



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

March 12, 1992

MEMORANDUM FOR: The Chairman
Commissioner Rogers
Commissioner Curtiss
Commissioner Remick
Commissioner de Planque

FROM: James M. Taylor
Executive Director for Operations

SUBJECT: SYSTEMATIC ASSESSMENT OF LICENSEE PERFORMANCE (SALP) PROGRAM

The Commission has directed the staff to undertake a comprehensive review of the Systematic Assessment of Licensee Performance (SALP) program (SRM dated December 20, 1991).

The staff's actions in response to the SRM, including results of the review to date, actions currently planned, plans for further analysis and review, and the timetable for completion of the project are summarized below.

Results of Staff Review To Date

The Commission directed the staff to undertake a comprehensive review of SALP results to determine whether appropriate QA controls are in place to ensure consistent and reliable evaluations. In November 1991, as part of its ongoing review of the SALP program and in response to the Commission's direction, the staff completed a study of recent SALP results to determine what conclusions could be drawn concerning uniform application of SALP Manual Chapter (MC) 0516. The report of the study is Enclosure 1. The study and the staff's ongoing oversight of the SALP program indicate that the regions are performing accurate assessments of licensee performance, and that there is consistent implementation of MC 0516. However, the staff is working to improve the SALP process as outlined below.

Actions Currently Planned

The staff will increase senior management involvement and oversight of the SALP process to ensure agency policy and procedures are appropriately implemented and that agency objectives for the SALP program are met. Special attention will be given to ensure that an individual inspector is not able to improperly influence nor appear to influence the SALP results. Each NRR manager at the

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division director level and above will attend at least one SALP Board meeting a year. In addition, each regional Division Director and Deputy Division Director who serves as a SALP Board Chairman will attend at least one SALP Board Meeting a year in a region other than their own.

The staff will solicit information from licensees regarding their views on the SALP process and their recommendations for program improvements. The staff will consider and implement, as appropriate, those recommendations which are consistent with agency policy and objectives for the SALP program. Recommendations which go beyond current agency policy will be forwarded to the Commission with a staff recommendation. The staff expects to periodically (e.g., 18-24 months) solicit such industry feedback as a part of the staff's assessment of the effectiveness of the SALP process.

Further Staff Analysis and Review

The staff desires to improve the application of the SALP process and provide for a more consistent understanding of the SALP results by the industry and the public. Therefore, the staff will undertake an overall reexamination of the SALP Program with the intent of providing a clear statement of the program objectives as well as the parameters and measures that will be used to monitor the effectiveness of the program. Among other things, the staff will, (1) consider reducing the current number of functional areas (seven) to a smaller number, each with approximately equal significance, (2) review the attributes to ensure consistency with the functional areas, (3) develop standard language for the SALP cover letter to ensure that the overall assessment is properly and consistently expressed, and (4) review the SALP Board voting membership.

The results of the above efforts and recommendations for any changes to the SALP Program will be submitted to the Commission in September 1992.

A summary of the staff recommendations and proposed schedule are shown in Enclosure 2.

Original Signed By:

James M. Taylor

James M. Taylor
Executive Director
for Operations

Enclosures:

1. Review of Uniformity in the SALP Process
2. Staff Recommendations and Proposed Schedule

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REVIEW OF UNIFORMITY IN THE SALP PROCESS AMONG THE REGIONS

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Scores by Functional Area

November 1991

1. BACKGROUND

In the SRM responding to SECY-90-189, "Reevaluation of the Systematic Assessment of Licensee Performance (SALP) Program," dated August 10, 1990, the Commission approved the implementation of program changes to the SALP Manual Chapter (MC 0516) and directed the staff to pursue further efforts to increase uniformity among the regions with regard to interpretation and application of the SALP program criteria and attributes.

This paper details the results of the staff's review of the SALP program which included a study of recent SALP scores to determine if the SALP program is uniformly implemented.

2. DISCUSSION

MC 0516 describes the basic structure and overall procedures for implementing the NRC program for assessing licensee performance. The SALP Board assesses licensee performance in the following seven functional areas: Operations, Radiation Protection, Maintenance/Surveillance, Emergency Preparedness, Security, Engineering/Technical Support, and Safety Assessment/Quality Verification (SA/QV). The following six criteria are used to evaluate the seven functional areas: (1) assurance of quality, including management involvement and control; (2) approach to the identification and resolution of technical issues from a safety standpoint; (3) enforcement history; (4) operational events; (5) staffing, and (6) effectiveness of training. Regional staff have significant experience implementing the SALP program.

2.1 Program Oversight

Additional oversight of the SALP function was initiated following issuance of the most recent changes to the SALP MC on September 28, 1990. A SALP program manager (PM) was appointed within the Division of Licensee Performance and Quality Evaluation (DLPQ). The SALP PM oversees the SALP program by reviewing SALP reports, attending SALP meetings in the five regional offices, and coordinating resolution of SALP issues with the regions. The SALP PM or his section chief attended resident counterpart meetings in each of the five regional offices to discuss the September 1990 changes to the SALP program. The SALP PM attends selected SALP Board meetings in each of the five regions to monitor the implementation of the SALP program and to interact directly with the regional management and staff involved in SALP implementation. Additionally, plant evaluators from the Performance and Quality Evaluation Branch (LPEB) routinely attend SALP Board meetings. The evaluators are knowledgeable of the SALP process since some of them participated in the SALP process as resident inspectors or project managers. The evaluators and the SALP PM compare observations on the regional implementation of the SALP program. LPEB staff have attended 29 SALP Board meetings in the past year. Observation of this large sample of SALP Board meetings, review of SALP reports, and discussions with regional management and staff directly involved in SALP implementation provide confidence that the SALP program is being uniformly implemented in accordance with the MC.

