

July 12, 1979

SECY-79-436

COMMISSIONER ACTION

For: The Commissioners

From: Victor Stello, Director, Office of Inspection
and Enforcement

Thru: Executive Director for Operations *[Signature]*

Subject: UNIT RESIDENT INSPECTORS

Purpose: To seek approval of an expansion to the Revised Inspection Program (SECY 77-138A) by stationing a full time unit inspector at each preoperational and operating nuclear power unit.

Category: This paper covers a minor policy question.

Discussion: An analysis of inspection alternatives in 1977 resulted in Commission approval to implement the site resident inspection program. The major improvement of the resident inspection program over the regionally based program was expected to be increased onsite presence and increased capability to perform independent verification of licensee activities through direct observation. Although this program is not fully implemented, the objective is being achieved at those sites to which resident inspectors have been assigned.

Recent experience with resident inspection results and licensee events and actions lead us to believe that increased resident inspection is warranted. NRC confidence in licensee safety related performance is not as high as the staff would like. We propose the addition of a resident inspector assigned to each unit to raise the confidence through increasing the number of independent observations of licensee safety related activities and equipment.

The unit resident program would be an expansion to the present resident inspection program; not a duplication. For example, a two-unit plant would have three resident inspectors assigned; one site inspector and two unit inspectors, one for each unit. The areas chosen for expansion are those in which the staff believes more independent verification is needed.

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The present IE inspection program has evolved over the past 20 years. The staff believes this program is basically sound. It is aimed at achieving balance between review of the program by which the licensee controls safety related activities, and testing the effectiveness of the implementation of these controls. To a large extent, the inspection of licensees' programs and a portion of the inspection of the implementation is based on records, logs, and instrument charts, i.e., it is retrospective and historical. We believe that the principal area in our present program needing improvement is the sample of the total work activities examined by independent NRC tests. Even a relatively poor program can be effective if it is implemented with dedication, likewise the best of programs will be ineffective with poor implementation. While we do not believe inspection of the quality program need be lessened, we believe that a significantly larger sample of program implementation is needed, even though the resultant fraction will still be small compared to testing performed by licensees.

The unit inspection program will not relieve a licensee of any of his responsibilities in the areas audited. IE experience has been that licensee attention tends to focus on the same areas NRC reviews. We would expect to see significant improvement in licensee attention to areas we scrutinize rather than a decrease. Our intention is to continue to stress, through enforcement, that licensees must take effective action to preclude recurrences.

NRC has received numerous suggestions, even demands, for around-the-clock inspection. The staff continues to believe this would be inefficient because most maintenance, testing, calibration and special operations are scheduled during day shifts. The proposed program is believed to be efficient and effective in achieving upgrading of the IE inspection program.

Assuming selection of a technically competent individual as a newly hired inspector, it takes twelve to eighteen months to get an inspector trained for assignment as a resident. This training includes some technical training, but it also includes such things as inspection techniques, inspection documentation, and licensee interfaces.

The site resident program will remain essentially unchanged. The addition of unit residents will be solely for independent assessment/verification and will include:

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1. Engineered Safety Feature Observation and Independent Assessment

- a. On a preplanned basis, the unit inspectors will independently verify that valves and switches in a rotating sample of systems are properly positioned.
- b. On a sampling basis, the unit inspectors will follow up on completed instrument, electrical and maintenance work orders to assure proper equipment lineup.

2. Surveillance Test Observation

- a. For selected surveillance tests, the unit inspectors will observe the entire surveillance test process. Beginning with verification that the test instruments are properly calibrated, the inspector will follow each step including take-out-of-service, doing the test and return to service. He will make independent calculations of the test results.
- b. The unit inspector will independently verify formulae used, corrections for elevation, temperature compensation and other factors which affect the validity of the test.

3. Technical Specification and Operating Parameter Check

Using a unit specific check list, the unit inspector will verify compliance with a sample number of Technical Specifications and operating parameters each week. Schedule for these checks will be such that in a fixed time interval all Technical Specifications will be checked. Those which apply to only certain time windows will be checked during the windows.

4. Maintenance Overview

- a. The unit inspector will determine that maintenance important to safety is given priority -- both in terms of prompt reporting of malfunctioning equipment and in accomplishing the work.
- b. He will observe routine maintenance looking for "traps" such as wrong lubricant, improper tightening of valve packing, substitution of unqualified parts, and lack of care in protection of open equipment.

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c. He will assess the need for detailed procedures where current practice relies on "skills of the trade".

5. Jumper and Bypass Control

The unit inspector will inspect terminal boards, panels and instrument racks for unauthorized jumpers and bypasses, and cross-check actual locations against records for removal of authorized jumpers.

6. Operating Procedure Adherence

On a random basis, the unit inspector will initiate detailed observation of work which is already underway and ascertain job status in relation to the applicable procedure. He will determine whether prerequisites were satisfied and whether previous steps were properly performed.

7. Startup and Preoperational Testing

For plants in the startup and preoperational testing phases, the unit resident inspector will witness all safety related tests.

IE plans to use professionals at slightly lower average grades (Agency wide) to staff the unit resident inspector positions. A career progression ladder will be available identifying possible growth positions for unit inspectors. The unit resident inspector will be rotated on the same basis and frequency as we will employ for the site resident inspector, i.e., on a nominal three-year assignment basis. The site resident will be a position senior to the unit resident inspectors; he will coordinate activities of the unit residents and regional inspection support as well as being the principal contact with the licensee.

Enclosed are the projected resources needed to implement the unit resident program.

Recommendation:

Recommend that the Commission approve the expansion of the resident inspection program to include unit resident inspectors.

Coordination:

The Office of the Executive Legal Director has no legal objection.

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Scheduling: In view of the need for early implementation, accelerated action is requested. If scheduled, staff recommends an open agenda session.



Victor Stello, Jr.
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and Enforcement

Enclosure:
Resource Requirements -
Unit Resident Program

Commissioners' comments should be provided directly to the Office of the Secretary by c.o.b. Thursday, July 19, 1979.

Commission Staff Office comments, if any, should be submitted to the Commissioners NLT July 17, 1979, with an information copy to the Office of the Secretary. If the paper is of such a nature that it requires additional time for analytical review and comment, the Commissioners and the Secretariat should be apprised of when comments may be expected.

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RESOURCE REQUIREMENTS

UNIT RESIDENT PROGRAM

ENCLOSURE

<u>MANPOWER</u>	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>
"Unit" Inspectors	98*	108	122	136
Clerical Support	22	26	29	33
Supervision	10	11	12	14
HQ Program Mgt.	5	5	5	5
Training Staff	<u>11</u>	<u>17</u>	<u>10</u>	<u>9</u>
TOTALS	146	164	178	197

<u>FUNDING (\$000)</u>	<u>FY80</u>	<u>FY81</u>	<u>FY82</u>	<u>FY83</u>
Salary	3,400	5,200	5,500	6,100
Admin. Support	570	650	690	760
Travel	490	730	780	860
Program Support				
Program Development	100	250	---	---
Training	<u>765</u>	<u>810</u>	<u>350</u>	<u>350</u>
TOTALS	5,325	7,640	7,320	8,070

*Recruitment base - most assignments will be made in FY 1981 provided program is approved and recruitment begins in FY 1979.