

ATTACHMENT 2A TO C0999-02

TECHNICAL SPECIFICATIONS PAGES  
MARKED TO SHOW PROPOSED CHANGES

REVISED PAGES  
UNIT 1

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3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.4 REACTOR COOLANT SYSTEM

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CHEMISTRY .

LIMITING CONDITION FOR OPERATION

3.4.7 The Reactor Coolant System Chemistry shall be maintained within the limits specified in Table 3.4-1.

APPLICABILITY: At all times.

ACTION:

MODES 1, 2, 3 and 4

- a. With any one or more chemistry parameter in excess of its Steady State Limit but within its Transient Limit, restore the Parameter to within its Steady State Limit within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With any one or more chemistry parameter in excess of its Transient Limit, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

At all other times

With the concentration of either chloride or fluoride in the Reactor Coolant System in excess of its Steady State Limit for more than 24 hours or in excess of its Transient Limit, reduce the pressurizer pressure to  $\leq 500$  psig, if applicable, and perform an analysis to determine the effects of the out-of-limit condition on the structural integrity of the Reactor Coolant System; determine that the Reactor Coolant System remains acceptable for continued operations prior to increasing the pressurizer pressure above 500 psig or prior to proceeding to MODE 4.

SURVEILLANCE REQUIREMENTS

4.4.7 The Reactor Coolant System chemistry shall be determined to be within the limits by analysis of those parameters at the frequencies specified in Table 4.4-3. Performance of this surveillance is not required when the reactor is defueled with no forced circulation.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.4 REACTOR COOLANT SYSTEM

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TABLE 3.4-1

REACTOR COOLANT SYSTEM

CHEMISTRY LIMITS

<u>PARAMETER</u>	<u>STEADY STATE LIMIT</u>	<u>TRANSIENT LIMIT</u>
DISSOLVED OXYGEN*	$\leq 0.10 \text{ ppm}^*$	$\leq 1.00 \text{ ppm}^*$
CHLORIDE	$\leq 0.15 \text{ ppm}$	$\leq 1.50 \text{ ppm}$
FLUORIDE	$\leq 0.15 \text{ ppm}$	$\leq 1.50 \text{ ppm}$

\*Limits not applicable with  $T_{\text{avg}} \leq 250^\circ\text{F}$ .

TABLE 4.4-3  
REACTOR COOLANT SYSTEM  
CHEMISTRY LIMITS SURVEILLANCE REQUIREMENTS

<u>PARAMETER</u>	<u>MINIMUM ANALYSIS FREQUENCIES</u>	<u>MAXIMUM TIME BETWEEN ANALYSES</u> <u>SAMPLE AND ANALYSIS FREQUENCY</u>
DISSOLVED OXYGEN*	3-times-per-7-days*	At least once per 72 hours
CHLORIDE	3-times-per-7-days	At least once per 72 hours
FLUORIDE	3-times-per-7-days	At least once per 72 hours

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\*Not required with  $T_{avg} \leq 250^{\circ}\text{F.}$

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.11 RADIOACTIVE EFFLUENTS

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GAS STORAGE TANKS

LIMITING CONDITION FOR OPERATION

3.11.2.2 The quantity of radioactivity contained in each gas storage tank shall be limited to 43,800 curies noble gas (considered as Xe-133).

APPLICABILITY: At all times.

ACTION:

- a. With the quantity of radioactive material in any gas storage tank exceeding the above limit, without delay suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.2 The quantity of radioactive material contained in each gas storage tank shall be determined to be within the above limit at least once per 7 days whenever radioactive materials are added to the tank and at least once per 24 hours during primary coolant system degassing operations, ~~by analysis of the Reactor Coolant System noble gases.~~



ATTACHMENT 2B TO C0999-02

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3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.4 REACTOR COOLANT SYSTEM

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CHEMISTRY

LIMITING CONDITION FOR OPERATION

3.4.7 The Reactor Coolant System chemistry shall be maintained within the limits specified in Table 3.41.

APPLICABILITY: At all times.

ACTION:

MODES 1, 2, 3 and 4

- a. With any one or more chemistry parameter in excess of its Steady State Limit but within its Transient Limit, restore the Parameter to within its Steady State Limit within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With any one or more chemistry parameter in excess of its Transient Limit, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

At all other times

With the concentration of either chloride or fluoride in the Reactor Coolant System in excess of its Steady State Limit for more than 24 hours or in excess of its Transient Limit, reduce the pressurizer pressure to  $\leq 500$  psig, if applicable, and perform an engineering evaluation to determine the effects of the out-of-limit condition on the structural integrity of the Reactor Coolant System; determine that the Reactor Coolant System remains acceptable for continued operation prior to increasing the pressurizer pressure above 500 psig or prior to proceeding to MODE 4.

