U.S. NUCLEAR REGULATORY COMMISSION
REGION I

Report No. 92-18

Docket No. 50-271

Licensee No. DPR-28

Licensee: Vermont Yankee Nuclear Power Corporation
RD 5, Box 169
Ferry Road
Brattleboro, VT 05301

Facility: Vermont Yankee Nuclear Power Station

Inspection Period: August 2 - September 19, 1992

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Approved by: _____ FOR _____ 10/8/92
Eugene M. Kelly, Chief — Date
Reactor Projects Section 3A

Scope: Station activities inspected by the resident staff this period included: plant operations; radiological controls; maintenance and surveillance; emergency preparedness; security; and safety assessment and quality verification. Initiatives selected for inspection included the diesel generator maintenance overhaul and condition monitoring program and Thermo-Lag fire barrier compensatory measures. Periodic inspections of backshift, deep backshift, and holiday operations were performed. The inspectors performed backshift inspections on August 19, 26, 28, 29, September 1, 12, 22, 23, and 24; amounting to 32 hours.

Findings: Inspection conclusions are summarized in the Executive Summary.

EXECUTIVE SUMMARY

Vermont Yankee Nuclear Power Station
Report No. 92-18

Plant Operations

A power reduction for a planned rod pattern change was well controlled. Control room operators responded well to erratic reactor recirculation pump speed control. Response to an event involving the loss of power to motor control center 8C was also good, except for an isolated failure of a Senior Control Room Operator to properly communicate a fire alarm to the oncoming shift.

Radiological Controls

Prompt and coordinated efforts minimized the radiological impact of an overflow from the backwash receiving tank.

Maintenance

Maintenance for an alternate cooling tower fan was uncharacteristically delayed by several days because of spare part availability. Overhaul of the "B" emergency diesel generator was planned and completed within five days. Competence and skills of maintenance personnel, and good vendor technical assistance were noted, although procedures in use lacked detailed work instructions.

Engineering and Technical Support

The emergency diesel generator conditioning monitoring program has not been developed to the point that it is a fully effective predictive maintenance tool, although the chemical analysis program is effective. Two key parameters not currently trended are crankcase pressure and lube oil consumption.

Safety Assessment and Quality Verification

Vermont Yankee's response to NRC Bulletin 92-01 for Thermo-Lag 330 fire barrier material identified five conduits utilizing this material, which were properly compensated.

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Note: Procedures from NRC Inspection Manual Chapter 2515, "Operating Reactor Inspection Program" which were used as inspection guidance are parenthetically listed for each applicable report section.

DETAILS

1.0 SUMMARY OF FACILITY ACTIVITIES

Power reductions were accomplished for a planned rod pattern exchange on August 9, and in response to reactor recirculation pump oscillations experienced during August 26 through September 1. On September 2nd, VY conducted its annual emergency preparedness exercise.

2.0 PLANT OPERATIONS (71707, 71710, 93702, 90712)

2.1 Operational Safety Verification

This inspection consisted of direct observation of facility activities, plant tours and operability reviews of systems important to safety. The inspectors verified that the facility was operated in accordance with regulatory requirements and confirmed that management actions ensured public health and safety.

2.2 Power Loss to Motor Control Center 8C

On August 23, a number of alarms were received in the control room that were caused by the automatic tripping open of the feeder breaker for the 480 volt AC motor control center (MCC) 8C. The feeder breaker is installed in bus 8, located in the plant's switchgear room. A turbine building closed cooling water pump, a station air compressor, power to the auxiliaries of the "B" emergency diesel generator (EDG), and the normal power supply feed to the alternate cooling tower fan 2-1 were lost. No plant transient or reactor perturbations occurred.

Prioritization of equipment issues and operability determinations were performed well. Troubleshooting was extensive and timely. Backshift augmentation to support maintenance was good. Although the MCC 8C feeder breaker (General Electric AK-2 Micro-Versa Series) had a short circuit trip unit actuation, no reason for the trip could be identified. Extensive testing and consultation with General Electric occurred prior to returning the breaker to service on August 24.

