



UNITED STATES
NUCLEAR REGULATORY COMMISSION
REGION IV

611 RYAN PLAZA DRIVE, SUITE 400
ARLINGTON, TEXAS 76011-8064

December 17, 2001

EA 01-236

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

SUBJECT: REGULATORY CONFERENCE WITH COLUMBIA GENERATING STATION

Dear : Mr. Parrish

This refers to the regulatory conference conducted in the Region IV office on November 26, 2001. This meeting was conducted to discuss the preliminary safety significance of a yellow finding and an associated apparent violation of 10 CFR 50.54(q) involving the failure to maintain emergency plans and procedures which meet the standards in 10 CFR 50.47(b) for the development of a range of protective actions for the public. The attendance list is enclosed with this summary.

In accordance with 10 CFR 2.790 of the NRC's "Rules of Practice," Part 2, Title 10, Code of Federal Regulations, a copy of this letter and its enclosures 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 Website at <http://www.nrc.gov/reading-rm/adams.html> (the Public Electronic Reading Room).

Should you have any questions concerning this matter, we will be pleased to discuss them with you.

Sincerely,

A handwritten signature in cursive script, reading "Gail M. Good", is written over the word "Sincerely,".

Gail M. Good, Chief
Plant Support Branch
Division of Reactor Safety

Docket: 50-397
License: NPF-21

Enclosures:

1. Attendance List
2. Licensee Presentation

J. V. Parrish

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cc with Enclosure 1:
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J. V. Parrish

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Failure to Meet a Regulatory Requirement

Advise and Communicate

Although routes and maps were developed in the Emergency Plan, the dissemination of maps or instructions in written form would have enhanced the ability to advise evacuees in a timelier manner. Specifically, the evacuation of larger numbers of people may have been delayed during normal working hours due to time required for advising each evacuee of the route and monitoring location at the roadblocks. This assumes a scenario where Site One evacuees immediately evacuated upon hearing the crossroads siren and did not receive instructions on routes and monitoring until reaching the roadblock.

Potential Delay of Evacuation Progress

Regulatory Requirement	Energy Northwest Actions
<p>Requirement:</p> <p>10 CFR 50.47 B(10) <i>A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place and protective action for the ingestion exposure pathway EPZ appropriate to the locale have been developed.</i></p> <p>NUREG 0654 Implementing guidance</p> <p>Part II.J.1</p> <p><u>Each licensee shall establish the means and time required to warn or advise onsite individuals and individuals who may be in areas controlled by the operator, including:</u></p> <ul style="list-style-type: none"> e. <i>Employees not having emergency assignments;</i> f. <i>Visitors;</i> g. <i>Contractor and construction personnel; and</i> h. <i>Other persons who may be in the public access areas on or passing through the site or within the owner controlled area."</i> 	<p>Enhancements to provide added assurance of meeting Regulations.</p> <p>Ensure implementing procedures provide efficient notification when alternate routes or need to monitor is directed and that tenant employee training is performed so proper response is ensured.</p> <ol style="list-style-type: none"> 1. <u>Emergency Response information to Lessee employees</u> <ul style="list-style-type: none"> ▪ Energy Northwest personnel have specifically briefed site One personnel (including tenants) regarding evacuation notification methods and required response. ▪ Four of five existing Site One tenant contracts have been revised to require annual refresher training concerning evacuation notification and required response. Negotiations are in progress with the fifth lessee to make this same lease contract change. ▪ The briefing guide used to brief Site One personnel (including lessees) has been upgraded. 2. <u>Written information</u> <ul style="list-style-type: none"> ▪ Security roadblock kits have been upgraded to include evacuation route maps. Notification advice includes written material. ▪ Revised PPM 13.5.3 to instruct security personnel to make Site One PA announcement concerning evacuation routes and monitoring prior to siren activation. Security also initiates Site One call tree contact. ▪ WNP-1 Site Construction Emergency Evacuation & Response Plan has been upgraded to better describe the evacuation process, including maps and route to ENOC for monitoring if required and provided to all tenants. ▪ The security instructions have been upgraded for conducting Owner Controlled Area sweeps to provide instructions on route to ENOC if monitoring is required.

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Root Cause Analysis C/A

Actions to preclude recurrence

1. Revise Procurement Departmental Instruction 1.15 to "require" a review of contracts by EP, Fire Protection, Industrial Safety, Occupational Health, Regulatory Services, etc., prior to issuance.
2. Develop a "requirements document" for Site One with regard to what Site One must do to support implementation of the Columbia Generating Station Emergency Plan.
3. Develop a formal change management process for Site One that requires reviews by proper Energy Northwest groups (i.e., Fire Protection, EP, Industrial Safety, Occupational Health, Security, Regulatory Services, etc.) to ensure compliance with various program requirements.
4. Conduct an Audit of Site One regarding implementation of CGS emergency response requirements focused on ensuring the CGS Emergency Plan requirements are properly implemented at Site One.
5. Revise, as needed, Quality program documents to ensure Site One is evaluated in the periodic Emergency Preparedness Audits conducted by Quality.
6. Upgrade Site One Emergency Alerting and PA capability to allow site-wide personnel (including lessees and contractors) notification regarding emergency conditions and required actions. This also includes the ability to initiate the alerting tone and PA from the Columbia Generating Station SCC, as well as, Site One.

ENCLOSURE 1
Columbia Generating Station
Emergency Preparedness Regulatory Conference
November 26, 2001

ATTENDANCE LIST		
NAME	ORGANIZATION	POSITION/TITLE
Vic Parrish	Energy Northwest	Chief Executive Officer
Rod Webring	Energy Northwest	Vice President, Operations Support/ PIO
Doug Coleman	Energy Northwest	Manager, Performance Assessment and Regulatory Programs
John Wyrick	Energy Northwest	Resource Protection Manager
Tim Messersmith	Energy Northwest	Corporate Emergency Preparedness, Safety and Health Officer
Jerral Rhodes	Energy Northwest	Licensing Engineer
David Fraley	Energy Northwest	Manager, WNP Unit 1
Ellis Merschoff	NRC, Region IV	Regional Administrator
Art Howell	NRC, Region IV	Director, Division of Reactor Safety
Gail M. Good	NRC, Region IV	Chief, Plant Support Branch
Bill Jones	NRC, Region IV	Chief, Project Branch E, DRP
Michael Vasquez	NRC, Region IV	Enforcement Officer
Karla Smith	NRC, Region IV	Regional Counsel
Charles Hackney	NRC, Region IV	Regional State Liaison Officer
William Maier	NRC, Region IV	Regional State Liaison Officer
Paul Elkmann	NRC, Region IV	Emergency Preparedness Inspector, PSB, DRS
Randy Sullivan	NRC, Region IV	Senior Emergency Preparedness Specialist, IRSB (by video conference)
Jack Cushing	NRC, Region IV	NRR Project Manager (by video conference)
George Replogle	NRC, Region IV	Senior Resident Inspector, Columbia Generating Station (by phone)
Michael Peck	NRC, Region IV	Resident Inspector, Columbia Generating Station (by phone)
Chris Nolan	NRC, OE	Enforcement Specialist

Electronic distribution from ADAMS by RIV w/out Enclosure 2:

Regional Administrator (**EWM**)

DRP Director (**KEB**)

DRS Director (**ATH**)

Branch Chief, DRS/PSB (**GMG**)

Inspector, DRS/PSB (**PJE**)

Senior Resident Inspector (**GDR**)

Branch Chief, DRP/E (**WBJ**)

Senior Project Engineer, DRP/E (**GAP**)

Staff Chief, DRP/TSS (**PHH**)

Section Chief, EP/HP Section, IRSB (**KHG**)

RITS Coordinator (**NBH**)

Director ACES (**GFS**)

OE:EA File (**RidsOeMailCenter**)

OE (**MCN**)

DOCUMENT NAME: R:_COL\2001\COL11-26MS-PJE.WPD

RIV:DRS/PSB	ACES	C:DRS/PSB		
*PJEIkman:nlh	*GFSanborn	GMGood		
/RA/	/RA/	/RA/		
11/30/01	12/09/01	12/17/01		

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T=Telephone

E=E-mail

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*Previously concurred.

ENCLOSURE 2

ENERGY NORTHWEST

**NRC Regulatory Conference
November 26, 2001**

John Wyrick
Manager, Resource Protection

NRC Regulatory Conference

November 26, 2001

NUREG-0654 II.J.1

Warn or Advise

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- a. Employees not having emergency assignments;
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- c. Contractor and construction personnel; and
- d. Other persons who may be in the public access areas on or passing through the site or within the owner controlled area.

Siren Operation Confirmation

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>a. <i>The Security Communications Center (the location from which emergency sirens are sounded) could not determine whether onsite sirens were operational when initiated because:</i></p> <p>(1) <i>the operator was not provided confirmation of operation by the siren control system, and</i></p> <p>(2) <i>the siren could not be reliably heard inside the protected area (i.e., plant personnel could not be used to confirm operation).</i></p> <p><i>Procedures did not direct security personnel (the personnel responsible for siren activation) to determine whether the notification sirens had actually sounded.</i></p>	<p>While it is true that specific direction was not contained in the security procedures to directly notify the SCC that the crossroad siren activated, it is reasonable to expect that the emergency team response team would detect a failure of the crossroad siren. Confirmation that the crossroad siren activated and was reported back to the SCC operator was not an essential implementation feature because the Emergency Response Team would be able to detect if the protective action decision (PAD) to evacuate the exclusion area was being implemented. Failure of the crossroads siren would most likely be detected and then reported to the security supervisor and the emergency director. This is because:</p> <p>1.a The Emergency Director would receive confirmation of evacuation progress from the Security mobile patrol.</p> <p style="padding-left: 40px;">[EPIP 13.5.3, Section 4.3.3, Security Supervisor Duties] <i>Direct the mobile patrol to perform a visual check of evacuation progress with the Exclusion Area Boundary, including the Security Firing Range and that portion of the Owner Controlled Area outside the Exclusion Area boundary.</i></p> <p style="padding-left: 40px;">[EPIP 13.5.3, Section 4.2.5, Security Manager (or security supervisor if security manager is not activated)] <i>Keep the Emergency Director informed on the status of Exclusion Area Evacuation</i></p> <p>1b. Crossroads Siren and the backup Site One sirens were confirmed via routine periodic tests. See Table on NRC concern J.II.1 Issue "c".</p> <p>2a. The Crossroads Siren alone could have been reliably heard outdoors within the Columbia Generating Station Protected Area. The Crossroads Siren was clearly audible outside of the Security Communications Center (SCC).</p> <p>2b. The crossroads siren decibel level in the Site One Industrial area has been measured and an estimated 60-db line would overlap the Columbia Generating Station protected area</p> <p style="padding-left: 40px;">Site One sirens were measured in 1995 and demonstrate 92 db at lessee Mater-Lee's location and 70 db at Durametal's location.</p>

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Siren Not Audible At All Indoor Locations

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>b. <i>Licensee emergency preparedness personnel determined that the onsite notification sirens were audible outdoors throughout the area used by lessees but were not audible at all indoor locations.</i></p>	<p>Audibility of the sirens was not essential in all indoor locations used by the lessee because the Exclusion Area notification system consisted of multiple means for initial and follow on notification of PADs for lessees. The multiple methods included (see II.J.II concern "a" for applicability to each lessee):</p> <ol style="list-style-type: none">1. The Crossroads siren (one of the initial methods of evacuation notification for Site One personnel who were out-of-doors.) <p>Note: The crossroads siren was audible indoors in many of the Site One Area buildings.</p> <ol style="list-style-type: none">2. Site One Telephone building page (indoors)3. Telephone notification via DSA Call Tree (indoors)4. Radio Announcements to Energy Northwest Site One employees and contractors5. Sounding SITE ONE sirens (outdoors, some indoor) <p>Note: The SITE ONE sirens were audible indoors in many of the Site One Area buildings.</p> <ol style="list-style-type: none">6. Gaitronics page of the SITE ONE power block7. *Peer to Peer notification (indoors, outdoors)8. Mobil Patrol Security Sweep (indoors, outdoors)9. Site One Emergency Team Sweep (normal working hours; indoors, outdoors) <p>*It is reasonable to expect that people who heard the siren would communicate with their supervision and their fellow workers that the sirens had been sounded. It is also reasonable to expect that if a person did not recall the required response to a siren, that they would ask their supervision and peers.</p>

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Siren Testing

NRC Inspection Report No. 50-397/01-008

Energy Northwest Response

- c. *Licensee procedures did not require testing of the onsite notification siren system. Tests were generally performed on the "crossroad" siren, but were not documented.*

The licensee's method for performing silent siren tests of the "crossroad" siren did not provide positive indication of siren operability.