SURVEILLANCE REQUIREMENTS

4.4.7 The Reactor Coolant System chemistry shall be determined to be within the limits by analysis of those parameters at the frequencies specified in Table 4.4-3. ~~Performance of this surveillance is not required when the reactor is defueled with no forced circulation.~~



3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.4 REACTOR COOLANT SYSTEM

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TABLE 3.4-1

REACTOR COOLANT SYSTEM

CHEMISTRY LIMITS

<u>PARAMETER</u>	<u>STEADY STATE LIMIT</u>	<u>TRANSIENT LIMIT</u>
DISSOLVED OXYGEN*	$\leq 0.10$ ppm	$\leq 1.00$ ppm
CHLORIDE	$\leq 0.15$ ppm	$\leq 1.50$ ppm
FLUORIDE	$\leq 0.15$ ppm	$\leq 1.50$ ppm

\*Limits not applicable with  $T_{avg} \leq 250^{\circ}\text{F}$ .

### 3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS

#### 3/4.11 RADIOACTIVE EFFLUENTS

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##### GAS STORAGE TANKS

##### LIMITING CONDITION FOR OPERATION

3.11.2.2 The quantity of radioactivity contained in each gas storage tank shall be limited to 43,800 curies noble gas (considered as Xe-133).

APPLICABILITY: At all times.

##### ACTION:

- a. With the quantity of radioactive material in any gas storage tank exceeding the above limit, without delay suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

##### SURVEILLANCE REQUIREMENTS

4.11.2.2 The quantity of radioactive material contained in each gas storage tank shall be determined to be within the above limit at least once per 7 days whenever radioactive materials are added to the tank and at least once per 24 hours during primary coolant system degassing operations, ~~by analysis of the Reactor-Coolant-System noble gases.~~

ATTACHMENT 3A TO C0999-02

PROPOSED TECHNICAL SPECIFICATIONS PAGES

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3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.4 REACTOR COOLANT SYSTEM

---

CHEMISTRY .

LIMITING CONDITION FOR OPERATION

3.4.7 The Reactor Coolant System chemistry shall be maintained within the limits specified in Table 3.4-1.

APPLICABILITY: At all times.

ACTION:

MODES 1, 2, 3 and 4

- a. With any one or more chemistry parameter in excess of its Steady State Limit but within its Transient Limit, restore the Parameter to within its Steady State Limit within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With any one or more chemistry parameter in excess of its Transient Limit, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

At all other times

With the concentration of either chloride or fluoride in the Reactor Coolant System in excess of its Steady State Limit for more than 24 hours or in excess of its Transient Limit, reduce the pressurizer pressure to  $\leq 500$  psig, if applicable, and perform an analysis to determine the effects of the out-of-limit condition on the structural integrity of the Reactor Coolant System; determine that the Reactor Coolant System remains acceptable for continued operations prior to increasing the pressurizer pressure above 500 psig or prior to proceeding to MODE 4.

SURVEILLANCE REQUIREMENTS

4.4.7 The Reactor Coolant System chemistry shall be determined to be within the limits by analysis of those parameters at the frequencies specified in Table 4.4-3. Performance of this surveillance is not required when the reactor is defueled with no forced circulation.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.4 REACTOR COOLANT SYSTEM

---

TABLE 3.4-1

REACTOR COOLANT SYSTEM

CHEMISTRY LIMITS

<u>PARAMETER</u>	<u>STEADY STATE LIMIT</u>	<u>TRANSIENT LIMIT</u>
DISSOLVED OXYGEN*	$\leq 0.10$ ppm	$\leq 1.00$ ppm
CHLORIDE	$\leq 0.15$ ppm	$\leq 1.50$ ppm
FLUORIDE	$\leq 0.15$ ppm	$\leq 1.50$ ppm

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\*Limits not applicable with  $T_{avg} \leq 250^{\circ}\text{F}$ .



