UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV
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July 19, 2002

EA-01-236

J. V. Parrish
Chief Executive Officer
Energy Northwest
P.O. Box 968; MD 1023
Richland, Washington 99352-0968

SUBJECT: COLUMBIA GENERATING STATION - NRC SUPPLEMENTAL INSPECTION REPORT 50-397/02-07

Dear Mr. Parrish:

On May 13 through June 6, 2002, the NRC conducted a supplemental inspection at your Columbia Generating Station. A preliminary exit meeting was held on site on May 17, 2002, and a final exit meeting was conducted with you by telephone from the NRC Region IV office on June 6, 2002. The enclosed report documents the inspection findings which were discussed with you and other members of your staff.

The NRC determined that a degraded emergency preparedness cornerstone existed at Columbia Generating Station based on one Yellow inspection finding that was documented in Inspection Report 50-397/01-08. This finding involved the failure to meet the requirements of 10 CFR 50.54(q) in that the licensee did not follow and maintain emergency plans and procedures which meet the standards in 10 CFR 50.47(b).

The risk-significant performance weakness associated with this finding involved a failure of the emergency response organization to ensure that members of the public on the facility owner controlled area were aware of actions that would be required of them and that they could be reliably evacuated, monitored, and decontaminated as needed in the event of an emergency at the Columbia Generating Station.

This supplemental inspection was conducted to provide assurance that the root and contributing causes of the Yellow inspection finding are understood, to independently assess the extent of the condition, and to provide assurance that the corrective actions for risk significant performance issues are sufficient to address the root cause and contributing causes and prevent recurrence of the problems. Detailed observations, assessments, and conclusions of the inspection are presented in the enclosed inspection report.

The root cause of the finding was adequately defined and understood, and the collective corrective actions resulting from the evaluations of the finding appropriately addressed the identified causes. However, some weaknesses were noted in the root cause and extent of condition evaluations. Details of these weaknesses are discussed in the enclosed inspection

report. The weaknesses did not invalidate the evaluations because the corrective actions implemented as a result of these evaluations were appropriate for all causes identified by both your staff and the NRC.

A public meeting was held on February 21, 2002, between Energy Northwest and the NRC to discuss your completed and planned corrective actions to address the Yellow finding. The results of our inspection indicate that the actions you have taken are substantially consistent with the actions you described at that meeting. Therefore, the exit meeting for this inspection was not held in a public forum.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," a copy of this letter and its enclosure will be available electronically for public inspection in the NRC Public Document Room or from the Publicly Available Records (PARS) component of NRC's document system (ADAMS). ADAMS is accessible from the NRC Web site at http://www.nrc.gov/reading-rm/adams.html (the Public Electronic Reading Room).

Sincerely,

/RA/ DAP

Elmo E. Collins, Director
Division of Reactor Safety

Docket: 50-397
License: NPF-21

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NRC Inspection Report No.
50-397/02-07

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U.S. NUCLEAR REGULATORY COMMISSION

REGION IV

Docket No: 50-397

License No: NPR-21

Report No: 50-397/2002-07

Licensee: Energy Northwest

Facility: Columbia Generating Station

Location: Richland, Washington

Dates: May 13 through June 6, 2002

Inspectors: R. Lantz, Senior Emergency Preparedness Inspector
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R. Moody, Emergency Preparedness Specialist, Office of Nuclear Reactor Regulation
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Division of Reactor Safety

SUMMARY OF FINDINGS

Columbia Generating Station
NRC Inspection Report 50-397/2002-07

IR 05000397-02-07, Energy Northwest, 5/13 through 6/6/2002, Columbia Generating Station. Supplemental inspection for a degraded emergency preparedness cornerstone from one Yellow inspection finding.

The inspection was conducted by two region based inspectors, one headquarters based emergency preparedness specialist, and two resident inspectors based at the facility. The NRC's program for overseeing the safe operation of commercial nuclear power reactors is described in NUREG-1649, "Reactor Oversight Process," Revision 3, dated July 2000."

Cornerstone: Emergency Preparedness

The U.S. Nuclear Regulatory Commission (NRC) performed this supplemental inspection to assess the licensee's evaluation associated with the failure to meet the requirements of 10 CFR 50.54(q) in that the licensee did not follow and maintain emergency plans and procedures which meet the standards in 10 CFR 50.47(b). This performance issue was previously characterized as having substantial risk significance ("Yellow") in NRC Inspection Report 50-397/2001-08. During this supplemental inspection, performed in accordance with Inspection Procedure 95002, the inspectors noted that although some weaknesses in the root cause analysis process challenged the consistency of adequately conducting those evaluations, the licensee performed a comprehensive evaluation of the Yellow finding. The weaknesses had been identified by the licensee and corrective actions to address those weaknesses will be reviewed in a future NRC inspection. The licensee's evaluation identified the primary root cause of the performance issue to be inadequate monitoring by the Columbia Generating Station Emergency Preparedness staff of activities at the Site One industrial complex.

Given the licensee's acceptable performance in addressing the issue, the Yellow finding associated with this issue was only considered in assessing plant performance for a total of four quarters in accordance with the guidance in Inspection Manual Chapter 0305, "Operating Reactor Assessment Program." The issue was identified in the third quarter of 2001, therefore it was no longer considered in assessing plant performance after the second quarter of 2002.

Report Details

01 INSPECTION SCOPE

The U.S. Nuclear Regulatory Commission (NRC) performed this supplemental inspection to assess the licensee's evaluation associated with the failure to meet the requirements of 10 CFR 50.54(q) in that the licensee did not follow and maintain emergency plans and procedures which meet the standards in 10 CFR 50.47(b). This performance issue was previously characterized as having substantial risk significance ("Yellow") in NRC Inspection Report 50-397/2001-08 and is related to the emergency preparedness cornerstone in the reactor safety strategic performance area.

02 EVALUATION OF INSPECTION REQUIREMENTS

02.01 Problem Identification

a. Determination of who (i.e., licensee, self-revealing, or NRC) identified the issue and under what conditions.

The NRC identified the issue during an emergency preparedness inspection. Problem Evaluation Request (PER) 202-0098, "NRC Yellow finding for 10 CFR 50.47(b)(10)," and NRC Inspection Report 50-397/01-08 both characterized the issue as NRC identified. The root cause evaluation for the issue, contained in PER 201-1793, "Several Concerns Have Been Identified Related to the Adequacy of our Evacuation Process for WNP-1 Staff and WNP-1 Lessees," did not specifically address who identified the issue.

b. Determination of how long the issue existed, and prior opportunities for identification.

The issue had existed for an extended period of time, beginning when construction on units one and four was halted in 1984, and continued through the end of 2001. The licensee identified several opportunities for prior identification, although none specifically addressed the evacuation issue. No other prior industry experience was related to this issue.

c. Determination of the plant-specific risk consequences (as applicable) and compliance concerns associated with the issue.

This issue does not affect core damage frequency but is a significant issue for protection of public health and safety in response to a radiological accident at the facility. Compliance concerns were accurately addressed in the root cause analysis in PER 201-1793.

02.02 Root Cause and Extent of Condition Evaluation

a. Evaluation of method(s) used to identify root cause(s) and contributing cause(s).

Based on concerns expressed by the inspector during the emergency preparedness program inspection in August 2001, PER 201-1793 was initiated on August 23, 2001.

This PER was classified as significant and required a root cause evaluation to be conducted. The root cause evaluation was presented to the Corrective Action Review Board (CARB), which found that the evaluation was too narrowly focused on Site One weaknesses and not on the responsibilities of the the licensee. A revision to the original root cause evaluation was subsequently initiated. Following issuance of the Yellow finding and Notice of Violation by the NRC on December 28, 2001, PER 202-0098 was initiated as required by licensee procedures. The licensee then determined that the root cause evaluation conducted in response to PER 201-1793 should be revised to include the regulatory characterization of the Yellow finding addressed in PER 202-0098. The third and final revision of the root cause evaluation was reviewed by the CARB on January 30, 2002.

The inspectors determined that a formal, systematic approach was not used to conduct the initial root cause evaluation of PER 201-1793. In that initial analysis, each concern identified in the PER was discussed in narrative form and corrective actions (immediate and long term) were determined without documentation of a systematic methodology used to develop them. The licensee's initial root cause analysis focused on programmatic problems rather than systematically evaluating inappropriate actions that may have occurred since Site One ceased construction in 1984. However, limited scope systematic evaluation methods were employed for the second and third revisions of the root cause evaluation. The licensee utilized barrier analysis to identify missed opportunities that contributed to the concerns identified in PERs 201-1793 and 202-0098.

In preparation for the supplemental inspection, the licensee reviewed its procedure SWP-CAP-02, "Root Cause Analysis," and NRC Inspection Procedure 95002. The licensee identified that SWP-CAP-02 had several weaknesses, especially in its ability to guide the conduct of a root cause evaluation and satisfy the inspection requirements of Inspection Procedure 95002. PER 202-1431, "The Root Cause Analysis of PER-1793 and SWP-CAP-02 do not include some important elements described in NRC Inspection Procedure 95002," was initiated to document those weaknesses in the following areas: cause and effect relationship, assessment of the extent of condition, appropriate use of a combination of methods, use of multi-disciplinary teams, and characterization of potential causes. An Apparent Cause Evaluation (ACE) was assigned for PER 202-1431 to evaluate the weaknesses and provide corrective actions.

The inspectors independently evaluated the final root cause report for PERs 201-1793 and 202-0098 and the guidance for conducting a root cause evaluation in SWP-CAP-02. The inspectors observed that the corrective actions identified in the root cause report did not directly address the identified root cause. The identified corrective actions were appropriate to address other failed barriers and contributing causes but did not address monitoring of Site One activities by the Columbia Generating Station Emergency Preparedness (EP) organization. The inspectors agreed with the licensee's conclusions that weaknesses in SWP-CAP-02 contributed to the problems encountered in the completion of the root cause evaluation associated with the Yellow finding. The inspectors concluded that the number of revisions to, and the extended time period to complete, the root cause evaluation contributed to weaknesses in the identification of corrective actions that logically addressed the identified root and contributing causes. The inspectors also agreed with the more generic concern of the potential affect on

future root cause analyses and the effectiveness of past root cause analyses that relied on that guidance. During a future NRC inspection using inspection procedure 71152, “Identification and Resolution of Problems,” NRC inspectors will review the licensee’s corrective actions associated with PER 202-1431 and determine their effectiveness for addressing these concerns. The results of that review will be documented in an NRC inspection report following that inspection.

The inspectors concluded that even though the root cause report did not identify corrective actions that directly addressed the identified root cause, the comprehensive nature of other corrective actions taken to resolve the problem provides assurance that the issue has been adequately evaluated and would not recur.

b. Level of detail of the root cause evaluation.

The inspectors reviewed the root cause analysis for PER 201-1793, and compared the level of detail in that analysis to two other root cause analyses. Each of the three root cause analyses were required to be accomplished by site procedures since the initiating PERs were all classified as significant. Site-wide procedure SWP-CAP-02 provided guidance for conducting the root cause analyses.

The analysis portion of the resolution report for PER 201-1793 was comprised of two parts. The first part analyzed the original six specific concerns documented in the PER. The second part documented the root cause analysis methods and conclusions. A number of corrective actions were developed to resolve the causes and contributing factors associated with the barrier analysis, and the level of detail in the report was sufficient to understand how those corrective actions were identified.

For comparison, the inspectors reviewed the root cause reports associated with PER 201-2754, "The Work Management Process Does Not Always Evaluate Collateral Consequences of Maintenance Activities," initiated on December 8, 2001, and dispositioned on April 4, 2002, and PER 202-0468, "Plant Shutdown Initiated when Station was Unable to Exit LCO 3.8.1 Action B.4 Within the Required Allowed Outage Time due to Inoperable DG2," initiated on February 14, 2002, and dispositioned on March 20, 2002. The inspectors noted, similar to PER 201-1793, that both reports had been revised following review. PER 201-2754 was revised to document interim corrective actions, clearly identify management error codes, and correct grammar. PER 202-0468 was revised to clarify the barrier analysis and its conclusions and correct typographical errors.

The inspectors concluded that the level of detail in the root cause reports for PERs 201-2754 and 202-0468 appeared consistent with PER 201-1793 and appropriate for each report, which included the use of systematic methods, identification of root and contributing causes, review of industry operating experience, and a discussion of generic implications.

c. Consideration of prior occurrences of the problem and knowledge of prior operating experience.

The licensee searched the Plant Tracking List (PTL) for documents related to either "sirens" or "WNP-1." The search of the historical PTL database resulted in 89 records located, none of which were directly related to the inability to notify Site One personnel of the need to evacuate. The search of the active PTL database revealed two PERs that were relevant.

The first, PER 201-0569, "The Accountability Requirements for the Exclusion Area Evacuation are not clearly defined," was identified as a precursor to PER 201-1793, and was assigned an ACE. Based on weaknesses identified in the ACE, PER 201-1829, "Failure to Self-identify and Adequately Correct EP Weaknesses Related to Columbia Generating Station Exclusion Area Evacuation for WNP 1, 4," was initiated to identify the failure of the ACE to preclude the weaknesses documented in PER 201-1793. The subsequent ACE performed in response to PER 201-1829 identified the apparent cause of the problem was a skill-based error on the part of the dispositioning manager regarding corrective actions 6 and 7 in PER 201-0569. In part, corrective action 6 required a review of the adequacy of the existing notification process and systems used at WNP-1 to notify tenants of the need to perform an immediate evacuation of the exclusion area due to an emergency at Columbia Generating Station. Corrective action 7 required development of an exclusion area new tenant evaluation form for potential new tenants inside the Columbia Generating Station exclusion area. The form was developed but was never fully implemented. A contributing factor identified in the ACE report following PER 201-1829 was the lack of rigor on the part of the acting Columbia Generating Station EP manager at the time to ensure all intended issues were identified and addressed in corrective action 6 prior to closing the action. Based on concerns about the identified corrective action weaknesses, PER 201-1866, "Adverse Trend - Several Cases of Ineffective Corrective Actions Leading to Adverse Consequences," was initiated on September 4, 2001, to document several cases of ineffective corrective actions, one of which was exclusion area evacuation capability.

The second PER identified by the licensee that was related to the problem was PER 201-0722, "Control Valve to WNP-1 Buildings 113 and 114 Fire Sprinkler Systems Found Closed." This PER identified two fire protection valves at Site One that were in an improper position and without documentation as to the acceptability of the position by either the on-site safety representative or the Columbia Generating Station fire protection organization. The report stated that this PER was considered to be a parallel case to the Yellow finding in that changes at Site One performed under Site One controls were not consistent with other Columbia Generating Station or Energy Northwest program implementation requirements. In response to the review of industry and in-house events, the licensee initiated a corrective action to develop a formal change management process for Site One that would require reviews by proper Columbia Generating Station groups, e.g., fire protection, emergency preparedness, industrial safety, occupational health, security, and regulatory services, to ensure compliance with various program requirements.

The licensee also performed a keyword search of the Institute of Nuclear Power Operation database. The licensee identified one relevant event report. The event

involved a failure to maintain configuration control of the paging system as new lessees took up occupancy in the owner-controlled area of the plant. The Construction & Maintenance Services group reviewed the event at their morning priority meeting but failed to identify any required action. There is no record of the Columbia Generating Station EP organization evaluating or being notified of the event. Consequently, the licensee initiated a corrective action for the Columbia Generating Station EP organization to review the event for applicability and potential actions.

The licensee's consideration of in-house and industry operating experience related to the problem was adequate, although some weaknesses in the disposition of relevant information were noted.

d. Consideration of potential common cause(s) and extent of condition of the problem.

The licensee identified the root cause of the problem to be inadequate program monitoring of Site One activities by the Columbia Generating Station EP organization. Contributing causes were determined to be a lack of commitment to program implementation in Site One's change management process in that no specific procedural requirements existed to ensure an evaluation of a Site One change for its impact on Columbia Generating Station programs and an inadequate interface between the Columbia Generating Station EP organization and Site One.

The root cause report evaluated other problems stemming from weak Columbia Generating Station organization and program interface with Site One. The evaluation report stated that the generic significance of the problem was the possibility of making changes at Site One resulting in non-compliance with regulatory and Columbia Generating Station program requirements. PER 201-1793 identified the lack of an organizational interface agreement with the Procurement Department regarding out-leasing as a weakness. The PER also stated that the potential for this weakness extended to other Energy Northwest organizations, including Construction and Maintenance Services, Resource Development, and Project Management. The PER further stated that interfacing organizations lacked specific criteria, instructions, checklists, guidance, and user aids to reliably support the need to inform the Columbia Generating Station EP organization of changes that needed to be evaluated for their on-site emergency preparedness affect. Additionally, the PER stated that the Columbia Generating Station EP organization lacked specific instructions and checklists to aid in their review of information provided from these interfacing organizations to ensure that the review adequately considered all potential impacts on the EP program.

An Organization & Programmatic Interface Chart (OPIC) was developed to analyze the relationships between various organizations and programs to determine where weaknesses existed. The OPIC chart for the exclusion area evacuation process revealed that there was no direct connection between Columbia Generating Station EP and Site One management organizations. Furthermore, the chart showed there was no formal interface between Columbia Generating Station EP and the lessees on Site One. In response to this OPIC analysis, the licensee initiated a corrective action to develop a formal change management process for Site One that required reviews by proper Columbia Generating Station groups, e.g., fire protection, emergency preparedness,

industrial safety, occupational health, security, and regulatory services to ensure compliance with various program requirements. However, the inspectors identified that a formal change management process had only been established between the Columbia Generating Station EP and Site One management organizations and not any of the other organizations listed in the corrective action above. In response to this observation, the licensee reopened the associated corrective action in PER 201-1793.

Also, while preparing for this inspection, the licensee identified a weakness in the evaluation that was related to a lack of organizational interface agreements and process linkages between Columbia Generating Station EP and other Energy Northwest organizations to ensure that the Columbia Generating Station EP organization is formally included in the review of activities, changes, and projects to assess the potential for impact on the EP program. PER 202-1430 was initiated on May 8, 2002, to address this weakness with a recommendation to perform an apparent cause evaluation. Corrective actions associated with PER 202-1430 will also be reviewed during a future NRC inspection.

The inspectors concluded that the licensee's evaluation of potential common cause(s) and extent of condition of the problem was adequate, although completion of identified actions had been inconsistent.

02.03 Corrective Actions

a. Appropriateness of corrective actions

The licensee took extensive immediate corrective actions, among which included:

1) revision of the Columbia Generating Station and Site One emergency plans

2) revision of applicable emergency plan implementing procedures

3) revision of lesson plans for initial emergency response organization training

4) revision of requirements for conduct of emergency preparedness audits

5) revision of leases to include emergency plan requirements

6) procedural requirements to ensure that changes to Site One are assessed by the Columbia Generating Station EP department for their effect on the Columbia Generating Station emergency plan

7) provision of initial emergency preparedness training to lessee employees and requirements for annual refresher training to be conducted by the Columbia Generating Station EP department

8) incorporation of the Site One Designated Site Authority (DSA) in the Columbia Generating Station emergency response organization

9) modification of Site One sirens to permit operation from Columbia Generating Station

10) several revisions to emergency plan implementing procedure 13.5.3, “Evacuation of Exclusion Area and/or Nearby Facilities,” including revisions of responsibilities to ensure an evacuation will occur at the Site Area Emergency

11) installation of a perimeter fence and gates to established positive control over lessee areas

12) installation of additional public address system speakers in lessee buildings

13) quarterly growl tests of the Site One on-site sirens

14) requiring a DSA be present at Site One whenever lessee employees occupy the site

15) improvements to work orders for testing emergency preparedness sirens

16) conduct of owner controlled area evacuation drills

The inspectors determined the immediate corrective actions were appropriate and adequate to address the immediate safety concern of inability to perform an exclusion area evacuation. The inspectors determined that all immediate corrective actions had been completed.

The licensee’s long-term corrective actions included:

1) revision of the six year plan to include objectives for evacuation of on-site emergency response facilities to their backup locations, activation of the offsite assembly area, and conduct of an exclusion area evacuation

2) revision of the emergency preparedness module in General Employee Training

3) development of an emergency preparedness training module for licensee employees who do not receive General Employee Training for protected area access

4) installation of additional on-site public address speakers

5) revision to on-site emergency alerting tones

6) annual audits of Site One activities

7) formal training of the emergency response organization on emergency plan and implementing procedure changes

The inspectors determined these corrective actions collectively were responsive to the root cause identified by the licensee.

b. Prioritization of corrective actions

The inspectors concluded that the corrective actions were properly prioritized. Actions of an immediate nature were given the highest priority. A completion date and a responsible manager were assigned for each corrective action.

c. Establishment of a schedule for implementing and completing the corrective actions

The licensee's evaluation established a schedule for the completion of the long-term corrective actions by October 2002. The inspectors concluded that this schedule was acceptable.

d. Establishment of quantitative or qualitative measures of success for determining the effectiveness of the corrective actions to prevent recurrence

The licensee scheduled a June 2002 effectiveness review of corrective actions which had been completed to date and scheduled an audit to review the effectiveness of the corrective actions after one year of implementation. The inspectors noted that although this was an appropriate action, formal evaluation and success criteria had not yet been established for the effectiveness review.

02.04 Independent Evaluation of Extent of Condition

1) Scope

The inspectors interviewed personnel from emergency preparedness, operations, quality assurance, health physics, security, and Site One to determine the extent to which corrective actions had specifically addressed the Yellow finding, and more generally the ability of the Columbia Generating Station EP organization to monitor Site One for events and activities that would affect the status of emergency preparedness within the Columbia Generating Station owner controlled area.

The inspectors also reviewed all actions taken by the licensee to address both the identified Yellow finding and the identified root cause. Documents to support this review included the Columbia Generating Station Emergency Plan and changes to that plan in the past year, the last three revisions to the Site One Emergency Evacuation and Response Plan, emergency plan implementing procedures, and all PERs associated with the Yellow finding and associated root cause analysis. Additional documents included procedures for control of leases, responsibilities of the DSA, self assessments, and Site One evaluation requirements.

The inspectors observed a focused, mini-drill conducted specifically to demonstrate the facility's ability to communicate the need for an evacuation of all personnel in the exclusion area, conduct the evacuation to the offsite assembly area, and perform monitoring and decontamination of the evacuees as needed. The inspectors also observed the drill participant and evaluators' debrief immediately following the completion of the drill and the subsequent presentation of the drill results to licensee

management. The inspectors performed an independent evaluation of the drill and compared those observations and evaluations to the facility evaluators' observations and conclusions. The inspectors also reviewed the seven PERs that were written to address problems that were observed during the drill.

2) Conclusions

The licensee's extent of condition review focused on the extent of the identified Yellow finding as it specifically related to evacuation of the Site One industrial area and the remainder of the Columbia Generating Station exclusion area. The inspectors determined that this evaluation was thorough and that it provided adequate assurance that an evacuation would be able to be conducted if one was ordered.

However, the inspectors identified one area that was observed during the mini-drill that was not identified during the licensee's extent of condition review. Security guards for the Columbia Generating Station and Energy Northwest employees (sweepers) at the Site One industrial complex perform searches along designated routes to ensure an evacuation order has been carried out. All of the security guards and some of the Site One employees have radiation monitoring thermoluminescent dosimeters (TLDs) with them at all times. During the drill, the inspectors observed that none of the security guards nor the Site One sweepers had self-reading dosimetry. Some of the sweepers did not have any dosimetry (permanent record or self-reading). Also, there was no discussion during the drill about issuing dosimetry to the guards or sweepers. When asked if there were any procedures that would direct issuance of self-reading dosimetry to the guards and sweepers during a nuclear accident, the licensee's representative responded that there were none.

NUREG-0654, planning standard K, "Radiological Exposure Control," states "Means for controlling radiological exposures, in an emergency, are established for emergency workers. The means for controlling radiological exposures shall include exposure guidelines consistent with Environmental Protection Agency Emergency Worker and Lifesaving Activity Protective Action Guides." Criteria 3a states, in part, that the facility licensee "shall make provision for 24-hour-per-day capability to determine the doses received by emergency personnel involved in any nuclear accident, . . . [the licensee] shall make provisions for distribution of dosimeters, both self-reading and permanent record devices." Criteria 3b states, in part, that the licensee "shall ensure that dosimeters are read at appropriate frequencies and provide for maintaining dose records for emergency workers involved in any nuclear accident." The inspectors did not characterize this observation as a violation since the licensee had the capability to issue dosimetry and failure to demonstrate this criteria during the drill did not constitute a failure to meet planning standard K. The licensee entered the observation in their corrective action program as PER 202-1489 to address the lack of programmatic guidance to issue dosimetry to guards at Columbia Generating Station and sweepers at Site One during a nuclear accident.

The inspectors identified other examples of extent of condition weaknesses, which are being addressed by the licensee in open PERs:

1) There was no process to specifically identify physical facility changes at Site One for Columbia Generating Station EP organization review. This is loosely captured in the DSA emergency plan implementing procedure but was not addressed in the initial resolution of a still open PER concerning 10 CFR 50.59 reviews of Site One activities.

2) The use of Department of Energy (DOE) health physicists for personnel decontamination had never been demonstrated, and use of DOE health physicists had only been demonstrated in field team monitoring, of which the last instance was in an evaluated exercise in 1995. The licensee routinely simulates DOE health physics support during exercises. Although this function is not considered a major element of the six-year plan and, therefore, is not required to be demonstrated, the licensee acknowledged that benefit would be gained by both the licensee and the DOE if that function were routinely demonstrated. The inspectors verified that a Memorandum of Understanding (MOU): "MOU between Energy Northwest and US Department of Energy, Richland Operations Office for Emergency Preparedness and Response," was in place that supported Health Physicist support from DOE. This MOU was signed in September 2000.

3) Site One sweepers are deployed without the protective and communication equipment that is carried by the Columbia Generating Station security guards, including dosimetry, protective masks, and portable communication equipment. The licensee documented this condition in PER 202-1504, dated May 16, 2002.

The inspectors also focused on the extent of the identified root cause to determine if corrective actions taken and planned would adequately address generic aspects of the root cause. The following observations supported that evaluation:

1) There is currently only one remaining lessee on the Site One industrial area. That lessee has been trained and new employees are also trained shortly after hiring. The activities of that lessee are overseen by the Site One Manager, and an MOU, "Memorandum of Understanding Between Columbia Generating Station and Site One Management for Emergency Preparedness," signed February and March 2002, is in place between the Site One Manager and the Columbia Generating Station. The lease of the last remaining lessee will expire in July 2002 and is not intended to be renewed by the licensee.

   The Bonneville Power ASHE substation is within the facility OCA, and coordinates its activities with the Columbia Generating Station EP organization. The substation is equipped with gaitronics such that plant announcements can be heard. Also, the Bonneville Power Administration System dispatcher's standing Order 134, "WNP-2 Emergency Procedures," dated March 12, 1993, is effectively an MOU between the substation and the Columbia Generating Station.

2) All lease contracts that are initiated at the Site One Complex must receive a review by the Columbia Generating Station EP organization as required in Section 3.2 of Procurement Department Instruction PDI 2.19, “Real Property Procurement and Leases.” This review is done using Energy Northwest form 968-26188, “Owner Controlled Area Evaluation.” This form verifies that initial and refresher EP training has been completed and/or scheduled and that the lease contains information for evacuation.

3) The inspectors reviewed the testing program for the on-site Emergency Response siren systems. Telecommunications Services Instruction TSI 6.2.22, Rev. 2, "Annual E/R Siren Activation Test" dated April 2, 2002, provides instruction for the annual testing of the Emergency Response Siren systems. A precaution and limitation in the procedure states that the person signing off the siren test should have direct involvement in the test. The results of the test are documented on Attachment 9.1, "Annual Alerting Siren Test." However, the intent of the test is to verify that each siren sounds, as opposed to verifying audibility inside buildings.

   Prior to the NRC inspection, the licensee conducted a public address (PA) system coverage test of the industrial area of the site to determine if areas existed where the system was difficult to hear or could not be heard. The test identified some areas on the edge of the industrial area where coverage was not adequate. These deficiencies were documented by the licensee in PER 202-1437 on May 9, 2002. A PA system speaker was installed in the building at Site One where members of the public work, which ensured this concern was resolved for current members of the public at Site One.

4) The Security manager’s duties include consulting with the Radiological Emergency Manager to determine if a security officer may be needed at the offsite assembly area. This position also has responsibility to verify a Site One evacuation was commenced, if ordered, and that the south power plant loop vehicle gate was opened by the roadblock officer (another member of the security force). Sufficient guard force was available to coordinate and conduct an OCA evacuation, although a simultaneous security event and radiological event would pose challenges to coordination of response by the Security Manager. The licensee was cognizant of these challenges and the inspectors were satisfied with the ability of the licensee to evaluate the given situation and react with the current guard force resources.

5) The Site One Emergency and Evacuation Response Plan was revised twice since the preliminary inspection finding was discussed in September 2001. Revision 16, the current revision, was issued in May 2002. The plan requires that all tenants be trained on the plan or be escorted by a trained person. A new “Blue badge” computer based training module was initiated for training individuals who do not have protected area access and, therefore, do not receive general employee training. This training would provide information on expected response to notification of an emergency and directions for an offsite evacuation.

Prior to Revision 33 of the Columbia Generating Station Emergency Plan, the Site One Emergency Evacuation and Response Plan implemented actions required by the Columbia Generating Station Emergency Plan. Revision 33 added the significant evacuation response requirements into the Columbia Generating Station Emergency Plan, and a newly issued procedure, 13.5.7, "DSA Authority Duties," now implements all aspects of evacuation of the Site One Industrial complex.

6) All personnel on Site One are directed to use their own vehicles during an evacuation. The DSA is responsible for ensuring that all individuals have evacuated before he leaves the site.

7) The decontamination facility shower and washdown area drains directly to the city sewer system. The licensee has performed a limited analysis on the adequacy of the facility to remain within discharge limits and has concluded that for credible personnel contamination scenarios, the drain water would not exceed Federal release limits.

8) The inspectors conducted a review to determine whether all critical elements of the Columbia Generating Station Emergency Plan are tested every six years. The inspectors observed that Revision 3 to the six-year plan dated October 26, 1995, had expired in 2001. This condition was identified by Columbia Generating Station Quality Assurance personnel and was documented in PER 202-0559, dated February 22, 2002. The evaluation of the PER concluded that a Corrective Action Plan be initiated to compare the expired six-year plan with the requirements in the Columbia Generating Station Emergency Plan and emergency plan implementing procedures and develop a current plan. The due date of the Corrective Action Plan is October 30, 2002. Other PERs related to weaknesses associated with the six-year plan included: 202-0528, "The Six-Year Plan Failed To Include Evacuation and Relocation of Emergency Centers and Owner Controlled Areas," 202-0529, "Demonstration By Drill the Evacuation and Relocation of Emergency Facilities," and 202-0530, "Demonstration By Drill Evacuation of the Exclusion Area to the Energy Northwest Office Complex Has Not Been Performed in the Past Six Years."

9) The licensee identified during the critique of the May 14, 2002, OCA evacuation drill that space challenges at the alternate assembly area parking area, as well as personnel in the facility during normal business hours, would pose challenges to successfully conducting the decontamination and monitoring function at that facility. A PER was planned to be written to address this concern, and one consideration discussed was to evacuate the building of unnecessary personnel at the beginning of a site evacuation. This would increase parking space and remove other members of the public from the building to avoid potential radiological hazards due to decontamination efforts.

The inspectors concluded that even though the licensee's extent of condition review contained some weaknesses, the scope of the effort and associated corrective actions were broad enough to provide assurance that the identified problem, as well as similar

problems with emergency preparedness activity monitoring, was corrected and should not recur.

03 MANAGEMENT MEETINGS

Exit Meeting Summary

The inspectors provided a debrief of inspection findings to Mr. Parrish, Chief Executive Officer, and other members of site management at the conclusion of the on-site inspection effort on May 17, 2002. The inspectors conducted a final exit interview via telephone on June 6, 2002, with Mr. Parish, and other members of site management.

The inspectors asked the licensee's management whether any of the material they had been presented during the inspection was proprietary. None was identified.

Attachment
Supplemental Information

PARTIAL LIST OF PERSONS CONTACTED

Licensee

P. Ankrum, Licensing Engineer
R. Brownlee, Licensing Engineer
D. Coleman, Manager, Performance Assessment and Regulatory Programs
L. Dovey, Communications Officer
K. Engbarth, Supervisor, Quality Services
D. Fraley, Manager, Site One
J. Gaston, Acting Manager, Operations
J. Hanson, Manager, Training
D. Holmes, Emergency Planner
J. Ittner, Emergency Planner
S. Jerrow, Manager, Operations
R. Jorgensen, Emergency Planner
A. Klauss, Emergency Planning (Off-site)
M. McLain, Supervisor, Radiation Support
L. Oakes, Engineer, Site One
S. Oxenford, Plant General Manager
J. Parrish, Chief Executive Officer
C. Perino, Manager, Licensing
J. Pierce, Supervisor, Emergency Planning
W. Sawyer, Emergency Planner
R. Sherman, Nuclear Engineer
C. Townsend, Manager, Performance Management
R. Webring, Vice President - Operation Support
D. Wyatt, Supervisor, Industrial Safety and Occupational Health
J. Wyrick, Manager, Resource Protection

DOCUMENTS REVIEWED

Emergency Plan and Implementing Procedures:

Procedure No.	Title	Revision No(s).
N/A	Columbia Generating Station Emergency Plan	33
13.5.1	Localized and Protected Area Evacuations	15
13.5.3	Evacuation of Exclusion Area and or Nearby Facilities	24, 25
13.5.7	DSA Authority Duties	0
13.7.5	Offsite Assembly Area Operations	13
13.10.1	Control Room Operations and Shift Manager Duties	22

13.10.2	Technical Support Center Manager Duties	18
13.10.4	Radiation Protection Manager Duties	24
13.10.8	Security Lieutenant Duties	19
13.11.1	Emergency Operations Facility Manager Duties	25
13.11.7	Radiological Emergency Manager Duties	24
13.11.10	Security Manager Duties	15
13.12.19	JIC Management	6
13.14.4	Emergency Equipment	38
13.14.9	Emergency Program Maintenance	20

Other Licensee Procedures:

PDI 2.19, “Real Property Procurement and Leases,” Revision 1

SWP-ASU-01, “Evaluations of Programs, Processes, and Suppliers,” Revision 10

SWP-LIC-02, “Licensing Basis Impact Determinations,” Revision 2

SWP-LIC-03, “Licensing Document Change Process,” Revision 3

SWP-CAP-02, “Root Cause Analysis (RCA),” Revision 0

TSI 6.2.22, "Annual E/R Siren Activation Test," Revision 2

Miscellaneous Documents:

Site One Emergency Evacuation and Response Plan, Revisions 14, 15, and 16.

Emergency Planning Program Audit, AU-EP-02, April 8, 2002

Energy Northwest Form 968-26045, R14, “Emergency Classification or Other Emergency Messages”

Energy Northwest Form 968-26188, R2, “Owner Controlled Area Evaluation”

Energy Northwest Form 26159, R1, “Applicability Determination for Licensing Basis Changes”

Energy Northwest Form 24341, R14, “Licensing Document Change Notice Form”

Form 26209, R2, “Procurement Process Checklist”

Memorandum of Understanding Between Energy Northwest and U.S. Department of Energy, Richland Operations Office for Emergency Preparedness and Response, signed 8/31/00 and 9/01/00

Memorandum of Understanding Between Columbia Generating Station and Site One Management for Emergency Preparedness, signed 2/14/02 through 3/18/02

Bonneville Power Administration System Dispatchers' Standing Order No. 134 of 3/12/93

OE 13081, January 21-25, 2002, "Kewanee Graded Emergency Exercise Performance"

Self Assessment, January 21-25, 2002, "EP-Maintenance-Operations Interface"

ERO Training Presentation slides, EP000238

Emergency Plan Change Summarys, Revisions 28 through 32

Mini-Drill Scenario for Evacuation at Site One, May 14, 2002

Drill Reports, 8/28/2001, 9/18/2001, 3/19/2002, 4/12/2002

2002 ERO Refresher Training Presentation for EOF, TSC, OSC, JIC

Lesson Plan EP000244, "Control Room Updates, Cycle 02-2"

Emergency Planning Instruction EPI-05, "Emergency Facilities and Equipment Maintenance Tracking," February 15, 2002

Emergency Preparedness Audit AU-EP-02

SPIP-SEC-03, "Response Team Leader, Owner Controlled Security Area Patrols, Mobile and Walk Patrols," Revision 7

Quality Assurance Activity Reports: A-1851, A-2304, A-2638, A-2173, A-2197, A-2209, A-2426, A-2453, A-2526, A-2532, A-2546, A-2580, A-2581

Problem Evaluation Reports (PERs)

201-0569	201-2621	202-0529	202-0561	202-0763	202-1498
201-1614	201-2906	202-0530	202-0562	202-1169	
201-1793	201-2917	202-0542	202-0624	202-1249	
201-1829	202-0098	202-0554	202-0635	202-1430	
201-2565	202-0430	202-0559	202-0688	202-1431	
201-2590	202-0528	202-0560	202-0695	202-1436	

Acronyms Used

EP	Emergency Preparedness
OPIC	Organization & Programmatic Interface Chart
PER	Problem Evaluation Request
ACE	Apparent Cause Evaluation
PTL	Plant Tracking List
DSA	Designated Site Authority
MOU	Memorandum of Understanding
DOE	Department of Energy
OCA	Owner Controlled Area
CARB	Corrective Action Review Board
PA	Public Address