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BY THE US GENERAL ACCOUNTING OFFICE

Report To The Chairman,  
Nuclear Regulatory Commission

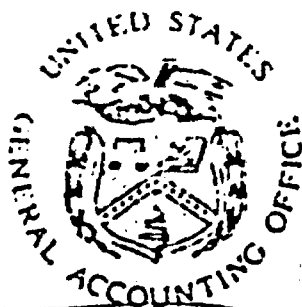
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## NRC Needs Alternative To Mandatory Relocation For Maintaining Objectivity Of Resident Inspectors

Since 1978, the Nuclear Regulatory Commission has stationed resident inspectors at nuclear powerplant sites. A continuing concern is the ability of these inspectors, or residents, to retain their objectivity over an extended period of time.

NRC plans to relocate residents at least every 5 years as one way to help assure objectivity. However, residents are likely to incur personal financial hardship--on the average of \$7,700--upon relocation, because federal employee relocation allowances are less than actual relocation costs. Therefore, NRC has not yet required residents to relocate due to concern that many of them might resign.

GAO believes there are better ways to preserve residents' objectivity than by mandating relocation within a set time period. NRC should make more use of alternative measures now being used by some regional inspection offices to help assure that residents objectively perform their duties. These measures could be used in conjunction with a flexible relocation policy which encourages--but does not mandate--periodic relocations.



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## CHAPTER 1

### INTRODUCTION

The Nuclear Regulatory Commission (NRC) and electric utilities each have important responsibilities in making sure that commercial nuclear powerplants are properly built and safely operated. Utilities construct and operate these plants, while NRC sets the regulations, standards, and guides for construction and operation. Furthermore, NRC is expected to ensure, through its inspection and enforcement program, that utilities are fulfilling their responsibilities for quality construction and safe powerplant operations.

In January 1975, when NRC was created as an independent regulatory agency out of the Atomic Energy Commission, it had responsibility for inspecting 53 operating nuclear powerplants and 63 plants under construction. Now, NRC's inspection responsibilities include 80 nuclear powerplants licensed to operate and another 64 plants under construction. NRC has increased its total inspection staff from about 200 inspectors in 1975 to about 475 by the end of 1982.

Until the late 1970s, NRC's nuclear powerplant inspections were made by inspectors assigned to NRC's five regional offices. Regional inspectors specialized in carrying out certain parts of NRC's inspection program such as fire protection, plant security, training and requalification of plant personnel, and quality assurance. These inspectors traveled to powerplants from regional offices to perform their assigned parts of NRC's inspection program. However, because of time spent (1) preparing for inspections, (2) traveling to and from plants, and (3) documenting and evaluating inspection findings, only about 25 percent of the regional inspectors' time was spent at plant sites. Furthermore, much of this time was devoted to reviewing records rather than observing work in progress or conducting independent tests and measurements.

In June 1977, the NRC Commissioners decided to station one inspector full-time at each operating nuclear powerplant and at selected plants under construction. Implementation started during the summer of 1978 with the relocation of 20 inspectors from regional offices to 20 nuclear powerplant sites. Each resident inspector (resident) received technical support from NRC's regional inspection offices. NRC intended that residents would be its "eyes and ears" at plant sites.

In 1981, NRC's Commissioners expanded the resident program. At least one resident was assigned at each site with a nuclear powerplant under construction or in operation, with additional residents assigned to sites on the basis of plant designs, past utility performance, and availability of adequately trained inspectors. As shown below, NRC had assigned residents to 82 nuclear powerplant sites as of December 1982. Funding for the program has grown from about \$2.7 million in fiscal year 1978 to about \$11.4 million in fiscal year 1982.

NUCLEAR POWERPLANT SITES WITH  
RESIDENT INSPECTORS

	Number of sites		<u>Total</u>
	<u>With one inspector</u>	<u>With two or more inspectors</u>	
Single unit			
Operating	12	10	22
Under construction	22	5	27
(note a)			
Multi-unit			
Operating	2	20	22
Under construction	<u>1</u>	<u>10</u>	<u>11</u>
(note a)			
Total	<u>17</u>	<u>45<sup>b</sup></u>	<u>82</u>

<sup>a</sup>Includes plants constructed but undergoing tests before operation.

<sup>b</sup>Five sites had more than two inspectors assigned. For example, four residents are assigned to the Three Mile Island site.

One of the major concerns raised when NRC established the program was the potential loss of residents' objectivity. For example, in the report accompanying the NRC authorization bill for fiscal year 1979, the House Committee on Interstate and Foreign Commerce (now the Committee on Energy and Commerce) remarked:

"The committee believes that the placement of an NRC employee at the site of an operating reactor or one under construction might lead to a familiarity with the operator or contractor which impairs the inspector's objectivity. This observation is in no way meant to raise questions as to the character or integrity of any inspector. Resident inspectors will have more frequent contact with the operator or contractor than they have with other NRC employees, and the likelihood of less than total objectivity must be viewed as a natural outgrowth of this phenomenon. Every effort must be exerted to guard against this possibility."

NRC believed it could minimize this risk by carefully selecting residents, limiting their duty tours at a site to 3 years, and ensuring that they had frequent contact with regional inspectors, supervisors, and other resident inspectors. In addition, NRC developed a strict code of conduct for them which prohibits activities such as car pooling with utility employees.

