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March 27, 2019
GO2-19-053

10 CFR 50.90

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555-0001

Subject: **COLUMBIA GENERATING STATION, DOCKET NO. 50-397
LICENSE AMENDMENT REQUEST TO REMOVE OPERATING
LICENSE CONDITION 2.C.(11) AND ATTACHMENT 3**

Dear Sir or Madam:

Pursuant to 10 CFR 50.90, Energy Northwest hereby requests an amendment to revise the Columbia Generating Station (Columbia) Operating License (OL) NPF-21. This amendment is requested to remove license condition (LC) 2.C.(11) and Attachment 3 from Columbia's Operating License. The LC and related attachment are outdated and no longer applicable to Columbia's operation. The proposed change does not result in changes to technical or operating requirements of Columbia.

The proposed changes have been evaluated in accordance with 10 CFR 50.91(a)(1) using criteria in 10 CFR 50.92(c) and it has been determined that these changes involve no significant hazards considerations. The bases for these determinations are included in Enclosure 1 of this submittal.

The proposed OL markup pages are included as Enclosure 2 to this submittal. Clean pages of the proposed OL change are included as Enclosure 3 of this submittal.

This letter and its enclosures contain no regulatory commitments.

Approval of the proposed amendment is requested within one year of the date of the submittal. Once approved, the amendment shall be implemented within 90 days.

In accordance with 10 CFR 50.91, Energy Northwest is notifying the State of Washington of this amendment request by transmitting a copy of this letter and enclosures to the designated State Official.

If there are any questions or if additional information is needed, please contact Ms. D.M. Wolfgramm, Licensing Supervisor, at 509-377-4792.

I declare under penalty of perjury that the foregoing is true and correct.

Executed this 27 day of March, 2019.

Respectfully,



R.E. Schuetz
Vice President, Operations

Enclosures: As stated

cc: NRC RIV Regional Administrator
NRC NRR Project Manager
NRC Senior Resident Inspector/988C
CD Sonoda – BPA/1399 (email)
EFSECutc.wa.gov – EFSEC (email)
E Fordham, Deputy Director, Radiation Protection -- WDOH(email)
WA Horin – Winston & Strawn

1.0 SUMMARY DESCRIPTION

This evaluation supports Energy Northwest's (EN) application to amend the Operating License (OL) NPF-21 for Columbia Generating Station (Columbia) to remove license condition (LC) 2.C.(11) and Attachment 3. LC 2.C.(11) was originally included in Columbia's license to support a permanent radioactive waste (radwaste) solidification system. That system was never fully installed and is not in use. The LC and related attachment are outdated and no longer applicable to Columbia's operation.

Implementation of this License Amendment Request (LAR) will result in:

- no physical modification to the plant;
- no change to plant operation;
- no change to existing radiation protection processes;
- no change to Columbia's compliance with 10 CFR 20 and ALARA (as low as reasonably achievable) program; and
- no adverse effect on the plant or plant safety.

2.0 DETAILED DESCRIPTION

Columbia's original design included installation and use of a permanent radwaste solidification system. This system would have been housed in several locations throughout Columbia's Radwaste Building. Some pieces of the system were installed but are either not operational or were deactivated and spared-in-place. These include, but are not limited to, centrifuges, decontamination concentrator vapor body and heating element. The design and location of the permanent radwaste solidification system called for the construction of concrete block shielding walls and a leaded glass viewing window to provide protection for anticipated potential occupational dose related to operation of the system.

The radwaste solidification system is designed to collect, monitor, process and package waste products in suitable form for offsite shipment and burial. The types of waste may be wet solids such as powdered ion exchange resins, expended bead resins, small quantities of miscellaneous liquid, and laboratory wastes. The waste system is designed to process waste while maintaining occupational exposure as low as reasonably achievable.

Columbia has always predicated the construction of the deferred shield walls and installation of the leaded glass viewing window as required by LC 2.C.(11) on the installation of the originally designed permanent radwaste solidification system and sound ALARA practice related to that system. The permanent system, described in Amendment 33 of Columbia's Final Safety Analysis Report (FSAR), which included decontamination concentrators, centrifuges, and a container filling station was never put into full operation.

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Instead, a skid-mounted resin processing system at a different location has been in use since Columbia's start-up. The skid mounted system (mobile system) was first described in FSAR Amendment 33, in November 1983.

LC 2.C.(11) of Columbia's license reflects plant conditions and potential radiation sources that do not exist. Columbia's current license contains the language below. EN is seeking removal of this language with this LAR.

2.C.(11) Shield Wall Deferral (Section 12.3.2, SSER #4, License Amendment #7)

The licensee shall complete construction of the deferred shield walls and window as identified in Attachment 3, as amended by this license amendment.

Attachment 3¹

1. Deleted.
2. Deleted.
3. Deleted.
4. Deleted.

**5. FSAR Figure 12.3-12, Zone G-9 - The access blockout to duplicate centrifuge room.

**6. FSAR Figure 12.3-12, Zone F-9 - Same as above for the duplicate centrifuge.

**7. FSAR Figure 12.3-13, Zone J-5 - The blockout for one of the two decon concentrators.

**8. FSAR Figure 12.3-11, Zone D-8 - The two block walls at the north end of the truck loading bay.

**9. FSAR Figure 12.3-11, Zone E-8 - The leaded glass viewing window in the radwaste area.

** Shield walls and window identified in items 5, 6, 7, 8, and 9 will be installed if the associated radiation levels at these locations exceed 2.5mR/hr as dictated by the ongoing ALARA reviews.

2.1 Historical Operating License and Licensing Basis

Columbia's² OL was issued on December 20, 1983. Prior to the issuance of the license, EN received NRC approval to temporarily defer construction of eight concrete block shielding walls and a leaded glass viewing window. The deferral occurred

¹ The deferred shield walls and window will be referred within this LAR as items 5 through 9 for the sake of clarity. The room may be called out to provide further clarification.

