



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555-0001

October 25, 1996

The Honorable Dan Schaefer, Chairman
Subcommittee on Energy and Power
Committee on Commerce
United States House of Representatives
Washington, DC 20515

Dear Mr. Chairman:

Enclosed are the Nuclear Regulatory Commission's responses to post-hearing questions from the September 5, 1996, hearing on General Oversight of the Nuclear Regulatory Commission.

Responses to several questions from Representative Markey are not included in this package.

Sincerely,

Dennis K. Rathbun, Director
Office of Congressional Affairs

Enclosures:
As Stated

cc: Rep. Frank Pallone

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016 Enclosures to Q's & A's are filed w/ Secy's copy.

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Post-Hearing Questions for the Nuclear Regulatory Commission

Submitted by the Majority

QUESTION 1.

You point out in your testimony that NRC will be working with DOE on the Hanford tank farm privatization effort. In that situation, from what source will funding for the NRC's regulatory role come from?

ANSWER.

The FY 1997 Energy and Water Development Appropriations Act appropriates \$3.5 million to NRC for work with DOE in the program of remediation for high-level waste currently contained in tanks located on the Hanford Reservation in Richland, Washington. Under the Act, these appropriated funds are excluded from license fee revenues collected under 42 U.S.C. 2214.

QUESTION 2.

The report of the Institute of Medicine (IOM), Radiation in Medicine: A Need for Regulatory Reform, indicates that the only distinction of byproduct materials versus other radioactive elements in medicine is that these materials originated in a nuclear reactor. Is there anything unique about the use or handling of byproduct materials in medicine that warrants a separate NRC regulatory role? Have there been any specific problems or deficiencies in how the States or FDA have handled regulation of radioactive materials in medical applications?

ANSWER.

There is nothing unique about radioactive materials originating from a nuclear reactor (byproduct material) versus non-byproduct material; and generally, the same safe handling and use techniques apply to both. However, some of the more hazardous radionuclides used for therapeutic purposes in medicine are NRC-regulated byproduct materials (e.g., cesium-137, iridium-192, and cobalt-60). Under its Atomic Energy Act authority and responsibility, the NRC has taken the lead in developing regulations and associated guidance for the safe medical use of these materials and, in many cases, the States have used these documents as templates for their own regulatory programs and initiatives.

The NRC conducts periodic reviews of the byproduct materials programs, including the medical use area, in 29 States which have signed agreements with the NRC. However, NRC does not review the effectiveness of State radiation control programs as they relate to the non-Atomic Energy Act (non-byproduct material) areas in any of the States (Agreement or non-Agreement).

Therefore, the NRC is not aware of specific problems or deficiencies in how the States have handled the regulation of radioactive materials, other than byproduct material, in medical applications. There have been misadministrations or similar events in Agreement States involving radioactive material or other sources of ionizing radiation, e.g., linear accelerators. However, they are relatively small in number.

The NRC and FDA exchange information on a routine basis on specific events and regulatory issues and conduct an annual meeting to discuss broad policy issues. These methods of communication and coordination have proven effective to date.

QUESTION 3.

The NRC is responsible for overseeing the remediation of uranium mill tailings sites. Please provide a brief report of the status of current remediation activity at the sites under NRC's jurisdiction. At what percentage of these sites has the Commission approved final cleanup plans? Has the NRC run into any unforeseen difficulties with the implementation of remediation plans at these sites?

ANSWER.

The Uranium Mill Tailings Radiation Control Act of 1978 (UMTRCA) established two programs to protect public health and the environment from uranium mill tailings. The Title I program established a joint Federal/State-funded program for remedial action at abandoned mill tailings sites, with ultimate Federal ownership under license from NRC. Under Title I, NRC must evaluate and concur that the Department of Energy's (DOE) actions for cleanup and remediation of these inactive tailings sites meet standards set by the Environmental Protection Agency (EPA). The Title II program is directed towards the active mill tailings sites (those sites under license by NRC or Agreement States). NRC evaluates and approves reclamation and decommissioning plans for Title II sites through licensing actions. Many of NRC's Title II licensees are presently working to reclaim the tailings and decommission the sites.

Current Status:

Title I -- Reclamation Work at Inactive Tailings Sites:

Twenty-four inactive mill tailings piles at 22 sites originally designated by DOE range in size from about 60 thousand to 4.6 million cubic yards of material. Except for sites at Canonsburg and Burrell, PA, the inactive sites are located in the western United States (Arizona, Colorado, Idaho, New Mexico, North Dakota, Oregon, Texas, Utah, and Wyoming). The number of sites to be remediated is 21, given DOE's delisting the Belfield and Bowman sites in North Dakota and upgrading the Burrell vicinity property to site status. NRC has approved reclamation plans at 18 of those sites (86%), and DOE has completed remedial work, with the exception of groundwater cleanup, at 16 of those sites. There are 19 Title I sites that will be licensed by NRC for long-term care (sites at Monument Valley, UT and Riverton, WY were co-located with other sites). To date, 7 of these sites have been licensed. Licensing of all the sites is expected to be completed by the end of FY 1998.

Title II -- Licensed Mill Tailings Sites:

Of 27 NRC-licensed uranium recovery facilities, there are 19 mills, 1 heap leach, and the Envirocare facility that include disposal of tailings. The other licenses are for *in situ* leach facilities that have no tailings disposal. Sixteen mill sites and the one heap leach are presently in the reclamation/decommissioning phase, and 14 of those (82%) have NRC-approved reclamation plans. Reclamation plans for the remaining 3 sites are under review, and one licensee (Umetco, Gas Hills) has requested a major revision to its approved plan. NRC has recently terminated its first license for a uranium mill tailings site, i.e., the TVA Edgemont site. That site has been

transferred to DOE and licensed for long-term care.

Generally, tailings reclamation is proceeding well. With the exception of groundwater cleanup, the NRC staff has not run into unforeseen difficulties associated with the implementation of remediation plans at these sites.

QUESTION 4.a.

The Commission recently participated in a meeting of the Gore-Chernomyrdin Commission in Russia. To what extent has the NRC been involved in providing technical assistance to the former Soviet Union in addressing unsafe conditions at reactors?

ANSWER.

The NRC has played a leading role since 1988, first in cooperative efforts under the Joint Coordinating Committee for Civilian Nuclear Reactor Safety (JCCC/NRS) to improve safety in the former Soviet Union, mainly through bilateral information exchanges, joint technical working groups, exchanges of safety inspectors, specific coordinated research and more recently through the implementation of nuclear safety assistance to the Newly Independent States (NIS). Nuclear safety assistance to the NIS has been implemented under the auspices of the Memorandum of Cooperation established between the ICCC/NRS.

The seriousness of safety concerns for Soviet-designed reactors led to a major international effort to organize assistance to the New Independent States. In May 1992, a major initiative of US assistance for Russia and Ukraine was announced in Lisbon, Portugal. A significant component of this program was nuclear safety. Most of the nuclear safety projects proposed derived from the previous experience under the Joint Coordinating Committee for Civilian Nuclear Reactor Safety.

Extending from the May 1992, US nuclear safety initiative, the NRC undertook the fourth component of the nuclear safety initiative, "Regulatory assistance

in developing consistent and effective safety standards and procedures, as well as training in their use." In July 1992, NRC met with the senior regulatory officials of Russia and Ukraine to develop the fourth component, resulting in a regulatory assistance program that today comprises 10 Russian and 17 Ukrainian nuclear safety projects.

Since 1992, the NRC has implemented this regulatory assistance program to enhance the overall effectiveness of the recipient regulator to improve operational nuclear reactor safety within their respective countries. As a result of NRC's assistance the Ukrainian and Russian regulators have made measurable progress in developing their nuclear safety and regulation capabilities.

NRC has also undertaken limited efforts to strengthen the regulatory authorities of Armenia and Kazakhstan. Activities conducted to date with Armenian authorities include development of regulations concerning fire protection, site physical security, handling of radioactive waste and spent fuel, and seismic issues. Activities conducted to date with Kazakstani authorities have focused on inspection techniques for operating research and power reactors, as well as development of materials control and accounting and physical protection regulations.

QUESTION 4.b.

Has the NRC seen significant improvements in the operation and performance of foreign reactors as a result of this assistance?

ANSWER.

The NRC has observed improvements in the developing regulatory organizations of Russia and Ukraine. Some notable results have been the incorporation of western approaches to licensing nuclear power plants within their regulatory framework, adoption of nuclear legislation supporting an independent regulatory authority, development of emergency response concepts and plans and application of safety and risk methodologies and practices to their reactor designs.

QUESTION 4.c. Has the NRC provided any direct financial assistance to improve foreign reactor safety?

ANSWER.

The NRC has signed agreements with the U.S. Agency for International Development under which that agency provides the necessary funding to support NRC's nuclear safety assistance program in the former Soviet Union. Currently, the NRC has signed agreements with the U.S. Agency for International Development totaling over \$22 million which has been distributed, as specified in the inter-agency agreements, among the nuclear safety assistance projects.

The NRC has conducted some limited research projects with the Kurchatov Institute and the Nuclear Safety Institute, Russian Academy of Science. These efforts have been used to benefit NRC's domestic research program. In one case, the "RASPLAV" project has been adopted by the Nuclear Energy Agency as an international research project.

QUESTION 5.

In its Report to Congress on the NRC's License Fee Policy Review as required by the Energy Policy Act of 1992, the NRC states that electric ratepayers paid, at a minimum, \$35.1 million in fiscal year 1993 to support NRC activities which have no bearing on the regulation of commercial nuclear energy facilities. These activities relate to NRC regulation of other federal agencies, such as VA hospitals, NASA radiographers, and the Commission's international activities. It is currently estimated that this "hidden tax" amounts to about \$47 million per year. Does the Commission concur with the report's conclusion that charging utilities and other NRC licensees for such activities constitutes a hidden tax on licensees? Would you support legislation to exclude such costs from the calculation of licensee user fees?

ANSWER.

Yes, the Commission supports legislation to exclude such costs from the calculation of licensee user fees.

In 1990 when the Congress first enacted legislation requiring the NRC to collect approximately 100 percent of its budget authority in user fees, the Congress recognized that certain NRC expenses could not be attributed to an individual licensee or a class of licensees. In the Conference Committee report on the legislation, the conferees made clear that these non-attributable expenses should nonetheless be collected from NRC licensees. The

conferees directed that the Commission, in its discretion, determine which of its licensees could fairly, equitably, and practicably pay fees covering these costs.

In its 1994 report to the Congress, the Commission described the inequities and concerns created by the collection of these non-attributable costs. These include certain international activities, oversight of and generic regulatory support to the Agreement State program, the legislative fee exemption for Federal agencies, the Commission fee exemption for nonprofit educational institutions and the Commission fee reduction for small entities. To address these inequities and concerns, the report recommended that Congress enact legislation which would exclude these costs from the user fee base. The Commission continues to support enactment of such legislation. Recently, a small positive step was taken in this direction. The FY 1997 Energy and Water Appropriation Act removed from the NRC fee base the budgeted costs of NRC activities related to commercial vitrification at the Department of Energy Hanford site, as requested by the NRC. Similar legislative action to remove such activities as Agreement State program support and international activities is needed.

QUESTION 6.

I understand a third party review of the Millstone site will be conducted prior to the restart of any of the site's reactors. Who will be responsible for the makeup of this independent third party, and who will be responsible for the costs associated with the third party's activities?

Answer.

The NRC, by means of a Confirmatory Order dated August 14, 1996, required Northeast Utilities to obtain the services of an organization, independent of Northeast Utilities and its design contractors, to conduct a third party multi-disciplinary review of Millstone Units 1, 2 and 3. The review is to provide independent verification that the Northeast Utilities' Configuration Management Plan has identified and resolved existing problems, processes and procedures for effective management in the future. The review must be comprehensive, incorporating appropriate engineering disciplines, such that the NRC can be confident that Northeast Utilities has been thorough in identification and resolution of problems.

The NRC will determine if the third party organization selected by Northeast Utilities is acceptable. The NRC will also determine if the individuals proposed to comprise the review team are acceptable to conduct the review based on direct interviews by the NRC. The NRC has placed certain conditions on these individuals chosen to ensure an independent review is conducted. These are: 1) the individuals will have no financial interest in Northeast Utilities; and 2) the team members will not have previously worked on the particular unit being reviewed.

The costs associated with the NRC ordered third party review will be borne by Northeast Utilities.

QUESTION 7.

As a result of the Millstone situation, many utilities presently have some program underway to go back and evaluate their licensing documentation - focusing principally on their final (or updated) safety analysis reports - for the stated purpose of determining whether the physical plant matches up with the description contained in the FSAR. Given the substantial resources to be expended by utilities in conducting such a review, what guidance has the NRC provided licensees regarding how to address discrepancies between the plant and the FSAR, and what level of detail should be in the FSAR? Where is this guidance set forth? Of the reports you are starting to get back from utilities, are you finding that all of the plants are identifying significant safety issues, or is the problem more isolated?

ANSWER.

The NRC has provided extensive guidance to the industry regarding how to address discrepancies between plants and their FSAR. In August 1966, the staff developed REG-1, A Guide for the Organization and Content of Safety Analysis Reports, in support of rulemaking revising section 50.34.

The Statement of Considerations for the 1980 rule requiring periodic FSAR updating (Section 50.71(e)), states that the level of detail to be maintained in the updated FSAR should be at least the same as originally provided. Guidance on the level of detail to be contained in FSARs is currently provided in Regulatory Guide 1.70, Standard Format and Content of Safety Analysis

Reports for Nuclear Power Plants, Light Water Reactor Edition, Revision 3, November 1978. In addition, the NRC issued Generic Letter 80-110, on December 15, 1980, to provide additional guidance specifically on requirements for updating FSARs.

In Generic Letter 91-18, "Information to Licensees Regarding Two NRC Inspection Manual Sections on Resolution of Degraded and Nonconforming Conditions and On Operability", issued on November 7, 1991, the NRC provided licensees guidance on resolving degraded or nonconforming conditions in a plant. This guidance establishes the process by which licensees can develop a basis either to continue operation or to place the plant in a safe condition, and take prompt corrective action to restore or establish acceptable conditions. This guidance specifically addresses situations where the plant does not conform to FSAR requirements.

It should be noted that in the early 1990s, many plants had initiated efforts to improve their adequacy and availability of design basis information as a result of inspection findings of problems in this area. To assist the industry in these programs, the Nuclear Management and Resources Council (NUMARC which was consolidated into NEI in 1994) issued a guidance document 90-12, "Design Basis Program Guidelines." The NRC provided comments on this document, and also prepared NUREG-1397, "An Assessment of Design Control Practices and Design Reconstitution Programs in the Nuclear Industry", to provide an independent view of the design control issue. In August 1992, the NRC issued a policy statement that stressed the importance of maintaining current and accessible design documentation, such that there is sufficient

documentation to conclude that the current facility configuration is consistent with its design bases.

Recent inspection findings revealing design and configuration deficiencies at some plants led the NRC to question whether past voluntary initiatives at the other plants have been implemented, whether similar designs, configuration and operability problems exist, and whether quality assurance programs have been effective.

On March 18, 1996, the NRC issued Information Notice (IN) 96-17, "Reactor Operation Inconsistent with the Updated Final Safety Analysis Report" to alert licensees to instances of reactor operation that may not conform to the licensing basis. IN 96-17 included a copy of an internal assessment performed by Northeast Utilities to determine the causes for inaccuracies contained in the Millstone Unit 1 updated FSAR.

In a letter dated August 2, 1996, the Nuclear Energy Institute (NEI) stated that the chief nuclear officers of the nuclear utilities approved an initiative to provide additional assurance and confidence that existing programs are adequate to ensure that licensees are operating their plants in conformance with their licensing basis, and that nonconforming conditions are resolved in a timely manner. In the letter, NEI stated that some issues needed to be resolved with the NRC before the initiative would commence. In a letter dated August 14, 1996, the NRC responded to this NEI letter stating that the NRC believed the NEI initiative could begin immediately. However, the NRC expressed some concern that the proposed initiative might not be of

sufficient scope and depth to identify the types of problems found at some plants and that an in-depth review of actual design basis documentation and comparison of as-built and as-modified systems may be more appropriate.

As a result of the above concerns, on October 9, 1996, the NRC issued a §50.54(f) letter to the chief executive officer of each nuclear utility except Millstone requiring submittal of information concerning engineering and design control processes, processes for identification and correction of problems, and the overall effectiveness of such processes in concluding the configuration of the plant is consistent with the design bases. Responses are required in 120 days. NRC will use this information to prioritize planned design-bases inspections.

With regard to your question about the magnitude of the problem, some utilities have already commenced or recently completed programs to sample FSAR information and their processes for changes to the plant that may impact the FSAR. As most of these programs are in the early phases, it is premature to characterize the safety significance of the findings. Licensees are generally keeping the NRC informed of their activities, and filing reports when required by NRC regulations. We note that the number of licensee reports of conditions outside of the design basis for 1996 is about twice that for the comparable period in 1995.

QUESTION 8.

What is the difference between a technical specification versus a commitment contained in an FSAR? How has the Commission decided what should be addressed in a technical specification and what should be addressed in a utility's FSAR? What guidance have you provided the staff with respect to the enforcement actions that should be taken in the event that discrepancies in the FSAR are identified? Does the commission now plan to treat all FSAR discrepancies in the same manner from an enforcement perspective? What steps have you taken to ensure that the positions taken by the agency's regional offices, particularly with regard to enforcement actions, are consistent with prior NRC positions and consistent from region to region?

Answer.

Technical specifications are conditions of a license to operate a nuclear power reactor, and the information required is so specified by 10 CFR 50.36. Changes to the technical specifications require a license amendment in accordance with 10 CFR 50.90. Each application for a license must include an FSAR as required by 10 CFR 50.34b. The FSAR includes information that describes the facility, presents the design basis and the limits on its operation, and presents a safety analysis of the structures, systems and components and of the facility as a whole. Licensee "commitments," along with other information related to the design and operation of the facility in the FSAR, can be changed by the licensee pursuant to 10 CFR 50.59 without prior NRC review and approval, unless the change involves an "unreviewed safety

question," or otherwise requires a change in technical specifications, which would require a license amendment as provided in that regulation.

10 CFR 50.36 states general requirements for matters to be included in the technical specifications. 10 CFR 50.36 was revised on July 19, 1995 (60 FR 36953), to incorporate specific criteria for the contents of technical specifications setting forth limiting conditions for operation. The purpose of the criteria is to ensure that the technical specifications specify requirements which are both necessary and sufficient to protect public health and safety. Requirements that do not meet the criteria may be relocated to the FSAR or other document with regulatory provisions for subsequent changes comparable to 10 CFR 50.59 or may be deleted altogether.

The regulatory process is predicated on the assumption that when a license is issued, the facility, procedures, tests, and experiments will be as described in the FSAR. However, in accordance with 10 CFR 50.59, the Commission allows licensees to make changes to the facility or procedures described in the FSAR and to perform certain tests or experiments not described in the FSAR without prior NRC approval provided evaluations are performed to demonstrate that the change does not involve an unreviewed safety question and the change does not conflict with a technical specification. Thus, 10 CFR 50.59 requires a process for evaluating the acceptability of proposed changes to the facility for the licensee to follow prior to actually implementing the change.