TABLE 4.4-3

REACTOR COOLANT SYSTEM

CHEMISTRY LIMITS SURVEILLANCE REQUIREMENTS

<u>PARAMETER</u>	<u>SAMPLE AND ANALYSIS FREQUENCY</u>
DISSOLVED OXYGEN*	At least once per 72 hours
CHLORIDE	At least once per 72 hours
FLUORIDE	At lease once per 72 hours

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\*Not required with  $T_{avg} \leq 250^{\circ}\text{F.}$

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.11 RADIOACTIVE EFFLUENTS

---

GAS STORAGE TANKS

LIMITING CONDITION FOR OPERATION

3.11.2.2 The quantity of radioactivity contained in each gas storage tank shall be limited to 43,800 curies noble gas (considered as Xe-133).

APPLICABILITY: At all times.

ACTION:

- a. With the quantity of radioactive material in any gas storage tank exceeding the above limit, without delay suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.2 The quantity of radioactive material contained in each gas storage tank shall be determined to be within the above limit at least once per 7 days whenever radioactive materials are added to the tank and at least once per 24 hours during primary coolant system degassing operations.



ATTACHMENT 3B TO C0999-02

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3/4.4 REACTOR COOLANT SYSTEM

---

CHEMISTRY.

LIMITING CONDITION FOR OPERATION

3.4.7 The Reactor Coolant System chemistry shall be maintained within the limits specified in Table 3.41.

APPLICABILITY: At all times.

ACTION:

MODES 1, 2, 3 and 4

- a. With any one or more chemistry parameter in excess of its Steady State Limit but within its Transient Limit, restore the Parameter to within its Steady State Limit within 24 hours or be in at least HOT STANDBY within the next 6 hours and in COLD SHUTDOWN within the following 30 hours.
- b. With any one or more chemistry parameter in excess of its Transient Limit, be in at least HOT STANDBY within 6 hours and in COLD SHUTDOWN within the following 30 hours.

At all other times

With the concentration of either chloride or fluoride in the Reactor Coolant System in excess of its Steady State Limit for more than 24 hours or in excess of its Transient Limit, reduce the pressurizer pressure to  $\leq 500$  psig, if applicable, and perform an engineering evaluation to determine the effects of the out-of-limit condition on the structural integrity of the Reactor Coolant System; determine that the Reactor Coolant System remains acceptable for continued operation prior to increasing the pressurizer pressure above 500 psig or prior to proceeding to MODE 4.

SURVEILLANCE REQUIREMENTS

4.4.7 The Reactor Coolant System chemistry shall be determined to be within the limits by analysis of those parameters at the frequencies specified in Table 4.4-3. Performance of this surveillance is not required when the reactor is defueled with no forced circulation.

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.4 REACTOR COOLANT SYSTEM

---

TABLE 3.4-1

REACTOR COOLANT SYSTEM

CHEMISTRY LIMITS

<u>PARAMETER</u>	<u>STEADY STATE LIMIT</u>	<u>TRANSIENT LIMIT</u>
DISSOLVED OXYGEN*	$\leq 0.10$ ppm	$\leq 1.00$ ppm
CHLORIDE	$\leq 0.15$ ppm	$\leq 1.50$ ppm
FLUORIDE	$\leq 0.15$ ppm	$\leq 1.50$ ppm

\*Limits not applicable with  $T_{avg} \leq 250^{\circ}\text{F}$ .

3/4 LIMITING CONDITIONS FOR OPERATION AND SURVEILLANCE REQUIREMENTS  
3/4.11 RADIOACTIVE EFFLUENTS

---

GAS STORAGE TANKS

LIMITING CONDITION FOR OPERATION

3.11.2.2 The quantity of radioactivity contained in each gas storage tank shall be limited to 43,800 curies noble gas (considered as Xe-133).

APPLICABILITY: At all times.

ACTION:

- a. With the quantity of radioactive material in any gas storage tank exceeding the above limit, without delay suspend all additions of radioactive material to the tank and within 48 hours reduce the tank contents to within the limit.
- b. The provisions of Specifications 3.0.3 and 3.0.4 are not applicable.

SURVEILLANCE REQUIREMENTS

4.11.2.2 The quantity of radioactive material contained in each gas storage tank shall be determined to be within the above limit at least once per 7 days whenever radioactive materials are added to the tank and at least once per 24 hours during primary coolant system degassing operations.





## ATTACHMENT 4 TO C0999-02

### NO SIGNIFICANT HAZARDS CONSIDERATION EVALUATION

Indiana Michigan Power Company (I&M), the Licensee for Donald C. Cook Nuclear Plant (CNP) Units 1 and 2, proposes to amend Appendix A, Technical Specifications (T/S), of Facility Operating Licenses DPR-58 and DPR-74. I&M proposes the following T/S revisions.