² Energy Northwest was originally named Washington Public Power Supply System (WPPSS). Columbia Generating Station was originally named WPPSS Nuclear Project No. 2 (WNP-2). For the purposes of this LAR, we will use the current names for the company and the plant, i.e., Energy Northwest (EN) and Columbia, however, correspondence from the time period being discussed will refer to WPPSS and WNP-2.

because the equipment in most of the areas to be shielded was not going to be used until after commercial operation began. Consequently, dose in the shielded areas was not anticipated to be elevated to a level warranting the additional protection offered by the shield walls. Columbia used a portable radioactive waste solidification system for an interim period after fuel load to solidify and package waste.

Specifically, in correspondence between the Nuclear Regulatory Commission (NRC) and EN beginning in February 1983, through the issuance of Columbia's license in December 1983, EN informed the NRC of changes to the permanent solid radwaste system implementation. EN begins to discuss the use of a portable radwaste system in correspondence on February 25, 1983. (Reference 1). In this correspondence the NRC was notified that Chapter 11.4 of the FSAR was being revised to discuss the use of a portable system. On March 28, 1983, EN notified the NRC of plans to defer construction of several concrete block shield walls. Three of the subject walls were included in that deferral. (Reference 2). In April 1983, EN notified the NRC of the deferral of 2 additional walls and a viewing window related to use of the permanent system. (Reference 3). The March and April 1983 deferrals were supported by ALARA reviews and deemed to have no appreciable effect on personnel exposures. Additionally, the portable solid radwaste system was to be used not the original permanent system.

In October 1983, EN notified the NRC of its revised FSAR to reflect the use of the portable system. (Reference 4). In November 1983, FSAR Amendment 33, Section 11.4, Solid Waste Management System was revised to describe a temporary solid radioactive waste management system which would be supplied and operated by Chem-Nuclear Systems Inc., (CNSI) until the permanent system was installed and operational. The mobile system, designed to be located on the curbed concrete pad adjacent to the Radwaste Building, was intended to bypass the systems described in FSAR Sections 11.4.2.6 and 7.

Columbia's license which was issued on December 20, 1983, stated that the licensee must complete construction of all deferred shield walls and leaded glass viewing window within one year, or prior to operation of the permanent radioactive waste solidification system at WNP-2, whichever occurs first. On December 29, 1983, the NRC issued Safety Evaluation Report Supplement No. 4 (SSER #4). The deferred shield walls were listed as a probable license condition. (Reference 5).

In August 1984, EN submitted a license amendment request seeking to revise LC 2.C.(11) to say the "The Licensee shall complete construction of the deferred shield walls and window as identified in Attachment 3 to this license as dictated by ongoing ALARA reviews identifying the need for additional shielding." In the LAR, items 2, 3, 5 through 9 were discussed individually in relation to the intended use of the areas and ALARA reviews that were performed to support the LAR. Items 1 and 4 were discussed in relation to the eventual completion of the shielding. The deferrals were requested because the use of the permanent solidification system was also deferred. As stated in the LAR, ALARA reviews indicated the deferrals had no effect on personnel radiation

safety, either on or off site. Item 6, duplicate centrifuge room, did show radiation levels of 45 mr/hr due to an equipment drain (radioactive) (EDR) processing line in the room. The line was used for transfer to the resin tanks. Access to the room was administratively controlled. The control was adequate because personnel on the other side of the existing partial wall had no line of sight to the EDR line. (Reference 6).

In September 1984, EN supplemented the original LAR, providing support for the statements in the original Reference 6 that the deferrals did not increase the risk of accident, accident pre-cursors or reduce safety margin. (Reference 7). EN indicated that:

"The bases for these statements is a Supply System [EN] 10 CFR 50.59 evaluation based on the fact that the original design anticipated radiation sources in the solid radwaste system and condenser tube access areas requiring shielding for protection of personnel in adjacent areas. At present there is no schedule for installation of the solid radioactive waste solidification system. As a result, the source originally anticipated is nonexistent. No requirement exists for protection as the anticipated source does not exist."

In this supplement, EN indicated that Item 2 east condenser tube access wall had been recognized as being required based on an ALARA review at 75% power, and was being completed.

Additional supplemental information was provided in October 1984. For items 5 through 9, the design for those shields would be implemented if the associated radiation levels outside the areas exceed 2.5 mR/hr. Existing ALARA processes would support removal or mitigation of radiation sources causing the elevated levels. These actions would be, to the degree possible, taken prior to actual shield wall or window construction. This supplement also stated that deferred items 1, 2, and 4, contained on OL Attachment 3 were being constructed and would be completed by December 20, 1984. (Reference 8).

Items 1 through 4 of OL Attachment 3 were completed within a relatively short time after Columbia's licensing. A brief discussion of these areas is contained herein. Item 1 was a partial height wall outside the spent resin tank. The spent resin tank was in use at the time of the August 1984 LAR, but high radiation levels were not expected for some time. The wall installation was to be completed before high radiation levels were experienced in the area. Items 2 and 3 were associated with the east and west ends of the condenser access areas. These walls were the only shield walls that were not associated with the permanent radwaste solidification system. The short-term deferrals for items 2 and 3 were supported by ALARA reviews showing that the principal radiation sources were not in line of sight of the two locations. Item 4, was an access blackout to the spare demineralizer cubicle. The cubicle was not in use, but radiation levels of 15-20 mr/hr were detected due to a reactor water clean-up (RWCU) line which passes through the cubicle, therefore the shield wall was completed. (Reference 6). Table 1 is included to provide a clear representation of the original 9 deferrals, disposition and justification for each.

