

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: Backup Power Distribution System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Backup Power Distribution System in the CSS supplies standby electric power from diesel generators for QA-1 SSCs during loss of normal power; however there are no identified QA-1 SSCs in the CSS. Therefore, the Backup Power Distribution System in the CSS is not required to function to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Backup Power Distribution System in the CSS is not required to prevent, mitigate, or monitor a DBE which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Backup Power Distribution System in the CSS will result in a DBE that will not lead to a radioactive release above federal limits. Loss of Off-Site/On-Site Power is a credible event potentially applicable to Yucca Mountain per Preliminary MGDS Hazards Analysis, B00000000-01717-0200-00130 REV 00.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Backup Power Distribution System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Backup Power Distribution System in the CSS will not affect the characteristics of the natural or engineered barriers.

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SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: Backup Power Distribution System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Backup Power Distribution System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Backup Power Distribution System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure of the Backup Power Distribution System in the CSS as a result of a fire DBE could impair the capability of QA-1 SSCs from performing their radiological safety functions. During a fire DBE, cables or equipment could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Backup Power Distribution System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Backup Power Distribution System in the CSS performs no special nuclear material accountability function.

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SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: Backup Power Distribution System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Backup Power Distribution System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Backup Power Distribution System in the CSS performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Backup Power Distribution System in the CSS was previously on the Q-List by direct inclusion for the Surface Service and Utility Systems, SSA 3.1.1.3.1 Power Distribution System, and Balance of Plant, SSA 3.2.3.2 Emergency and Backup Power Generator System, as QA-1; but the Backup Power Distribution System in the CSS has not been specifically analyzed or included on the Q-List.

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: UPS Power System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The UPS Power System in the CSS supplies emergency and uninterruptible electric power for personnel safety and critical operations during loss of normal power; however there are no identified QA-1 SSCs in the CSS. Therefore, the UPS Power System in the CSS is not required to function to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The UPS Power System in the CSS is not required to prevent, mitigate, or monitor a DBE which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the UPS Power System in the CSS will result in a DBE that will not lead to a radioactive release above federal limits. Loss of Off-Site/On-Site Power is a credible event potentially applicable to Yucca Mountain per Preliminary MGDS Hazards Analysis, B00000000-01717-0200-00130 REV 00.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The UPS Power System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the UPS Power System in the CSS will not affect the characteristics of the natural or engineered barriers.

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: UPS Power System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes? Rationale:

The UPS Power System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The UPS Power System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ Yes? Rationale:

Failure of the UPS Power System in the CSS as a result of a fire DBE could impair the capability of QA-1 SSCs from performing their radiological safety functions. During a fire DBE, cables or equipment could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes? Rationale:

The UPS Power System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes? Rationale:

The UPS Power System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: UPS Power System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The UPS Power System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The UPS Power System in the CSS performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The UPS Power Distribution System in the CSS was previously on the Q-List by direct inclusion for the Surface Service and Utility Systems, SSA 3.1.1.3.1 Power Distribution System, and Balance of Plant, SSA 3.2.3.2 Emergency and Backup Power Generator System, as QA-1; but the UPS Power Distribution System in the CSS has not been specifically analyzed or included on the Q-List.

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: Utility Power Distribution System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Utility Power Distribution System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits. Power requirements for radiological safety functions is provided by the UPS and Backup Power Systems in the CSS.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Utility Power Distribution System in the CSS is not required to function to prevent, mitigate, or monitor any DBE. Power requirements for radiological safety functions is provided by the UPS and Backup Power Systems in the CSS.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Utility Power Distribution System in the CSS will result in a DBE that will not lead to a radioactive release above federal limits. Loss of Off-Site/On-Site Power is a credible event potentially applicable to Yucca Mountain per Preliminary MGDS Hazards Analysis, B00000000-01717-0200-00130 REV 00.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Utility Power Distribution System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Utility Power Distribution System in the CSS will not affect the characteristics of the natural or engineered barriers.

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: Utility Power Distribution System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Utility Power Distribution System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Utility Power Distribution System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?**

Rationale:

Failure of the Utility Power Distribution System in the CSS as a result of a fire DBE could impair the capability of QA-1 SSCs from performing their radiological safety functions. During a fire DBE, cables or equipment could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Utility Power Distribution System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Utility Power Distribution System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Electrical Systems

Level 4: N/A

Level 3: Utility Power Distribution System

Level 6: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Utility Power Distribution System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Utility Power Distribution System in the CSS performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Utility Power Distribution System in the CSS was previously on the Q-List by direct inclusion for the Surface Service and Utility Systems, SSA 3.1.1.3.1 Power Distribution System, as QA-1; but the Utility Power Distribution System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Facility Monitoring & Control System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Facility Monitor & Control System in the CSS is not be required to function to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Facility Monitor & Control System in the CSS is not required to prevent, mitigate, or monitor a DBE which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Facility Monitor & Control System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Facility Monitor & Control System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Facility Monitor & Control System in the CSS will not affect the characteristics of the natural or engineered barriers.

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Facility Monitoring & Control System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes? Rationale:**

The function and design of the Monitor & Control System in the CSS is not for collection, containment, or monitoring of site-generated radioactive waste. SSD No. SU29, Waste Handling Facility Radiological Monitoring System, addresses this function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes? Rationale:**

The Facility Monitoring & Control System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes? Rationale:**

Failure of the Facility Monitoring & Control System in the CSS as a result of a DBE will not impair the capability of QA-1 and QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes? Rationale:**

The Facility Monitoring & Control System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes? Rationale:**

The Facility Monitoring & Control System in the CSS performs no special nuclear material accountability function.

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Facility Monitoring & Control System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Facility Monitoring & Control System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☒ Yes? Rationale:

The Facility Monitor & Control System in the CSS may performs a radiological monitoring function if SSD No. SU29, Waste Handling Facility Radiological Monitoring System, does not addresses this function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Facility Monitor & Control System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Facility Monitor & Control System in the CSS has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lighting Systems

Level 4: N/A

Level 3: General Lighting System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

General Lighting System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The General Lighting System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the General Lighting System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The General Lighting in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the General Lighting System in the CSS will not affect the characteristics of the natural or engineered barriers.

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SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lighting Systems

Level 4: N/A

Level 3: General Lighting System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The General Lighting System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The General Lighting System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the General Lighting System in the CSS as a result of a DBE would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The General Lighting System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The General Lighting System in the CSS performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lighting Systems

Level 4: N/A

Level 3: General Lighting System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The General Lighting System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The General Lighting System in the CSS does not perform any radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The General Lighting System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the General Lighting System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lighting Systems

Level 4: N/A

Level 3: Safety/Security Lighting System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
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QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Safety/Security Lighting System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Safety/Security Lighting System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Safety/Security Lighting System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Safety/Security Lighting System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Safety/Security Lighting System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lighting Systems

Level 4: N/A

Level 3: Safety/Security Lighting System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Safety/Security Lighting System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Safety/Security Lighting System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Safety/Security Lighting System in the CSS as a result of a DBE is not expected to impair the capability of QA-1 or QA-2 from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Safety/Security Lighting System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area. It is expected that the CSS will be a restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Safety/Security Lighting System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lighting Systems

Level 4: N/A

Level 3: Safety/Security Lighting System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Safety/Security Lighting System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Safety/Security Lighting System in the CSS performs no radiation monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Safety/Security Lighting System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Safety/Security Lighting System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lightning Protection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Lightning Protection System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

Portions of the Lightning Protection System in the CSS functions to mitigate a potential DBE that could result in exceeding the federal limits. Lightning is a credible event potentially applicable to Yucca Mountain per Preliminary MGDS Hazards Analysis, B00000000-01717-0200-00130 REV 00. However, it is assumed that the shipping cask is designed to withstand a lightning strike.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Lightning Protection System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Lightning Protection System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Lightning Protection System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lightning Protection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes?