If a licensee identifies a discrepancy with the FSAR, corrective action is

required. The licensee is to (1) make a prompt decision on operability, and either (2) make an evaluation under 10 CFR 50.59 if the licensee intends to maintain the facility or procedure in the as found condition, or (3) initiate corrective action consistent with Criterion XVI of 10 CFR 50, Appendix B if it intends to restore the facility or procedure to the FSAR description.

The NRC issued Information Notice 96-17, "Reactor Operation Consistent with the Updated Final Safety Analysis Report," on March 18, 1996, to alert licensees about a number of fundamental factors that led to an inaccurate FSAR at an operating plant leading to operation that may not have been in conformance with the plant's licensing basis. The NRC expected that licensees would review the information notice for applicability to their facilities and consider actions, as appropriate, to avoid similar problems.

The NRC General Statement of Policy and Procedures for NRC Enforcement Action, and the NRC Enforcement Manual provide guidance with respect to enforcement actions including those involving departures from the FSAR. To promote consistency in implementing these policies and procedures, the Office of Enforcement (OE) oversees, manages and directs the development of policies and procedures for enforcement. OE also issues enforcement guidance and trains the staff on its implementation. Recently the Commission approved modifications to the Enforcement Policy which have now been issued to provide additional guidance for the treatment of violations associated with FSAR discrepancies. The Commission recognizes that not all departures from the FSAR have the same degree of significance and the modified Policy will provide

examples of various FSAR/50.59 and FSAR update violations at Severity Level II -IV as well as for minor violations. Enforcement actions involving the more significant violations (Severity Levels II and III) associated with FSARs require review by the Office of Enforcement and coordination with the Office of Nuclear Reactor Regulation. The guidance in the modified Enforcement Policy together with oversight from the Office of Enforcement should improve the consistency of enforcement actions in this area.

QUESTION 9.

In July of 1996, the agency's first performance-based regulation -- the maintenance rule -- went into effect. This regulation was advertised at the time as a means of giving licensees more flexibility in structuring their maintenance programs, with the Commission focusing more on the results of a utility's maintenance program. At this point, it appears that all of the pre-existing maintenance requirements remain on the books. Will the maintenance rule wind up being just another regulation on top of the existing rules, rather than an alternative way to approach maintenance? Is the NRC specifically looking at the elimination of maintenance regulations now that the maintenance rule is in place?

ANSWER.

The results of the Commission's maintenance team inspections at all commercial nuclear plants in the late 1980's indicated that licensees had adequate maintenance programs and had exhibited an improving trend in program implementation. However, some common maintenance-related weaknesses were identified. Principle among these were inadequate root cause analysis leading to repetitive failures, lack of equipment performance trending, and lack of consideration of plant risk in the prioritization, planning, and scheduling of maintenance. The maintenance rule, 10 CFR 50.65, "Requirements for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," is directed at the improvement of those weaknesses.

There are no other Commission regulations that focus solely on the performance of maintenance at nuclear power plants, thus there are no such regulations to eliminate. There are, however, other Commission regulations, such as Appendix B to 10 CFR Part 50 and 10 CFR 50.36, that, although broad in scope, address regulation on the maintenance of plant structures, systems, and components. For example, the scope of activities covered by Appendix B to 10 CFR Part 50 addresses maintenance regulation because "(t)he pertinent requirements of this appendix apply to all activities affecting the safety-related functions of those structures, systems, and components (of the facility); these activities include ... maintaining" However, Appendix B imposes no specific maintenance requirements. Similarly, 10 CFR 50.36 addresses maintenance regulation because it requires licensees to develop technical specifications that, in part, define minimum functional capability or performance levels of equipment required for safe operation of the facility. When those limitations cannot be met, the licensee must perform certain restorative actions, which typically incorporate corrective maintenance activities.

In a sense, the maintenance rule is, and will continue to be, another regulation on top of the existing rules. Regulatory Guide 1.160, "Monitoring the Effectiveness of Maintenance at Nuclear Power Plants," states, "It is intended that activities currently being conducted by licensees, such as technical specification surveillance testing, be used to the maximum extent practical to satisfy monitoring requirements." The objective of the maintenance rule is to require licensees to monitor the overall continuing

QUESTION 9. (continued)

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effectiveness of their maintenance activities to ensure that: 1) safety-significant plant equipment, which includes certain nonsafety-related plant equipment, is capable of performing its intended functions and 2) for nonsafety-significant equipment, failures will not occur that prevent the fulfillment of safety-related functions, and failures resulting in scrams and unnecessary actuation of safety-related systems are minimized.

The NRC believes that the use of risk assessment in establishing risk and performance criteria, setting performance goals and determining monitoring requirements, will lead to enhanced safety at nuclear power plants.

QUESTION 10.

Your testimony mentions the cooperation between NRC and DOE as the Department seeks a new tritium production source. What has the NRC identified as possible problems or difficulties associated with DOE's proposed use of commercial reactors for the production of tritium for defense purposes? Would the use of a commercial reactor for this purpose require hardware modifications or other changes requiring amendments to a reactor's operating license?

ANSWER.

Although DOE is not expected to make an initial formal submittal until the end of November 1996, the staff has held preliminary discussions with DOE regarding licensing and technical issues associated with the use of commercial reactors for tritium production. The staff has not identified technical problems or difficulties associated with the proposed use of commercial reactors for the production of tritium for defense purposes. However, it should be recognized that a systematic staff review can only be conducted after a submittal is received. It is the staff's understanding that a hardware modification will be necessary that involves substitution of lithium for boron in certain core control rods to produce tritium. As part of its review, the staff will identify licensing process issues under the options DOE is considering: commercial light water reactor (CLWR) purchase or CLWR irradiation services. There are also policy issues involved in producing a weapons-related material--tritium--in a commercial reactor that the Commission will need to address under its Atomic Energy Act authority. Such issues could

differ depending on which option DOE selects. There is also a potential issue concerning the NRC's ability to use appropriated funds "for any purpose related to licensing of any defense activity or facility of the Department of Energy." See 42 U.S.C. 7272. Legislation may be needed to address this issue.

QUESTION 11.

Your testimony states that the Commission plans to have its new strategic plan in place by the beginning of calendar year 1997, yet its budget request will not reflect the new plan until perhaps fiscal year 1999. Does the NRC anticipate any difficulty in implementing the plan due to the lag between its budget requests and its time line for putting the plan in place? Will these changes result in a leaner fiscal year 1998 budget request to Congress?

ANSWER.

The NRC has underway a Strategic Assessment and Rebaselining of the NRC activities. A principal outcome of this process will be a strategic plan which will establish a strategic framework that will guide future NRC decision-making. In addition, the plan will provide a basis for aligning the NRC's budget with its mission and goals. As you noted, the plan will be available in early 1997. This will be about the same time that the Administration is expected to be finalizing its fiscal year 1998 budget for submission to Congress. Therefore, the strategic plan itself cannot be the driving force behind our fiscal year 1998 budget request. However, we have reviewed our budget against the preliminary results from our strategic assessment and rebaselining initiative and found no major inconsistencies in scope and direction. We will use the strategic plan as the framework for the fiscal year 1999 budget which we will begin to develop in early 1997.

Even though we have not been able to use the final results of the strategic assessment and rebaselining initiative in developing our fiscal year 1998

QUESTION 11. (continued)

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budget, please be assured that we have developed our budget with the view of requesting only those resources necessary for us to effectively and efficiently protect public health and safety.

QUESTION 12.

Commercial mixed hazardous-radioactive waste is dual-regulated by the NRC and the Environmental Protection Agency, which complicates the management of these wastes and actually prevents certain mixed wastes from appropriate treatment and disposal because adequate NRC/RCRA (Resource Conservation and Recovery Act) permitted treatment and disposal facilities simply do not exist. Involuntary on-site storage puts some NRC licensees into automatic violation of RCRA's land ban storage prohibition.

- (A) Have the Commission and EPA put any resources into developing a strategy to resolve this issue?

ANSWER.

Yes. Since the mid-1980's, the Nuclear Regulatory Commission and the Environmental Protection Agency have cooperated in seeking solutions to the issues associated with the joint regulation of mixed waste. The regulated community identified several issues to the agencies that they felt warranted development of guidance by NRC and EPA. These issues included a definition and methodology for the identification of mixed waste, siting guidelines for mixed waste disposal facilities, a mixed waste disposal facility design that met the requirements of both agencies, and guidance on the testing and storage of mixed waste. NRC and EPA responded by publishing, in 1987, joint guidance documents that addressed the definition of mixed

waste, siting guidelines for mixed waste disposal facilities and a conceptual design for a mixed waste disposal facility.

In addition, in response to a May 1990 request from the Host States Technical Coordinating Committee, the agencies developed the National Profile on Commercially Generated Low-Level Radioactive Mixed Waste, which was the first comprehensive evaluation of mixed waste volumes, characteristics, and treatability on a national basis. In March 1992 the agencies published joint guidance on mixed waste testing for comment and in August 1995 published joint guidance on mixed waste storage for comment. Currently, NRC staff has completed revisions to the mixed waste testing guidance and is preparing a comment summary for inclusion in the final guidance. The NRC and EPA staffs have reviewed the comments on the mixed waste storage guidance and are preparing a final version for publication. The NRC staff expects to publish final testing and storage guidance in early 1997.

QUESTION 12.

Commercial mixed hazardous-radioactive waste is dual-regulated by the Nuclear Regulatory Commission and the Environmental Protection Agency, which complicates the management of these wastes and actually prevents certain mixed wastes from appropriate treatment and disposal because adequate NRC/RCRA (Resource Conservation and Recovery Act) permitted treatment and disposal facilities simply do not exist. Involuntary on-site storage puts some NRC licensees into automatic violation of RCRA's land ban storage prohibition.

- (B) Would the Commission support requiring EPA to promulgate a contingent management exclusion for mixed waste in the final hazardous waste identification rule for process wastes, which would be based on a finding that the existing NRC regulations constitute appropriate management of mixed waste and that such waste, when managed under NRC controls, does not pose a substantial present or potential threat to human health or the environment, and thus does not fall within the definition of hazardous waste?

ANSWER.

Yes, NRC supports consideration of a contingent management exclusion for mixed waste on the basis that regulation of this waste under the Atomic Energy Act (AEA) ensures adequate protection of public health and safety. In March 1992,

NRC staff provided EPA with comments on the proposed repromulgation of the "mixture and derived from" rules. In May 1992, NRC staff provided EPA with comments on the first proposed Hazardous Waste Identification Rule (HWIR). Finally, in April 1996, NRC staff provided comments on the final proposed HWIR. In commenting on these proposed rules NRC staff urged EPA to:

- 1) Establish concentrations of hazardous constituents, based on health and environmental risks, below which a listed waste would not be considered hazardous; and
- 2) Develop a contingent management approach for the disposal of mixed wastes where the conditional exemption from RCRA would be based on compliance with the regulations to control the radiological hazards. This approach would be acceptable as long as case-specific demonstrations were made showing that the protection offered by a licensed radioactive waste disposal facility was adequate to protect the public health and safety from all significant hazards posed by the waste.

NRC has repeatedly supported regulatory approaches that provide flexibility to mixed waste generators, as long as public health and safety and the environment are adequately protected. The NRC also stated that it would review the details of mixed waste management systems in any supplemental HWIR rulemakings and encouraged EPA's timely completion of its evaluation of the AEA requirements for the disposal of radioactive waste to determine whether these requirements would provide an acceptable level of protection for

QUESTION 12.(B). (continued)

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hazardous waste emplaced in a low-level waste disposal facility designed, constructed and operated in accordance with 10 CFR Part 61.

Post-Hearing Questions for the Nuclear Regulatory Commission

Submitted by the Representative Bilirakis

QUESTION 1.

It is my understanding that the States regulate all medical uses of ionizing radiation not produced in a reactor. Is the NRC aware of any safety problems as a result of State control in this area?

ANSWER.

The NRC does not review the effectiveness of State radiation control programs in the non-Atomic Energy Act (non-byproduct material) areas or in the 21 non-Agreement States. Therefore, the NRC is not aware of specific problems as a result of State control of non-byproduct material.

QUESTION 2.

What weight does NRC assign to public comments on rulemaking? If there was overwhelming opposition to an NRC proposed rule, how does the agency reconcile those concerns? Specifically, if the NRC received 81 out of 85 comment letters opposing the rulemaking addressing the unauthorized use of radioactive material, why would the agency continue to move forward with this initiative?

ANSWER.

All public comment letters on a proposed rule are considered in the development of any final rule. The Federal Register notice for any final rule includes a discussion of all comments received, the staff's resolution of those comments, any changes that were made to the final rule as a result of those comments, and the staff's reasoning for making changes or not making changes suggested by the commenters, as well as noting the number of comments received. The consideration of comments is a complex process of analyses, and while the number of positive and negative comments received is important, it cannot be the sole determinant of the Commission's action. In the final analysis, the Commission must determine if a rule is necessary to provide reasonable protection to the public and workers. Frequently those who comment on a rule are those who are burdened by it, not those who benefit from it. Moreover, frequently the concerns raised by the commenters are limited to specific aspects of a proposed rule, and objections or endorsements do not necessarily apply to the entire rule. In the case cited, the proposed rule on unauthorized use of radioactive material, there were 85 comment letters, with 81 opposing the rule. In the process of evaluating and responding to the issues raised by the commenters, the NRC staff made changes to the final rule

that it believed would remove the strongest objections. Accordingly, a draft of the final rule incorporating these changes was provided to the Agreement States, and placed in the NRC's Public Document Room, to obtain additional input prior to forwarding the draft final rule to the Commission for approval. Ultimately, prior to making any decision as to whether to proceed with a final rule, the Commission will consider all comments received, as well as the staff's evaluation of and response to the concerns raised by the commenters.

Post-Hearing Questions for the Nuclear Regulatory Commission

Submitted by the Representative Markey

Reactor Safety Ranking

QUESTION 1. Eleven years ago, I asked a previous Commission to [provide] a listing of the 5 most unsafe nuclear reactors in America, as well as the top 5 safest nuclear reactors in America ... Please provide a similar listing now.

Answer.

- a. The NRC conducts semi-annual Senior Management Meetings to review the operational performance of nuclear power plants. Plants whose performance is of most concern are placed on the agency's "Watch List" by senior NRC managers. There are three categories associated with this list, as discussed below.

Category 3 - Shutdown plants requiring NRC authorization to start up and that the NRC will monitor closely. -- Plants in this category are having or have had significant weaknesses that warrant maintaining the plant in a shutdown condition until the licensee can demonstrate to the NRC that adequate programs have both been established and implemented to ensure substantial improvement. Commission approval is required for restart of a plant in a Category 3 status.

There are three nuclear reactors currently in category 3:

Millstone 1

Millstone 2

Millstone 3

Category 2 - Plants authorized to operate that the NRC will monitor closely. -- Although they are being operated in a manner that adequately protects public health and safety, plants in this category are having or have had weaknesses that warrant increased NRC attention from both headquarters and the associated regional office. A plant will remain in this category until the licensee either demonstrates a period of improved performance, or until a further deterioration of performance results in the plant being placed in Category 3.

There are three nuclear reactors currently in category 2:

Dresden 2

Dresden 3

Indian Point 3

Plants that are placed in either Category 2 or Category 3 are referred to as being "on the NRC Watch List."

Plants that are placed in Category 1 have been removed from the list. In order to fully describe the Watch List, the definition of category 1 is provided below.

Category 1 - Plants removed from the Watch List. -- Plants in this category were previously designated as Category 2, and have taken effective action to correct identified weaknesses. No further NRC special attention beyond the current level of monitoring is needed to verify that improvement continues. There were no plants placed in this category at the June 1996 Senior Management Meeting.

- b. The NRC formally recognizes plants that have demonstrated superior performance by meeting the following criteria: a nuclear power plant must have received category 1 ratings in all functional areas at its most recent Systematic Assessment of Licensee Performance (SALP); the plant has maintained a superior level of safety performance since the last SALP, as evidenced by a lack of significant operational problems and operator errors; the NRC has not initiated any escalated enforcement actions for events that have occurred since the last SALP; plant performance indicators reflect superior overall safety performance since the last SALP; and, the NRC is not conducting any significant inspections or investigations of allegations that, if substantiated, might adversely reflect on overall plant performance.

Over the past 18 months, the plants listed below have been formally recognized for superior performance:

Callaway

Davis-Besse

Kewaunee

North Anna 1

North Anna 2

Plants identified as superior performers are not placed in a numbered category. They are recognized as superior performers.

Deterrent Effect of NRC Fines and Penalties

QUESTION 1. What is the largest fine the NRC has ever issued to a licensee for violating NRC rules or the terms of an NRC-issued license?

ANSWER.

The largest fine the Commission has issued was \$1,250,000 for violations associated with the inattentive operators at the Peach Bottom Nuclear Power Station. This action was issued on August 10, 1988 and the licensee paid the penalty on September 8, 1988.

QUESTION 2.

On average, how much time elapses between the point at which a potential rule or license violation is first detected, the point at which NRC determines the activity in question did indeed constitute a violation, and the actual collection of the fine from the licensee?

ANSWER.

Based on data from the NRC Enforcement Action Tracking System for reactor cases involving civil penalties paid in Fiscal Years 1995 and 1996, the average time to issue a proposed civil penalty was about 84 days and to collect the penalty thereafter was about 37 days, for a total elapsed time of about 121 days.

The NRC Enforcement Tracking System does not track the date on which a potential violation is first identified. The above answer was based on the following starting dates: (1) For inspections, the NRC used the exit date of the inspection, which is generally the date licensee management is put on notice that the NRC has determined a violation may exist. (2) In the case of a violation that is the subject of a report by the Office of Investigation (OI), the NRC used the date the OI report was issued to the staff as the starting date to track enforcement actions, unless the case was referred to the Department of Justice (DOJ), in which case the NRC used the date DOJ declined prosecution or released its hold on civil action. (3) If the violation is based on a DOL adjudicatory finding, the date of the DOL finding was used.

QUESTION 3.

What is the average cost to a licensee per day of shutting down a reactor for safety-related repairs or upgrades necessary to comply with NRC requirements?

ANSWER.

The average daily cost for shutting down a reactor is:

\$310,000 for a pressurized water reactor, and

\$249,000 for a boiling water reactor.

The source of this information is Forecast: Regulatory Effects Cost Analysis Software Manual, Version 4.1 (NUREG/CR-5595, Rev. 1; July 1996).

It should be noted that these are average costs and that shutdown costs at individual plants may be substantially different based on variations in plant size, replacement power costs, capacity factors, or other factors.

QUESTION 4.

In light of your responses to questions 1, 2, and 3, do you believe that the prospect of NRC fines serves as a sufficient deterrent to violations of NRC rules or applicable license requirements, or is the NRC concerned that licensees may view such fines just another cost of doing business? Should these fines be increased in size in order to strengthen their deterrent and punitive effects?