Table 1

ORIGINAL 9 DEFERRED SHIELD ITEMS			
ITEM	DESCRIPTION	DISPOSITION	JUSTIFICATION
1	Partial height wall outside the spent resin tank room	Built.	High radiation levels were expected.
2	Tube access wall to the main condenser	Built.	An ALARA review of the area when the reactor was at 75% power.
3	Tube access wall to the main condenser (other end of condenser)	Built.	Results of ALARA surveys.
4	Access blackout to the spare demineralizer cubicle	Built.	Although the cubicle was not in use at the time, radiation levels at the time were 15-20 mr/hr detected due to the RWCU line that passes through the cube.
5	Access blackout for the duplicate centrifuge room	Proposed deletion	This LAR
6	Access blackout for the duplicate centrifuge room	Proposed deletion	This LAR
7	The blackout for one of the two decon concentrators.	Proposed deletion	This LAR
8	Two block walls at the north end of the truck loading bay.	Proposed deletion	This LAR
9	The leaded glass viewing window in the radwaste area.	Proposed deletion	This LAR

In Amendment No. 7 of the OL issued in December 1984, Columbia committed to completing three of the nine shield walls prior to the expiration of the one year period following issuance of the OL. Columbia was permitted to further defer the construction of the remaining five shield walls and window (items 3, 5 through 9) until ALARA reviews identified the need for additional shielding. (Reference 9.)

FSAR Section 11.2, Liquid Waste Management System was revised in 1990 with amendment 42. This amendment deferred pre-operational testing and the use of the decon solution concentrators and other items, until a need was identified. In 1994, FSAR Section 11.4, Solid Waste Management System was revised to describe the portable solid radioactive waste management system purchased from a vendor designed to interface with the installed plant system. These changes signified an update of the plant description per 10 CFR 50.71(e) reflecting Columbia's intent to operate a portable radwaste solidification system as the primary system.

Completion of Items 1 through 4 of OL Attachment 3 were verified as completed by the NRC and deleted from Columbia's license in Amendment 223. (Reference 10).

2.2 Area Illustrations and Discussion

Following are illustrations and descriptions of the five areas that make up items 5 through 9 of Attachment 3 of Columbia's OL. All areas are located in the Radwaste Building.

Figure 1
Item 5 – Side view of the access blockout to duplicate centrifuge room

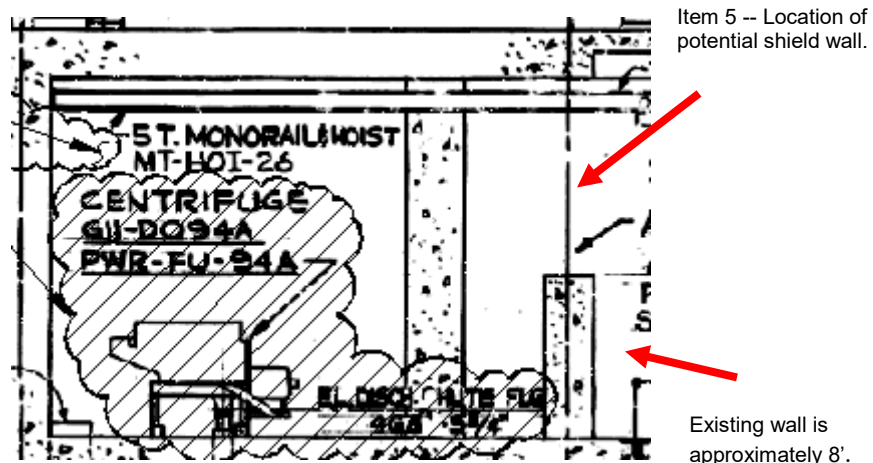
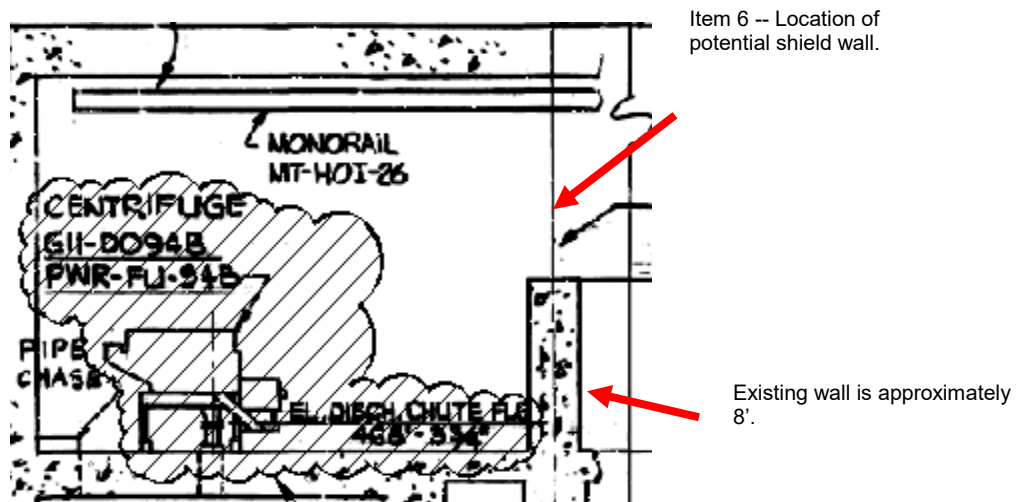


Figure 2
Item 6 – Side view of the second duplicate centrifuge room



The cross-hatching in the illustrations indicates that the centrifuges have been deactivated and spared-in-place.