In 1981, NRC extended the 3-year duty tour to a maximum of 5 years because it was concerned that residents might resign rather than relocate. NRC's Office of Inspector and Auditor found that relocation costs they incurred in initially moving to their assigned plant sites were generally greater than what NRC could reimburse under government relocation allowances. NRC was concerned that residents might resign rather than face financial losses--then estimated by NRC at about \$4,700 per relocation--thus adversely affecting the inspection program. When NRC decided to extend maximum duty tours from 3 to 5 years, it also intended to assign more than one resident to each site. Therefore, NRC reasoned, a minimum of two at each site would reduce the potential that they might lose their objectivity as a result of longer duty tours.

In 1981 NRC also requested legislative authority to pay residents higher relocation allowances. The legislative proposal was included in the fiscal years 1982 and 1983 NRC authorization bill passed by the Senate, but it was subsequently deleted by the House and Senate conference committee. Furthermore, the legislative proposal was opposed by both the General Services Administration and the Office of Management and Budget because of its preferential treatment of NRC residents over other federal employees and because of its estimated cost. NRC estimates that, if it obtains authority to pay residents higher relocation allowances, the annual cost of relocating them will increase from about \$600,000 to somewhere between \$880,000 and \$1.4 million.

In lieu of giving NRC the authority it sought, the Congress directed NRC to conduct a study of financial hardships due to relocation. On April 29, 1983, NRC submitted its report, entitled "Study of Financial Impacts on Resident Inspectors," to the Congress. Among other things, NRC estimated that the average future financial loss a resident will incur with relocation is about \$7,700 and endorsed the earlier legislative proposal intended to reduce this hardship.

The first group of NRC's resident inspectors will be completing their 5-year duty tours in the summer of 1983. NRC had expected that 11 residents would be relocated in 1983, and that an average of 72 annual relocations would eventually be required. This estimate included normal attrition and transfers into and out of the program as well as relocations among sites.

In December 1982, however, NRC's Executive Director for Operations authorized the administrators of NRC's five regional offices to recommend for his approval, on a case-by-case basis, extensions of duty tours beyond 5 years after considering the following factors:

- The resident's overall performance, including continued objectivity.
- Whether the remoteness of site location, the presence or absence of other residents at the site, and the level of

day-to-day regional office contact affect the resident's performance and objectivity over time.

- The personal desires and career goals of the individual.
- Humane considerations where a family move could create an undue hardship.
- Whether the nuclear facility's regulatory performance calls for maintaining the resident for continuity or replacing him or her for a fresh look.
- Whether available positions at other sites, NRC regional offices, or NRC headquarters are commensurate with the experience, qualifications, and career development of the individual and NRC needs.
- The overall safety impact of rotation of a number of residents during a short period of time.
- The recruiting/staffing impact of rotation of a number of residents during a short period of time.

The directive announcing this policy modification states that it is in effect until NRC obtains legal authority to pay resident inspectors' relocation allowances in amounts above current federal regulations.

#### OBJECTIVES, SCOPE, AND METHODOLOGY

NRC's mandatory resident inspector relocation policy was scheduled to be implemented beginning in the summer of 1983. In addition, the Congress directed NRC to study and report on the financial hardship issue by April 4, 1983. For these reasons, we evaluated the issue of maintenance of resident inspector objectivity. Our evaluation included an assessment of NRC's experience to date with this issue; a review of NRC's mandatory relocation policy in terms of its rationale, estimated cost, and potential impacts on NRC's overall nuclear powerplant inspection program; and an analysis of alternative ways of assuring that residents maintain their objectivity.

We discussed these issues with officials of NRC's Office of Inspection and Enforcement in Bethesda, Maryland, and in the NRC regional offices at King of Prussia, Pennsylvania, and Atlanta, Georgia. These regional offices inspect a relatively large number of nuclear powerplants. We also examined inspection program policies and procedures as well as studies of NRC's resident inspection program. We requested each of NRC's five regional administrators to identify all cases in which NRC management had concluded that resident and regional inspectors had compromised their objectivity.

In addition, we discussed NRC's relocation policy with four former regional inspectors, four former residents, and 21 current

residents. We did not select these former or current NRC inspectors on a random basis. Our criteria for selecting interviewees included (1) coverage of all five of NRC's regions, (2) ready accessibility to us of nuclear powerplant sites, and (3) availability of current and former inspection personnel.

Duty Stations of Residents  
Interviewed by GAO

<u>Nuclear powerplant</u>	<u>State</u>
<u>NRC Region I</u>	
Millstone	Connecticut
Pilgrim	Massachusetts
Susquehanna	Pennsylvania
Yankee-Rowe	Massachusetts
<u>NRC Region II</u>	
Hatch	Georgia
Sequoyah	Tennessee
Watts Barr	Tennessee
<u>NRC Region III</u>	
Cook	Michigan
Dresden	Illinois
Quad Cities	Illinois
<u>NRC Region IV</u>	
Cooper Station	Nebraska
Fort Calhoun	Nebraska
Fort St. Vrain	Colorado
<u>NRC Region V</u>	
Diablo Canyon	California
San Onofre	California

The results of our discussions with NRC's former and current inspectors are not statistically projectable. We believe, however, that the results discussed in this report represent a good cross-section of views since we interviewed about 16 percent of NRC's current residents, including inspectors from all of NRC's five regions.

We also discussed the resident inspection program and relocation policy with inspectors in two states--Connecticut and Massachusetts--having nuclear plant inspection programs; with

officials of the Institute of Nuclear Power Operations;<sup>1</sup> with officials of six electric utilities (listed below) operating nuclear powerplants at eight of the plant locations where we interviewed resident inspectors; and with representatives of three groups (listed below) with longstanding and active interests in nuclear power and nuclear regulation.