LPEB sponsored a meeting in June 1991 with the five regional SALP coordinators to discuss the SALP program and exchange information on the techniques that work best within each region. LPEB staff used the knowledge gained from review of SALP reports and attendance at SALP Board meetings to formulate the meeting agenda. During the meeting LPEB staff also discussed some minor problems with the implementation of the SALP MC, such as format changes to the SALP report and Board voting procedures. Regional coordinators exchanged ideas about (1) the mechanics of drafting a SALP report, issuing it for comment, and incorporating the comments into a useful report for the Board; (2) problems associated with using trends; and (3) the benefits of making further changes to the attribute, trend, and functional area definitions. The meeting was successful because ideas were exchanged and some minor administrative differences among the regions were identified and resolved.

On July 18, 1991, at the Director, Division of Reactor Projects (DRP) counterpart meeting in Region IV, the SALP PM and the Section Chief discussed some of the issues addressed at the coordinators' meeting to understand the perspective of regional management with regard to the SALP process and to reinforce SALP program goals.

2.2 Review of SALP Numerical Results

Because of the importance of numerical SALP scores to the NRC and to the licensees, the numerical results of the SALP program were reviewed. The staff used scores for the last two SALP assessment periods for each plant in this study. The most recent SALP assessment periods, which began in mid-1989, were designated as Group A. The second most recent SALP periods, which began in late 1987 and early 1988, were designated as Group B. To facilitate the numerical analysis the staff used the assumption that performance of all plants is similar and therefore the distribution of SALP scores was expected to be consistent from one region to the next.

2.2.1 Functional Area SALP Score

To obtain an average of SALP scores for each functional area by region, each SALP score was multiplied by the number of plants receiving that score, the results were totalled and that total was then divided by the number of plants.

The data was obtained from NUREG-1214, Revision 8, "Historical Data Summary of the Systematic Assessment of Licensee Performance," which contains data that was current as of June 30, 1991. To obtain the national average score, the regional scores for each functional area were added and divided by 5.

(1) Group A SALP Scores (mid-1989 to early 1991)

Table 1 gives the average scores within all functional areas for all regions. Of the 511 SALP scores reviewed, 31 percent were assigned by Region I, 25 percent were assigned by Region II, 26 percent were assigned by Region III, 11 percent were assigned by Region IV, 7 percent were assigned by Region V.

Table 1 Group A Functional Area Average SALP Scores

Functional Area	Region				
	I	II	III	IV	V
Operations	1.5	1.6	1.5	1.5	1.4
Radiation Protection	1.8	1.3	1.7	1.6	1.6
Maintenance/Surveillance	1.6	1.9	1.6	1.9	2.0
Emergency Preparedness	1.3	1.5	1.3	1.4	1.4
Security	1.3	1.6	1.5	1.4	1.8
Engineering/Technical Support	1.8	1.7	2.1	2.0	2.0
SA/QV	1.7	1.7	1.9	1.8	1.8

Table 2 gives the national average for each functional area calculated from the results given in Table 1.

Table 2 National Average for Group A SALP Scores

Functional Area	Average Score
Operations	1.5
Radiation Protection	1.6
Maintenance/Surveillance	1.8
Emergency Preparedness	1.4
Security	1.5
Engineering/Technical Support	1.9
SA/QV	1.8

The largest difference between a functional area average and its corresponding national average was 0.3: the Region II functional area of Radiation Protection had a lower score (higher rating) than the national average by 0.3 and the Region V functional area of Security had a higher score (lower rating) than the national average by 0.3.

In the larger regions (Regions I, II and III), a change of one SALP grade for one licensee would result in a difference of about 0.05 for the regional functional area average. For Region IV one SALP category change would result in a 0.12 change, and for Region V one SALP category change would result in a 0.2 change. In order for Region II to have its Radiation Protection functional area average agree within 0.3 of the national average, only one licensee would need to achieve a lower grade in that one functional area, for example, a change from a SALP Category 1 to a SALP Category 2. Similarly, if one grade change were made in the Security functional area for Region V, the regional average would agree within 0.3 of the national average. Therefore, no real statistical abnormality exists between each region's implementation of the SALP program.

(2) Group B SALP Scores (late 1987 to mid-1989)

The same calculations performed above were repeated using the Group B SALP scores. Tables 3 and 4 give the results. Of the 483 SALP scores reviewed, 32 percent were assigned by Region I, 23 percent were assigned by Region II, 28 percent were assigned by Region III, 10 percent were assigned by Region IV, and 7 percent were assigned by Region V.

Table 3 Group B Functional Area Average SALP Scores

	Region				
	I	II	III	IV	V
Functional Area					
Operations	1.7	1.6	1.6	1.7	1.8
Radiation Protection	1.7	1.6	1.7	1.7	1.6
Maintenance/Surveillance	1.7	1.7	1.7	2.1	2.2
Emergency Preparedness	1.5	1.6	1.2	1.4	1.2
Security	1.2	1.7	1.6	1.7	2.0
Engineering/Technical Support	1.6	2.1	2.0	2.0	2.4
SA/QV	1.8	1.8	1.9	2.1	2.6

Table 4 National Average for Group B SALP Scores

Functional Area	Average Score
Operations	1.7
Radiation Protection	1.7
Maintenance/Surveillance	1.9
Emergency Preparedness	1.4
Security	1.6
Engineering/Technical Support	2.1
SA/QV	2.0

Two regions had six functional areas that differed from the national average by 0.3 or greater: Region I had two functional areas with average scores lower (higher rating) than the national average (Security by 0.4 and Engineering/Technical Support by 0.3) and Region V had four functional areas with average scores higher than the national average by at least 0.3 (Maintenance/Surveillance by 0.4, Security by 0.4, Engineering/Technical Support by 0.3 and Safety Assessment/Quality Verification (SA/QV) by 0.6). A change of one functional area category for one licensee would result in agreement between the individual regional functional area average and the national average (within 0.3) for all but two of the above results. It would take category changes of five licensees for Region I Security area and category changes of two licensees in the SA/QV area for Region V to agree with the national average.