Rationale:

The Lightning Protection System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Lightning Protection System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the Lightning Protection System in the CSS as a result of a DBE is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Lightning Protection System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Lightning Protection System in the CSS performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Lightning Protection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Lightning Protection System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Lightning Protection System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Lightning Protection System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Lightning Protection System in the CSS has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Non-Nuclear HVAC System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits since the spent nuclear fuel is still in the waste transportation cask.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Non-Nuclear HVAC System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Non-Nuclear HVAC System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Non-Nuclear HVAC System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the Non-Nuclear HVAC System in the CSS as a result of a DBE would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Non-Nuclear HVAC System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Non-Nuclear HVAC System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Non-Nuclear HVAC System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Non-Nuclear HVAC System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Non-Nuclear HVAC System in the CSS has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Chilled Water Distribution System (as required)

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Chilled Water Distribution System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Chilled Water Distribution System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Chilled Water Distribution System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Chilled Water Distribution System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Chilled Water Distribution System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Chilled Water Distribution System (as required)

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Chilled Water Distribution System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Chilled Water Distribution System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Chilled Water Distribution System in the CSS as a result of a DBE would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Chilled Water Distribution System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Chilled Water Distribution System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Chilled Water Distribution System (as required)

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Chilled Water Distribution System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Chilled Water Distribution System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Chilled Water Distribution System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Chilled Water Distribution System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Industrial Air Distribution System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Industrial Air Distribution System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Industrial Air Distribution System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Industrial Air Distribution System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Industrial Air Distribution System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Industrial Air Distribution System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Industrial Air Distribution System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Industrial Air Distribution System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Industrial Air Distribution System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Industrial Air Distribution System in the CSS as a result of a DBE would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Industrial Air Distribution System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Industrial Air Distribution System in the CSS performs no special nuclear material accountability function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Industrial Air Distribution System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Industrial Air Distribution System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Industrial Air Distribution System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Industrial Air Distribution System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Industrial Air Distribution System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Instrument Air Distribution System (as required)

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Instrument Air Distribution System in the CSS in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Instrument Air Distribution System in the CSS may be required to function to prevent, mitigate, or monitor any DBE, but no QA-1 SSCs have been identified in the CSS that require Instrument Air. It is also assumed any QA-1 SSCs using the Instrument Air Distribution System in the CSS will be designed to fail-safe on loss of the Instrument Air Distribution System.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Instrument Air Distribution System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Instrument Air Distribution System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Instrument Air Distribution System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Instrument Air Distribution System (as required)

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Instrument Air Distribution System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Instrument Air Distribution System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Instrument Air Distribution System in the CSS as a result of a DBE will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Instrument Air Distribution System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Instrument Air Distribution System in the CSS performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Instrument Air Distribution System (as required)

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Instrument Air Distribution System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Instrument Air Distribution System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Instrument Air Distribution System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Instrument Air Distribution System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Potable Water Distribution System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Potable Water Distribution System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Potable Water Distribution System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Potable Water Distribution System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Potable Water Distribution System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Potable Water Distribution System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Potable Water Distribution System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes? Rationale:**

The Potable Water Distribution System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes? Rationale:**

The Potable Water Distribution System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes? Rationale:**

Failure of the Potable Water Distribution System in the CSS as a result of a DBE would not impact or impair any QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes? Rationale:**

The Potable Water Distribution System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes? Rationale:**

The Potable Water Distribution System in the CSS performs no special nuclear material accountability function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Potable Water Distribution System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Potable Water Distribution System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Potable Water Distribution System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Potable Water Distribution System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Potable Water Distribution System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Sewage Collection System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Sewage Collection System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Sewage Collection System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Sewage Collection System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Sewage Collection System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Sewage Collection System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Sewage Collection System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Sewage Collection System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Sewage Collection System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Sewage Collection System in the CSS as a result of a DBE would not impact or impair any QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Sewage Collection System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Sewage Collection System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Sewage Collection System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Sewage Collection System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Sewage Collection System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Sewage Collection System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Sewage Collection System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Vacuum System (as required)

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Vacuum System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Vacuum System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Vacuum System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Vacuum System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Vacuum System in the CSS will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Vacuum System (as required)

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes?