For Figures 1 and 2, i.e., items 5 and 6, there are existing walls separating centrifuge rooms A and B from the tool decontamination room area. The partial blockout walls were intended to fill the 9'-6" high x 7'-0" wide access openings above the 3' thick 8'-

high concrete walls shown above. These blackout walls above the south concrete walls of centrifuge rooms A and B of the Radwaste Building were intended to provide shielding to the exterior rooms from the shine and scatter generated by the centrifuges. Columbia's FSAR currently makes no mention of centrifuges in either Chapter 11 or Chapter 12. The centrifuges were described in FSAR Amendments 33 through 48 as being used for dewatering ion exchange resins and demineralizer sludges from the various liquid radwaste processing systems in relation to the permanent system.

Figure 3

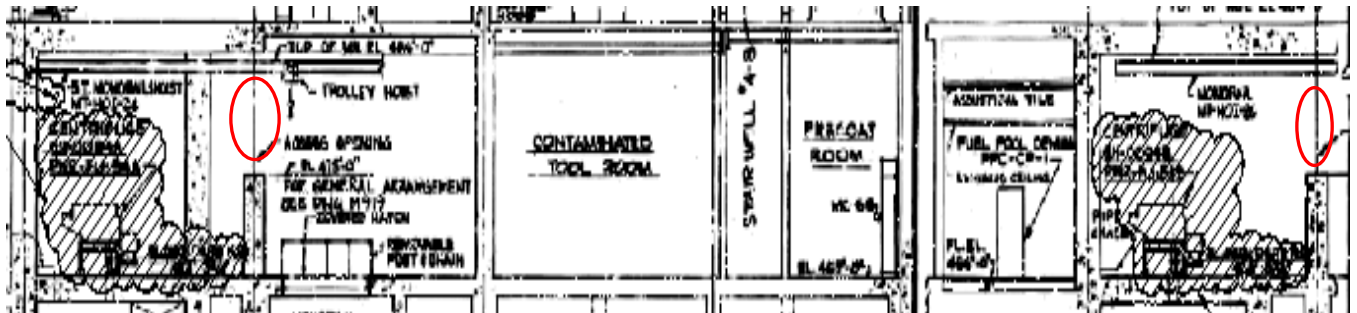
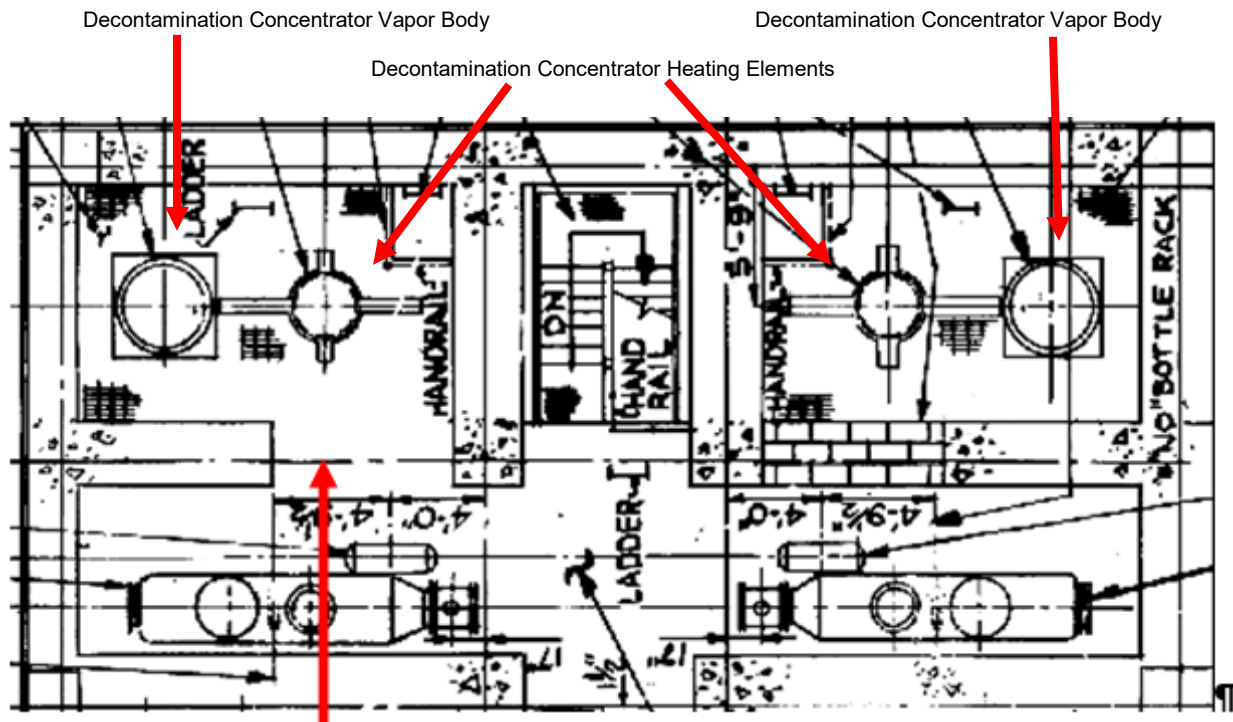


Figure 3 above is an additional side view of items 5 and 6, showing the entire layout of the two duplicate rooms in relation to the tool decontamination room.