ANSWER.

The Commission is satisfied that the current penalties provided in section 234 of the Atomic Energy Act of 1954, as amended, provide sufficient deterrence for violations of NRC requirements. Pursuant to recent legislation the amount of civil penalties which may be assessed for a violation is subject to periodic adjustments for inflation. These penalties can be used as an effective tool to emphasize to licensees the need to improve licensee performance. If the normal amounts of civil penalties do not prove effective in a particular case, the NRC can escalate its actions to include the use of higher penalties and/or issuance of orders. In 1995, the Commission reevaluated its enforcement program. As part of that effort both the financial relevance of civil penalties and the amount of penalties were considered. Section II.D of NUREG 1525, Assessment of the NRC Enforcement Program, addresses these issues. A copy of NUREG 1525 is enclosed.

NRC civil penalties, in accordance with the legislative history of the Atomic Energy Act, are intended to be remedial and not punitive. The NRC recognizes

that a civil penalty of fifty thousand dollars or even several hundred thousand dollars is relatively small compared to the capital investment and resources of most utilities regulated by the NRC. But it is not trivial. In considering the impact of a civil penalty, there are other factors to consider beyond the monetary amount, such as, the adverse publicity from the penalty, the increase in regulatory attention by both the NRC and state Public Utility Commissions, and the cost of corrective action. These factors also contribute to encouraging licensees to improve performance by preventing violations and by promptly identifying and correcting violations if they do occur. As noted above, NRC has other actions it can take if civil penalties do not achieve the necessary improvement in performance.

Enclosure:

NUREG-1525, Assessment of the NRC Enforcement Program

Assessment of the NRC Enforcement Program

U.S. Nuclear Regulatory Commission

Review Team Report



QUESTION 5.

Under the federal securities laws, the SEC can bar an individual from the securities industry for life (or for a specified period of years) for violations of the securities laws, and it periodically uses this authority to sanction individuals at securities firms who break the rules. Does NRC have similar authority to bar persons employed by a nuclear licensee from being employed by or associated with a licensee if that person was found to be responsible for violations of NRC rules? If so, has the NRC ever used this authority (please provide a listing of all individuals so barred within the last 5 years)? If not, don't you think that the NRC should have such authority.

ANSWER.

In August 1991, the NRC promulgated the Deliberate Misconduct Rule, which became effective September 16, 1991. See, 10 CFR 50.5. The rule puts licensed and unlicensed persons on notice that they may be subject to enforcement action for deliberate misconduct that causes or would have caused, if not detected, a licensee to be in violation of any of the Commission's requirements, or for deliberately providing to the NRC, a licensee, or contractor, information that is incomplete or inaccurate in some respect material to the NRC.

Since the Deliberate Misconduct Rule took effect, the Commission has issued 38 orders prohibiting or in some way restricting an individual from performing

NRC-licensed activities. Of the 38 orders, 11 involved employees at power reactors and 27 involved employees of materials licensees. In addition, in FY 96, the Commission has issued 19 Notices of Violation to employees of reactor licensees and one Letter of Reprimand to individuals where the Deliberate Misconduct Rule was considered but not applied.

The NRC publishes semiannually a list of those individuals currently subject to restriction as to NRC-licensed activities. Enclosure 1 is the most recent volume of NUREG-0940, Enforcement Actions: Significant Actions Resolved - Individual Actions, which is distributed to the Commission's major licensees. Orders and Notices of Violation issued to individuals as well as other significant enforcement actions are available on the Office of Enforcement's internet home page, [www.nrc.gov.oe](http://www.nrc.gov/oe).

The NRC has sought amendments to section 234 of the Atomic Energy Act of 1954, as amended, to clarify NRC's ability to take enforcement action for violations of the Rule on Deliberate Misconduct. The Agency submitted a legislative proposal to the 103rd Congress. No Congressional action was taken by that Congress. The NRC did not submit a legislative proposal to the 104th Congress. Enclosure 2 is a copy of Section 3 of a legislative proposal submitted on March 1, 1993.

Enclosures:

1. NUREG-0940, Vol 15, No. 1, Part 1
Enforcement Actions: Significant Actions Resolved, Individual Actions
2. Letter from Chairman Ivan Selin to the Honorable Albert Gore dated 3/1/93



UNITED STATES
NUCLEAR REGULATORY COMMISSION
WASHINGTON, D.C. 20555

Enclosure 2
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March 1, 1993

The Honorable Albert Gore
President of the United States Senate
Washington, D.C. 20510

Dear Mr. President:

I am enclosing the Nuclear Regulatory Commission's legislative proposals in the form of an omnibus draft bill that would make a number of changes to the Atomic Energy Act of 1954 and the Energy Reorganization Act of 1974. Specifically, this legislation would accomplish the following objectives: (1) help ensure that defects in components and regulatory violations will be reported to the NRC; (2) confirm the Commission's authority to impose civil monetary penalties on all persons who willfully violate or cause another to violate the Atomic Energy Act or NRC requirements based thereon; (3) modify a congressional reporting requirement applicable to the NRC's Advisory Committee on Reactor Safeguards; (4) authorize guards at NRC-licensed facilities to carry firearms; (5) make unauthorized introduction of weapons at certain NRC-licensed facilities a Federal crime; (6) make sabotage of a production, utilization, or waste storage facility during its construction a Federal crime if the action could jeopardize public health and safety during the facility's operation; and (7) authorize the NRC to obtain administrative search warrants.

The Commission believes that enactment of this legislation would enhance nuclear safety and physical security. A draft bill (Enclosure 1), an analysis of its provisions (Enclosure 2), a comparative text (Enclosure 3), and a memorandum explaining the need for the legislation (Enclosure 4) are provided.

The NRC also expects to propose user fee legislation in the very near future. While the NRC has established fees to comply with the spirit and intent of the language of the Omnibus Budget Reconciliation Act of 1990 and has made a concerted effort to formulate a fair user fee schedule consistent with our statutory mandate, we recognize that problems remain. As we indicated in our July 7, 1992 letter to the Congress, the NRC does not believe that resolution of these problems can be achieved under existing legislation.

The NRC expects to address the fee problems as part of the fee policy review required by section 2903(c) of the Energy Policy Act of 1992. The Act requires that NRC review its policy for assessment of annual fees, solicit public comment on the need for changes to such policy, and recommend to the Congress such changes

in existing law as the NRC finds are needed to prevent the unfair burden on certain NRC licensees. We plan to request public comment in March 1993 and formulate a proposal for fee-related legislation as soon as it is reasonably practical thereafter.

Sincerely,



Ivan Selin

Enclosures:

1. Draft Bill
2. Analysis of Proposal
3. Comparative Text
4. Legislative Memorandum

SECTION 3. CIVIL MONETARY PENALTIES FOR VIOLATIONS OF RULES, REGULATIONS, ORDERS OR LICENSING REQUIREMENTS.

(a) The heading of section 234 of the Atomic Energy Act of 1954 is amended to read as follows: "CIVIL MONETARY PENALTIES FOR VIOLATIONS OF RULES, REGULATIONS, ORDERS, OR LICENSING REQUIREMENTS."

(b) The first sentence of subsection a. of section 234 of the Atomic Energy Act of 1954 is amended to read as follows:

"a. Any person who--

"(1) violates (A) any licensing provision of section 53, 57, 62, 63, 81, 82, 101, 103, 104, 107, or 109, or any rule, regulation, or order issued thereunder, (B) the certification provisions of section 1701, or any rule or regulation issued thereunder, (C) any term, condition, or limitation of any license or certification issued under any of these sections, or (D) any rule or regulation issued under section 161 b., 161 i., or 161 o., or

"(2) commits any violation for which a license may be revoked under section 186, shall be subject to a civil penalty, to be imposed by the Commission, of not to exceed \$100,000 for each such violation."

SECTION 4. REORGANIZATION PLAN AMENDMENTS.

(a) Section 1(b) of Reorganization Plan No. 1 of 1980 is amended to read as follows:

Safety Problems at the Millstone Reactors

Question 3.

Why should employees of licensees, such as Mr. Gallatis (sic), be forced to take the unusual and rather extreme step of filing a public 2.206 petition to the NRC to take enforcement action before the agency responds to safety concerns they have regarding a licensee? Do you think it appropriate NRC practice to not fully investigate whistleblower complaints until they are the subject of a public petition or a press report? What specific actions are you taking to assure that in the future, whistleblower complaints are fully investigated at an earlier point?

Answer.

The NRC does not consider the filing of a 2.206 petition as unusual or extreme. The 2.206 process was designed to be a readily available means by which any member of the public can formally request enforcement action for alleged violations or safety concerns. Nevertheless, the NRC strives to promptly address safety concerns brought up by any member of the public or any utility employee. It is not appropriate practice to defer investigation of safety concerns brought to our attention until they are the subject of a public petition or press report.

A number of specific actions have been taken to improve our performance in this area. The NRC has a goal of completing the evaluation of technical concerns within six months of receipt, on average. It may take longer to

complete an evaluation involving complex technical issues. To assure that allegeders' complaints are reviewed in a timeframe commensurate with the safety and regulatory significance of the concerns, NRC management reviews the timeliness of the staff's actions on a periodic basis. To assist the staff in monitoring the timeliness of resolution of allegations, features were added to the new tracking system to make the monitoring easier. Additionally, the Agency Allegation Advisor reinstituted annual audits of the implementation of the allegation program in February 1995. One element of the audits requires evaluation of the timeliness of addressing the concerns.

QUESTION 5.

What about those at Northeast Utilities that were responsible for the utilities' violation of its license, those who filed false or misleading reports with the NRC, those who failed to promptly report Mr. Galatis' allegations to the NRC, and those who harassed or retaliated against Mr. Galatis or other NU employees -- what is being done to hold them accountable for their misdeeds? Have any of these individuals been disciplined, sanctioned or dismissed?

Answer.

Please refer to our answer to Question 9.

QUESTION 6.

When does the NRC intend to act on Mr. Galatis' petition? Why is it that the NRC acted so promptly on Northeast's request for a license amendment to allow them to perform a full fuel core offload, but has taken so long to respond to this petition?

Answer.

We anticipate that a final Director's Decision on the 10 CFR 2.206 petition will follow completion of evaluation of potential NRC enforcement actions related to issues raised in the petition. In the interim, the staff plans to respond to those portions of the petition focused on the technical issues before restart of any of the Millstone Units. The NRC staff has conducted evaluations, inspections and investigations of fuel offloading practices at Millstone Unit 1. The staff is continuing its assessment of possible enforcement action to be taken based on inspection and investigation findings.

The licensee filed an amendment application on July 28, 1995; the amendment was granted on November 9, 1995. The review of the proposed amendment focused on the safety and technical issues associated with the changes to the technical specifications and design modification. It is not inordinate for the NRC to act promptly to review license amendments that would affect upcoming refueling outages. Mr. Galatis' petition raised complex issues that necessitated substantial investigatory work, beyond the technical reviews required to address the license amendment.

Recognizing the length of time it has taken to conduct these investigations,

QUESTION 6. (continued)

- 2 -

periodic status letters have been sent to the petitioner to keep him informed of staff progress on the petition.

QUESTION 7.

Do you think it would be appropriate to approve a restart of the Millstone reactors when the Justice Department announced last month that it has undertaken a criminal investigation of the company? Were Northeast Utilities to be criminally indicted or convicted, what impact would that have on its licensee status?

Answer.

The NRC will take into account all relevant information regarding Millstone and its management bearing on possible restart of the plants or possible enforcement action against the licensee. A criminal indictment or conviction does not, per se, affect the status of the licensee; however, the NRC would consider such information in assessing whether to initiate action that would affect the licensee's status.

QUESTION 8.

I recently received a letter from a former Northeast employee who alleges that he and other employees who had raised concerns about safety practices at the Millstone reactors were targeted for dismissal in a January 1996 corporate downsizing (see attachment 1). Has NRC examined whether any of the 100 employees laid off as part of that downsizing may have been the subjects of retaliation for their efforts to bring attention to safety concerns at the reactors? If not, please explain why not. If so, please explain what actions the NRC is taking to pursue this matter.

ANSWER.

In March 1996 a task force was set up to review the January 1996 work force reduction at Northeast Utilities to determine if the process was utilized to discriminate against employees who had raised safety concerns. The task force completed its efforts in mid-April and orally reported its findings to senior NRC management. Subsequently, the Office of Investigations (OI) initiated two investigations regarding several complaints. OI is presently pursuing these matters. In mid-September, the task force was asked to document its findings and a report has now been completed. The task force report and the OI investigations are part of the review being conducted by the United States Attorney for the District of Connecticut.

QUESTION 9.

In light of the events at Millstone, concerns have been raised by some whistleblowers about the adequacy of investigative techniques used by the NRC Office of Investigations (OI), its independence, its response to allegations of whistleblower harassment or retaliation, and its contacts with licensee legal counsel. I recently received a copy of notes prepared by Mr. Galatis' attorney in preparation for a meeting with you to discuss these deficiencies (see attachment 2). Inasmuch as the allegations contained in these notes raise some very serious substantive issues with respect to the adequacy of OI investigative techniques, I request you evaluate and respond to the concerns raised therein, as well as the specific suggestions for reforms. Are any steps being undertaken to alter OI investigative techniques in response to the type of concerns raised in these notes?

ANSWER.

As you may know, the United States Attorney for the District of Connecticut is reviewing evidence collected by the Office of Investigations (OI) concerning possible criminal activity relating to the operation of Northeast Utilities Service Company nuclear power plants. It would be inappropriate for us to discuss the evidence, findings, conduct, strategies, or techniques involved in any potentially criminal matter currently under investigation by OI or under review by the Office of the United States Attorney.

With regard to the independence of OI, we believe that an effective investigative function is an essential part of fulfilling the Agency's safety mission. As such, it should be located within the organization where it can support the staff's efforts while maintaining the necessary independence to conduct investigations in a manner consistent with the investigator's best professional judgment. The current organizational structure and management of the investigations is successfully fulfilling these objectives.

Safety Problems at the Haddam Neck Reactor

Questions 1-2. According to a recent article in the Boston Globe, the Haddam Neck plant is being shut down due to a series of 11 safety concerns identified by the NRC. On page 19 of your prepared testimony, you stated that "the plant was shut down due to a design deficiency restarting [sic] [relating] to containment fan coolers" and reported that "additional safety-significant design-related issues have been raised." Please describe the nature and severity of the safety problems that have been identified at this reactor. How serious are these safety problems?

Answer.

The majority of the safety findings related to Haddam Neck thus far are deficiencies relating to the licensee's failure to control the configuration of the plant to preserve the design basis assumptions. These deficiencies appear to be the result of inadequate engineering work. The deficiencies raised doubts regarding the plant's ability to cope with the accidents analyzed during design and facility licensing. These issues were significant enough to lead the NRC to ask the licensee to provide its basis for continued operation of Haddam Neck. The plant was subsequently shut down in July 1996 due to a design deficiency relating to containment fan coolers. The design deficiencies noted above require resolution prior to plant restart. In addition to the configuration management problems noted by the NRC and the licensee, recent operator errors are a significant concern. Specifically,

operator errors (while the plant was shut down) led to several problems with water inventory control in the reactor coolant system. The most safety significant issue was the introduction of a large undetected quantity of nitrogen into the reactor vessel. This error had the potential to cause a loss of one method of cooling the shut down reactor.

The last area of concern involves weaknesses identified during a full-participation emergency preparedness exercise conducted on August 14, 1996. The weaknesses included 1) failure to properly classify the initial event and difficulty in classifying subsequent escalation of the events; and 2) the inability to make correct and appropriate protective action recommendations (PARs). This is potentially significant since the licensee was found to have weaknesses in its ability to properly evaluate a simulated plant emergency.

Question 3.

How and when were these problems identified?

Answer.

The majority of the configuration management weaknesses were identified in March and April 1996 by an NRC Special Inspection Team. The team also raised questions that led the licensee to self-identify several weaknesses (including the issue that resulted in the July shutdown). The team's findings were presented to the licensee at the completion of the inspection and were formally transmitted in a July 31, 1996, inspection report.

The operator errors were discovered by the licensee in late August and early September 1996. However, an NRC Augmented Inspection Team found that the licensee was slow to identify and react to these problems.

The weaknesses found in the full participation exercise were identified by NRC inspectors during the August 14, 1996 exercise. The licensee also self-identified similar weaknesses during the exercise.

Question 4.

What actions are being taken by the licensee and by the NRC staff in response to these concerns?

Answer.

On October 9, 1996, Connecticut Yankee Atomic Power Company issued a press release that stated that economic analysis of operations, expenses, and the cost of replacement power indicates that a permanent shutdown of the Haddam Neck plant seems likely.

QUESTION 5.

Can you assure us that this plant won't be restarted until all of these safety problems are fully resolved?

Answer.

See Answer to Question 4.

QUESTION 6.

The aforementioned Globe article reports that the Haddam Neck plant may not be restarted. Has the licensee informed the NRC whether this is the case?

Answer.

See Answer to Question 4.

Safety Problems at the Maine Yankee Reactor

QUESTION 1.

A May 8, 1996 report issued by the NRC Inspector General found "significant indications" that operators of the Maine Yankee reactor hid problems in a safety-related computer program from the NRC. These deficiencies related to safety items identified by the NRC as priorities in the Three Mile Island Action (TMI) Plan. The IG report further notes that these deficiencies resulted in this item being formally closed out when it should not have been. As a result, the TMI action plan reports to Congress (which were being submitted in response to a request I initiated), contain inaccuracies. Do you believe the IG findings regarding this matter suggest deficiencies or gaps in implementation of the TMI action plan by NRC licensees?

Answer.

To address this question, the NRC staff initiated, prior to issuance of the May 8, 1996, OIG report, a review to determine the scope of potential problems related to licensee implementation and NRC staff closeout of items in the TMI action plan.

To date, the review has not raised significant concerns beyond those specifically occurring at Maine Yankee. The starting point for this review specifically addresses the accuracy of the data in our tracking system for items of concern in the Maine Yankee case (i.e., items II.K.3.30 and II.K.3.31 related to analysis of small-break loss-of-coolant accidents (SBLOCAs)).

Also, in an initial expansion of the scope of review, a related TMI Action Plan Item (II.K.3.5), regarding automatic trip of reactor coolant pumps during loss-of-coolant accidents, will be part of the review. The staff review is being done for each plant currently holding an operating license.

The staff's current review of the accuracy of the closeout and implementation data for the three TMI Action Plan items is focusing on identifying potential problems in several areas. In the Maine Yankee case the project manager's closeout letter of May 8, 1989, did not include documented technical staff or management concurrence. The staff's review is looking for similar concurrence process weaknesses in the closeout of the TMI Action Plan items for other plants. In addition, the staff's review is examining the implementation data for other licensees which included commitments or conditions like those placed on Maine Yankee to make sure the commitments were fulfilled. The staff will follow up such cases to verify adequate implementation.

