

# VERMONT YANKEE NUCLEAR POWER CORPORATION

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September 11, 2000  
BVY 00-76

U.S. Nuclear Regulatory Commission  
ATTN: Document Control Desk  
Washington, D.C. 20555

- References:
- (a) Letter, USNRC to VYNPC, "NRC Office of Investigations Case Nos. 1-1998-029 & 1-1999-027," Nvy 00-80, dated August 8, 2000.
  - (b) Letter, USNRC to VYNPC, "NRC Integrated Inspection Report 05000271/1999009," Nvy 00-06, dated January 18, 2000.
  - (c) Letter, USNRC to VYNPC, "Plant Performance Review - Vermont Yankee," Nvy 00-34, dated March 31, 2000.

**Subject:** Vermont Yankee Nuclear Power Station  
License No. DPR-28 (Docket No. 50-271)  
Response to Apparent Violation Based on  
Office of Investigations Report Nos. 1-1998-029 & 1-1999-027

This letter is written in response to Reference (a), which documents the NRC Office of Investigations findings relative to case numbers 1-1998-029 & 1-1999-027. The inspection identified an apparent violation of regulatory requirements regarding inadequate supervision of contractors resulting in a violation of 10 CFR 50 Appendix B, Criterion VII, "Control of Purchased Equipment, Materials and Services." Our response to the apparent violation is provided below.

## APPARENT VIOLATION

10 CFR 50 Appendix B, Criterion VII requires, in part, that measures be established to assure that purchased services conform to procurement documents and that the effectiveness of the control of quality by contractors be assessed at intervals consistent with the importance, complexity and quantity of the service.

Contrary to the above, Vermont Yankee (VY) did not provide adequate supervision of contracted personnel during the 1998 outage to control the quality of work. In addition, evidence developed by the NRC office of Investigations indicates that a VY manager deliberately caused the violation to occur.

## RESPONSE:

### Reason for the Apparent Violation

Vermont Yankee (VY) does not contest this apparent violation. Attachment 1 provides a chronology of events that lead up to the apparent violation and supporting justification for the information provided below. Attachment 2 provides affidavits supporting the statements made in Attachment 1.

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VY acknowledges that a violation of our procedure for control of contracted services occurred, however, our review of the events does not support a finding that a VY manager deliberately caused the violation, as described in the Summary of Findings of OI Investigations 1-1998-029 and 1-1999-027. Rather, it appears that the violation was caused by inadequately defined supervisory requirements, inadequate training on contractor control procedures and inadequate communication. We therefore respectfully request that the NRC reconsider its finding that the violation was willful. VY believes that the information included in the Attachments clearly supports a cause determination that the violation was not deliberate.

During the course of our interviews, and therefore possibly the NRC OI interviews, a number of individuals described events using terms interchangeably and inconsistently. For example, a number of people indicated that BW/IP International Inc. technicians could work "independently", meaning VY supervision did not have to be with them 100% of the time. The contractor control procedure in effect at the time defines the term "independent work" as work not needing any VY supervision. We believe that inconsistent use of terms led to some confusion by individuals at the time, and perhaps during the NRC investigations.

We also want to emphasize that the processes in place during the 1998 outage, if followed correctly, would have resulted in the necessary oversight being performed. However, we agree that the processes were not sufficiently followed and corrective actions were necessary.

Finally, we believe that the actions of the Mechanical Maintenance Manager (MMM), the foremen and supervisors do not represent someone attempting to willfully mislead individuals regarding the purchase order status of the contractor workers. Examples of such actions include: generation of numerous event reports by maintenance staff and the MMM, the application of additional review resources, the actions of the day/night supervisors, the MMM post-outage lessons-learned review and request for input and correspondence from the valve contractor.

**Corrective Steps That Have Been Taken and the Results Achieved:**

The failure to adequately control contractor work on the RCIC-20 valve was identified by VY personnel as part of planned quality checks that were integrated into the installation and test procedure (I&T). The event was entered into our corrective action process in April 1998 (Event Report 98-0986). The following is a summary of the primary corrective actions implemented by VY to address this issue:

**Completed Corrective actions:**

1. Upon identification of a contractor inspection qualification issue (Event Report 98-0623), inspections being performed by the subject contractor were put on hold until expectations relative to the training, qualifications and supervisory requirements could be established and implemented.
2. Prior to start-up from the 1998 outage the RCIC-20 valve and other potentially similar valves were inspected and any required additional maintenance was performed by qualified individuals.

3. A "Continuous Process Improvement" (CPI) Program effort was implemented in relation to the control of work accomplished by contractor personnel. The CPI effort was designed to monitor the effectiveness of contractor control and identify actions to improve this control. As a result of the implementation of this effort, an entirely new process has been developed and implemented. Standard expectations for providing oversight of contracted work now include contractor work scope definition and qualifications, contractor control processes, training and supervision, management expectations, worker accountability, staff integration and signature authority.
4. As part of the CPI effort, the procedures governing contract-related work were reviewed, resulting in the development of a new set of procedures. The procurement and oversight of contract work was formerly conducted under Administrative Procedure AP 0847 "Control of Contracted Services" and Vermont Yankee Contractor Indoctrination Guidelines. A review of these documents determined that responsibilities and expectations were not clearly defined. To remedy this, three new procedures were developed and implemented prior to the 1999 refueling outage: Program Procedure PP 7803, "Control of Contracted Services Program", Administrative Procedure AP 0866, "Contractor Control" and Administrative Procedure AP 0867 "Control of Off-Site Contracted Services." A review of the contractor control process during the 1999 refueling outage indicates that work conducted according to these procedures resulted in satisfactory performance.
5. Prior to implementation of PP 7803, AP 0866 and AP 0867, a memorandum was circulated to all maintenance staff regarding contractor control. This memorandum summarized the intent of these new procedures and clarified the expectations for field supervision and contractor signature authority.
6. An Adjunct Instructor Preparation Plan and Training Module was developed and implemented to qualify individuals to perform the duties required as a Designated Representative or Supervisor over contractor personnel. Among the nine objectives of the training module are identification of the codes and standards to be complied with, an explanation of the term "work independently", identification of the jobs associated with a given qualification status and the specific responsibilities of a Designated Representative and Supervisor.
7. During the 1999 refueling outage, the new contractor control processes were exercised and found to be effective in establishing the expectations for control of contracted work.
8. Following the 1999 refueling outage, a self-assessment was conducted to determine if the improved procedures resulted in the desired level of oversight and an improvement in the quality of work performed during the outage. This assessment revealed that contractor supervision during the 1999 refueling outage was satisfactory for all measures of performance, including supervision, observations, quality surveillances, procedure compliance, inspections, lost time accidents, exposure, supervisory involvement and contractor feedback.

**Corrective Steps That Will Be Taken to Avoid Further Violations:**

1. Continued use of the CPI Process to identify areas of improvement.
2. Continued oversight by line management supported by VY's Quality Assurance department assessments to verify that corrective actions remain effective and adjustments are made when necessary.

**Date When Full Compliance Will Be Achieved:**

Compliance was achieved on April 28, 1998 when the subject valve inspections were completed by qualified VY personnel. VY also implemented a number of corrective actions shortly after the violation occurred and additional corrective actions following the 1998 outage to improve the control of contracted services and prevent recurrence of similar problems in the future.

To verify the effectiveness of these improvements, VY performed a QA surveillance of our contractor control implementation during the 1999 outage and found contractor control implementation to be satisfactory. In References (b) and (c) the NRC provided information through the inspection program that also supports these observations.

We trust that the information provided is responsive. Should you have any questions or desire additional information, please contact us.

Sincerely,

VERMONT YANKEE NUCLEAR POWER CORPORATION

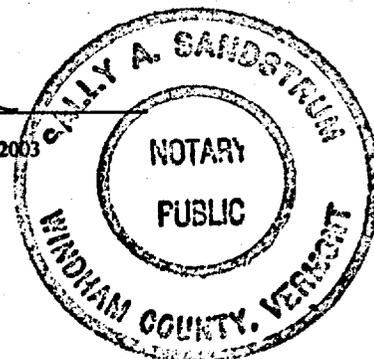
*Robert J. Wanczyk*

Robert J. Wanczyk  
Director of Safety and Regulatory Affairs

STATE OF VERMONT            )  
  )ss  
WINDHAM COUNTY            )

Then personally appeared before me, Robert J. Wanczyk, who, being duly sworn, did state that he is Director of Safety and Regulatory Affairs of Vermont Yankee Nuclear Power Corporation, that he is duly authorized to execute and file the foregoing document in the name and on the behalf of Vermont Yankee Nuclear Power Corporation, and that the statements therein are true to the best of his knowledge and belief.

*Sally A. Sandstrom*  
Sally A. Sandstrom, Notary Public  
My Commission Expires February 10, 2003



Attachments

- cc: USNRC Region 1 Administrator
- USNRC Resident Inspector – VYNPS
- USNRC Project Manager – VYNPS
- Vermont Department of Public Service

Docket No. 50-271  
BVY 00-76

**Attachment 1**

**Vermont Yankee Nuclear Power Station**

**Details of Event**

## **Description of the Events**

In connection with the 1998 outage, Vermont Yankee (VY) retained BW/IP International Inc. (BWIP) to provide valve repair services. This contract was designated as a non-nuclear-safety (NNS) contract, signifying that any work on safety-related systems or components would be performed under VY's Quality Assurance program and the technical adequacy of the work would be the responsibility of a VY-qualified individual.

In 1997, VY had issued a new procedure, AP 0847 "Control of Contracted Services." Because of this new procedure, there were discussions within the maintenance department prior to the 1998 outage concerning whether a supervisor was permitted to supervise a number of technicians performing activities in different locations, or whether a supervisor was required to witness all contractor work. The maintenance department concluded that each supervisor could oversee multiple crews and did not have to be present at each work location for 100% of the time, provided that the supervisor or other qualified VY personnel inspected key attributes of the work.

The Mechanical Maintenance Manager (MMM) considered whom to appoint to supervise the BWIP technicians. In previous outages the valve work was supervised by VY maintenance engineers. However, the MMM had heard that there had been some problems with the quality of valve maintenance by contract technicians in the previous outage (he was not the MMM and had not been involved with the valve work in the previous outages). Based on this, he decided to designate experienced VY maintenance mechanics to supervise the BWIP technicians. The MMM designated two VY mechanics with valve maintenance expertise as the VY Supervisors for the day and night shifts. The MMM thought that this would result in closer oversight and improve the quality of valve work by the contractor technicians.

The VY day and night supervisors responsible for the valve work received a short supervisory training session, but this training was fairly general and dealt primarily with employee relations, and not on the specifics of how valve work should be supervised. Based on the recollection of these individuals and a review of training records, neither received formal training on AP 0847, or information regarding the contract, prior to the 1998 outage.

Prior to commencing work during the 1998 outage, the BWIP valve technicians received general and plant specific training. However, around the start of the outage VY's Quality Assurance (QA) department questioned whether the BWIP technicians were qualified to perform In-Service-Testing (IST) and other code-required inspections. This question related to the IST required inspections of safety related check valves performed pursuant to VY procedure OP 4222 "Disassembly and Inspection of Check Valves", and did not relate to the Generic Letter (GL) 89-10 Motor Operated Valve (MOV) work or to chamfering (which is not an IST or code required inspection). With respect to the IST issue, the VY QA Program required that personnel not identified in ANSI N18.1-1971 who perform inspections, examinations and testing must be qualified to ANSI N45.2.6-1978. The QA department issued an Event Report (ER 98-0623) to require analysis and resolution of this issue.

At this time, the two VY valve supervisors were informed that the BWIP technicians could not perform any inspection activities until this issue was resolved, and that the two VY supervisors would have to perform the inspections.

Following issuance of ER 98-0623, there were a number of meetings between individuals in the Maintenance, Training, and QA departments to resolve this issue. As one possible solution to the problem, the MMM asked BWIP whether their technicians possessed ANSI N45.2.6 certifications and also initiated a revision to the Purchase Order so that BWIP could provide additional certifications and QA services if they were available. However, BWIP reported back to the MMM that only one of its technicians had an ANSI N.45.2.6 certification, so this possible solution was not viable.

The Technical Support Manager (TSM), was assigned to investigate and resolve ER 98-0623. He determined that the IST inspections of check valves were technician/repairman functions and were not the type of inspections requiring ANSI N.45.2.6 qualification. He also determined that that a contractor could perform these verifications independently if an evaluation in accordance with the VY contractor indoctrination program determined that the individual was qualified to a level equivalent to a plant mechanic. The BWIP technicians, however, had not undergone VY plant mechanic qualification training and therefore were not qualified to an equivalent level. Consequently, they could not perform the IST inspections of the check valves independently.