Electric utility organizations

Boston Edison Company, Boston, Massachusetts  
Commonwealth Edison Company, Chicago, Illinois  
Northeast Nuclear Energy Company, Hartford, Connecticut  
Omaha Public Power Company, Omaha, Nebraska  
Pacific Gas and Electric Company, San Francisco, California  
Tennessee Valley Authority, Chattanooga, Tennessee

Citizen groups interested in nuclear power

Critical Mass  
Friends of the Earth  
Union of Concerned Scientists

Finally, through their embassies in Washington, D.C., we obtained the views of the nuclear regulatory organizations of Canada, France, Germany, and Japan concerning their nuclear power-plant inspection programs. These countries all have major nuclear power programs. Of these countries, however, only Canada uses resident inspectors.

We did not obtain official NRC comments on this report. We did, however, discuss the report with representatives of the NRC Executive Director for Operations, and their comments have been incorporated as we believed appropriate.

Except as noted above, we conducted our audit in accordance with generally accepted government auditing standards. Audit work was performed during the period of October 1982 through July 1983.

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<sup>1</sup>The Institute of Nuclear Power Operations is a non-profit organization established by nuclear utilities after the accident at the Three Mile Island nuclear powerplant to assist utilities in improving the safety of operations at nuclear powerplants. The Institute conducts periodic inspections of utilities constructing and operating nuclear powerplants.

## CHAPTER 2

### THERE ARE BETTER MEASURES THAN MANDATORY RELOCATION TO HELP ASSURE RESIDENT INSPECTOR OBJECTIVITY

NRC has attached considerable importance to assuring that residents objectively perform their duties, because they work daily at nuclear powerplants and are in frequent contact with utility personnel.

There are two fundamental ways of helping to provide this assurance. One is to monitor the individual inspector's performance, including his or her objectivity. The other, which NRC selected when it established its resident inspector program, is to relocate each inspector periodically so that the inspector does not lose his or her objectivity over time. NRC has not, however, implemented this mandatory relocation policy. NRC is concerned that, due to the financial hardship inspectors can incur in moving to new nuclear powerplant sites, many might resign rather than relocate. If this happened, NRC believes the loss of these experienced inspectors would hurt the quality of its inspection program. Our review tended to confirm NRC's concern. Nineteen of 21 residents we talked to said that, considering the potential financial hardships, they would seek other employment if NRC required them to relocate. In addition, while NRC's capabilities for assessing objectivity are limited, to date it has not found loss of objectivity to be a significant problem.

On the other hand, we believe occasional relocations of residents are generally healthy. Not only does it provide some assurance that they retain their objectivity, but it also allows them to broaden their bases of experience. On balance, however, we believe mandatory relocation every 5 years is unnecessary, particularly in view of the possibility that NRC might lose many experienced inspectors. Alternative measures, which some NRC regional offices are currently using to a limited extent, could improve the inspection program and help NRC managers assess how objectively inspectors perform their duties. These measures, coupled with a flexible relocation policy which generally encourages but does not mandate relocation, should help NRC management maintain and possibly improve the inspection program.

#### LOSS OF OBJECTIVITY MAY NOT BE THE PROBLEM IT WAS ORIGINALLY ASSUMED TO BE

As noted earlier, the ability of residents to retain their objectivity over prolonged tours of duty at nuclear powerplant sites was a major concern when NRC established the program in 1975. NRC believed that the longer an inspector was assigned to a specific powerplant site, the greater the likelihood that the inspector would lose some of his or her objectivity.

In November 1979, we reported that, particularly where only one inspector is assigned to a nuclear powerplant site, the loss



of a resident's objectivity appeared to be a legitimate concern.<sup>1</sup> We reasoned that while onsite, inspectors will probably become acquainted with many plant employees on a first name basis. The longer inspectors remain at the plant, the more they may consider themselves a part of that plant's organizational structure. They may even begin to defend it against outsiders who raise questions concerning its design, construction, or operation. Because of these considerations, we believed it would be hard for inspectors to indefinitely maintain their objectivity, particularly if they were the only resident assigned to their respective plants.

Largely because of a combination of concern over objectivity and lack of experience with the resident inspector concept, NRC promulgated a strict code of conduct which applied to them and, to some extent, to their immediate families. Other than the general supervision provided out of its regional office, however, the code of conduct was the only step NRC took to permit it to measure or evaluate residents' maintenance of objectivity.

NRC now has about 5 years of experience with its resident inspection program. To date, based on the general supervision of residents and experience with the code of conduct, NRC has not found loss of objectivity to be a significant problem. As stated in a December 6, 1982, paper on the resident inspection program from NRC's Executive Director for Operations to the NRC Commissioners:

"Overall, it is the staff's judgment that the maintenance of objectivity by Resident Inspectors has not, so far, proven to be a significant problem. It is important to note, however, that a claim of success in this matter is only as good as our inexact ability to recognize and react to the often subtle changes in the objectiveness of an employee's actions over a span of several years. Additionally, those originally assigned as Resident Inspectors have, in general, been experienced NRC inspectors, which has contributed to their understanding of the importance of objectivity."

During the program's 5 years, it has been expanded to include 134 residents stationed at 82 nuclear powerplant sites. However, only once during this period has NRC management decided that a resident compromised his objectivity. In that case, the inspector publicly stated his opinions about an NRC drug investigation and plant security measures. The inspector's opinions generally supported the utility's rather than NRC's position. Because of the inspector's publicly stated views, NRC management decided that it would have to reassign him. He later resigned from NRC.