If review of the implementation and closeout of the TMI Action Plan items indicates a broader problem, the scope of the review will be appropriately expanded to include other TMI Action Plan items. The current review is scheduled to be completed and reported to the Commission by the end of November 1996.

QUESTION 2.

In light of the experience at Maine Yankee, is the NRC concerned that other TMI action plan items may also have been improperly closed by the NRC staff or by licensees? In light of the IG's findings with respect to Maine Yankee, isn't it possible that there are other TMI action plan items that should not have been closed out? What is the NRC doing to assure that TMI action plan items have not been improperly closed out by the licensees or the NRC staff?

Answer.

Please refer to the response for Question 1.

Question 4.A.

In a June 13, 1996, nonpublic Management Implications Report regarding the events at Maine Yankee, the NRC IG made several findings regarding regulatory failures at the NRC. A few weeks ago, you wrote me to indicate that you have asked the NRC staff to review the IG's findings and report on what actions should be taken in response. What actions have been taken?

Answer.

The NRC IG was asked to prepare a comprehensive evaluation of NRC staff actions associated with Northeast Utilities (NU) and the Millstone facility. The report was to include insights gained during the course of OIG investigations involving Millstone and provide an evaluation of the managerial and regulatory program issues associated with the Millstone and Maine Yankee cases.

Even though the staff is still developing its formal response to this report, a number of actions have already been planned or implemented to address issues raised in the individual IG reports which were used to prepare OIG Management Implications Report (MIR). These are also discussed below. Additionally, two senior NRC managers have been tasked with performing a review of the agency's corrective actions to assess whether they are appropriately broad and comprehensive. Their report is expected to be provided to the Chairman by the end of 1996.

Of the five specific observations contained in the MIR, two were closely

related. OIG made the observation that regulatory failures at Millstone and Maine Yankee were not due to a lack of knowledge of what was occurring at the site, while a second observation noted that NRC management has not clearly articulated the knowledge and performance level expected from resident inspectors and headquarters Project Managers. The NRC issued revised guidance to all regional offices to verify selected Final Safety Analysis Report (FSAR) commitments by reviewing the applicable portions of the FSAR during routine inspection preparation and verifying that the commitments had been properly incorporated into plant practices, procedures and designs. The NRC staff has been reminded of the need to be familiar with the licensing basis and the FSAR and to consistently apply that information during licensing reviews. The staff will also ensure that the Fundamentals of Inspection course emphasizes the importance of consulting the FSAR during inspections to ensure maintenance of the licensing basis. This course is required to be completed by all inspectors as part of their qualification process.

Another observation noted that NRC senior management failed to take adequate actions to ensure regulatory compliance at Millstone. The staff recognizes the need for better integration and analysis of available data, leading to earlier recognition by the NRC of the scope and depth of licensee performance problems, and the need for more effective monitoring of licensee implementation of long-term corrective action programs to ensure better understanding of the full extent of a problem. The staff took corrective actions, including the development of the Integrated Performance Assessment Process (IPAP) in 1994 and revision to Inspection Module 40500, "Effectiveness of Licensee Controls in Identifying, Resolving and Preventing Problems" in

April 1994, which expanded the routine core program look at how well licensees identify and resolve problems. The NRC staff has also improved the Senior Management Meeting (SMM) process, providing additional structure and rigor to the preparations for, and conduct of, SMMs, including the plant performance review process, and in identifying the criteria that are used to evaluate the safety performance of nuclear power plants. The standardization of evaluative activities throughout the NRC fosters increased objectivity in plant performance evaluations, and the criteria that have been developed publicly establish benchmarks to assess the safety performance of all plants. Finally, the Office of Analysis and Evaluation of Operational Data has retained an independent management consultant to evaluate the development of improved indicators that can provide a more objective basis for judging whether a plant should be placed on or deleted from the NRC Watch List.

The OIG MIR also noted that the NRC must continue to improve its handling of allegations from employees in the nuclear industry. The agency has put forth substantial effort to improve its practices and procedures for handling allegations. The Agency issued Management Directive (MD) 8.8, "Management of Allegations," to provide additional guidance on referring allegations to licensees, conducting allegation review boards, and maintaining contact with allegeders. Subsequently, office and regional instructions were revised to be consistent with MD 8.8. NRR has re-instituted audits of the implementation of the allegation program on an annual basis, and established a toll-free number for individuals to refer safety and regulatory issues to the NRC. NRC management, in response to recent concerns, has re-inforced the staff's sensitivity in the handling of confidential sources and the need to protect

the identity of alleged.

The final OIG observation concerned the staff's failure to document interactions with licensees and to track licensee commitments. The staff acknowledges that the NRC did not have and does not presently have a formal tracking system for individual plant licensing commitments, and the staff relied on the licensees' tracking systems. Though such information can be obtained in the NRC's docket files, it is not easily retrievable in an accessible data form. The staff is reviewing options to modify its processes to clearly identify those licensee commitments that the staff relied on to make regulatory decisions. The staff is also reviewing appropriate mechanisms for following up on licensee commitments and NRC requirements.

Additionally, NRC management has stressed with the staff the need to adequately document significant discussions and conversations with licensee personnel. Office procedures were revised to include the handling of unsolicited information received from an applicant, licensee or vendor. Further detailed instructions are being developed for the NRR staff on the need to document significant discussions and conversations with licensee personnel, with emphasis on those important statements and commitments made by licensees that are relied upon in the staff's safety evaluations.

QUESTION 4.b.

In a June 13, 1996 nonpublic Management Implications Report regarding the events at Maine Yankee, the NRC IG made several findings regarding failures at the NRC. A few weeks ago, you wrote me to indicate that you have asked the NRC staff to review the IG's findings and report on what actions should be taken in response. (b) Will the NRC now release the June 13, 1996 IG report?

ANSWER.

No, the NRC will not release the June 13, 1996, IG report, because the NRC staff is developing its formal response to this report, and the Commission has not evaluated the staff's response.

QUESTION 5.

The IG report also notes that evidence of wrongdoing by the licensee at Maine Yankee has been referred to OI for further action. Has OI completed its investigation of this matter? Please provide me with a copy of any reports or memoranda issued by OI on its findings or recommendations and outline what actions the NRC has taken in response to such recommendations. If not, please report on what is being done to assure a timely resolution of this matter.

ANSWER.

The Office of Investigations has completed its investigation into the allegations of wrongdoing at Maine Yankee that are referenced in the IG's report. The report has been referred to the U.S. Attorney's Office, Portland, Maine, for review. That office has requested that the report and related documentation not be made available at this time. The staff will consider civil enforcement action based on the report at an appropriate time, taking into account the status of the U.S. Attorney's review.

QUESTION 6.

It is my understanding that on January 3, 1996, the NRC staff issued an order allowing the Maine Yankee reactor to operate at 90 percent of full licensed power, notwithstanding the fact that the reactor is not in compliance with TMI Action Plan Items II.K.3.30 and II.K.3.31 (regarding plant parameters following a small break loss of coolant accident.

A) What is the Commission's position regarding the staff's rationale for allowing this plant to operate notwithstanding its noncompliance with the TMI action plan requirements?

Answer.

With regard to the Commission's view of the regulatory basis for the Order, the Commission supports the action of the Director of NRR in issuing the Order in accordance with his general delegated authority to issue orders to power reactor licensees to protect public health and safety under the provisions of 10 CFR Parts 2 and 50, including the authority specified in 10 CFR 50.46(a)(2). The Commission has closely monitored the staff's activities in this matter and would have intervened had it deemed it necessary. The NRC's basis for allowing Maine Yankee to operate is addressed in response to Question 6.B.

QUESTION 6.

It is my understanding that on January 3, 1996, the NRC staff issued an order allowing the Maine Yankee reactor to operate at 90 percent of full licensed power, notwithstanding the fact that the reactor is not in compliance with TMI Action Plan Items II.K.3.30 and II.K.3.31 (regarding plant parameters following a small break loss of coolant accident.

B) What was the basis for the NRC staff's determination that allowing the plant to operate at 90 percent of full capacity was an adequate substitute for requiring the licensee to undertake the analysis required under the aforementioned TMI action plan requirements?

Answer.

TMI Action Plan Items II.K.3.30 and II.K.3.31 sought to verify licensee compliance with the licensing basis for the facility, and in particular, the adequacy of small break loss of coolant accidents (SBLOCA) analyses performed pursuant to the requirements of 10 CFR 50.46(a)(1). Specifically, Item II.K.3.30 is "Revised Small-Break Loss-of-Coolant Accident Methods To Show Compliance With 10 CFR 50, Appendix K" (Appendix K is a description of required and acceptable features of ECCS evaluation models for use per section (a)(1) of 10 CFR 50.46.); and Item II.K.3.31 is "Plant Specific Calculations To Show Compliance With 10 CFR 50.46."

The Order on January 3, 1996, was issued for the explicit purpose of ensuring

safe operation of Maine Yankee pending completion of the staff's evaluation of the Maine Yankee emergency core cooling systems and containment design. The Order recited as a basis for those restrictions that the Maine Yankee Atomic Power Company (the licensee) had not applied computer code RELAP5YA, as it had proposed for Cycle 15 SBLOCA analyses, in conformance with the requirements of 10 CFR 50.46, and did not satisfy TMI Action Plan Items II.K.3.30 and II.K.3.31. The Order did not waive TMI Action Plan Items II.K.3.30 and II.K.3.31. The Order required the submission of an SBLOCA analysis that, if submitted and accepted, would bring the licensee into conformance with the regulatory guidance of TMI Action Plan Items II.K.3.30 and II.K.3.31 and into compliance with the requirements of 10 CFR 50.46(a)(1) for operation above 2440 mwt.

Although Maine Yankee has not satisfied the guidance of the TMI Action Plan Items II.K.3.30 and II.K.3.31, the licensee is in compliance with 10 CFR 50.46 requirements for ECCS. This is because with the imposed power penalty, and consistent with 50.46(a)(2), compliance was demonstrated by the licensee's approved large-break loss-of-coolant accident analysis, which bounded credible design-basis accidents. The Order contains an extensive discussion of the safety basis relied on to justify power operation with the imposed restrictions.

On the basis of previous analyses performed for Maine Yankee using approved methods (other than RELAP5YA) for a power level of 2440 mwt, and the proposed core operating limits for the current cycle of operations (cycle 15),

restricting the maximum permissible power level to 2440 mwt is adequate to assure that abundant core cooling will be provided for postulated SBLOCAs. Accordingly, the requirements of 10 CFR 50.46 are satisfied for Maine Yankee operations at 2440 mwt.

QUESTION 6.

It is my understanding that on January 3, 1996, the NRC staff issued an order allowing the Maine Yankee reactor to operate at 90 percent of full licensed power, notwithstanding the fact that the reactor is not in compliance with TMI Action Plan Items II.K.3.30 and II.K.3.31 (regarding plant parameters following a small break loss of coolant accident.

C) Does the Commission believe this action by the NRC staff was justified?

Answer.

Yes. Before accepting its recommendation to issue the Order, the Commission was assured by the staff that the safety basis contained in the Order provided the necessary assurance that operation at the reduced power level was consistent with public health and safety. As described in the response to Question 6.B, Maine Yankee is in compliance with 50.46 for operation at the reduced power level specified in the January 3, 1996 Order.

QUESTION 6.(D). It is my understanding that on January 3, 1996, the NRC staff issued an order allowing the Maine Yankee reactor to operate at 90 percent of full licensed power, notwithstanding the fact that the reactor is not in compliance with TMI Action Plan Items II.K.3.30 and II.K.3.31 (regarding plant parameters following a small break loss of coolant accident.

D) How many other nuclear plants are operating in noncompliance with these TMI action plan requirements (if there are any, please list them and indicate when the NRC staff approved them for operation and under what condition)?

Answer.

The staff is reviewing the other operating nuclear plants to verify the proper implementation of TMI Action Plan Items II.K.3.30 and II.K.3.31. To date, the staff has not found other nonconformances with these items.

QUESTION 7.A.

I understand that a cut wire was recently discovered in certain safety-related circuitry in the Maine Yankee reactor control room area. Reportedly, this wire had been cut by mistake, the activity resulting in the cut wire was not documented, and the error was not discovered for a period of years. I recently received a copy of a September 16, 1996 letter from a Maine resident, Mr. Henry Meyers, which raises a number of safety-related questions regarding this matter (see Attachment 3).

A) Please provide me with a copy of the NRC's responses to the questions contained in the aforementioned letter.

Answer.

On September 24, 1996, the NRC staff received Mr. Myers' letter of September 16, 1996. Although the staff has begun to review his questions, it will not be possible to complete a response until our review of the cut wire incident can be fully completed by the staff. At that time we will promptly respond to Mr. Myers' questions and provide a copy to you.

QUESTION 7.(B). I understand that a cut wire was recently discovered in certain safety-related circuitry in the Maine Yankee reactor control room area. Reportedly, this wire had been cut by mistake, the activity resulting in the cut wire was not documented, and the error was not discovered for a period of years. I recently received a copy of a September 16, 1966 letter from a Maine resident, Mr. Henry Meyers, which raises a number of safety-related questions regarding this matter (see Attachment 3).

B) What actions is the NRC taking (or does it intend to take) to respond to this and other safety problems at this license? In your response, please summarize that actions are being taken by the NRC and the licensee to respond to safety deficiencies identified by the Maine Yankee Independent Special Assessment Team.

Answer.

The licensee formed a special investigation team to evaluate the circumstances associated with the cut wire. The staff has closely followed the licensee's activities and finds its efforts to date to be satisfactory. Other key safety concerns center upon an allegation the staff received in December 1995. The staff's response was to perform an on-site evaluation in December 1995 and issue an Order and Demand for Information on January 3, 1996. The Order imposed a power penalty to ensure compliance with governing rules and regulations. Specifically the licensee is not allowed to operate above their

originally licensed power limit of 2440 Mwt, which equates to about a 10% reduction in power until questions and concerns are satisfactorily addressed regarding the adequacy of the licensee's small break loss of coolant accident analysis and a comprehensive integrated reanalysis of the containment pressure response is completed.

The Independent Safety Assessment Team (ISAT) recently completed its report. The staff required the licensee's actions to address several technical concerns that arose during the inspection and found them acceptable... prior to Maine Yankee resuming operation from a short outage on September 3, 1996. Several of the ISAT concerns were based on a finding of little design margin. The ISAT team and NRC staff concluded that continued operation at 2440 MWT was safe. However, until a number of design related issues are addressed by the licensee and reviewed by the NRC staff regarding satisfactory margins at 2700 Mwt, the ISAT could not conclude that the plant could return to its higher rated power limit. The NRC staff will take whatever action is found to be necessary to assure that the technical concerns are satisfactorily addressed prior to authorizing a return to the higher power level.

NRC Policies and Procedures Regarding Protection of Whistleblowers

QUESTION 1.

According to a March 7, 1996 letter I received from the NRC IG, as of March of this year less than one-half (23) of the 47 recommendations contained in the January 1994 Review Team report on inadequacies in the NRC policies and procedures relating to whistleblower protection had been fully implemented, with only 3 of the 11 "High Priority" recommendations (or 30%) having been implemented. Despite the fact that the problems encountered are, according to the IG, "of grave concern," the two year delay suggests that the NRC did not appear to accord these items of sufficiently high priority for action. The IG attributed delays in responding to its recommendations for reforms in this area to "delays in issuing important management directives and policy statements."

A) Please explain the reason for these delays.

Answer.

The delays referred to by the IG were delays in issuing Management Directive 8.8 (MD 8.8), "Management of Allegations," and a Commission policy statement on creating and maintaining an environment conducive to raising safety concerns. The delays were not due to inaction by the NRC staff. These delays resulted from complications in drafting positions on controversial

issues and coordinating positions with the Department of Labor (DOL). The resolution of five recommendations was dependent on issuance of a Commission policy statement on achieving and maintaining an environment conducive to raising safety concerns. Developing a draft policy statement required extensive coordination within the NRC staff as well as approval of the Commission. A draft policy statement on this subject was published in the *Federal Register* for public comment on February 8, 1995. The staff received 28 comments on the draft policy statement, including comments from the DOL. Because the DOL and NRC share responsibility for protecting employees, the staff did not believe it would be prudent to issue the final policy statement without DOL concurrence. From the end of the comment period in April 1995, the staff actively worked with DOL to resolve its concerns. Resolution of the comments was delayed due to extensive discussions with DOL. In a letter dated March 5, 1996, the DOL stated that it has no objection to the revised policy statement. On March 14, 1996, the staff forwarded SECY 96-056 to the Commission, recommending approval of the revised policy statement. The policy statement was printed in the *Federal Register* on May 1, 1996.

Complete resolution of 11 other recommendations depended on issuing Management Directive 8.8 (MD 8.8), "Management of Allegations." However, pending issuance of MD 8.8, the staff implemented at least portions of 6 of the 11 recommendations, including those related to notifying individuals alleging discrimination both that they must file a complaint with DOL to obtain a personal remedy and of the limits on the NRC's ability to protect their identity, and increasing the priority placed on investigating discrimination

complaints. The staff forwarded a revision to MD 8.8 for approval on March 1, 1995. However, it was determined that the revised MD 8.8 was not consistent with the Commission's existing Policy Statement on Confidentiality, which was outdated. Preparation of a Commission paper on the existing policy statement on confidentiality and MD 8.8 was delayed because a higher priority was placed on auditing the implementation of the NRC's allegation program, another of the recommendations from the Review Team. Staff sent a paper on the issue to the Commission on September 29, 1995. On November 21, 1995, the Commission issued a Staff Requirements Memorandum asking the staff to revise the existing policy statement to cover the protection provided to alleged as well as confidential sources. The staff submitted the revised policy to the Commission on March 5, 1996. The Commission approved the policy statement on April 5, 1996 and MD 8.8 was approved for issuance on May 1, 1996.

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B) Why was this matter not given top priority by the NRC, given the importance of whistleblowers to the NRC's effectiveness in carrying out its mission?

Answer.

The overall process of improving the NRC's program for handling allegations was given top priority. The staff's efforts were prioritized with those actions that would have the greatest effect being given the highest priority. Implementing the recommendations for improving the NRC's enforcement program was considered a top priority in providing a deterrent to future acts of

discrimination. Of the nine recommendations for changes to the enforcement policy, eight were implemented by December 31, 1994. The Commission decided not to implement the recommendation concerning seeking legislation to increase the NRC's civil penalty authority to \$500,000 per violation per day.

Determining how well NRC's program for handling allegations was being implemented by the staff and improving the staff's implementation of the program was also determined to have an immediate positive affect on the handling of allegations. As stated in response to Question 43.A, this review effort delayed the drafting of the revised Commission policy statement on confidentiality, and therefore the issuance of MD 8.8. The reasons for the delays in issuing a final policy statement on creating and maintaining an environment conducive to raising concerns are discussed in the answer to Question 1.A.

QUESTION 1.

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C) What were the other rulemakings that the NRC considered more important than protecting whistleblowers?

Answer.