According to the MMM's testimony and current recollection, VY determined that the BWIP technicians could not perform IST of the check valves. After the question concerning the qualification of BWIP technicians was raised, the MMM directed the VY supervisors to make sure that they or other qualified VY personnel, had performed all qualified inspections (i.e., ISI, IST, and QC inspections), or if any had been done by BWIP technicians, to re-perform the inspections. From that point on, the VY supervisors were directed to make sure that only qualified individuals performed these inspections.

The question concerning the ability of contractors to perform inspections again resulted in a discussion of the degree of supervision that was required. According to the recollection of a number of individuals, it was agreed that contractor technicians could perform certain activities in the field without a VY supervisor being present<sup>1</sup>, as long as a VY supervisor or other qualified VY person was checking critical attributes.

The night shift maintenance manager recalls agreement with QA that BWIP technicians could not perform IST and that the contractor technicians could not work independently. The TSM recalls discussing with the night shift manager that the necessary direct supervision did not mean that a supervisor had to be present 100% of the time but did need to verify critical attributes of the work, and the TSM provided examples. The mechanical maintenance foremen also recall that, throughout the outage, it was understood that BWIP technicians could not work independently. They also understood that while the VY supervisors did not have to be present in the field all the time work was being performed, they needed to be there at certain times, such as before a valve was being assembled, and were responsible for accepting BWIP's work.

The day shift supervisor recalls learning at the start of the 1998 outage that the BWIP technicians might not be qualified. His best recollection is that he was told, "At this time, the workers are not qualified to do inspections on their own. We are trying to get this changed." He was told that he had to do the inspections himself until this issue was resolved. He remembers that it was the MMM who told him this. Later, he remembers that the MMM told him that the problem was resolved. He does not recall the exact conversation, but just that "the problem with the purchase order has been resolved." He does not know how the purchase order had been changed.<sup>2</sup> In fact he tells us that he may just have asked the MMM if the problem with the purchase order was resolved and the MMM may just have said yes.

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<sup>1</sup> The MMM explained in his OI interview that it would be appropriate, for example, to allow a contractor to do minor cleaning of parts prior to inspection without direct supervision of that skill of the craft activity, but that there would be other attributes of the job to which VY would have to pay close attention. 1/20/99 Tr. at 12-13, 29-30. See also 6/8/99 Tr. at 24

<sup>2</sup> The day shift VY supervisor may have known that the MMM was considering changing the purchase order to obtain additional ANSI N.45.2.6 certifications from BWIP if it could provide them. The MMM may have mentioned pursuing this possibility when the qualification issue in ER 98-0623 was raised. 6/8/99 Tr. at 38.

The day shift supervisor also does not remember anyone telling him that the workers could work without supervision or "independently." In fact, he does not remember anyone using the term "independently" until later investigations after the outage was over. He understood that he was responsible for supervision, but also that he did not have to be physically present when everything was done.<sup>3</sup> He gave the technicians in his crews instructions that he wanted to see specific items, such as the blue checks and the valves before re-assembly and he understood that he was responsible for seeing the final results, checking anything questionable and completing the paperwork.

The night shift supervisor also recalls that, when the BWIP valve technicians first came on site, there were questions raised about their qualifications to work on safety related valves. He also recalls that there was a period when the technicians could not do work while this issue was being resolved. At the end of this period, he recalls that his foreman told him at a pre-shift meeting that per the MMM the contractors had been determined to be qualified<sup>4</sup>, and that the MMM later passed on the same thing.

He stated that being qualified to work on safety class equipment meant one and the same as being qualified to work independently (i.e. with little or no supervision). He does not recall any discussion of whether the contract was safety-related or non-nuclear-safety. He still understood that VY would be applying oversight by periodic inspection, which to him meant looking at critical attributes, and that the BWIP technicians were working under VY's QA program. He tried to witness work or use independent inspectors who might be available. However, he has told us that he believed that the determination that the contractors were qualified to work on safety class equipment meant that they could sign off on inspections and that he had no final sign off responsibility for a package.

The night shift supervisor attempted to supervise the BWIP technicians, but was unhappy with their performance and the quality of their work. He initiated five Event Reports identifying problems with BWIP's valve work. He later asked to be relieved of his responsibility of leading the valve work effort. After he was relieved, the remainder of the valve work was moved to day shift and performed under the oversight of the day shift supervisor.

Event Reports related to valve work during the 1998 outage were also written by a VY engineer with responsibility for GL 89-10 matters. For work that was being performed in connection with a modification of valve RCIC-20, the installation and test procedure (I&T), required him to perform a visual inspection of the valve to verify that the internal work was correct before the valve was re-assembled. However, the BWIP technicians working on this valve during the night shift reassembled the valve prior to the required inspection. The VY engineer's review of the work package and discussions with the BWIP technicians led him to believe that the technicians might have applied incorrect chamfers. He therefore required the valve to be reopened, and it was discovered that chamfer on the wedge seat and body guides was only 1/32 of an inch, as opposed to 1/16 of an inch required by VY procedures.<sup>5</sup> Upon investigation of this matter, as discussed in Event Report 98-0986, VY concluded that supervisory oversight and work control was inadequate, both because the VY supervisor had not been involved with the chamfering work and because the valve had been reassembled without verification of the work.

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<sup>3</sup> While we have not had the opportunity to review the day shift VY supervisor's OI interview transcript, during the MMM's interview the OI investigator described his statement as follows: "I knew they could go out on their own. I was told this. But I knew I was still responsible for visual testing inspection." 6/9/99 Tr. at 27. This characterization appears consistent with our interview of the day shift supervisor -- that he understood that he did not have to be present with the technicians all the time they were performing work (that the technicians could be in the field doing work items on their own), but that he still needed to supervise by checking key attributes.

<sup>4</sup> The foreman does not recall this specific conversation but has told us that throughout the outage it was his understanding that the BWIP technicians could not work independently. He stated that BWIP technicians were qualified to the work on which they had been trained by VY, but they were not qualified to sign off and do inspections.

<sup>5</sup> Another safety-related MOV, which was disassembled in the 1998 outage because the valve was "chattering," was found to have incorrect chamfering, but the incorrect chamfering had been applied in a previous outage. VY found no other instances of incorrect chamfering on work performed during the 1998 outage.

Because of the valve problems that were being reported, the MMM also initiated an ER to require evaluation of any trends in the reported problems. He believed that the identification of problems was indicating that his supervisors were overseeing BWIP's work, catching problems, and requiring appropriate corrective action.

Based on our understanding of the facts as described above, VY believes that the inadequate supervision of BWIP's valve work during the 1998 outage was caused by lack of clear instruction to and training of the VY supervisors, confusing and poorly understood requirements in the VY procedures and a failure to follow procedures (i.e. the missed I&T step related to the inspection of RCIC-20). The supervisors received no formal training on AP 0847, and no formal training specific to the supervision of valve work by contractor employees working under an NNS contract. While the supervisors appeared to have understood that they were required to check critical attributes, it was left to each supervisor's discretion to determine what activities to monitor over and above those QC hold points and engineering inspections included in the procedures.

### **Office of Investigation Findings**

The Summary of Findings of OI Investigations states,

[T]he day shift supervisor testified that he was told by the Mechanical Maintenance Manager that the purchase order had been changed from NNS to safety-related, and that contractors could sign off on the paperwork, which led him to believe that the contractor technician could work independently. Afterwards, others, including the night shift supervisor, also understood that the contract technicians could perform their work independently.

Based on our inquiry, we believe that these OI findings relate to how the resolution of the qualification issue (discussed above) was communicated to the two supervisors. Based on our interviews, we understand that the communications summarized in the preceding section, are the only communications that the VY supervisors recall that might pertain to OI's findings.

Our review of the facts does not support the conclusion that the MMM told the supervisors that the BWIP technicians could work independently because the contract had been changed to a safety related contract. While there is no precise record or recollection of exactly what was said, the interviews suggest that the supervisors were told that the BWIP technicians (1) were qualified to perform their work assignments, and (2) that the supervisors did not have to be present with each crew at all times.

Our interview with the day shift supervisor indicates that he understood that he still had supervisory responsibility and he exercised that responsibility. He only recalls being told that the purchase order problem was resolved.

Our interview with the night shift supervisor reveals that he understood or interpreted communications on the resolution of the qualification issue as indicating that he was no longer ultimately responsible for the technician's work. However, his interview indicates that this interpretation was based on being told that the technicians were qualified to work on safety-related equipment.<sup>6</sup> At most, this appears a case of miscommunication.

Moreover, VY's review of this matter in 1998 indicates that like the day shift supervisor, the night shift supervisor also understood that he had supervisory responsibility. Event Report 98-0988 states:

Interviews with [the two supervising craftsmen] concluded that they understood their responsibilities in supervising valve repair perform (sic) by contract personnel (i.e. Supervisory Role, Track Work, Answer Work Package Questions, Coordinate Tagging, Make Decisions on Work Efforts, Watch Contractor Work, Ensure Maintenance Performed Correctly).

Further, Event Report 98-0623 includes statements, from the VY supervisors, that they witnessed IST testing for check valves. Moreover, the night shift supervisor's attempts to supervise work up to the point that he asked to be relieved, and his initiation of event reports, indicate that he understood that he still had supervisory responsibilities. In addition, the VY foreman has told us that there is no question in his mind that the night shift supervisor understood he was meant to supervise the BWIP technicians, because he had discussions with him during the outage stressing the need to supervise the work in the field. Given the night shift supervisor's unhappiness with the performance of the technicians he was required to supervise, and the problems that ensued, he may have some natural propensity to remember events in a manner diminishing his responsibility. However, the weight of the evidence suggests to VY that he was not relieved of this responsibility by any statement of the MMM or any other VY employee.

We also note that "working independently" is a phrase that can be used casually in a sense different from the definition in AP 0847 and therefore readily can lead to misunderstanding. This potential for confusion was even greater in the 1998 outage and in the ensuing months when OI conducted its initial interviews, because the VY supervisors who were questioned had not received formal training on AP 0847. Consequently, the recollection by a number of individuals of the discussions and decisions (i.e. that VY supervisors did not need to be present in the field all the time when BWIP technicians were working on valves, as long as they were checking key attributes) could easily have been mischaracterized in later interviews as statements that BWIP technicians could be off working in the field "independently."

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<sup>6</sup> Event Report 98-0988 states:

Some confusion/frustration was noted by the craftsmen in the prerequisite sign off ("Independent Contractor", "Qualification/Certification") on many of the data forms used during valve repairs . . . Maintenance Engineers told the craftsmen that the contractor was qualified to perform the procedure and had the requisite training. Why then did the contractor require such supervision if they were qualified to perform the work? The intent of this prerequisite was only that the contractor had the training on the use and filling out of the form, not that they could independently perform the valve repairs.

Perhaps his recollection of being told that the contractors were qualified relates to this subject – that the contractors were qualified to perform the work on which they had been trained by VY.

### **The Mechanical Maintenance Manager's Denial**

The Summary of OI Findings states that the MMM could not deny that he had told the day shift supervisor that the procurement order had changed from NNS to safety related. This does not appear to be a fair characterization. The MMM's interview transcripts reveal the following exchanges:

Q. Did you direct any of the temporary supervisors to have the contractors work on aspects of work that they weren't qualified to do?

A. Boy, geez, I hope not. I don't recall doing that.

Q. Okay.

A. I wouldn't have done that knowingly.

Q. Okay.

A. Absolutely not.

1/20/99 Tr. 44.

Q. Did you make any statement that, you know, it changed and they can do anything and everything but visual testing inspections because it was now a safety-related purchase order?

A. Boy, I don't recall saying that. If I did, I made a mistake and miscommunicated, because that -- certainly the purchase order didn't change, and I wouldn't have --

Q. Right.

A. I wouldn't have wanted to have communicated that to him.

Q. Right.

A. That just didn't make a whole lot of sense.

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Q. Did someone direct you to tell [the day shift supervisor] that the contract had changed, you know, that these guys were now safety-related and they could work on their own?

A. Absolutely not. I believe -- I know I never told him that, and -

Q. That's your sworn testimony under oath?

A. I swear I – you know, I don't – I'll say I don't recall telling him that, because I had no reason to tell him that. That wouldn't have made any sense.

Q. So you can't out-and-out say no, I didn't say that.

A. I can't out-and-out say that.

Q. Is there some reason why you can't definitively say absolutely didn't tell him that?

Because what's making you hesitate? Is there something that happened that –

A. No, because I can't say that I would have wanted to say that, because I know it's true that the purchase order wasn't changed. So if I said it to him on the fly and made a miscommunication there, that's possible.

Q. Okay. And how would you like say it on the fly, you know, miscommunicate something like that?

A. I can't even – I don't even recall that, because I can't even imagine me saying that.

Q. Okay.

A. I really can't. Because the purchase order was not changed, so there was no reason for me to go to him and say that –

Q. Was the work falling behind to a point where not enough was getting done and the schedule wasn't being met?

A. No, I'll say firmly that I didn't say that, all right?

6/8/99 Tr. at 27-30. The MMM also agreed to take a lie detector test (id. at 35) – an offer that OI apparently declined to pursue.

### **Relationship to Work on RCIC-20**

The violation, which the OI investigation characterizes as deliberate, relates to the improper chamfering of the RCIC-20 valve. However, there does not appear to be a causal connection between the recollections of the VY supervisors and the work that was performed on this valve. The day shift supervisor supervised the BWIP technicians who worked on the day shift, while the chamfering work on the RCIC-20 valve was performed during the night shift. While the night shift supervisor normally supervised BWIP technicians on the night shift, he was sick on the night when the RCIC-20 valve was reassembled and another VY craftsman was assigned to supervise the valve crew. Consequently, we are not aware of any direct communication between the MMM and the supervisor filling in for the night shift supervisor who was out sick that resulted in the re-assembly of the RCIC-20 valve in violation of procedures.

## Conclusion

VY Procedure AP-0847, as it existed during the 1998 outage, defined Independent Work as follows:

Work performed by contractor personnel which is not subjected to first hand verification by permanent plant personnel, either directly through continuous supervision or indirectly through physical inspection of key attributes (for example, verification of the satisfactory performance of : parts installation; setpoint adjustment; cable termination; machining or lapping; torquing of bolts; lubrication; shaft alignment, etc.). Also, work which progresses to the point that "irreversible" actions (e.g., component or system closure) have occurred without involvement of permanent plant personnel as noted above. Independent work is typically accepted on the basis of contractor sign-off on work documents, supplemented by applicable post-maintenance testing.

During the 1998 outage, VY determined that the supervisors responsible for the work by BWIP technicians did not have to be present 100% of the time when the technicians were performing jobs (i.e. that BWIP technicians could work in the field on their own as long as the supervisors or other qualified VY personnel checked key attributes of the work). This determination is consistent with AP 0847, because under the definition in that procedure, a contractor's work would not be considered independent if VY-qualified personnel were checking the key attributes. The determination was communicated to the VY supervisors perhaps by the MMM among others. It is possible that these communications were misunderstood, or perhaps described incorrectly later during investigative interviews, but VY has not uncovered any evidence that the MMM told his supervisors that the BWIP technicians could work independently within the meaning of AP 0847.

There are also other potential explanations for the confusion. The day shift supervisor was probably aware that the MMM was pursuing the possibility of obtaining additional certifications for the BWIP technicians, and perhaps when he learned that "the purchase order problem had been resolved," he inferred that additional certifications had been obtained. Such an inference by the day shift supervisor, however, would not make the MMM guilty of willful misconduct; and in any event, the day shift supervisor apparently understood even after this communication that he was responsible for supervising the BWIP work and checking anything that he considered important.

In any event, there does not appear to be any causal connection between the recollections of the VY supervisors and the improper chamfering of the RCIC valve. Neither of these individuals were on duty on the night when the RCIC-20 valve was reassembled without VY engineering reviews and sign-offs, required by both the I&T procedure and maintenance procedure controlling the work activity.

Docket No. 50-271  
BVY 00-76

**Attachment 2**

**Vermont Yankee Nuclear Power Station**

**Supporting Affidavits**

**AFFIDAVIT OF RICHARD L. RUSIN**

CITY OF VERNON )  
STATE OF VERMONT ) ss:

I, Richard L. Rusin, hereby duly sworn according to law, depose and state as follows:

1. I am a resident of the State of Vermont. I am employed by Vermont Yankee Nuclear Power Corporation (Vermont Yankee) and work at the Vermont Yankee Nuclear Power Station in the Engineering Department. Presently, I am a supervisor in the Engineering Department. My business address is Governor Hunt Road, P.O. Box 250, Vernon, VT 05354.
2. The purpose of this affidavit is to set forth the facts as I recall them related to the findings by the Office of Investigations that BWIP valve technicians were not properly supervised during the 1998 refueling outage and that this lack of supervision was the result of a statements attributed to me. I have personal knowledge of the facts stated herein and believe them to be true and correct to the best of my information and knowledge.
3. Around the start of the 1998 outage, Vermont Yankee's quality assurance department questioned whether the BWIP technicians were qualified to perform In- Service Testing (IST) and code-required inspections. This question related to the IST of safety related check valves performed pursuant to VY procedure OP 4222, and did not relate to the motor operated valves (MOVs) subject to Generic Letter (GL) 89-10 or to valve chamfering (which is not an IST or code required inspection). The QA department issued an Event Report (ER 98-0623) to require analysis and resolution of this issue.
4. Following the identification of this issue, I believe that the two Vermont Yankee mechanics who had been assigned to supervise the BWIP technicians were informed that the BWIP technicians could not perform any inspection activities until the issue was resolved, and that the two VY supervisors would have to perform the inspections.
5. A number of meetings were held between individuals in the maintenance department, training department and QA department to resolve the issue raised in ER 98-0623. I also asked BWIP whether its technicians possessed N45.2.6 certifications and initiated a revision to the Purchase Order so that BWIP could provide additional certifications and QA services. BWIP reported back to me, however, that only one of its technicians had an N.45.2.6 certification, so this possible solution was unavailable.
6. The resolution of ER 98-0623 was that the BWIP technicians could not perform IST. The question concerning the ability of contractors to perform inspections rolled into a discussion of the degree of supervision that was required. It was agreed that technicians could perform certain activities in the field without a VY supervisor being present, as long as the VY

supervisor or other qualified VY personnel were checking critical activities. I also recall that these discussions included consideration of whether the BWIP technicians were qualified to perform and sign off on work steps other than IST, ISI and QC inspections. To the best of my recollection, the consensus was that the VY training coupled with the experience of the BWIP technicians qualified them to perform and sign for the completion of procedural steps that were within the skill of the craft, subject to the VY supervision required for a non-nuclear safety-related contract.

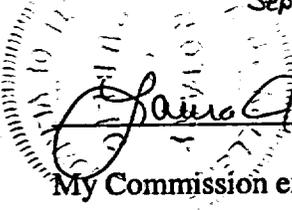
7. I believe that any communications by me to the VY mechanics acting as supervisors would have been consistent with this resolution. I did not tell the VY supervisors or anybody else that the BWIP technicians could perform work independently because the contract with BWIP had been changed to a safety-related contract.



Richard L. Rusin

Subscribed and sworn to before me  
this 6<sup>th</sup> day of August 2000.

~~September~~



James A. Keeler  
My Commission expires: 2/10/03



8. During the performance of these duties, I was dissatisfied with the performance and work quality of the BWIP personnel. I initiated five Event Reports identifying problems with BWIP's valve work. On May 28, 1998, I described these same concerns in a memo and asked to be relieved of my responsibility of leading the valve work.
9. I was sick and did not work on the night the V13-20 valve was reassembled during the 1998 outage.

*Michael A. Jurkowski*

Michael A. Jurkowski

Subscribed and sworn to before me  
this 6<sup>th</sup> day of August 2000.

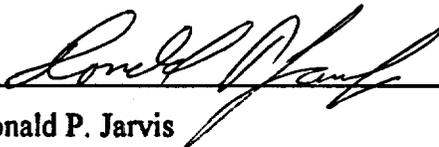
*Septembre*

*Jana Q Keele*

My Commission expires: 2/10/03

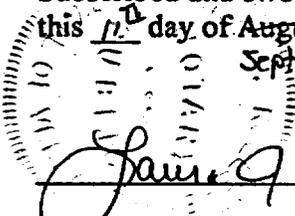


8. During the 1998 outage, I understood that I was responsible for supervision, but also that I did not have to be physically present when everything was done. I gave the technicians in my crews instructions that I wanted to see specific items, such as the blue checks and the valves before re-assembly. I understood that I was responsible for seeing the final results, checking anything questionable and completing the paperwork.
9. I was not involved with the work on the chamfering of the RCIC-20 valve, which I believe was performed during the night shift.

  
\_\_\_\_\_  
Donald P. Jarvis

Subscribed and sworn to before me  
this 11<sup>th</sup> day of August 2000.

September

  
  
\_\_\_\_\_  
My Commission expires: 2/10/03

## SUMMARY OF VERMONT YANKEE COMMITMENTS

BVY NO.: 00-76

The following table identifies commitments made in this document by Vermont Yankee. Any other actions discussed in the submittal represent intended or planned actions by Vermont Yankee. They are described to the NRC for the NRC's information and are not regulatory commitments. Please notify the Licensing Manager of any questions regarding this document or any associated commitments.

COMMITMENT	COMMITTED DATE OR "OUTAGE"
None	N/A