The inspector's field review and subsequent discussions with shift personnel identified a concern involving the failure of the prior shift's senior control room operator (SCRO) to inform his own crew, and the relieving crew, of an abnormal equipment condition. Because of the loss-of-power condition, a fire detection alarm for the fuel oil pump house fire detection system annunciated as a trouble alarm in the control room. The SCRO responded and silenced the alarm; however, the SCRO failed to bring this matter to either his supervision or the subsequent shift's attention. This delayed for approximately one hour the evaluation of the need for a Fire Protection Control Permit to specify compensatory actions for fire detection systems being out-of-service, two potential concerns were identified: (1) the trouble alarm, while active, could have masked additional alarms received from other fire zones; and (2) the equipment in question was not being protected. The fuel oil pump house zone is not a technical specification-required system; however, proper compensatory

measures (checks of the fire panel and local area once per hour) were identified and subsequently implemented. Prior to the end of the inspection period, Operations Department management counselled the SCRO and initiated efforts to strengthen the shift turnover process involving the fire control panel.

2.3 Reactor Recirculation Pump Speed Control

Similar to the occurrences of erratic reactor recirculation pump (RRP) speed control documented in NRC Inspection Reports 92-12 and 92-16, VY experienced instability of the "A" RRP during this report period. On August 26, a speed oscillation above the instantaneous full power administrative limit resulted in control room operators entering Procedure OP 3110, "Positive Reactivity Insertion," to reduce power until the erratic operation subsided. No thermal or technical specification limits were exceeded. Operators increased the cooling capacity of the air conditioning units near the RRP motor generator (MG) sets, which appeared to improve the stability of the "A" RRP MG set. Plant management and a cognizant engineer were informed immediately following the oscillation. Actions were also taken to monitor and record control signals in the RRP MG control circuit in an effort to identify the cause. Discussions with the vendor also occurred the following day.

On August 31, oscillation again occurred and reactor power was reduced to approximately 95 percent. The following day, VY confirmed that a voltage-to-current converter, which monitors motor generator speed and provides a feedback signal to the master speed controller, was operating inconsistently. The problem equipment was removed, and a bench test confirmed its erratic operation. The equipment was replaced and satisfactory completed post-maintenance testing. Since the installation of the new electronics, the "A" RRP has operated satisfactory. Oscillations have not been observed on the "B" RRP.

2.4 Backwash Receiving Tank Resin Spill

On August 14, during operations to backwash the "B" condensate demineralizer, the backwash receiving tank (BWRT) overflowed onto the turbine building (TB) basement floor. The event was initiated when an electrician manually secured the backwash transfer pump while connecting meter leads at the motor control center, and inadvertently caused the transfer pump motor to "single phase." The overflow from the BWRT, which was a slurry consisting of Powdex resin and condensate, flowed from the tank room and covered the majority of the floor. Floor drains had been previously administratively plugged to prevent inadvertent chemical or radioactive liquid intrusion into the TB sump, which is located in the immediate vicinity of the spill. As a result of the spill, radiation levels in the immediate area of the tank were as high as 800 mrad beta in contact with the resin, from an estimated 2.667 millicuries of contamination on the floor.

Isotopic analysis of the water collected from the sump confirmed that the floor drain plugs leaked, and identified radioiodines and tritium. An estimated 5-15 gallons of BWRT slurry entered the TB sump. Vermont Yankee assumed that 1000 gallons of sump water was eventually diluted by 360,000 gallons of circulating system water. Vermont Yankee calculated the total concentration discharged was approximately 0.3% MPC, well below reportable levels. An NRC regional effluents specialist reviewed the VY calculations, and confirmed that the assumptions were conservative.

The initial notification to the control room by the electrician was prompt. The shift supervisor (SS) exhibited good command and control; his direct actions identified the severity of the spill and prevented additional overflow of the backwash receiving tank. Communications from the control room to the radiation protection and chemistry staffs were prompt. No elevated exposures or personnel contamination events occurred. Radiation protection and chemistry technicians contributed to the timely radiological assessment of the situation, the evaluation of the potential consequence of an unmonitored radioactive liquid release, and provided good technical recommendations to plant operators during this event. The performance of plant personnel in response to this event was very good.