Only one of the 47 recommendations required rulemaking to implement the recommendation. The rulemaking involved an administrative change to Section 19.11 of Title 10 of the Code of Federal Regulations to require licensees to post a more recent version of NRC Form 3, "Notice to Employees."

Unfortunately, there was a six month delay in assigning a rulemaking project manager and in initiating the rulemaking, but the rule progressed quickly once

work began. On January 5, 1996, with the package in the final stages of concurrence, the Directors of OE and OI requested that the issuance of the rule be delayed to allow additional changes to NRC Form 3 to more accurately reflect OI practice. The direct final rule revising Part 19 was published in the *Federal Register* on February 22, 1996. Although the rulemaking was delayed, the NRC had already provided copies of the revised Form 3 to all licensees.

QUESTION 1.

According to a March 7, 1996 letter I received from the NRC IG, as of March of this year less than one-half (23) of the 47 recommendations contained in the January 1994 Review Team report on inadequacies in the NRC policies and procedures relating to whistleblower protection had been fully implemented, with only 3 of the 11 "High Priority" recommendations (or 30%) having been implemented. Despite the fact that the problems encountered are, according to the IG, "of grave concern," the two year delay suggests that the NRC did not appear to accord these items of sufficiently high priority for action. The IG attributed delays in responding to its recommendations for reforms in this area to "delays in issuing important management directives and policy statements."

D) According to your written testimony, the staff has now completed action on 43 of the 47 recommendations, and intends to take action on the remaining items by October. You indicated that the other two recommendations require proposed legislative changes affecting the Department of Labor. Please describe the four recommendations which still are waiting final action, what actions you anticipate taking to close out action on these recommendations, and when you expect they will be completed.

Answer.

The two remaining recommendations that are within the control of the NRC are issuing a brochure describing the allegation process and developing an enhanced software package for tracking and trending allegations.

The public brochure has been delayed because it needed to reflect the positions in the Commission's policy statement on creating and maintaining an environment conducive to raising concerns. The NRC intends to publish and distribute the brochure by the end of October 1996.

The upgrade of the software for the Allegation Management System to facilitate tracking and trending of allegations, Recommendation II.B-13, is taking longer than originally planned because a completely new Windows-based software package using client-server technology is being developed rather than upgrading the existing mainframe software. The software is currently being tested and installation is currently scheduled to be completed by the end of October 1996.

The two issues involving DOL are the submittal of legislation to amend Section 211 and the development of an NRC/DOL shared database on discrimination cases. The legislative changes to be proposed are as follows:

- (1) Revising the statute to provide 120 days (from the filing of the

complaint) to conduct the DOL investigation; 30 days from the investigation finding to request a hearing; 240 additional days to issue an Administrative Law Judge (ALJ) decision; and 90 days for the Secretary of Labor to issue a final decision when an ALJ decision is appealed. This would allow 480 days (from when the complaint is filed) to complete the process.

- (2) Revising the statute to provide that reinstatement decisions be immediately effective following a DOL finding based on an administrative investigation.

DOL supports these changes and has agreed to have the NRC draft the legislative changes.

With the pending transfer of responsibility for investigating discrimination complaints from Wage and Hour to OSHA, the NRC delayed discussing developing a shared database until the transfer is effective. A date for these discussions concerning the database will be set following completion of the transfer.

QUESTION 2.

On July 14, 1994, the NRC IG issued a report on "Investigation of Improper Disclosure of Allegers' Identities by the NRC Office of Investigations (OI) to the Tennessee Valley Authority, Office of Inspector General (TVA-OIG)." This report indicates that the identities of TVA employees who brought safety concerns to the attention of the NRC were subsequently disclosed to TVA-OIG without their consent. Moreover, such improper disclosures were facilitated by a Memorandum of Understanding (MOU) providing for such disclosure. Please explain:

(A) Why NRC OI entered into such an MOU with TVA-OIG, and who was responsible for this action?

ANSWER.

On October 18, 1985, the TVA Board of Directors approved a plan for the creation of the TVA Office of Inspector General (TVA-OIG). The TVA-OIG was charged with the duty to investigate and report on information from any source, including employee concerns, regarding substantial or specific danger to the public health and safety, initially under general supervision of and reporting to the TVA Board. However, the Inspector General Act Amendments of 1988 made the TVA-OIG a statutory Inspector General. On January 11, 1991, the then-Director of NRC OI and the then-Inspector General of TVA entered into an MOU in order to facilitate the operation of two Federal investigatory offices with overlapping jurisdiction. OI saw a benefit to the MOU in the management

QUESTION 2.(A). (continued)

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of OI resources. The Commission was advised on June 21, 1990, in SECY 90-221, of the proposed MOU.

QUESTION 2.

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(B) Why, as the IG report states, "based on a regional office instruction, Region II employees were misleading allegers as to the degree they could expect their identifies to be protected." Who issued such instructions and on what authority?

ANSWER.

There was no intent by Region II employees to provide allegers misleading information regarding the extent to which their identities could be protected. In the staff's attempts to explain the concept of identity protection, some allegers assumed that they had been granted confidentiality, although formal confidentiality was not discussed. The NRC does have authority to grant formal confidentiality to allegers. Confidentiality affords an allegers a higher degree of protection and involves a formal written agreement between

the NRC and the alleged. Identity protection is afforded to all allegeders through administrative controls that are implemented without a written agreement. Because of the misperception that occurred in these cases, NRC employees are required to inform allegeders who have not signed written confidentiality agreements that they are not considered confidential sources.

Regional Office Instructions (ROI) are prepared within the Region and approved by the Regional Administrator or his designee. These instructions are used primarily to disseminate, implement, clarify, or amplify NRC policy or information contained in other NRC documents. The ROI addressing identity protection was prepared by the Regional Enforcement and Investigation Coordination Staff, concurred in by Division Directors and approved by the Regional Administrator. The ROI in this particular case was prepared to implement, at the Regional level, Management Directive (MD) 8.8 - Management of Allegations, dated April 30, 1990.

The review of this matter by the Inspector General and senior regional management did not find any indication of intentional wrongdoing or misconduct by the staff in their discussions with allegeders. In addition, the ROI was generally found to be in compliance with the April 30, 1990 revision of MD 8.8 in most respects. However, the review also found that there was a lack of clear guidance in MD 8.8 and the ROI to govern how the concepts of identity protection or confidentiality should be explained to allegeders. This resulted in the confusion that existed at the time when the differences between identity protection and confidentiality were being explained to allegeders. The

QUESTION 2.(B). (continued)

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guidance was initially clarified in a August 22, 1994 memorandum from the Executive Director for Operations to office directors and regional administrators. The clarification was also included in the May 1, 1996 revision to MD 8.8.

QUESTION 2.

On July 14, 1994, the NRC IG issued a report on "Investigation of Improper Disclosure of Allegers' Identities by the NRC Office of Investigations (OI) to the Tennessee Valley Authority, Office of Inspector General (TVA-OIG)." This report indicates that the identities of TVA employees who brought safety concerns to the attention of the NRC were subsequently disclosed to TVA-OIG without their consent. Moreover, such improper disclosures were facilitated by a Memorandum of Understanding (MOU) providing for such disclosure. Please explain:

(C) What is the current job status of those NRC employees responsible for signing the aforementioned MOU, providing misleading information to allegers regarding their confidentiality, or disclosing the names of allegers to TVA-OIG. Was any of these individuals the subject of any disciplinary action or sanction for these activities? If so, please explain what actions were taken. If not, please explain why no one was held accountable for these regulatory failures.

ANSWER.

The Director of the Office of Investigations (OI) who signed the MOU with TVA-OIG is now retired. The individual responsible for inadvertently disclosing names of allegers to TVA-OIG is currently assigned to the OI Region II

QUESTION 2.(C). (continued)

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Office. This individual was orally admonished. We are not aware of anyone deliberately providing misleading information to alleged regarding their confidentiality. We have cancelled the MOU.

QUESTION 2.

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(D) Why did NRC decide in May 1991 to allow the release of allegers' names who had not signed confidentiality agreements? What disclosures are currently provided to allegers regarding the confidentiality of information they provide to the NRC and regarding anonymity?

ANSWER.

The release of allegers' names to the TVA-OIG in 1991 was in error and not consistent with the provisions of the TVA/NRC MOU. NRC requirements for protecting the identity of allegers and confidential sources are documented in the Commission's Policy Statement, "Protecting the Identity of Allegers and Confidential Sources." A copy of the policy statement is enclosed. Management Directive 8.8, "Management of Allegations," requires that allegers and confidential sources be informed of the protections afforded by the NRC

and the limitations of those protections. This may be done during the initial telephone discussion. However, the letter NRC sends the alleged acknowledging receipt of the alleged's concerns must contain a discussion of the protections afforded and the limitations of those protections. Additionally, allegeders are informed that they are not considered confidential sources unless they have a written confidentiality agreement with the NRC.

Enclosure: Policy Statement

POLICY STATEMENTS

b. Contains trade secrets and commercial or financial information (proprietary information).

c. Contains safeguards information.

d. Is of a personal nature where such disclosure would constitute a clearly unwarranted invasion of personal privacy.

e. Is related to a planned, ongoing, or completed investigation and/or contains information compiled for law enforcement purposes.

f. Could result in the inappropriate disclosure and dissemination of preliminary, unverified information.

g. Is a general information exchange having no direct, substantive connection to a specific NRC regulatory decision or action;

h. Indicates that the administrative burden associated with public attendance at the meeting could result in interfering with the NRC staff's execution of its safety and regulatory responsibilities, such as when the meeting is an integral part of the execution of the NRC inspection program.

It is important to note that whether or not a meeting should be open for public attendance is dependent primarily on the subject matter to be discussed, not who outside nor who within the NRC staff is participating (e.g., staff level versus senior management).

Also note that meetings between staff and licensees or trade groups to discuss technical issues or licensee performance would normally be open because they may lead to a specific regulatory decision or action. However, should a meeting involving a general information exchange be closed and should discussions during such a meeting approach issues that might lead to a specific regulatory decision or action, the NRC staff may advise the meeting attendees that such matters cannot be discussed in a closed meeting and propose discussing the issues in a future open meeting.

D. Notice to the Public

1. Normally, meeting announcement information is to be provided by the staff to the agency's meeting announcement coordinator at least ten days in advance of the date of the meeting so that adequate notice can be made to the public.

Public notice will be provided through the Weekly Compilation of Press Releases and posting in the NRC headquarter's Public Document Room, 2120 L Street (Lower Level) NW., Washington, DC. The public may obtain a schedule of agency staff meetings on a toll-free telephone recording at 800-

952-9674 and on a toll-free electronic bulletin board at 800-952-9676.

2. Meetings which are scheduled for the next 60 calendar days will be announced to the public. Meeting announcements will include the date, time, and location of the meeting, as well as its purpose, the agency and outside organizations in attendance, and the name and telephone number of the agency contact for the meeting. Information about canceled, rescheduled, and open meetings scheduled on short notice will be updated daily or as needed by its posting at the agency Public Document Room, on the telephone recording, and on the electronic bulletin board.

Dated at Rockville, MD, this 14th day of September 1994.

For the Nuclear Regulatory Commission
John C. Hoyle,

Acting Secretary of the Commission

61 FR 25924
Published 5/23/96
Effective 5/23/96

Protecting the Identity of Allegers and Confidential Sources; Policy Statement

AGENCY: Nuclear Regulatory Commission.

ACTION: Final policy statement.

SUMMARY: This revision is an update of the Commission's policy for protecting the identity of an individual who has been granted confidentiality. This revision reflects the changes in the organization of the NRC and the agency's practices concerning confidentiality, including informing individuals of the availability of confidentiality, circumstances under which confidentiality will be granted, and circumstances under which the identity of confidential sources will be revealed. The revision also describes the measures taken by the NRC to protect the identity of all individuals who bring safety concerns to the agency, regardless of whether the individual is granted confidentiality. This statement of policy is not a major rule as defined in Section 804 of the Small Business Regulatory Enforcement Fairness Act of 1996.
EFFECTIVE DATE: May 23, 1996.

FOR FURTHER INFORMATION CONTACT:
Edward T. Baker, Agency Allegation Advisor, Office of Nuclear Reactor Regulation, U.S. Nuclear Regulatory Commission, Washington, DC 20555-0001; telephone: (301) 415-8529.

SUPPLEMENTARY INFORMATION:

Background

On November 25, 1985 (50 FR 48506), the Nuclear Regulatory Commission (NRC or Commission) issued a Statement of Policy to provide a clear, agency-wide policy on the granting of confidentiality to persons who provide information to the NRC concerning licensee activities. The Commission is revising the policy statement to reflect changes in the NRC organization and criteria for disclosing the identity of confidential sources. The policy statement also describes the measures taken to protect the identity of any individual who brings safety concerns to the NRC and the circumstances under which the individual's identity may be disclosed. The Commission's inspection and investigatory programs rely in part

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on people voluntarily coming forward with information. Some individuals will come forward only if they are confident that their identities will be protected from public disclosure. Therefore, safeguarding the identities of these individuals is a significant factor in ensuring the future voluntary flow of this information. The Commission will make all reasonable efforts to protect the identity of anyone who brings safety concerns to the NRC. This policy statement applies to all NRC offices except the Office of the Inspector General (OIG).

The Commission's policy statement on confidentiality has not been revised since 1985. Since then, changes in the NRC's organizational structure and agency practice concerning confidentiality and protecting the identity of alleged and confidential sources have occurred that are not reflected in the existing policy statement. Additionally, the review team for reassessing the NRC program for protecting alleged recommended in NUREG-1499, "Reassessment of the NRC's Program for Protecting Allegers Against Retaliation," that the policy statement be revised.

The existing policy statement specifically discusses the role of the Office of Inspector and Auditor, which was abolished following creation of the OIG in 1989. The OIG has established its own procedures on confidentiality in accordance with the Inspector General Act of 1978. The agency's practice concerning protecting the identity of alleged, informing them of the availability of confidentiality, and disclosing the identity of confidential sources has changed in the intervening period. In order to reflect those changes and the NRC staff's experience in dealing with confidentiality, the existing policy statement is being revised in the following respects:

(1) On March 22, 1995, the Commission approved the disclosure of the identity of a confidential source based on the existence of an overriding safety concern. The existing policy statement does not speak to disclosure in this circumstance.

(2) The existing policy statement restricts NRC employees from initiating a discussion of confidentiality except in the following circumstances:

(a) It is apparent that an individual is not providing information because of fear that his/her identity may be disclosed; or

(b) It is apparent from the surrounding circumstances that the individual wishes his/her identity to remain confidential.

On August 22, 1994, after notifying the Commission, the Office of the Executive Director for Operations (EDO) issued guidance to the NRC staff that an alleged who has not requested to be a confidential source be clearly informed that he or she is not considered a confidential source. If the allegation is received during a phone call, the NRC staff is required to tell the alleged of this position during the initial call. This position is also stated in the letter sent to an alleged acknowledging receipt of the allegation and documenting the NRC staff's understanding of the alleged's concerns. The NRC staff has adopted this position to avoid misperceptions by alleged as to whether they are considered confidential sources.

(3) The existing policy statement does not specifically address the problem of investigating discrimination when confidentiality has been granted to the individual who alleges that he or she was the victim of discrimination. In practice, individuals who allege that they are victims of discrimination and who request confidentiality are informed of the difficulty of performing an investigation of this type of concern without revealing the name of the subject of the discrimination. These individuals are told the NRC will not normally investigate the discrimination aspects of their allegation if confidentiality is granted.

(4) In addition, a change to the disclosure criteria allows the Office of Investigations (OI) to disclose the identity of a confidential source, on a need-to-know basis, to either the U.S. Department of Justice (DOJ) or to another law enforcement agency. This disclosure would occur without seeking prior Commission approval or notifying the confidential source. Under the existing policy statement, the NRC is required to contact the confidential source before releasing his or her identity. If the confidential source agrees to the release, the EDO or the Director, OI, is authorized to release the identity. If the confidential source objects to the release or cannot be reached, the agency may not release the identity without specific Commission approval.

It is common practice in the law enforcement community for investigative agencies and prosecutors' offices to share the identity of confidential sources if there is a legitimate need-to-know. Traditionally, in the interest of preserving the integrity of any ongoing investigation or

prosecution, the sources are not informed that their identities have been shared. Additionally, DOJ and other law enforcement agencies appreciate the sensitivity with which they need to treat the identity of confidential sources. The ability to share the identity of confidential sources in this manner will enhance the sense of partnership in pursuing wrongdoing investigations.

(5) A provision has been added to allow the NRC official who granted the confidentiality to withdraw it without further approval, provided the confidential source has made such a request in writing and the NRC official has confirmed that the requesting individual is the same person that was granted confidentiality.

In addition to these changes to the Commission's policy on confidentiality, this revision describes the basic protection afforded individuals who bring safety concerns to the NRC but have not been formally granted confidentiality, that is, alleged.

The primary differences between the protection afforded confidential sources and alleged are:

- An NRC office director or regional administrator may approve the disclosure of the identity of an alleged, while the approval of the Commission, the EDO, or the Director of the Office of Investigations (OI) is necessary for disclosure of the identity of a confidential source.

- There is a formal, signed agreement between a confidential source and the NRC that sets forth the protection afforded and the circumstances in which a confidential source's identity may be revealed; and

- OI may disclose the identity of an alleged outside the agency during the pursuit of a wrongdoing investigation at their discretion without the knowledge or consent of the alleged. For confidential sources, OI may only disclose the identity to DOJ or another law enforcement agency without the confidential source's knowledge or consent.

This revised final policy statement provides a comprehensive statement of the Commission's position and reflects agency practice concerning confidentiality and the addition of the protection afforded all individuals who bring safety concerns to the NRC.

Small Business Regulatory Enforcement Fairness Act

The NRC has consulted with the Office of Management and Budget and concluded that this policy statement is not a major rule as defined in 5 U.S.C. 804(2).

¹ In this policy statement, the term "discrimination" includes allegations of harassment and intimidation.

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Statement of Policy

The Commission's investigative and inspection programs rely in part on individuals coming forward with information about safety concerns or perceived wrongdoing. All individuals should feel free to communicate to the NRC any safety or wrongdoing concerns.² It is NRC's responsibility to communicate fully with individuals raising the concerns, to provide the status and details of NRC review of the concerns, to address the concerns and respond to the individual in a timely manner, and to protect the identity of the individual to the greatest degree possible. The NRC recognizes that routine public release of the identities of those who come forward with this information could lead to reprisals against those individuals. Reprisals may involve not only physical harm to the individual, but may take other forms such as employment-related discrimination, including blacklisting, economic duress, or ostracism. Obviously, these actions would deter others from coming forward with information and could jeopardize the effectiveness of the NRC's oversight activities. Both Congress and the Commission have recognized this concern. Section 211 of the Energy Reorganization Act of 1974, as amended (42 U.S.C. 5851) and the Commission's related employee protection regulations are designed to protect those who assist the NRC in carrying out its safety responsibilities from discrimination by their employers. In addition, the Commission has developed procedures for protecting the identity of individuals who bring safety concerns to the NRC (allegers), and for protecting the identity of individuals who have been granted confidentiality (confidential sources).