- T/S Surveillance Requirement 4.4.7, "Reactor Coolant System Chemistry," - delete the requirement to perform this surveillance when the reactor is defueled with no forced circulation.
- T/S Table 4.4-3, "Reactor Coolant System Chemistry Limits Surveillance Requirements," Unit 1 only - change the reactor coolant system (RCS) chemistry sampling frequency from three times per seven days with a maximum interval of 72 hours to a frequency of at least once per 72 hours.
- T/S Tables 3.4-1, "Reactor Coolant System Chemistry Limits," and 4.4-3, "Reactor Coolant System Chemistry Limits Surveillance Requirements" - editorial changes to the footnote on the applicability of the dissolved oxygen chemistry limits.
- T/S Surveillance Requirement 4.11.2.2, "Radioactive Effluents, Gas Storage Tanks," - eliminate the prescriptive method for determining the quantity of radioactive material contained in each gas storage tank, while preserving the general requirement to verify compliance with this limit.

I&M has evaluated this proposed amendment and determined that it does not involve a significant hazard. According to 10 CFR 50.92(c), a proposed amendment to an operating license involves no significant hazards consideration if operation of the facility in accordance with the proposed amendment would not:

1. involve a significant increase in the probability of occurrence or consequences of an accident previously evaluated;
2. create the possibility of a new or different kind of accident from any previously analyzed; or
3. involve a significant reduction in a margin of safety.



The determination that the criteria set forth in 10 CFR 50.92 are met for this amendment request is indicated below.

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

The proposed changes to the RCS chemistry sampling requirements do not affect the probability of a loss-of-coolant accident or steam generator tube rupture, which are evaluated in Sections 14.3 and 14.2.4, respectively, of the Updated Final Safety Analysis Report (UFSAR). RCS contaminant limits are maintained to reduce the potential for RCS leakage or failure due to corrosion. Sampling the RCS for contaminants does not initiate an accident. Deleting the requirement to obtain samples when the reactor is defueled does not modify any plant equipment or affect plant operation and therefore does not introduce any new accident initiators or precursors. Suspension of RCS chemistry sampling when the reactor is defueled does not increase the potential for RCS leakage or failure because the corrosive effects of the contaminants is minimal during this low-temperature, low-pressure condition. To ensure elevated contaminant levels would be detected and corrected prior to subjecting the system to a high-temperature condition, chemistry sampling will be reinstated within 72 hours of re-establishing forced circulation and prior to entering Mode 6. Removing the restriction for analyzing primary coolant chemical contaminants at least three times every seven days does not change the maximum surveillance interval. This change allows the sample to be collected two or three times per week, consistent with the maximum 72-hour interval. The 72-hour sampling and analysis interval is consistent with the current requirement in the Unit 2 T/S, and industry guidance in NUREG-0452, "Standard Technical Specifications." The 72-hour interval continues to provide adequate assurance that concentrations in excess of the limits are detected in sufficient time to take corrective actions. Therefore, the probability of occurrence of a previously evaluated accident is not increased.

This change does not alter the quantity of radioactive material in any system during normal plant operation, the amount of shielding provided by plant systems, or the mitigative capabilities of any system following an event. Therefore, the consequences of a previously evaluated accident are not increased.

The editorial changes to the RCS chemistry T/S provide consistency between the Unit 1 and Unit 2 T/S and the Standard Technical Specifications. These changes do not affect the design or operation of any system, structure, or component in the plant. The accident analysis assumptions and results are unchanged. No new failures or interactions are created.

The amount of radioactive material in the gas storage tanks is controlled to ensure that, in the event of a rupture of one of these tanks, the resulting total body exposure to an individual at the nearest site boundary would not exceed 0.5 rem. The accidental waste gas release event is summarized in Section 14.2.3 of the UFSAR. Sampling to determine the radioactivity levels in the tanks does not initiate an accident or identify any accident precursors. The increased

sampling flexibility does not change the method of operating the waste gas system, nor does it modify any interfaces with other plant systems. Therefore, this change does not increase the probability of occurrence of an accidental waste gas release event.