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<sup>1</sup>"Placing Resident Inspectors At Nuclear Powerplants: Is It Working?", EMD-80-28, November 15, 1979.

During the same period NRC management also decided that a regional inspector--rather than a resident--had compromised his objectivity by accepting free tickets to an entertainment event from a utility employee. In this case, NRC suspended the inspector for 30 days without pay and prohibited him from further inspections of the utility's plant.

Furthermore, NRC's decision in 1981 to extend residents' duty tours from 3 years to 5 years was based on its conclusion that (1) maintaining their objectivity had not been a problem and (2) assigning two or more to each of many nuclear powerplant sites would reduce the risk of decreased objectivity.

Of the foreign nuclear regulatory agencies we visited, only the Canadian Atomic Energy Control Board has resident inspectors. The Board said that for about 20 years it has had two assigned to each nuclear powerplant. The Board added that it has not identified any potential cases of lost objectivity and it does not require inspectors to periodically relocate.

#### MANDATORY RELOCATION MAY WEAKEN NRC'S INSPECTION PROGRAM

Mandatory periodic relocation of residents is intended to provide NRC management with increased assurance that they objectively perform their duties. At the same time, broadening inspectors' experiences through periodic reassignments should, in the long run, make them better inspectors. However, implementation of the mandatory relocation policy may weaken NRC's inspection program by reducing the overall level of experience of NRC's resident inspectors, because:

- The attrition rate of residents, who are generally among NRC's most experienced inspectors, could increase. If this happens, NRC will have to hire and train replacements. The new inspectors would need time to acquire experience commensurate with those who left NRC. Although NRC has not actually implemented its mandatory relocation policy, the attrition rate among its regional inspectors increased drastically in 1979 and 1980 when it began assigning them as residents.
- Residents say it generally takes them 1 to 2 years to become thoroughly familiar with a specific nuclear powerplant and the utility's operations. Thus, mandatory relocation every 5 years, while broadening their experience, would mean that for a significant portion of their duty tours residents would be performing at less than their full potential.

#### Inspector attrition rate could increase

During the first year of its resident inspection program, NRC assigned 32 inspectors to nuclear powerplant sites. Currently, 9 of them are still at their initial sites, 14 have voluntarily

rotated to new positions within NRC, 3 have retired, and 6 have resigned. However, because NRC has not yet implemented its mandatory relocation policy, it does not have actual experience on the policy's impact on retention.

One indication of its potential effect is what occurred when the resident inspection program began. At that time, NRC management reassigned experienced regional inspectors to plant sites rather than hire new inspectors. This mandatory relocation caused some of them to leave NRC. For example, the four former regional inspectors we contacted told us they left NRC rather than relocate. They were not alone. On November 12, 1980, the Director, Office of Inspection and Enforcement, told NRC's Executive Director for Operations:

"During the last year there has been a particularly high loss rate of 17 percent of reactor operations inspectors. A few of these were resident inspectors but the majority were regional inspectors who had been notified of a reassignment to a resident site or had reason to believe that they were prime targets for such a reassignment. The loss of 17 percent is more than four times as great as the loss rate of 3.5 percent for the preceding year. The 17 percent loss rate combined with the need for an 18-24 month training period for new inspectors, creates a formidable obstacle to effective use of allocated positions. Too many of them are tied up with trainees or are vacant and thus cannot make any significant contribution to the inspector program."

Further, there has been and continues to be concern over the disruptions and potential financial hardships of relocation. Nineteen of the 21 residents we interviewed told us that, considering the potential financial hardships, they would seek other employment rather than relocate if required by NRC. For example, one of these residents told us he had considered relocating to another powerplant with greater promotion potential but decided against it after estimating that a move would cost him more than the \$3,200 annual increase in pay he would receive with a promotion. His estimate was based on higher State income taxes, commuting costs, and mortgage interest payments at the potential new location. Finally, 7 of these 19 residents--more than one-third--said they did not want to relocate even if it would not cause personal financial hardship.

Of the 2 residents in addition to the 19 discussed above, 1 said the location of his next duty assignment would largely determine whether he would relocate or seek other employment. The other resident said he is returning to a regional office to avoid having to relocate every 5 years.

Not only are some residents likely to resign if NRC implements its mandatory relocation policy, but NRC must hire and train new inspectors to fill vacancies created by these resignations. As stated by the Director, Office of Inspection and Enforcement, in the memorandum quoted above, the 18 to 24 months required to train new inspectors "\*\*\*\*creates a formidable obstacle to effective use of [these] allocated positions." Even beyond the 18 to 24 month training period, new inspectors would need several years to acquire experience commensurate with the level of experience possessed by many of NRC's current residents.

Relocation could result in residents' loss of specific plant expertise

In the long run, periodic relocations to different nuclear powerplant sites should make better inspectors out of NRC's residents because of the inherent diversification of experience. In the short term, however, implementation of the mandatory 5-year relocation policy would mean that residents on a new assignment would not be working at their full potential until they had fully familiarized themselves with the assigned plant. Nuclear powerplants are not built to uniform or standardized designs, nor are utility operating procedures standardized. Therefore, residents need time to learn their plants and the utility's operations. Estimates of the time it takes residents to become familiar enough with a plant and the utility's operations to enable them to effectively perform their duties ranged from 6 months to 2 years. The residents we contacted generally told us it took them from 1 to 2 years before they felt comfortable at their current sites. For example, some residents told us that after they were at a plant a couple of years, isolated deficiencies they identified early in their tours began to develop into patterns which enabled them to identify more deep-rooted problems.

