
**OFFICE OF
THE INSPECTOR GENERAL**

**U.S. NUCLEAR
REGULATORY COMMISSION**

Review of NRC's Quality Assurance
Process for Official Documents

OIG-01-A-02 February 23, 2001

AUDIT REPORT



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February 23, 2001

MEMORANDUM TO: William D. Travers
Executive Director for Operations

FROM: Stephen D. Dingbaum/RA/
Assistant Inspector General for Audits

SUBJECT: REVIEW OF NRC'S QUALITY ASSURANCE PROCESS FOR
OFFICIAL DOCUMENTS (OIG-01-A-02)

Attached is the Office of the Inspector General's (OIG) audit report titled, *Review of NRC's Quality Assurance Process for Official Documents*. The report incorporates comments provided by your offices, as appropriate, within the body of the report. Agency managers elected not to provide written comments to the draft report as indicated in Appendix IV.

The provision of inaccurate information by any Government agency can have harmful consequences on both the decision-making process that relies on such information and the public's confidence in the agency. Without exception, the Nuclear Regulatory Commission (NRC) offices contacted during this review employ quality assurance measures to ensure accuracy in the documents they generate. However, this report identifies inconsistencies in NRC's guidelines and policies which increase the risk of releasing inaccurate information.

This report makes two recommendations to improve NRC's quality assurance process for official documents. Please provide information on actions taken or planned on each of the recommendations directed to your office no later than April 9, 2001. Actions taken or planned are subject to OIG follow-up.

If you have any questions, please call me at 415-5915.

Attachment: As stated

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EXECUTIVE SUMMARY

PURPOSE

As part of previous audit and investigative work, the Office of the Inspector General (OIG) identified instances in which the information prepared by Nuclear Regulatory Commission (NRC) staff for the Commission, Congress, Office of Management and Budget, public, and others was of questionable accuracy and reliability. The provision of inaccurate information by any Government agency can have harmful consequences on both the decision-making process that relies on such information and the public's confidence in the agency. We initiated this review to determine whether NRC has adequate processes in place to ensure that official NRC documents contain accurate information.

BACKGROUND

The Commission and Congress base key decisions regarding NRC programs and operations on the information provided in official NRC documents. The agency has publicly recognized the importance of providing clear and accurate information by incorporating it into its Fiscal Year 2000 - 2005 Strategic Plan as a cornerstone of its goal to increase public confidence.

NRC's quality assurance process for official documents relies on two primary components: (1) the ability of document originators to provide accurate information in the documents they generate, and (2) the concurrence process. Under this process, staff sign off on a document before passing it up the line for additional concurrences and, ultimately, final sign off by an NRC official.

RESULTS IN BRIEF

Without exception, the NRC offices contacted during this review employ quality assurance measures to ensure accuracy in the documents they generate; however inconsistent practices were identified that increase the risk of releasing inaccurate information. Specifically, the role and responsibilities of NRC's document originators are unclear in the agency's guidance pertaining to correspondence. By providing basic guidance to document originators on fact checking methods and clarifying existing guidance concerning their role and the review process, NRC can improve the quality of its official documents and better achieve its goal of increasing public confidence. In addition, the Executive Director for Operations (EDO) should issue an announcement that provides clear expectations for staff to heighten awareness of the importance of information accuracy.

At the exit conference, NRC managers agreed with the report's finding and recommendations. During this discussion, both NRC managers and OIG highlighted the need for NRC staff to pay close attention to the language they use in written

documents to avoid misinterpretation by the reader. In addition, a senior official stated

that initiatives are underway to strengthen the quality assurance process for official documents in two offices that report to the EDO.

RECOMMENDATIONS

This report makes two recommendations to improve NRC's quality assurance process for official documents.

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PURPOSE

As part of previous audit and investigative work, the Office of the Inspector General (OIG) identified instances in which the information prepared by Nuclear Regulatory Commission (NRC) staff for the Commission, Congress, Office of Management and Budget (OMB), the public, and others was of questionable accuracy and reliability. OIG has also received allegations and other feedback in recent years that have called into question the accuracy of information provided by NRC.

The provision of inaccurate information by any Government agency can have harmful consequences on both the decision-making process that relies on such information and the public's confidence in the agency. The main purpose in conducting this audit was to evaluate whether NRC has adequate processes in place to ensure that official NRC documents contain accurate information. It was not to uncover inaccuracies in official documents or second guess the work of NRC technical staff. Our review focused on official correspondence.

BACKGROUND

NRC relies on written information to accomplish its regulatory mission. The Commission and Congress base key decisions regarding NRC programs and operations on the information provided in official NRC documents. Therefore, it is imperative that NRC's information be accurate and fairly reflect the true status of the matter being portrayed.

NRC generates a variety of written documents, including SECY papers; congressional testimony; responses to correspondence from members of Congress, the public, licensees, other Government agencies, and other stakeholders; inspection reports; financial reports; research reports; Federal Register notices; and news releases. Agency guidance (as described below) related to the preparation of these and other types of documents recognizes the need for both accuracy and clarity in these products to ensure that the intended message is conveyed to the recipient. When a reader is unable to decipher the intended message — even if the document is technically accurate — a key purpose of issuing the document is not achieved.

NRC strives to ensure that information sent to the public and other stakeholders is accurate. The agency has recognized the importance of providing clear and accurate information by incorporating it into its Fiscal Year 2000-2005 Strategic Plan as a cornerstone of its goal to increase public confidence. The plan states:

NRC views building and maintaining public trust and confidence that the NRC is carrying out its mission as an important performance goal for the agency. To reach this goal, the NRC must be viewed as an independent, open, efficient, clear and reliable regulator. This will be accomplished by providing our stakeholders with clear and accurate information about, and a meaningful role in, our regulatory programs.

The agency's guidance concerning accuracy and clarity appears in various publications, including management directives, NRC's Principles of Good Regulation, the NRC Inspection Manual, and specific office and regional instructions. Management Directive (MD) and Handbook 3.57, "Correspondence Management,"⁽¹⁾ speak directly to the preparation of NRC's official correspondence, which is defined in MD 3.57 as "a generic term for any written communication." Another key piece of guidance, NRC Inspection Manual Chapter 0610, "Inspection Reports," provides instructions concerning content, format, and style to ensure that inspection reports "clearly communicate significant inspection results to licensees, NRC staff, and the public." NRC's web page also contains information about the agency's Plain Language Action Plan, which emphasizes the need for NRC staff to use "plain, understandable language" in documents and at public meetings.

NRC's process to ensure accuracy in official documents relies on two primary components. The first component is the ability of document originators to provide accurate information. The second is the concurrence process wherein staff sign off on a document before passing it up the line for additional concurrences and, ultimately, final sign off by an NRC official. According to Handbook 3.57, "The purpose of obtaining concurrence is to ensure that appropriate managers with collateral responsibility are aware of and agree to what is written. Although it is important that our documents be of the highest possible quality, those concurring should focus on the accuracy and clarity of the information rather than on nonsubstantive editorial changes."

In 1992 and 1995, a former Executive Director for Operations (EDO) issued memoranda concerning document accuracy and the concurrence process. The first memo, which referred to criticism NRC had received concerning "the accuracy of information contained in some of the staff-generated documents," conveyed "guiding principles" that the EDO wanted NRC to follow in the process of originating and concurring on documents. These principles are still contained in MD and Handbook 3.57. In the 1995 memo, the EDO expressed concern about "excessive concurrences and the resultant delays" and issued office-specific goals for limiting the concurrence chain to a specific number of reviewers. These goals are no longer followed, and concurrence chain lengths vary among offices and for different product types.

FINDING

NRC offices contacted during this review employ quality assurance practices to ensure accuracy in the documents they generate; however, inconsistencies in Handbook 3.57 and in quality assurance practices increase the risk of releasing inaccurate information. Specifically, the role and responsibilities of NRC's document originators are unclear in Handbook 3.57, and document originators employ inconsistent approaches to quality assurance. As a result, inaccurate information has been released to Congress or the public and NRC's credibility is adversely affected.

Document Originator's Role and Responsibility Are Unclear in Handbook 3.57

¹

The current version of MD and Handbook 3.57 was approved August 4, 1994.

The primary source of guidance for ensuring accuracy in SECY papers and official correspondence is MD and Handbook 3.57. This guidance:

- ◆ emphasizes the responsibility of document originators for ensuring technical accuracy in the documents they generate, and
- ◆ stresses the importance of the concurrence process as a quality assurance measure.

Document Originators

Accurate information is the responsibility of the document originator. The document originators interviewed conveyed an understanding of their responsibility to produce an accurate draft; however, they described a wide variety of measures they undertake to make sure their work is accurate. All strategies were based on the individual's judgment about what is appropriate, rather than on an NRC-imposed standard. Other factors that influenced the originator's approach to quality assurance included deadlines and availability of staff with the expertise to provide input. One method used by document originators to check accuracy was a point-by-point verification of a report's facts and figures by a co-worker who was not involved in the original draft. Another approach was taken when the author was so familiar with his subject that he was confident he included the correct information in his document, without any additional verification. In between these two extremes were staff who (1) kept highlighted source files of information used to draft a document, (2) did not keep source files, but knew where they could locate the source documents if necessary, (3) asked cold readers to review documents, and (4) went to specific subject matter experts to verify certain aspects of a report. The variations described above are not necessarily problematic, but reflect the fact that MD and Handbook 3.57 fail to establish a minimum threshold concerning fact-checking methods to be employed by document originators.

As currently written, Handbook 3.57 is inconsistent in addressing where the originator's responsibility ends with regard to the draft document. Part II (J)(2)(b) of Handbook 3.57 states, "The primary author is responsible for the accuracy of all statements of fact and all statement[s] of technical opinion contained in the *original* [emphasis added] document." Yet, according to Part I (H)(5), the originator is responsible for "Verifying that all aspects of the communications are correct." These two statements are inconsistent. The first implies the document originator must verify the accuracy of the original document only, while the latter suggests that originator responsibility carries through until the document is finalized.

As another example of inconsistency in the guidance, Part II (C)(4)(b) of Handbook 3.57 states that the primary author is responsible for, "Ensuring that contributions from others are accurate *and* [emphasis added] that the contributor is an appropriate source for the information." Yet, according to Part II (J)(2)(ii), the primary author must, "Ensure that contributions from others are accurate *or* [emphasis added] that the contributor is a proper source for accurate information." These two statements are inconsistent because the first suggests that the primary author must undertake two distinct quality assurance measures with regard to contributions from others, while the latter suggests that either measure will suffice.

Concurrence Process

A lack of clarity in Handbook 3.57 pertaining to the meaning of concurrence exists. According to Part II (J)(3), "the purpose of obtaining concurrence is to ensure that appropriate managers with collateral responsibility are aware of and *agree to* [emphasis added] what is written." Yet, two paragraphs later, the guidance states, "An individual's concurrence *does not mean that he or she agrees* [emphasis added] with the structure or every detail of the document." Although concurrence chain reviewers were not unclear on their responsibilities in that role, this contradictory explanation in Handbook 3.57 constitutes another example where the agency's expectations and guidance need to be clarified.

Another relevant inconsistency in Handbook 3.57 pertains to whether documents are sent back to the originator to review and concur on changes that arise through the concurrence process. Handbook 3.57 makes two different statements concerning this issue. Part III (S)(3)⁽²⁾ requires that if changes are made to a document that affect specific facts or substance, the document must be returned to the primary author for "verification and/or documentation of the change and new concurrences." However, Part II (J)(3)(e) requires return of the document to the primary author for verification and/or documentation of the change but omits the requirement for "new concurrences."⁽³⁾ The return of documents to the originator for review and/or concurrence is a prudent measure for ensuring that inaccuracies are not inadvertently introduced to a document during the review process. However, it is an essential requirement if document originators are being held responsible for "verifying that all aspects of the communications are correct." If NRC's intent is that responsibility for accuracy shifts once changes are introduced through the concurrence process, the Handbook needs to state this clearly so that accountability can be established for later and final versions of the product.

² This requirement also appears in Part IV (R)(5) of Handbook 3.57.

³ The more stringent requirement (i.e., if changes are made to a document that affect specific facts or substance, the document must be returned to the primary author for "verification and/or documentation of the change and new concurrences") appears in Parts III and IV of MD 3.57, which address letters and memoranda. The less stringent requirement (i.e., return the document to the primary author for verification and/or documentation of the change) appears in Part II, which addresses principal and general correspondence. The requirement is unclear because letters and memoranda will, by definition, fall into either the principal or general correspondence category. Principal correspondence, as defined in MD 3.57, is executive correspondence that on the basis of its source, subject matter, sensitivity, or possible impact on NRC programs requires priority control, response, and management awareness. General correspondence, according to MD 3.57, refers to the correspondence that does not fit under the principal correspondence category.

Specific practices that enhance the concurrence/quality assurance process are included in Appendix III of this report.

Conclusion

The failure to employ appropriate quality assurance measures can interfere with the decision-making process and diminish public confidence. NRC at times finds itself in the media spotlight for perceived inaccuracies and lack of candor in its communication. It is inevitable that some mistakes will occur due to the varying perceptions of and resources available to staff. However, the agency needs to provide consistent guidance and clear expectations to staff concerning fundamental information verification approaches. This will help ensure that the information it disseminates is accurate and that staff clearly understand their responsibilities with regard to the quality assurance process.

At the exit conference covering the topics in the report, NRC managers agreed with the finding and recommendations. During this discussion, both NRC managers and OIG highlighted the need for NRC staff to pay close attention to the language they use in written documents to avoid misinterpretation by the reader. In addition, a senior official stated that initiatives are underway to strengthen the quality assurance process for official documents in two offices that report to the EDO.

RECOMMENDATIONS

OIG recommends that the Executive Director for Operations:

- 1) Revise MD 3.57 to clearly establish the responsibilities of the document originator and concurrence chain reviewers with regard to accuracy in the final product, and set clear expectations for document originators concerning fact-checking methods.
- 2) Issue an announcement that provides clear expectations for staff to heighten awareness of the importance of information accuracy.

AGENCY COMMENTS

OIG provided this report in draft form to agency officials and discussed its content at an exit conference on January 11, 2001. The views of attending officials have been incorporated in this report as appropriate. Agency managers elected not to provide written comments to the draft report. (See Appendix IV)

SCOPE AND METHODOLOGY

This audit focused on the Nuclear Regulatory Commission's (NRC) quality assurance processes for ensuring that official documents contain accurate information. It included a review of agency, regional, and office guidance pertaining to quality assurance of documents. Interviews were conducted with senior management officials, managers, and staff responsible for originating, tracking, reviewing, concurring on, and signing official documents in 16 headquarters offices and 2 regional offices (Regions I and II). During these interviews, Office of the Inspector General (OIG) staff sought information about (1) the types of documents each office produces and the quality assurance measures employed for each type, (2) the concurrence process, (3) ways to improve quality assurance activities, and (4) specific "good practices" that offices follow with regard to these activities. OIG also contacted several other Federal agencies to learn about their quality assurance processes for official documents, reviewed recommendations issued by the Department of Health and Human Services pertaining to rulemaking, and interviewed staff from the Union of Concerned Scientists and Public Citizen.

At the start of this review, OIG determined it would be problematic to quantify the number of errors in NRC documents due to the large volume, variety, and technical complexity of material the agency prepares. Instead, OIG maintained a focus on processes employed by NRC for ensuring the accuracy of information in official documents. OIG did, however, explore examples of inaccuracies that the OIG had identified during previous audit and investigative work and other examples where accuracy of information had been called into question. This audit was performed in accordance with generally accepted Government auditing standards and included a review of management controls related to the objective of the audit.

The work was conducted from August 2000 to November 2000. The following OIG staff members were major contributors to this report: Corenthis Kelley, Team Leader; Judy Gordon, Senior Management Analyst; and Vicki Foster, Management Analyst.

AGENCY "GOOD PRACTICES"

Many offices and individuals involved in producing official NRC documents employ their own specific procedures that supplement the agency's overall guidance concerning quality assurance processes for such documents. During the audit, a collection of some of these agency "good practices" was compiled. This appendix was prepared to offer options for managers and staff to consider. Some of these "good practices" are not required by NRC guidance and others, while required, are employed in a manner that seems particularly helpful to the quality assurance process. The chart below provides an overview of these practices; further elaboration is provided in the numbered paragraphs that follow the chart.

| Good Practices To Facilitate the Document Review Process | |
|--|---|
| 1 | Hold up-front planning meetings among concurring individuals. |
| 2 | Share changes with document originator. |
| 3 | Hold staff accountable for inaccuracies. |
| 4 | Share "lessons learned." |
| 5 | Use parallel concurrence. |
| 6 | Use informal parallel reviews prior to concurrence process. |
| 7 | Have court reporters transcribe public meetings. |
| 8 | Involve public affairs staff in "Plain English" reviews. |
| 9 | Send press releases back to originator to review Commission changes. |
| 10 | Establish communication team for high profile events. |
| 11 | Keep source files of reference materials. |
| 12 | Use primary or reliable secondary source materials. |
| 13 | Have technical editor proofread documents. |
| 14 | Ask "cold reader" to review the document. |
| 15 | Allow concurrence option to agree with facts, but disagree with conclusion. |
| 16 | Provide product-specific concurrence guidance. |
| 17 | Modify concurrence chains to avoid redundancy, yet include necessary reviewers. |
| 18 | Conduct "peer reviews" of written products. |

| Good Practices To Facilitate the Document Review Process | |
|---|---|
| 19 | Alternate people who write about the same subject. |
| 20 | Use WordPerfect compare feature. |
| 21 | Conduct independent referencing on written products. |
| 22 | Hold off-site draft reviews prior to concurrence process. |

1. Hold up-front planning meetings among individuals (including the originator) who will be concurring on a document to discuss the desired approach to preparing a written product and appropriate content.
2. Share all changes made to the original draft with the document originator. This not only helps to ensure accuracy, but also serves as a coaching strategy.
3. Hold staff accountable for inaccuracies in their written work by documenting the problems in this area during performance appraisals.
4. Regularly heighten staff awareness about accuracy issues. In one region, this is accomplished by the sharing of "lessons learned" experiences pertaining to specific examples of inaccuracies or lack of clarity during training, in memoranda, and verbally, as appropriate. In the same region, signs are posted throughout the regional office reminding staff to be sensitive to audience perceptions.
5. Send documents around for parallel, or simultaneous, concurrence. This practice requires some extra effort in terms of coordinating feedback, but can draw the process to a close more quickly than the sequential concurrence approach.
6. Send documents around for simultaneous informal review prior to the formal concurrence process. This review may include a combination of people who will not be on the formal concurrence chain as well as people on the chain.
7. Utilize court reporters to transcribe the verbal exchanges that occur during public meetings. This allows NRC to respond better to attendees who have requested that NRC provide them with certain information at a later date. This "good practice" has limited applicability with regard to ensuring accuracy in written documents, but is useful with regard to the issue of accuracy in verbal exchanges with the public.
8. Involve public affairs staff in reviewing documents for "Plain English." This practice occurs routinely in one region, and sporadically in headquarters.
9. Send press releases back to the document originator for review after the Commission has made changes to the document.

10. Establish a communication team to ensure consistency and accuracy of responses with regard to specific high profile events. One such team was created in Region I, following the recent steam generator tube leak at Indian Point Unit 2 Power Plant, and included multidisciplinary team members from both headquarters and the region. The team was created to assist NRC management in the coordination of agency communications with the public and other external stakeholders. One of its responsibilities was to coordinate written responses to congressional correspondence and inquiries.
11. Keep source files of reference materials used to compose an item of correspondence. Highlight specific information that was used in the product provided for concurrence.
12. Use only primary or reliable secondary source materials in preparing written documents.
13. Have documents proofread by a technical editor.
14. Have documents reviewed by a "cold reader" who was not involved in the preparation of the document, but who has expertise in the subject area.
15. Allow a concurrence option whereby the person concurring can document that he or she concurs with the facts and information presented in a document, but disagrees with the conclusion.
16. Provide specific written guidance concerning concurrence chain requirements for specific products.
17. Modify concurrence chains to avoid redundancy yet include the necessary reviewers. In one region where an addition was made to the concurrence chain for a particular product, a pilot test was first conducted to see if the time needed to obtain the additional review resulted in improved accuracy. In one headquarters office, the concurrence chain was shortened by deleting duplicate reviews at the same management level.
18. Conduct "peer reviews" of written products. In one region that employs this practice, peer review participants review inspection reports issued during the preceding quarter. All participants read and critically assess the reports (or report sections) to determine whether they are consistent with agency guidance, and then openly discuss their findings.
19. Alternate people who write about the same subject. In one region where this practice is employed, two different inspectors alternate monthly visits to a particular site. This gives them an opportunity to discuss their observations, which are ultimately combined into one quarterly inspection report.

20. Use the WordPerfect compare feature to compare different versions of a document and determine where changes have been made.
21. Independently reference written products by having an individual, who has not worked on a product, review that product and check factual statements against the source documents. This review is more rigorous than the "cold reader" approach described in number 14.
22. Hold off-site reviews of draft products prior to the concurrence process. Participants are those who will be on the concurrence chain for the product. This practice encourages reviewers to focus on the subject and to discuss issues prior to the concurrence process.

ABBREVIATIONS AND ACRONYMS

| | |
|-----|-----------------------------------|
| EC | Executive Council |
| EDO | Executive Director for Operations |
| FY | Fiscal Year |
| MD | Management Directive |
| NRC | Nuclear Regulatory Commission |
| OIG | Office of the Inspector General |
| OMB | Office of Management and Budget |

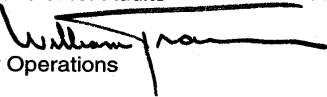
AGENCY RESPONSE TO DRAFT REPORT



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

February 13, 2001

MEMORANDUM TO: Stephen D. Dingbaum
Assistant Inspector General for Audits

FROM: William D. Travers 
Executive Director for Operations

SUBJECT: DRAFT OIG REPORT ON THE REVIEW OF NRC'S QUALITY
ASSURANCE PROCESS FOR OFFICIAL DOCUMENTS
(OIG-01-A-02)

We have no comments on the subject report. The primary concerns discussed at the January 11, 2001, meeting have been appropriately incorporated. This is a good example of the value-added from the new process.

If you have any questions, please contact Debbie Corley (djc2; 415-1728)

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