Identity Protection for Allegers

In resolving alleged concerns, the NRC intends to make all reasonable efforts not to disclose the identity of an allegor outside the agency. NRC staff personnel who receive an allegation are required to forward all information to an NRC allegation coordinator. The allegation coordinator provides the identity of an allegor only to NRC staff who have a need to know an allegor's identity, e.g., an inspector or investigator assigned to interview an allegor. In addition, documents containing the identity of allegors are

stored in locked cabinets with controlled access and are not placed in the NRC's public document rooms.

However, the NRC may reveal the identity of an allegor outside the agency under the following circumstances:

- The allegor clearly states that he or she has no objection to being identified;
- The NRC determines that disclosure of the allegor's identity is necessary to protect the public because of an overriding safety issue identified based on the allegor's concerns;
- Disclosure of the allegor's identity is necessary to respond to a request from Congress or State or Federal agencies in the furtherance of NRC responsibilities under law or public trust;
- Disclosure is necessary pursuant to a court order or an NRC adjudicatory board order;
- The allegor takes an action that is inconsistent with and overrides the purpose of protecting his or her identity;
- Disclosure is necessary to pursue a wrongdoing investigation; or
- Disclosure is necessary to support a hearing on an enforcement action.

In addition, if the NRC is investigating an allegation that the allegor was a victim of discrimination because he or she raised a safety concern, it would be extremely difficult to investigate such an allegation without naming the individual who was the subject of discrimination. NRC Management Directive 8.8, "Management of Allegations," contains additional information concerning protecting the identity of allegors and the circumstances when the identity may be disclosed.

Confidentiality

The protective measures and disclosure circumstances described above apply to all allegors. If the individual is granted confidentiality, as described below, the individual is considered a confidential source. The Commission's regulations in 10 CFR 2.790(a)(7) authorize withholding the identities of confidential sources from public release. Further, 10 CFR 21.2(d) provides that, "as authorized by law", the identity of individuals "not subject to the regulations in this part" who report certain nuclear safety-related problems "will be withheld from disclosure." Additionally, under 10 CFR 19.16(a) if a worker requesting an inspection requests that his or her name not be included in the copy of the request given to the licensee, the name of the worker and the name of individuals referred to in the request must be withheld. The following discussion explains the Commission's general policy regarding confidentiality.

1. Circumstances Under Which Confidentiality May Be Granted

Although the Commission recognizes the importance of confidentiality, it does not believe that confidentiality should be granted to all individuals who provide information to the NRC or that confidentiality it should be granted routinely, particularly in light of the protection afforded all allegors. The Commission believes that confidentiality should be granted only when necessary to acquire information related to the Commission's responsibilities or when warranted by special circumstances. For instance, confidentiality should ordinarily not be granted when the individual is willing to provide the information without being given confidentiality.

If it becomes apparent that an individual is not providing information because of a fear that his or her identity will be disclosed, an authorized NRC employee may suggest a grant of confidentiality. Similarly, an authorized NRC employee may suggest confidentiality in the absence of a request when it is apparent from the surrounding circumstances that the individual wishes his or her identity to remain confidential. This could be the case if an individual sets up an interview in a secretive manner.

The Commission recognizes that some individuals who desire confidentiality may not request it because of an erroneous belief that the identities of everyone providing information to the NRC are kept in confidence. Some individuals may not provide information because they do not know that confidentiality is available. Therefore, the Commission has decided to adopt a policy that requires an individual to explicitly request confidentiality. In the initial contact with the NRC, the extent to which the NRC can protect an allegor's identity will be explained. If the individual does not request confidentiality, the individual will be informed that he or she is not considered a confidential source. If the individual asks about confidentiality, the differences between identity protection for allegors and confidential sources will be explained. If the individual then requests confidentiality, the NRC staff will evaluate the request and inform the individual if confidentiality was granted.

2. The Manner and Form in Which Confidentiality Should Be Granted and Disseminated Within the NRC

The Commission has delegated authority to the Executive Director for

² The Commission expects licensees and contractors to create and maintain an environment conducive to employees raising safety concerns. See "Statement of Policy on Freedom of Employees in the Nuclear Industry to Raise Safety and Compliance Concerns Without Fear of Retaliation," (61 FR 24366, May 14, 1996).

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Operations (EDO) and the Director, Office of Investigations (OI), to designate those persons within their organizations who will be authorized to grant confidentiality. Confidentiality will be granted only when an NRC employee authorized to grant confidentiality and the individual requesting confidentiality sign a standard NRC Confidentiality Agreement, unless it is impossible to sign the agreement at the time the information is obtained. The agreement will explain the conditions to which the NRC will adhere when it grants confidentiality, as set forth in this policy statement. When it is impossible to sign a Confidentiality Agreement at the time the information is obtained, such as when the information is obtained over the telephone, confidentiality may be given verbally pending the signing of the Confidentiality Agreement, which must be done within a reasonable time. If confidentiality is granted verbally, it must be fully documented. If the Confidentiality Agreement is not signed within a reasonable time, the EDO or Director, OI, as appropriate, will determine if confidentiality should be continued.

After confidentiality is granted, the individual's name should be divulged to NRC employees only on a need-to-know basis. Each NRC employee with access to a confidential source's identity should take all necessary steps to ensure that the identity remains confidential. The EDO and the Director, OI, will ensure that consistent procedures are developed throughout the agency for implementing this requirement that should prevent inadvertent or unauthorized disclosures.

3. Circumstances Under Which Identity of a Confidential Source Will Be Divulged

The Commission stresses the importance of protecting the identity of a confidential source. However, there are six circumstances under which the identity of a confidential source may be released outside the NRC by the Commission or by certain NRC staff officials as described below. The Commission emphasizes that in each of these cases it will attempt to limit disclosure to the minimum necessary and that it expects disclosure to occur only rarely.

(1) The first category involves disclosure to a licensee because of an overriding safety issue. There are conceivable circumstances when public health and safety require the NRC to divulge the identity of a confidential source to allow a licensee to correct an

immediate safety concern. If this situation occurs, which we expect to be infrequent, the NRC will try to limit the disclosure to the licensee's senior management.

In most circumstances, the agency will be able to give a licensee sufficient information to correct an immediate safety issue without divulging the name of a confidential source. However, the Commission believes individuals should be aware their identity could be divulged if this situation occurs.

(2) The second category involves disclosure pursuant to a court order. It is conceivable that a licensee or other entity could obtain a court order requiring the NRC to divulge the identity of a confidential source. If that happens, the NRC will seek to keep the disclosure limited to the minimum necessary through protective orders or other means.

(3) The third category of circumstances when a confidential source's identity might be disclosed outside the NRC involves disclosure during an NRC adjudicatory proceeding. The Commission, in a separate Statement of Policy on Investigations, Inspections, and Adjudicatory Proceedings published on September 13, 1984 (49 Fed. Reg. 36032), has provided that any licensing board decision to order disclosure of the identity of a confidential source shall automatically be certified to the Commission for review. Therefore, the only adjudicatory board within the NRC with the actual authority to require that the identity of a confidential source be revealed is the Commission. The Commission will follow current judicial standards in determining whether to disclose the identity of a confidential source.

(4) The fourth circumstance when the identity of a confidential source might be released is in response to a request by Congress. Section 303 of the Atomic Energy Act of 1954, as amended, requires the NRC to keep congressional committees with jurisdiction over the NRC "fully and currently informed with respect to the activities . . . of the Commission." That section also requires "[a]ny Government agency [to] furnish any information requested by [congressional] committees with appropriate jurisdiction." The Commission may have to release the identity of a confidential source in response to a congressional request. Although any such request will be handled on an individual case-by-case basis, the Commission will disclose the identity of a confidential source only if the request is in writing. The Commission will make its best efforts to

have any such disclosure limited to the extent possible.

(5) The fifth circumstance when the identity of a confidential source may be revealed is in response to a request from a Federal or State agency. The Commission recognizes its responsibility to assist other agencies in their functions. However, the Commission also recognizes that providing the identities of confidential sources to other agencies could adversely affect the flow of information to the Commission. The Commission has decided to balance these two considerations as follows. If the requesting agency demonstrates that it requires the identity in furtherance of its statutory responsibilities and agrees to provide the same protection to the source's identity that the NRC promised when it granted confidentiality, the NRC will make a reasonable effort to contact the source to determine if he or she objects to the release. If the source can be reached and does not object, the EDO or his designee, or the Director, OI, are authorized to provide that identity to the requesting agency.

If the source either objects to the release of his or her identity, or cannot be reached, the EDO or his designee, or the Director, OI, may not release the source's identity, except as noted in (6) below, but shall advise the requesting agency of the situation. The requesting agency may then ask the Commission to release the identity. Although ordinarily the source's identity will not be provided to another agency over the source's objection or without contacting the individual, in extraordinary circumstances when furtherance of the public interest requires release, the Commission may release the identity of a confidential source to another agency despite the objections of that source or without being able to contact the person. However, even in those cases the requesting agency must agree to provide the same protection to the source's identity that was promised by the NRC.

(6) As an exception to (5) above, when OI and the U.S. Department of Justice (DOJ) are pursuing the same matter or when OI is working with another law enforcement agency, the EDO or the Director, OI may reveal the identity of a confidential source to DOJ or the other law enforcement agency, as needed, without notifying the individual or consulting with the Commission.

It is common practice in law enforcement and when conducting criminal prosecutions for agencies to share the names of confidential sources if there is a need to know. One of the primary reasons for these exchanges of

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sensitive information is the protection of the confidential source. It is essential that the investigating and prosecuting parties know the identity of a confidential source to physically protect the source during the course of investigative activities and to prevent compromising the source's identity through some inadvertent action by one of the outside investigators or prosecutors. Because it is inappropriate for a source to know the investigative or prosecutorial activities, strategies, or tactics, it is also inappropriate to notify the source that his or her identity is being shared.

4. Circumstances Under Which Confidentiality May Be Revoked

A decision to revoke a grant of confidentiality can only be made by (1) the Commission, (2) the EDO, or (3) the Director. Of course, the Commission emphasizes that a grant of confidentiality will be revoked only in the most extreme cases. Generally, confidentiality will be revoked only when a confidential source personally takes some action so inconsistent with the grant of confidentiality that the action overrides the purpose behind the confidentiality. For instance, this can happen when the source discloses information in a public forum that reveals his or her status as a confidential source or when he or she has intentionally provided false information to the NRC. Before revoking confidentiality, the Commission will attempt to notify the confidential source of its intent and provide the individual an opportunity to explain why their identity should not be disclosed.

5. Withdrawal of Confidentiality

The NRC official granting confidentiality may withdraw confidentiality without further approval if the confidential source has made such a request in writing and the NRC official has confirmed that the requesting individual is the same person who was granted confidentiality.

6. Conclusion

The Commission views protecting the identity of alleged and confidential sources as an important adjunct to investigative and inspection programs. Therefore, the Commission places great emphasis on protecting the identity of individuals who bring safety concerns to the NRC. However, the Commission recognizes there are limited circumstances when the identity of an alleged or confidential source will be divulged outside the NRC. In those circumstances the Commission will

attempt to limit disclosure to the extent possible.

Dated at Rockville, MD, this 17th day of May, 1996.

For the Nuclear Regulatory Commission:

John C. Hoyle,

Secretary of the Commission

Cracks in Steam Generator Tubes

QUESTION 1.

In your March 27, 1996 responses to questions posed in my letter of March 5, 1996, you stated that the NRC does not plan any further action to assure that nuclear power plant safety plans prepare for the possibility of multiple ruptures in steam generator tubes. In your response you state that you see no reason to change the current definition of a design-basis generator tube rupture, because to date only single steam generator tube ruptures have occurred and because emergency operating procedures provide guidance to operators for mitigation of beyond design basis events.

(A) If the design-basis were to be changed to fully prepare for the possibility of multiple ruptures in steam generator tubes, wouldn't that provide a greater margin of safety than reliance on "mitigation" actions by the operator?

ANSWER.

A fully automatic system of very high reliability may provide some increase in margin of safety for multiple steam generator tube rupture events. However, system response to multiple tube ruptures has been found by analysis to be similar to other design basis events, and is therefore within the capability of existing systems and procedures. It should also be noted that operator actions are credited for events involving single steam generator tube ruptures as well. These events, in general, are not significant contributors to

QUESTION 1.(A). (Continued)

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overall plant risk. Accordingly, any increase in margin which might result from full automation of system response for multiple steam generator tube rupture events would not be expected to be significant relative to overall plant risk.

QUESTION 1.

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(B) What additional safety risks are posed by relying on "mitigation of beyond design basis events" rather than fully preparing for accident scenarios involving multiple ruptures of steam generator tubes?

ANSWER.

The staff does not believe that significant additional risks are posed as a result of relying upon operator actions (rather than fully automatic systems) for mitigation of scenarios involving multiple ruptures of steam generator tubes. As noted above, analyses indicate that system response for multiple tube rupture events is similar to other design basis events. In addition, because multiple tube failures are involved (by definition) for such events, these events have a low probability of occurrence. The low probability of such an event in conjunction with analyses which indicate that existing systems and procedures can reliably mitigate such events, leads to the

QUESTION 1.(B). (continued)

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conclusion that core damage is very unlikely, and these events are only a small contributor to overall risk. Enhancements for mitigation of events which are already small risk contributors do not result in a significant change to the overall plant risk.

QUESTION 2.

In your March 27, 1996 letter, you also state that "in some cases, the technical specifications allow crack-like indications to remain in service provided that there is reasonable assurance that the tubes containing these crack-like indication will be capable of performing their intended safety function during the operating interval between inspections."

- (A) How is this "reasonable assurance" determined, and what are the procedures for making such a determination?

ANSWER.

To determine if there is reasonable assurance that the steam generator tubes will be capable of performing their intended safety function, the staff evaluates whether the tubes will meet the requirements set forth in the Commission's regulations. The design of the reactor coolant pressure boundary, which includes the steam generator tubes, is controlled under the general design criteria specified in Appendix A of 10 CFR Part 50. These requirements pertain, in part, to the structural and leakage integrity of the steam generator tubes. A methodology acceptable to the NRC staff for satisfying these regulations as they pertain to steam generator tube degradation is described in Regulatory Guide 1.121, "Bases for Plugging Degraded PWR Steam Generator Tubes." Specific requirements governing the maintenance of steam generator tube integrity are in plant technical

specifications and in Section XI of the American Society of Mechanical Engineers (ASME) Boiler and Pressure Vessel Code (ASME Code). These include requirements for periodic inservice inspection of the tubing, flaw acceptance criteria (i.e., repair limits for plugging or sleeving), and primary-to-secondary leakage limits. These requirements, coupled with the requirements in the plants' technical specifications, have formed the basis for ensuring adequate steam generator tube integrity.

With respect to the specific reference in the March 27, 1996, letter regarding allowing crack-like indications which exceed the depth-based tube repair limits to remain in service, the NRC has issued a generic letter which outlines criteria and guidance which can be used by a licensee in obtaining NRC approval to leave certain crack-like indications in service. Generic Letter 95-05, "Voltage-Based Repair Criteria for Westinghouse Steam Generator Tubes Affected by Outside Diameter Stress Corrosion Cracking," was issued on August 3, 1995. This document provides a methodology acceptable to the staff for leaving a specific type of crack-like indication in service.

The generic letter methodology ensures that structural and leakage integrity of the steam generator tubes continues to be maintained with an acceptable level of margin consistent with the applicable requirements of 10 CFR Part 50, Appendix A and the acceptance criteria of 10 CFR Part 100. The generic letter ensures that the probability of tube failure under postulated accident conditions is acceptably low consistent with a generic safety assessment for steam generator tubes contained within NUREG-0844, "NRC Integrated Program for

the Resolution of Unresolved Safety Issues A-3, A-4, and A-5 Regarding Steam Generator Tube Integrity". The generic letter also ensures that the radiological consequences of any primary-to-secondary leakage (i.e., off-site and control room doses) would be acceptable. The doses are calculated utilizing currently accepted licensing basis assumptions.

QUESTION 2.

In your March 27, 1996 letter, you also state that "in some cases, the technical specifications allow crack-like indications to remain in service provided that there is reasonable assurance that the tubes containing these crack-like indication will be capable of performing their intended safety function during the operating interval between inspections."

- (B) Is the determination made entirely by the licensee, or is approval by the NRC required?

ANSWER.

Consistent with the guidance in Generic Letter 95-05, NRC approval is required to leave crack-like indications in service based on the voltage response from the indication. This is an alternate tube repair criteria to the depth-based tube repair criteria. However, approval by the NRC to leave crack-like indications in service would not be required if the licensee were able to determine using qualified techniques, as required in 10 CFR Part 50 Appendix B, that the indication's depth was less than the depth-based repair limit specified in the plant's technical specifications. This limit typically requires that the degradation's depth is less than 40% through-wall (i.e., no detectable degradation occurs in 60% of the tube wall thickness). The existing regulatory framework¹ requires a license amendment to change the

¹ See response to question 4, below, regarding possible changes in this area.

QUESTION 2.(B). (continued)

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repair criteria contained in the technical specifications. A license amendment requires a public notice and NRC review and approval.

QUESTION 2.

In your March 27, 1996 letter, you also state that "in some cases, the technical specifications allow crack-like indications to remain in service provided that there is reasonable assurance that the tubes containing these crack-like indication will be capable of performing their intended safety function during the operating interval between inspections."

- (C) Have any cracked tubes that were left in service substantially failed?

ANSWER.

No cracked tubes that have been left in service under the repair criteria specified under Generic Letter 95-05 have failed (i.e., ruptured). However, several tube failures (i.e., ruptures) have occurred as a result of other forms of tube cracking not addressed by Generic Letter 95-05. The other degradation/failure mechanisms included fatigue and loose parts (see answer to 4B.D). The NRC has evaluated these events and incorporated the lessons learned, as appropriate, into the regulatory framework (e.g., inspection oversight).

QUESTION 2.

In your March 27, 1996 letter, you also state that "in some cases, the technical specifications allow crack-like indications to remain in service provided that there is reasonable assurance that the tubes containing these crack-like indication will be capable of performing their intended safety function during the operating interval between inspections."

(D) How often has this happened?

ANSWER.

There have been 7 steam generator tube ruptures in the United States. A steam generator tube rupture is defined in NUREG-0844 to be a leak in excess of the normal charging flow capacity of the reactor coolant system. Two other significant leakage events, which do not meet the above criteria for a steam generator tube rupture have also occurred. Steam generators tube ruptures have occurred at Point Beach 1 in 1975, Surry Unit 2 in 1976, Prairie Island Unit 1 in 1979, Ginna in 1982, North Anna 1 in 1987, McGuire Unit 1 in 1989, and Palo Verde Unit 2 in 1993. The causes of these tube ruptures involve corrosion cracking in four instances, foreign objects (i.e., loose parts) in two instances, and fatigue cracking in one instance. The significant leakage events occurred at Fort Calhoun in 1984 and at North Anna 1 in 1989. The Fort Calhoun event was a result of corrosion cracking, the North Anna 1 event was the result of a tube plug failure.