ALTERNATIVE MEASURES ARE AVAILABLE TO HELP ASSURE OBJECTIVITY

NRC regional management, regional inspectors, and residents have identified measures besides mandatory relocation which could be used to provide NRC management with assurances that residents retain their objectivity. They believe these measures are easier to implement, can enhance inspection program quality, and, in contrast to mandatory relocation, provide positive ways of assessing how objectively inspectors perform their duties. These measures, some of which are being selectively used in some regional offices, include:

- peer review of a resident's performance by other residents, or by regional inspectors and supervisors who are not in the resident's line of command;
- review of a resident's performance concurrent with NRC's annual assessment of the utility's performance;

- changing a resident's supervisor at 3-year intervals to provide a fresh look at his or her performance;
- monthly, rather than quarterly, visits to nuclear powerplant sites by supervisors based at regional offices; and
- occasional temporary reassignment of residents to other plants for about 2 weeks.

Regarding the latter measure, most of the 21 residents we interviewed favored periodic temporary assignments to other nuclear powerplant sites. They said this would broaden their exposures to other residents, powerplants, and utilities. They believed this type of interaction would improve the program and help them maintain their objectivity. For example, according to one resident, some of the inspections they perform are subjective, such as inspections for plant cleanliness. This presents the question, "how 'clean' is 'clean'?" The inspector said that by seeing other plants, a resident can gain a perspective on how well his assigned plant is doing.

Still another resident suggested that residents could be temporarily assigned to regional inspection duties and travel to several plants to perform inspections. In this case, rather than traveling out of a regional office they would travel from the specific plant to which they were assigned as residents. Instead of returning to a regional office to document and prepare inspection reports, they would prepare the reports at their nuclear powerplant sites.

## CONCLUSIONS

As the principal federal agency charged with regulating commercial nuclear power activities, NRC--its management, supervisors, and all employees--needs to be continually aware of and concerned about objectivity in the performance of their regulatory duties. From the outset of the resident inspection program NRC management has attached particular importance to residents' objectivity because they work daily at nuclear powerplants and are in frequent contact with utility personnel. NRC established a mandatory relocation policy as one means to assure that they retain their objectivity.

Periodic relocation is intended to provide some assurance that residents retain their objectivity and in the long run it provides residents with a broader base of experience. Nevertheless, NRC's reliance on mandatory relocations to help assure objectivity has presented the agency's management with a dilemma because, the agency believes, the financial hardships of periodic relocations would probably cause high resident attrition and jeopardize the quality of the inspection program. Our review confirmed this concern. In fact, 7 of the 19 resident inspectors we interviewed said they did not want to relocate even if relocation would not cause personal financial hardship.

NRC's earlier approach to ending this dilemma was to seek legislative authority to pay, when necessary, residents' relocation costs which exceed the limits set out in federal regulations. NRC did not obtain this authority in the last Congress, at least in part due to an objection within the administration that it would provide selected NRC employees preferential treatment over other federal employees. NRC continues to support the earlier legislative proposal as the solution to the mandatory relocation dilemma.

If NRC obtains financial relief for its residents, it intends to fully implement its mandatory 5-year relocation policy. In the meantime, NRC is now permitting case-by-case extensions beyond 5 years, when appropriate, after weighing factors such as

- the resident's overall performance, including objectivity;
- the resident's career goals and the availability of commensurate positions within the agency;
- humane considerations where a family move could create an undue hardship;
- the particular utility's regulatory performance; and
- the overall safety, staffing, and recruiting impacts of numerous relocations during a short period of time.

On balance, there are better ways than mandatory relocation for NRC to help assure that residents retain their objectivity, particularly in view of the uncertainty of obtaining legislative relief from the financial hardships of relocation for this small group of federal employees and the reluctance of many of them to relocate. First, NRC should establish a flexible relocation policy which

- does not limit the length of a resident's assignment,
- encourages periodic relocations, and
- reserves to NRC management the prerogative of relocating a resident after weighing factors such as those now used in considering extensions of residents duty tours beyond 5 years.

In conjunction, NRC should use some or all of the alternative measures now being selectively used by some of its regional offices as a framework to help assure that residents retain their objectivity. These measures include temporarily reassigning residents to other nuclear powerplants for about two weeks and increasing the frequency of regional office supervisory visits to powerplant sites. When coupled with a flexible relocation policy, this modified approach to the objectivity issue should help NRC management maintain and possibly improve the overall quality of powerplant inspections.

The above approach is particularly applicable in view of the fact that, although NRC's existing measures for testing objectivity are limited, it has not found inspector objectivity to be a significant problem.

RECOMMENDATIONS TO THE CHAIRMAN,  
NUCLEAR REGULATORY COMMISSION

To help assure that resident inspectors objectively perform their duties while at the same time minimizing the potential drawbacks of relocating them, we recommend that the Chairman, NRC

- adopt a flexible policy which encourages, but does not mandate, periodic relocations while retaining NRC management's prerogative of relocating individual residents when management determines that it is in the best interests of NRC; and
- use alternative measures, such as those now being selectively used by some regional offices, to assess inspector objectivity.

APPENDIX C  
OFFICE OF INSPECTION AND ENFORCEMENT MANUAL CHAPTERS  
ON  
NRC INSPECTOR OBJECTIVITY AND  
CONDUCT OF EMPLOYEES





UNITED STATES  
NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT  
Washington, D.C. 20555

## INSPECTION AND ENFORCEMENT MANUAL

ORPB:DI

### CHAPTER 0215

#### NRC INSPECTOR OBJECTIVITY

##### 0215-01 PURPOSE

To provide the criteria, methodology, and measures to be used as guidance in confirming, documenting, and ensuring the continued objectivity of NRC inspectors.