Because there was no remote activation capability, siren tests were not performed on two WNP1 site sirens.

Columbia has not utilized an onsite (Columbia Protected Area and nearby buildings) siren system for initial notification. Rather, an Alerting Tone and PA announcements have been used for onsite emergency notification. Notification by the crossroads siren was part of the initial notification system for the exclusion area including the lessees at the Site 1 Industrial Area. Site One sirens were back up when crossroads siren was inoperable.

1. Crossroads Siren testing was required by procedures, was performed, and was documented.
2. Positive indication of the Crossroads Siren operability was demonstrated annually. (Refer to Surveillance Chart below.)
3. Site One sirens have been tested annually by Site One during the crossroads and river siren testing (EPIP 13.14.4). Energy Northwest Emergency Planning or Security personnel coordinated this testing to minimize the number of times that Site One activities would be interrupted. Documentation that the Site One siren test was conducted during the crossroads siren test exists. Site One sirens have been used as part of an augmenting notification method for personnel located on Site One (including lessees).

Crossroads Siren Surveillances

Surveillance	Frequency	Description
TSI 6.2.25 Crossroads Siren Polling Test	Weekly	Verifies operation of telemetry link between SCC and siren. (The siren is not sounded)
TSI 6.2.23 Crossroads (W1)	Twice per year	Siren-Battery Load Test and Remote Activation
TSI 6.2.27 FCC Equipment Operational Tests	Annually	Annual transmitter on-frequency
EPIP 13.14.4 Attachment 5.5 Emergency Equipment	Annually	Full operational test (Crossroads and Site One sirens are sounded)

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Notification of the Designated Site Authority (DSA)

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>d. <i>Part C to Attachment 6.1 of Plant Procedure Manual (PPM) 13.4.1, "Emergency Notifications," Revision 25, required notification of an emergency classification of alert or higher to the WNP1 designated site authority. However, this procedure was assigned to an emergency operations facility responder which introduced an hour or more delay in its completion following the initial classification (based on the facility activation time). In an emergency, the WNP1 designated site authority would not have been able to accomplish the procedural requirements during the delay period.</i></p>	<p>There was no delay in notifying the DSA. The Site One DSA notification has not been dependent on EOF activation. This responsibility was procedurally assigned to on-shift Security staff until the EOF was activated. There is reasonable likelihood that the Site One Designated Site Authority would have been able to satisfy procedural requirements because the DSA would have been notified at the Alert level; the DSA could have made call tree calls from any offsite or onsite phone; and could have delegated some of the DSA responsibility to on shift personnel if not on site at the time exclusion area evacuation was declared. During after hours, the DSA call tree implementation timeliness could be impacted if exclusion area evacuation was declared shortly after the event started. Further, the DSA position is provided with an on call beeper and is staffed for call in 24 hours a day 7 days a week. This function routinely responds to Site One emergencies by the security.</p> <p>The details of this process are illustrated below:</p> <ol style="list-style-type: none"> 1. The Security Communications Center (SCC) was responsible for notifying the DSA at an Alert, until relieved by the EOF Offsite Agency Coordinator. <div style="margin-left: 20px;">[EPIP 13.4.1, Section 5.6.9] <i>For initial or fast breaking classifications where the Offsite Agency Coordinator has not yet arrived at the EOF to take over Part C notifications (Attachment 6.1) ... contact the listed agencies in the Part C notification list...</i></div> <div style="margin-left: 40px;"><u>Attachment 6.1 Part C Emergency Notification Lists At Alert or Above</u> <div style="margin-left: 20px;">▪ WNP-1 Site Security (or designated WNP-1 site authority).</div> </div> 2. Security Manager (or Security Supervisor if Security Manager was not activated) directed notification of DSA for an exclusion area evacuation: <div style="margin-left: 20px;">[EPIP 13.5.3, Section 4.2.4] <i>Provide telephone evacuation notification and the above instructions* to the following: WNP-1 Emergency Manager / Site Manager - Day Shift; WNP-1 Designated Site Authority - Back Shifts. *Refers to the Emergency Directors PAD</i></div> 3. Once the DSA was notified, the WNP-1 Construction Site Emergency Evacuation & Response Plan included the capability to delegate duties to on-shift personnel. <div style="margin-left: 20px;">[March 1995, Rev 14, Page 16, Additional duties of the Site Emergency manager] <i>Note: On backshifts, weekends and holidays, it is very likely we will have people working on site or in close proximity ... The Site Emergency Manager shall be informed of the officer work schedule and will delegate duties in the event of an emergency.</i></div>

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Security Sweeps

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>e. <i>In April 2001, emergency planning staff indicated that procedures did not require Columbia Generating Station site security to sweep the exclusion area to ensure that siren notification occurred and that an evacuation had taken place. In later discussions, the staff stated that security would perform visual checks during an exclusion area evacuation but that active measures, such as knocking on the doors of lessee buildings, would not be performed.</i></p>	<ol style="list-style-type: none">1. Evacuation progress was verified by a procedurally required security sweep. [EPIP 13.5.3, Section 4.3.3] <i>Direct the mobile patrol to perform a visual check of evacuation progress within the Exclusion Area Boundary, including the Security Firing Range and that portion of the Owner Controlled Area outside the Exclusion Area boundary.</i>2. Sweeps by Security that included building entry would occur at obvious signs of occupancy such as open doors, lights, and vehicles.3. Security sweeps were the final means to notify lessees. Initially, the DSA call list contacts lessees directly.

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Adequate Staff for Evacuation Verification

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>f. <i>Procedural direction to security personnel did not ensure an ability to determine the extent to which the evacuation has been completed. Security staff were to be dispatched to the WNP1 gate area only on an "as available" basis. Directions to security personnel were contained in several procedures. As a result, a single security patrol could be simultaneously directed to perform multiple duties, such as visually inspecting the intake building at the same time as staffing the WNP1 gate. In the event of an emergency sufficient security patrols may not have been available to complete all the activities directed by both the Columbia Generating Station procedures and the WNP1 Site Evacuation Plan.</i></p>	<p>The Security staffing for all shifts consisted of the minimum security threat denial level plus at least 3 additional security personnel. These three officers were available to be dispatched to set up the 2 roadblocks at the Alert level and to staff the mobile patrol at Exclusion Area Evacuation. During off hours and during periods when the crossroad siren was inoperable, the initial notification of essentially 100% of the population in 15 minutes of the Emergency Plan could have been difficult if initial notification occurred by the security sweep (i.e. sirens & telephone call tree not successful). However, all lessees could have been evacuated within the 1-hour estimate of the plan.</p> <ol style="list-style-type: none"> 1. During normal working hours, the Site One Emergency Manager (or alternate) would have performed initial lessee notification and sounded the Site One sirens per the Site One Construction Site Emergency Evacuation & Response Plan. During non-normal work hours, the number of persons to be evacuated would be very small, so some level of additional duties such as Security activating the Site One sirens would have been reasonable. When directed the mobile patrol would proceed to the Site One gate and sound the Site One sirens. It would take an approximately 5-minutes to perform this task, because the sirens were to be sounded for 3 minutes. Procedures did not require Security to continuously staff the Site One gate. Specifically, EPIP 13.5.3 stated: <p style="margin-left: 40px;">[EPIP 13.5.3, Section 4.3.3] <i>Direct the mobile patrol to perform a visual check of evacuation progress within the Exclusion Area Boundary, including the Security Firing Range and that portion of the Owner Controlled Area outside the Exclusion Area boundary.</i></p> <p style="margin-left: 40px;">[EPIP 13.5.3, Step 4.2.4, Evacuation of Exclusion Area] <i>Provide telephone evacuation notification and the above instructions to the following:</i></p> <p style="margin-left: 40px;"><i>WNP-1 Emergency Manager/Site Manager Day shift WNP-1 Designated Site Authority- Back Shifts</i></p> <p style="margin-left: 40px;"><i>NOTE: The Roving Security Patrol responds to the WNP-1 gate, as resources are available. Their function is to be prepared to sound the alarms to evacuate the site to the designated area.</i></p> 2. Additionally, Security would augment its response resources, as necessary, with call-in personnel at Alert or higher classification levels.

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Evacuation Consideration at Site Area Emergency

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>g. <i>There was an inconsistency between the emergency plan and the implementing procedures regarding the requirement to conduct an evacuation. Emergency plan implementing procedures required exclusion area evacuation at the general emergency classification while the emergency plan required exclusion area evacuation at the site area emergency classification. Because of this inconsistency, an exclusion area evacuation may not have been performed according to the requirements of the emergency plan, resulting in the potential for additional dose to the public located at lessee sites.</i></p>	<p>1. There was no conflict. The procedures followed the Columbia Generating Station Emergency Plan guidance and would have caused the Exclusion Area evacuation at a Site Area Emergency <u>if conditions warranted</u>. For ease of reference, the following text was part of the emergency plan and implementing procedure requirements:</p> <p style="margin-left: 40px;">[Emergency Plan, Section 5.7.2] <i>Non-essential personnel in the Exclusion Area will be evacuated as needed at a Site Area Emergency or General Emergency</i></p> <p style="margin-left: 40px;">[EPIP 13.5.3, Section 4.1.1, Emergency Director Responsibilities] <i>Determine the need for an Exclusion Area <u>Evacuation at Site Area Emergency</u>.</i></p> <p style="margin-left: 40px;">[EPIP 13.5.3, Section 2.2] The Emergency Director is responsible for determining when an Exclusion Area evacuation should be conducted. The decision to evacuate personnel should be based on the course of action presenting the minimum risk to personnel.</p> <p style="margin-left: 40px;"><i>Some examples of conditions which make an Exclusion Area evacuation not advisable include, but are not limited to:</i></p> <ul style="list-style-type: none"> ▪ <i>An ongoing security threat affecting personnel in the Exclusion Area (consult with the Security manager to aid in determining the safest course of action)</i> ▪ <i>Inclement weather (e.g. high winds or hazardous road conditions may preclude a safe evacuation of personnel)</i> ▪ <i>Radiological hazards exist (determined which action would result in lowest dose to evacuating personnel)</i> ▪ <i>Other hazards exist which might subject evacuees to a higher risk to personnel safety than not evacuating.</i> <p style="margin-left: 40px;"><i>If conditions for an Exclusion Area evacuation are present, but the decision is made to not evacuate personnel due to safety concerns, personnel will normally remain at their work locations unless directed otherwise.</i></p> <p style="margin-left: 40px;">[EPIP 13.5.3, Section 2.3] <i>Normally, Exclusion Area evacuations will be considered at a Site Area Emergency, or when other conditions warrant and is an automatic action at General Emergency.</i></p>

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Lessee Employee Response To Siren Actuation

NRC Inspection Report No.
50-397/01-008

Energy Northwest Response

h. Five of 10 (50 percent) lessee employees interviewed at four locations were either unaware of the existence of the Columbia Generating Station emergency sirens or did not correctly understand the expected response to a siren activation. Several lessee employees stated that when responding to a siren activation they would report to assembly areas and/or monitoring stations, which were actions that they were familiar with from previous experience with the DOE Hanford Site Emergency Plan. Lessee employees could not clearly distinguish between the Hanford Site Emergency Plan and the Columbia Generating Station Emergency Plan.