These results indicated that Region V was rating licensee performance lower in the Group B SALP period than other regions. There are a number of factors that may explain this difference between Region V functional area averages and the averages of the other regions. The first is that Region V has fewer plants. One grade change in one functional area for a Region V plant would change the regional average in that functional area by 0.2. A similar change in Region I would result in a change of 0.05 to its regional average. This example illustrates the problems inherent in using the same acceptance criteria to compare a large data base to a small data base. The second factor that may have affected the Region V average were the SALP program changes in June 1988 and again in August 1989. As with any change, there is a learning curve associated with it. While these changes also were implemented by the other four regions, Region V uses the SALP Manual Chapter less frequently than the other regions and therefore had less opportunity to gain experience working with the manual chapter. The third factor may be that Region V managers spend more time at their assigned sites than managers at a similar level in the larger regions. As a result, there are more voting members at the SALP Board with first-hand knowledge of the site in Region V than in other regions. These managers may be more critical in their review because they have first hand knowledge.

The results also suggested that Region I may have graded licensees lower in the Security functional area than the other regions. Some factors for this difference may be the old age of many of the plants in Region I and the fact that all plant security plans are custom made to the facility.

The above ratings may have resulted in an industry perception that SALP ratings vary from region to region. However, Group A SALP scores reveal that presently there is a more uniform rating of licensee performance than in Group B SALP scores.

2.2.2 Distribution of SALP Scores

Computations of average scores for SALP do not give a complete description of the SALP process since the distribution of SALP scores can vary without a significant change in the average score. Therefore, graphic displays of the SALP results by percent for each region were developed. Figures 1 through 7 graphically display these results for Group A and Group B SALP scores by functional areas. When utilizing these figures for comparisons, it is important to keep in mind that one licensee changing one category rating in a functional area represents a 5 percent change for Regions I, 2, and 3, a 12-percent change for Region IV, and a 20-percent change for Region V.

The figures show that the functional areas of Emergency Preparedness and Security had a larger percentage of Category 1 ratings than the other functional areas. Also, Engineering/Technical Support and Safety Assessment/Quality Verification both had significantly more Category 2 ratings than the other functional areas. These results are similar to those for the functional area averages.

The two Group A functional areas (low Region II Radiation Protection scores and high Region V Security scores) that differed from the national functional area average by 0.3 also are apparent in the figures. Two other Group A rating distributions that stand out on the figures are the larger number of Category 2 ratings in Maintenance/Surveillance in Region II and the larger number of Category 1 ratings in Engineering/Technical Support in Region III. For the Group B results, the figures indicate a distribution difference in the following areas: Region I had a larger number of Category 3 ratings in Operations, Region III had a larger number of Category 1 ratings in Emergency Preparedness, and Region II had a larger number of Category 2 ratings in Emergency Preparedness.

One assumption of this comparison was that licensee performance is similar among the regions. This assumption was not always true. For example, a number of licensees from Region I were on the problem-plant list during the period when Region I experienced a larger than normal number of plants with a Category 3 rating in Operations. While the distribution suggests this is an abnormality, actual plant performance confirms the SALP results.

In summary, the figures indicate that the regions are fairly uniform in their assignment of SALP ratings. Although the older Group B SALP data suggests that the Region V plants had higher average scores, the more current Group A SALP results show Region V ratings consistent with the other regional ratings. These conclusions agree with the conclusions drawn from the functional area averaging.

2.2.3 Regional Average of All Functional Areas

A computation of a regional average for all functional areas was conducted. This calculation crosses functional areas and is not considered a good representation of SALP performance. Even though it is true that the same criteria apply to all functional areas, these criteria may not receive the same weight in each functional area. For example, enforcement history may be more important in one functional area than in another functional area. Some functional areas, such as Emergency Preparedness and Security, receive far fewer inspection hours than other functional areas, such as Operations. Inspection hours for a given SALP are typically less than 3 percent for Emergency Preparedness and less than 5 percent for Security, while Operations inspection hours could approach 40 percent of the inspection effort. Additionally, a computation of a regional average for all functional areas assumes that licensee performance is consistent from one region to the next. Historically, plant performance among the regions was not always consistent. For these reasons, the comparisons of SALP scores should be limited to within a functional area. Too many variables exist in plant performance and inspection activities to support evaluation of SALP scores across functional areas for each region. However, licensees have been known to calculate SALP score averages, and this calculation may indicate why some licensees believe there is a disparity among the regional SALP results. Table 5 gives the results of this review.

Table 5 Average SALP scores for the Regions

Region	Group A	Group B
I	1.6	1.6
II	1.6	1.7
III	1.7	1.7
IV	1.7	1.8
V	1.7	2.0

This table suggests that Region V had higher ratings (lower scores) in the earlier averages and scores that more closely follow the other regions in the more recent (Group A) averages. This data is also consistent with the previous data for functional area averages and national averages of SALP scores by functional area.

2.2.4 Assignment of Trends in the SALP Process

DLPQ had indicated in previous observations of the SALP process that the determination of a trend was a potential problem area. A trend, in some cases, had been used to indicate a high or a low rating for a functional area. This erroneous use of trends resulted from SALP Board's recognition of licensee performance that was above or below the norm for a given functional area. The Group A and Group B SALP results were compared to determine how well the predictive nature of the trend determination was functioning in the SALP process. Table 6 gives the results.

Table 6 Trend Results in Percent

Region	Times trend was used	Predictions became true*	Improved beyond one category	Declined from last score	Remained the same
I	22	46	5	36	14
II	15	47	20	20	13
III	13	54	15	15	15
IV	2	0	50	50	0
V	3	100	0	0	0

* Performance improved or declined as shown by a change in rating.

Nationally, 49 percent of the trend designations resulted in the anticipated change in the functional area category. Only one of the declining trends resulted in a lower SALP score in the next assessment. In the other six cases of declining trends, licensee action was sufficient and the SALP Board concluded that performance had improved. It could be concluded that in almost all cases the assignment of a declining trend was effective in stimulating licensee action to correct the performance in the functional area.

The use of the improving trend had not been as effective as the declining trend and was subject to misuse as an indication of a "high" category rating. The use of trends in the Group A SALP results has increased approximately 52 percent over the Group B SALP results. For improving trends only, the predictive ability of the improving trend was 56 percent accurate.

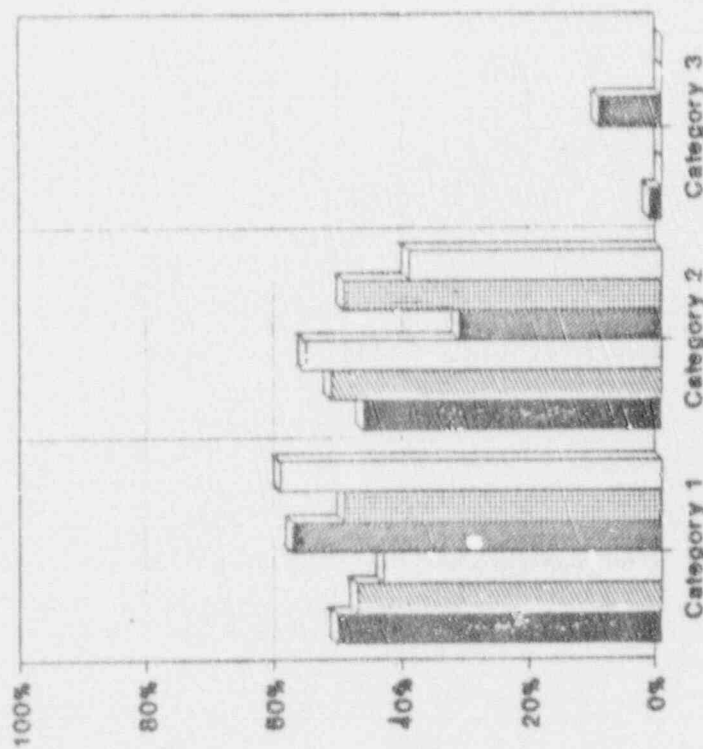
The issue of SALP trends was discussed with the regions during the SALP coordinators' meeting and again at the Division of Reactor Projects Director's meeting. The regions use trends in planning for inspections. The regions and the program office are continuing to review and discuss trending to determine if any changes to the SALP program are necessary. To date, no changes have been identified, but these discussions have heightened the awareness of the regions to potential misuses of trending. The program office has observed more deliberate discussions at SALP Board meetings with regard to trending determinations.

3. CONCLUSIONS

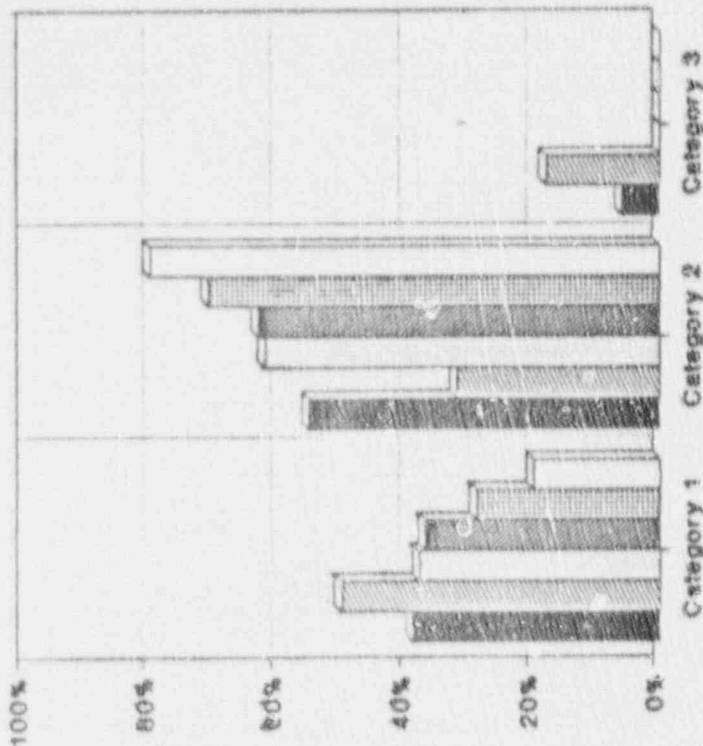
As a result of the oversight functions and the study discussed above, the staff concludes that the regions are performing accurate assessments of licensee performance and there is relatively consistent implementation of the SALP program. Although there were some minor differences identified between some regional functional area averages and national averages, these differences were small and minor changes in a functional area rating would normally result in agreement between regional and national functional area averages.

Use of the declining trend is an effective SALP tool as shown by the improvement in performance in six of seven cases where declining trends were assigned. However, the use of improving trends resulted in an improved SALP category in only 50 percent of the cases in which it was used. Although the regions utilize trends to assign priorities and inspection resources, the poor accuracy of the improving trend and the large increase in the use of trends indicate a need for further monitoring of the use of improving trends.

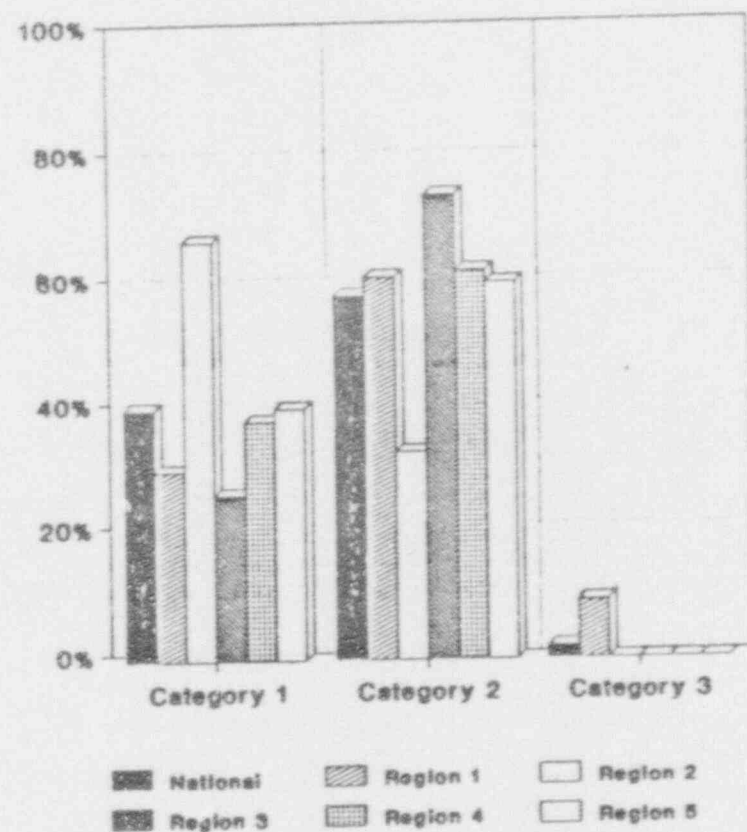
Operations



Operations

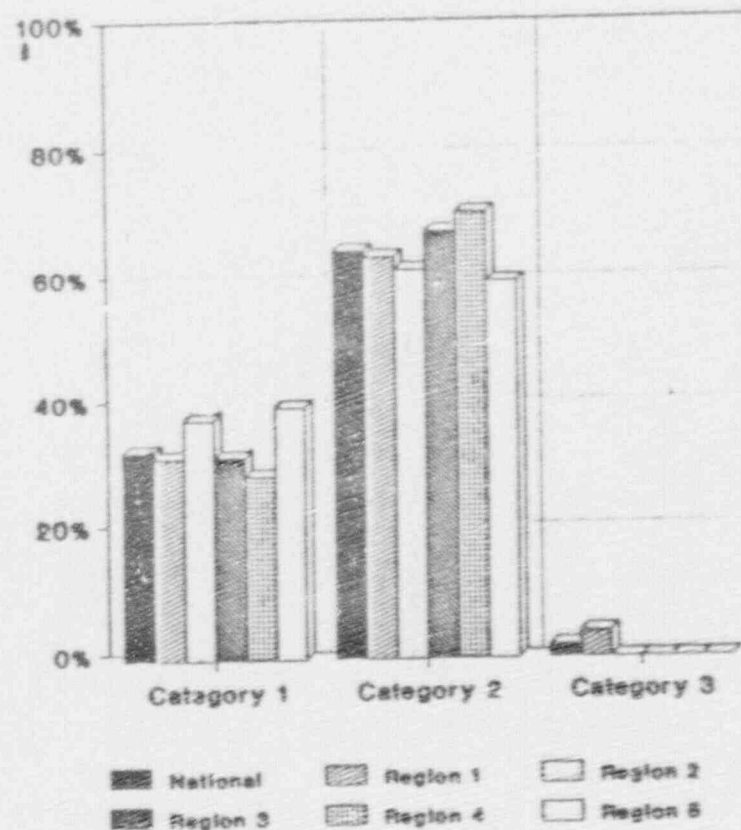


Radiation Protection



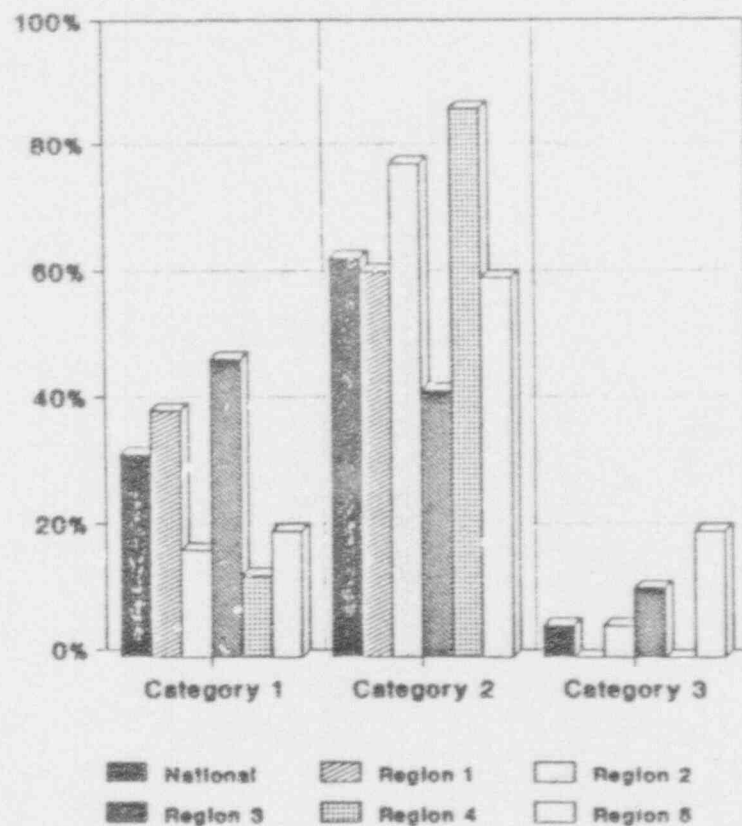
Group A

Radiation Protection



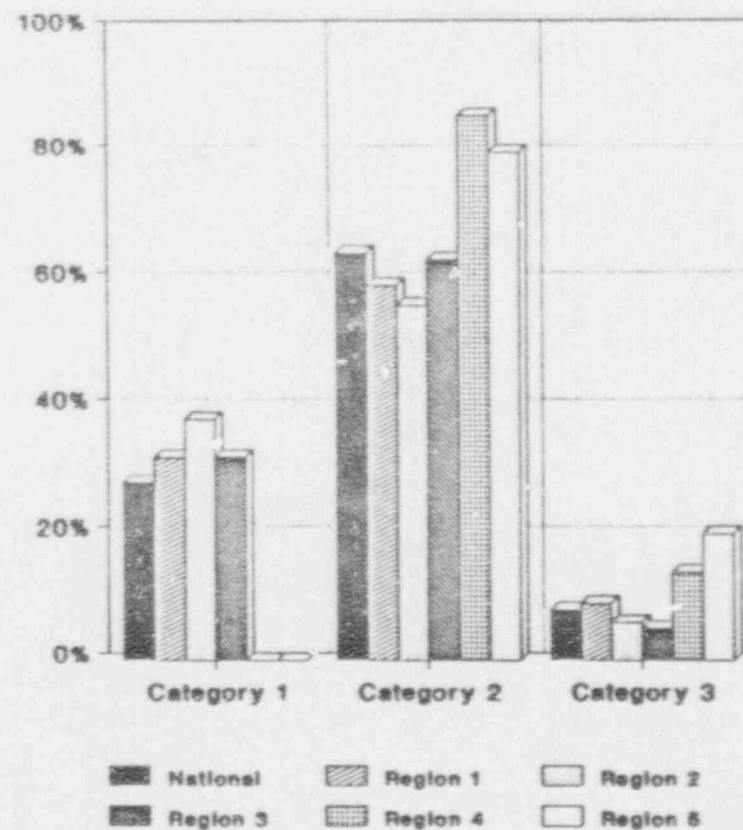
Group B

Maintenance



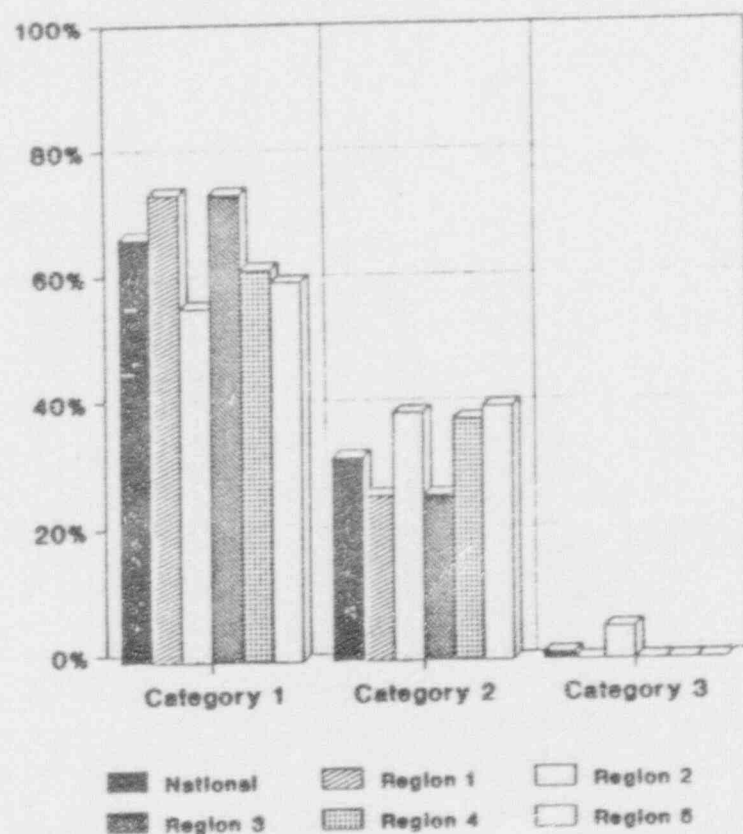
Group A

Maintenance



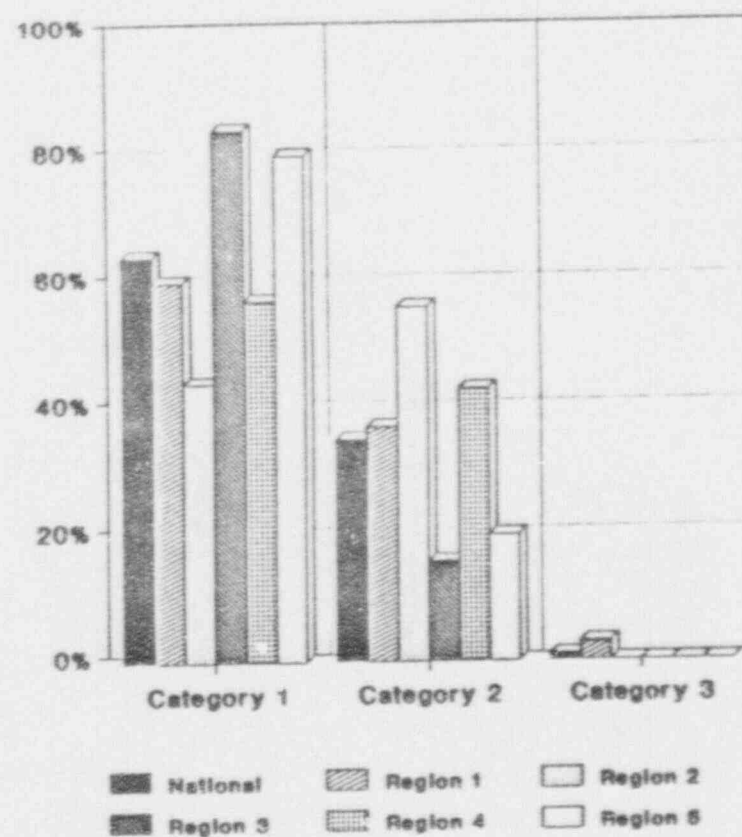
Group B

Emergency Preparedness



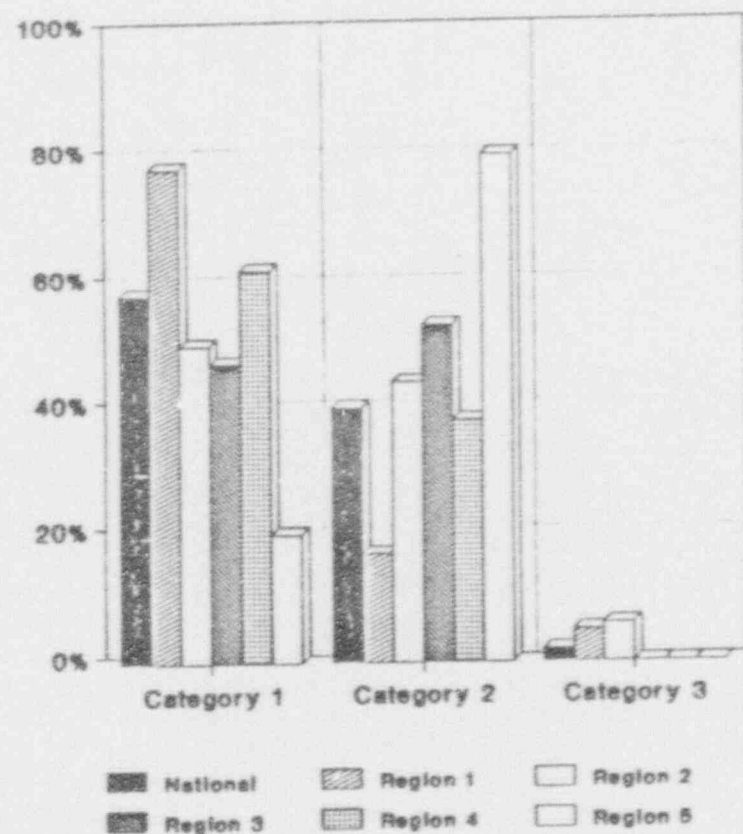
Group A

Emergency Preparedness



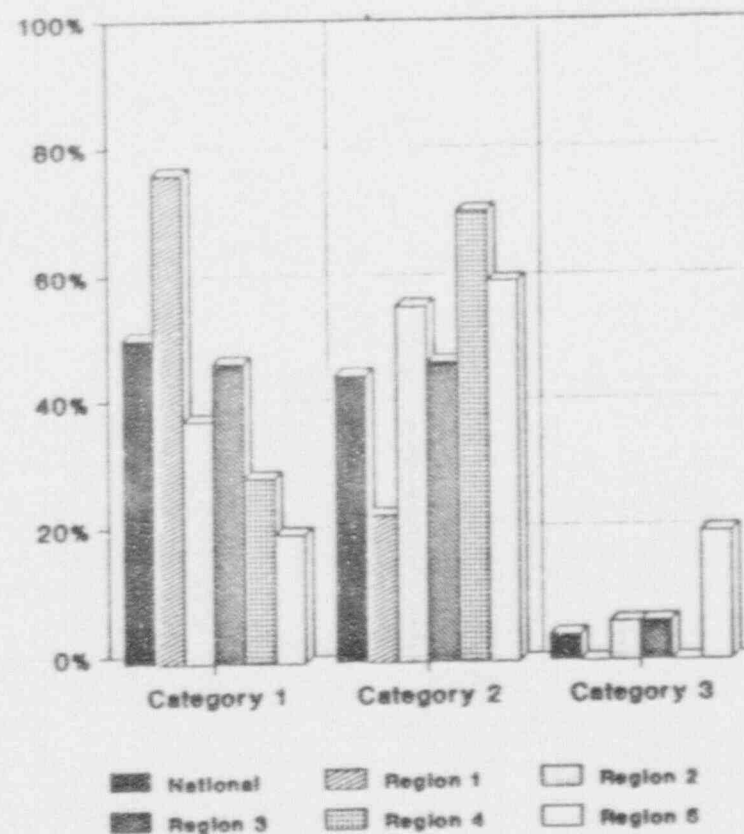
Group B

Security



Group A

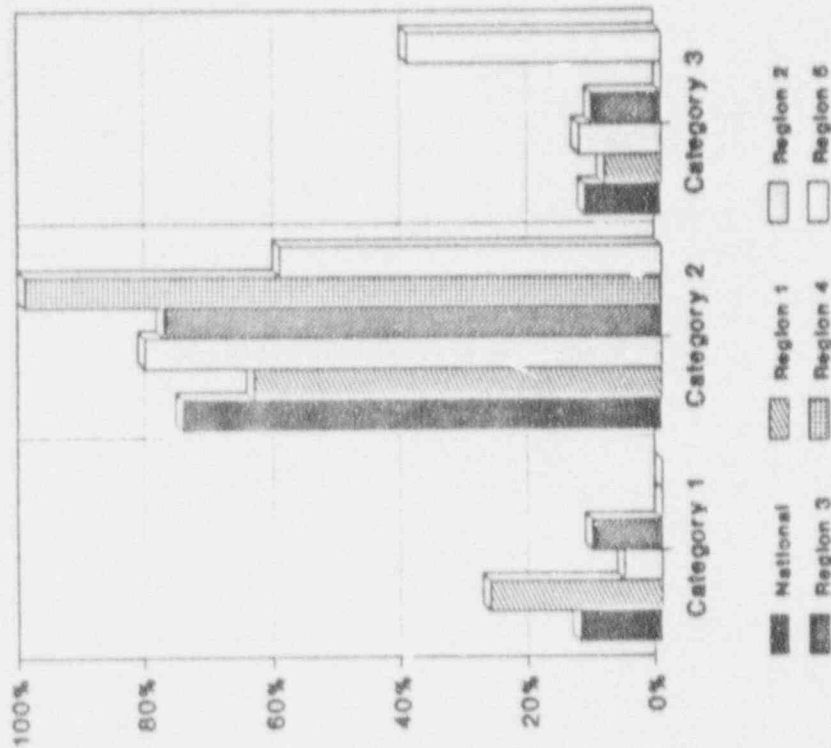
Security



Group B

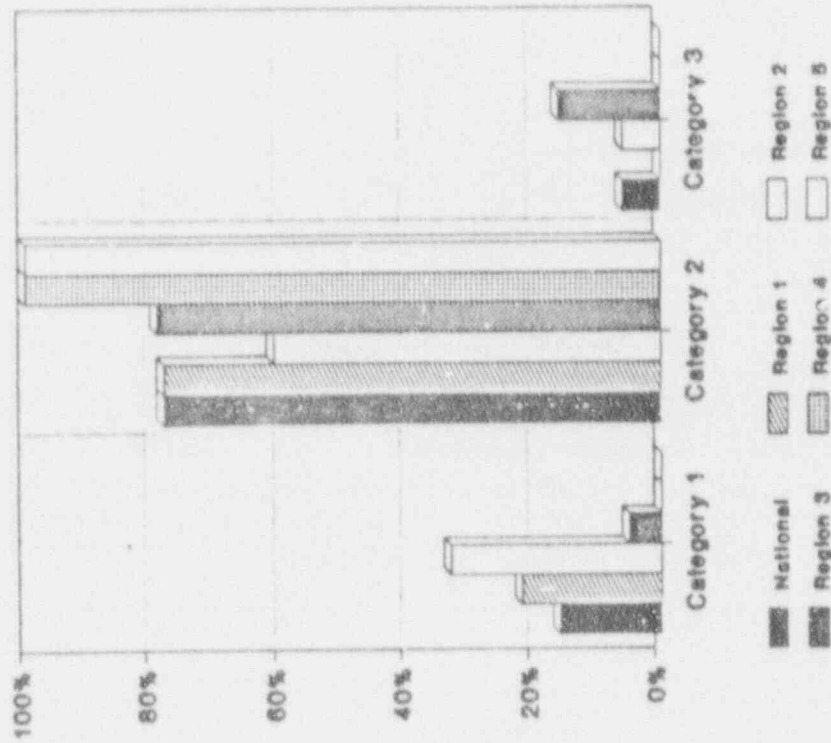
Figure

Engineering



Group B

Engineering

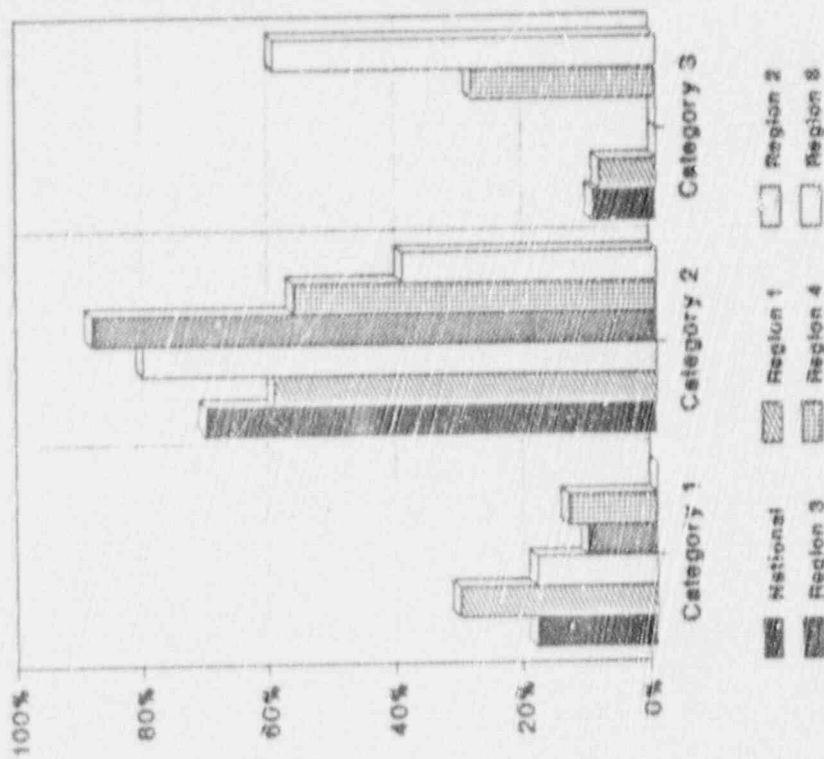


Group A

Safety Assessment



Safety Assessment



STAFF RECOMMENDATIONS AND PROPOSED SCHEDULE

The schedule for staff actions in response to SRM 91-172 dated December 20, 1991, is as follows:

<u>Action</u>	<u>Completion Date</u>
1. Increase senior NRR and regional management oversight of the SALP program.	May 1, 1992
2. Complete further staff analysis and review.	June 30, 1992
3. Obtain industry input on the SALP process and recommendations for program improvements.	July 31, 1992
4. Provide a Commission paper on results of staff review with recommendations for changes, as appropriate.	September 30, 1992