##### 0215-02 OBJECTIVE

To ensure that a specified and common set of criteria is used to assess and maintain the continued objectivity of NRC inspectors.

##### 0215-03 DEFINITION

Objectivity exists when the inspector implements the inspection program, interfaces with the public and conducts personal/organizational relationships in an unbiased manner, free from both partiality and antagonism toward a licensee or vendor, or the employees of a licensee or vendor, as evidenced by patterns of the inspector's actions.

##### 0215-04 APPLICABILITY

04.01 Assessment. All supervisors of NRC inspectors shall use the guidelines, criteria, and measures provided in this manual chapter to assess and assure the continued objectivity of the NRC inspectors they supervise.

04.02 Guidelines. The provisions of this chapter apply to all NRC inspectors (resident inspectors and all personnel who conduct inspection activities). Although the criteria provided in this chapter were developed by a task force that was primarily concerned with the resident inspection program, the guidelines are equally applicable to all NRC inspectors.

##### 0215-05 CRITERIA

When the resident inspection program was proposed by the Commission in May, 1977, it was recognized that maintenance of inspector objectivity was paramount to the success of the program. Since implementation of the resident

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inspection program in late 1978, the evaluation of a resident inspector's objectivity has been accomplished by regional management familiar with the inspector's performance. With the growth of the program, the need to provide formal guidelines for the performance and documentation of the results of these evaluations has been recognized.

The criteria provided in this manual chapter are to be used as guidelines to evaluate inspector objectivity. The criteria define patterns of actions which tend to confirm that inspector objectivity is being maintained. Conversely, patterns of actions different from those listed could indicate a trend toward a loss of objectivity. Patterns of actions are to be emphasized rather than isolated events when considering inspector objectivity.

The criteria are listed under the functional areas of Inspection Program Implementation (05.01), Public Interfaces (05.02), and Relationships (05.03). Some overlapping of the criteria occurs in functional areas, because the criteria are to be considered relative to the context of the section under evaluation. No single criterion or particular grouping is considered more important than any other as an objectivity measure.

Objectivity criteria are applied to performance patterns as opposed to any single performance event. It is recognized that some criteria reflect technical or administrative job performance attributes as well as objectivity measures. This should be considered by the evaluator when measuring patterns of actions against any criterion. The evaluator should differentiate between job performance and objectivity trends and be guided by consideration of the following factors, as appropriate:

- a. Experience level of the inspector.
- b. Technical expertise of the inspector with regard to issue or event under consideration.
- c. Length of time the inspector has been assigned to site or project, and the inspector's familiarity with the facility.
- d. Industriousness of the individual.
- e. Effectiveness as a regulator.
- f. External pressures, if known, that are unrelated to the job.
- g. Internal pressures that are job-related (for example, workload, time constraints).
- h. Differences of opinion that are based on valid disagreements involving the technical merit of the issue under consideration.

05.01 Inspection Program Implementation. Objectivity is assessed through observations of patterns of how the inspector communicates, responds to incidents, and initiates enforcement actions associated with the inspection program.

- a. Communications. Objectivity in communications is assessed by patterns of performance and changes in patterns of performance in the following areas: R

1. Independent Verification

- (a) Positive Pattern. Demonstrates through reports and other activities that the inspector independently attempts, to an appropriate degree, to verify information received from the licensee.
- (b) Negative Pattern. Unless otherwise warranted, demonstrates that little or no verification was done to substantiate information received from the licensee. Shows reliance on unsubstantiated licensee information with no independent followup regarding plant activities and events.

2. Language

- (a) Positive Pattern. Uses moderate, unbiased language in discussing the licensee or vendor, their employees, or the NRC. [Emphasis here is not on use of personal pronouns (i.e., my, we), which is considered trivial, but rather on the absence of repeated use of strong or extreme language showing either antagonism toward or defensiveness regarding licensee or vendor activities.] However, individual personalities must be considered.
- (b) Negative Pattern. Employs biased language when discussing the licensee or vendor, their employees, or the NRC. Reacts negatively to NRC communications or NRC policy in a protective manner toward the licensee.

3. Timing of Involvement/Notifications

- (a) Positive Pattern. Becomes involved early with licensee- or vendor-identified problems and provides timely identification of licensee or vendor problems to the inspector's supervisor.
- (b) Negative Pattern. Does not initiate followup of problems identified by the licensee or vendor. Tends to wait until problems have escalated in importance before becoming involved. Delays or withholds communications of problems, resulting in overreaction by supervisors.

4. Data Sent to End User

- (a) Positive Pattern. Data sent to the end user are accurate, complete against known data set. Within the inspector's abilities, licensee or vendor supplied information is generally independently verified by the inspector before being transmitted to the end user (with due regard for the need for prompt, best available information by the end user). Facts are provided that support valid safety concerns or mitigate safety significance. (Special situations

onsite may preclude prompt notification by a resident inspector). Sources of this information would include:

- (1) drafts of final reports
- (2) drafts of final memoranda
- (3) telephone discussions
- (4) meetings, e.g., SALP\* and exit meetings
- (5) briefings
- (6) site visits

(b) Negative Pattern. Seldom verifies information before passing it on to the end user. Transmits information to the end user omitting information that either supports valid safety concerns or mitigates the safety significance of any activity or event.

b. Incident Response. Patterns in the following items will be considered in determining objectivity. Positive patterns are listed below; negative patterns would be represented by preceding the statement with "failure to ....":