Recollection of the appropriate action by a minimum specific percentage of persons in the exclusion area is not required by regulations. Lessees were provided instructions on the actions required when the siren sounds. Additionally, methods (including roadblocks) were in place to direct evacuees concerning evacuation route information and whether they needed to report to the ENOC for monitoring. Some lessee employees might not have had sufficient training to instill familiarity with expected response. However, Energy Northwest took reasonable measures to inform lessee management of appropriate emergency response actions. The below table provides details to specific contract requirements. These included:

1. All lessees had been provided a copy of the WNP-1 Construction Site Emergency Evacuation & Response Plan (Rev. 14, March 1995)

[WNP-1 Construction Site Emergency Evacuation & Response Plan, "Total Site Evacuation", Page 12]

- *WNP-1 personnel may be required to completely evacuate the site.*
- *The notice to evacuate will be by activation of the Site 1 siren and broadcasting a message over the telephone paging system, Gaitronics paging system and operations radio frequency.*
- *NOTE: THE SIREN FOR TOTAL SITE EVACUATION IS A STEADY, THREE-MINUTE SIREN!*
- *All personnel are directed to go home unless directed to an assembly area by a Security officer at the roadblock.* *[Emphasis added]*

2. All lessee employees passed a sign daily, which contained basic evacuation information located on the access roads

Notice! Notice!
You are entering the Plant 2
EXCLUSION AREA
Should you hear a steady
THREE-MINUTE SIREN, you must
EVACUATE this area **IMMEDIATELY**

DSA / Security sweeps would have been conducted to locate and inform all persons within Site One regarding the exclusion area evacuation, to ensure compliance with the PAD.

Contract Provisions related to the WNP-1 Construction Site Emergency Evacuation & Response Plan (Rev. 14, March 1995)

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- Since October 1997, all lessees had lease requirements to comply with WNP-1 Construction Site Emergency Evacuation & Response Plan. The specific language of these requirements changed in detail over the period of October 1997 through April 2001. Two lessees had general rather than specific requirements. The below table provides details on the contract requirements.
- In addition, some lessees also had contract provisions to follow "Site 1 Industrial Complex Rules" (August 21, 2000) Specifically related to evacuation was the following:

***Safety and Emergencies** Site occupants may be required to evacuate in the event of an emergency in accordance with the Site 1 Emergency Evacuation and Response Plan. If a three-minute siren is heard on site, you must immediately evacuate the area. In the event of less severe emergency actions you will be notified in person. Please listen carefully and obey all instructions you receive.*

- The contract provisions associated with lessees from October 1997 to April 2001 contained requirements to follow the site evacuation plan. The requirements for lessee numbers 2,3,5,6, & 9 were:

[Site Emergency Plan] The Premises are located within the exclusion area and potential evacuation boundary of the WNP-2 operating commercial nuclear power plant. As such, the Lessee shall comply with the WNP-1 Emergency Evacuation & Response Plan and shall provide copies of the plan and training to all employees stationed at the Premises. Furthermore, the Lessee shall comply with any and all WNP-2 emergency preparedness requirements, including participation in evacuations and drills as necessary. The Lessee is required to provide proof to the Lessor of compliance with these requirements within thirty (30) days of occupying the Premises. The Lessee shall provide the Lessor a contact person's name and phone number that will be used for emergency notification purposes.

Lessee number 8 and lessee number 10 had specific provisions to implement and train their employees but did not have an article requiring written proof of training.

[Site Evacuation Plan] The Premises are located within the exclusion area and potential evacuation boundary of the WNP-2 operating commercial nuclear power plant. The Lessee shall comply with the WNP-1 Emergency Evacuation & Response Plan and shall provide copies of the plan and training to all employees stationed at the Premises. The Lessee may be required to evacuate the Premises.

Lessee number 1 had the above plus a requirement to train and provide proof of training but there was no time specified.

[Site Evacuation Plan] The Lessee is required to ensure that all their personnel are briefed prior to occupancy "on-site" and annually thereafter regarding emergency notification methods and emergency evacuation. The Lessee shall document compliance with this requirement in writing.

Another lessee number 9 had a similar provision to number 8 to implement and train their employees but did not have an article requiring written proof training.

[Site Evacuation Plan] The Premises are located within the exclusion area evacuation boundary of the Columbia Generating Station (WNP-2) commercial nuclear power plant. the Lessee shall comply with the WNP-1 Emergency Evacuation & Response Plan and shall provide copies of the plan and training to all employees stationed at the Premises. The Lessee may be required to evacuate the Premises.

Lessees 4 & 7 had general contract provisions

[Security] Both Lessor and Lessee and their respective employees, agents invitees and licensees agree to comply with all security regulations and procedures established by the Lessor for the "building".

Associated with this provision, a copy of the WNP-1 Construction Site Emergency Evacuation & Response Plan was provided and discussed with the lessees.

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Tenant	Building	Lease Period	Contract Reference Article						
			E Plan provided to Lessee	E Plan contract Ref	Employee Distribution	Siren Response	Employee Training	Site Rules	Confirmation Required
Current in April 2001									
1. TARC	242,252,etc	9/00 – Current	Yes	A30	No	A26	A30	No	A30 (No time limit)
2. CREHST Museum	55	6/98 – Current	Yes	A32	A32	A31	A32	A31	A32 (30 days)
3. Durametal	2,4	2/98 – Current	Yes	A32	A32	A28\$C	A32	A28 Sec Regs	A32 (30 days)
4. Master-Lee	74	10/97 – Current	Yes	A28*	No	No	No	A28 Bldg Sec Regs	No
5. Tri-City Railroad#	Track	8/00 - Current	Yes	A30	A30	A29	A30	A16	A30 (30 days)
Existed During 10/97-4/01									
6. CWT Technologies	1	1997 - 2000	Yes	A35	A35	A32	A35	A32	A35 (30 days)
7. Exitech#	211	11/97 - 4/98	Yes	A28*	No	No	No	A28 Bldg Sec Regs	No
8. Fluor Hanford#	211	2/00 - 11/00	Yes	A35	A39	A35	A39	A35 Sec Regs	No
9. IET, Inc.	TGB	11/98 - 4/01	Yes	A32	A32	A31	No	A31	A32 (30 days)
10. Lampson #	250	1/01 - 6/01	Yes	A29	A29	A26	A29	A26 Sec Regs	No
	* See [Security] provision Article above. Although not specific in its language, lessees 4 & 7 were provided the WNP-1 Construction Site Emergency Evacuation and Response Plan associated with this Article. # Short term storage only contracts and infrequent occupancy								

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NUREG-0654 II.J.2
Evacuation Routes

Each licensee shall make provisions for evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density and specific radiological conditions.

Lessee Evacuation Information

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>a. <i>Some lessees were not provided written information about what their actions should be in an emergency, including the use of evacuation routes and modes of transportation. Some lessees were provided with a copy of the WNP1 Site Evacuation Plan without any additional information, explanation, or interpretation. A lessee that had been provided the WNP1 Site Evacuation Plan believed that the plan was no longer valid.</i></p> <p><i>The WNP1 Site Evacuation Plan generally addressed actions to be taken by licensee employees; however, it did not clearly describe its application to lessees. The only specific reference to lessees in the WNP1 site plan was in the "encompassing statement" section. The plan did not identify actions which were intended to be taken only by licensee employees and which actions applied to all personnel. For those actions which did apply to both licensee and lessee employees, the WNP1 site plan did not identify any differences between them.</i></p>	<p>1. All lessees were provided a copy of the WNP-1 Construction Site Emergency Evacuation & Response Plan (Rev. 14, March 1995) after signing the lease.</p> <p>[WNP-1 Construction Site Emergency Evacuation & Response Plan, "Total Site Evacuation", Page 12]</p> <ul style="list-style-type: none"> ▪ <i>WNP-1 personnel may be required to completely evacuate the site.</i> ▪ <i>The notice to evacuate will be by activation of the Site 1 siren and broadcasting a message over the telephone paging system, Gaitronics paging system and operations radio frequency.</i> • NOTE: THE SIREN FOR TOTAL SITE EVACUATION IS A STEADY, THREE-MINUTE SIREN! ▪ <i>All personnel are directed to <u>go home</u> unless directed to an assembly area by a Security officer at the roadblock.</i> <p>2. Written information concerning specific evacuation routes and modes of transportation was not provided in advance. Energy Northwest's implementing process relied on verbal notification. The designed means to normally communicate the route and monitoring station location to lessee employees were by four or more of the following means (see below table for each lessee). During off hours, this could reduce to three.</p> <ul style="list-style-type: none"> ▪ PA Announcements by telephone ▪ Gaitronics page for workers in power block area ▪ DSA telephone Call Tree (Lists lessees that daily occupy premises) ▪ Site One Area sweep ▪ Security sweep ▪ Peer to Peer ▪ Security roadblock <p>Mode of transportation information was not provided. Because there were no persons that resided at Site One, the means of transportation was the one they used commuting to their work location.</p> <p>3. Security Officers at roadblocks would verbally direct personnel to an Assembly Area for monitoring (if necessary):</p> <p>[PPM 13.10.8, Section 3.1.13.e, Security Lt. Duties] <i>Direct evacuees, and those evacuees that may be contaminated, to report to the assembly area for accountability and personnel monitoring</i></p> <p>[PPM 13.10.8, Section 3.1.13.g, Security Lt. Duties] <i>Instruct Security Officers at the roadblocks to direct persons coming from the plant to proceed to the designated assembly area for monitoring and decontamination, as necessary.</i></p> <p>[Site One Emergency Evacuation & Response Plan] <i>All personnel are directed to go home unless directed to an assembly area by a Security officer at the roadblock</i></p> <p style="text-align: right;">(continued)</p>

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	<p>4. Energy Northwest's WNP-1 Construction Site Emergency Evacuation & Response Plan and Columbia Generating Station emergency procedures did not distinguish between lessees and others when an Exclusion Area Evacuation was directed. The characterization that the WNP-1 Construction Site Emergency Evacuation & Response Plan description that "<i>WNP-1 personnel may be required to completely evacuate the site</i>" on page 12 was limited to only Licensee employees is not correct. The title of the page was "<i>Total Site Evacuation</i>" and referred to all persons on the construction site.</p> <p>5. Additionally, the "ENCOMPASSING STATEMENT" was:</p> <p><i>The WNP-1 Construction Site Emergency Evacuation & Response Plan is written to guide actions and response of all personnel under direction of WNP-1 Supply System Management. This includes all Supply System employees, contractors and visitors, who are within the geographical area of WNP-1/4 when an emergency occurs. Lessees of facilities and Supply System contractors within the WNP-1 area are required to prepare a similar plan or comply with this plan with the Supply Systems concurrence.</i></p> <p>No contractors, lessees, or other occupants during October 1997 to April 2001 submitted an alternate plan for approval. Thus the WNP-1 Construction Site Emergency Evacuation & Response Plan, including the requirements for total site evacuation, applied to all lessees.</p>
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			Communication means for each lessee Notification									
Current Lessees			Cross-roads Siren	Site One Sirens	Bldg Page	Call Tree	Power Block Page	DSA Sweep	Security Sweep	Peer To Peer	Road Block	
Lessee	Building	Lease Period										
TARC	4, 242,252	9/00 - Current	1	1	2	*		5	6	8	9	
CREHST Museum	55	6/98 - Current	1	1		3		5	6	8	9	
Durametal	2,4	2/98 - Current	1	1		3		5	6	8	9	
Master-Lee	74	10/97 - Current	1	1		3		5	6	8	9	
Tri-City Railroad#	Track	8/00 - Current	1	4		#		5	6	8	9	
Existed During 10/97-4/01												
CWT Technologies	1	1997 - 2000	1	1	2	3		5	6	8	9	
Exitech#	211	11/97 - 4/98	1	1		#		5	6	8	9	
Fluor Hanford#	211	2/00 - 11/00	1	1		#		5	6	8	9	
IET, Inc.	TGB	11/98 - 4/01	1	1		3	7	5	6	8	9	
Lampson#	250	1/01 - 6/01	1	1		#		5	6	8	9	
Code		Description										
1		Will hear external, but may not hear inside buildings										
2		Building 4 office and Building 1										
3		Notification by telephone call tree on Site One										
4		May not hear over engine noise										
5		Normal Working Hours only, unless DSA mobilizes at Alert										
6		Notification by Sweep										
7		Will notify all persons in the power block										
8		A peer to peer notification is expected by the lessee										
9		Roadblock was the final backstop for providing route and monitoring direction										
#		Short term storage only contracts and infrequent occupancy, no onsite telephone										
*		Located in same building as Energy Northwest Site One staff.										

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NUREG-0654 II.J.2
Evacuation Routes

Each licensee shall make provisions for evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density and specific radiological conditions.

Lessee Evacuation Routes

NRC Inspection Report No. 50-397/01-008

Energy Northwest Response

b. *The licensee had not established nor communicated expected evacuation routes to the lessees and had not communicated circumstances under which the alternate routes would be required. The licensee also lacked methods for directing lessees to alternate locations, if required.*

Although routes and maps were developed in the Emergency Plan, the dissemination of maps or instructions in written form would have enhanced the ability to advise evacuees in a timelier manner. Specifically, the evacuation of larger numbers of people may have been delayed during normal working hours due to time required for advising each evacuee of the route and monitoring location at the roadblocks. This assumes a scenario where Site One evacuees immediately evacuated upon hearing the crossroads siren and did not receive instructions on routes and monitoring until reaching the roadblock. However, methods were in place to provide this information and could reasonably expect to have been accomplished given the numbers of people being evacuated. Specifically:

1. Evacuation routes for the Exclusion / Owner Controlled area evacuees (including lessees) were established and evaluated in the Columbia Emergency Plan:
 - Four evacuation routes out of the EPZ were pre-determined and specified (EP 5.7.2)
 - Evacuation routes were evaluated and had sufficient capacity (EP 5.7.2)

2. The expected evacuation routes were not communicated in advance. The Emergency Director evaluated situation-specific hazards and would have identified routes that would be verbally communicated to evacuees. To have pre-directed the evacuation route could have been adverse to the PAD determined by the emergency director. The procedure requirements were:

[EPIP 13.5.3, Section 2.2]

The Emergency Director is responsible for determining when an Exclusion Area evacuation should be conducted. The decision to evacuate personnel should be based on the course of action, which presents the minimum risk to employees.

Some examples of condition which make an Exclusion Area evacuation not advisable include, but are not limited to:

- *An ongoing security threat affecting personnel in the Exclusion Area (consult with the Security manager to aid in determining the safest course of action)*
- *Inclement weather (e.g. high winds or hazardous road conditions may preclude a safe evacuation of personnel)*
- *Radiological hazards exist (determined which action would result in lowest dose to evacuating personnel)*
- *Other hazards exist which might subject evacuees to a higher risk to personnel safety than not evacuating.*

If conditions for an Exclusion Area evacuation are present, but the decision is made to not evacuate personnel due to safety concerns, personnel will normally remain at their work locations unless directed otherwise.

[EPIP 13.5.3, Section 4.1.3]

If the decision is made to evacuate the Exclusion Area, determine if radiological hazards exist or are suspected within the Exclusion Area. If a radiological hazard does exist or a release is in progress, then direct evacuees to report to the ENOC assembly area. Determine safe evacuation routes and hazardous areas to avoid.

(Continued)

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	<p>[PPM 13.10.8, Section 3.1.13.e] <i>Direct evacuees, and those evacuees that may be contaminated, to report to the assembly area for accountability and personnel monitoring.</i></p> <p>[PPM 13.10.8, Section 3.1.13.g] <i>Instruct Security Officers at the roadblocks to direct persons coming from the plant to proceed to the designated assembly area for monitoring and decontamination, as necessary.</i></p> <p>[WNP-1 Construction Site Emergency Evacuation & Response Plan] <i>All personnel are directed to go home unless directed to an assembly area by a Security officer at the roadblock</i></p> <p>3. Methods to direct evacuees to alternate locations were in place. Energy Northwest implementing process relied on verbal notification. The designed means to normally communicate the route and monitoring station location to lessee employees were by four or more of the following means (see previous table for each lessee. During off hours, this could reduce to three.</p> <ul style="list-style-type: none">▪ PA Announcements by telephone▪ Gaitronics page for workers in power block area▪ DSA telephone Call Tree▪ Site One Area sweep▪ Security sweep▪ Peer to Peer▪ Security Officers at roadblocks verbally direct personnel to an Assembly Area for monitoring (if necessary):
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NUREG-0654 II.J.2

Evacuation Routes

Each licensee shall make provisions for evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density and specific radiological conditions.

Delayed Lessee Employee Training

NRC Inspection Report No. 50-397/01-008

Energy Northwest Response

c. *Some lessee employees did not receive any emergency preparedness information until more than 10 weeks after they began work at the WNP1 site.*

Energy Northwest did not have a continuing direct training program for lessee employees because we relied on the lessees to train their own employees with material we provided as required by their contract provisions. Not ensuring lessee training implementation was performed is an identified weakness.

A majority of the personnel at Site One knew the required evacuation requirements, however a greater percentage of lessee personnel should be knowledgeable. Site One Energy Northwest employees were fully trained and charged with specific responsibilities to ensure lessees would be evacuated.

1. Initial training implementation by some lessees for all their employees was not timely and in some cases less than adequate, but other elements of the Emergency Plan reasonably compensate for this deficiency and were in place to provide the basic evacuation instructions at the time evacuation was directed:

2. Basic written information included:

- It was our practice to provide initial briefings by Energy Northwest Site One personnel to the lessee management (and at times to the then current lessee employees) at the time the lease agreement was signed. These briefings were on the WNP-1 Site Emergency Evacuation & Response Plan
- Site 1 Industrial Complex Rules provided information
- Access road signs provided information

During an actual evacuation, those lessee employees that were not trained or could not recall the requirements would be informed and required to respond. Means would include:

- Call Tree notification
- Peer to peer communication at time of evacuation
- PA announcements to some lessees buildings
- Gaitronic PA announcements in the power block
- Verbal notification by Site One Emergency Response personnel during Site One sweep at time of evacuation
- Verbal notification by Mobile patrol sweep at time of evacuation
- Verbal direction by roadblock Security Officer at time of evacuation.

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NUREG-0654 II.J.2
Evacuation Routes

Each licensee shall make provisions for evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density and specific radiological conditions.

Lessee Employee Training by Energy Northwest

NRC Inspection Report
No. 50-397/01-008

Energy Northwest Response

d. *In April 2001, emergency preparedness staff stated that they had not provided direct training about exclusion area evacuation requirements to lessee employees, nor did they intend to provide this training.*

Energy Northwest did not have a continuing direct training program for lessee employees because we relied on the lessees to train their own employees with material we provided as required by their contract provisions. Not ensuring continued lessee training implementation was performed is an identified weakness.

1. It was our practice to provide initial briefings by Energy Northwest Site One personnel to the lessee management (and at times to the then current lessee employees) at the time the lease agreement was signed.
2. The basic written exclusion area evacuation instruction initially provided to each lessee was a copy of the WNP-1 Construction Site Evacuation & Response Plan. Additional copies were also provided to the lessee for each employee for training
3. Access road signs provide (daily) basic exclusion area evacuation information for all lessee employees.

Notice! Notice!
You are entering the Plant 2
EXCLUSION AREA
Should you hear a steady
THREE-MINUTE SIREN, you must
EVACUATE this area **IMMEDIATELY**

See response to II.J.1 concern "h" for specific information on each lessee.

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NUREG-0654 II.J.3

Monitoring

Each licensee shall provide for radiological monitoring of people evacuated from the site.

Commitment to Provide Radiological Monitoring for Lessee Employees

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>a. <i>In April and May 2001, emergency preparedness staff stated that the emergency plan requirement to provide radiological monitoring at the Energy Northwest Office Complex for personnel evacuated from the exclusion area applied only to Energy Northwest employees (employees of Columbia Generating Station and other company employees located at WNP1) and direct Energy Northwest contractors. The staff also stated that they did not intend to provide radiological monitoring for lessee employees.</i></p>	<p>After the NRC raised initial concerns, Energy Northwest emergency staff made Exclusion Area evacuation mandatory at a Site Area classification level in an effort to ensure public safety. Because of this, Emergency staff believed that by evacuating early, there would not be a need for monitoring, as the evacuees would not be exposed. Emergency planning staff failed to consider the possibility of a rapidly escalating event, which could result in exposures to lessees. However, if there had been a need to monitor because a rapidly escalating event occurred, the Emergency Plan and implementing procedures retained the means and methods for providing radiological monitoring. The ED would have still considered the need to choose alternate routes and the need for monitoring.</p> <ol style="list-style-type: none">1. The Columbia Generating Station Emergency Plan was not changed.2. The implementing procedures for assessing the need for radiological monitoring and providing a facility for monitoring all persons in the exclusion area that are evacuated were not changed.3. The change was to EPIP 13.5.3 to evacuate Site One personnel (including the lessees) at Site Area Emergency, rather than making it optional.

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NUREG-0654 II.J.3

Monitoring

Each licensee shall provide for radiological monitoring of people evacuated from the site.

Notification Methods to Provide Lessee Employees Direction for Radiological Monitoring

NRC Inspection Report No. 50-397/01-008	Energy Northwest Response
<p>b. <i>The licensee did not have procedures or notification methods for directing lessee employees to radiological monitoring stations as needed. Lessees had not been provided advance information about radiological monitoring locations, nor were they provided directions or maps.</i></p>	<p>Lessees were not provided with advanced information or maps to the monitoring location as the direction to the ENOC was reasonably simple to communicate verbally. The ENOC is located at 3000 George Washington Way in Richland. George Washington Way is a main north-south street through Richland and is well known. Not providing advanced written information is an identified implementation weakness.</p> <ol style="list-style-type: none"> 1. Energy Northwest's implementing process relied on verbal notification. The designed means to normally communicate the route and monitoring station location to lessee employees were by four or more of the following means (see below table for each lessee). During off hours, this could reduce to three. <ul style="list-style-type: none"> ▪ Call Tree notification ▪ Peer to peer communication at time of evacuation ▪ PA announcements to some lessees buildings ▪ Gaitronic PA announcements in the power block ▪ Verbal notification by WNP-1 Emergency Response personnel during Site One sweep at time of evacuation ▪ Verbal notification by Mobile patrol sweep at time of evacuation ▪ Verbal direction by roadblock Security Officer at time of evacuation. 2. Procedures and the WNP-1 Construction Site Emergency Evacuation & Response Plan contained requirements for the Security Officers at roadblocks would verbally direct personnel to an Assembly Area for monitoring (if necessary): <p>[PPM 13.10.8, Section 3.1.13.e] <i>Direct evacuees, and those evacuees that may be contaminated, to report to the assembly area for..... personnel monitoring.</i></p> <p>[PPM 13.10.8, Section 3.1.13.g] <i>Instruct Security Officers at the roadblocks to direct persons coming from the plant to proceed to the designated assembly area for monitoring and decontamination, as necessary.</i></p> <p>[Site One Emergency Evacuation & Response Plan] <i>All personnel are directed to go home unless directed to an assembly area by a Security officer at the roadblock.</i></p>

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Failure to Meet a Regulatory Requirement

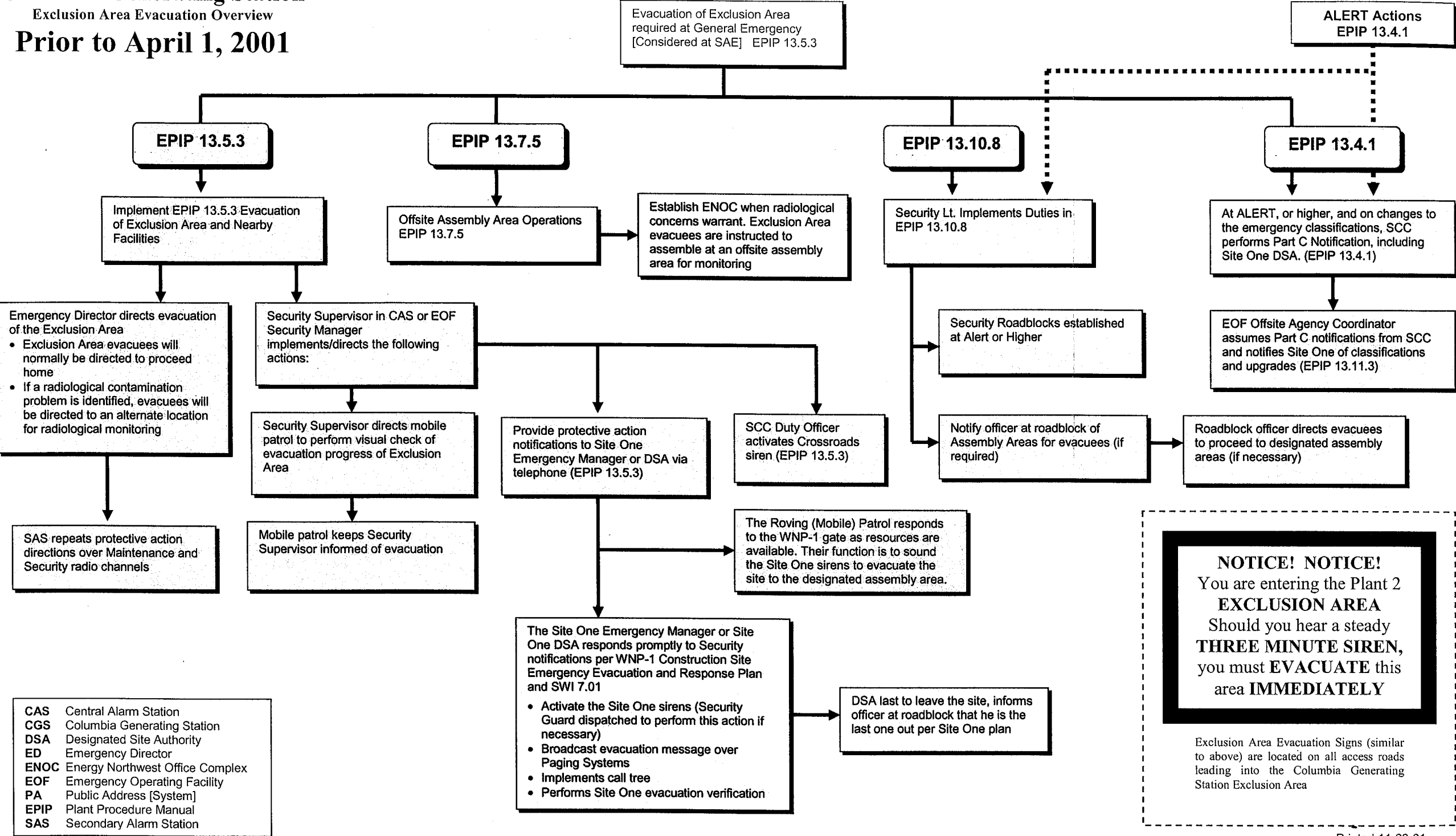
Warn

The initial notification methods used by Energy Northwest to notify industrial tenants within the Columbia exclusion / owner controlled areas may not have notified essentially 100% of the tenants at all hours of the day within 15 minutes. Although the alert signal (crossroads siren) would have been timely, during off hours the DSA would be performing telephone notifications from offsite while the mobile patrol would perform the sweep. During the time the crossroad siren was not operable, the mobile patrol would have had the extra duty during off hours to sound the Site One sirens making it potentially difficult that we would have achieved the 15-minute standard. However, other arrangements were in place to assure 100% notification and evacuation within the 1 hour estimated in the Emergency Plan. 100% evacuation would have been easily implemented due to the very small number of persons during off-normal working hours.

Timely Off-Hours Notification

Regulatory Requirement	Energy Northwest Actions
<p>Requirement:</p> <p>10 CFR 50.47 B(10) <i>A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place and protective action for the ingestion exposure pathway EPZ appropriate to the locale have been developed.</i></p> <p>NUREG 0654 Implementing guidance Part II.J.1 <i>Each licensee shall establish the means and time required to warn or advise onsite individuals and individuals who may be in areas controlled by the operator, including:</i></p> <ul style="list-style-type: none"> a. <i>Employees not having emergency assignments;</i> b. <i>Visitors;</i> c. <i>Contractor and construction personnel; and</i> d. <i>Other persons who may be in the public access areas on or passing through the site or within the owner controlled area."</i> <p>Appendix 3 b) <i>The initial notification system will assure direct coverage of essentially 100% of the population within 5 mile of the site.</i> c) <i>Special arrangements will be made to assure 100% coverage within 45 minutes of the population who may not have received the initial notification within the entire plume exposure EPZ</i></p> <p><i>The design objective does not, however constitute a guarantee that early notification can be provided for everyone with 100% assurance or that the system when tested under actual field conditions will meet the design objective in all cases.</i></p> <p>Supplement to NUREG- 0654 <i>Not every individual would necessarily be reached by the actual operation of such a system under all conditions of system.</i></p> <p style="text-align: center;"><i>Columbia Generating Station EP5.8 estimates the initial notification within 15 minutes and evacuation within 1 hour.</i></p> 	<p>C/A to Restore Compliance with Regulations and the Emergency Plan</p> <p><u>Ensure notification to essentially 100% of the tenants within 15 minutes at all times.</u></p> <ul style="list-style-type: none"> ▪ Revised PPM 13.5.3 to instruct security personnel to make Site One announcement concerning evacuation routes and monitoring via telephone PA prior to crossroad and Site One siren activation. Security also initiates Site One call tree contact if DSA is not immediately available. ▪ Lessee phone numbers were specifically added to the PPM 13.5.3 and Security phone tree checklists (24 hr. staffing). Security notifies Lessees directly by phone. ▪ A verification drill was performed to demonstrate that corrective actions were effective. <p>Enhancements to provide added assurance of meeting Regulations.</p> <ul style="list-style-type: none"> ▪ PPM 13.5.3 was revised to implement early, mandatory evacuation of Site One personnel at Site Area Emergency. ▪ Site One area sirens modifications were made to allow remote activation of the Site One on-site sirens by the Security (24 hr. staffing). ▪ Initiated routine testing (including documentation and a quarterly growl test) of the Site One on-site sirens to ensure their reliability. ▪ Instructed WNP-1 lessees to call the SCC and notify them when they come and go on back shifts to better facilitate evacuation should it become necessary and SCC logs when WNP-1 lessees come and go.

Columbia Generating Station
Exclusion Area Evacuation Overview
Prior to April 1, 2001





Introduction

JV Parrish

Chief Executive Officer



Management Statement

RL Webring

Vice President, Operations Support / PIO

Agenda**Presentation**

1. Introduction – JV Parrish
2. Management Statement - RL Webring
3. Overview of Exclusion Area – JE Wyrick
 - Overview of exclusion area including location of lessees and emergency equipment
4. Significance Determination Process Considerations – DW Coleman
5. Emergency Plan Implementation Prior to April 2001 – JE Wyrick
 - Review of notification, evacuation, and monitoring procedures applicable to Site One
6. Detailed Review of Inspection Report Concerns – JE Wyrick
 - Energy Northwest's detailed evaluation of each inspection report concern
7. Significance Determination Evaluation – DW Coleman
 - Energy Northwest evaluation of concerns using the Significance Determination Process
8. Concluding Remarks

3

Objective

Energy Northwest will clarify the Columbia Generating Station emergency response process for the exclusion area (including Site One) as it existed prior to April 2001. We will also present our perspective on the concerns raised in NRC Inspection Report No. 50-397/01-008.

4

We have taken each of the Inspection concerns very seriously. Issues identified in the inspection were the basis for a number of changes made to the emergency response program.

5

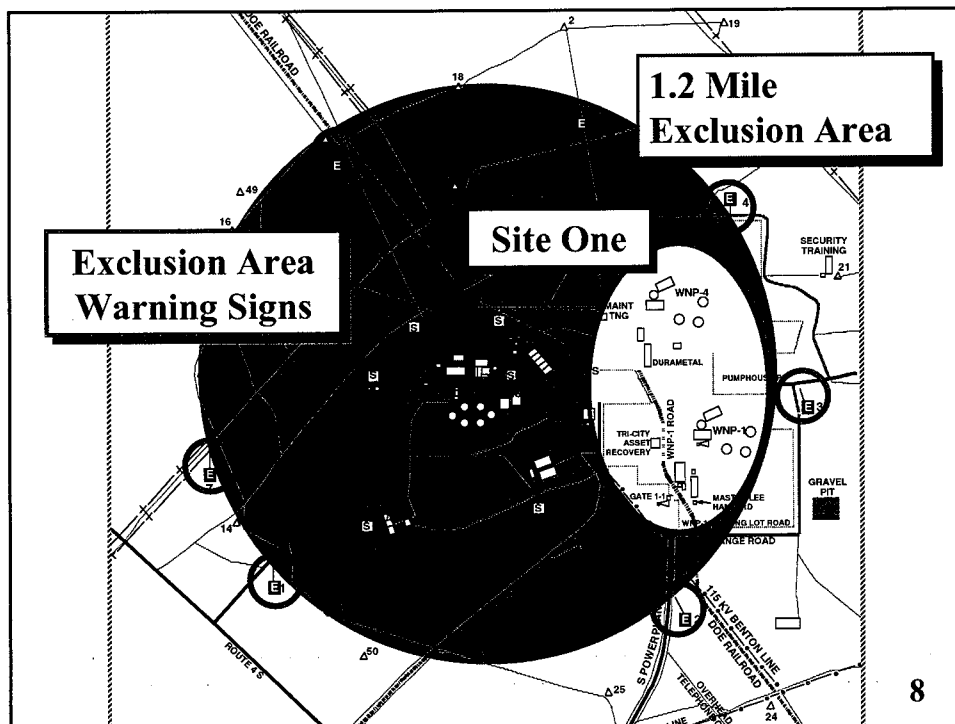
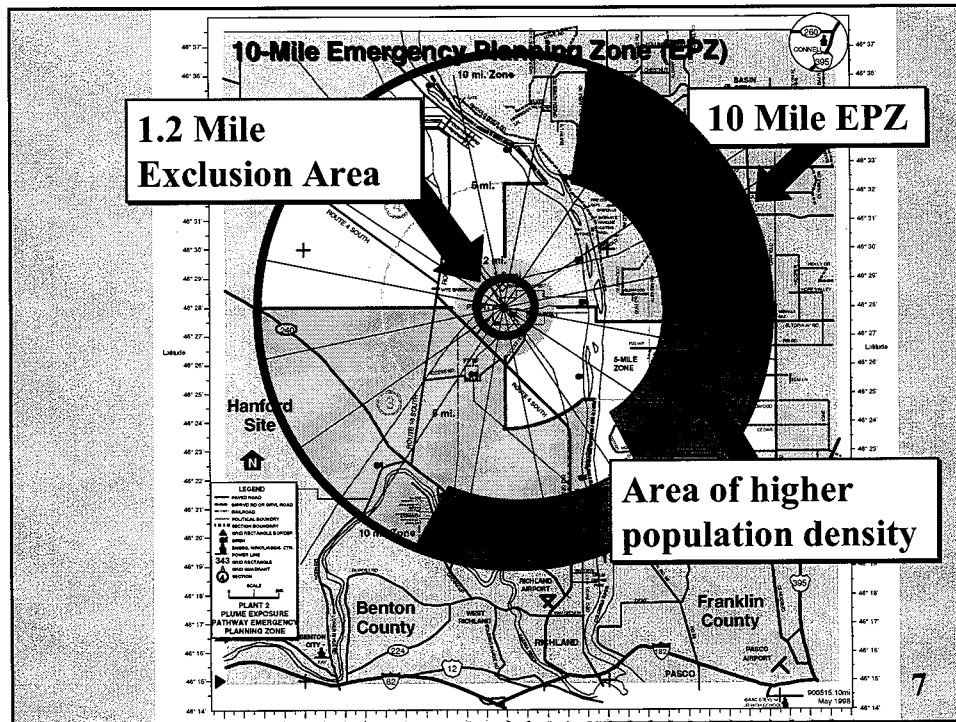


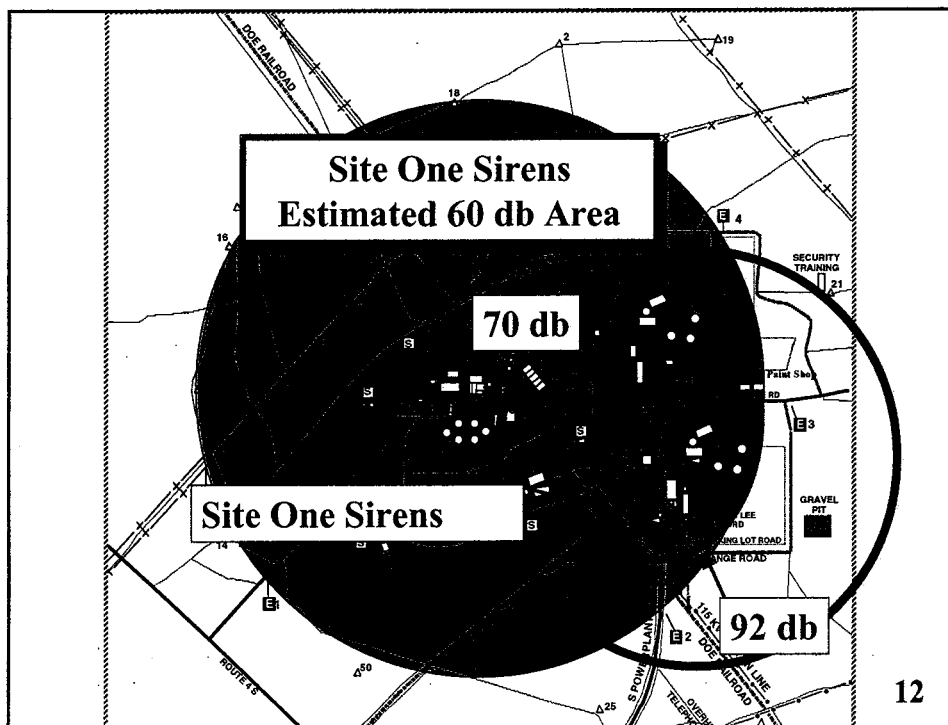
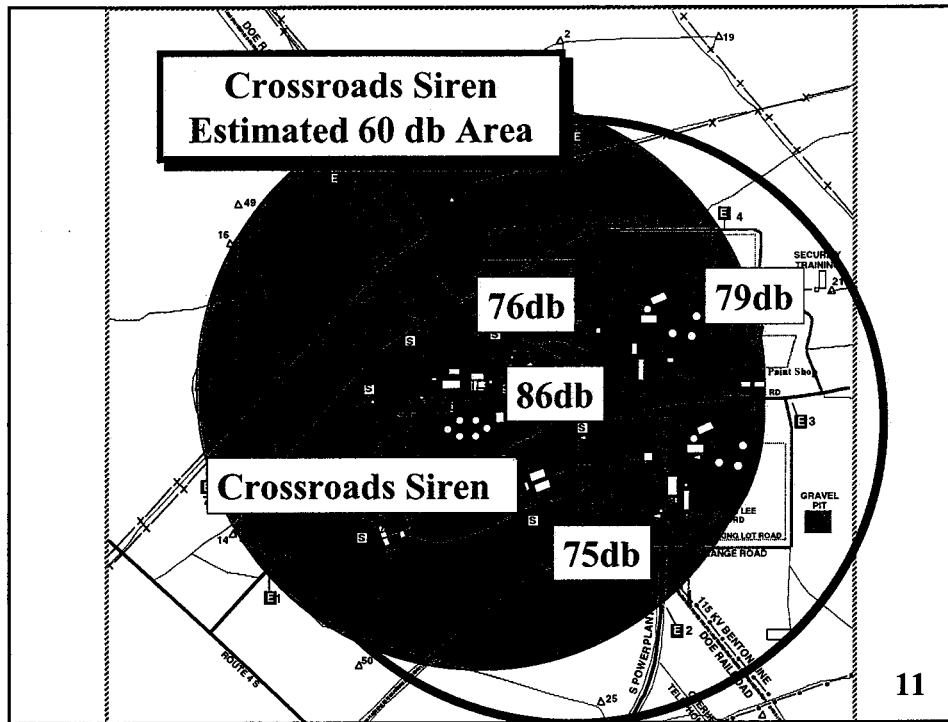
Overview

JE Wyrick

Manager, Resource Protection

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Columbia EPZ Site One Industrial Lessees

The concerns expressed in the inspection report affect Site One lessees in the Columbia Exclusion Area / Owner Controlled Area

- Total Columbia Generating Station EPZ population is ~31,000 (all populations)
- Total population within the exclusion area is ~1100
- Population within the Exclusion area for all occupants at Site One is ~120
- April 2001 lessee occupancy during normal work hours ~40
- Current lessee during non-normal work hours ~2-3 a few times per month

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ENERGY NORTHWEST

Significance Determination Process Considerations

DW Coleman

Manager, Performance Assessment
& Regulatory Programs

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NRC preliminary yellow finding of failure to meet the requirements of 10 CFR 50.47(b)(10):

- **Inability to notify**
- **Inability to implement protective actions**
- **Lack of provisions for radiological monitoring**

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10 CFR 50.47(b)(10)

“A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place...”

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Significance Determination Process

QUESTION:

Do the concerns constitute a failure to meet the 10 CFR 50.47(b)(10) planning standard as defined by the criteria in NUREG-0654 J.1, J.2, and J.3?

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Failure to Meet a Planning Standard?

- **Failure to meet a PS means that program elements are not in compliance with the PS of 10 CFR 50.47(b). It may be that:**
 - **Plan commitments are not met,**
 - **the Plan is inadequate,**
 - **implementing procedures are inadequate,**
 - **program design is inadequate, etc.**

From: NRC Inspection Manual 0609, Appendix B, Emergency Preparedness Significance Determination Process, issue date 12/29/00, section 5.0 "Failure to Meet a PS"

Failure to Meet a Risk Significant Planning Standard?

The following provides specificity on what constitutes a failure to meet the risk significant planning standard (RSPS) provisions of 10 CFR 50.47(b)(10)

- **“Licensee guidance does not provide PARs that are in accordance with Plan commitments or approved guidance.”**
- **“Personnel responsible for the development of PARs are not able to implement the guidance.”**

From: NRC Inspection Manual 0609, Appendix B, Emergency Preparedness Significance Determination Process, issue date 12/29/00, section 5.10, “10 CFR 50.47(b)(10)”

ENERGY NORTHWEST

Emergency Response Plan Overview and Evaluation of NRC Concerns

JE Wyrick

Manager, Resource Protection

Overview Emergency Response Plan

We will present an overview of the emergency response plan as it existed prior to April 2001 and the methods in place to comply with the following NUREG provisions:

- NUREG-0654 II.J.1
- NUREG-0654 II.J.2
- NUREG-0654 II.J.3

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NUREG-0654 II.J.1 Warn or Advise

Each licensee shall establish the means and time required to warn or advise onsite individuals and individuals who may be in areas controlled by the operator, including:

- a. Employees not having emergency assignments;
- b. Visitors;
- c. Contractor and construction personnel; and
- d. Other persons who may be in the public access areas on or passing through the site or within the owner controlled area.

NUREG-0654 II.J.2
Evacuation Routes

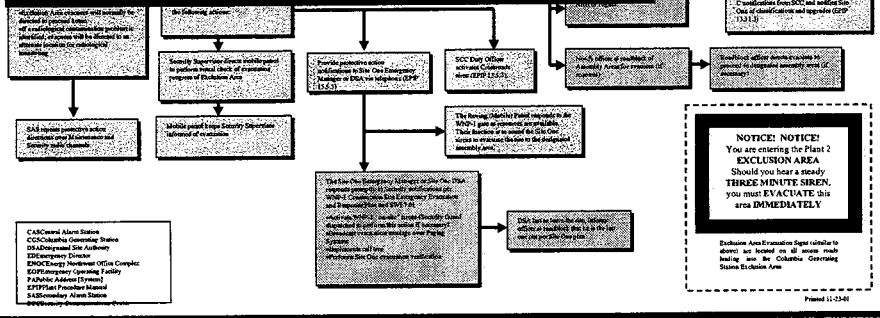
Each licensee shall make provisions for evacuation routes and transportation for onsite individuals to some suitable offsite location, including alternatives for inclement weather, high traffic density and specific radiological conditions.

NUREG-0654 II.J.3
Monitoring

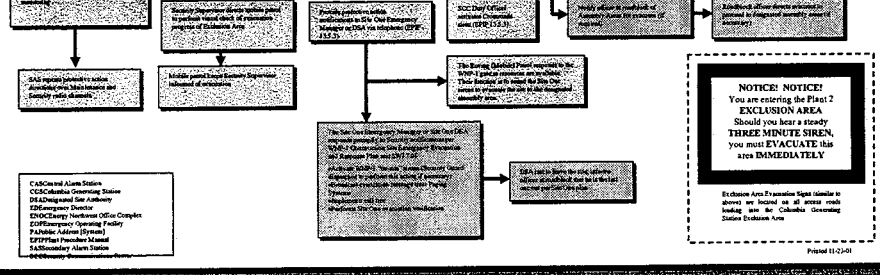
Each licensee shall provide for radiological monitoring of people evacuated from the site.

ALERT Actions

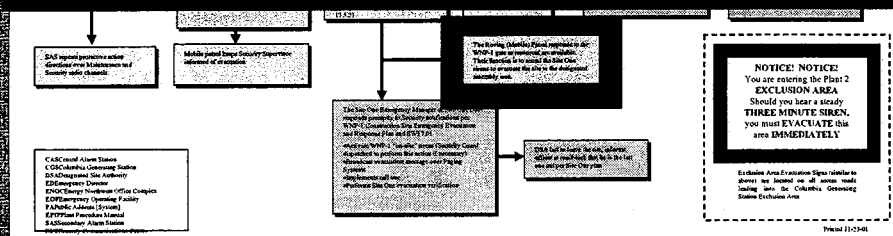
EPIP 13.4.1



At ALERT, or higher, and on changes to the emergency classifications, SCC performs Part C Notification, including Site One DSA. (EPIP 13.4.1)

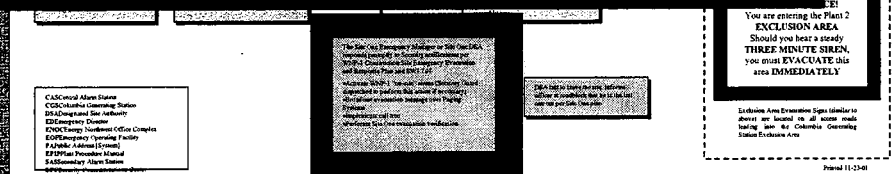


The Roving (Mobile) Patrol responds to the WNP-1 gate as resources are available. Their function is to sound the Site One sirens to evacuate the site to the designated assembly area.

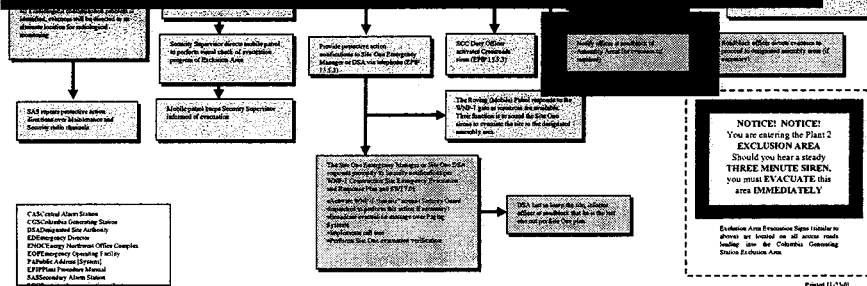


The Site One Emergency Manager or Site One DSA responds promptly to Security notifications per WNP-1 Construction Site Emergency Evacuation and Response Plan and SWI 7.01

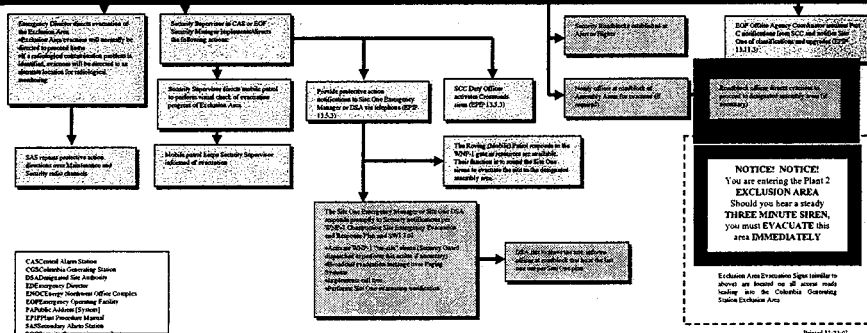
- Activate the Site One sirens (Security Guard dispatched to perform this action if necessary)
- Broadcast evacuation message over Paging Systems
- Implements call tree
- Performs Site One evacuation verification

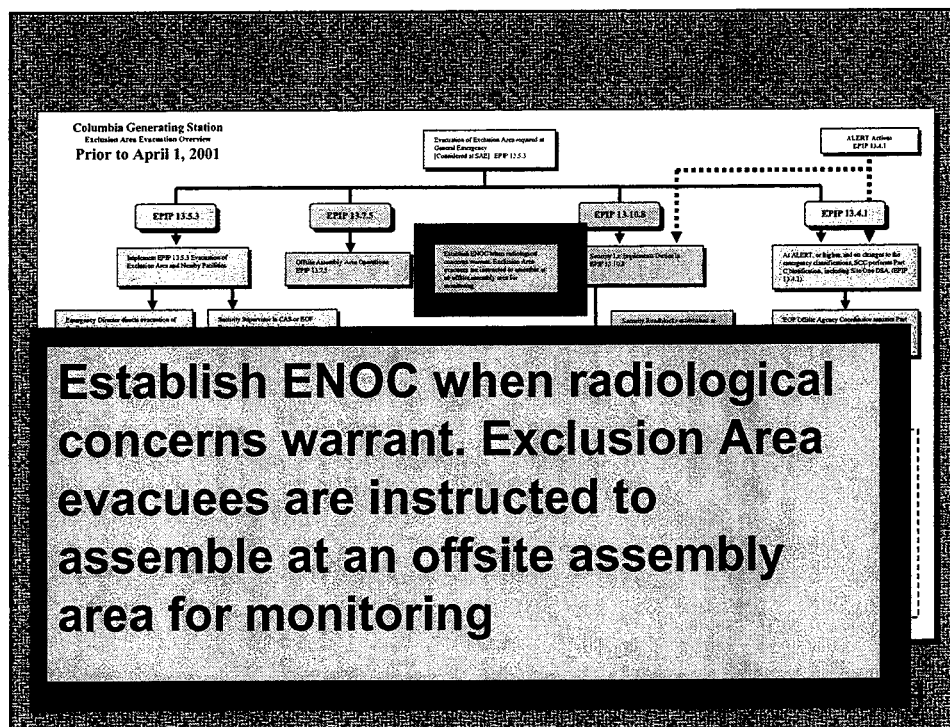
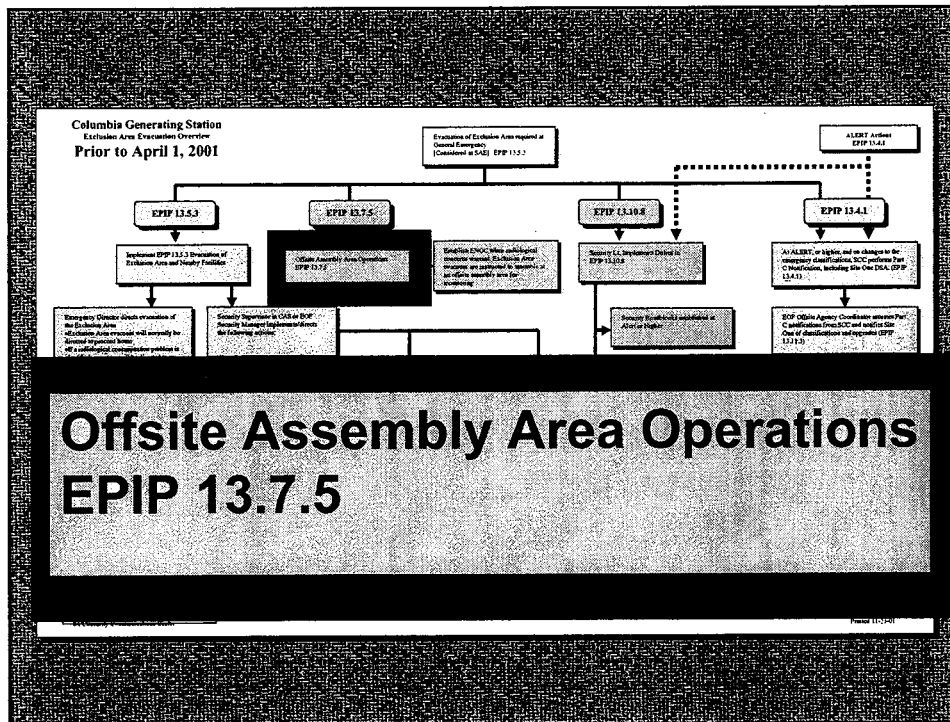


**Notify officer at roadblock
of Assembly Areas for
evacuees (if required)**



Roadblock officer directs evacuees to proceed to designated assembly areas (if necessary)





Inspection Concerns

45

J.1 Warn or Advise

- 1. Crossroads Siren**
- 2. Site One Telephone building page**
- 3. Telephone (DSA call tree)**
- 4. Radio Announcements**
- 5. Site One Sirens**
- 6. Gaitronics**
- 7. Peer-to-Peer notification**
- 8. Mobile patrol Security sweep**
- 9. Site One Emergency Team sweep**

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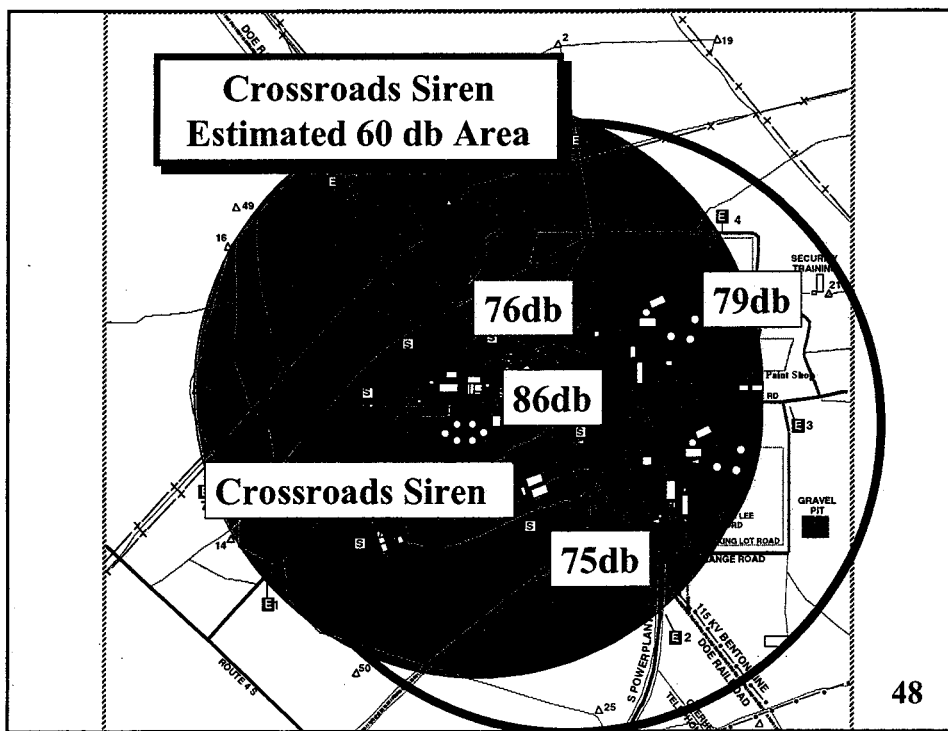
J.1 Warn or Advise

a

- 1.a. FD would receive confirmation of evacuation progress from Security patrol
- 1.b. Crossroads Siren and Site One sirens routinely tested.
- 2.a. Crossroads Siren audible outdoors in the Protected Area
- 2.b. Estimated 60dB level overlaps Protected Area [see next slide]

Conclusion: Confirmation of evacuation was required by procedure. Crossroads siren can be heard outdoors in the protected area (per test).

47



48

J.1 Warn or Advise

b

Notification methods:

1. Crossroads Siren
2. Site One Telephone building page
3. Telephone (DSA call free)
4. Radio Announcements
5. Site One Sirens
6. GaITronics
7. Peer-to-Peer notification
8. Mobile patrol Security sweep
9. Site One Emergency Team sweep

Conclusion: Reasonable multiple methods were in place to warn and advise exclusion area personnel (i.e., visitors, lessees, contractors, and employees) including those who were indoors.

J.1 Warn or Advise

c

1. Crossroads Siren testing was required by procedures, performed, and documented
2. Annual Crossroads Siren full operational test
3. WNP-1 Sirens part of augmenting notification system, tested annually

Conclusion: Crossroads siren testing was required by procedures, performed, and documented.

J.1 Warn or Advise

d

The DSA is provided a beeper, is assigned 24 hours a day, 7 days a week, and routinely responds to Site One problems.

1. DSA notified by Security at Alert or higher, independent of EOF activation
2. DSA notified by Security for Exclusion Area evacuation
3. Provisions for DSA to delegate duties to on-shift personnel

Conclusion: DSA notification was not dependent on EOF activation.

51

J.1 Warn or Advise

e

1. Contrary to initial information provided by emergency planning staff, security sweep was required by procedure (EPIP 13.5.3, Step 4.3.3)
2. Building entry at obvious signs of occupancy
3. Sweeps one of several notification means

Conclusion: Security sweep was required by procedure. The sweep would enter buildings based on signs of occupancy.

52

J.1 Warn or Advise

f

There are two security officers available to man two roadblocks at Alert. A third individual is available to man the mobile patrol at evacuation.

1. Roadblock duties are not the responsibility of the mobile patrol.
2. During off-hour periods, when directed, the mobile patrol would activate the Site One sirens and then proceed with the sweep.
3. Additionally, security would augment its resources as necessary at Alert or higher.

Conclusion: There was reasonable assurance that evacuation would occur within one hour. However, timeliness of initial notification of essentially 100% of personnel within 15 minutes during off-hours could have been adversely impacted.

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J.1 Warn or Advise

g

1. Procedures implemented Columbia Generating Station Emergency Plan (i.e., there was no conflict)

Conclusion: No conflict between emergency plan and implementing procedures.

54

J.1 Warn or Advise

h

Briefing of lessees:

1. All lessees were provided the WNP-1 Construction Site Emergency Evacuation & Response Plan
2. Exclusion Area Warning Signs

Conclusion: Reasonable means were in place to warn and advise exclusion area personnel (i.e., visitors, lessees, contractors, and employees).

55

J.2 Evacuation Routes


a

1. All lessees were provided the WNP-1 Construction Site Emergency Evacuation & Response Plan
2. Evacuation information verbally communicated via multiple means
3. Direction to Assembly Area provided by Security roadblocks
4. No distinction in Evacuation Plan between lessee and Energy Northwest employees for Exclusion Area evacuation
5. Encompassing Statement — "Lessees of facilities ... within the WNP-1 area are required ... to comply with this plan ..."
6. Communication of information methods for each lessee in table

Conclusion: The WNP-1 plan did apply to lessees and means were in place to evacuate exclusion area personnel (i.e., visitors, lessees, contractors, and employees).

J.2 Evacuation Routes

b

- 
1. Evacuation Routes established and evaluated in Emergency Plan
 2. Specific evacuation route not communicated to evacuees until specific route decided by Emergency Director


Conclusion: Methods were in place to direct evacuees to alternate routes



57

J.2 Evacuation Routes

c

- 
1. Training implementation by some lessees for all their employees was less than adequate, but other elements of the Emergency Plan reasonably compensated and were sufficient to provide basic evacuation instructions


Conclusion: Multiple means were in place to evacuate lessee employees who were not trained




58

J.2 Evacuation Routes

d

- 
1. Energy Northwest provided initial briefing for lessee management but not lessee employees
 2. Basic written exclusion area evacuation briefing was initially provided to each lessee (written information was provided with the lease agreement)
 3. Exclusion Area Warning Signs on access roads

Conclusion: Elements of the emergency plan were sufficient to provide basic evacuation instructions



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J.3 Monitoring

a



Statements by Emergency Planning personnel did not accurately reflect the planned response for monitoring of evacuees (visitors, lessees, contractors, and employees) when radiological conditions warrant.

1. Emergency Plan was not changed
2. Assessment of the need for radiological monitoring and providing a facility for monitoring all evacuees was not changed
3. The change was to EPIP 13.5.3 to evacuate Site One and the lessees at Site Area Emergency, rather than making it optional

Conclusion: Elements of the emergency plan were sufficient to provide for monitoring of evacuees

60

J.3 Monitoring

b

[REDACTED]

Direction to Energy Northwest Office Complex (ENOC) reasonably simple to communicate—it is located on a major thoroughfare in Richland.

1. Verbal communication, by multiple means, to provide direction
2. Personnel directed to assembly area for monitoring by Security roadblocks

Conclusion: Elements of the emergency plan were sufficient to provide basic evacuation instructions

[REDACTED]

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Summary

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10 minute Break (?)

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ENERGY
NORTHWEST

Significance Determination Evaluation

DW Coleman

Manager, Performance Assessment
& Regulatory Programs

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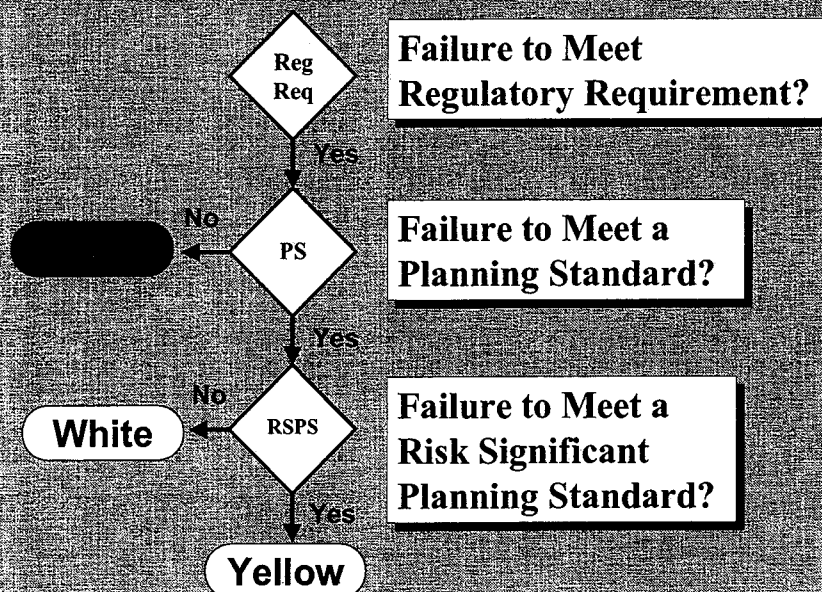
Significance Determination Process

QUESTION:

Do the concerns constitute a failure to meet the 10 CFR 50.47(b)(10) planning standard as defined by the criteria in NUREG-0654 J.1, J.2, and J.3?

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Significance Determination Process



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Failure to Meet a Regulatory Requirement?

Noncompliance

- 1. Timeliness of initial notification of essentially 100% of personnel during off-hours could have been adversely impacted**

67

Implementation Weaknesses

- 1. Not confirming that lessees provided emergency response information to their employees**
- 2. Not providing additional written information in advance on routes and assembly area could have potentially delayed evacuation**

68

Warn Timely Off-Hours Notification

- **Actions taken to restore compliance:**
 - Sequence of Site One page, Crossroads Siren activation, and lessee phone call tree added to Security duties
 - Lessee Call List added to Security notification duties
 - Conducted verification drills
- **Enhancements:**
 - PPM 13.5.3 revised to implement early, mandatory evacuation at Site Area Emergency
 - SCC remote control of Site One sirens
 - Site One siren reliability – more frequent testing
 - Lessees required to call and SCC logs off hours work

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Advise & Communicate Potential Delay of Evacuation Progress

- **Enhancements:**
 - Roadblock kits upgraded with new/additional maps
 - Security makes Site One PA announcement, including evacuation routes and monitoring
 - Revised WNP-1 Emergency Plan for lessees
 - Provided briefings to lessee employees
 - Site One contract revised
 - WNP-1 EP briefing guide enhanced and provided
 - Mobile patrol instructions upgraded

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Root Cause Analysis Corrective Actions To Preclude Recurrence

- **Revise Procurement Instructions for new Site contract review and approval**
- **Develop a requirements document for compliance with Columbia EP**
- **Develop formal change process for Site One that includes cross discipline reviews**
- **Licensing to participate in all NRC inspection activities**
- **Conduct Audits of Site One**
- **Upgrade Site One Emergency Alerting & PA capability to improve site wide notification**

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10 CFR 50.47(b)(10)

“A range of protective actions have been developed for the plume exposure pathway EPZ for emergency workers and the public. Guidelines for the choice of protective actions during an emergency, consistent with Federal guidance, are developed and in place...”

72

Failure to Meet a Planning Standard?

- Failure to meet a PS means that program elements are not in compliance with the PS of 10 CFR 50.47(b). It may be that:
 - Plan commitments are not met,
 - the Plan is inadequate,
 - implementing procedures are inadequate,
 - program design is inadequate, etc.
- However, the measure of program compliance is the PS and its articulation in NUREG-0654, taking into consideration any deviations from NUREG-0654 (and the compensating program elements) that were approved by NRC.

From: NRC Inspection Manual 0609, Appendix B, Emergency Preparedness Significance Determination Process, issue date 12/29/00, section 5.0 "Failure to Meet a PS"

Failure to Meet a Risk Significant Planning Standard?

The following provides specificity on what constitutes a failure to meet the risk significant planning standard (RSPS) provisions of 10 CFR 50.47(b)(10)

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From: NRC Inspection Manual 0609, Appendix B, Emergency Preparedness Significance Determination Process, issue date 12/29/00, section 5.10, "10 CFR 50.47(b)(10)"

NRC Inspection Report No. 50-397/01-008

NRC preliminary yellow finding of failure to meet the requirements of 10 CFR 50.47(b)(10):

- inability to notify**
- inability to implement protective actions**
- lack of provisions for radiological monitoring**

75

Did the Licensee guidance provide PARs that are in accordance with Plan commitments or approved guidance?

In accordance with the Emergency Plan, Energy Northwest provided PARs to the small population of lessees located in the Columbia exclusion / owner controlled area. These included actions to:

- ✓ Warn and advise (J.1) of an exclusion area evacuation at SAE or GE (including the selected evacuation route and location of the assembly area for monitoring)**
- ✓ Made provisions for evacuation routes (J.2)**
- ✓ Provided for an assembly area for monitoring (J.3)**

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Did the Licensee guidance provide PARs that are in accordance with Plan commitments or approved guidance?

Yes

77

Were the personnel responsible for the development of PARs for the Site One lessees able to implement the guidance?

- ✓ Multiple means were in place to warn and advise the lessees regarding protective actions in the exclusion / owner controlled area
- ✓ Multiple means were in place to advise and direct lessees to the correct evacuation route
- ✓ Multiple means were in place to advise and direct lessees to the location for monitoring
- ✓ Measures were in place to establish an assembly area for monitoring individuals evacuated from the exclusion / owner controlled area

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Not a failure to meet a Planning Standard

Were the personnel responsible for the development of PARs for the Site One lessees able to implement the guidance?

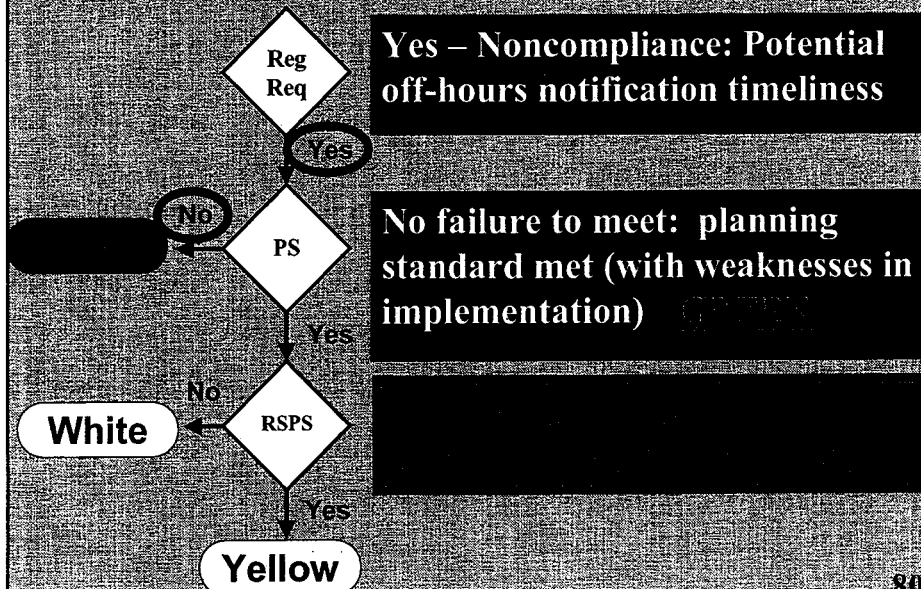
Yes

Did the Licensee guidance provide PARs that are in accordance with Plan commitments or approved guidance?

Yes

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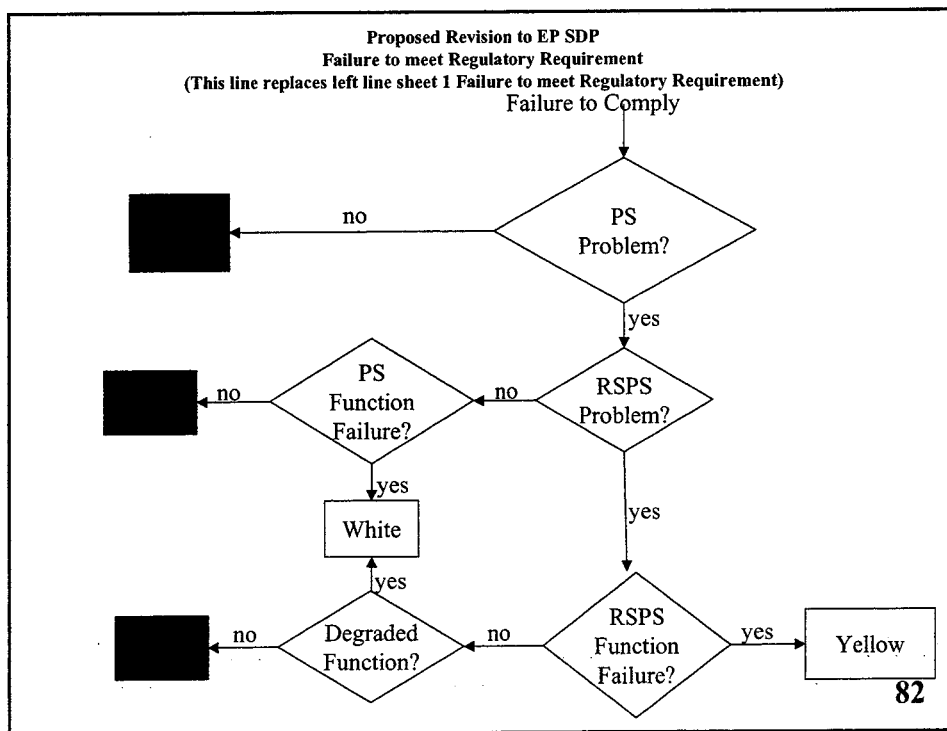
Significance Determination Process



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Proposed Revision to EP SDP

- The revised EP SDP provides additional insight regarding the existing SDP with respect to what is a “failure to meet.”
- The revised process provides clarification of the existing EP Cornerstone SDP:
 - contrasts public vs. emergency worker protective actions
 - provides definitions / examples for loss of function
 - introduction of RSPS degraded condition
 - addition of a ‘White’ finding for RSPS
 - provides examples of degradation



Proposed Revision to EP SDP

Examples of a Loss or Degradation of RSPS function

- **Examples of a loss of the RSPS function:**
 - Personnel responsible for the development of PARs are not able to implement the guidance
 - Licensee procedures do not provide PARs that are in accordance with Plan commitments or federal guidance
- **Examples of degradation of the RSPS function include:**
 - Licensee PAR guidance is not complete in that PARs do not cover a small population (<1% of EPZ) near site (e.g., in a park in the exclusion area or owner controlled area).

Proposed Revision to EP SDP

Evaluation of J.1 issue

- **PS Problem?**
 - Yes
- **RSPS Problem?**
 - Yes (J.1 is a RSPS)
- **RSPS Function Failure?**
 - No - The system design development of PARs is able to implement the guidance. PARs were provided that are in accordance with Plan commitments and federal guidance
- **Degraded Function?**
 - No - Licensee PAR guidance is complete and PARs cover the small near site population in question (<1% of EPZ)
- **Green**

EP SDP Summary

- **Failure to meet planning standard 10 CFR 50.47(b)(10) as defined by the criteria in NUREG-0654 J.1, J.2, and J.3?**
 - **No - The planning standard was met with weaknesses in implementation**
- **Green**
- **Response: Licensee is addressing identified problems in the corrective action program**

End of Presentation