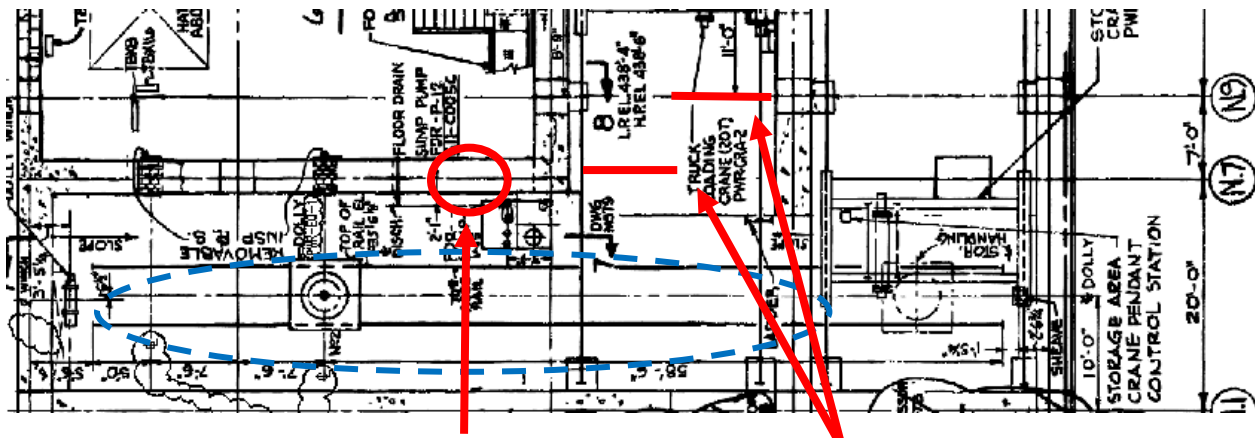
Figure 4
Item 7 – top view of the blockout for one of the two decon concentrators



Item 7 -- Location of potential shield wall.

Figure 4 shows that item 7 would have been a removable block wall located in the Radwaste Building and was intended to provide shielding from the decontamination concentrator vapor body and the decontamination concentrator heating element. The FSAR describes the decontamination solution concentrators as currently not used. Portions of the system, which include the decontamination solution concentrators and band associated heating elements, are further identified as equipment deferred for later pre-operational testing and not presently operational. The FSAR describes the decontamination solution evaporator system as deactivated with no plans to use the system.

Figure 5
Items 8 and 9 – (8) top view of the two block walls at the north end of the truck loading bay.
(9) top view of the leaded glass viewing window in the radwaste area.



Item 9 -- Location of potential leaded glass viewing window.

Item 8 -- location of 2 potential block walls. Lines are representative of the wall location not wall thickness.

Figure 5, item 8 is located in the truck loading bay of the Radwaste Building. It is made up of two partial height offset block walls at the north end of the truck loading bay. The walls were intended to provide shielding from disposal containers (i.e., radwaste liners) of dewatered and solidified resin slurries and filter sludges while these containers were on the transfer dolly at the storage area station.

Figure 5, item 9, the leaded glass viewing window near the decon station control panel was intended to provide shielding while also providing the ability to monitor filling, capping, decontamination, surveying and handling of radwaste disposal containers on the transfer dolly at the container filling station. The area where the leaded glass viewing window would have been situated is now a solid concrete wall.

To support the permanent system's original design, the area with the dashed circle on Figure 5, would have had solid waste slurries processed through one of the centrifuges (Figures 1 and 2), through a mixing hopper and discharged to a 50 cubic foot disposal container on the transfer dolly at one of two container filling stations. Individuals would ostensibly have monitored this process from the viewing window. The containers would have been within line of sight from the open area of the truck bay. (Figure 5, item 8). As previously discussed the permanent system is not in operation. If the permanent system was in use the entire area where items 8 and 9 are located would be areas of significant dose. The container filling station area is currently used for material storage and the location of the leaded glass viewing window is a concrete wall.

Columbia's FSAR currently describes a portable solid waste management system, where spent resins are dewatered in the liner storage area, also known as the "NUPAC

Cage", or in shipping casks on trucks. Filled containers from the dewatering operation are lifted by a crane and placed on a track riding dolly. The dolly moves the containers from the storage area to the loading area where another crane lifts the container onto the truck/cask for offsite shipment.

3.0 TECHNICAL EVALUATION

In reviewing the correspondence between EN and the NRC, it is clear the purpose of the five shield walls and viewing window was to ensure personnel exposures were minimized during operation of the Columbia's permanent radwaste solidification system as originally designed. That system was not put into operation and there are no plans to make the system operable. The deferred shield walls and viewing window are not needed for the portable radwaste solidification system and processes currently being used.

The regulatory requirement in 10 CFR 20.1101(b) to use, to the extent practical, procedures and engineering controls based upon sound radiation protection principles to achieve occupational doses that are ALARA ensures that the ALARA concept is an integral part of the radiation protection program. However, the application of ALARA to a radiological shielding concern does not obligate the licensee to a particular ALARA approach. ALARA may consist of physical design or administrative controls to achieve the desired end result of reasonably reducing dose. EN's ALARA practices comply with 10 CFR 20. LC 2.C.(11) is duplicative (and more restrictive than) the codified regulatory requirements. The LC provides no additional protection to the health and safety of the public or EN personnel, hence this LAR.

Columbia uses sound ALARA principles and practices to maintain these areas in the same manner it maintains other low level radiation areas. Low level radiation areas exist throughout the plant and are maintained with dose rates as low as reasonably achievable where there is no additional regulatory or licensing requirements to erect shield walls. The benefit of installation of items 5 through 9, absent Columbia's use of the originally designed permanent radwaste solidification system, fails the "R" test in ALARA, i.e., installation of the shield walls is not reasonable for the low radiological hazard and desired end result. Columbia's existing radiological controls for these areas are sufficient to ensure ALARA.

There is no information available as to the specificity in Attachment 3 of the OL for exceeding 2.5 mrem/hr as an actionable dose rate in relation to the wall and window locations. Any response is purely speculative. It is a low dose rate that today requires no specific action on the part of the licensee. EN believes that the dose rate was derived by dividing 5 rem (total effective dose equivalent) by 2000 (reference man working year), but that is conjecture. The supporting correspondence between EN and the NRC at the time is not specific on the choice of this action level.

3.1 Current Area ALARA Status

On-going ALARA reviews of the deferred shield walls and window have consistently shown the following:

Items 5 and 6 at centrifuge rooms A and B in the Radwaste Building were meant to support centrifuges which are mechanically and electrically disconnected, deactivated, and spared-in-place. The additional shielding in these areas was to minimize dose to employees outside the rooms from scatter and shine that would have been generated by the centrifuges. The two rooms are now used for storage. Therefore, the radiation levels from these centrifuges will be <2.5 mrem/hr throughout the life of the plant. There is no appreciable dose directly attributable to the centrifuges. Other items stored in the rooms may result in occasional higher dose rates within the centrifuge rooms themselves (see Table 1), in which case existing plant radiation procedures, processes and practices are instituted to maintain regulatory compliance and ALARA.

The license condition language for items 5 and 6 calls out the access cutouts between the centrifuge rooms and the tool decontamination area. The access openings are areas that are 8' off the ground above the existing block wall. This is not generally an area that would be surveyed. Elevated dose rate in that area would only be expected if the centrifuges were functioning.

Item 7 at decontamination concentrator room A in the Radwaste Building was intended to support the decontamination concentrator vapor body and the decontamination concentrator heating element. These items are presently non-operational and there are no plans to use the system. This area is presently not in use. Due to its remote location within the Radwaste Building it has not been used for any routine purpose and is rarely accessed. Therefore, the radiation levels from these components is expected to remain <2.5 mrem/hr.

Item 8, which is at the north end of the truck loading bay in the Radwaste Building, currently has dose rates that at times exceed 2.5 mrem/hr. This dose comes from filled radwaste disposal containers on the transfer dolly. This occurs only when these containers are being transferred from the liner storage area (i.e., the "NUPAC Cage") to a truck trailer for shipment to the off-site disposal facility. The current ALARA practice is to limit personnel access to the radwaste processing area during container transfers. ALARA practice, requires the crane operator to position themselves behind the shielded frisking booth during container transfer operations. Thus, dose rates to personnel are generally maintained <2.5 mrem/hr. Currently, the two off-set shield walls, if installed, would be more of an impediment to the safe and efficient handling and transfer of radwaste containers than any dose-reduction benefit that might be gained. The ALARA assessment is that the shielded frisking booth at the north end of the truck loading bay provides sufficient shielding for crane operators during waste transfer operations.

Item 9, the leaded glass viewing window, in the Radwaste Building, was for use in the original design of the Radwaste Solids Handling System which, as stated previously,

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would have solid waste slurries processed through one of the centrifuges, through a mixing hopper and discharged to a 50 cubic foot disposal container on the transfer dolly at one of two container filling stations. Again, the system was not put into operation. The components for the container filling equipment have been removed. The container filling station area is currently used for material storage and the location of the leaded glass viewing window is a concrete wall. The radiation levels from container filling, capping, and decontamination operations at the container filling station, as originally designed, are expected to remain <2.5 mrem/hr throughout the life of the plant.

Table 2 provides a sampling of survey data for various years in these areas. As noted previously, a tool decontamination area sits outside items 5 and 6. This area does at times show dose rates exceeding <2.5 mrem/hr however the dose is not related to the permanent radwaste solidification system on which the license condition was based but rather items that may be stored in these areas. Additionally, items with dose are stored in items 5 and 6. And as stated previously, an EDR line runs through item 6 and access to this room is administratively controlled. ALARA controls consistent with other station areas exhibiting similar dose rates are employed as necessary in these areas as storage contents change.

Table 2

Date	Item 5 – access blockout to Centrifuge Room (mR/hr)	Item 6 – access blockout to Centrifuge Room (mR/hr)	Item 7 – blockout decon concentrator (mR/hr)	Item 8 – north end of the truck bay (mR/hr)	Item 9 – leaded window. (mR/hr)
1/2004	The survey data for these two areas is taken outside Items 5 and 6 – the centrifuge rooms – where the anticipated occupational dose related to the access blockout would have occurred had the permanent system been in operation. The dose readings for this area (the tool decontamination room) for these particular dates range from a 1 to 12 mrem/hr. The readings are typically at waist or floor level not at the access blockout. These dose rates are not due to sources in the centrifuge rooms themselves, but rather from sources located in the rooms where the surveys were taken.		<1	<1	<1
1/2005			<1	<1	<1
1/2006			<1	1	<1
1/2007			<1	<1	<1
1/2008			<1	<1	<1
2/2008			<1	<1	<1
1/2009			<1	<1	<1
1/2010			<1	<1	<1
2/2010			<1	<1	<1
1/2011			<1	<1	<1
1/2012			<1	<1	<1
1/2013			<1	<1	<1
1/2014			<1	<1	<1
1/2015			<1	<1	<1
1/2016			<1	<1	<1
1/2017	< 1 – 1.0	< 1 – 1.0	<1	< 1	< 1
1/2018	2	2	<1	1-3 ⁽²⁾	<1
1/2019	<1 ⁽¹⁾	<1 ⁽¹⁾	<1	<1	<1

Notes:

- (1) Dose rates taken in overhead at blockout locations.
- (2) Dose rates elevated due to high radiation area (HRA) posted nearby due to resin liners temporarily located in the truck bay – this is outside of the area that would be protected by the shields.

As shown above, there have been occasions where some of these areas surveyed above 2.5 mR/hr. During these instances, the areas were treated appropriately per Columbia radiation protection procedures until the source was removed.

3.2 License Condition Compliance

On October 28, 2016, Columbia received a licensee-identified non-cited violation (NCV) of NRC requirements for non-compliance with LC 2.C.(11). One of the areas (item 5) listed in Attachment 3 of the OL surveyed at higher than 2.5 mR/hr, however it was determined that the violation resulted in no actual safety consequence. All five areas related to LC 2.C.(11) remained properly characterized by periodic surveys and appropriate administrative radiation area controls remained in place. (Reference 11)

Previous to the NRC NCV, a 2015 Quality Assurance (QA) finding identified an inconsistency with the OL and Columbia's practice in this area. The 2015 QA finding was discussed in the 2016 violation which led to the violation being licensee-identified. Columbia performed Condition Evaluations (CEs) in October 2015 and 2016. Actions to address the 2015 QA finding included revision of procedure Plant Procedure Manual (PPM) 11.2.24.1, Radiation Protection Work Routines, to include the radiation surveys and ALARA reviews required by License Condition 2.C.(11) of these areas; an annual preventive maintenance task (PM) was established to support surveys of the areas. This PM will be discontinued with the removal of LC 2.C.(11), because the areas of personnel radiation safety concern are covered under existing ALARA processes. Based on the NCV and the QA finding, EN decided to take action to update its operating license to accurately reflect current plant operations.

The CEs identified that EN focused on its understanding of the intent of the license condition rather than the plain language of the license. The intent of the license condition when viewed in the context of the historical correspondence between the NRC and EN was to limit occupational exposure that would be received from the use of the originally designed permanent radwaste solidification system. The permanent system was not fully installed or put in to use. Worker exposure would therefore be minimal in these areas and would not be the result of the use of the permanent radwaste system, thus the plain language of the license condition was misinterpreted.

EN treated these areas as plant areas that require surveys to be conducted based on what is reasonable for that area under the circumstances, i.e., the use of the area. In keeping with sound radiation protection practices, the magnitude and extent of radiation levels, concentrations or quantities of radioactive material, and the potential radiological hazards are evaluated and then, based on the planned work in those areas, ALARA controls are implemented.

EN's ALARA program, policies, and procedures provide assurance that any proposed modifications to Columbia's systems, structures, or components are evaluated for their impact on personnel exposures and for the need to minimize exposures by the installation of shielding or use of engineering controls, thus meeting the requirements of

10 CFR 20. The abandonment of the equipment that was originally to be used to support the permanent solid radioactive waste solidification makes the need for the remaining shield walls and leaded glass viewing window obsolete.

4.0 REGULATORY EVALUATION

4.1 Applicable Regulatory Requirements/Criteria

While the requested change to Columbia's OL is not technically administrative or editorial, it is administrative in the sense that the license contains an outdated condition that is duplicative of the requirements contained in the CFR. The removal of the condition does not affect any regulatory requirements or criteria. The change does not affect how plant equipment is operated or maintained and there are no changes required to the physical plant or analytical methods. Nor does the change eliminate EN's obligation to employ ALARA practices as prescribed by 10 CFR 20.1101(b). Therefore, there are no impacts on the FSAR accident analysis.

4.2 No Significant Hazards Consideration Determination

Energy Northwest has evaluated whether or not a significant hazards consideration is involved with the proposed amendment by focusing on the three standards set forth in 10 Code of Federal Regulation (CFR) 50.92, "Issuance of amendment," as discussed below:

1. Does the proposed change involve a significant increase in the probability or consequences of an accident previously evaluated?

Response: No.

The proposed amendment involves the removal of an outdated license condition. The proposed amendment does not impact any accident initiators, analyzed events, or assumed mitigation of accident or transient events. The proposed change does not involve the addition or removal of any equipment or any design changes to the facility. The proposed change does not affect any plant operations, design functions, or analyses that verify the capability of structures, systems, and components (SSCs) to perform a design function. The proposed change does not change any of the accidents previously evaluated in the Final Safety Analysis Report (FSAR). The proposed change does not affect SSCs, operating procedures, and administrative controls that have the function of preventing or mitigating any of these accidents.

Therefore, the proposed change does not represent a significant increase in the probability or consequences of an accident previously evaluated.

2. Does the proposed change create the possibility of a new or different kind of accident from any accident previously evaluated?

Response: No

The proposed amendment only involves the removal of an outdated license condition. No actual plant equipment or accident analyses will be affected by the proposed change. The proposed change will not change the design function or operation of any SSCs. The proposed change will not result in any new failure mechanisms, malfunctions, or accident initiators not considered in the design and licensing bases. The proposed amendment does not impact any accident initiators, analyzed events, or assumed mitigation of accident or transient events.

Therefore, this proposed change does not create the possibility of an accident of a new or different kind than previously evaluated.

3. Does the proposed change involve a significant reduction in a margin of safety?

Response: No

The proposed amendment only involves the removal of an outdated license condition. The proposed change does not involve any physical changes to the plant or alter the manner in which plant systems are operated, maintained, modified, tested, or inspected. The proposed change does not alter the manner in which safety limits, limiting safety system settings or limiting conditions for operation are determined. The safety analysis acceptance criteria are not affected by this change. The proposed change will not result in plant operation in a configuration outside the design basis. The proposed change does not adversely affect systems that respond to safely shutdown the plant and to maintain the plant in a safe shutdown condition.

Therefore, the proposed change does not involve a significant reduction in a margin of safety.

4.3 Conclusion

Based on the considerations discussed above: (1) there is reasonable assurance that the health and safety of the public will not be endangered by operation in the proposed manner, (2) such activities will be conducted in compliance with the applicable regulations as identified herein, and (3) the issuance of the amendment will not be inimical to the common defense and security or to the health and safety of the public.

5.0 ENVIRONMENTAL CONSIDERATION

EN has determined that the proposed amendment would not change requirements with respect to installation or use of a facility component located within Columbia's restricted area, as defined in 10 CFR 20, nor would it change an inspection or surveillance requirement. EN has evaluated the proposed change and has determined that the change does not involve, (i) a significant hazards consideration, (ii) a significant change

in the types or a significant increase in the amounts of any effluents that may be released offsite, or (iii) a significant increase in individual or cumulative occupational radiation exposure. Accordingly, the proposed change meets the eligibility criteria for categorical exclusion in accordance with 10 CFR 51.22(c)(9). Therefore, pursuant to 10 CFR 51.22(b), no environmental impact statement or environmental assessment need be prepared in connection with the proposed amendment.

6.0 REFERENCES

1. Letter from G.D. Bouchey, Washington Public Power Supply System (WPPSS) to A. Schwencer, NRC, Nuclear Project No. 2 – Solid Waste Management System FSAR Chapter 11 Section 11.4, Utilization of Intermin Portable Solid Radioactive Waste Solidification System, dated February 25, 1983.
2. Letter from G.D. Bouchey, Washington Public Power Supply System (WPPSS) to A. Schwencer, NRC Nuclear Project No. 2 – Deferred Shielding Walls, dated March 28, 1983.
3. Letter from G.D. Bouchey, Washington Public Power Supply System (WPPSS) to A. Schwencer, NRC, Nuclear Project 2 – Deferred Shielding Walls, dated April 27, 1983.
4. Letter from G.C. Sorensen, Washington Public Power Supply System (WPPSS) to A. Schwencer, NRC- Nuclear Project No. 2 – Solid Waste Management System FSAR Chapter 11 Section 11.4, Utilization of Interim Portable Solid Radioactive Waste Solidificaiton System, dated October 11, 1983.
5. Letter from A. Schwencer, NRC to G.C. Sorensen, Washington Public Power Supply System (WPPSS) – Issuance of Safety Evaluation Report Supplement No. 4 for Washington Public Power Supply System Nuclear Project No. 2, dated December 29, 1983.
6. Letter from G.C. Sorensen, Washington Public Power Supply System (WPPSS) to A. Schwencer, NRC, Nuclear Plant No. 2 – Operating License NPF-21; Request for Amendment to Licensing Condition 2.C.(11), Shield Wall Deferral, dated August 15, 1984.
7. Letter from G.C. Sorensen, Washington Public Power Supply System (WPPSS) to A. Schwencer, NRC, Nuclear Plant No.2 – Operating License NPF-21; Request for Amendment to Licensing Condition 2.C.(11), Shield Wall Deferral, Supplemental Information, dated September 7, 1984.
8. Letter from G.C. Sorensen, Washington Public Power Supply System (WPPSS) to A. Schwencer, NRC, Nuclear Plant No.2 – Operating License NPF-21; Request for Amendment to Licensing Condition 2.C.(11), Shield Wall Deferral, Supplemental Information dated October 10, 1984.

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Enclosure 1

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9. Letter from A. Schwencer, NRC to G.C. Sorensen, Washington Public Power Supply System (WPPSS), Issuance of Amendment No. 7 to Facility operating License NPF-21, WPPSS Nuclear Project No. 2, dated December 10, 1984.
10. Letter from M.C. Thadani (NRC) to M.E. Reddemann, Columbia Generating Station – Issuance of Amendment [223] Re: Deletion or Modifications of License Conditions That Have Been Completed or are No Longer in Effect (TAC NO. ME5903), dated March 30, 2012, (ADAMS Accession Number ML120800078).
11. Letter from J.R. Groom (NRC) to M.E. Reddemann, Columbia Generating Station - NRC Integrated Inspection Report and Independent Spent Fuel Storage Installation (ISFSI) Inspection Report 05000397/2016003 and 07200035/201600, dated October 28, 2016, (ADAMS Accession Number ML16302A315).

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Enclosure 2

Operating Licensing
Markup Pages

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 252, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- a. For Surveillance Requirements (SRs) not previously performed by existing SRs or other plant tests, the requirement will be considered met on the implementation date and the next required test will be at the interval specified in the Technical Specifications as revised in Amendment No. 149.

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(11) Deleted. Shield Wall Deferral (Section 12.3.2, SSER #4, License Amendment #7)

~~The licensee shall complete construction of the deferred shield walls and window as identified in Attachment 3, as amended by this license amendment.~~

(12) Deleted.

(13) Deleted.

~~*The parenthetical notation following the title of many license conditions denotes the section of the Safety Evaluation Report and/or its supplements wherein the license condition is discussed~~

ATTACHMENT 3

Deleted LIST OF SHIELD WALLS

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~~4. Deleted.~~

~~**5. FSAR Figure 12.3-12, Zone G-9 The access blockout to duplicate centrifuge room.~~

~~**6. FSAR Figure 12.3-12, Zone F-9 Same as above for the duplicate centrifuge.~~

~~**7. FSAR Figure 12.3-13, Zone J-5 The blockout for one of the two decon concentrators.~~

~~**8. FSAR Figure 12.3-11, Zone D-8 The two block walls at the north end of the truck loading bay.~~

~~**9. FSAR Figure 12.3-11, Zone E-8 The leaded glass viewing window in the radwaste area.~~

~~** Shield walls and window identified in items 5, 6, 7, 8, and 9 will be installed if the associated radiation levels at these locations exceed 2.5mR/hr as dictated by the ongoing ALARA reviews.~~

GO2-19-053
Enclosure 3

Operating License
Clean Pages

(2) Technical Specifications and Environmental Protection Plan

The Technical Specifications contained in Appendix A, and the Environmental Protection Plan contained in Appendix B, as revised through Amendment No. 252, are hereby incorporated in the renewed license. The licensee shall operate the facility in accordance with the Technical Specifications and the Environmental Protection Plan.

- a. For Surveillance Requirements (SRs) not previously performed by existing SRs or other plant tests, the requirement will be considered met on the implementation date and the next required test will be at the interval specified in the Technical Specifications as revised in Amendment No. 149.

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ATTACHMENT 3

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