The discharge to the environment was significantly below regulatory limits. Plant staff immediately recognized the significance of the spill and contained the contamination to the immediate area. Decontamination efforts resulted in low exposures to personnel (60 millirem total by pocket dosemeter), attributed to good concern for ALARA considerations and a recommendation to slurry the resin and to pump the mixture into two 55 gallon drums.

2.5 (Closed) Unresolved Item 91-07-01: Shift Engineer as Fire Brigade Leader

Unresolved Item 91-07-01 concerned the appropriateness of assigning the Shift Engineer (STA) the collateral duty as the fire brigade leader. The NRC staff reviewed this practice and concluded that, while not compatible with the Commission's Policy Statement regarding the STA function, no additional regulatory action is warranted until an industry generic review is completed (NRC to VY letter dated April 7, 1992). This item is therefore closed.

3.0 RADIOLOGICAL CONTROLS (71707)

3.1 Observations

Compliance with the radiological protection program was verified on a periodic basis. This included observations to verify operability of radiation protection equipment, adherence to radiological control procedures, and the posting of radiation and contamination areas within the plant. No unacceptable conditions were identified.

3.2 Storm Drain Contamination

On August 24, VY identified higher than normal concentrations of radioactive isotopes in the sediment collected from storm drain #12. This storm drain is located within the radiologically controlled area (RCA) near the radioactive waste building (RWB), and discharges to the circulating water discharge structure after accepting additional water from four downstream storm drains. The elevated radionuclide concentrations did not constitute an unmonitored release. This conclusion was based upon analyses performed on downstream water and sediment samples (collected from downstream manholes that are within the Protected Area) that have not identified any radioactive isotopes.

Storm drain #12 is sampled quarterly and drain #14 is sampled monthly; both analyses results are trended. The isotopes identified were cobalt-60, cesium-137, cesium-134, zinc-65, and manganese-54, and are all plant-generated isotopes. The largest isotopic change occurred with zinc-65, which increased by a factor of 100 to approximately 11,000 pci/kg. Concentrations for Cesium 137 and 134 have been trending upwards since the second quarter of 1990; however, the other isotopes have not exhibited the same trend. On August 24, a second sediment sample from drain #12 indicated that the concentrations returned to routinely observed levels - this was due to removal of the top layer of the sediment that constitutes the sample.

A VY Task Team determined that rain water from the RWB roof was the most probable source for the elevated isotopic concentrations found in drain #12. This was based on similar isotopic compositions collected from standing water collected from the RWB roof. Replacement of radioactive liquid filters for the fuel pool and radioactive waste systems, and operations involving radioactive waste shipping casks, may contribute to these elevated storm drain concentrations. Immediate corrective actions included decontamination of the RWB roof area near the roof drain, the establishment of an accelerated environmental monitoring program for storm drain #12 to evaluate possible leaching of contaminants, and direct sampling of roof drain water. The Chemistry and RP Managers indicated possible long-term corrective actions involving: (a) re-design of the RWB roof enclosure for the filter replacement activities; (b) removal of the sediment from the storm drains, in an attempt to determine sediment and concentration deposition rates; and (c) a re-evaluation of the contamination controls established for maintenance involving filter replacement and activities having a direct path outside the RCA.

The inspector concluded that VY took appropriate and timely action to identify the source of contamination in the storm drain. Department managers were appropriately critical of the contamination control on the RWB roof and their inability to previously identify the root cause when a similar (smaller) contamination peak was identified in the same storm drain in 1991. The timeliness of notification to plant management from the Yankee Nuclear Services Division (YNSD) environmental lab will also be evaluated by the Chemistry Manager.

4.0 MAINTENANCE (62703)

The inspector observed selected maintenance on safety-related equipment to determine whether these activities were conducted in accordance with TS, approved procedures, and appropriate industry codes and standards.

4.1 Alternate Cooling Tower Fan 2-1

On September 5, the control room operators received indications of an intermittent ground on electrical circuit MCC-5B-2A. The ground was found in the electrical power supply to the safety-related alternate cooling tower fan 2-1, which is the ultimate heat sink for the plant. Vermont Yankee declared the alternate cooling system inoperable, entered the 7-day TS limiting condition for operation (LCO), and initiated repairs.

