U. S. NUCLEAR REGULATORY COMMISSION
REGION I

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LICENSEE: Vermont Yankee Nuclear Power Corporation
Vernon, Vermont

FACILITY: Vermont Yankee Nuclear Power Station

DATES: July 11-15, 1994

INSPECTOR: J. Hanek, Contractor, INEL

INSPECTOR: A. Della Greca — 8/8/94
A. L. Della Greca, Sr. Reactor Engineer — Date
Electrical Section
Division of Reactor Safety

APPROVED BY: William H. Ruland — 8/11/94
William H. Ruland, Chief — Date
Electrical Section
Division of Reactor Safety

Areas Inspected: Announced inspection to determine the acceptability of actions taken by Vermont Yankee (VY) in response to NRC Bulletin 90-01, Supplement 1, "Loss of Fill-Oil in Transmitters Manufactured by Rosemount." This inspection was performed in accordance with the guidance of NRC Inspection Manual Temporary Instruction 2515/122, "Evaluation of Rosemount Pressure Transmitter Performance and Licensee-Enhanced Surveillance Programs." The scope of this inspection included a review of the enhanced monitoring program for Model 1153B/D Rosemount transmitters manufactured prior to July 11, 1989. Other areas reviewed included: the disposition of stored transmitters, the Rosemount transmitter calibration procedure, the criteria used to identify transmitter failures caused by oil loss, and VY's actions to address failed transmitters. Data on the performance of Rosemount transmitter models outside the scope of Bulletin 90-01, Supplement 1 was also obtained. These included all Model 1151, 1152, and 1153A transmitters and the Model 1153B/D and 1154 transmitters manufactured after July 11, 1989.

Results:

The inspectors concluded that the actions taken by VY to address the loss of fill-oil concerns described in Bulletin 90-01 and Bulletin 90-01, Supplement 1, were adequate. However, weaknesses were also identified in the transmitter monitoring program, as indicated by some of the inspection results below:

- All pre-July 11, 1989, Model 1153 transmitters in the spare parts inventory have been modified or replaced with transmitters equipped with sensing modules manufactured after July 11, 1989.

- An enhanced monitoring program had been established for transmitters within the scope of NRC Bulletin 90-01 and its supplement. However, the licensee failed to include four transmitters associated with the reactor water cleanup system. One of these transmitters showed loss of fill-oil symptoms and was under review by the licensee.

- The calibration trending program was adequate in identifying transmitters that indicated potential fill-oil loss. However, the monitoring methods were limited. For instance, no trending of operational data and span drift was being done. In addition, the current program did not meet the intent of Bulletin 90-01, Supplement 1 requirement regarding licensees maintaining the ability to detect failures. This item was unresolved, pending appropriate actions by the licensee.

- Station personnel have been trained to recognize the symptoms associated with the loss of fill-oil. However the training program had no provisions for training newly-hired personnel.

- Instrument calibration procedures contained no direction for the technicians on how to test for and identify a loss of fill-oil.

- The licensee identified one pre-July 1989, Model 1153B transmitter failure and another was being investigated. No failures of Model 1151 or 1152 in safety-related applications had been recorded by the licensee or observed by the inspector.

- An unrelated issue pertaining to a discrepancy between loop accuracy and stated accuracy in the FSAR and technical specification was unresolved, pending further review and action by the licensee.

DETAILS

1.0 BACKGROUND

On December 22, 1992, the NRC issued NRC Bulletin 90-01, Supplement 1, "Loss Of Fill-Oil in Transmitters Manufactured by Rosemount," to inform licensees of actions taken by the NRC staff and the industry in evaluating loss of fill-oil in Rosemount transmitters and to request licensees to take actions to resolve the issue. Licensees were requested to develop an enhanced surveillance program for Model 1153, Series B and D, and Model 1154 transmitters manufactured before July 11, 1989. The purpose of the surveillance program was to ensure that installed Rosemount transmitters meet current design criteria as highly reliable components for which failures can be readily detected. Model 1151, 1152, and 1153A transmitters were excluded from the actions requested in the supplement due primarily to few confirmed oil loss failures and differences in the oil sensor design, as compared to Model 1153B/D and 1154 transmitters. Similarly, due to transmitter design and process improvements and few confirmed failures, Model 1153B/D and 1154 transmitters, that were manufactured after July 11, 1989, were also excluded from the supplement actions.