QUESTION 2.

In your March 27, 1996 letter, you also state that "in some cases, the technical specifications allow crack-like indications to remain in service provided that there is reasonable assurance that the tubes containing these crack-like indication will be capable of performing their intended safety function during the operating interval between inspections."

(E) What were the consequences?

ANSWER.

The radiological consequences of a steam generator tube rupture are dependent on the concentration of radionuclides in the primary coolant, the meteorological conditions, and how quickly the operators respond to the rupture. For design basis analyses, conservative values are assumed for these parameters. The resulting postulated maximum doses to a hypothetical individual must meet the dose acceptance criteria of 10 CFR Part 100. In the plant Technical Specifications, limits are placed on the concentration of radionuclides in the primary coolant based on these dose analyses. The actual primary coolant concentration is usually much lower than the value assumed in the design basis analyses. Also, the meteorological conditions are usually much better than assumed in the design basis analyses. Therefore, when tube ruptures have occurred, the doses to members of the public have generally been very small, less than one millirem (1000 millirem equal 1 rem). However, larger maximum hypothetical doses to an individual (15 millirem to the whole

body and 40 millirem to the thyroid) were estimated for the Ginna tube rupture. These doses are also very small and within the limits of 10 CFR Part 20 for members of the public. In the U. S., the average dose from exposure to natural sources of radiation is about 100 millirem per year to the whole body.

QUESTION 3.

In your March 27, 1996 letter, you stated that several actions had been taken by NRC staff to respond to safety concerns raised by cracked steam generator tubes, including issuance of information notice (IN 94-88) and generic letter (95-03) on this matter. However, as the events at Millstone have suggested, licensees may not always be relied upon to fully comply with NRC requirements, and the NRC staff has not always been vigilant in enforcing compliance. What actions have been taken to assure that licensees actually perform comprehensive examinations of steam generator tubes, and that they hold the periodic internal meetings you referred to in your letter? Has NRC staff checked to see what licensees are doing in this area?

ANSWER.

To ensure that licensees actually perform comprehensive steam generator tube examinations, the NRC performs periodic inspections of licensee's inservice inspection programs to ensure compliance with existing requirements and assess licensee steam generator surveillance and maintenance activities. To ensure that NRC inspectors have detailed guidance regarding steam generator tube inspections, the NRC staff has recently issued new inspection guidance pertaining to the inspection of steam generator tubes. This guidance is contained within the NRC Inspection Manual (i.e., Inspection Procedure 50002, "Steam Generators"). New enforcement guidance (i.e., Enforcement Guidance Memorandum 96-003) has also been issued to address situations where noncompliances are identified. In addition to inspection and enforcement

activities, the NRC staff reviews steam generator tube inservice inspection results provided by the licensee following their inspection. If issues arise out of the inspection or the review of licensee reports, the appropriate action is taken (e.g., meeting with the licensee, enforcement, etc.).

The staff verifies that the periodic internal meetings referred to in the March 27, 1996, letter are held through discussions and meetings with licensees, owners groups, and vendors. These discussions provide assurance that significant findings are shared with all applicable parties. In addition, the NRC staff has internal meetings to ensure that NRC personnel responsible for monitoring tube integrity throughout the industry are aware of current operating experience and emerging issues. These meetings ensure that members of the different NRC offices and regions are aware of findings at other offices and regions so that they can use this information as appropriate in their function.

The NRC has continued to monitor the steam generator tube inspections performed by licensees. As mentioned above, this monitoring includes such activities as performing periodic inspections of the licensee's program and reviewing inspection results submitted by the licensee. In addition, the staff recently reviewed the responses from Generic Letter 95-03, "Circumferential Cracking of Steam Generator Tubes," and, in instances where additional information was necessary for the staff to evaluate the licensee's response, it was requested from the licensee. Since Generic Letter 95-03 requested licensees to submit, in part, their steam generator tube inspection plans pertaining to circumferential cracking, a review of these responses

would permit the staff to identify any plants whose steam generator tube inspections were not comprehensive. To date, no significant issues have been identified as a result of the review of the responses to Generic Letter 95-03.

Generic Letter 95-03 only requested information pertaining to circumferential cracking; however, it also highlighted the importance of performing comprehensive examinations of steam generator tubes using techniques and equipment capable of reliably detecting all forms of degradation to which the steam generator tubes may be susceptible. This includes axially oriented tube degradation. The inspection activities discussed above apply both to axial and circumferentially oriented tube degradation. With respect to NRC actions specific to axially oriented tube degradation, the staff issued Generic Letter 95-05, "Voltage-Based Repair Criteria for Westinghouse Steam Generator Tubes Affected by Outside Diameter Stress Corrosion Cracking" on August 3, 1995, which addresses a specific form of axially oriented tube degradation. Implementation of this tube repair criteria involves inspecting hot and cold leg tubes with a technique capable of detecting axially oriented tube degradation. For plants which are not affected by this form of tube degradation, or have chosen not to implement this tube repair criteria, the inspections required by the plant's technical specifications must be performed. For plants with extensive tube degradation, a 100% examination would be required. These inspections are monitored as discussed above.

QUESTION 4.

Your letter also refers to an ongoing rulemaking effort intended to address steam generator integrity issues. What specific proposals are being considered as part of this rulemaking? What is the current status of this rulemaking effort?

ANSWER.

Consistent with policy guidance, the proposed steam generator (SG) rule is intended to be performance-based and risk-informed. Licensees would develop and implement SG programs that monitor the condition of the steam generator tubes against performance criteria. These criteria would be reviewed and approved by the NRC and would be designed to provide reasonable assurance that the steam generator tubes remain capable of performing their intended safety functions. The performance-based rule would provide a more flexible framework in which licensees would develop and implement plant-specific programs for surveillance and maintenance of their steam generators. It is intended that the approach would provide incentive for licensees to use state-of-the-art inspection methods and to implement the most appropriate repair criteria for different types of degradation. It should be noted, however, that this performance-based approach would put greater responsibility on the licensees. The NRC staff is currently weighing the advantages and disadvantages of a performance-based rule to address steam generator tube integrity. One potential disadvantage of a performance-based approach is that the NRC staff would not review and approve licensee established tube repair criteria, but would rely on the performance criteria and inspection and enforcement to

ensure acceptable performance. For the approach to be successful, it is fundamental that the performance criteria be "tolerable" (i.e., failure to meet the criteria would not result in a loss of safety function) and "measurable" (i.e., inspection, test, and analysis methods would have to be qualified to provide a high level of confidence in assessing tube condition relative to the performance criteria.) As mentioned above, the rule is to be risk-informed. The staff is examining all postulated events and utilizing the insights gained from this technical work to develop rule requirements that ensure low risk. Regarding the status of the rulemaking effort, the staff is currently developing the proposed rule and plans to have that package to the Commission by February 1997. The proposed rule would be subsequently issued for public comment, the comments addressed, rule prepared in final form, and the final rule issued in the 1998 time frame.

Defective Electrical Cables

QUESTION 1.

In your March 27, 1996, letter, you stated that the study performed by Sandia National Laboratory identified defects in electrical cables that failed during simulated accidents, and that "failure of these cables during or following design-basis events may effect the performance of safety functions in nuclear power plants." In what specific ways could performance of safety-functions in nuclear power plants be affected by the failure of these electric cables?

ANSWER.

Failure of these qualified cables could affect the ability of environmentally qualified (EQ) equipment to perform their safety functions of ensuring: (a) the integrity of the reactor coolant pressure boundary, (b) the capability to shut down the reactor and maintain it in a safe condition, and (c) the capability to prevent or mitigate the consequences of accidents that could result in potential offsite exposures comparable to the 10 CFR part 100 guidelines following a design basis event. A specific example of a cable failure affecting the capability of EQ equipment to perform its safety function would be if a channel of reactor water level instrumentation were lost due to a failure of the associated cable providing the level indication signal, thereby preventing operators in the control room from using that level instrument's readings during their performance of emergency procedures.

QUESTION 1. (Continued)

- 2-

Although the staff has concerns about the results of the Sandia study, we do not consider the situation to be an immediate safety concern.

QUESTION 2.

If, as you say, safety functions could be affected by these defective cables, what is the empirical basis for the staff conclusion that "there is no immediate safety concern?"

ANSWER.

The cables failed under test conditions that were more severe than required by NRC regulations and guidance (10 CFR 50.49, "Environmental Qualifications of Electric Equipment Important to Safety for Nuclear Power Plants" and NRC Regulatory Guide 1.89, "Environmental Qualification of Certain Electric Equipment Important to Safety for Nuclear Power Plants"). The determination that "there is no immediate safety concern" was based on several factors: (a) the equipment has not reached its 40-year qualified life, (b) the actual service environment in which the equipment resides is less severe than the service environment assumed in the qualification testing (resulting in less degradation during its qualified life), and (c) the environmental qualification process of accelerated aging and accident testing includes significant margins.

Although the staff has concerns about the results of those tests, we do not consider the situation to be of immediate concern. The staff is currently conducting research designed to followup on the deficiencies found with these types of cables. This research, which involves the evaluation of uncertainties associated with accelerated aging methodologies used in the tests in question, will be completed in October 1998.

QUESTION 3.

In your letter you state that "most in-plant cable applications are well below the environmental conditions (e.g., temperature and/or radiation) assumed for aging tests. While this is welcome, it begs the following question: (a) are any of these cables installed in applications which are above those assumed for aging in the tests? (b) Has the NRC assessed the safety consequences of allowing these cables to remain?

ANSWER.

(a) The NRC has not done any inspections to determine if any of the cables of concern from the Sandia tests are currently installed in environments that exceed the temperature/radiation levels established in the tests. However, reviews at five sites have been performed of licensee activities pertaining to the cables of concern. At Watts Bar Nuclear Plant, the staff found that the licensee did not use any of the cables identified in the Sandia testing in high temperature environments. During four site visits conducted as part of the EQ Task Action Plan (EQ-TAP) (See Question 5), the NRC reviewed licensee programs regarding NRC Information Notices with emphasis on the cables of concern. The staff did not identify any cases where the cables of concern were installed in environments that exceed the temperature/radiation levels established in the tests.

(b) Yes; the staff has evaluated the safety significance of the cable test failures and determined that there is no immediate safety concern associated

with allowing the cables to remain installed. The basis for our determination is specified in our answer to Question 2.

In addition, all cables currently installed in EQ applications in nuclear power plants are required to be qualified for their service environment and accident condition, plus margin, in accordance with 10 CFR 50.49. However, if a licensee were to find a piece of equipment (e.g., cable) installed in an environment for which it was not qualified, Generic Letter 88-07, modified Enforcement Policy Relating to 109 CFR 50.49, "Environmental Qualification of Electrical Equipment Important to Safety for Nuclear Power Plants", dated April 7, 1988, provides guidance to address this deficiency. Briefly, the licensee would be required to make a prompt operability determination and take immediate steps to establish a schedule to correct the deficiency. The licensee would also prepare a Justification for Continued Operation (JCO) and have the JCO available for NRC review. Equipment covered by the licensee's Technical Specifications (TS) and determined to be inoperable may require a plant shutdown in accordance with the TS. Reactor operation may continue with inoperable equipment not covered by the TS if the safety function of the inoperable equipment can be accomplished by other qualified equipment, or if limited administrative controls can be used to ensure the safety function is performed.

QUESTION 4.

In your response you indicated that the NRC issued a notice regarding the cable test failure problem and noted that licensees are expected to review this notice and consider "appropriate actions." What are the appropriate actions to take in response to this notice?

ANSWER.

The purpose of the Information Notice (IN) 92-81, Potential Deficiency of Electrical Cables with Bonded Hypalon Jackets dated December 11, 1992, was to alert licensees to a potential deficiency in the environmental qualification of electric cables with bonded Hypalon (chlorosulfonated polyethylene) jackets. As with all INs, the recipients are expected to review the information for applicability to their facility, and consider actions, as appropriate. No specific actions or written response are requested of the licensee for INs.

In the case of IN 92-81, although no actions were required, the staff would expect the licensee to review their list of EQ equipment to see whether any of the cables of concern were located in their plant in safety-related applications and at elevated service temperatures. If they found any cables in environments with elevated temperature, the staff would expect the licensee to evaluate whether further action was required, such as inspecting the *in situ* condition of the cable, reducing the cable's qualified life, or replacing the cable.

QUESTION 5.

You state that staff "visited several sites since the information notices were issued and determined that the licensees had evaluated the information notices and had taken appropriate action, thereby assuring that these cables were not installed inside containment in a high-temperature environment." Which nuclear power plant operators made these changes?

ANSWER.

Four sites (Nine Mile 1, Catawba, Crystal River 3, and Perry) were visited as part of the EQ Task Action Plan. One objective of the site visits was to determine what programs were in place to ensure generic communications regarding EQ, such as Information Notice (IN) 92-81, were being addressed. All four licensees involved in the site visits stated that, at the time of the site visit, they did not have any cables of concern in high temperature environments. We are not aware of any situation where the licensee had to replace any cables mentioned in IN 92-81 because of their service environment.

QUESTION 6.

(a) How many other sites have cables installed in similar environments? (b) Has the NRC checked to see if licensees have undertaken similar changes to respond to the information notice issued by the staff on this matter?

ANSWER.

The NRC Information Notice regarding these test failures was for information only. Licensees are expected to review the notice for relevance to their facility and take appropriate action.

(a) It is not known how many sites had cables of concern installed in high temperature environments similar to those identified in the Sandia test report. (b) The staff has not reviewed the actions taken by other licensees in response to IN 92-81.

Defects in Thermo-Lag Fire Protection Barriers

QUESTION 1.

In your March 27, 1996 letter, you reported that only 28 of the 86 nuclear reactors that use defective Thermo-Lag fire barriers have actually completed corrective actions - even though the NRC identified concerns about the fire resistance of Thermo-Lag back in 1991. You also report that corrective actions will not be completed at all 86 reactors until the year 2000. Do you find a nearly 9-year delay in corrective actions to be [an] acceptable timetable for responding to the problem of combustible fire barriers at nuclear powerplants [sic]? Why isn't corrective action being speeded up?

ANSWER.

Of the original 86 units, three have either permanently shut down or stopped construction. Therefore, there are 83 units that need to address the Thermo-Lag problems. Of these 83 units, to date, the licensees for 32 units have informed the NRC staff that they have completed all corrective actions. Of the remaining units, 18 have committed to completion dates during 1996, 10 during 1997, 10 during 1998, 7 during 1999, and 6 during 2000.

Each licensee with Thermo-Lag fire barriers has responded to the problems by implementing NRC-approved measures, such as fire watches, to compensate for possibly inoperable fire barriers. In addition, licensees rely on a defense-in-depth concept where multiple safety measures are incorporated. The Thermo-Lag barriers will provide some measure of fire protection, automatic

fire detection and sprinkler systems are provided in areas which have safe shutdown equipment, trained fire brigades are required 24 hours per day at all plants, and fuels that can feed a fire and ignition sources to start a fire are controlled. Because of these measures, it is unlikely that a fire significant enough to challenge a plant's safe shutdown capability will occur. The combination of fire watches and the defense-in-depth fire protection features provides an adequate level of fire protection until licensees implement permanent corrective actions.

The NRC staff is currently reviewing the licensees' completion schedules. The NRC staff plans to meet with those licensees that submitted schedules between 1998 and 2000 to determine whether adequate justification exists based on plant specific considerations. If, on the basis of a case-by-case review and evaluation, the NRC staff finds that a schedule is not justified or is too tenuous or protracted, it will take appropriate action to shorten the schedule.

QUESTION 2.

Your letter reports that the NRC staff is currently reviewing Thermo-Lag corrective action plans by licensees and that the staff "will perform inspections after corrective actions are implemented." To date, has the NRC staff conducted any inspection of corrective actions undertaken by licensees to respond to the Thermo-Lag problem? Which licensees have been inspected? Did the NRC staff find the unit's implementation of corrective actions to be adequate?

ANSWER.

Yes. The NRC staff has conducted inspections of corrective actions at Browns Ferry, Units 2 and 3; Comanche Peak, Unit 2; and Watts Bar, Unit 1. On the bases of its inspections, the NRC staff concluded that the licensees' corrective actions were adequate. The NRC staff has also inspected or visited other plants to review with the licensees certain aspects of their corrective action programs. These plants include Crystal River, Unit 3; Davis-Besse; Diablo Canyon, Units 1, and 2; Cooper; Grand Gulf, Unit 1; Limerick, Units 1 and 2; Susquehanna, Units 1 and 2; and Turkey Point, Units 3 and 4.

Regarding future inspections, the staff is replacing the stand-alone Thermo-Lag fire barrier inspections with a new broad-based Fire Protection Functional Inspection (FPFI) program. When the NRC staff developed the original Thermo-Lag Action Plan in 1992, it believed that the licensees would either repair their existing Thermo-Lag fire barriers or replace the

Thermo-Lag barriers with another type of fire barrier. However, since that time, the licensees have proposed a much broader range of corrective action options. For example, most licensees have started fire barrier reduction programs, based on reassessments and subsequent revisions of the plant post-fire safe shutdown analysis, to eliminate as much as possible the need for fire barriers to meet the NRC fire protection requirements. The outcomes of these programs are, for example, redefined fire area boundaries, relocated safe shutdown components, and additional operator actions and safe shutdown procedures. Some licensees are also performing detailed engineering analyses to justify the elimination of certain Thermo-Lag barriers or to justify certain Thermo-Lag fire barriers as they are.

After considering the range and scope of corrective action options, the NRC staff decided that an inspection of broader scope than originally envisioned was needed. Therefore, the NRC staff is currently converting the Thermo-Lag inspection procedures into a barrier inspection procedure, which will be integrated into the new broad-scope FPII procedures. (This element of the FPII procedures can also be used to inspect Thermo-Lag fire barriers independent of an FPII, where appropriate.) The staff is currently drafting the FPII procedures and is scheduling the first four FPIIs.

Nuclear Reactor Vessel Head Penetration

Question 1. In your March 27, 1996 letter, you reported that the NRC staff was currently assessing a white paper submitted by the Nuclear Energy Institute and several PWR owners groups on the safety significance of PWR vessel head penetrations and industry activities to manage this issue. You further stated that the staff intended to decide what further actions were required. Have any conclusions or determinations been made? If so, what are they?

ANSWER.

The NRC staff is continuing to monitor and assess the vessel head penetration (VHP) cracking issue. Inspections have been performed at several plants (Point Beach 1, D. C. Cook 2, Palisades, North Anna 1, Oconee 2) and no significant cracking was discovered. Re-inspections were performed at D.C. Cook 2 and Oconee 2 during their Spring 1996 outages. During the inspections, minor cracking was found at Oconee 2, but no cracking was found that would challenge structural integrity.

On March 5, 1996, NEI, submitted a "white paper" that reviewed the safety significance of cracking in PWR vessel head penetrations and described industry activities to manage this issue. Based on a review of the white paper, and on the results of the inspections of U.S. PWRs, the PWR Owner's Groups' analyses, and the European experience, the NRC staff has determined

that VHP cracking does not pose an immediate safety concern because the cracks would result in detectable leakage before failure, and the leakage would be detected during visual examinations performed as part of surveillance walkdown inspections. In the long-term, however, degradation of the VHPs is an important safety consideration that warrants further evaluation. Therefore, in order to ensure safety in the long-term, NRC is in the process of issuing a Generic Letter to request information on licensee future inspection plans. A draft Generic Letter (96-XX) was published in the Federal Register on August 1, 1996 (61 FR 40253) for public comment. The comment period expired October 3, 1996. Information collected in response to the Generic Letter will assist the NRC staff in assessing industry actions on this subject and in establishing a plan for assuring appropriate long-term inspections and corrective actions.

On-Line Maintenance

QUESTION 1. Concerns have been raised about problems with on-line maintenance at the Seabrook nuclear reactor last year. Please describe the nature and severity of the problems which occurred and what steps have been undertaken to prevent a recurrence.

Answer.

The On-Line Maintenance (OLM) program at Seabrook was developed by the licensee in April 1995, with initial field implementation in June 1995. Several weaknesses were evident in the initial implementation of the program. Specifically, the NRC identified weaknesses in the planning, work control, pre-evolution briefings, and in-field performance, and documented these findings in NRC Inspection Reports 50-443/95-08, dated September 22, 1995, and 50-443/95-13, dated December 28, 1995. Individually the weaknesses were not significant to actual reactor safety. However, collectively these weaknesses represented OLM program vulnerabilities that if not corrected posed the potential to adversely affect reactor safety.

The licensee suspended implementation of the OLM program and established a committee to conduct a causal analysis of the weaknesses in the OLM program and to make recommendations for corrections. The committee concluded that a lack of OLM definition clarity, unclear program responsibility, inadequate work package preparation and review, and inefficiencies in the work control system contributed to the OLM program weaknesses. Additionally, the committee

QUESTION 1. (Continued)

- 2 -

noted that weak management oversight and direction were contributing causes. Further, the committee identified 16 corrective actions and recommendations, which were presented to and accepted by the licensee group managers.

Corrective actions were implemented, and the OLM program was restarted in July 1996, as documented in NRC Inspection Report 50-43/96-06, dated September 11, 1996. It should be noted that the NRC will continue to inspect the OLM program implementation.

The findings cited in the NRC inspection reports resulted in no cited violations. The events concerning operation in excess of licensed thermal power resulted in a non-cited violation due to the minimal actual safety significance since thermal power remained below 3479 MWt, which corresponds to 102% of rated thermal power which is bounded by the plant accident analyses.

QUESTION 2.

Please provide me with copies of any reports prepared by the NRC staff about problems with on-line maintenance at Seabrook.

Answer.

Four inspection reports were issued in 1995 and two were issued in 1996 that contained references to on-line maintenance. The reports are:

Inspection Report 50-443/94-30, letter dated February 10, 1995
Inspection Report 50-443/95-08, letter dated September 22, 1995
Inspection Report 50-443/95-12, letter dated October 5, 1995
Inspection Report 50-443/95-13, letter dated December 28, 1995
Inspection Report 50-443/96-80, letter dated April 3, 1996
Inspection Report 50-443/96-06, letter dated September 11, 1996

Copies of these reports are attached.

QUESTION 3.

Do these problems at Seabrook raise any questions about the general advisability of allowing licensees to conduct on-line maintenance at nuclear reactors? Have any other licensees experienced problems with on-line maintenance? Which one? What happened?

ANSWER.

The NRC has a longstanding concern about inappropriate use of on-line maintenance. In 1991, NRC issued guidance to its inspectors regarding the practice of removing equipment from service for maintenance. This guidance acknowledged the fact that some on-line maintenance represents a net safety benefit. The guidance established principles pending quantitative studies concerning the risk of on-line preventive maintenance. Tools to assess the relative risks of various preventive maintenance schedules are now available and are being used by licensees to meet the maintenance rule.

In October 1994, based on senior management visits to several sites, NRC management expressed its continuing concerns regarding the control of on-line maintenance to the Institute for Nuclear Power Operation (INPO) and the Nuclear Energy Institute (NEI). The concerns were generic and focused upon an apparent lack of sensitivity regarding the relative safety importance of safety systems or combinations of equipment that would have risk-significance if taken out of service. Risk insights from the Individual Plant Examination did not appear to have been fully utilized in the operational and maintenance decision process at certain facilities. As an example, a "train" or "division" approach to on-line maintenance where numerous train "B" safety

components were removed from service was identified. In another case, a facility planned to have the turbine-driven auxiliary feedwater pump and one of two emergency diesels out of service at the same time. Other concerns related to the potential impact of on-line maintenance on safety systems availability.

NRC letters to INPO and NEI acknowledged that existing industry guidance was available, but that it may not have been adequately implemented at some sites. The letters also reiterated that technical specifications were not designed to control on-line maintenance, but rather addressed random single failures and reasonable repair times.

The letters further noted that the maintenance rule addressed on-line maintenance in that it required licensees to balance the improvement in reliability resulting from maintenance with the increase in equipment unavailability due to planned maintenance, and to evaluate the impact on safety of all equipment out of service before voluntarily taking additional equipment out of service. The NRC also issued a Temporary Instruction to its resident inspectors to assess the magnitude and safety implications of on-line maintenance.

The Temporary Instruction was performed at each site during the fall of 1994. An NRC task group reviewed the results and determined that there were several weaknesses (lack of comprehensive risk assessments, procedural controls, and training); however, no significant safety concerns were identified.

In February 1995, INPO issued additional guidance to licensees on managing maintenance during power operations. NEI also strengthened its discussion of this subject in NUMARC 93-01 "Industry Guideline for Monitoring the Effectiveness of Maintenance at Nuclear Power Plants." NRC provided additional guidance to inspectors in the maintenance inspection procedures. Inspectors are expected to review this practice both during their monthly inspection activities and during the maintenance rule baseline inspection. A baseline inspection is planned for each nuclear power plant during the period July 1996 to July 1998. To date, these inspections have identified some weaknesses in the analyses and procedures for on-line maintenance; however no significant safety concerns have been found.

Nuclear Decommissioning Costs/Licensee Ownership Arrangements

QUESTION 1.

On page 21 of your prepared testimony you note that in response to the ongoing restructuring of the electricity industry, you are examining the issue of whether utilities in a restructured market will have adequate funds set aside to cover nuclear decommissioning costs and that you have issued an advance notice of propose[d] rulemaking on this matter. Please explain how utilities currently fund decommissioning costs, and what legal requirements exist to provide assurance that utilities will be able to satisfy all their decommissioning obligations. How do you envision these arrangements could be affected by electric utility industry restructuring? What options are you considering to assure that utilities have sufficient funds available to cover decommissioning costs?

ANSWER.

The NRC's regulations in 10 CFR 50.75(e) require electric utility licensees to provide assurance of decommissioning funding by (1) prepayment, (2) an external sinking fund accumulated over the estimated life of the reactor in an external trust fund, (3) a surety method, insurance, or other guarantee method, or (4) for Federal government licensees, a statement of intent. Virtually all power reactor licensees use the external sinking fund method. When it promulgated the decommissioning rule in 1988, the NRC distinguished between electric utility licensees and others by allowing electric utility

licensees to accumulate funds over remaining facility life. The basis for this distinction was that electric utilities are extensively economically regulated by State public utility commissions (PUCs) and the Federal Energy Regulatory Commission (FERC). Thus, in addition to the NRC's requirements, electric utilities are subject to requirements to provide decommissioning funding by these authorities.

However, with the advent of rate deregulation, the NRC is concerned that some additional decommissioning funding assurance may be needed for those power reactor licensees that lose rate regulatory oversight by FERC or the PUCs. Currently, NRC regulations in 10 CFR 50.75(e) do not allow licensees to use the external sinking fund method of decommissioning funding assurance if they do not meet the NRC's definition of "electric utility" in 10 CFR 50.2. As power reactor licensees lose rate regulatory oversight and thus no longer are considered "electric utilities," they would be required to provide some other method of assurance, such as a letter of credit or surety bond, for any unfunded balance of decommissioning costs. Consequently, NRC's regulations currently have some built-in safeguards to address rate deregulation. Nevertheless, as indicated in the advance notice of proposed rulemaking (ANPR) (61 FR 15427; April 8 1996), the NRC is considering additional changes to its regulations including methods of decommissioning funding assurance, such as eliminating ambiguities in the NRC's definition of "electric utility;" pooled insurance, if available; accelerated funding of decommissioning; and other methods. The NRC is developing a proposed rule as a follow-up to the ANPR that will address this issue.

Mixed Waste

QUESTION 1.

What is the basis for NRC's determination that existing disposal alternatives for Cs-137 contaminated electric arc furnace dust are not cost-effective?

ANSWER.

On January 22, 1996, the U.S. Nuclear Regulatory Commission published in the Federal Register a proposed technical position on the disposition of cesium-137 (^{137}Cs) contaminated emission control dust and other incident-related materials (61 FR 1608). The disposal option is being proposed in the form of a "permissive" technical position (i.e., an option, likely requiring multiple approvals, that would be initiated by a request from an NRC or Agreement State licensee on a case-by-case basis). The broad policy justification, as stated in the Federal Register notice was that "NRC believes that disposal, under the provisions of the position or other acceptable alternatives (emphasis added), is preferable to allowing this mixed waste to remain indefinitely at steel company sites." Another acceptable alternative referred to in the Federal Register notice is the mixed waste disposal facility operated by Envirocare of Utah. In April 1995, this facility received authorization from the State of Utah to accept the subject waste at concentrations not exceeding 560 picocuries per gram after the work on the technical position was initiated.

Notwithstanding the availability of the mixed-waste disposal facility option, which has been used by several steel facilities with ^{137}Cs -contaminated, incident-related material, other steel companies informed NRC that they did

not consider disposal at Envirocare to be a cost-effective solution.

NRC staff contacted the industry, as well as the mixed-waste and Subtitle C disposal facility operators, to assess the possible cost of the disposal alternatives. Although contractual privacy and market considerations prevented exact determination, NRC staff concluded that the differential costs between the mixed-waste and Subtitle C disposal options could be significant. In fact, the comment letters from the mixed-waste disposal facility operator and the Subtitle C facility operators appear to confirm this assessment. Actual cost differences would be considered in an environmental assessment that would support any decision to implement the position's disposition alternative. The significance of any cost differential could be judged by appropriate regulatory authorities in their selection of the most reasonable and proper disposal alternative (e.g., whether saving a few cents per ton of steel is in the public interest).

QUESTION 2.

What is the volume of undisposed material that would be the subject of MRC's Draft Technical Position?

ANSWER.

As the result of past inadvertent meltings of Cesium-137 (^{137}Cs) sources, a number of steel producers possess a total of about 10,000 tons (9,000 metric tons) of incident-related materials, most of which contains ^{137}Cs concentrations of less than 100 picocuries per gram (pCi/g) (3.7 Bq/g). This material is typically being stored on site because of the lack of disposal options that are considered cost-effective by the steel companies.

When sources containing ^{137}Cs are inadvertently melted with a load of scrap metal, a significant amount of the ^{137}Cs activity contaminates the metal-rich dust that is collected in the emission control systems that steel mills have installed to comply with air pollution regulations. Emission control dust, generated immediately after the melting of a ^{137}Cs source with the scrap metal, can contain cesium concentrations in the range of hundreds or thousands of picocuries per gram or a few to a few tens of becquerels (Bq) per gram of dust) above typical levels in dust caused by ^{137}Cs in the environment (e.g., 2 pCi/g or 0.074 Bq/g). Several thousand cubic feet (several tens of cubic meters) of dust could be contaminated at these levels. Dust generated days or weeks after a melt of a source (containing hundreds of millicuries or a few curies of ^{137}Cs (~37 GBq)) will contain reduced concentrations, typically less than 100 pCi/g (3.7 Bq/g).

Even after extensive decontamination and remediation activities, newly generated dust may still contain concentrations greater than 2 pCi/g (0.074 Bq/g) background levels, but generally less than 10 pCi/g (0.37 Bq/g). When the melting of a source is not immediately detected, materials related to downstream processes have also been contaminated with relatively low concentrations of ^{137}Cs (e.g., 10 pCi/g (0.37 Bq/g)). In addition, materials used during decontamination may also be contaminated with dust containing ^{137}Cs concentrations at similar levels above background.

QUESTION 3.

How much waste that would have been affected by the Draft Technical Position has already been treated and disposed of at existing facilities?

ANSWER.

The NRC staff does not have specific information about the total amount of waste that has been treated and disposed of at existing facilities. The Envirocare facility that NRC understands has accepted some of the waste is regulated by the State of Utah.

In responding to the staff's request for comments on the Draft Technical Position, Envirocare of Utah indicated that more than half of the 236,000 ft³ of contaminated material generated by seven steel recyclers had been disposed of at its Clive, Utah facility. However, this facility can accept incident-related material with radionuclide concentrations up to 560 picocuries per gram (pCi/gm) (20.7 Bq/g), while the Draft Branch Technical Position is limited to waste with concentrations of up to 100 pCi/g (3.7 Bq/g), for treated bulk waste.

QUESTION 4.

If existing treatment and disposal alternatives are not cost-effective, what is the NRC's explanation as to why so much waste has already been treated and disposed?

ANSWER.

At the time NRC began to develop the technical position on disposition of Cesium-137 contaminated emission control dust, this material was typically being stored on site because of the lack of disposal options that were considered cost-effective by the steel companies. In April 1995, Envirocare of Utah, Inc., an operator of a mixed-waste disposal site, received authorization from the State of Utah and initiated operations to treat and dispose of Cesium-137 contaminated incident-related materials at concentrations not exceeding 560 pCi/g (20.7 Bq/g). This authorization was granted after the draft technical position had been developed. Facilities that sent this waste to Envirocare apparently determined that disposal at the Clive site (a relatively new option) was a safe and effective solution for their situation. NRC has not performed a cost comparison of disposal at Envirocare vs. the cost of disposal in accordance with this technical position. Therefore, NRC is not in a position to explain how the steel companies determine that disposal of the waste at Envirocare was preferable to continued on site storage.

QUESTION 5.

The National Council on Radiation Protection and Measurements is currently conducting a study, funded in part by the NRC, to investigate the current state of scientific research on the health effects of exposure to low levels of ionizing radiation. Is NRC planning to finalize the Draft Technical Position prior to finalizing the NCRP's study?

ANSWER.

Yes. NRC is currently sponsoring a study by the National Council on Radiation Protection and Measurements (NCRP), the objective of which is to make a critical assessment of all biological studies of the effects of ionizing radiation and radiobiology theory of effects in the low-dose and dose-rate region and to summarize these effects. Current plans are to receive a letter report summarizing the results of this assessment from the NCRP in September 1997.

The NRC currently plans to prepare the Draft Technical Position in final form in December 1996. The radiation protection basis employed in the NRC's Draft Branch Technical Position is consistent with national and international recommendations by NCRP, the International Commission on Radiological Protection, the United Nations Scientific Committee on the Effects of Atomic Radiation, and the National Academy of Sciences. The ongoing NCRP study may eventually result in changes to the radiation protection framework, but it

is premature and inappropriate to forecast the study's conclusions or to defer regulatory decisions in the interim.

QUESTION 6.

Is it NRC's expectation that the Draft Technical Position, if finalized, will establish a precedent that would be expanded to other radionuclides and waste streams? If not, what is the legal basis for carving out Cs-137 contaminated mixed waste?

ANSWER.

The NRC has no plans to develop any similar positions at this time. However, the NRC believes that the precedent being suggested in this case is reasonable and proper, based on the circumstances and the justification outlined in the Draft Branch Technical Position. With regard to other possible situations for which this position may be considered a precedent, the NRC believes these situations should be judged on their own merit.

QUESTION 7. (A).

If a mixed waste stream develops as a result of a melting incident, how will it be determined as a technical matter what waste would be below the cutoff level that would qualify for the exemption?

ANSWER.

The Draft Branch Technical Position on the disposition of Cesium-137 (^{137}Cs) contaminated emission control dust contains specific guidance on which incident-related mixed waste streams could be disposed of in accordance with the conditions outlined in the guidance. For packaged waste, the maximum activity of ^{137}Cs allowed in the incident-related material would be 130 picocuries per gram (pCi/gm) (4.8 Bq/g). For unpackaged incident-related material, the limit would be 100 pCi/gm (4.8 Bq/g) of ^{137}Cs . The concentration in the waste would be determined by appropriate radiological analysis techniques (e.g., gamma spectroscopy).

QUESTION 7.(B).

Once a determination is made about what waste in a waste stream would qualify for the exemption, how will that waste be segregated from the waste that does not qualify?

ANSWER.

The Draft Branch Technical Position on the disposition of Cesium-137 (^{137}Cs) contaminated emission control dust envisions disposal of packaged or unpackaged (bulk) waste after treatment to comply with all applicable Environmental Protection Agency and/or State waste treatment requirements for land disposal of regulated hazardous waste. These treatment operations would be undertaken by either: (1) the owner/operator of the electric arc furnace or foundry (licensed by NRC or appropriate Agreement State to possess, treat, and transfer ^{137}Cs -contaminated, incident-related materials); or (2) an NRC- or Agreement State-licensed service contractor (operating either on or off site). Segregation of the waste that would qualify for the exemption from waste that would not qualify for the exemption would be performed as part of the treatment operations. These treatment operations would be carried out under an approved NRC or Agreement State radioactive materials license that would include, among other things, descriptions of the treatment operations, as well as the methods and procedures the licensed facility will use to protect public health and safety and the environment. The waste would be segregated on the basis of its specific activity, with higher activity waste being sent for disposal at a licensed radioactive waste disposal facility that is also

permitted to dispose of hazardous waste.

QUESTION 7.(C).

What will happen to the remaining, more radioactive waste, for which disposal alternatives are currently nonexistent?

ANSWER.

Because of its radioactivity (i.e., Cesium-137 (^{137}Cs) concentration levels), some of the incident-related material may not be suitable for disposal at a Subtitle C, RCRA-permitted disposal facility as contemplated in NRC's Draft Branch Technical Position. This material may be disposed of either: (a) at a licensed low-level radioactive waste (LLW) disposal facility after "delisting" (e.g., after appropriate treatment of its hazardous constituents); or (b) at a licensed and permitted mixed-waste disposal facility. In April 1991, Envirocare of Utah, Inc., an operator of a mixed-waste disposal site, received authorization from the State of Utah and initiated operations to treat and dispose of ^{137}Cs -contaminated incident-related (mixed-waste) materials at concentrations not exceeding 560 pCi/g (20.7 Bq/g). Waste material that is not acceptable for disposal at a licensed low-level radioactive waste disposal facility, or at the Envirocare facility, would remain on-site, or be transferred to a licensed facility for storage until adequate disposal capacity is developed.