1. Demonstrates a willingness to routinely follow up on reactor trips, operator errors, equipment malfunctions, and other events of significance.
2. Demonstrates a willingness to respond to significant events during normal hours or outside normal working hours.
3. Demonstrates appropriate depth of review and thoroughness to the followup of responses.
4. Transmits accurately and promptly to the region data of issues about which the inspector has knowledge and concern.
5. Independently confirms the licensee's event sequence and event significance reporting in the followup of an incident.
6. Assesses an event's significance in general agreement with regional management's assessment.
7. Supports the final decisions of NRC management for each event.
8. Consistently represents the NRC viewpoint regarding conditions for plant restarts

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\*Systematic Assessment of Licensee Performance.

c. Enforcement. Enforcement actions initiated by the inspector have a pattern of consistency, are in conformance with the NRC enforcement policy (MC-0400), and generally agrees with management's assessment of the licensee's actions. These actions are identified by:

1. No unexplainable changes in the scope, frequency, significance, or severity of violations/deviations or other identified concerns when licensee performance appears unchanged. R
2. Assessment of enforcement items are generally consistent with the NRC enforcement policy as implemented by the region.
3. Consistency in resolving identified concerns.
4. No unsupported arguments with regard to findings of other inspectors.

05.02 Public Interfaces. Objectivity is indicated if statements attributed to an inspector from such sources as the news media, the licensee or vendor, and community groups are free from personal feelings or prejudice and are accurate. Examples are statements that:

- a. Represent the NRC and the public interests
- b. Establish a pattern of speaking for the NRC
- c. Are based on available facts
- d. Are neither estimates nor speculations R

05.03 Relationships. The inspector in the normal conduct of business establishes relationships with other personnel of the regional office, other NRC Offices, and the licensee. Patterns established in these relationships can be considered to verify objectivity. These patterns are:

- a. Presents an unbiased view in meetings and conferences. Unbiased view is defined as:
  1. No pattern of antagonism to the licensee or vendor.
  2. No pattern of partiality toward the licensee or vendor. However, the inspector should be permitted, based on the reality of technical data, to support a resolution which the licensee or vendor also advocates.
  3. No pattern of antagonism or defensiveness regarding findings of other inspectors that would reflect negatively toward the licensee or vendor.
- b. Responds to concerns expressed by licensee's or vendor's staff.
- c. Shows no evidence of performing as part of the licensee's or vendor's management organization on licensee internal matters.
- d. Shows no evidence of representing the licensee or vendor in an advocacy role with regard to licensing matters.

0215-06 IMPLEMENTATION

06.01 Direct Evaluation

- a. On a continuing basis, the inspector's Section Chief and other regional management evaluate, as appropriate, an inspector's objectivity. This evaluation will utilize the criteria listed in Section 0215-05 of this manual chapter as guidance. Annually, the section chief will collectively review and document the objectivity of those inspectors assigned to his section. The Regional Administrator should establish internal procedures for completing this action.

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In making the evaluation, the Section Chief should examine patterns of an inspector's performance for each of the objectivity criteria. Loss of objectivity is generally not reflected in a single event in an inspector's performance but in a consistent pattern of events over a period of time.

- b. When patterns tend to indicate a loss of objectivity, corrective measures should be immediately implemented by regional management. Patterns that show a trend toward a loss of objectivity are expected to be observed at an early stage using the guidance provided in this manual chapter. If a trend away from objectivity is observed, the Section Chief is expected to counsel the individual to correct the trend. Other measures, as appropriate (see Section 07.02), may be necessary to ensure objectivity. The Section Chief will discuss these matters with higher regional management prior to initiation.
- c. While this manual chapter identifies the Section Chief as the primary evaluator of inspector objectivity, the Section Chief shall use other sources of information in making the objectivity evaluation. These sources include observations made by other inspectors (regional and resident), other supervision, and personnel from other NRC Offices. The composite of information known to the Section Chief from all sources will then be considered in confirming inspector objectivity. Persons having concerns about an inspector's objectivity are expected to discuss the matter promptly with the inspector's Section Chief.

06.02 Indirect Evaluation. The SALP reviews serve as an indirect method of assessing an inspector's objectivity. Personnel involved in performing SALP reviews have contacts with the resident inspector as well as with project inspectors, PAT and CAT inspectors and regional specialists. During these contacts an informal evaluation is made of an inspector's objectivity. Often inspectors are primary contributors to the SALP report and participate at SALP board meeting. The lack of expression by personnel involved in the SALP process about an inspector's objectivity is considered a positive expression of the inspector's continued objectivity.

0215-07 MEASURES TO MAINTAIN OBJECTIVITY

07.01 Resident Inspector Objectivity. Since a resident inspector is assigned to just one site, additional measures are deemed necessary to

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provide the resident inspector with a broader perspective of NRC activities beyond the assigned site and region. The region shall assume responsibility for maintaining the resident inspector's objectivity by implementing the following measures:

- a. Each resident inspector shall spend a minimum of one week per year performing inspection activities at another site. These inspection activities may consist of activities at a single site or may include inspections at multiple sites. Participation as a member of a special inspection team (e.g., PAF or CAT) will satisfy this requirement.
- b. Section Chiefs of resident inspectors shall visit each site to observe and participate in resident inspector activities at least once per quarter. This requirement can be satisfied by participation of other regional management in lieu of the Section Chief (e.g., Branch Chief).

07.02 Additional Measures. Listed below are examples of other measures that may be implemented to help ensure the continued objectivity of resident and region-based inspectors.

