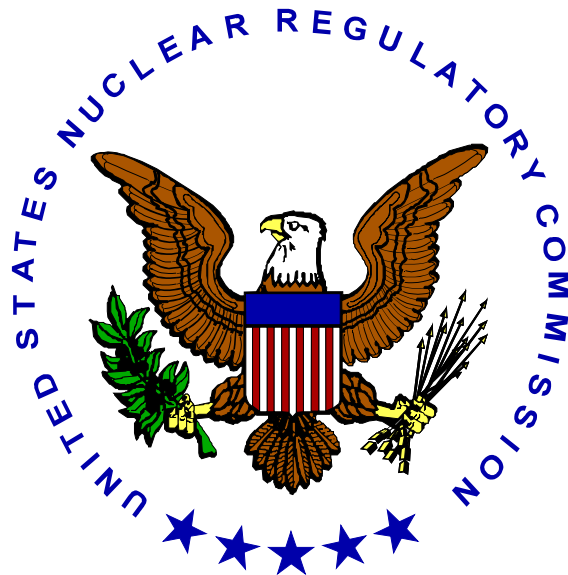


PUBLIC'S CONCERNS WITH MILLSTONE
INDEPENDENT CORRECTIVE ACTION\
VERIFICATION PROGRAM (ICAVP)

CASE NO. 97-05S 1/13/98

OFFICE OF THE INSPECTOR GENERAL EVENT INQUIRY



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VERIFICATION PROGRAM (ICAVP)

CASE NO. 97-05S

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CHRONOLOGY

<u>Date</u>	<u>Event</u>
June 1996	NRC designates Millstone 1, 2, and 3 as Category 3 plants on the NRC's watch list. Plants in this category require Commission authorization to resume operations.
August 6, 1996	NRC Chairman announces NRC's plan to require NNECO to obtain third-party organization to conduct Independent Corrective Action Verification at Millstone 1, 2 and 3.
August 12, 1996	Meeting between NRC and licensee officials to discuss ICAV?.
August 13, 1996	Licensee commits to ICAVP in letter to NRC.
August 14, 1996	NRC issues Confirmatory Order directing licensee to contract with third party to implement ICAVP.
November 3, 1996	NRC creates Special Projects Office (SPO) within NRR to provide specific NRC management focus on future activities at Millstone.
January 3, 1997	SECY 97-003, "Millstone Restart Review Process" issued. Contains the NRC's Restart Assessment Plan for Millstone Unit 3 as well as the NRC's ICAVP Oversight Inspection Plan.
March 11, 1997	NRR Director issues letter clarifying August 14, 1996, Order regarding ICAVP starting point.
March 28, 1997	NRC identifies two systems for ICAVP review at Millstone 3.
April 7, 1997	NRC provides conditional approval for Sargent and Lundy (S&L) as independent third party to conduct ICAVP for Millstone I & 3.
May 28, 1997	NRC provides conditional approval for Parsons Power Group, Inc., as ICAVP contractor for Millstone 2.
July 17, 1997	NRC staff presents ICAVP acceptance criteria during public meeting; final two systems are selected for Millstone 3 ICAV? review.

BASIS AND SCOPE

The Office of the Inspector General (OIG), U.S. Nuclear Regulatory Commission (NRC), initiated this Event Inquiry to address concerns from the public related to the Millstone Nuclear Power Station (Millstone) Independent Corrective Action Verification Program (ICAVP). On August 14, 1996, the NRC issued a Confirmatory Order (Order) directing Northeast Nuclear Energy Company (NNECO), the licensee, to immediately establish an ICAVP for Millstone Units 1, 2, and 3. The purpose of the ICAVP was to confirm that each Millstone unit was operating in conformance with its licensing and design bases. The Order required the licensee to obtain the services of an independent third-party to act as the ICAVP contractor.

Based on concerns raised by the public, OIG addressed the following issues:

- ! The selection and independence of the ICAVP contractors.
- ! The point at which the NRC authorized the ICAVP contractor to begin its review and the number and type of plant systems to be reviewed.
- ! The NRC's acceptance criteria for plant systems reviewed during the ICAVP.

BACKGROUND

On August 6, 1996, the NRC Chairman held a news conference in New London, Connecticut and stated, among other things, that NNECO would be required to obtain the services of a third-party organization to conduct an "Independent Corrective Action Verification" of licensee activities at Millstone Units 1, 2, and 3. The Chairman said the objective of this effort would be "to provide a high level of confidence in the process used by the licensee to identify, review, and correct problems."

During a meeting with NNECO officials on August 12, 1996, NRC staff identified the need for independent verification of the licensee's programs for identifying and resolving existing discrepancies between the plant's configuration and its licensing and design bases. In an August 13, 1996, letter to the NRC, the licensee indicated that it planned to voluntarily comply with the third-party verification effort.

On August 14, 1996, the NRC issued a Confirmatory Order directing NNECO to establish an ICAVP for Millstone Units 1, 2, and 3 "to confirm that the plant's physical and functional characteristics are in conformance with its licensing and design bases." The NRC issued this Order to the licensee after identifying a significant number of design and configuration control issues at the three Millstone units. The Order stipulated that the ICAVP review would begin after the licensee had completed the problem identification phase of the Configuration Management Program (CMP): a licensee effort to ensure that the design of the Millstone units was in conformance with NRC requirements and was accurately documented.

The Order also required the licensee to obtain the services of an organization, independent of the licensee and its design contractors, to conduct the multi-disciplinary review of the Millstone units. The Order added that "the review is to provide independent verification that, for the systems selected, the licensee's CMP has identified and resolved existing problems, documented and utilized licensing and design bases, and established programs, processes, and procedures for effective configuration management in the future." The Order also stated that the selection of the independent verification contractor had to be approved by the NRC.

On April 7, 1997, the NRC conditionally approved the licensee's selection of Sargent and Lundy, LLC, (S&L) as the independent third-party to conduct the ICAVP review for Millstone Units 1 and 3. The NRC concluded that S&L had sufficient technical experience and independence to conduct the ICAVP. On May 28, 1997, the NRC similarly approved the licensee's selection of Parsons Power Group, Inc. (Parsons) as the ICAVP contractor for Millstone Unit 2.

ISSUE 1: THE SELECTION AND INDEPENDENCE OF THE ICAVP CONTRACTORS

NRC directs independent review be conducted

The Order issued to NNECO on August 14, 1996, "direct(ed) the Licensee to obtain the services of an organization, independent of the Licensee and its design contractors, to conduct a multi-disciplinary review of Millstone Units 1, 2, and 3." Further, "(t)he ICAVP is to be conducted by an independent verification team whose selection must be approved by the NRC."