2.0 PURPOSE OF THE INSPECTION

The objectives of the inspection were to: (1) verify that the actions taken by Vermont Yankee (VY) in response to Bulletin 90-01, Supplement 1 were acceptable; (2) evaluate the performance of safety-related model 1151, 1152 and 1153A transmitter at the VY facility; (3) obtain information on VY experience with failure of model 1153B/D and 1154 transmitters manufactured after July 11, 1989; and (4) determine VY reporting practices for failed transmitters.

The additional data collected on transmitters that are outside of the scope of the bulletin supplement will be used to verify failure reports, determine to what extent licensees notify Rosemount of transmitter failures, and to confirm that actions requested by the bulletin supplement were sufficient.

3.0 DISPOSITION OF STORED TRANSMITTERS

The inspectors reviewed the actions taken by Vermont Yankee to ensure that Rosemount Model 1153B and D and Model 1154 transmitters manufactured before July 11, 1989, and held in storage as stock spares would not be used in safety-related systems or systems installed in accordance with 10 CFR 50.62.

The inspectors' review determined that, on July 17, 1990, the licensee had responded to Bulletin 90-01 and informed the NRC that they had agreed with Rosemount to return all stock spares so that the sensing modules could be replaced with others manufactured after July 11, 1989. Discussions with the licensee also determined that the spare transmitters had been modified and returned to stock soon after the issuance of the bulletin. Verification of

approximately 50% of the stocked spare transmitters found that their serial number either ended in "A" or was in the 500,000 range. These serial numbers indicated, respectively, that the transmitters had been either modified or manufactured after July 11, 1989.

The inspectors concluded that VY had taken appropriate actions to prevent use of transmitters susceptible to oil leakage in safety-related or ATWS applications.

4.0 SURVEILLANCE PROGRAM

4.1 Scope of Surveillance

The inspectors reviewed VY's instrument database and their response to Bulletin 90-01 and its supplement to determine their scope of surveillance and compliance with the NRC requirements.

In response to NRC Bulletin 90-01, VY searched their database and determined that only 24 transmitters were within the scope of review and surveillance described in the bulletin. All transmitters were Model 1153B. Four transmitters monitored reactor pressure and level and were in the 1000 pounds per square inch gage (psig) pressure range. The remainder had an operating pressure of less than 100 psig. The licensee's review also found that two installed transmitters and one spare were from manufacturing lots identified by Rosemount as having a high failure fraction due to loss of fill-oil. As indicated above, the spare was returned to Rosemount for sensor module replacement. The installed transmitters were in a low pressure application and used for indication only. The licensee placed these two transmitters in the enhanced surveillance program, in accordance with the requirements of the NRC bulletin.

In response to NRC Bulletin 90-01, Supplement 1, the licensee again reviewed their database and found that of the 24 transmitters previously identified, only one, PT-2-3-52C, should remain in the enhanced monitoring program. The transmitter, one of four in the medium pressure range, had been replaced in October 1988 and had not yet reached maturity (60,000 psi-months), as described in the bulletin supplement.

While preparing for the this inspection, the licensee again reviewed the list of transmitters within the scope of the bulletin and supplement. They found that four transmitters in the reactor water clean-up system had not been included in the surveillance program. VY informed the inspectors of the finding during the entrance meeting. At that time, the inspectors also received a copy of an internal memorandum indicating that the licensee reviewer had evaluated the significance of the omission against the requirements of Supplement 1 and found that all four transmitters were excluded from the enhanced surveillance program; two of the transmitters had an operating pressure of less than 500 psig and the other two had already achieved maturity (60,000 psi-months). The memorandum attributed the omission to the fact that the earlier data was gathered manually, probably from the Vermont Yankee Equipment Manual (VYEM). This manual includes up-to-date vendor information applicable to plant equipment. The four transmitters were not in the list included

in VYEM No. 0055; and, apparently, this same list was used for the response to the bulletin supplement, despite the fact that a computerized database was already functional at the time of the response.

The inspectors found that VY's conclusions regarding surveillance requirements for the four transmitters were only correct in view of the bulletin supplement. Their review at the time of the original bulletin would have evaluated previous performance and ensured trending of calibration data. Since this had not yet been done by the licensee, the inspectors requested that they provide copies of calibration data from the last four surveillance tests. A review of this data found that one of the transmitters, FT-12-1A, used to measure reactor water cleanup flow, had negative zero deviations in each of the last five surveillance tests. A series of negative zero deviations for a Range 4 transmitter could be indicative of a loss of fill-oil. The licensee engineering agreed with inspectors and committed to further investigate the issue. Based on the data provided, the amount of oil lost was not sufficient to be of an immediate concern.

The inspectors concluded that the actions taken by the licensee to ensure the accuracy of the responses to the Bulletin and to the Supplement were poor. However, considering the safety function of the four transmitters, the inspectors also concluded that the safety significance of the omission was low.

4.2 Loss of Fill-Oil Failures and Reporting Practices

The inspectors reviewed available data to determine VY's experience regarding loss of fill-oil failures in Rosemount Model 1153B and D and Model 1154 transmitters manufactured after July 11, 1989, and the licensee reporting practices regarding these failures.

In their letter of July 17, 1990, to the NRC, the licensee indicated that their investigation of the Rosemount transmitters that had failed at VY had concluded that none of the failures was attributable to loss of fill-oil. Further discussions with licensee engineering determined that, at the time of the letter, they had recorded three transmitter failures: one in 1984 and two in 1988. The documentation regarding these failures was not immediately retrievable. However, the licensee stated that none of the failures were attributable to loss of fill-oil. One transmitter, replaced in 1988, had slow response, but calibration records indicated that the performance data were contrary to those expected from a loss of fill-oil. The other two transmitters were replaced, one because of oil contamination (intermittent saturation syndrome), the other because of nonlinearity.

Since 1988, the licensee replaced two additional transmitters: one because of saturation, the other because of sluggish output. The latter transmitter was returned to Rosemount for further analysis. On May 5, 1994, Rosemount informed Vermont Yankee that the sluggish output was the result of an oil leak at the glass to metal seal interface of the low pressure fill tube. The inspectors' review also found that the transmitter, a Model 1153B, Range Code 5 used for monitoring torus water level, was one of the two installed transmitters originally

identified by the licensee as belonging to the manufacturing lots exhibiting a high failure fraction due to loss of fill-oil. A review of the calibration data for the other transmitter showed random zero drift indicating that a loss of fill-oil was not a concern at that time.

The return of the transmitter with sluggish output to Rosemount indicated VY's concern with the loss of fill-oil issue and their policy to report experienced failures to the manufacturer for their failure analysis. Discussions with the licensee indicated that no plans had been made to change past reporting practices.

The inspectors concluded that VY's actions and current reporting policy were effective in addressing failed transmitters.

4.3 Surveillance Program

To verify the acceptability of the actions taken by VY in response to NRC Bulletin 90-01, Supplement 1, the inspectors reviewed the administration of the enhanced surveillance program, the monitoring techniques, the testing intervals, training of operations and technical support personnel, applicable plant procedures, and transmitter calibration records.

Program Administration

The administration of the surveillance program was the responsibility of an I&C engineer within the I&C engineering group, a branch of the site engineering organization. This engineer was responsible for receiving, maintaining, and evaluating the calibration data to determine if there are any trends that may be indicative of fill-oil loss. If a transmitter calibration trend data showed evidence of potential fill-oil loss, the engineer generated an action request to evaluate the transmitter for operability and to determine the need for further actions, such as increased calibration and monitoring frequency or replacement of the transmitter.

Monitoring Techniques/Test Intervals

The elements of VY's program for monitoring the performance of the Rosemount transmitters manufactured prior to July 11, 1989, were outlined in the response to the original bulletin. The inspectors' review of that July 17, 1990, letter revealed that the surveillance program consisted largely in the trending of calibration data from corrective maintenance and surveillance activities. This letter also stated that training had been performed to ensure that licensed personnel and instrumentation and control (I&C) technicians were aware of the symptoms of the loss of fill-oil, i.e., sluggish response during calibration, zero drift, and/or failure to fully span. A program to monitor for changes in process noise was not be implemented since sustained transmitter drift was considered

sufficient to determine the onset of transmitter loss of fill-oil. The cited bases for the program were: Rosemount Technical Bulletin No. 4, dated December 22, 1989; draft EPRI document, "Method for Enhancing Surveillance to Detect Incipient Failures of Rosemount 1153 Transmitters"; and NUMARC letter, dated April 16, 1990.

Regarding monitoring frequency, the July 1990 response letter stated that the four transmitters subject to reactor pressure would be placed on an enhanced surveillance schedule and would be calibrated every six months; the remainder of the transmitters, subject to an operating pressure of less than 100 psig, would remain on their calibration cycle of 18 months. On February 26, 1993, the licensee responded to the bulletin supplement and informed the NRC that an enhanced surveillance monitoring program was not required for all but one transmitter, PT-2-3-52C. However, the I&C "surveillance setpoint tracking program will still be in place to provide an additional level of confidence in detecting potential oil loss."

The inspectors' review of monitoring program found that the licensee had done a comprehensive research of the calibration data and evaluated it in accordance with the recommendations of Rosemount's Technical Bulletin No. 4. Graphs had been prepared for ease of review. The acceptance criteria required placing any transmitter that exhibited zero drift in the same direction for three consecutive calibrations on an increased surveillance program. The criteria also required that the transmitter be considered as having failed if the zero drift continued in the same direction for five consecutive calibrations and the upper range limit error was exceeded.

Following the original historical trending, the licensee developed tables that contained the same information included with the graphs. This data trending continued until the transmitters remained within the scope of enhanced surveillance. A review of the data showed that the calibration results had been recorded on their applicable tables through the end of 1992. The last transmitter, PT-2-3-52C, reached maturity in 1993, shortly after VY's response to the bulletin supplement.

For mature transmitters and transmitters that do not fall within the enhanced surveillance program requirements, Bulletin 90-01, Supplement 1 requires that licensees "maintain ability to detect failures." As indicated previously, VY's response indicated that "surveillance setpoint tracking program" would be in place to detect potential oil loss. The inspectors' review of this program concluded that it did not meet the failure detectability requirement of the bulletin supplement.

The surveillance setpoint tracking program is described in Administrative Procedure AP-0310, "Surveillance, Preventative and Corrective Maintenance Program," dated December 6, 1993. Section I.B. of this procedure required that surveillance procedure data sheets containing red circled data and/or comments be reviewed by the system engineer and highlighted for computerized trending. The section also required that the engineer's review include a survey of past out-of-spec reports and the percent-of-drift calibration. Since red

circling of surveillance data is done only when and if they do not meet the acceptance criteria of the surveillance procedure, no formal evaluation or trending is required, unless the test results fall outside the specified limits. Thus, a negative zero shift could remain unnoticed for several calibrations until it falls outside the acceptance limits. At that time, a review of the computerized records would provide no information regarding past records, since the test results were within acceptable limits. Therefore, only a manual search of not readily available data would reveal the negative trend of the transmitter zero shift. In some transmitters, the zero shift, due to loss of fill-oil, is typically well below the specified acceptance criteria of the procedure. Therefore, trending of calibration results is important to timely detect a failure.

Since the "surveillance setpoint tracking program" did not meet the intent of the bulletin supplement requirement to "maintain ability to detect failures," the licensee was requested to reevaluate their current program and inform the NRC of the actions that would be taken to ensure compliance with the Supplement. This item is unresolved, pending an NRC review of these actions. **(50-271/94-16-01)**

Training

The inspectors reviewed VY's training program and conducted interviews to determine the capability of the technical personnel to identify loss of fill-oil failure.

The training program consisted of two training lessons (XIC-89-013 and XIC-90-002) for the I&C Department and one (LOR 90.1-502) for the licensed operators. The first I&C training lesson, provided in September 1989, involved the review of pages 1 and 2 of Information Notice (IN) 89-42 and of page 4 of Rosemount Technical Bulletin No. 4 and the applicability of the phenomenon to VY. The lesson recommended heightened awareness of loss of fill-oil symptoms and careful review of previous and new calibration data to determine potential trends. The second I&C lesson, dated January 1990, involved the review of Section 2, Appendix B, of Rosemount Technical Bulletin No. 4, "Guidelines for detection of sluggishness." Oral exams were given. Both lesson plans had few details. Therefore, the inspectors could not make an accurate assessment of the lesson quality. However, the one-half hour allocated for the lesson indicated minimum coverage.

The lesson plan for the licensed operators, dated January 1990, like the first I&C lesson plan, involved the review of IN 89-42 and its applicability to VY. This lesson plan, although still somewhat sketchy, included more details about the issue and about the methods for detecting transmitter failures.

Since all the lesson plans and training session records provided were dated 1990 or earlier, the inspectors asked whether additional training records were available and whether new I&C personnel had similar training. No additional lesson plans had been prepared, and no other

training sessions had been recorded. However, the two new I&C technicians hired since 1990 had previous experience at other plant sites. Both technicians had received training at their respective sites.

Interviews of several I&C technicians, including a new employee, indicated familiarity with the oil issue and awareness of at least one of the loss of fill-oil symptoms, sluggishness and slow response.

Transmitters Calibration/Procedures

No Rosemount transmitter calibrations had been scheduled during the inspection period. Therefore, the inspector reviewed three calibration procedures to determine the extent to which they provided guidance in identifying potential loss of fill-oil. The procedures reviewed included OP-4310, Revision 22, "Scram Discharge Instrument Volume High Water Functional/Calibration;" OP-4336, Revision 16, "Reactor Vessel Shroud Level/Containment Spray Low Water Level Interlock Instrument Functional/Calibration Test;" and OP-4340, Revision 23, "Reactor Low Pressure ECCS Valve Permissive Functional/Calibration." None of these procedures included instructions, precaution notes, or any other information regarding loss of fill-oil to help the technician to recognize the associated symptoms and identify the potential oil loss, if one existed. However, as indicated previously, interviews of several I&C technicians and one foreman indicated they were experienced and aware of at least one important symptom associated with loss of fill-oil, slow and sluggish response to an input change.

Calibration Records

The inspectors reviewed available calibration records to verify VY's experience regarding transmitter failures. No other concerns, except as indicated previously, were identified.

Conclusions

The inspectors concluded that the monitoring methods and associated training had been limited; only zero shift had been trended; no trending of span shift or operational data had been performed; training had been limited to an initial lesson with no plans made to train new technicians; and the surveillance procedures did not ensure that technicians were reminded of the loss of fill-oil symptoms and did not provide instructions to identify and address these symptoms. The inspectors also concluded that the program had been adequate, as evidenced by the recent identification of a failed transmitter. Additional licensee actions are required to ensure that, when all transmitters reach maturity or fall outside the scope of enhanced trending per Bulletin 90-01, Supplement 1, the "surveillance setpoint tracking program" meets the intent of the bulletin supplement for licensees maintaining ability to detect failures.

actuated at the minimum setting. Regarding the transmitters post-LOCA function, the calculation referred to a Yankee Atomic memorandum, dated June 12, 1986. This memorandum, based upon pump shutoff head and valve opening time, showed that a setpoint as low as 260 psig would be adequate to mitigate the consequences of a design basis LOCA.

Based on the above analysis, the inspectors concluded that the calculated error was not a safety concern, but asked the licensee why the FSAR and technical specifications had not been revised to incorporate the results of the setpoint calculation. A similar concern was also expressed in a Yankee Atomic memorandum, dated April 13, 1987. This memorandum, based on a previously-calculated LOCA loop error of ± 34 psig, stated that the "total error deviation... could cause the technical specification limits to be exceeded." The same memorandum recommended that for a long-term solution, the transmitter should be made to sense reactor pressure from a reference leg.

In response to the inspectors' question, the licensee stated that the FSAR and technical specifications limits were correct, because they referred to calculated error under normal operating conditions. The inspectors disagreed with VY's position. The transmitters and associated actuation devices are required to mitigate the consequences of a LOCA. Under LOCA conditions, based upon the calculation results and a loop setting of 325 psig at normal ambient conditions, the loop actuation signal will occur anywhere between 295 and 355 psig. Contrary to the results of the calculation, the FSAR and TS state that the trip setting is between 300 and 350 psig.

As stated previously, the inspectors did not view the setting of this particular instrument loop as a safety issue, but they expressed a concern that the setpoints of other instrument loops using the same rational could exceed the TS limits. This issue is unresolved, pending NRC review of the licensee's actions to address the accuracy of the above and similar instrument loops and to revise the FSAR and technical specifications where appropriate. **(50-271/94-15-02)**

6.0 REVIEW OF MODEL 1151, 1152, AND 1153A TRANSMITTERS

The inspectors reviewed the licensee's records to identify all Model 1151, 1152, and 1153A Rosemount transmitters in safety-related (excluding pressure boundary) applications, to evaluate potential calibration failures, and to verify the results of Vermont Yankee's analysis to identify the cause of the failure.

The inspectors determined that 40 Rosemount transmitters, all Model 1152 from this group, were installed at Vermont Yankee. These model transmitters were not addressed by Bulletin 90-01 and its Supplement and were not included in the enhanced surveillance monitoring program. The licensee had not reported any failures from loss of fill-oil in this group of transmitters.

5.0 ADDITIONAL OBSERVATIONS

In Response 4.(b) to NRC Bulletin 90-01, VY stated that they would calibrate PT-2-3-52C and D every six months, until the instrument trip functions would be replaced by PT-2-3-56A through D. PT-2-3-52C and D provided a permissive signal to initiate core spray. However, a review of the database determined that the transmitters had not been replaced. The inspectors also determined that the reason for transferring the trip functions to PT-2-3-56A-D was that the pressure taps of PT-2-3-52C and D were derived from the bottom of the vessel, rather than from the top. Since the permissive signal from the transmitters was used during accident conditions, when the reactor water is not at its normal operating level, the inspectors reviewed the setpoint calculations to determine how VY had accounted for water level.

This review and a review of the FSAR, technical specifications (TS), setpoint calculations and related documents revealed the following:

1. Table 7.4.3 of the FSAR stated that the trip setting of the transmitters was between 300 and 350 psig and that the required accuracy was $\pm$ 20 psig.

2. Table 3.2.1 of the technical specifications stated that the trip setting of the instruments was between 300 and 350 psig.

3. The instrument loops were calibrated to actuate at 325 psig.

4. Calculation No. VYC-470, Revision 3, dated March 11, 1991, showed that under loss-of-coolant accident (LOCA) conditions, the instrument loop error was $\pm$ 30 psig with a postulated trip between 295 and 355 psig. The same calculation showed that, following a high energy line break (HELB), the postulated trip could be as low as 218 psig and as high as 432 psig.

5. An analysis of the error deviation, included in the calculation, had concluded that the deviation was acceptable.

Because of the large loop errors calculated under accident conditions, the inspectors questioned the bases for the acceptability of the loop error. The licensee provided adequate documentation to show that the transmitters were not required to mitigate a HELB, when the environmental conditions had the greatest effect on the loop accuracy. For post-HELB conditions, the licensee justified the acceptability of the loop error stating that the transmitters were not needed for several hours and, at that time, the environmental conditions would have returned to near normal. In addition, the licensee clarified that the maximum calculated pressure (432 psig) was still below the piping design pressure (450 psig) and that adequate time existed to manually place the system in service if the permissive switch

As in the case of the other safety-related transmitters, the licensee utilized a computerized "surveillance setpoint tracking program" to record and alert the technical staff when the "As-Found Data" of any transmitter falls outside the ±0.25% calibrated span tolerance. When the "As-Found Data" of any transmitter is outside the specified tolerance limits, the licensee reviews the past calibration data to determine if the instrument drift is a repeat occurrence and whether further review is necessary.

However, the reviewed the data for the following post-July 11, 1989, Model 1153B transmitter. For these transmitters the "As-Found Data" was out of tolerance during the last three surveillance periods:

- DPT-10-91A RHR HX Tube to Shell DP

However, the review of calibration data indicated normal drift not associated with fill oil leakage.

Conclusion

The operation of post-July 11, 1989, Model 1153B VY transmitters was reliable and, with no failures, attributed to a loss of fill-oil.

8.0 EXIT MEETING

At the conclusion of the inspection on July 15, 1994, the inspector met with the VY representatives denoted in Attachment 1. At that time, the inspector summarized the scope of the inspection and the results. In particular, the inspectors discussed in detail the bases for two unresolved issues. At that time, the inspectors also informed the licensee that they would further evaluate the issue regarding the setpoint limits of the FSAR and technical specifications. The results of this evaluation, discussed in Section 5.0 of this report, were identified to Mr. M. Watson of the licensee staff. The licensee asked for clarification regarding on August 10, 1994, the inspection results, but made no negative comments regarding the issues discussed.

No proprietary information was reviewed during the course of this inspection.

Attachment 1: Persons Contacted

ATTACHMENT 1

Persons Contacted

Vermont Yankee Nuclear Power Corporation

	D. Calsyn	QSG Supervisor
*	R. Current	I&C Engineer
*	G. A. Maret	Operations Superintendent
	J. Osmond	Equipment Qualification Coordinator
*	R. J. Wanczyk	Plant Manager
*	M. Watson	I&C Manager
	S. Wender	Training

Yankee Atomic

	G. Hengerle	Instrument Engineer

U. S. Nuclear Regulatory Commission

	P. W. Harris	Resident Inspector
*	H. Eichenholz	Senior Resident Inspector

* Denotes those present at exit meeting.