Restoration of this system was relatively long with respect to the usual timely corrective maintenance for failures associated with safety systems, due in part to the unavailability of replacement parts. The first replacement motor required the installation a motor hold-down bolt as identified by quality assurance documentation. On September 9, the motor was installed in the cooling tower; however, 1.5 hours into the post-maintenance test, the motor tripped on high vibration. The preliminary root cause was determined to be a seized motor. A second replacement motor was available; however, maintenance was necessary to resolve a non-conformance associated with the motor heating element.

A review was initiated to assess whether VY efforts to restore this safety-related system could have been more vigorously pursued and what improvements could be made. On September 10, approximately four days into the 7-day LCO, alternate cooling tower fan 2-1 was declared operable. The original motor was sent to the vendor, but testing was unable to identify the condition causing the intermittent ground. The replacement motor which experienced the shaft seizure will also be disassembled for root cause determination. The actions to determine root cause were appropriate, despite the inability to conclusively determine the cause of the intermittent ground. The inspector noted that, since the installation of the second replacement motor, no subsequent grounds have been identified.

As a result of the action taken by the Operations Superintendent to review the initial maintenance effort and a post-job critique, several good corrective actions were identified. Specifically, reiterated to supervisors that the Maintenance Department has the responsibility to make prompt operability determinations and to initiate timely repairs. In addition, actions were planned to ensure that safety-related parts are "installation-ready" verses "ready for issue," as was the case in this event. The inspector also reviewed the preventive maintenance procedure for "in stock" testing of motors and noted that this motor shaft had been properly rotated to verify freedom of movement. No further concerns were identified.

4.2 Diesel Generator Maintenance Overall

On September 13, VY removed the "A" EDG from service in preparation for preventative maintenance. The EDG is required to be completely inspected every 18 months, and was last overhauled in February 1991. Vermont Yankee planned the maintenance such that the diesel would be returned to service within 5 days of the 7-day Technical Specification limiting condition for operation (LCO) time period. Vermont Yankee's process for performing LCO preventative maintenance during power operations was previously reviewed in Inspection Report 91-22.

Planning

Diesel maintenance is controlled by procedure OP 5223, "Emergency Diesel Generator Maintenance." Technical representatives from the EDG vendor were on site 24 hours a day to support the maintenance. Spare engine parts, which were projected to be replaced, were verified to be available and ready for use. Tooling was also inspected and pre-staged for use. Contingency plans were prepared; for example, if the vertical drive spring coupling and bearing inspection revealed any abnormal conditions, VY ensured that the vendor had a complete vertical drive assembly available in addition to the spare parts available on site.

Scope of Work

Several major maintenance tasks were not performed during this overhaul, as they were previously completed during the cylinder liner replacement in June 1992. These tasks included the upper and lower piston inspections, upper crankshaft main bearing inspections, and the cleaning and inspection of the crankcase lube oil sump. The following preventative maintenance (PM) was observed by the inspector:

- fuel injector nozzle testing and installation;
- crankshaft lead timing check;
- lube oil strainer inspection;
- vertical drive inspection, including gear backlash and drive thrust measurements;
- jacket coolant water system hydrostatic test;
- jacket coolant water heat exchanger inspection; and
- blower inspection, including impeller and lobe clearance measurements.

During the injector nozzle testing, correct maintenance practices were employed by the technician, in that, a spray pattern test was conducted in addition to a nozzle "pop" test. Proper quality control oversight of the nozzle testing occurred. Eight injection nozzles were subsequently replaced due to poor spray patterns. Excellent interaction and assistance from the vendor technical representative was noted by the inspector during the crankshaft, vertical drive, and blower inspection and measurement checks. All measurements were found to be within expected tolerances.

Procedural Controls

Although no maintenance performance deficiencies were identified, the inspector did have several observations regarding the diesel maintenance plan. Specifically, procedure OP 5223 is merely a checklist of inspection activities to be conducted. The procedure does contain general precautions and prerequisites, but does not include a detailed methodology on how to disassemble, inspect, test, and reassemble various engine components. Instead, the procedure references the Fairbanks Morse Technical Manual to accomplish each preventative maintenance task. This method of performing maintenance places a heavy reliance on the individual knowledge, expertise, and experience of the mechanics performing the maintenance. Under these circumstances, the consistency of the maintenance may vary over time, as different individuals and work crews perform the maintenance. Additionally, lessons learned or various maintenance techniques for specific tasks may not be incorporated into a checklist type of procedure. However, during the observed maintenance, the inspector found the mechanics to be experienced and knowledgeable of each PM task referenced in the Technical Manual. Additionally, under the LCO maintenance plan, all other work activities are minimized.

Post-Maintenance Testing

The inspector also had several observations regarding the content of the diesel maintenance plan. Preventive maintenance on the diesel turbocharger has not been incorporated into the maintenance procedure. The Technical Manual states that the turbocharger impeller and diffuser should be cleaned every 4,000 hours or less. Additionally, a complete turbocharger cleaning and inspection should be performed every 8,000 hours. However, this did not present a turbocharger performance concern, since the current engine run hours are 3,068 hours for the "A" EDG and 2,863 hours for the "B" EDG. Vermont Yankee indicated that they were also aware of this omission and that the turbocharger PM tasks would be incorporated into future engine overhauls although, as a precaution, the air side of the turbocharger was inspected. The inspector also questioned VY's practice of not manually rolling over the engine following a diesel test run or operability run. The technical manual indicates that the engine should be barred over 15 minutes after shutdown in order to remove accumulated oil from the upper piston area. Neither the post-maintenance test procedure nor the operations surveillance procedure have incorporated this practice. Barring the engine over would minimize the amount of oil leaking past the piston oil control rings into the combustion chamber or exhaust manifold. Vermont Yankee has experienced excessive oil leakage into the exhaust manifold. The inspector was informed that an EDG Task Force was evaluating current PM practices (refer to NRC Inspection Report 92-12). At the end of the inspection period, this Task Force report was in draft form.

During the post-maintenance testing, the inspector noted that the acceptance criteria for maximum differential cylinder exhaust temperature were not consistent with the Technical Manual. The existing limit is 300 degrees F for exhaust temperature variation between cylinders, while the Technical Manual specifies 250 degrees F. However, a Fairbanks Morse

service information letter (SIL) was provided by the vendor which states that 300 degrees F is an acceptable limit if no operational malfunctions are detected. The inspector found this justification to be acceptable; however, the SIL was not filed with other SILs in the technical manual used by the mechanics, nor was it specifically referenced in the maintenance procedure.

Conclusions

Overall, the diesel maintenance was properly planned and completed within the LCO goal, and the diesel was declared operable on September 18. No aging-related material deficiencies were identified. The diesel maintenance was performed by competent and skilled mechanics. The inspector did observe that VY places strong reliance on personnel knowledge and experience, and that conversely procedures are not detailed. Good interaction was evident between the vendor technical representative and VY personnel. The maintenance procedure was found to be adequate, but could be improved by incorporating additional vendor-recommended maintenance practices and more detailed work instructions.

5.0 ENGINEERING AND TECHNICAL SUPPORT (71707, 62703, 92700)

5.1 Emergency Diesel Generator Condition Monitoring Program

The inspector reviewed VY's EDG condition monitoring program. Under this program, certain diesel operating parameters are monitored and trended to determine if equipment performance has degraded.

Parameters Monitored

Diesel operating logs were reviewed to determine if all available parameters are monitored. The inspector noted that several key engine parameters are not monitored, even though the engine has the necessary installed instrumentation. For example, the vendor Technical Manual recommends that jacket water temperature difference between engine inlet and outlet be maintained at 10 degrees; however, VY does not log jacket water inlet temperature. Too low a jacket water temperature could cause excessive wear, lube oil deterioration from sludge formation, and increased fuel oil consumption. Another parameter not monitored by operations personnel is fuel rack position. This can be used as an accurate check of load balancing, as rack position for each fuel injector pump should be at an identical setting and should not vary between each full load test. Finally, the combined cylinder exhaust gas temperature to the turbocharger turbine is not monitored by operators, even though the Technical Manual indicates that exhaust gas temperature should not exceed 1200 degrees F. The above mentioned parameters are monitored only by maintenance personnel during the diesel maintenance run following engine overhaul or inspection.

Trending

Vermont currently trends several basic diesel parameters. These include individual cylinder exhaust temperatures, jacket water coolant temperature, lube oil temperature and pressure, and fuel oil pump suction pressure. During the 8-hour surveillance testing, the inspector noted that generator load may vary between 2500-2750 kW. Cylinder exhaust temperature may vary significantly between this 250 kW range, and could produce inconclusive trending information. VY has not yet established baseline values to compare with increasing or decreasing cylinder exhaust temperatures. Baseline values should be established following an engine overhaul when the diesel is known to be operating satisfactorily. Two key parameters which are not trended, even though VY has the capability to do so, are crankcase pressure and lube oil consumption.

Chemical Analysis

The inspector reviewed VY's chemical analysis program for the lube oil and jacket water systems. The jacket water system contains a molybdate-nitrite corrosion inhibitor and is sampled monthly. A jacket water treatment monitoring program was initiated in 1988 and monitors and trends corrosion inhibitor concentration, pH, and chloride and iron concentrations. The inspector questioned the current jacket water pH range of 8.5 - 11.0, since the Technical Manual recommends a range of 8.5 - 9.5. Vermont Yankee changed the pH range, with the concurrence of Fairbanks Morse, based on using demineralized water vice "hard" water in the jacket water system. A recent initiative has included the cleaning and flushing of the jacket water system with tri-sodium phosphate. This has been effective in reducing the iron concentration from about 35 ppm to less than 5 ppm in the "A" diesel. Vermont Yankee also maintains a lube oil analysis program to detect any possible trends which would indicate oil or equipment degradation. Spectrographic analysis is used to identify various metallic and chemical compounds and the relative concentration of each. The lube oil is sampled and analyzed a minimum of every six months and subsequently drained and replaced every 18 months. The three analyses prior to lube oil replacement provides VY with a valuable predictive maintenance tool. No adverse trends were noted by the inspector.

Conclusions

Overall, the inspector concluded that VY does not yet have a fully effective EDG condition monitoring program for use as a predictive maintenance tool. Not all available diesel parameters are monitored via the operational surveillance procedure and several valuable parameters are not trended even though VY has the instrumentation to do so. Vermont Yankee's chemical analysis program was, however, found to be effective. The inspector was informed that VY's EDG condition monitoring program was also being evaluated by the diesel generator Task Force.

6.0 SAFETY ASSESSMENT AND QUALITY VERIFICATION (40500, 92712)

6.1 NRC Bulletin 92-01 - Thermo-Lag 330 Fire Barriers

NRC Bulletin 92-01 identified deficiencies in the fire endurance for Thermo-Lag 330 fire barrier material when used to protect small diameter conduits and wide cable trays. Bulletin 92-01 identification of use of this material and any necessary compensatory measures. Vermont Yankee determined that five conduits were protected by Thermo-Lag 330; two 3/4-inch, one 3-inch, and two 4-inch sized conduits.

The 3/4-inch conduits are located in the torus area of the reactor building and contain torus temperature and level instrumentation. The Thermo-Lag was originally installed on these conduits to meet 10 CFR 50, Appendix R safe shutdown capability. Vermont Yankee's initial compensatory measure was to immediately station a continuous firewatch near these penetrations. Later, due to ALARA concerns, VY installed a remote camera and stationed a continuous watch at the camera's monitor located in a stairwell in the reactor building. Vermont Yankee further analyzed these conduits and determined that the original basis for protecting these conduits with a fire barrier was no longer relevant due to design upgrades associated with Regulatory Guide 1.97. As a result, VY eliminated the compensatory watch. The 3-inch conduit runs through the reactor building, and is affected by Thermo-Lag in two locations: on the torus side of the RCIC corner room; and, above the transverse incore probe (TIP) room. This conduit protects the dc power feed from the alternate shutdown battery (AS-1) to the RCIC system for reactor shutdown outside of the control room. Initially, VY stationed a one-hour firewatch for the 3- and 4-inch conduits. Upon further analysis and evaluation of mitigating factors, VY elected to relax the firewatch on the 3-inch conduit to once per shift, and outlined their actions in a letter to the NRC dated July 24, 1992.

The 4-inch conduit is located in the radwaste hallway and protects the normal power supply to motor control center 9B. VY determined that the 4-inch conduit was beyond the scope of the original Bulletin 92-01, and discontinued its firewatch. However, on September 25, a supplement to NRC Bulletin 92-01 expanded compensatory measures for 4-inch conduits, and Vermont Yankee appropriately established an hourly firewatch.

The inspector performed a walkdown of the areas protected by Thermo-Lag 330, and found housekeeping to be good, and no transient combustible material. The inspector held discussions with the Fire Protection Engineer as to the adequacy of the partial detection fire detection TIP room and suppression (water spray) in the TIP room area, and whether an unprotected conduit support required fire insulation material. The inspector concluded that it was reasonable that the suppression system would be capable of suppressing fire below the Thermo-Lag conduit. In addition, the fire detection system was in the general vicinity and capable of the detecting fire. This matter is discussed in more detail in an NRC letter to VY dated September 8, 1992, and will be the subject of additional discussions regarding fire protection technical specifications.

6.2 Periodic and Special Reports

The plant submitted the following periodic and special reports, which were reviewed for accuracy and concluded to be adequate:

- Monthly Statistical Reports for September and August 1992.

- Vermont Yankee Effluent and Waste Disposal Semiannual Report for First and Second Quarters, 1992.

- Failed Fuel Status and Parameter Trends from August 1 - September 1, 1992.

  VY determined, based on radioisotopic analysis, that there is currently no failed fuel within the core. Offgas activities have decreased over the last period and are expected to approach 20,000 μCi/sec at the end of this operating cycle. These levels are significantly below the levels observed during previous Cycle XV, and have resulted in lower radioactive gas concentrations within plant buildings.

6.3 Licensee Event Reports

The inspector reviewed the Licensee Event Reports (LERs) listed below and determined that, with respect to the general aspects of the events: (1) the report was submitted in a timely manner; (2) the description of the event was accurate; (3) a root cause analysis was performed; (4) safety implications were considered; and, (5) corrective actions implemented or planned were sufficient to preclude recurrence of a similar event.

- LER 92-10, "1992 Appendix J Type B and C Failure Due to Seat Leakage."

  Inspection Report 92-16 documented that VY would report the root cause of valve CRD-413A in their 1992 Integrated Leakage Rate Report (ILRT). Discussions with the engineering department and a review of maintenance documents confirmed that the failure mode for CRD-413A was indeterminant, but because of an oversight, was not mention in the ILRT report which will be supplemented.

- LER 92-17, "A" Diesel Generator Inoperable Due to Low Jacket Coolant Pressure."

  This voluntary LER was submitted to inform the NRC of problems with the "A" EDG due to cylinder liner failures. The "A" EDG was also declared inoperable due to the failure a service water flow control valve, that resulted in inadequate jacket cooling system operation. This issue, as well as the cylinder liner failures, were documented in Inspection Report 92-12.

- LER 92-18, Supplement 1, "Unusual Event as a Result of a Design Weakness in the Uninterruptible Power System Control Circuitry."

  The supplemental LER was submitted to reflect VY's continuing efforts to determine the root cause for the "A" uninterruptible power supply (UPS) to properly shift modes of operation.

7.0 MANAGEMENT MEETINGS (30702)

7.1 Preliminary Inspection Findings

Meetings were periodically held with plant management during this inspection to discuss preliminary inspection findings. A summary of those findings was also discussed at the conclusion of the inspection on September 23. No proprietary information was utilized.

7.2 Region Based Inspection Findings

One Region based inspection was conducted during this inspection period. Inspection findings were discussed with senior plant management at the conclusion of the inspection.

Date	Subject	Inspection. No.	Lead Inspector
9/1-3/92	Emergency Preparedness	92-19	C. Amato

7.3 Other Meetings

On August 19, the NRC Region I Division of Reactor Projects Acting Section Chief responsible for the implementation of the inspection program at VY, toured the facility and discussed current plant issues with plant management.