Implementation of a different sampling method does not change the maximum quantity of radioactive material specified in the T/S Limiting Condition for Operation (LCO). The sampling method has no effect on normal plant gaseous radwaste activities, so the composition of the radioactive gaseous nuclides present in the tank at the time of the event is not affected. As the proposed revision allows a change to the method of sampling but does not affect the radioactivity limit for the gas storage tanks, the proposed change does not increase the consequences of an accidental waste gas release event.

Therefore, the probability of occurrence or the consequences of accidents previously evaluated are not increased.

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

The proposed changes to revise the RCS chemistry sampling frequency and to suspend RCS chemistry sampling when the reactor is defueled with no forced circulation does not change the method of operating any equipment or the operational limits of any equipment. The proposed changes do not introduce any new failure mechanisms to the RCS or any other plant systems. The proposed change does not involve any physical alterations to any plant equipment, and causes no change in the method by which any plant system performs its function. Editorial changes to footnotes for Tables 3.4-1 and 4.4-3 provide consistency between the T/S for Unit 1 and Unit 2, but do not change the methods of operating any equipment or introduce any new failure mechanisms.

The proposed change to eliminate the prescriptive waste gas tank sampling method does not introduce any new failure mechanisms to the waste disposal system, involve any physical changes to the waste disposal system or any other plant systems, or change the way any plant systems are operated. This change does not change any interfaces between the waste disposal system and any other plant systems. The proposed changes continue to ensure the system is operated within the existing limit established by the T/S LCO. Thus, no adverse safety considerations are introduced by this proposed change to the T/S.

Therefore, the proposed changes do not create the possibility of a new or different kind of accident from any accident previously evaluated.

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

The margin of safety pertinent to the RCS chemistry surveillance is related to the concentration of chemical contaminants that would expedite corrosion of the RCS piping and components and the period of time during which the system is allowed to operate outside the T/S limits. The proposed changes to the RCS chemistry surveillance do not alter either of these criteria. These proposed changes do not affect any safety limits or T/S parameter limits. The proposed changes do not introduce new equipment, equipment modifications, or new or different modes of plant operation. These changes do not affect the operational characteristics of any equipment or systems. The editorial changes to footnotes for Tables 3.4-1 and 4.4-3 provide consistency between the T/S for Unit 1 and 2, but do not affect the acceptance criteria or surveillance frequencies for this T/S.

The margin of safety pertinent to the waste gas storage tanks is related to the quantity of radioactivity that would be released in the unlikely event of a tank rupture. The proposed change to the gas storage tank T/S eliminates the prescriptive sampling methodology, but does not affect the requirement to periodically quantify the radioactive gaseous material in the gas storage tanks. The proposed change does not affect the quantity of radioactivity allowed in the gas storage tanks, nor does it alter the methodology, assumptions, or results of any safety analyses. The proposed change to delete the prescriptive sampling method does not affect any safety limits or T/S parameter limits.

Therefore, the proposed changes do not involve a significant reduction in a margin of safety.

In summary, based upon the above evaluation, I&M has concluded that the proposed amendment involves no significant hazards consideration.

ATTACHMENT 5 TO C0999-02

ENVIRONMENTAL ASSESSMENT

Indiana Michigan Power Company (I&M) has evaluated this license amendment request against the criteria for identification of licensing and regulatory actions requiring environmental assessment in accordance with 10 CFR 51.21. I&M has determined that this license amendment request meets the criteria for a categorical exclusion set forth in 10 CFR 51.22(c)(9). This determination is based on the fact that this change is being proposed as an amendment to a license issued pursuant to 10 CFR 50 that changes a requirement with respect to installation or use of a facility component located within the restricted area, as defined in 10 CFR 20, or that changes an inspection or a surveillance requirement, and the amendment meets the following specific criteria:

- (i) The amendment involves no significant hazards consideration.

As demonstrated in Attachment 4, this proposed amendment does not involve significant hazards consideration.

- (ii) There is no significant change in the types or significant increase in the amounts of any effluent that may be released offsite.

As documented in Attachment 1, there will be no significant change in the types or significant increase in the amounts of any effluents released offsite.

- (iii) There is no significant increase in individual or cumulative occupational radiation exposure.

The proposed changes will not result in significant changes in the operation or configuration of the facility. There will be no change in the level of controls or methodology used for processing of radioactive effluents or handling of solid radioactive waste, nor will the proposal result in any change in the normal radiation levels within the plant. Therefore, as documented in Attachment 1, there will be no significant increase in individual or cumulative occupational radiation exposure resulting from this change.