- a. Schedule one-on-one discussions between the inspector and regional management when the resident inspector is in the regional office for the regularly scheduled regional resident meetings or for the regularly scheduled SALP board meeting.
- b. Maintain an emphasis on training. Areas where this emphasis should be applied are:
  - 1. technical training (refresher courses)
  - 2. inspection program training (especially changes)
  - 3. public interface
- c. Hold periodic refresher training on this manual chapter.
- d. Reassign inspectors to provide a change in immediate supervision
- e. Temporary or permanent reassignment of an inspector to another site

END

U. S. NUCLEAR REGULATORY COMMISSION  
OFFICE OF INSPECTION AND ENFORCEMENT

INSPECTION AND ENFORCEMENT MANUAL

CHAPTER 0200

MC 0235 CONDUCT OF EMPLOYEES

0235-01 PURPOSE

To provide a standard of conduct which IE representatives must follow in their dealings and relationships with non-NRC parties involved in the regulation of nuclear energy. This instruction supplements and emphasizes certain aspects of the Commission's regulation on Conduct of Employees, but that regulation is the definitive standard and contains requirements not repeated in this instruction. (See Title 10, Chapter 1, Part 0, Code of Federal Regulations.)

0235-02 BACKGROUND

IE representatives must conform to high standards of conduct in their dealings and relationships with the regulated nuclear industry to avoid even the appearance of a conflict of interest in the decisions they make. The Congress, special interest groups, the news media and the general public are aware of well-publicized conflict of interest cases. The political and social climate is such these days that NRC critics would be quick to point out any apparent conflicts of interest, no matter how irrelevant they might be. Executive Order 11222 mandates unusually high standards of conduct for Federal workers in the discharge of their duties. So IE representatives must avoid any association, activity or relationship that could appear to be a factor in influencing a decision regarding a regulated party.

0235-03 STANDARD OF CONDUCT

The prescribed standard of conduct involves four general areas: Acceptance of favors, official dealings with licensees, solicitation of employment with licensees and ownership of stock of nuclear energy companies. To avoid redundancy, the word "licensee" hereafter includes applicants for construction permits or licenses, holders of construction permits or licenses, component vendors, architect-engineers, and nuclear steam system suppliers.



031 Acceptance of Favors - IE employees shall not:

- a. Solicit or accept any gift, gratuity, entertainment, loan, or other thing of value from a licensee, including meals, drinks and visits to hospitality suites. However, acceptance of a TV dinner at the plant during an inspection is not prohibited. The NRC regulation permits acceptance of food under this circumstance provided the cost of the food is nominal and the occurrence is infrequent. Also, IE employees may use licensee telephones provided they charge any long distance calls to NRC.
- b. Go to places of entertainment with a licensee even though the IE employee pays his own way, or go out to eat with a licensee.
- c. Become overly friendly or establish social relationships which would appear to constitute a conflict of interest.
- d. Accept transportation from a licensee except for the purpose of moving between buildings in a plant complex during an inspection or investigation when there is no reasonable alternative.

032 Official Dealings - While representing NRC during the course of an inspection, investigation, or a meeting, an IE employee shall:

- a. Conduct interviews and discussions in a serious business-like manner and shall demonstrate in his attitude, mannerisms and statements a completely objective approach to the obtaining of essential factual information, and in any decisions or conclusions he draws from this information.
- b. Control his off-hours activities so that he is fully capable of performing his duties during business hours.
- c. Put in a full day's work when away from the office, just as he would when not in travel status, when circumstance allow this; i.e., not sitting early or coming to work late in the morning, except as necessary to catch a plane, or other legitimate purpose. IE employees should show by their actions that Federal employees are a dedicated group with a desire to give the tax paying public the full value of their services.

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- 033 Future Employment - IE employees shall not solicit, negotiate or arrange for employment with any licensee while representing NRC to that licensee. (Employees should read 0.735-22, of the previously cited regulation for a full treatment of this subject.)
- 034 Ownership of Stocks, Bonds and Other Securities - Section 0.735-29 of the previously cited regulation prohibits NRC employees from owning stocks, bonds and other securities in licensee firms. IE employees should read paragraph (a)(2) of that section for a definitive description of the firms to which this prohibition applies.
- 035 Credit Unions - There is no legal conflict with continued participation of IE employees in a credit union associated with a former employer who is an NSSS or utility. The credit union is not controlled by the former employer, but by the federal agency that regulates credit unions.
- 036 Hospitality and Meals at Speaking Engagements - The NRC regulation on conflict-of-interest does not apply to civic, professional and fraternal organizations (per 0.735.42). So acceptance of a meal or other hospitality associated with a speaking engagement before one of these groups is permissible under the rule.

0235-04 THE OFFICE OF THE GENERAL COUNSEL

Provides counseling regarding the specific provisions of Part 0 of the Commission's regulations. Employees may call that Office directly without going through supervision. Other matters of this nature may be discussed with an employee's immediate supervisor.

0235-05 EXCEPTIONS

Although an employee is expected to utilize his best effort to avoid prohibited conduct, an occasion may arise where a deviation from these requirements is unavoidable. In such a case, the employee should document the facts in a memorandum to his supervisor. Such memoranda shall be placed in the employee's local office file and shall be made available only to those officials who have a specific need for this information.

- 051 Friendships and Normal Social Activities - None of the restrictions in this instruction are intended to prohibit the continuation of friendships or other normal social activities. If a friendship or social relationship constitutes an apparent or real conflict of interest, the employee shall: