

INSPECTION ADMINISTRATIVE PROCEDURE

A-107

INSPECTION DOCUMENTATION

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Revision 3

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INSPECTION ADMINISTRATIVE PROCEDURE A-107, REV. 3

INSPECTION DOCUMENTATION

1.0 PURPOSE

This procedure provides guidance to the Office of Safety Regulation (OSR) staff on documenting inspection results, including inspection report content, format, and style.

2.0 OBJECTIVES

2.1 This procedure ensures preparation and maintenance of a complete inspection record, providing a basis for conclusions about Contractor performance and for any resulting corrective actions.

2.2 This procedure ensures that inspection reports:

- Clearly communicate significant inspection results to the River Protection Project Waste Treatment Plant (RPP-WTP) Contractor (hereafter referred to as "Contractor"), OSR staff, Tribal Nations, and the public
- Provide conclusions about the effectiveness of the programs or activities inspected. The depth and scope of the conclusions should be commensurate with the depth and scope of the inspection
- Provide a basis for the need for corrective actions
- Assess Contractor performance in a periodic, short-term context and present information in a manner that will be useful to OSR management in developing longer-term, broad assessments of Contractor performance.

3.0 DEFINITIONS

NOTE: Users of this procedure should also refer to the Glossary in RL/REG-97-05, *Office of Safety Regulation Management Directives*, for additional definitions.

Assessment Follow-up Item (AFI): A matter that requires further inspection because of a potential problem, pending action by the Contractor or OSR, additional information that is needed which was not available at the time of the inspection, or other reasons.

Authorization Basis Requirement: The composite of information provided by the Contractor in response to radiological, nuclear, and process safety requirements that is the basis on which the Office of River Protection Manager grants permission to perform regulated activities. The authorization basis includes, but is not limited to, the following:

1. The information submitted in connection with a request for Standards Approval, a request for Construction Authorization, a request for Commissioning Authorization, or an Initial Safety Assessment. This includes the information associated with the requests as described in DOE/RL-96-0003, *DOE Regulatory Process for Radiological, Nuclear, and Process Safety for the River Protection Project Waste Treatment Plant Contractor*, and any other information submitted by the Contractor in connection with the requests.
2. Amendments to the information described above that are on the Contractor's docket. Such amendments may be in the form of revisions to previously submitted documents or new information that supplements previously submitted information.

The authorization basis begins at the Standards Approval regulatory action and continues throughout the design, construction, and commissioning of the RPP-WTP Contractor facility.

Closed Item: A matter previously reported as an inspection Finding , an assessment follow-up item , an Incident Notification Report , or other item requiring follow-up that the inspectors conclude has been satisfactorily resolved based on information obtained during an inspection.

Conclusion: As used in this procedure, an assessment that relates one or more observations to the broader context of a Contractor's safety program.

Draft Inspection Report: Any version of the inspection report before its official issuance.

Finding: When the performance of the Contractor is not consistent with the commitments in the authorization basis, or in compliance with the Contract, Safety Requirements Document, or applicable regulations.

Inspection: The examination and assessment of any Contractor activity to determine its effectiveness, to ensure safety, and/or to determine compliance. A single inspection report is normally limited to a specific period of inspection (e.g., a six-week period).

Inspection Document: Any material obtained or developed during an inspection that is considered to be an OSR record (refer to the definition of "OSR record" below).

Integrated Inspection Report: An inspection report that combines input from all inspections conducted within a specific period.

Observation: A fact or detail noted during an inspection.

Occurrence Report : A report generated by the Contractor describing an event or conditions that meet the Contractor's reporting threshold.

OSR Record: Any written, electronic, or photographic record under OSR control that documents the policy or activities of the OSR or Contractor.

Requirement: A legally binding obligation such as a statute, regulation, contractual commitment, or order.

Vendor: A supplier of products or services to be used in the Contractor's facility or activity.

4.0 RESPONSIBILITIES

OSR inspectors are required to prepare inspection reports in accordance with the guidance provided in this inspection procedure. General and specific responsibilities are listed in the following sections.

4.1 GENERAL RESPONSIBILITIES

Each inspection report should include the following:

- A cover letter transmitting the inspection report to the Contractor and describing any significant issues, concerns, or identified Findings
- An Executive Summary highlighting conclusions drawn from each of the areas inspected
- A report coversheet documenting the report number, inspection period, inspection location, names of the inspectors, and name of the reviewing official
- A report details section that, for each area inspected, describes the area inspected, documents reviewed, inspectors' observations, and conclusions
- A section that discusses any management meetings conducted during the inspection period, including the exit meeting
- A summary data section that lists key Contractor personnel contacted during the inspection, items opened, reviewed, and/or closed, and commonly used acronyms.

The report details section should include the following information:

- Sufficient detail to describe the inspection
- The compliance status in the areas examined
- The status of related follow-up items and reported Contractor events
- Sufficient information to support any identified Findings, including a description of completed and anticipated corrective actions
- Sufficient detail for OSR management to evaluate the Contractor's overall safety program.

A different inspector should be able to use the inspection report to prepare for a subsequent inspection and to determine the general status of the inspected area at the time of the last inspection.

4.2 REPORT WRITING

- 4.2.1 Inspectors have primary responsibility for ensuring that observations and Findings are accurately reported, referenced material is correctly characterized, and the scope and depth of conclusions are adequately supported by documented observations and Findings, if any. Advice and recommendations are not to be included in inspection reports.
- 4.2.2 Inspectors are responsible for ensuring that the content and tone of the report, as issued, are consistent with the content and tone of the exit meeting presentation. When the report differs significantly from the exit meeting, the inspector (or the report reviewer) should discuss those differences with the Contractor before the report is issued.
- 4.2.3 Report writers and reviewers should ensure that inspection reports follow the general format provided in this procedure.
- 4.2.4 The inspection report number should be in the following format:

V-WW-XXX-YYYY-ZZZ, where

- V Single letter indicator (will always be A for inspections)
- WW Two-digit code for year
- XXX Code for Organization (will always be OSR)
- YYYY ORP code for location of assessment (will always be RPPWTP)
- ZZZ Sequential number assigned by the OSR tracking system coordinator

4.3 REPORT REVIEW AND CONCURRENCE

- 4.3.1 Before issuance, each inspection report must be reviewed by the Verification and Confirmation Official (VCO) or the VCO's designee, and approved by the Safety Regulation Official (SRO), as a minimum.
- 4.3.2 The VCO should ensure that conclusions are logically formulated and sufficiently supported by observations and Findings, and that the observations, Findings, and conclusions are consistent with OSR policies and requirements.
- 4.3.3 The VCO should ensure that assessments made in the inspection report represent established OSR policy rather than the personal views of an individual inspector or group of inspectors.
- 4.3.4 Substantial changes to an inspection report made by OSR management should be discussed with the inspectors involved to ensure continued concurrence. Disagreements that cannot be adequately resolved should be discussed with the SRO.

NOTE: The record of inspector and reviewer concurrence is maintained by the OSR. This concurrence record is not distributed with the inspection report.

4.4 REPORT TIMELINESS

- 4.4.1 General Timeliness Guidance. The goal for issuing inspection reports is 21 calendar days after inspection completion (30 calendar days for integrated reports and major team inspections). Although this goal may not be met in all cases, the report should be issued no later than 30 calendar days after inspection completion (45 calendar days for integrated reports and major team inspections).

NOTE: Inspection completion is normally defined as the day of the exit meeting.

- 4.4.2 Expedited Reports for Significant Safety Issues. Whenever an inspector identifies an issue involving significant or immediate public health and safety or environmental concerns, facility and public safety is the first priority; issues of documentation are secondary. Based on the circumstances of the case, an expedited inspection report may be prepared that is limited in scope to the issue before the full inspection report is released.

5.0 GUIDANCE - INSPECTION REPORT CONTENT

This section focuses primarily on matters of content in the details section of the inspection report. Guidance on the content of report cover letters and executive summaries is presented in Sections 6.1 and 6.3, respectively.

5.1 OBSERVATIONS, ASSESSMENTS, AND CONCLUSIONS

To achieve relative consistency in inspection report content, a common understanding of how inspection observations are assessed for significance and how any resulting assessments may be combined to reach a conclusion about the adequacy of the program or activity inspected, are required.

- 5.1.1 Observations. The most basic results of an inspection are the facts that are gathered by an inspector. Facts may be collected by a variety of methods such as observing work activities, examining equipment, interviewing Contractor employees, reviewing records, etc. As documented, these observations should be factual; an inspector should not report hunches, unsubstantiated hearsay, or unverified opinions.

For example, consider an inspection in which a maintenance worker states there is excessive shaft leakage in a particular pump, and the inspector wants to make this an inspection observation. If possible, the inspector should physically observe the pump to verify the maintenance worker's statement. If the pump is inaccessible, or the leakage has already been corrected, the inspector should attempt to verify the period of excessive

leakage through review of logs and maintenance records, discussions with additional plant personnel, or some other method.

When documenting an observation, language that clearly identifies how the observation was discovered and verified should be used, as follows.

BAD: "The cooling water system make-up pump had excessive shaft leakage," or "It was noted that the cooling water system make-up pump had excessive shaft leakage."

GOOD: "A maintenance worker informed the inspector that the cooling water system make-up pump had excessive shaft leakage. The inspector verified this information by observing the pump in operation," or "...by reading the operator logs for June 5-6."

It should be noted that neither of these statements explains the significance of the observation nor the criterion used. Additional examples are provided in this section. Further discussion on the subject of active voice is presented in Section 7.1.2.3 of this inspection procedure.

Other factual information may be relevant to an observation, such as the time of discovery; how long the problem existed; the type, size, or model of the equipment; and so forth. Section 5.3 discusses how to determine the appropriate level of detail.

5.1.2 Assessments. Although inspectors are frequently instructed to "bring back the facts," OSR managers also expect those facts to be assessed for significance. Reports should be free of "dangling observations" - items that leave the reader unclear as to (1) how the observation relates to a requirement, standard, or Contractor commitment; (2) whether the observation is positive or negative; and (3) the significance of the issue. By answering these questions, inspection observations become inspection assessments.

5.1.2.1 Referencing Requirements and Standards. Whenever possible, an observation should be related to a commitment, requirement, or standard. For requirements and standards to be discussed, they must be included in the authorization basis. Often this context is achieved quantitatively, or by direct numerical comparison; for some observations, the standard to be referenced will be qualitative. When the area of the observation is not addressed by the authorization basis requirements, the inspector should still attempt to clearly state the expected standard of performance. For example, consider the case in which an inspector discovers that, as the result of a poor shift turnover, equipment operators are not initially aware of an ongoing test elsewhere in the facility. Depending on the significance of the test, the inspector may wish to document this observation even though it may not be covered by a specific requirement. In such a case, the inspector should use inspection procedures and discussions with OSR and Contractor management to arrive at a clear statement of expected performance. A statement similar to the one used in the following example should be included in the report.

EXAMPLE: "In discussions with the equipment operators, the inspector determined that they were unaware of a test in progress on the make-up water storage tank level transmitter. Further discussion and log review revealed that the level transmitter test had begun during the previous shift, but had not been discussed by the equipment operators at shift turnover."

"The inspector discussed with the operations manager the Contractor's expectations for conduct of shift turnovers. The operations manager stated that shift turnovers should include discussion of all evolutions in progress that could affect safe operation of the plant."

NOTE: Refer to Section 5.5.2 for additional discussion on inspections/documenting issues in areas beyond authorization basis requirements.

5.1.2.2 Clarifying Positive/Negative Status. The reader should usually be left with a clear sense of whether an observation is positive or negative. Often this is made obvious by the context of the material or by relating the observation to a requirement or standard. If the observation is "neutral" and does not relate to a requirement or standard, the inspector should question whether the item is significant enough to be documented at all. In some cases, a significant "neutral" observation can be placed in context by its relation to past performance. Refer to Section 5.5.3 for the discussion on documenting strengths and weaknesses.

5.1.2.3 Providing Context for Significance. Fully assessing the significance of an observation requires consideration of many factors, such as the following.

- Who was involved in the issue?
- What was the actual or potential safety significance? What were the root causes?
- Has this occurred before? Is a trend or pattern developing? Who found the problem?
- Should it have been discovered by the Contractor sooner?
- What was done to correct it?
- Were those corrective actions prompt and thorough?
- How does the Contractor characterize the significance of this matter?

It is not necessary that each of these questions always be answered in the report, or that every supporting detail for every observation be exhaustively included in the report. The inspector should, however, impartially weigh the circumstances and should include in the report those details that contribute to the understanding

of the significance of the observation regardless of whether they make the observation appear more or less severe.

NOTE: Inspectors always should document in the report certain supporting details to support inspection assessments. On the other hand, inspectors should be careful not to make direct statements regarding the safety significance of the inspection Findings (see Section 5.4.1).

Because the process of assessing significance (or translating observations into assessments) is subjective, it requires skill, experience, and judgment, and demands that the inspector carefully consider all viewpoints. The inspector should make every effort to understand and fairly characterize the Contractor's perspective. In addition, the inspector's final assessment of the significance of an observation should be validated through discussion with other inspectors and with OSR management.

5.1.3 Conclusions. Conclusions are general assessment statements that relate one or more observations and assessments to the broader context of the Contractor's program or functional area inspected. Conclusions can easily be made too narrow or too broad; the report writer's task is to match the scope of the conclusions to what the inspection results will support.

5.1.3.1 Conclusion Scope. The scope of a conclusion usually depends on how much of the inspection was directed towards a given area.

For a report writer to conclude that an overall program or functional area is "declining," "marginal," "inadequate," or "displaying significant weakness" (or, on the positive side, "improving," "superior," or "considered a strength"), the inspection observations and assessments must be sufficient to substantiate the conclusion. A broad negative conclusion should be based on specific observations of unsafe practices, ineffective programs or activities, poor operator or supervisory oversights, significant procedural inadequacies, etc. Conversely, a broad positive conclusion should be supported by observations of sustained safe performance, innovations to improve safety and reliability, efficient execution of complex tasks, programmatic upgrades that improve safety or correct previous weaknesses, etc.

Even in integrated inspection reports, the inspector rarely has sufficient material to justify making broad conclusions regarding Contractor performance in each overall functional area (e.g., "Performance in the area of engineering was excellent"). However, depending on the focus of the individual inspection, the inspector may be able to draw meaningful conclusions about specific Contractor programs (e.g., fitness-for-duty program, work scheduling, in-service inspection program) or portions of a specific functional area (e.g., motor-operated valve maintenance or emergency drill performance).

NOTE: In reaching a conclusion, the inspector sometimes considers and integrates related information from a previous inspection report. In such a case,

the inspector should briefly summarize the previous inspection information or reference the previous inspection report.

Frequently, the assessments in a given program area will be mixed (positive and negative), or the limited scope of inspection in a particular area will only support a correspondingly limited conclusion. In such cases, the inspector should neither "force fit" a broad conclusion nor restrict the conclusion scope to a simple restatement of the assessments. Where applicable, the conclusion should account for both negative and positive assessments.

EXAMPLE: During a facility tour, the inspector routinely verified that valves and circuit breakers were in the position required by Contractor procedures for the applicable facility mode. During a six-week period in which such verifications are routinely performed, the inspector found two instances of a particular breaker being inappropriately closed to power a local receptacle. In each case, the inspector mentioned the observation to the operations shift manager, who was unaware of the breaker closure, despite Contractor policy that says the shift manager should be aware of such conditions. After the second instance, the operations supervisor issued a control room directive to formally track any closures of this breaker.

In addition to the issue, what conclusion can be drawn from this information?

TOO NARROW: "The inspector concluded that the operations shift manager needed to be more aware of when MC-5B2 Breaker 13 was being used for welding."

TOO BROAD: "The inspector concluded that the operations control of plant configuration management needed improvement."

APPROPRIATE: "The inspector concluded that, while overall operations control of valve and breaker lineups was satisfactory during this period, the observed discrepancies and associated issue indicated a need for improved shift manager awareness of local breaker manipulations."

5.1.3.2 Conclusion Focus. In general, conclusions should focus on the capability of the program or activity to accomplish its design basis function. In assessing this capability, the conclusion statements may take various forms but in all cases should be concrete and supportable.

- For inspections of hardware components or systems, conclusions should seek to answer questions such as the following.
 - Is the component or system capable of performing the safety functions required by either its design or authorization basis?

- Is testing [and/or maintenance] adequate to demonstrate that the component or system would perform all of the safety functions required?
- Is training adequate to ensure proper operation and maintenance of the component or system?
- Are control functions effective and reliable?
- Are human factors considerations relating to the component or system (e.g., accessibility and labeling of components) adequate to ensure proper system operation?
- Are system procedures adequate to ensure proper system operation under normal and accident conditions?
- Additional, similar questions may be developed based on the applicable inspection procedure. Answering these questions should result in conclusions such as the following.
 - EXAMPLE: Based on aspects observed during the system walkdown, as described above, the emergency diesel generators were capable of performing the safety functions required by their design basis.
 - EXAMPLE: As described above, the surveillance testing observed during this inspection was thorough, consistent with industry standards, and sufficient in scope to demonstrate that the protection system would perform its required safety functions.
- Conclusions also can be helpful by assessing improving or declining performance in the particular area inspected.

Because the OSR's inspection program only samples a portion of Contractor activities, report writers should be careful in making statements about a perceived trend to ensure that: (1) the focus of the statement is accurate in scope (i.e., not overly broad) and based on an adequate sample of observations; (2) a perceived improvement or decline does not simply reflect a lack of earlier observation in the area of focus; and (3) the comparison of past and present performance involves the same specific Contractor program area (e.g., the report should not assess an improving trend based on comparing the present excellent procedural adherence of the equipment operators to a past problem involving the procedural adherence of maintenance personnel).

- For an inspection that has focused on an overall program, the conclusion should assess the basic capability of that program in meeting its safety

objectives. In some cases, the safety objectives may be found in the applicable inspection procedure. If the safety objectives have not been specified elsewhere in the report, the conclusion should make the objectives clear.

- EXAMPLE: Solid radioactive waste controls are intended to minimize the volume of radioactive waste and ensure safe transportation of radioactive materials. Based on aspects observed during this inspection and discussed above, the inspector concluded that the Contractor's solid radwaste program is effective in meeting these safety objectives.
- Finally, conclusion statements should note Findings described in that section of the report.
 - EXAMPLE: The overall conduct of maintenance observed during this inspection was controlled and thorough, and was appropriately focused on ensuring system and component safety and reliability. One Finding was identified, as described above, concerning a failure to properly tag out certain isolation valves before performing maintenance.

It should be noted that these conclusion statements are illustrative and not intended to be used exactly as written. In addition, other types of conclusion statements may be appropriate in certain situations.

5.1.3.3 Inspection Report Conclusions. OSR assessments are an ongoing process in which periodic, short-term evaluations (such as inspection reports and Contractor self-assessments) are integrated into longer-term evaluations.

Report conclusions should be written in a manner to support this overall assessment and integration process. As stated above, this does not mean that each report should, for example, provide an overall assessment of the maintenance functional area. However, if a succession of three or four reports each makes well-supported conclusions about a portion or portions of the maintenance area (e.g., maintenance work control and scheduling, facility material condition, conduct of mechanical or electrical maintenance, adherence to maintenance procedures, maintenance personnel knowledge and performance, maintenance facilities, accuracy of maintenance records, etc.), a longer-term evaluation covering that period should be able to integrate those assessments into a well-supported conclusion about the overall maintenance program.

A thorough understanding of this concept adds perspective to the inspection process. Effective regulation requires the initiative to draw sound conclusions and demands a sense of overall long-term performance; however, this does not mean that, when inspectors make an observation, they should immediately leap from that observation to a broad conclusion. Rather, each observation should be

placed in context, assessments should be related to other inspection assessments (and may provide the basis for further inspection), and reports should seek to incorporate those assessments into ever-broader conclusions.

5.2 THRESHOLDS OF SIGNIFICANCE

Each day of facility operation involves many people, dozens of evolutions, and multiple facility systems. Problems are identified and resolved daily. Within this scenario, the OSR inspector performs an auditing role; he or she cannot hope to monitor all the activities in progress on to document every minor discrepancy that occurs. As part of maintaining a focus on safety, inspectors continually use contract authorization requirements, inspection procedures, risk assessment documents, industry standards, and their own individual training and insight to make judgments about which issues are worth pursuing and which are not.

Such decisions concerning prioritization must be evident in inspection reports for effective communication. Inspection reports should discuss significant safety issues in appropriate detail, treating less significant issues succinctly and avoiding excess verbiage. To maintain some consistency in how minor issues are handled, report writers must recognize certain "thresholds of significance," (i.e., they must use similar criteria in deciding whether an issue is important enough to document, track, or follow up, etc).

5.2.1 Thresholds of Significance for Findings. Some Findings are of minor safety and regulatory concern and are not usually documented in inspection reports.

5.2.1.1 Minor Findings - Determining Significance. When an inspector identifies a Finding, the determination of whether the Finding is minor or "more-than-minor" should be based on the answers to the following questions.

- Does the Finding have any actual impact (or any realistic potential for impact) on safety?
- Does the Finding suggest a programmatic problem that could have a safety or regulatory impact?
- Could the Finding be viewed as the possible precursor to a significant event?
- If the Finding inadvertently recurred, would its recurrence be a more significant safety concern?
- If inadvertently left uncorrected, would the Finding become a more significant safety concern?
- Are there associated circumstances that add regulatory concern to this Finding (e.g., apparent willfulness, Contractor refusal to comply, management involvement, etc.)?

If the answer to any one of these questions is "yes," the Finding should not be considered a minor Finding. If the answer to all of these questions is "no," the Finding should be considered minor. For cases in which a Contractor does not take corrective action or repeatedly or willfully fails to follow the requirements in the authorization basis, resulting in a Finding that would otherwise be characterized as minor, the matter should be considered serious and forwarded to the U.S. Department of Energy (DOE), Office of Enforcement and Investigation (EH-10) for possible enforcement consideration.

EXAMPLE: The night orders require that operators assess and log the status of a certain piece of equipment by 1:00 a.m. on every mid-shift. The inspector reads three months of control room logs and finds two instances in which this status was not assessed until 1:30 a.m. After reviewing plant conditions, the potential impact, and associated circumstances, the inspector answers each of the above questions with "no" and determines that the matter was a minor procedural Finding. Because it is considered minor, this Finding need not be documented in the inspection report.

EXAMPLE: An inspector observes maintenance workers removing protective clothing while exiting a radiologically controlled area. In an isolated instance, one worker forgets to remove the protective hood until stepping over the boundary into the clean area. The radiation protection technician (HPT) reminds the worker to remove the hood. The worker acknowledges the error, carefully removes the hood, and places it in the appropriate receptacle. The inspector notes that a violation of procedure has occurred but finds no associated safety concern and decides that the overall process was appropriately controlled. The inspector determines that the matter was a minor Finding and need not be documented.

EXAMPLE: As a variation on the previous example, suppose the maintenance workers as a group are careless in removing their protective clothing, paying little attention to cross-contamination or posted signs, joking boisterously while frisking, ignoring the HPT's directions and attempts to control the spread of contamination. As in the previous example, the inspector notes the same violation of Contractor procedures; however, based on the circumstances, the inspector determines that this is clearly more than a minor Finding and therefore merits both documentation and follow-up.

- 5.2.2 Minor Findings - Determining Whether to Document. In general, minor Findings should not be documented; however, certain exceptions apply. Documentation may be necessary as part of the resolution to an allegation. In other cases, while the Finding itself is minor, the associated technical information may relate directly to an issue of OSR concern. If, for these or any other reasons, the report writers and reviewers wish to document a minor Finding, then it should be documented.
- 5.2.3 Findings Identified as Part of Contractor Self-Assessments. Under certain circumstances, even a Finding that could be classified as "more-than-minor" need not be documented. This is generally justified when the Finding has been identified and corrected as part of a Contractor's self-assessment effort. As a matter of policy, the OSR encourages

Contractor self-assessment efforts and seeks to avoid the negative impact that can result from a redundant OSR emphasis on problems that the Contractor's responsible action has already identified and corrected. Consider the following example.

EXAMPLE: While evaluating the Contractor's quality assurance (QA) efforts in the fire protection area, an inspector reviews relevant audits and surveillances conducted during the previous year. The review reveals that the audits have been probing and are well developed and technically sound and include six problems, four of which might be classified as significant problems. In such a case, the inspector should follow up on the problems and other audit issues to ensure that root causes have been appropriately assessed, appropriate and comprehensive corrective actions have been taken, and no new examples of Findings exist. Provided that no new problems are revealed by this follow-up, the inspector is normally not expected to issue the four Findings individually, or to report the details of those Findings in the inspection report. Instead, the assessments and conclusions documented in the OSR inspection report should assess the adequacy of the Contractor's QA efforts, including a clear reference to the name, dates, and general subject matter of the audit or self-assessment.

NOTE: This expectation only applies to less serious problems. Even when identified through a Contractor self-assessment, serious problems must be documented in the inspection report and given appropriate follow-up.

In some instances, reasons exist to document one or more of the problems found in a Contractor's audit or self-assessment. For example, if the report concludes that the Contractor's self-assessment was especially positive or negative, one or more examples should be given to support that conclusion. As another example, if the Contractor's audit or self-assessment issues reflect on overall Contractor performance in a way that reveals a trend, the particular issues may be documented (and, if documented, should be appropriately dispositioned).

In addition, the inspector may decide to document one or more of the problems found in a Contractor self-assessment due to the technical significance or generic implications of the particular item. Technical details surrounding the problem may provide useful insight on equipment or system reliability, or on some aspect of human performance. If, for any of these reasons, the inspector decides to discuss in the inspection report a particular Contractor self-assessment issue or audit issue, and that issue involves a Finding, then the Finding must be clearly dispositioned in the report.

The discussion in this subsection applies to Findings identified through Contractor audits and self-assessments (i.e., cases in which the OSR inspection is focused on the Contractor's QA efforts) and should not be applied to all Contractor-identified Findings. When the inspector pursues an issue as part of day-to-day Contractor observation or other normal inspection activities, the decision on whether to document the issue should be based on its significance (see Sections 5.2.1.1 and 5.2.2). Unless the inspection is specifically focused on Contractor auditing and self-assessment capabilities, Findings of more-than-minor significance should be documented and dispositioned regardless of whether they are OSR- or Contractor-identified.

5.2.4 Thresholds of Significance for Non-Finding-Related Issues. Inspectors must also make judgments about the relative significance of non-finding-related issues. As with Findings, the judgment of individual inspectors will differ; questions on the relative significance of an issue should be discussed with other inspectors and with OSR management.

5.2.4.1 Determining the Significance of Negative Observations. The following questions should be used to determine whether an observation should be documented in the inspection report.

- Does this observation have any actual impact (or any significant potential for impact) on safety?
- Is this observation illustrative of a programmatic Contractor problem that could have a safety or regulatory impact?
- Does this observation provide insights on an equipment, system, or human performance problem?
- Could this observation be viewed as the possible precursor to a significant event?
- If the Contractor takes no action on this matter, will the condition worsen (i.e., will the safety significance increase)?
- If this observation recurs, will its recurrence result in more significant or additional safety concerns?
- Will this information be useful in assessing the long-term performance of this Contractor program or functional area?
- Does this observation have generic significance?

If the answer to any one of these questions is "yes," the observation should be documented in the inspection report. If the answer to all questions is "no," the observation normally should not be documented.

5.2.4.2 Determining the Significance of Neutral or Positive Observations. For neutral or positive observations or for Contractor improvements, similar thresholds of significance apply. The following or similar questions should be asked by the inspector.

- Does this Contractor improvement have an actual positive impact (or a significant potential for positive impact) on safety?

- Will the Contractor's efforts to effect change in this area be likely to result in programmatic improvements to safety or regulatory performance?
- Will this upgrade be likely to result in improved equipment or system reliability or improved human performance? Does this information provide useful equipment, system, or human performance insights?
- Does this Contractor action significantly reduce the probability of a particular event?
- Will this information be useful in assessing the long-term performance of this Contractor program or functional area?
- Does this observation have generic significance?

If the answer to any one of these questions is "yes," the observation should be documented in the inspection report. If the answer to all questions is "no," the observation normally should not be documented.

NOTE: Inspectors should use discretion in giving credit or making strong positive statements for a proposed Contractor action that has not yet been implemented, is in early stages of implementation, or has not yet been verified by the OSR.

5.2.5 Observations Previously Addressed in Contractor Self-Assessments. This decision should be treated similarly to the corresponding decision for Finding issues. In general, there is little benefit to be gained from the OSR re-emphasizing issues already addressed in Contractor self-assessments, unless there is some problem with the Contractor's actions. However, in some instances the technical significance or generic implications of an issue merit ensuring that it is discussed on the docket and preserved as a matter of public record. If the Contractor self-assessment in which the issue was initially discussed is already on the docket, the inspection report may simply refer to the discussion in the Contractor self-assessment. If more detail is needed, or if the Contractor self-assessment is not on the docket, the inspector may wish to discuss the issue in the inspection report narrative.

5.2.6 Non-cited Findings: At the conclusion of the inspection, certain Findings may be determined to fall into the non-cited category. Criteria for this determination is found in Inspection Administrative Procedure A-105, "Inspection Performance," Section 4.4. The documentation for non-cited Findings should be the same as for Findings that are cited to the Contractor.

5.3 LEVEL OF DETAIL

Just as inspectors must use judgment in determining what issues are worth including in the inspection report, they must also determine the appropriate level of detail for the issues that are

included. Some issues should be discussed in more detail than others based on safety or regulatory significance, technical complexity, and other factors.

- 5.3.1 Identifying the Target Reader? In writing any technical or business document, the most basic step in ensuring the appropriate level of detail is to have a clear sense of the reader - his or her background, priorities, and level of expertise in the subject area. Inspection reports have multiple readers with varying levels of technical expertise (including individuals at all levels of the OSR and DOE and Contractor staff, vendors, industry groups, public interest groups, Tribal Nations, and members of the general public). The principal reader, however, is the person to whom the report cover letter is addressed. This person is generally a vice president or similar high-ranking Contractor official. The report, therefore, should be written with a corresponding level of technical detail so that it will be understood by a knowledgeable individual conversant with nuclear technology but who may not be an expert in the specific area inspected. Plant-specific design features, relevant procedures, event-specific details, and other factual information should be presented in sufficient detail to allow this "target audience" to understand the characteristics and significance of the inspection observations and Findings. NOTE: See also Section 7.1.4 for a discussion on using technical, legal, and local jargon.

Finally, the inspection report writer should consider that the report is written for the "record" - the docket file that chronicles official OSR interactions with the Contractor. While the "record" is not a reader in the usual sense, the writer should be aware that readers who later use the docket file for research and historical purposes/perspective will frequently be dependent on the level of detail in an inspection report. Certain types of detail can be especially helpful for these readers such as knowing: the inspection procedure used; the exact component (or system) inspected; the component manufacturer (where relevant); the revision number of a referenced Contractor procedure; the date, time, and duration of an event or transient; and similar details. This awareness - that one is writing for the record - should not be taken as an incentive to author long narrative descriptions, but it should provide motivation for writing precisely.

- 5.3.2 Importance of Overall Conciseness. For most writers, the second step in ensuring an appropriate level of detail lies in learning to differentiate between information that contributes to understanding the observations and information that detracts or merely adds verbiage. The details used to describe any given observation should be scrutinized from this standpoint and the non-essential details eliminated. If properly performed, this process will result in a clearer presentation of the observations and assessments and a better communicated message overall.

In learning to write concisely, many inspectors will need to overcome a widely held but naive assumption that a shorter (or less thick) inspection report is a report of less merit. The report is not intended to be a lengthy discourse of activities carried out so as to justify the time spent or to demonstrate knowledge of a particular technical area. For any given report section, if no safety or compliance issues were identified, then all that is needed is a brief summary of the inspection methods, a succinct characterization of the activities observed, and any supportable conclusions on program adequacy.

5.3.3 Level of Detail on Inspection Scope. The level of detail on inspection scope should be minimal. Inspectors sometimes fall into the habit of inserting long "boilerplate" paragraphs to establish that the inspection program is being implemented. Consider the following example.

EXAMPLE: "The inspectors performed walkdowns of the accessible portions of various safety systems. In performing these walkdowns, the inspectors verified the proper installation of hangers and supports; the adequacy of housekeeping; correct valve position and conditions; the absence of ignition sources; proper labeling, lubrication, and cooling of major components; operational status of support systems, including instrumentation; consistency of significant process parameter values with expected values ..."

Descriptions of this sort serve little purpose. They are usually copied from previous inspection reports or paraphrased from the inspection procedure, and they are rarely read. Simply referencing the inspection procedure used serves the same purpose, as the OSR's inspection procedures are publicly available. Detailed descriptions of inspection methods or of "what was inspected" should only be included when needed to understand or add perspective to the inspection observations and Findings. A tabular format is frequently useful.

EXAMPLE: "Using Inspection Technical Procedure I-XXX, the inspectors walked down accessible portions of the following systems:

- Emergency diesel generator
- Electrical distribution
- Chemical storage."

This level of detail is normally appropriate when reporting a review of Contractor procedures, observed work in progress, routine plant evolutions monitored, or similar inspection activities.

For certain types of inspection activities, more detail is appropriate, as follows.

5.3.3.1 When the inspector is present during a significant plant event or an unusual plant evolution, more detail may be appropriate concerning which portions of the event or evolution were actually observed.

5.3.3.2 For construction inspections or inspections of significant plant modifications, strong emphasis is generally given to quality verification of newly installed or re-worked plant components or systems. In such cases, a detailed description of inspection activities regarding what the inspector actually examined (e.g., a listing of welds observed or radiographs reviewed) should be developed. A tabular format may still be useful for presenting these details as noted above.

5.3.4 Level of Detail on Observations and Findings. Once the inspector has decided that an observation is important enough to be included in the report, the same questions used in

making that decision (Section 5.2) can assist in determining the appropriate level of detail to include in the report. The following guidance is applicable.

- 5.3.4.1 The degree of actual or potential safety consequence associated with an observation should be a primary consideration in determining the level of appropriate detail. Items of higher significance generally merit more discussion.
- 5.3.4.2 If the inspector has concluded that an observation has programmatic aspects (e.g., multiple examples of the problem, a related series of failures, an underlying training deficiency, or diverse effects resulting from the same root cause), enough detail should be presented to support this conclusion.
- 5.3.4.3 Assessments of greater technical significance (i.e., assessments that provide insights into equipment, system, or human performance issues, or assessments that could have generic significance) should be discussed in sufficient detail to communicate those insights.
- 5.3.4.4 When the inspector has identified that a particular assessment adds significance based on risk, that perspective should be explained. For example, if the inspector finds that two components with reliability problems are related by a dominant event sequence, that relationship should be explained.
- 5.3.4.5 As a general rule, "neutral" assessments should be described in less detail than positive or negative observations. For example, an inspection report section should not provide a detailed description of the Contractor's conduct of various plant evolutions only to conclude that "no problems were observed." In some cases, sufficient detail may be provided simply by concluding that the Contractor's program met certain expected criteria (e.g., "as of July 200_, the external dosimetry program had passed re-accreditation by the DOE Laboratory Accreditation Program").

Additional "neutral" details may be warranted when reporting certain performance indicators or similar information that will be useful in assessing long-term performance in a Contractor program or functional area (e.g., annual radiation exposures, out-of-service equipment, size of the mechanical maintenance backlog, number of radwaste shipments over a given period, etc.). These details usually can be given additional useful perspective by comparisons with previous performance.

- 5.3.4.6 Positive observations normally should be described with less supportive detail than negative observations (i.e., positive observations normally do not merit supportive detail on root cause, previous examples, related performance, etc.). If the inspector concludes that the Contractor's performance in a particular area is superior or poor, then the volume and nature of documented observations should be sufficient to justify making that conclusion (see Section 5.5.3). As noted above, the negative observations may warrant additional detail based on significance.

5.3.4.7 When initiating an AFI, the description of the issue should provide enough background information so that a different inspector, using the same information, would be equipped to perform the follow-up inspection.

5.4 DOCUMENTING FINDINGS

OSR enforcement guidance is provided in the most recent revision of the document RL/REG-98-06, *Corrective Action/Enforcement Action Program Description*. This document presents information on regulatory/safety concern information (RSCI), which is defined as "information that raises a concern regarding Contractor achievement of regulatory expectations" (see Section 7.2). Section 7.3 of RL/REG-98-06 states that the OSR will evaluate RSCI to determine:

- "whether an immediate hazard exists,
- the safety significance of the RSCI,
- whether and on what priority corrective actions should be performed by the Contractor to meet regulatory expectations, and
- if the RSCI potentially involves a DOE nuclear safety requirement noncompliance."

Actions that can be taken by the OSR after its evaluation of the RSCI can include:

- A determination that the safety significance of the RSCI is below the threshold of safety concern established in the Contractor's commitments
- Request corrective action and a written response in the inspection report cover letter
- Issuance of a corrective action notice (CAN) to the Contractor
- Referral to DOE-HQ Office of Enforcement and Investigations (EH-10)
- OSR recommendation to withhold an authorization request or issue a stop work order under the provisions of the Contract.

5.4.1 Supporting Details and Discussions of Safety Significance. The discussion of RSCI and Findings in the inspection report must be sufficiently detailed to substantiate any OSR safety and regulatory concerns and to support any enforcement sanction EH-10 may choose to issue. The narrative should answer, as appropriate, the questions given in the Findings Information Checklist (see Attachment 1). For a Finding, the report should state as a minimum, the following:

- What requirement was violated or what Contractor commitment was deviated from
- How the Finding occurred
- When the Finding occurred and how long it existed
- Who identified it and when

- Any actual or potential safety consequence
- The root cause (if identified)
- Whether the Finding appears isolated or programmatic
- What corrective actions have been taken or planned.

The degree of detail necessary to support an enforcement action is a function of the significance and complexity of the Finding.

Although supporting details clearly assist in determining the safety significance of the Finding, inspectors must be careful to avoid making direct statements regarding safety significance in the details section of the inspection report. For example, if an inspection report refers to a Finding as being "of low safety significance" (i.e., the Finding did not result in any actual adverse impact on plant equipment or personnel), it may be difficult for the OSR to subsequently decide that the potential for an adverse impact or the regulatory significance of the Finding warrants issuance of a CAN.

- 5.4.2 Findings Involving Willfulness. Inspection reports should neither speculate nor make conclusions about the intent behind a Finding, such as whether it was deliberate, willful, or due to careless disregard. As with any observation, the report discussion should include relevant details on the circumstances of the Finding without making a conclusion about the intent of the violator. Consider the following examples.

APPROPRIATE: "The radiographer failed to activate his alarming dosimeter, although he had informed the inspectors earlier that he had been properly trained on the use of the device."

INAPPROPRIATE: "The radiographer deliberately failed to activate his alarming dosimeter."

Conclusions about the willfulness of a Finding are OSR/EH-10 decisions. A premature or inaccurate discussion of the willfulness of a Finding in the inspection report could result in later conflicts based on additional input and review.

5.5 DOCUMENTATION OF PERFORMANCE-BASED INSPECTION

"Performance-based inspection" is inspection that focuses on issues of safety and reliability, with an emphasis on field observation rather than in-office procedural or record reviews. The emphasis on safety and reliability can borrow from risk studies to structure inspections that focus on systems or components most important to plant safety. In addition, performance-based inspection tends to focus more on results (e.g., does the pump work?) than on process and method (e.g., was the pump maintenance procedure well written?).

"Performance-based regulation" tends to be less prescriptive about process or method and more focused on results. For most areas of inspection, the range of relevant regulations, requirements, industry guidelines, and Contractor commitments is a mixture of performance-based (results-oriented, less prescriptive) and compliance-based (process-oriented, more prescriptive)

standards. This mixture often makes it difficult for inspectors/report writers to present and document inspection observations in a consistent manner.

- 5.5.1 Documenting Performance-Based Issues versus Compliance-Based Issues. The first step in documenting "performance-based" issues is understanding the underlying flow of logic and differentiating this logic from that of an issue based strictly on compliance. For compliance issues, the clearest manner of presentation is usually comparison/contrast.

EXAMPLE of Compliance-Based Issue: An inspector finds that a certain surveillance is not being conducted at the required frequency. No performance problems exist with the equipment, and follow-up of the observation determines it to be an isolated area of operator oversight with no underlying training or procedural problem. The inspector might present such a Finding in the following manner.

"Procedure ___ states that the ___ instrument channel shall be verified operable by performing CHANNEL CHECK and CALIBRATION operations at ___ frequency. However, from April 7, 20___, until the inspector identified the issue on August 13, 20___, the CHANNEL CHECK and CALIBRATION operations were only performed at a frequency of ___, thus failing to meet the above requirement ..." This information could be followed by a brief summary of the inspector's follow-up actions, the Contractor's response, and similar details, concluding with statements that disposition the Finding.

By contrast, a performance-based Finding usually begins with the field observation of a safety or reliability issue (e.g., an equipment problem, a deficient work practice, a questionable system response, etc.), which results in efforts to place the observation in context, pinpoint the root causes, understand any associated problems with the underlying processes or methods -- all of which may or may not lead to issuing a Finding. When documenting such an issue, the clearest presentation usually follows the same path of discovery. That is, the narrative (1) begins with a statement of the observation, (2) places that observation in the context of related observations or circumstances that contribute to understanding its significance, (3) explains any known root causes or underlying process problems, and (4) leads to a determination that a particular standard was or was not met (if the standard is a requirement, this may be documented as a Finding).

This performance-based approach can be a factor in determining whether an observation is important enough to document, and if so, what level of detail is appropriate. For example, the organization and staffing of a particular group within the Contractor's organization may not be an appropriate topic from which to build significant Findings. However, discussion of organization and staffing may be appropriate if it results from the follow-up of a performance issue.

EXAMPLE of Performance-Based Issue: During routine tours of a building, the inspector begins to notice reliability problems with a particular type of pump. A review of maintenance requests indicates a sharp increase, beginning several months earlier, in the backlog of requests associated with these pumps. Discussion with the mechanical maintenance supervisor reveals that the increased backlog stems from readjusted priorities, resulting from Contractor cost-cutting measures that included reorganization and mechanical maintenance staffing reductions. The supervisor states that, based on

available staffing, delayed responses to maintenance requests of this priority should be expected.

In this case, the organization and staffing issue may be a legitimate topic for the inspector to investigate and document. If there are no requirements for the Contractor in this area, the inspector should limit the discussion of staffing to factual observations, related performance issues, clearly demonstrated (not speculative) effects of the organization and staffing changes, and Contractor assessments of the issue.

- 5.5.2 Documenting Issues in Areas not Covered by Regulatory Requirements or Contractor Commitments. Mere compliance with requirements (i.e., DOE's Nuclear Safety Management requirements in 10 CFR 830, "Nuclear Safety Management") and commitments does not automatically ensure safety. The OSR's safety mandate entails inspection and evaluation of Contractor performance in areas that may not be covered by written requirements.

Presumably, judgments made in this realm must still follow some standard as a reference point. When inspection observations are made in these areas -- that is, when safety issues are identified that do not relate directly to a regulatory requirement or Contractor commitment -- the treatment of such issues can be extremely difficult. The following sections describe how such issues are to be dispositioned at an exit meeting or in an inspection report.

- 5.5.2.1 Avoid Making Recommendations or Creating New Requirements. As the first "rule of thumb" in this area, note that the "expectations" discussed herein are generally recognized principles of safe operation and are not written or stated in a manner to resemble concrete requirements. For example, while the generally recognized principle of keeping exposures as low as is reasonably achievable (ALARA) justifies the ACCEPTABLE statement below, it would not be appropriate to prescribe specific in-process controls that constitute recommendations or could be construed to be new requirements as in the UNACCEPTABLE example.

ACCEPTABLE: "Contractor conduct of work in radiologically controlled areas should give evidence of in-process controls to minimize radiation exposure."

UNACCEPTABLE: "Contractor conduct of work in radiologically controlled areas should include remote monitoring cameras and/or direct job-site supervision by an HPT."

Inspectors must be careful never to impose personal preferences or arbitrary opinions on the Contractor when seeking to establish a clear standard of expected performance in areas not covered by the DOE Nuclear Safety Management requirements or Contractor commitments. Standards of expected performance should be discussed with both OSR and Contractor management, and the inspector should promptly bring any Contractor disagreements to the attention of the VCO.

5.5.2.2 Using Standards in Areas not Covered by Regulatory Requirements. As discussed earlier in this procedure (Section 5.1.2.1, EXAMPLE), the inspector should attempt through review of inspection procedures and discussions with OSR and Contractor management to arrive at a clear statement of expected performance. That statement should then be included in the report narrative.

EXAMPLE: The Contractor identifies a pump failure and decides to replace the pump while the facility is operational. The inspector monitors this maintenance activity and makes the following observations.

- The pre-job briefing places little emphasis on the actual work to be performed or the caution statements included in the work package.
- At the job site, initial communications with the control room are confusing and hard to hear due to in-plant noise.
- As the maintenance workers are about to begin dismantling the pump, the inspector observes that they are replacing the wrong pump and alerts the workers to this problem.
- Because of these delays, errors, and the resulting additional time and effort, the radiation exposure received is nearly double that expected.

Each of these observations is valid and insightful, yet the inspector may in each case be unable to establish that any requirement has been violated (e.g., because the workers stopped before actually replacing the wrong pump, an actual procedural violation may not have occurred). On the other hand, expected standards of performance clearly have not been met.

To clarify these standards, the inspector may choose to include in the report narrative a statement such as the following: "In later discussions with the inspector, the maintenance supervisor agreed that pre-job briefings for safety-related tasks are expected to ensure that workers understand the exact nature of the work to be performed, including means of identifying the proper components involved." Similar statements regarding clear communication with the control room, job-site verification of correct components, etc, might be included.

Whenever possible, the inspector should seek to tie the observation to a documented program or expectation (e.g., a generic communication on wrong component events, a Contractor's previously established self-checking program, etc.). In addition, once a clear standard is recognized, the inspector may be able to relate these observations to other instances in which the Contractor's performance has not met these expectations.

When multiple problems have been found, the inspector may, depending on the circumstances of the case, prefer to use a more broadly worded statement that applies to more than one of the observations. For the previous example, such a

statement might read: "Contractor conduct of maintenance on safety-related components or in radiologically controlled areas should be characterized by adequate preparation, effective communication, and in-process controls to avoid rework and minimize radiation exposure."

NOTE: Each of these example statements is focused on safety performance and characterizes generally accepted principles of safe operation without creating new requirements or imposing personal opinions.

5.5.2.3 Addressing the Need for Corrective Action by a Contractor. Because the expectations discussed in this section may be in areas outside the DOE Nuclear Safety Management requirements or Contractor commitments, they may not be used as the basis for requesting Contractor corrective action either verbally or in the inspection report. When safety issues are involved, a responsible Contractor will likely take corrective actions and such actions should be documented in the inspection report, as appropriate.

When questions exist about the adequacy of the Contractor's planned corrective actions or those already taken, the inspector may choose to create an IFI to ensure that the Contractor's later actions are evaluated.

In extreme cases in which the Contractor refuses to take corrective action for a matter of immediate safety significance, OSR management must be promptly notified, even if the Contractor has not violated an existing regulation, commitment, or requirement in the authorization basis.

5.5.3 Documenting Strengths and Weaknesses. Consistent with maintaining a focus on safety, inspectors often characterize their primary responsibility as identification of "problems," and inspection reports devote the most detail to discussions of Contractor problem areas. However, safety benefits can also result from identifying and documenting positive observations. Contractor initiatives that have positive results should be encouraged and recognized. In particular, inspectors should be careful to recognize positive achievements related to Contractor's self-assessment efforts.

Section 5.2.4 discusses criteria to be used in determining whether to document negative and positive observations. Section 5.3.4 discusses the appropriate level of detail to be used in documenting these observations. In addition, report writers should be tentative regarding the use of evaluative terms and in seeking to present a "balanced" report narrative.

5.5.3.1 Use of Evaluative Terms. Evaluative terms such as "strength" and "weakness" are not always helpful in understanding the inspector's assessment of an observation. For example, the label of "strength" rapidly loses significance if it is applied equally to (1) a program area in which no Findings were observed; (2) the completion of a maintenance procedure without incident; and (3) the introduction of a substantial, innovative Contractor program that directly contributes to safety. The label of "weakness" becomes similarly unclear if used indiscriminately.

In general, report narratives and executive summaries can make a useful distinction in this area by using the labels of "positive observation" and "negative observation" for individual observations of moderate or low significance. Use of the terms "strength" and "weakness" gain significance if they are reserved for (1) situations in which the overall assessment of a Contractor program has found that program (or significant aspects of that program) to be particularly effective or ineffective, and the report narrative includes observations to support that broad conclusion; or (2) individual observations that have either high-safety significance or programmatic implications.

Inspectors can communicate even more clearly if these and other evaluative terms are only used when necessary. Instead, writers should search for descriptive terms that communicate more precisely the conditions observed. For example the statement:

"Facility housekeeping was excellent" conveys much less to the reader than "The facility was brightly lit, clearly labeled, free of clutter, and exceptionally clean."

When summarizing a report section, the proper characterization of the Contractor's performance in that area typically includes terms like "adequate," "good," "declining," or "improving." However, writers may sometimes find it more descriptive (and equally accurate) to characterize the performance of radiation surveys as "thorough" or "meticulous," the conduct of a difficult evolution as "safety conscious," or an overall program as "technically sound."

NOTE: See also the discussion of "purple language" in Section 7.1.3.

5.5.3.2 Presenting a "Balanced" Report Narrative. The need for balance in presenting inspection observations is sometimes misunderstood. Inspectors should not attempt to present a "balanced report" in the sense of offering an equal number of positive and negative observations. Some inspection results are more negative than others. The report should accurately reflect the overall flavor of the inspection.

However, balance should be sought in the sense of placing observations in the context of the overall evaluation. When deficiencies are documented, the report should also note the "sample size."

EXAMPLE: "The inspector reviewed the Contractor's control, storage, and labeling practices for radioactive sources used in the calibration lab. Out of 56 sources, the inspector found three instances in which the labels were smudged and illegible."

Section 5.1 provides additional guidance on placing observations and assessments in context.

5.5.4 Documenting Management Issues. Inspectors should exercise care in making conclusions about Contractor management effectiveness. Management-related provisions

in the DOE Nuclear Safety Management regulations and in the Contractor's commitments are limited, and few inspectors have received professional training in evaluating administrative or managerial skills, the appropriate level of staffing for a given Contractor task or program, or similar issues.

Inspectors should seek to identify and document observations that will assist OSR management in broad-scope assessments. When discussing substantial improvements or decline in the performance of a particular Contractor program, the inspector may identify specific, concrete ways in which staffing changes or management involvement have contributed to that impact.

EXAMPLE: A Contractor with a record of maintenance scheduling and completion problems makes sweeping changes that result in successfully completing a maintenance activity under budget, ahead of schedule, and well within radiation exposure goals. In such a case, the inspector should be attentive to the effects of various changes, including new approaches to the maintenance organization, redistribution of staff, specific efforts to generate more supervisory involvement, and similar measures.

When documenting these management issues, inspectors should avoid making vague, broad assertions, and should be careful not to report "cause-and-effect" relationships except where a direct correlation exists. In some cases, inspectors may be too quick to conclude that a weak Contractor program is "deserving of more management attention," or that a particular group of workers is weak because of "a lack of management oversight." Because Contractor management is ultimately responsible for all facility operations, these conclusions may be valid; however, a more effective approach is to be more specific. Consider the following statements:

NON-SPECIFIC: "The continued motor-operated-valve deficiencies showed a lack of management support in this area."

SPECIFIC: "The continued motor-operated-valve deficiencies had several apparent causes, including (1) the failure to schedule repairs for the valves, (2) the lack of a system to track repetitive failures, and (3) the lack of follow-up to internal audit findings in this area."

The details provided in the second example are much more meaningful. In addition, these details add credibility and weight to later, more broadly scoped assessments, when the observations and conclusions of individual inspection reports are integrated into conclusions of broader scope.

Finally, when referencing statements made or positions taken by "Contractor management," the inspection report should be as specific as possible as to which Contractor manager or management area is being referenced (e.g., "the director of regulatory compliance" or "the engineering manager for facility modifications").

5.6 TREATMENT OF OPEN ITEMS IN INSPECTION REPORTS

Issues that merit additional inspection are identified by a unique tracking number and entered into the CARS by the originating inspector or office. Open items include AFIs and Findings.

- 5.6.1 Initiating Open Items. The action of initiating an open item is a commitment of future resources and should be used only when some specific Contractor action is pending or when needed information is not available at the time of the inspection. In addition, AFIs should only be initiated for issues that, if substantiated, would clearly rise above the thresholds of significance discussed in Section 5.2.

Findings should be assigned a follow-up item number for tracking purposes. When an inspection involves multiple Findings (or multiple examples of a single Finding), the inspector should ensure a one-to-one correspondence between the number of follow-up items and the number of Findings in the report details section.

- 5.6.2 Follow-Up and Closure of Open Items. The level of detail devoted to closing open items depends on the nature and significance of the additional information identified. For example, the closure of an AFI should, at a minimum, summarize the topic, and the inspector's follow-up actions, evaluate the adequacy of the Contractor's corrective actions, and include enough detail to justify the inspector's conclusion.

NOTE: An AFI may be closed simply by administrative action when OSR management decides not to expend the effort originally envisioned when the AFI was opened.

In closing out a Finding, if the Contractor's response to the Finding already has accurately described the root cause, corrective actions taken, and other aspects, and the inspector identifies no other instances of the Finding, then closeout description should be correspondingly brief.

EXAMPLE: "(Closed) A-01-OSR-RPPWTP-001-F01: Failure to properly post a high radiation area. The inspector verified the corrective actions described in the Contractor's response letter, dated March 28, 19__, to be reasonable and complete. No similar problems were identified."

- 5.6.3 Avoiding "Implied" AFIs. For any issue that merits inspection follow-up, a formal open item should be assigned. Conversely, if the OSR inspector or manager does not wish to open an AFI, then the report should not imply that follow-up will occur. In the absence of an AFI entry, the report should not include statements such as the following:

"The OSR will continue to monitor this matter during routine inspection activities."

In short, the inspection report should not commit to future OSR attention in a particular area unless that commitment is tracked.

6.0 GUIDANCE - INSPECTION REPORT FORMAT

Whenever possible, OSR inspection reports should conform to the standard formats described in this section and illustrated in Attachment 2. This standardization in format significantly enhances readability and information retrieval, which in turn, increases efficiency and improves the ability to integrate inspection results. Exceptions should be made for major team inspection reports and in cases where the specifically directed focus of the inspection does not easily fit into the functional area topics and sub-topics given in the standardized report outline.

6.1 COVER LETTER

Inspection reports are transmitted via a cover letter from the SRO to the designated Contractor executive. Cover letter content varies depending on whether Findings were identified in the inspection. In general, however, every cover letter uses the same basic structure, as follows.

- 6.1.1 Addressee, Date, and Salutation. Refer to RL/REG-97-05, Handbook 2.1, Part I and the *ORP Correspondence Manual* on guidance for letters.
- 6.1.2 Subject Line. The subject line of the letter should state the type of inspection report (e.g., "INTEGRATED INSPECTION REPORT") followed by the report number, IR-XX-XXX.
- 6.1.3 Introductory Paragraph. The first paragraph of the letter should give a brief introduction, as follows.

EXAMPLE: "From July 8 - 12, 2002, the Office of River Protection performed an inspection of Bechtel National, Inc. (BNI) QA, including Records Management and Document Control. The inspectors identified one Finding related to a failure to track and to review document revision history, which is documented in the Notice of Finding (Enclosure 1)."

- 6.1.4 Body of the Letter. The ensuing paragraphs should discuss the most important inspection results, including Findings, significant issues, or conclusions. Considerable flexibility is possible in terms of choosing the proper content and overall message of the cover letter. In general, this portion of the cover letter should focus on clearly communicating a few main points (or a single point) that are well supported by the executive summary and report details rather than attempting to deliver a large number of points or extensive detail.

If no Findings or significant issues were raised by the inspection, this section should briefly summarize the scope of specific inspection activities performed. This will substantiate the conclusion that "no findings or significant issues were identified."

- 6.1.5 Closing. The signature of the ORP Manager is followed by a list of enclosures (if applicable) and any cc: distribution.

6.2 REPORT COVER PAGE

The report cover page provides a summary of information about the inspection. It contains the dates of the inspection, the report number, and the names and titles of participating inspectors and the VCO.

For vendor inspections, the cover page should list the name of the company, its principal product (i.e., a description of the types of components, equipment, or services supplied), and a brief statement describing the vendor's nuclear industry activity.

6.3 EXECUTIVE SUMMARY

The executive summary should be informative but concise. An inspection report summary will be a useful overview tool for Contractor management and for OSR staff when preparing management briefings.

6.3.1 Introduction. The summary should begin with a one- or two-sentence introduction that covers the type of inspection, scope (i.e., the Contractor programs or functional areas inspected), and any special details.

EXAMPLE: "This integrated inspection included aspects of Contractor operations, engineering, maintenance, and plant support. The report covers a six-week period of announced inspections by engineering and radiation specialist inspectors."

6.3.2 Presentation of Significant Observations and Conclusions. The list of issues that follows should be in the same order as the report details (modeled after the standard inspection report outline included as Attachment 2). In essence, the executive summary should be compiled by scanning each report section and writing a concise summary sentence for each Finding, significant issues, and conclusions. As a minimum, the executive summary should include a general conclusion on the adequacy of each program area in which significant inspection was performed.

NOTE: AFIs should not be discussed in the executive summary (i.e., where more information is needed to reach a Finding or conclusion). If a Finding or conclusion was made in an area related to the open item, the executive summary may include that Finding or conclusion.

When negative observations are included in the executive summary, the usefulness of those observations will be increased by concisely stating the root cause (if the root cause has been determined). When broad conclusions are included, indicating unusually positive or negative performance in a particular area of inspection focus, the conclusions will be made more useful by providing a brief but supportive example.

6.4 TABLE OF CONTENTS

For reports of significant length (i.e., in which the report exceeds 5 pages), the writer should consider including a table of contents to aid the reader.

6.5 REPORT DETAILS: USE OF THE STANDARDIZED REPORT OUTLINE

Report details should be topically arranged in accordance with the standardized report outline (see Attachment 2). This does not mean that each outline topic should be addressed in each report; however, to the extent that inspection is performed in a particular area, the resulting observations should be placed in the corresponding standard section of the report.

NOTE: Conformity to the standardized outline should not result in artificially fragmenting an event description or separating report details that would logically be presented together. Regardless of which section the writer finds most appropriate, the basic details need only be presented once.

6.6 REPORT DETAILS: INTERNAL ORGANIZATION OF SPECIFIC SECTIONS

Differences in the nature, significance, and complexity of individual observations result in considerable variety in how those observations are organized and presented. However, the overall organization of each report section should follow the same basic progression of logic: inspection scope, observations and assessments, and conclusions.

6.6.1 Inspection Scope. As previously discussed, this description should be complete and factual but concise. A tabular format is usually the most clear; the inspector can use this format to list systems and components inspected, specific work activities or plant evolutions that were monitored, procedures and records reviewed, etc.

6.6.2 Observations and Assessments. This portion of each report section should be used to present, in a narrative format, the inspection results. At this stage in the report, the inspector may choose to simply number issues sequentially, with appropriate subheadings, or may use another method of organizing the issues (see Section 7.2 for additional guidance on methods of organization).

6.6.3 Conclusions. In general, each report section should contain a conclusion section. In appropriate cases, the assessments should be related to the broader context of the particular Contractor's program. The relationship among assessments will vary. In some cases, the conclusions will be specific to the individual report section. In other instances, the assessments of several report sections can be integrated into a broader conclusion.

NOTE: When a given section of the report only involves closure of one or more open items, a separate conclusion section may not be needed or appropriate.

6.7 EXIT MEETING SUMMARY

The final section of each inspection report should be a brief summary of the exit meeting. This summary normally should include the following elements.

- 6.7.1 Characterization of Contractor Response. In general, the report should not characterize a Contractor's exit meeting response as one of wholehearted acceptance of the inspection observations. If the Contractor generally agreed with the results presented, the exit meeting characterization might read as follows:

EXAMPLE: "The inspectors presented the inspection results to members of Contractor management at an exit meeting on June 12, 20___. The Contractor acknowledged the observations presented."

On the other hand, when the Contractor disagrees with the inspectors' assessment of a particular observation of Finding, this position should be briefly and specifically characterized. Specific items discussed elsewhere in the report should not be described in detail in this section.

- 6.7.2 Contractor Oral Statements and Regulatory Commitments. If, at the exit meeting or at any other time during the inspection, the Contractor verbally states that it will take a specific action, the report should attempt to accurately characterize that statement. As determined by the significance, complexity, subject area, and resource expenditure involved, the inspector should ensure that such oral statements are made or endorsed by the proper member of Contractor management. Inspectors should be careful to differentiate between (1) Contractor general descriptions of "voluntary enhancements" or general intent; and (2) oral statements of the Contractor's intent to make a specific regulatory commitment (i.e., to submit, on the docket, a written commitment to take a specific action).

Because regulatory commitments are a sensitive area, the inspector should also ensure that any reporting of such a Contractor oral statement is accurately characterized. When the Contractor makes an oral statement reflecting its intent to make a regulatory commitment, the report cover letter should ordinarily state the OSR's understanding of that proposed commitment and request that the Contractor clarify any differences in understanding. This will ensure a clear, mutual understanding of such issues.

- 6.7.3 Absence of Protected Information. At the exit meeting, the inspectors should verify whether the Contractor considers any materials provided to or reviewed by the inspectors to be "limited rights data" as defined in the Contract.

NOTE: When an inspection is likely to involve limited rights data (i.e., based on the technical area or other considerations of inspection scope), the topic of how to handle such information should be discussed at the entrance meeting. If the Contractor does not identify any material as limited rights data, the exit meeting summary should include a sentence to that effect.

EXAMPLE: "The inspectors asked the Contractor whether any materials examined during the inspection should be considered limited rights data. No limited rights data was identified."

- 6.7.4 Subsequent Contacts or Changes in OSR Position. The report writer should briefly discuss any significant contacts between the inspectors and Contractor staff or management that occur after the exit meeting (e.g., to discuss new information relevant to an inspection observation, conclusion, or Finding). In addition, as discussed earlier, if the OSR's position on an inspection Finding changes significantly after the exit meeting, that change should be discussed with the Contractor before the report is issued.

6.8 REPORT ATTACHMENTS

The attachments discussed below should be included at the end of inspection reports.

- 6.8.1 Partial List of Persons Contacted. The report writer should list, by name and title, those individuals who provided significant information or were key points of contact during the inspection (except in cases where there is a need to protect the identity of an individual). An exhaustive list is neither required nor desirable; five-to-ten key individuals is sufficient. The list should include the most senior Contractor manager present at the exit meeting. The list should also include other OSR technical personnel who were significantly involved if they were not listed as inspectors on the cover page.
- 6.8.2 List of Inspection Procedures Used. The report should list, by procedure number and title, the inspection procedures used.
- 6.8.3 List of Items Opened, Closed, and Discussed. The report should provide a brief reference list of open and closed items, including the item number, the IFS code for the item, and a brief phrase (10 words or less) describing the item. Open items that were discussed (but not closed) should also be included in this list.
- 6.8.4 List of Acronyms. All inspection reports should include a list of acronyms. All acronyms should also be clearly defined when first used in the text with the acronym used thereafter.

7.0 GUIDANCE - INSPECTION REPORT STYLE

An inspection is often evaluated on the basis of the clarity of the inspection report. Even the most intensive inspection effort may not succeed in delivering the desired safety messages if the inspection results are not clearly presented. On the other hand, a clear writing style that communicates the desired safety issues increases the professionalism of the product and can enhance the credibility of a good inspector (and the OSR).

7.1 CHARACTERISTICS OF GOVERNMENT TECHNICAL WRITING

Government technical writing, as it appears in OSR inspection reports, combines aspects of scientific, legal, and corporate communication. Because few inspectors possess the combined skills of a scientist, attorney, and business executive, certain aspects of OSR report writing are standardized. Four specific writing styles will be discussed in this section: boilerplate; standard grammatical tenses, "purple" language; and technical, legal, or local jargon.

- 7.1.1 Boilerplate. Standard paragraphs or phrases, termed "boilerplate," are used for certain sections of the inspection report. Boilerplate is a writing style used to, (1) achieve consistency throughout the OSR among writers whose individual styles may vary, and (2) provide precise wording for statements that may have legal implications. Used properly, boilerplate can save time and effort.

Boilerplate should not be used to substitute for report content, such as when discussing inspection methods, activities inspected, or inspection observations, conclusions, or Findings. On the other hand, once clear standards in a given inspection area have been developed, the inspector may find it useful to repeat those statements in later inspections of the same or similar areas.

- 7.1.2 Grammatical Person, Tense, and Voice Used in OSR Inspection Reports. The use of specific grammatical conventions is another style distinctive of inspection report writing. The narrative sections of a report should be written in the third person, in the past or past perfect tense, in predominately active voice, as follows.

- 7.1.2.1 Always write in the third person.

RIGHT: "The inspectors watched the mechanic remove the check valve."

WRONG: "I watched the mechanic remove the check valve."

- 7.1.2.2 In general, use the past or past perfect tense.

RIGHT: "The plant manager stated that the review committee had been fully staffed as of April 20__."

WRONG: "The plant manager states that the review committee was fully staffed as of April 20__."

NOTE: As a rule of thumb, use the past tense (e.g., "the pump cavitated ..." or "the pump was cavitating ...") when writing about events that occurred during the inspection. Use the past perfect tense (e.g., "the pump had cavitated ..." or "the pump had been cavitating ...") when writing about events that occurred before the inspection.

EXCEPTION: When quoting or paraphrasing existing literature, the present tense may be used (e.g., "10 CFR 830.120 states ..."). However, if using the present tense when quoting a Contractor procedure, be certain that the quotation is current

when the inspection report is issued (or provide the date and revision number of the procedure from which the quote was excerpted).

7.1.2.3 Use predominately active voice (subject-verb-object). Passive voice tends to be more wordy and indirect, and thus more difficult to read and comprehend.

ACTIVE: "The auxiliary operator reported that lube oil pressure was rising."

PASSIVE: "It was reported by the auxiliary operator that lube oil pressure was rising."

In addition, passive voice sometimes fails to identify the subject, or the performer of the action.

PASSIVE: "It was reported that lube oil pressure was rising" or "Lube oil pressure was reported to be rising."

In cases such as the latter example, the use of passive voice actually results in omitting information that could be important in evaluating the significance of the observation.

7.1.3 "Purple" Language. "Purple" language refers to words or phrases that have undesirable connotations or hidden implications, such that a reader might misconstrue the writer's meaning and therefore should not be used. Consider the following examples.

EXAMPLE: "The inspectors concluded that the Contractor had a wonderful quality assurance program."

PROBLEM: The term "wonderful" is imprecise, subjective, and unsupported; a more concrete description, detailing those aspects of the QA program that seemed superior, is more appropriate.

EXAMPLE: "Radiation protection controls had been carelessly disregarded by the maintenance staff."

PROBLEM: Because terms such as "careless disregard," "willful," and "deliberate" represent OSR conclusions with enforcement connotations, they should not be used in a report narrative unless they represent a formal OSR conclusion.

EXAMPLE: "By waiting until the last minute to return the cooling water pump to service, the Contractor narrowly missed getting an OSR Finding."

PROBLEM: The inspection report is not a forum for the inspector's opinions or conjecture; observations should be factual rather than speculative.

For further discussion on evaluative terms, see Section 5.5.3.1. For further discussion on willfulness and related topics, refer to Section 5.4.2.

- 7.1.4 Technical, Legal, and Local Jargon. Because of the specialized technical and legal aspects of the OSR's oversight role, inspectors must maintain sensitivity to the use of specialized vocabulary in inspection reports. The use of technical and legal jargon is expected and necessary; however, inspectors should explain terms that are likely to be unfamiliar to the "target reader" (see Section 5.3.1).

7.2 CLEAR ORGANIZATION

The attribute most likely to make a report appear unprofessional is a lack of organization. This writing style problem is evidenced in reports that (1) leave the reader uncertain as to the main points or overall message; (2) blur the distinctions among observations, assessments, and conclusions; (3) fail to present observation and Findings in terms of relative significance (i.e., treat all observations and Findings with the same priority and level of detail); (4) present redundant information throughout the report (e.g., use the same observation to create issues and Findings and draw conclusions in multiple areas); and/or (5) draw unsubstantiated conclusions, or make contentions in the cover letter or executive summary, that do not match the report observations.

Use of a standardized report outline and format for report sections helps writers to achieve more coherent report organization, but is frequently not enough. For writers who struggle with organization, or for accomplished writers who want to further improve their writing style, several specific actions may prove useful.

- 7.2.1 Managing the Writing Process. Many writing courses are designed for effective business memo or letter writing. These courses teach the mid-level executive how to break down the writing process into manageable steps. The same techniques, slightly modified, can be applied to OSR inspection report writing.

Writing involves planning, brainstorming, organizing, drafting, and revising. Trying to perform all of these activities at once will produce "writer's block," incoherent presentation of issues and observations, sloppy final drafts, and extended cycles of report review and revision. A more effective writing style is to break down the writing process into stages to avoid frustration, save time, and produce a more professional product.

Attachment 3 provides detailed guidance on managing the writing process in this manner.

- 7.2.2 Standard Organizational Techniques. Within the "Observations and Assessments" portion of each report section, the inspector must determine how to organize the observations relevant to that area. When few issues exist, organization is simple. However, when extended evaluation of a Contractor program has resulted in a large number of issues, the inspector must group the issues into logical categories and arrange the issues within each category into some logical order. Several methods may be used, as follows.

- Order of Importance. To present the observations, assessments, and Findings within each category, beginning with the most significant
- Chronological. To present the essential details of a complicated event
- Comparison/Contrast. To write observations and Findings in which the regulation or Contractor commitment is quoted or paraphrased and closely parallel language is used in the "Contrary to" statement. This is also an effective method for presenting a negative observation in the report details section.

7.2.3 Use of Repetitive Formats. Most inspection writing tasks are repetitive in organization. By identifying the basic structure of each type of report section, the inspector can use this repetitiveness to make the organization of details much easier.

EXAMPLE: Consider the details usually present in closing an open item. List the types of information that may be included: a description of the issue; Contractor corrective actions; an indication of the item's open or closed status; the applicable regulatory criteria; the inspector's actions to verify resolution of the issue; the root cause (when following up on an event or a Finding); and the IFS number of the open item.

Now arrange these pieces of information into a logical order and create a series of steps for documenting the closure of an open item.

1. Provide the IFS number of the open item.
2. Indicate next to the IFS number whether the item will remain open or closed.
3. Briefly describe the issue.
4. In the description, reference the regulatory criteria, if applicable.
5. State the root cause, if desired.
6. Describe the Contractor's corrective actions.
7. Describe the actions taken by the inspector to verify resolution of the issue.

Some types of information, such as a statement of root cause, will not be included for less significant issues or when the follow-up results are routine and straightforward. The underlying organization, however, will remain the same.

This technique can be applied to most sections or subsections of the inspection report. Once the structure has been established and repeated several times, the organization of similar details in later reports can become almost automatic, saving time and effort.

7.3 EFFECTIVE REVISION

Because of deadlines and other pressures, many writers submit their products for review and approval immediately after the report has been drafted, without taking the time for effective revision. Whether reviewing one's own report or that of someone else, the following guidance will be helpful in ensuring that the report (1) communicates clearly, (2) achieves professionalism in the writing style, and (3) avoids embarrassing mistakes.

NOTE: The guidance below is summarized in a report review checklist included as Attachment 4 to this procedure.

Levels of revision should be prioritized. Some corrections are more important than others. If the reviewer begins by focusing on spelling and punctuation errors, he or she may be too distracted to notice larger organizational problems. The most effective practice is to revise in several stages.

The first stage is a rapid read through to check for overall coherent organization and level of detail in each report section. If no major revisions are needed, the second stage review is then performed to assess paragraph structure, sentence style, and clarity of syntax. The final stage is a careful word-by-word proofread to check for spelling, punctuation, and accuracy.

7.3.1 Highlighting the Message. The first-stage review ensures that the most significant observations and conclusions will be evident to the reader.

- Are the main topics of the cover letter supported by assessments in the executive summary?
- Are the assessments in the executive summary consistent with the report details?
- Are the main ideas in each section clearly developed (observations translated into assessments; assessments integrated into substantiated conclusions)?
- Is the level of detail appropriate for the significance of the issue and in keeping with the technical expertise of the target reader?

7.3.2 Checking the Style. Even a well-organized report can miscommunicate. Government technical writers sometimes lapse into a "bureaucratese" writing style that can obscure meaning. Long paragraphs and sentences, pompous language, and useless phrases are symptoms of this sort of undesirable bureaucratic style.

By contrast, the second-stage revision can enhance report clarity, in part, by noticing the amount of "white space" on the page. Where appropriate, add emphasis techniques such as subheadings or lists. Make each paragraph coherent and concise. Ensure the predominate use of active voice. Eliminate wordy phrases, false subjects, and other symptoms of "bureaucratese" that weaken sentence clarity. A crisp, clear style will add far more credibility to a report than an inflated vocabulary.

7.3.3 Proofreading. Unfortunately, there is no good substitute for a final, word-by-word proofread. Computer spellcheck systems are helpful but will not identify cases in which the wrong word is used for the context (e.g., "corrective actions were directed by the cite maintenance manager"). This final revision should look for such errors as:

- Improper subject-verb agreement (and other grammatical errors)

- Undefined acronyms
- Typographical errors that result in the wrong word for the context
- Missed or incorrect punctuation
- Metrication mistakes: errors in converting Standard International units to/from English units.

In addition, before the final draft is released, verify the accuracy of all numbers (including page numbers), dates, distribution, and titles.

7.4 WRITING STYLE GUIDES AND USEFUL OSR REFERENCES

Few writers can recite all the rules of English grammar, and few inspectors can remember the large assortment of boilerplate and guidance. Familiarity with a desktop writing guide adds efficiency and confidence in achieving a clear communication style. Most inspectors will find it useful to be familiar with the U.S. Government Printing Office (GPO) Style Manual as a reference source on government writing style. The GPO Style Manual addresses a range of topics from capitalization to compound words.

8.0 RELEASE AND DISCLOSURE OF INSPECTION REPORTS AND ASSOCIATED DOCUMENTS

8.1 GENERAL PUBLIC DISCLOSURE AND EXEMPTIONS

Except for report enclosures containing limited rights data, all final inspection reports will be routinely disclosed to the Tribal Nations and the public. Management Directive 2.1, "Information Management," provides guidance on acquisition and control of OSR records, including inspection-related documents.

9.0 REFERENCES

10 CFR 830, "Nuclear Safety Management," *Code of Federal Regulations*, as amended.

DOE/RL-96-0003, *DOE Process for Radiological, Nuclear, and Process Safety Regulation for the River Protection Project Waste Treatment Plant Contractor*, Rev. 2, U.S. Department of Energy, Office of River Protection, 2001.

ORP Correspondence Manual, Rev. 1, 2002.

RL/REG-97-05, *Office of Safety Regulation Management Directives*, Rev. 2. 2001.

RL/REG-98-06, *Corrective Action Program Description*, Rev. 3, U.S. Department of Energy, Richland Operations Office, 1999.

Safety Requirements Document, (SRD), BNFL-5193-SRD-01-02, Volumes I and II, Rev. 2 & 3, Bechtel National, Inc., Richland, Washington, 2001.

Style Manual, U.S. Government Printing Office for the Joint Committee on Printing, Washington, D.C., 1984.

Attachments:

- Attachment 1, Findings Information Checklist
- Attachment 2, Standard Inspection Report Outline
- Attachment 3, Managing the Writing Process
- Attachment 4, Inspection Report Review Checklist

Attachment 1. Findings Information Checklist

NOTE: This checklist is a guideline for gathering and arranging information and to support "Findings." However, it should not be considered prescriptive, or will it be all encompassing in all cases.

REQUIREMENT

- What nuclear safety management requirement or commitment was not followed? If the requirement was conditional, how were the conditions satisfied which made the requirement applicable?

STATEMENT OF FINDING

- How was the requirement or commitment violated?
- By whom (individuals and titles) was the requirement or commitment violated?
- When was the requirement or commitment violated and what was the duration of the violation?

CONTEXT

- What were the circumstances surrounding the Finding (such as system configuration and operational conditions)?
- How, when, and by whom (Contractor or OSR) was the Finding discovered?
- When was the Contractor made aware or put on notice of the problem requiring corrective action?
- Was the Finding the result of a self-disclosing event?

ROOT CAUSE/CORRECTIVE ACTION

- What was the apparent root cause (and contributing causal factors) for the Finding?
- What were the short-term corrective and remedial actions and when were they taken?
- Did the OSR have to intervene to accomplish satisfactory short-term corrective and remedial action and, if so, to what degree?
- Were the Contractor's corrective actions comprehensively or narrowly focused?

SIGNIFICANCE

- What was the actual safety consequence of the Finding (e.g., overexposure, release of radiation, loss of redundancy, inoperable safety system, degraded system, etc.)?
- What was the potential safety consequence of the Finding?
- Are there other circumstances surrounding the Finding which increase or decrease its significance (e.g., appearances of willfulness, careless disregard)?

NOTE: Inspection documentation should describe the circumstances of the Finding in a manner to support later discussions regarding any potential enforcement action. However, inspection reports should not offer conclusions regarding safety significance, willfulness, or careless disregard, as these are DOE conclusions.

- Was Contractor management aware of, or should it have been aware of the Finding?
- Is there evidence that Contractor management was involved directly or indirectly in the Finding and to what extent?
- Is the Finding repetitive or similar to past Findings? If so, should the previous corrective actions have been adequate to prevent recurrence?
- Are the inspection Findings of programmatic problems?

ADDITIONAL FACTORS

- If the Finding was a result of a self-disclosing event, did the Contractor demonstrate initiative in identifying the root cause?
- Were there prior opportunities for the Contractor to have identified the Finding, such as by audits or OSR notification that would have reasonably put the Contractor on notice of the potential for a Finding?
- Do the inspection Findings represent another example of poor performance or do they represent an isolated occurrence?
- Were there multiple examples of a particular Finding?
- Did the duration of the Finding add particular significance to the issue?

REPORTABILITY

- If the Finding or the conditions leading to the Finding were required to be recorded in internal logs or records and the matter was not properly recorded, what was the applicable recording requirement?
- Was the Finding required to be reported and, if so, what was the applicable reporting requirement?
- Was the Finding reported and, if so, when and by whom was it reported?
- If the Finding was reported, but the report was late, why was the report late?
- Was the report complete and accurate?

Attachment 2. Standard Inspection Report Outline

In addition to the major areas listed below, generic or routine areas inspected should be included in the inspection report. For most facility inspections, only a few of these areas will have been inspected or applicable for that inspection. As described below, the "Report Details" section should include any other areas that were inspected but are not named in this outline.

- Cover Letter
- Cover Page
- Executive Summary
- Persons Contacted.

Report Details:¹

1. Introduction (optional for team inspections and original program inspections).
 - a. Process Background
 - b. Inspection Overview.
2. Programmatic Areas Inspected (if appropriate, each area could correspond to a different inspection procedure covered during the inspection).
 - a. Each major area could be divided as necessary. For instance, "Radiation Protection" could be subdivided into Internal, External, Members of the Public, and Records.
 - b. Use as many divisions and subdivisions as necessary.
3. If more than one programmatic area was inspected, enter the next major programmatic area inspected, such as:
 - Facility Operations
 - Chemical Safety
 - Criticality Safety
 - Radioactive Waste
 - Physical Protection
 - Radiation Protection
 - Transportation
 - Names of Contacts
 - Assessment Follow-up Items (AFIs) Reviewed
 - Exit Meeting Summary
 - List of Acronyms

¹ Scope observations, demonstrations, measurements (both independent measurements and confirmatory measurements), and conclusions made by the inspector during the course of the inspection should be described in the most applicable section of the "Report Details."

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Attachment 3. Managing The Writing Process

1. Introduction: Writing Efficiently and Clearly. Few inspectors place report writing high on their list of favorite activities. For many, the writing process is a frustrating, laborious experience involving many revisions. Contrary to popular belief, however, techniques can be learned that will make the writing experience more manageable.

Learning to present facts in a clearly developed, logical order is a key ingredient in developing communication skills. By consistent practice, one will recognize patterns of thought and repetitive arrangements of similar facts that will increase both the speed and effectiveness of the writing process. In addition, these familiar, repetitive ways of thinking will help inspectors ask key questions earlier in the inspection process, thus improving their field inspection skills as well as their writing.

2. Separating the Parts of the Writing Process. Writing involves planning, brainstorming, organizing, drafting, and revising. Trying to perform all of these activities at once will produce "writer's block," incoherent presentation of observations, sloppy final drafts, and extended cycles of report review and revision. A more effective writing style is to break down the writing process into stages to avoid frustration, save time, and produce a more professional product.

- a. Planning. For the inspector, planning is the simplest stage of the report writing process. It is useful to ask two important questions that will help to maintain later focus:

- What is the purpose and scope of this inspection report?
- Who are the readers and what are their priorities?

Ideally, these questions will be answered before the report writing begins. The purpose of the inspection report will vary slightly with the nature of the inspection observations (e.g., depending on whether significant weaknesses or Findings were identified). The scope of the inspection report will be similar to the scope of the inspection itself, which in turn may be largely determined by the scope of a well-prepared inspection plan.

The report's principal readers will be Contractor and OSR management. The priorities of the reader will include understanding observations and assessments (and perhaps defending a differing perspective), evaluating the conclusions, improving facility safety, protecting health and safety and the environment, continuing unhampered operation, and maintaining good public relations. Being aware of these reader priorities will not change any of the inspection results (i.e., the report observations, assessments, and conclusions); however, it will help to make the writer a better communicator (e.g., in setting the proper tone for the cover letter or in emphasizing the need for written conclusions to be well supported by facts).

In addition, never expect to become a skilled inspection report writer unless the inspection itself is well planned. The importance of a detailed inspection plan cannot be overemphasized; it will not only influence the effectiveness of the inspection but also will directly affect the amount of time spent on writing. A good inspection plan is the first report outline.

- b. Brainstorming. Brainstorming involves the rapid, non-critical dumping of ideas onto paper (or into a computer). Like planning, brainstorming will first occur during the construction of an effective inspection plan. In addition, brainstorming can be used during almost any inspection, as inspectors speculate on the implications of their observations and inspect new areas.

In writing reports, brainstorming is the single most effective weapon against writer's block. When presenting a difficult technical issue, writer's block may result from the unrealistic goal of trying, simultaneously, to remember all the necessary details, balance each one against the appropriate regulatory criteria, analyze the major areas of discrepancy, and formulate the massive amount of information into a coherent, well-organized report section.

Instead, brainstorming can be used by rapidly listing all the related ideas on paper or computer working from one's memory and inspection notes. Avoid worrying about organization or relative importance or what the report reviewer will think. Brainstorming is complete only when the writer has ensured that all details relevant to this report section have been written down. At that point, proceed to the next step of the writing process.

- c. Organizing. Organizing naturally follows brainstorming. Group the brainstormed ideas into topical categories, then arrange each of the ideas within each category in a logical order. If the scope of the inspection did not change significantly, these categories and their order may correspond naturally to the outline already provided by the original inspection plan. Standard methods of organizing details include the following.

- Order of Importance. Within each category, present the observations and assessments beginning with the most significant.
- Chronological. This method is useful in presenting the essential details of a complicated event.
- Comparison/Contrast. This is the organizational method used for writing Findings in which the regulation or commitment is quoted or paraphrased and closely parallel language is used in the "Contrary to" statement. This is also an effective method for presenting a negative observation in the report details section.

In addition, "repetitive formats" may serve as helpful organizational models for certain types of assessments where the underlying structure is generally the same from one report to another (such as when documenting events, follow-up of open items, Findings, review of audits, etc.). This technique is an extremely effective time saver. Section 7.2.3 of this procedure provides additional guidance on how to create and use these "repetitive formats."

- d. Drafting. Now it is time to draft the report. Most of the distaste inspectors have for report writing is focused on this stage of the process. However, as stated earlier, frustration in writing is often the result of trying to do too many things at once. By breaking the writing task into separate, manageable steps, drafting itself becomes a shorter, less complicated process.

If the planning, brainstorming, and organizing stages have been performed well, and the temptation to revise throughout these stages has been avoided, one can write a draft rapidly and effectively. This usually involves unlearning bad habits and requires practice. Follow these drafting steps:

- Work from the outline of categories and brainstormed, organized notes
- Begin with any section
- Write quickly
- Resist the temptation to edit.

The last step is the most difficult. Most writers have learned to reevaluate spelling, syntax, organization, and even the value of the written content while they are actually drafting. By resisting this acquired habit, the drafting process becomes faster, revision becomes a natural part of the writing process, and the result is both more polished and quickly produced.

- e. Revising. Always allow some time between the drafting and revising stages. This will enable the writer to have a fresh perspective when finally reviewing the draft, and to be more effective in identifying mistakes.

In addition, the first draft should never be submitted to one's supervisor for review. Supervisors often take on the role of technical editor, making the review and concurrence process into a frustrating cycle of revised revisions. Learn to responsibly edit your own work.

Levels of revision should be prioritized. Some corrections are more important than others; spelling and punctuation can distract from larger organizational problems. The most effective practice is to revise in several stages.

The first stage is a rapid read through to check for overall coherent organization and level of detail in each report section. If no major revisions are needed, the second stage review is then performed. This stage involves reading to assess paragraph structure, sentence style, and clarity of syntax. The final stage is a

careful word-by-word proofread to check for spelling, punctuation, and accuracy. An Inspection Report Review Checklist that explains each of these revision stages is provided as Attachment 4.

3. Understanding the Supervisory Review Process. The inspection report review and concurrence process is frequently an area of inefficiency. For both supervisors and inspectors, it can become the focus of considerable frustration. Much of this frustration originates from miscommunication, unclear standards, and misunderstood roles. By understanding the review process and applying intelligent effort, these interactions can be positive and productive.

a. The Importance of Supervisory Review. The inspector and the supervisor are in some ways like liaisons to the outside. The inspector, as the OSR's "eyes and ears," interacts with the Contractor, subcontractor, or vendor with a responsibility to observe accurately, analyze logically, and report the results. The supervisor's responsibility is to ensure that when these results are available in their final written form, they reflect past Findings, current knowledge, and approved OSR emphasis.

In producing high-quality inspection reports, therefore, the supervisor serves a vital (but often misunderstood) role. The supervisor is a shield between the inspector and certain "hazards," such as unintentional backfits that impose new requirements on the Contractor, inconsistent OSR positions, and retracted Findings. In the role of liaison, the supervisor anticipates the reactions of the report's readers (such as the Contractor, OSR and DOE management, Tribal Nations, and the public). The supervisor also ensures that the report's message is clear and appropriate in terms of safety significance, OSR position, and general tone.

Conversely, the supervisor should not be viewed as a technical editor. The supervisor's function should not be to correct spelling errors, break up long paragraphs, and fix problems of report organization. In such cases, he or she can easily become so immersed in the report details that the more important supervisory functions described above are lost.

When the supervisor's role becomes blurred in this manner, a cycle of inefficient review and concurrence begins. The draft report circles in a path from the supervisor to the inspector to technical editing/word processing and back again. By understanding the proper importance of supervisory review, and by making thorough accurate revision one's own responsibility, this inefficiency can be avoided.

b. Writing Expectations. Despite the best efforts of English instructors, writing remains a changing and subjective science. This procedure establishes a standard style and format for inspection reports; some aspects of writing, however, remain a matter of personal preference. The supervisor may have specific additional standards in these areas.

When the review and concurrence process has become the focus of frustration, it may be due to ill-defined supervisory expectations. If the writing standards of the supervisor and inspector differ, both will save a great deal of effort by taking the time to clarify those standards.

- Ask for a "model report" that meets the supervisor's standards. If possible, ask the supervisor to make clarifying remarks in the margins of the model report about his/her expectations.
- When changes are made to the report, try to decipher the rule behind the change. Ask for clarification that will make the supervisor's comments useful for future reports (e.g., "Do you prefer that I always refer to the regulatory criteria before discussing the related Findings?").

- c. Cooperative Writer/Reviewer Relationship. A cooperative inspector/supervisor relationship must be learned, in many cases. Old bad habits often result in new bad habits. For example, a non-cooperative writer/reviewer relationship may condition an inspector to expect that his/her reports will always require significant revision; as a result, the inspector may become complacent about submitting a report known to contain errors.

Clarifying the supervisor's writing standards, as discussed above, is one step in changing the "old habits." Three more are discussed below: early supervisory involvement, effective debriefings, and submitting final drafts.

- Early Supervisory Involvement. If the inspector waits to involve the supervisor in the inspection results until after the inspection, then it should not be unexpected to have the observations and assessments challenged at the debriefing. Even worse, is to first inform one's supervisor about the observations and assessments by handing in a draft report; the review and concurrence process may become lengthy simply in order to give the supervisor time to mull over the inspector's ideas.

Ideally, "supervisory review" should begin at the inspection planning stage. A short briefing explaining the intended inspection scope will plant the areas of focus in the supervisor's mind, begin the cooperative effort, and build respect.

If a supervisor tends to respond to an inspector's assessments by suggesting additional areas for inspection, the inspector will profit by receiving that input as early as possible. Telephone discussions with a supervisor several times during the inspection will continue the cooperative effort (brainstorming is even more effective with two people).

- Effective Debriefings. As a matter of routine, conduct a brief discussion with the supervisor before the exit meeting. By evaluating the inspection

assessments at this stage, one will avoid inconsistencies between the exit meeting and final report.

In any event, be sure to hold a thorough, organized debriefing with the supervisor before beginning to write the report. Two rules apply:

- Always try to resolve differences of opinion before writing about them. (Sometimes you will hear a statement like, "Well, why don't you try writing it up and we'll see how it looks on paper . . ." Using this approach to resolving technical or compliance issues is a sure avenue to inefficiency. Disagreements take much longer to resolve on paper than in oral discussion. Written products should become the arena for resolving differences only when unavoidable.)
 - Give the supervisor a mental picture of what the report will look like. By preparing and presenting observations and assessments in a well-organized debriefing, the inspector's and supervisor's expectations about the content and tone of the final report will become aligned.
- Submitting Final Drafts. If possible, never give a reviewer anything other than a final draft (i.e., do not submit a draft before revising it oneself). The presence of errors (even minor spelling and punctuation errors) will predispose any reader to believe the document is also flawed in other ways.

Attachment 4. Inspection Report Review Checklist

The checklist can be an effective aid for writers and reviewers. It is not intended to be a prescriptive recipe; however, used consistently it will add considerable focus and efficiency to the writing/review process and will improve the clarity of the written product.

FIRST-STAGE REVIEW

COVER LETTER

- The major idea is clearly presented.
- The message is supported by observations and assessments in the executive summary.
- The letter uses appropriate tone.

EXECUTIVE SUMMARY

- Organization follows the order of the standardized report outline.
- Each significant assessment and conclusion are presented in a clear, concise description.
- Executive summary assessments are supported by report details.

REPORT DETAILS: OVERALL ORGANIZATION

- Organization follows the order of the standardized report outline.
- Each report section uses standard internal organization.
- "Areas Inspected" sub-sections are presented clearly and concisely.

REPORT DETAILS: PRESENTATION OF REPORT OBSERVATIONS/ASSESSMENTS/ CONCLUSIONS

- Thresholds of significance (in determining what to document) are appropriate.
- Assessments are clearly developed.
 - Main ideas are clearly presented.
 - Observations are placed in context.
 - Assertions are supported by facts.
 - Requirement or standard is included, where appropriate.
 - Contractor response to assessments is included, where appropriate
- Level of detail is appropriate (based on significance, complexity, and reader awareness).
- Conclusions are of appropriate scope.
 - Conclusions are substantiated and assessments are incorporated.
 - If substantial inspection has occurred, an assessment of program adequacy results.

SECOND-STAGE REVIEW

CLEAR PRESENTATIONAL STYLE

- Subheadings are used where appropriate.
- Emphasis techniques (bullets, underlining) are used where appropriate.
- Statistical data are presented in graphic or tabular format.

PARAGRAPHS

- Each paragraph develops only one main idea.
- The main idea of the paragraph is clearly presented.
- Paragraphs are generally a maximum of 10-12 lines.

SENTENCES

- Active voice predominates (subject-verb-object).
- Wordy phrases are avoided (e.g., "Due to the fact that ..." versus "Because ...").
- False subjects are avoided (e.g., "It is clear that ..." versus "Clearly ...").
- Weak verbs are avoided (e.g., "The Contractor gave authorization to ..." versus "The Contractor authorized ...").
- Word selection reflects a generally understood vocabulary (except where the use of technical jargon is necessary).

THIRD-STAGE REVIEW

- Cover letter, cover page, executive summary, and report details are accurate and consistent on all dates, distribution, titles, etc.
- Index accurately reflects section headings and page numbers.
- Acronyms and initialisms are defined.
- Grammar and punctuation are correct.
- Spelling is correct.

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