During a meeting with the NRC on September 24, 1996, the licensee indicated that requests for proposal to conduct the ICAVP review had been issued to three companies: (1) S&L; (2) Bums and Roe; and (3) Parsons Power Group, Inc. (Parsons).

On December 18, 1996, the licensee requested NRC approval of S&L as the ICAVP contractor for Millstone Unit 3, and on January 15, 1997, NU requested approval of S&L with respect to Millstone Unit 1. On February 14, 1997, NU requested NRC approval of Parsons as the ICAVP contractor for Millstone Unit 2.

In SECY 97-003, dated January 3, 1997, the NRC staff pointed out that it had established checks and balances in the ICAVP contractor selection process to assist in ensuring independence. For instance, the NRC stipulated that the ICAVP contractor would have *no current* involvement with the Millstone unit being reviewed, *limited* prior involvement, and no ownership interest in NU. In addition, the NRC stipulated that *individual* ICAVP team members would have no prior involvement in the unit being reviewed and no financial interest in the licensee, such as stocks or bonds, or participation in the pension plan. The NRC stated that "this approach recognizes the practical difficulty in identifying a technically competent organization that has no previous involvement with the licensee."

NRC approves S&L as ICAVP contractor

On April 7, 1997, the NRC issued its conditional approval of S&L for Millstone Units 1 and 3, concluding that S&L had sufficient technical experience and independence to conduct the ICAVP. However, the NRC restricted S&L from performing reviews in two areas because of its previous efforts related to "seismic qualifications, specifications, standards, and procedures for Millstone Unit 1, and its involvement in an analytical study regarding interaction between nonseismic Category 2 systems and seismic Category I safety systems at Millstone Unit 3." The NRC also identified potential conflicts based on S&L's prior work related to the standardized fuse control process and life cycle management, but NRC found that this work did not affect S&L's ability to perform as the ICAVP contractor.

The NRC based its conditional approval on a review which concluded that S&L was sufficiently financially independent of the licensee to conduct the ICAVP. The NRC determined that S&L had no current involvement with Units 1 or 3 when it was proposed as the ICAVP contractor and that over the past 10 years S&L received approximately \$700,000 in revenues from the licensee.

This figure amounted to 0.035 percent of S&L's gross revenues during this 10-year period (based on annual revenues of more than \$200 million).

The NRC concluded that the amount of S&L's financial involvement with the licensee "did not comprise a sufficient financial interest on which to question the objectivity of the contractor." In addition, the NRC noted that the licensee had placed a restriction on S&L from seeking or performing any work at any of the licensee's facilities until one year after the completion of the ICAVP. The NRC also reviewed S&L's retirement plan and determined that, although it may have direct or indirect ownership interests in the licensee, its design contractors or nuclear steam supply system vendors, the investment portions are managed by a firm independent of S&L and each individual investment option is widely diversified.

In its review of S&L, the NRC also addressed several issues about the selection of S&L that had been raised at previous public meetings. One of these issues questioned the process whereby the licensee selected and paid for the ICAVP contractor. The NRC determined that it was appropriate for the licensee to assume the costs associated with the ICAVP and added that the NRC would closely oversee interaction between the licensee and S&L. The NRC concluded that these actions "provide substantial assurance of an independent objective review by the contractor."

The NRC also addressed concerns related to work that S&L was performing for the NRC pursuant to a two-year contract, valued at \$1,845,431, beginning on October 1, 1996, to provide nuclear technical assistance for design inspections. The NRC contract prohibited S&L from entering into contractual arrangements with any nuclear power plants based on work developed as a result of this contract. However, the NRC noted that the ICAVP contractor was to be independent from the licensee, not the NRC.

NRC approved Parsons as Millstone 2 ICAVP contractor

On May 28, 1997, the NRC approved Parsons as the ICAVP contractor for Millstone Unit 2. The NRC reviewed work that Parsons had performed at Millstone and concluded that "the work activities were programmatic in nature, and work did not directly change any existing process, procedure, or design." With respect to the financial independence of Parsons, the NRC found it had annual revenues of about \$1.5 billion over the last five years, while it received about \$5 million over the last 10 years based on work performed for the licensee (\$460 thousand of this was nuclear-related work). The NRC noted that the Parsons Employees Stock Ownership Plan did not invest in outside companies and that Parsons employees did not control investment decisions in their 401k program. The NRC also approved the licensee's use of Parsons to perform seismic reviews for S&L at Millstone Units 1 and 3.

Former Millstone employee raises concerns about the independence of the ICAVP contractor

A former Millstone employee referred OIG to the NRC's Order which directed the licensee to obtain the services of an independent contractor to perform the ICAVP review. According to this

former Millstone employee, the Order stipulated that the contractor have no prior involvement with the licensee.

The former Millstone employee claimed to OIG that S&L was selected as the ICAVP contractor for Millstone Units 1 and 3 despite performing more than \$1 million in work for the licensee in the past. The previous work included contracts in the area of configuration management. The former employee believed that S&L's prior financial involvement with the licensee and the type of work S&L performed represented a conflict of interest that prevented S&L from conducting a truly independent review.

The former Millstone employee argued that the NRC had lost the public's confidence; therefore, the NRC should have taken extra measures to create an ICAVP that, at the very least, had an appearance of independence. However, this former employee believed the NRC's Special Projects Office (SPO) which was set up by the NRC, in part, to oversee the ICAVP process had completely ignored public suggestions about improving the independence of the ICAVP. This former employee also believed the SPO never intended the ICAVP to be a truly independent process.

Prior S&L contract with the licensee on life cycle management

OIG reviewed a September 29, 1995, proposal to NNECO in which S&L offered to provide consulting services related to the licensee's life cycle management program. OIG also reviewed the contract that the licensee awarded to S&L on October 12, 1995. Pursuant to an OIG request, the licensee provided documents related to the life cycle management contract with S&L. OIG found no reference to future work that S&L planned to perform for the licensee in the area of life cycle management subsequent to the August 1996 announcement of the ICAVP.

In a February 21, 1997, letter to the NRC, NNECO addressed questions that the NRC raised during a February 5, 1997, meeting regarding the independence of S&L. The licensee responded to particular concerns from the NRC with respect to S&L's efforts in the area of life cycle management. The licensee provided the following information:

On January 23, 1996, Sargent & Lundy issued a report documenting cost saving opportunities through Life Cycle Management for the Haddam Neck Plant and Millstone Unit Nos. 1, 2, and 3. The emphasis of the study was the identification of opportunities that could be quickly implemented and would produce a favorable return on investment through direct cost reduction or increased revenue in a short period of time. The study also identified several longer term activities that could yield a similar result, but take longer to implement and longer to realize the results ...

In conclusion, the study focused mostly on the overall approach to Life Cycle Management. The component-specific recommendations were based on a comparison of NU's [Northeast Utilities] practices with industry practices. The effort did not directly impact issues related to the completeness or the correctness of the design and licensing bases.

In a letter to the licensee dated March 12, 1997, the NRC requested additional information about why the Millstone licensing and design bases were not impacted by S&L's componentspecific recommendations. In a March 26, 1997, response to this request, the licensee stated that "The study did not explore the basis for these practices, such as planned maintenance. It only highlighted differences for NU to explore. Therefore, we maintain that the recommendations made as a result of the study did not directly impact issues related to the completeness of the design and licensing bases."

Former NRR Director surprised with NRC approval of S&L

The former Director of the NRC's Office of Nuclear Reactor Regulation (NRR) who issued the August 14, 1996, Order, explained to OIG that there was precedent for the NRC to approve independent third-party organizations to conduct pre-licensing independent design verifications. However, the former NRR Director was surprised that the NRC had approved S&L as the ICAVP contractor for Units I and 3 because of a contract that the NRC had recently awarded to S&L and Stone and Webster to conduct design reviews. He believed that considering this financial relationship, it did not look good for the NRC to approve S&L as the ICAVP contractor.

The former Director told OIG he was not concerned that S&L had a small amount of prior financial involvement with NNECO because individual team members would be prohibited from reviewing their own work. He added that because of the variance in the design and construction of the three Millstone units, it may have been difficult for the licensee to find a contractor with no prior involvement with the licensee yet with sufficient experience to conduct the ICAVP.

The former NRR Director said the Order did not include specific requirements with respect to the independence of the ICAVP contractor(s) because the NRC's Office of the General Counsel (OGC) and the Office of Enforcement (OE) did not want the Order to be overly prescriptive.

He stated that even though it may not have been a legal problem, it could create an appearance issue if S&L had performed some work for the licensee in the past with the expectation that it would lead to future work after completing the ICAVP contract. However, the former NRR Director was unfamiliar with any specific projects that S&L performed for the licensee, such as the life cycle management program.

SPO member agreed with the selection of S&L and Parsons

According to a senior NRC employee assigned to the SPO, the NRC approved the licensee's selection of S&L and Parsons, despite the existence of limited prior financial involvement with the licensee, because the NRC was confident in their abilities to conduct thorough and competent design basis reviews. He explained that there are only a few companies nationwide that have the requisite nuclear experience and are capable of handling this type of effort. He said suggestions from the public that an engineering company outside of the nuclear industry should have been selected were not practical because such a company would not possess enough experience in

dealing with the unique requirements and aspects involved with the design of nuclear power plants. He explained the NRC had to be confident in the technical abilities and experience of the companies that would be selected to perform the ICAVP reviews.

The SPO member noted that the fact the licensee was paying S&L and Parsons to perform the ICAVP reviews was a secondary issue. He added that it was more important for the NRC to ensure the independence of the ICAVP contractor. To accomplish this, the NRC established a rigid protocol for communications between the licensee and the ICAVP contractors.

The SPO member said the Order required that there be no current financial involvement between the licensee and the third-party organization that would be performing the ICAVP review. He said S&L and Parsons had performed some minimal work for the licensee in the past, but they were not the architect/engineers for any of the Millstone units. He added that the NRC did identify a few instances where S&L and Parsons proposed potential ICAVP team members who had financial conflicts of interest because they owned small amounts of the licensee's stock. However, he said these individuals ultimately divested themselves of this stock.

The SPO member said the NRC reviewed all prior work by S&L and Parsons at the Millstone units, and except for some seismic-related work that S&L had performed, no problems or potential conflicts of interest were identified. As a result, he said the NRC directed that S&L would not be allowed to review any prior work in this seismic related area and that these reviews would be transferred to Parsons.

The SPO member told OIG he was not aware of any future work that S&L would be performing for the licensee in the area of life cycle management. He said the NRC had identified some prior work by S&L in this area but did not view it as a potential conflict of interest. He explained that the NRC stipulated that both S&L and Parsons would be prohibited from performing any work for the licensee until one year after the ICAVP had been completed. He added that S&L had stated that the ICAVP contract would not affect its independence or cause the company to put its reputation at risk.

The SPO member said the NRC's contract with S&L to perform design basis reviews at other nuclear plants was indicative of the NRC's confidence that S&L was technically competent to perform the ICAVP review. He noted the NRC Order only required the ICAVP contractors to be independent from the licensee, not the NRC.

SPO Director was confident in independence of the ICAVP contractors

The Director of the NRC's SPO told OIG that he believed that the NRC conducted a thorough review of S&L and Parsons before they were approved as the ICAVP contractors. He said the NRC reviewed the amount of prior financial involvement that S&L and Parsons had with the licensee and concluded that it was limited. He said the NRC also reviewed the independence of individual ICAVP team members and required them to sign statements that they had no financial interest or stock ownership in the licensee.

The SPO Director told OIG that the NRC relied on representations and information provided by the licensee with respect to the extent and nature of prior work performed by S&L and Parsons. Based on this information the NRC identified a potential conflict due to some prior seismic-related work that S&L had performed at Millstone. As a result, the NRC prohibited S&L from reviewing its own work in this area and arranged for Parsons to handle any seismic-related issues that arose out of the ICAVP. The SPO Director recalled that S&L had performed some prior work for NU in the area of life cycle management, but he was unaware of any future work that S&L would be performing for the licensee in this area. However, he said the NRC prohibited S&L and Parsons from performing any work for the licensee until one year after the ICAVP review had been completed.

The SPO Director believed that the NRC contract with S&L in the area of design reviews added credibility to the ICAVP process because this was an indication of the NRC's confidence in S&L as a technically competent organization. However, he said it did not affect the independence of S&L because the ICAVP contractors were required to be independent of the licensee, not the NRC.

Licensee employees discuss possible future work by S&L at Millstone

OIG interviewed three NNECO employees who were involved in the life cycle management contract with S&L. The licensee manager assigned to oversee this contract told OIG that the purpose of the life cycle management contract with S&L was to find a way to deal safely and cost effectively with the degradation of nuclear assets. He said that prior to awarding the contract to S&L, the licensee considered several other organizations. He added that the licensee stipulated in the contract that the work was to be considered proprietary and that the contract was to be completed by December 1995. This licensee manager said he decided to award the life cycle management contract to S&L because they promised to meet the completion date and to dedicate senior staff to the project.

This licensee manager told OIG that S&L produced a report that contained approximately 98 action items that the licensee could pursue in the short and long term. He explained that he had planned to meet with Millstone senior management and present approximately 12 action items which offered the most immediate and measurable cost reductions. He added that in early 1996, an S&L representative had offered to meet with senior Millstone management about pursuing some of these action items; however, the licensee manager declined the offer and told the S&L representative that he would make the presentation himself.

Additionally, this licensee manager told OIG that the life cycle management project was "pretty much done" by S&L and that it was the responsibility of the licensee to carry the project forward. However, he said this project was stalled because of emerging issues such as Millstone design bases compliance. He added that there were no agreements or discussions with S&L about pursuing future work based on the results of the life cycle management contract. In addition, he said that because the project had been stalled, there were no funds available to pursue any of S&L's life cycle management recommendations.

OIG also interviewed an NNECO engineer who was involved in the life cycle management project. This licensee engineer told OIG that approximately 12 of the most beneficial action items that could have been implemented quickly and efficiently were gleaned from the S&L report. He said that one of the life cycle management recommendations made by S&L related to the licensee's fuse control program. He added that the licensee awarded a separate contract to S&L in March or April 1996 to follow-up on S&L's fuse control recommendations, but he was unable to recall when it was completed. However, he believed the cost of this contract was comparable to the life cycle management contract which, he recalled, was approximately \$110,000. This licensee engineer was unaware of any other follow-up work that S&L performed as a result of the life cycle management contract.

This licensee engineer recalled that in August or September 1996, the licensee requested that S&L submit a proposal to perform approximately \$1 million in electrical equipment qualification work pursuant to 10 Code of Federal Regulations (CFR), Part 50.49, but that S&L declined to submit a bid because it could have affected their ability to compete for the ICAVP contract.

This licensee engineer told OIG that it was reasonable to have expected S&L to play a role in implementing the action items identified as a result of the life cycle management contract. He believed that such an effort would have been significant, possibly involving millions of dollars. He added that after completing the life cycle management contract, an S&L representative marketed S&L's services for implementing the action items that were identified. He said S&L would have been the "natural choice" for this work because of their involvement in the initial life cycle management contract and their involvement with other NRC licensees in this area. He also indicated that S&L could possibly have qualified as a "sole source" contractor on certain of the items due to their prior experience on the life cycle management contract. However, he said the possibility that S&L could be performing future work for the licensee as a result of the life cycle management contract had been placed on the "back burner" because there was no money or staff available to implement any of the action items.

OIG also interviewed an NNECO program manager who was involved with the life cycle management effort. He told OIG that the licensee and S&L determined that although it would have cost approximately \$600,000 to implement the top 12 or 13 action items, they would have produced financial returns to NNECO of more than \$13 million in one year. He said he incorporated this information in a proposed presentation for senior Millstone management. However, the presentation never took place. This program manager believed that NNECO had the ability to implement some of these action items, but NNECO would have considered hiring an outside organization, such as S&L, to implement those where the licensee lacked the expertise.

The program manager told OIG he met briefly in March or April 1996 with a senior Millstone manager on other matters, and he took the time to briefly raise the issue of the life cycle management presentation. The program manager told OIG that this senior Millstone manager indicated that the licensee would not be in a position to implement any of the life cycle management recommendations until after the year 2000. It was noted that this meeting predated the first mention of the ICAVP by at least four months.

OIG interviewed two senior project engineers from S&L who were involved in the life cycle management contract at Millstone. Both engineers confirmed the facts surrounding the award and execution of the contract by S&L. The manager responsible for developing S&L's life cycle management expertise advised OIG that in the past S&L had minor contracts (less than \$100,000) with Commonwealth Edison (COMED) and Baltimore Gas and Electric (BGE) on aging management issues. The only S&L work at Millstone which resulted from the life cycle management contract was a small dollar contract involving the licensee's fuse control program. While the company had initially hoped that the Millstone life cycle management contract would lead to additional work for S&L at Millstone, the manager termed any future S&L life cycle management work for Millstone as a "completely dead issue." He stated that there were no continuing contacts with Millstone on the issues addressed in the life cycle management report. Additionally, due to internal cost cutting measures, S&L was no longer formally developing its life cycle management program.

The S&L program manager believed that the previous Millstone life cycle management work had no relationship to the current ICAVP work. He characterized the life cycle management work as strategic consulting services that involved essentially business-related decisions while the ICAVP work was considered a tactical evaluation of a compliance-based program. Another major difference was the life cycle management contract addressed future cost saving decisions while the ICAVP was a retrospective look at how the licensee complied with its licensing and design basis. Both S&L managers confirmed to OIG that once the company was considered a serious contender for the ICAVP contract, S&L upper management verbally directed that no work be pursued regarding additional contracts with Millstone. While neither employee could recall the specific time of this directive, they both believed that it was sometime during the summer of 1996. The S&L project manager who had been assigned Millstone for business development purposes said that he was reassigned to Maine Yankee in late September/early October 1996.

Member of NEAC believes independence could have been increased

OIG interviewed a member of the Connecticut Nuclear Energy Advisory Council (NEAC) who has been a member of NEAC since it was formed by the Connecticut state legislature and the Governor in August 1996. This NEAC member explained to OIG that NEAC was formed because of problems at the Millstone and Haddam Neck nuclear plants. He stated that state officials believed that an independent body was -necessary to monitor problems at these plants and to represent the interests of the citizens of Connecticut.

This NEAC member believed that S&L has been performing competently as the ICAVP contractor for Millstone Units I and 3, and he had no major question about their independence. However, he said it was difficult to claim that S&L is totally independent because they are being paid by the licensee to perform the ICAVP review. He added that he was satisfied with the actions the NRC has taken to ensure the financial independence of S&L and the individual ICAVP team members. However, the NEAC member thought the NRC could have done a better job of creating a barrier between the ICAVP contractor and the licensee.

The NEAC member said that at the early stages of the ICAVP review and before the selection of S&L, NEAC provided suggestions to the NRC that NEAC believed would have increased the independence of the ICAVP contractors. He said NEAC suggested that the NRC could have selected the ICAVP contractor and charged the cost back to the licensee. He said NEAC also suggested that the NRC could have formed an independent board of public, NRC, and NEAC representatives that would hold money from the licensee in an escrow account and release it to the contractor as certain ICAVP milestones were satisfactorily met. He stated that the NRC listened to NEAC but indicated that these suggestions were not practical and that they were going to proceed in accordance with the Order.

The NEAC member said he had no reason to question the technical competence of S&L. He added that it would not have been reasonable to select a contractor without any expertise in the nuclear industry, as some members of the public had suggested, because of the learning curve required to develop the necessary expertise.

ISSUE 2: THE POINT AT WHICH THE NRC AUTHORIZED THE ICAVP CONTRACTOR TO BEGIN ITS REVIEW AND THE NUMBER AND TYPE OF PLANT SYSTEMS TO BE REVIEWED

NRC Establishes ICAVP Starting Point

On August 6, 1996, during a visit to Millstone, the NRC Chairman commented to the public that the ICAVP team "would not go in until the licensee has testified to us that it is at least halfway through the issues that have to be resolved and then we would go in and verify the resolution of those issues."

On August 12, 1996, the NRC held a meeting at NRC Headquarters in Rockville, Maryland with NNECO officials to discuss independent verification actions needed to confirm that the licensee's programs to detect and correct design control problems were effective. The NRR Director stated during this meeting that the ICAVP would be comprised of two phases. Phase I of the ICAVP would focus only on problem identification within systems. The NRR Director advised the licensee that, "We would like you to focus on the most risk significant systems first. That is, by way of applying your resources, don't start with the ones that are easiest to accomplish first, but start with the more risk significant first and work through."

The NRR Director added that Phase II would focus on corrective actions for problems that the licensee identified in Phase I.

With respect to when the ICAVP review would begin, the NRR Director said:

I don't want to establish a rigid number, but we want to have a sufficient number of systems completed [so] there can be a representative sampling out of those systems to make judgements on the process, whether that's approximately half of the systems completed or it's some number of systems, I don't want to specify a percentage, et cetera, because I would like to start the process as early as we can, as soon as there is a representative number that you have completed.

The NRR Director added that the ICAVP review would begin when the licensee had completed the discovery phase for approximately one-half of the systems, some of which would be risk significant and some would be non-risk significant.

On August 14, 1996, the NRC issued its Order directing the licensee to establish an ICAVP for Millstone Units 1, 2, and 3 "to confirm that the plant's physical and functional characteristics are in conformance with its licensing and design bases." The Order stated that the ICAVP review would "begin after the licensee has completed the problem identification phase of the CMP." The licensee defined the CMP (Configuration Management Program) as a document that described all actions the licensee took to ensure that the designs of its Connecticut nuclear power plants were in conformance with NRC requirements and were accurately documented. The CMP included all 88 NRC Maintenance Rule, 10 CFR, Part 50.65 group I and group II systems for Millstone Unit 3.

In a letter from the current Director of NRR to the licensee, dated March 11, 1997, the NRC explained that the Order was not intended to prevent the ICAVP from beginning until the entire problem identification phase of the CMP had been completed. The NRC advised the licensee that it intended for the ICAVP to begin when problem identification had been completed for a sufficient number of systems to allow the NRC to select an initial representative sample for review by the ICAVP. According to this letter, the NRC "clarified" the earlier Order so that the ICAVP would begin after the licensee had completed the problem identification phase of the CMP for one-half of the total number of risk-significant and safety-related systems (group 1), as categorized by a methodology similar to that used in implementing the NRC Maintenance Rule. The NRC added:

After NNECO has completed the entire problem identification phase of the CMP, the NRC will select an additional system or systems that will be reviewed by the ICAVP. This will provide additional assurance that the problem identification phase of the CMP has been done with the same rigor and depth for all systems within the scope of the CMP. The review of a representative sample of systems by the ICAVP will allow both the licensee and the NRC to make judgements on the effectiveness of the licensee's problem identification process.

NRC Identifies Scope of ICAVP

On December 17, 1996, the NRC issued an ICAVP Oversight Plan which contained information on the scope of the ICAVP and the NRC's methodology for selecting systems. The NRC indicated that the ICAVP review involved a three-tiered process. In the first tier, four systems would be selected "to provide a representative sample to test the thoroughness of the licensee's reviews in identifying potential nonconformances with the design and licensing bases The ICAVP contractor will review all design and operational aspects of these systems, including maintenance, surveillance testing, and training."

The NRC added that the scope of the licensee's review would include a detailed review of approximately 80 systems that it had characterized as either group I (safety-related and risk-significant) or group II (safety-significant or risk-significant) in accordance with criteria in the NRC's Maintenance Rule.

In the second tier, the ICAVP contractor would review those systems that had not been reviewed during the first-tier review. However, the NRC pointed out that "(t)hese reviews will be more limited in scope than those performed on the Tier I systems. The objective of these reviews is to identify and review some critical design characteristics of the systems that are important to ensure that the licensee's corrective actions have resulted in these systems being capable of performing their accident mitigation functions"

In the third tier, the ICAVP contractor would, "review some of the various processes used by the licensee to change or modify the facility as described in the licensing bases. These processes include, but are not limited to, calculation changes, proposed technical specification changes, modifications, drawing changes, procedure changes, set point change requests, and replacement item evaluations."

With respect to the methodology for selecting systems for the tier one review, the NRC indicated that it would select four systems based on risk significance, system characteristics and complexity, previous opportunities for introducing inappropriate changes to the system or design bases, and previous problems with that system. The NRC added that it would allow the public to recommend one or two systems. The NRC explained that "This would address the public concern regarding the potential for the list of systems being predetermined and available to the licensee before the start of the ICAVP."

NRC selects systems for tier one review

During an August 6, 1997, Commission Briefing, the NRC indicated that the following four systems had been selected for the tier one review:

- (1) Service Water System
- (2) Recirculation Spray and Quench Spray (including Refueling Water Storage Tank)
- (3) Auxiliary Building HVAC and Supplemental Leak Collection and Release System
- (4) Emergency Diesel Generator and Support Systems

In making its selection, the NRC grouped more than one system for all except the Service Water System so that, in actuality, a total of 15 systems were included in the tier one review. For the purpose of the tier one review, the NRC combined the Recirculation Spray System, the Quench Spray System and the Refueling Water Storage Tank System into one system; the Auxiliary Building HVAC System and the Supplemental Leak Collection and Release System into one system; and the Emergency Diesel Generator System, and the Support Systems (which comprised eight systems) into the final system.

Member of public concerned with ICAVP starting point and scope

According to a former Millstone employee, during a public meeting on August 6, 1996, the NRC Chairman stated that the ICAVP review would not begin until the licensee had resolved approximately 50 percent of all outstanding licensing and design bases issues and had testified as such to the NRC. However, he said the ICAVP differed significantly from what the NRC Chairman told the public. He said the August 14, 1996, Order stated that the ICAVP review would "begin after the licensee has completed the problem identification phase" of the licensee's CMP. He added that the Order was clarified in March 1997 so that the review would begin when the licensee had completed problem identification for one-half of the group I systems, or about 18 of the 88 total systems for Unit 3, and there was no requirement that the licensee correct these problems prior to initiation of the ICAVP review.

This individual expressed the view to OIG that the entire ICAVP process was being driven by the Millstone restart schedule and that the change in the starting point was the result of the NRC working with the licensee. Further, he said the NRC was well aware of the financial consequences if the licensee failed to meet its planned restart dates for the Millstone units.

The former Millstone employee told OIG that the ICAVP review would involve a complete review of only five of the 88 systems for Unit 3. He believed that the probability that the results of this review would represent the status of the other systems was very low because not enough systems were being reviewed. He was concerned that problems found in these five systems could appear insignificant but could have drastically greater significance if they also applied to the unreviewed

systems. He added that an NRC employee told the New London Day newspaper that to gain a probability of about 90 percent the ICAVP would have to include 59 systems in its review.

Former NRR Director recalls NRC's intent at the time of the Order

The former NRR Director told OIG that the August 14, 1996, Order he issued was not intended to be specific with respect to when the ICAVP review would begin. He said it was intended to commit the licensee to certain actions, such as completing problem identification of plant systems, but not to impose requirements on the NRC staff. He did not believe that orders should be specific with respect to outlining NRC staff requirements. He added that the Order allowed the Director of NRR to revise its requirements based on a showing of good cause by the licensee.

The former Director said he advised the licensee during the August 12, 1996, meeting that the ICAVP would not begin until the licensee had completed problem identification for approximately one-half of the Unit 3 systems. He explained that the NRC staff did not want to unnecessarily delay the restart process by waiting until the licensee had completed problem identification activities for all systems.

He related that the Service Water System, one of the first systems selected for ICAVP review, is a high risk system that interfaces with numerous other plant systems. He said licensees have had a history of failing to maintain their licensing basis for this system, and the NRC requires a high degree of confidence that this system meets its licensing basis. He said it was reasonable for the NRC to select this system for review, and he would probably have done the same had he been in a position to do so. The former NRR Director told OIG that he believed that the Service Water System should have been selected even though it had recently been reviewed pursuant to Generic Letter 89-13 (GL 89-13). He explained that GL 89-13 required licensees to assure the NRC that the Service Water System was performing its intended safety functions. GL 89-13 focused on operational aspects of the Service Water System and did not require licensees to conduct a complete design basis review.

SPO member explains scope and starting point of ICAVP

An SPO member told OIG that according to the NRC Maintenance Rule, 36 of the Millstone Unit 3 systems are classified as group I and 52 are classified as group 11 for a total of 88 systems. He explained that the NRC selected the Service Water System, and Recirculation Spray and Quench Spray (including Refueling Water Storage Tank) for S&L to review after the licensee had completed problem identification for one-half, or 18, of the group I systems. This actually accounted for a total of four systems from the group of 18 that S&L would review in the first phase of the ICAVP review. He explained that the classification of 88 group I and II systems for Unit 3 was too narrow for the purposes of selecting only four individual systems (two by the NRC and two by NEAC) and that the NRC needed to group some systems together so that the ICAVP review would be sufficiently comprehensive.

The SPO member said after the licensee had completed problem identification for all 88 group I and II systems, the NRC allowed NEAC to randomly choose two more systems from about 11 group I and II systems that the NRC believed were the most safety significant. According to this SPO member, NEAC selected the Auxiliary Building IIVAC and Supplemental Leak Collection and Release System (group II), and the Emergency Diesel Generator and Support Systems (group I). As

a result of the way these systems were grouped by the NRC, these two systems actually accounted for 11 systems that were reviewed by S&L.

The SPO member told OIG that the NRC allowed NEAC to randomly select the two systems in response to concerns from the public that the NRC could have notified the licensee in advance as to the systems that were going to be reviewed by S&L. He said the public was concerned that the licensee would be given the opportunity to focus its efforts on those systems that were going to be reviewed while paying less attention to identifying problems in other systems.

The SPO member believed that 15 systems receiving a complete review by S&L was a sufficient number. He said this number would allow the NRC to conclude with a high level of confidence that as long as S&L did not identify any deficiencies in the systems selected for review, there was a high probability that the licensee's process for identifying licensing and design deficiencies was effectively applied to other systems. However, he said if problems were identified by S&L, the scope of the ICAVP review would be increased and S&L would review additional systems.

According to this SPO member, the NRC testimony during the August 12, 1996, public meeting indicated that the NRC's intent at the time of the Order was that the ICAVP review would begin before the licensee had completed its review of all 88 systems but not until a sufficient sample size of systems existed. He saw no benefit to waiting until the licensee completed problem identification for all 88 systems before allowing the ICAVP review to begin. He explained that although the NRC would be selecting its systems from the initial sample size of 18, the licensee would still be required to complete problem identification for all 88 systems because NEAC would make its selection from the total set of group I and 11 systems.

The SPO member said the NRC selected the Service Water System for review because it is risk significant and complex, and the NRC wanted to be confident that it met its licensing basis.

This SPO member added that he drafted the March 11, 1997, letter which "clarified" the Order. He said his letter was written originally as a "modification" of the Order, but that the NRC Office of the General Counsel (OGC) later changed it to a "clarification." He said he relied on OGC's judgement that this change was appropriate.

The SPO member believed this letter was written as a result of an inconsistency that the SPO Director had identified in the Order with respect to the starting point of the ICAVP review. He said the Order did not conform to the intent of what the NRC had communicated to the licensee during the meeting on August 12, 1996. During this meeting, he said the former NRR Director indicated that the ICAVP review would begin after the licensee had completed problem identification for approximately one-half of the Millstone Unit 3 systems. However, the SPO member said the Order did not accurately reflect how the ICAVP was being implemented because it indicated that the ICAVP review would begin when the licensee had completed its problem identification efforts. He added that the March 1997 NRC letter was not initiated as a result of communications with, or pressure from, the licensee. He stated that the letter was issued entirely by the NRC.

NRC Chairman addresses ICAVP starting point

The NRC Chairman advised OIG that the exact wording of the Order as well as a precise starting point for the ICAVP review had not been established at the time of her August 6, 1996, press conference. The purpose of the press conference was to provide a general overview of how the ICAVP process was envisioned at the time. Details such as the starting point were left to the NRC staff. The Chairman added that the prevailing view among the NRC staff was that the review should begin during the problem identification phase of the ICAVP rather than during the corrective action phase. This preference was due, in part, to NRC concerns over past weaknesses with the licensee's problem identification. With respect to her comment during the August 6, 1996, press conference, the Chairman noted that it was her understanding that the ICAVP review would not begin until the licensee had completed problem identification for approximately one half of the risk significant systems for Unit 3. She further noted that the second part of her comment in which she mentioned the NRC's verification of the resolution of issues referred to the later stages of the ICAVP process and not the starting point. While she acknowledged a slight inconsistency in the Order with respect to the starting point of the ICAVP, the Chairman felt that it was of minor significance since the NRC retained the authority to identify additional systems for review at any point during the ICAVP process.

SPO Director initiated change to the Order

The SPO Director told OIG that when the NRC issued its Order on August 14, 1996, the intent was that the ICAVP would begin when NU had completed the problem identification phase of the CMP for approximately one-half of the most safety significant systems (the CMP included all 88 group I and II systems for Unit 3). He said this intent was conveyed to NU during the August 12, 1996, meeting. However, the SPO Director recognized that the Order did not accurately reflect the NRC's intent, and he suggested that it be amended so that it would clearly define NRC expectations as to when the ICAVP review would begin.

OGC Review of Clarification Letter

A senior OGC attorney advised OIG that he reviewed the "clarification" letter which addressed the starting point for the ICAVP. The original letter drafted by SPO was submitted as a modification to the original Order. He noted that an order cannot be modified by a letter: an order can only be modified through issuance of a modified order. Following consultation with another senior attorney in OGC, there was consideration given to calling the letter a relaxation of the order. However, the OGC attorney advised OIG that he ultimately made the decision to call the letter a clarification of the original Order. Since it was the NRC staff's original intent to commence the ICAVP reviews prior to completion of problem identification, a clarification of the Order was needed. He recalled that there was a five to ten minute conversation within OGC over the clarification letter and it was not deemed to be a significant issue. Additionally, the OGC attorney did not recall any noteworthy discussion on the starting point for the ICAVP at the time the original Order went out in August 1996.

NRC Procedures for Issuing, Modifying, Relaxing, and Clarifying Orders

OIG interviewed a senior representative from the NRC Office of Enforcement (OE). The representative advised that the agency guidance on issuing orders is generally contained in Chapter 5 of the NRC Enforcement Manual as well as Section C of the General Statement of Policy and Procedures for NRC Enforcement Actions. Reference to relaxing or rescinding an order is usually contained in Section IV of the order. Normally, an order can be relaxed or rescinded in writing by the authority who issued the original order. As to modifications to an order, the OE representative advised that an order can only be modified through issuance of a new or modified order; it can not be modified by letter. The OE member continued that a clarification letter is normally issued when the recipient of an order requests an explanation of something contained in the original order. According to this representative, a clarification letter should not be used to alter any of the terms or conditions in the original order. Altering the terms or conditions of an order requires issuing either a new or modified order. He was unaware of any written explanation or formal procedure governing the use of clarifying letters. He relied on the commonly used definition of the word to describe the purpose of such letter.

NEAC member approved of scope and systems selected for review

The NEAC member interviewed by OIG stated that he was initially surprised when he learned that only four systems were going to receive a complete review. However, he said the NRC did not effectively communicate to the public that the boundaries of these four systems would result in reviews of other interfacing systems, thereby increasing the scope of the ICAVP review. For instance, he said NEAC selected the diesel generator system which the NRC had grouped with other interfacing systems so that S&L's review actually included nine systems.

This NEAC member told OIG that once he understood that the ICAVP review included more than just four systems, he was satisfied that the scope was adequate. He added that by reviewing 15 of the 88 total systems for Millstone Unit 3, the NRC could effectively determine if the licensee's program for identifying design deficiencies was working properly.

The NEAC member believed that there was a healthy interchange between NEAC and the NRC. He said there was never any feeling that the NRC was attempting to limit the scope of the ICAVP to assist the licensee. He added that the NRC adopted a suggestion by NEAC to formalize definitions for deficiency reports resulting from the ICAVP so that they could be grouped according to safety significance.

He explained that he was chosen by NEAC as a member of the subcommittee that randomly selected the final two groups of systems for review from a list of eight or ten group I and I1 systems provided by the NRC. He said he was satisfied with the selection process and the systems that were ultimately selected by the NRC and NEAC. He said the subcommittee unanimously agreed that the list of systems provided by the NRC was comprehensive and included systems that NEAC also believed should be reviewed.

This NEAC member said it was appropriate for the NRC to allow the ICAVP review to begin after the licensee had completed problem identification for one-half of the group I systems if the review

was to be completed in a timely manner. He added that he was unaware of any concerns within NEAC regarding the point at which the ICAVP review would begin.

ISSUE 3: THE NRC's ACCEPTANCE CRITERIA FOR PLANT SYSTEMS REVIEWED DURING THE ICAVP

Background

On January 3, 1997, the NRC issued SECY-97-003 which set forth the NRC staff's processes and approaches for overseeing the corrective action program at Millstone. Included in the SECY was the December 1996 ICAVP Oversight Plan which addressed the need to establish acceptance criteria as well as a process for handling findings from the ICAVP contractor. The Oversight Plan indicated the following about acceptance criteria:

Before the start of the ICAVP audit, the staff needs to establish acceptance criteria, and a process for handling individual findings from the ICAVP contractor. The staff intends to define a "defect" as any condition that results in the plant being outside its current licensing bases. For example, this would include a condition that would be considered an unreviewed safety condition in accordance with 10 CFR 50.59. It would also include a condition that would prevent a structure, system, or component from meeting a regulatory requirement applicable to the unit. The significance of any defect identified by either the ICAVP contractor or the NRC will be assessed by the SPO staff.

The oversight plan continued by explaining that the identification of any defects could "result in a decision to suspend the ICAVP, to expand the scope of the ICAVP, or to re-perform the ICAVP following additional licensee corrective action." The Plan added that all deficiencies that do not meet the definition of a defect would be reviewed to determine if any programmatic trends were evident.

On March 18, 1997, the NRC held a public meeting and addressed questions regarding acceptance criteria. The SPO Director explained that the ICAVP process was complex, and it was unrealistic to expect the NRC to define what actions they would take based on specific findings of the ICAVP. This Director told the public, "We've actually talked about outcomes, potential outcomes. One of them is that if we begin to find serious deficiencies against licensing basis issues, we'll stop the ICAVP potentially ... Another potential is if the deficiencies, for example, are less significant, we might expand the scope of what we look at to get further confidence that the kinds of findings we found aren't pervasive, that they really have done a good job."

In a Commission briefing on April 23, 1997, the NRC Chairman asked the SPO Director, "And I'm saying, so how do you decide an expanding scope or potentially expanding scope?" In response, the SPO Director made the following comment regarding the "success criteria" for the ICAVP:

We have established a success criteria and termed it, quote, a "defect" for lack of a better word. And fundamentally, it relates to an expectation that the licensee's program will be or should be successful in eliminating issues that might be uncovered in our subsequent steps that put their unit outside of its licensing basis.

We intend, if we find items of that sort, to look at the significance of those items. For example, we would really not expect, and we might consider it a significant finding if we found an issue that raises to the level of an unreviewed safety question,

So the success criteria that we have in mind in our verification phase is one that hopefully documents that their effort has been successful in eliminating areas where their plant is outside of its licensing basis.

On July 17, 1997, at a public meeting the NRC presented the following ICAVP acceptance criteria:

Level I - System does not meet licensing/design bases and cannot perform its intended function.

NRC Action: Would likely result in selection of additional system(s) for ICAVP review.

Level 2 - Single train of redundant system does not meet licensing/design bases and cannot perform its intended function.

NRC Action: Would likely result in expansion of ICAVP scope to evaluate for similar nonconformance issues in other systems.

Level 3 - System does not meet licensing/design bases but is able to perform its intended function.

NRC Action: Could result in expansion of ICAVP scope to evaluate for similar nonconformance issues in other systems.

Level 4 - System meets licensing/design bases but contains minor calculational errors or inconsistencies of an editorial nature.

NRC Action: Multiple examples could result in expansion of ICAVP scope to evaluate for similar errors/inconsistencies in other systems.

SPO member explained development of acceptance criteria

An SPO member told OIG that the ICAVP acceptance criteria was developed shortly before a public meeting on July 17, 1997. He said it was not modeled after any prior Independent Design Verification Programs because these programs did not use acceptance criteria. He explained that from the time of the Order, the public had been advised that none of the three Millstone units would restart until the NRC determined that they were in compliance with their licensing and design bases. Nevertheless, he said the public wanted the NRC to publish formal acceptance criteria which would set forth specific NRC actions based on potential negative findings by the ICAVP contractors. He stated that establishing this acceptance criteria was an attempt to respond to these concerns from the public. He said the acceptance criteria could not have been more specific with respect to NRC actions because it would have been difficult and impractical to anticipate the many possible situations that could develop from the ICAVP review.

The SPO member told OIG that prior to developing this acceptance criteria, the NRC told the public on several occasions that any negative findings identified by the ICAVP contractors would cause the NRC to: (1) terminate the ICAVP review and direct the licensee to rereview the deficient system; or, (2) expand the scope of the ICAVP review to include additional systems.

Former NRR Director comments on acceptance criteria

The former NRR Director told OIG that the concept at the time of the Order was that ICAVP findings would be reviewed against the terms and conditions of the operating license for the systems selected for review. He said any findings by the ICAVP contractor not identified by the licensee which were outside of the licensing basis (i.e., were reportable pursuant to 10 CFR, Part 50.72 or 50.73) would be deemed by the NRC as an unacceptable license review. He believed that the NRC would then direct the licensee to re-review the deficient system and the ICAVP sample size would be increased.

In the view of the former NRR Director, the NRC's acceptance criteria contained "waffle words" which decreased its impact with the public. He noted that although to the public the wording appeared to provide the NRC with "wiggle-room," he believed this acceptance criteria nevertheless required the NRC to select additional systems for review if the initial systems were found to have licensing basis deficiencies. The former NRR Director faulted the acceptance criteria because it did not adequately define the regulatory standard upon which the licensee's performance would be measured by the NRC. He felt that tying the acceptance criteria to a regulatory basis such as 10 CFR 50.72 or 50.73 would have provided a better standard for evaluation.

SPO Director defended acceptance criteria

The SPO Director told OIG that he reviewed and approved the NRC's acceptance criteria that was published in July 1997. He said the acceptance criteria was developed to help the public understand what types of actions the NRC could take based on negative findings that arose from the ICAVP review. Because of the complexity of the ICAVP effort and the number of different deficiencies that could be identified, the SPO Director believed it would have been impractical to establish certainties that would force the NRC to take specific actions. However, in an effort to keep the public informed, he said the NRC has held public meetings every four to six weeks and deficiencies are publicized as they are identified by the ICAVP contractors.

NEAC member supportive of NRC's acceptance criteria

The NEAC member told OIG that the NRC decided to develop formal acceptance criteria based on suggestions provided by NEAC. He believed that the acceptance criteria was wellworded and adequately defined NRC actions that would result from negative findings by the ICAVP contractors. He noted that the acceptance criteria contained some "wiggle room" for the NRC, but he believed this was appropriate because there should be some allowance for subjectivity and human judgment. He said the acceptance criteria effectively provided a framework with which the NRC and the public will be able to discuss deficiencies and how they will be handled.

OIG FINDINGS

ISSUE 1: THE SELECTION AND INDEPENDENCE OF THE ICAVP CONTRACTORS

OIG found that although S&L had performed work for NNECO, there was insufficient reason to preclude S&L's selection as the ICAVP contractor. OIG learned that although S&L's earlier life cycle management contract could have resulted in future work for S&L at Millstone, the contractor ceased pursuing additional life cycle management work prior to becoming involved in the proposed ICAVP project. Millstone management indicated that additional work in this area was not anticipated until after the year 2000.

ISSUE 2: THE POINT AT WHICH THE NRC AUTHORIZED THE ICAVP CONTRACTOR TO BEGIN ITS REVIEW AND THE NUMBER AND TYPE OF PLANT SYSTEMS TO BE REVIEWED

OIG determined that although statements and documents by NRC regarding the starting point for the ICAVP review contained apparent inconsistencies, the eventual starting point conformed with the original expectation of the NRC. However, the inconsistencies led to confusion and some skepticism on the part of the public regarding the objectivity and thoroughness of the ICAVP process.

OIG also determined that the August 1996 Order directed the ICAVP review to begin upon completion of the problem identification phase of the CMP. However, at the staff's initiative, the Director of NRR sent a March 11, 1997, letter to NNECO to "clarify" the Order and allow the ICAVP review to begin after the licensee had completed problem identification for one-half of the 36 group I systems being reviewed under the CMP. While termed a "clarification" of the Order, OIG concluded the March 1997 letter was either a relaxation or modification of the Order because it changed a condition of the original Order. OIG also found that an NRC order can only be modified through issuance of a modified order.

ISSUE 3: THE NRC'S ACCEPTANCE CRITERIA FOR PLANT SYSTEMS REVIEWED DURING THE ICAVP

The December 1996 Oversight Plan which was submitted to the Commission on January 3, 1997, as part of SECY-97-003, called for the NRC staff to establish acceptance criteria prior to the start of the ICAVP audit. Additionally, during an April 23, 1997, Commission briefing, the NRC staff discussed the establishment of criteria. However, OIG found that the criteria was not published until July 1997 as a result of continued public concern over the need for formal acceptance criteria. OIG also found that the NRC's acceptance criteria for the ICAVP contained vague and imprecise wording to describe the range of possible NRC actions to address deficiencies. More importantly, as noted by the former NRR Director, the acceptance criteria did not adequately define a regulatory standard upon which the licensee's performance would be measured by the NRC.