Rationale:

The Vacuum System in the CSS may have collection and containment functions for site-generated radioactive waste because of radioactive particles or gases it may contain.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Vacuum System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the Vacuum System in the CSS as a result of a DBE will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Vacuum System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Vacuum System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Piped Utility Systems

Level 4: N/A

Level 3: Vacuum System (as required)

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The Vacuum System in the CSS may require personnel access into radiation areas by its own radioactive source term because of radioactive particles or gases it may contain.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Vacuum System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☐ Yes? Rationale:

The Vacuum System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Vacuum System in the CSS has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Fire Detection System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Fire Detection System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Fire Detection System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits since the spent nuclear fuel is still in the waste transportation cask that is designed to withstand severe fire conditions.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Fire Detection System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Fire Detection System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Fire Detection System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Fire Detection System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Fire Detection System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☒ **Yes?** **Rationale:**

The Fire Detection System in the CSS may perform a fire detection function for the protection of the QA-1 SSCs.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Fire Detection System in the CSS as a result of a DBE will not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Fire Detection System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Fire Detection System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Fire Detection System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The Fire Detection System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Fire Detection System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Fire Detection System in the CSS was previously on the Q-List by direct inclusion for the Surface Service and Utility Systems, SSA 3.1.1.3.11 Fire System, as QA-1; but the Fire Detection System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Fire Suppression System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Fire Suppression System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Fire Suppression System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits since the spent nuclear fuel is still in the waste transportation cask that is designed to withstand severe fire conditions.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Fire Suppression System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Fire Suppression System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Fire Suppression System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Fire Suppression System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Fire Suppression System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☒ **Yes?**

Rationale:

The Fire Suppression System in the CSS may be required to protect QA-1 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Fire Suppression System in the CSS as a result of a DBE will not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Fire Suppression System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Fire Suppression System in the CSS performs no special nuclear material accountability function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Fire Suppression System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Fire Suppression System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Fire Suppression System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Fire Suppression System in the CSS was previously on the Q-List by direct inclusion for the Surface Service and Utility Systems, SSA 3.1.1.3.11 Fire System, as QA-1; but the Fire Suppression System in the CSS has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Radiological Monitoring System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Radiological Monitoring System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Radiological Monitoring System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Radiological Monitoring System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Radiological Monitoring System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Radiological Monitoring System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Radiological Monitoring System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes?

Rationale:

The Radiological Monitoring System in the CSS may be required to monitor site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Radiological Monitoring System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the Radiological Monitoring System in the CSS as a result of a DBE would not impact or impair any QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Radiological Monitoring System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Radiological Monitoring System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Safety Systems

Level 4: N/A

Level 3: Radiological Monitoring System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Radiological Monitoring System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☒ Yes? Rationale:

The Radiological Monitoring System in the CSS contains permanently installed monitors for personnel radiation protection.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Radiological Monitoring System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Radiological Monitoring System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Security System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Security System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Security System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Security System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Security System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Security System in the CSS will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Security System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes? Rationale:

The Security System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The Security System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes? Rationale:

Failure of the Security System in the CSS as a result of a DBE will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☒ Yes? Rationale:

The Security System in the CSS may provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area. It is expected that the CSS will be located in a restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☒ Yes? Rationale:

The Security System in the CSS may be required to provide an accountability function for the loaded casks brought into the staging area.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Security System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The Security System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Security System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Security System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, SSA 3.2.1.1.7, Support Facility, as QA-1 but the Security System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Hazardous Waste System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Hazardous Waste System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits. No radioactive waste is included in this waste collection system.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Hazardous Waste System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Hazardous Waste System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Hazardous Waste System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Hazardous Waste System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Hazardous Waste System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Hazardous Waste System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Hazardous Waste System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Hazardous Waste System in the CSS as a result of a DBE will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Hazardous Waste System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Hazardous Waste System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Hazardous Waste System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Hazardous Waste System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Hazardous Waste System in the CSS is not expected to have any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Hazardous Waste System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, Site Generated Waste Collection Facilities, SSA 3.2.1.1.8, as QA-1 but the Hazardous Waste System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Radiological Waste System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Radiological Waste System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Radiological Waste System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Radiological Waste System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Radiological Waste System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Radiological Waste System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Radiological Waste System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The Radiological Waste System for the Carrier Staging Shed may be required to collect, contain, and/or monitor small amounts of contaminated rags generated from equipment and vehicle decontamination.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Radiological Waste System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Radiological Waste System in the CSS as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Radiological Waste System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Radiological Waste System in the CSS performs no special nuclear material accountability function.

O-List Questions

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SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Radiological Waste System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Radiological Waste System may require personnel access into radiation areas by the source term of contaminated rags.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Radiological Waste System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Radiological Waste System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, Site Generated Waste Collection Facilities, SSA 3.2.1.1.8, as QA-1 but the Radiological Waste System in the CSS has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Sanitary Waste System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Sanitary Waste System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits. No radioactive waste is included in this waste collection system.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Sanitary Waste System in the CSS is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Sanitary Waste System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Sanitary Waste System in the CSS is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Sanitary Waste System in the CSS will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Sanitary Waste System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Sanitary Waste System in the CSS does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Sanitary Waste System in the CSS does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of Sanitary Waste System in the CSS as a result of a DBE will not impair the capability of QA-1 and QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Sanitary Waste System in the CSS does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Sanitary Waste System in the CSS performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU05 - Carrier Staging Shed (CSS) System

SSC: Solid Waste Collection Systems

Level 4: N/A

Level 3: Sanitary Waste System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The Sanitary Waste System in the CSS does not provide any personnel radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Sanitary Waste System in the CSS performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Sanitary Waste System in the CSS was previously on the Q-List by direct inclusion of the Waste Handling Building, Site Generated Waste Collection Facilities, SSA 3.2.1.1.8, as QA-1 but the Sanitary Waste System in the CSS has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU08 - CSS Material Handling System

SSC: N/A

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The CSS Material Handling System controls the electromechanical equipment dedicated to preparing the transportation casks, and carriers for receipt at the waste handling areas. The Material Handling System in the CSS performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits since the spent nuclear fuel is still in the waste transportation cask designed for extreme transportation conditions without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The CSS Material Handling System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the CSS Material Handling System could result in a equipment of material drop onto cask that would not result in a release above federal limits as discussed in Question 1.1.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The CSS Material Handling System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the CSS Material Handling System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU08 - CSS Material Handling System

SSC: N/A

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** Rationale:

The CSS Material Handling System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** Rationale:

The CSS Material Handling System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** Rationale:

Failure of the CSS Material Handling System could potentially impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** Rationale:

The CSS Material Handling System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** Rationale:

The CSS Material Handling System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU08 - CSS Material Handling System

SSC: N/A

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The CSS Material Handling System does not provide shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The CSS Material Handling System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The CSS Material Handling System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, SSA 3.2.1.1.7, Support Facility, as QA-1 but the CSS Material Handling System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Cart System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask Cart System transfers casks between the operating stations in the WHF, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Cask Cart System is required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Cask Cart System could lead to a radioactive release above the federal limits due to a collision type DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask Cart System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask Cart System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Cart System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Cask Cart System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Cask Cart System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Cask Cart System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Cask Cart System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Cask Cart System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00
Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Cart System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Cask Cart System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Cask Cart System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Cask Cart System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Cask Cart System has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Clean & Purge System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask Clean & Purge System checks the cask cavity pressure and gas for contamination which includes introducing a small negative pressure into the cask cavity, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Cask Clean & Purge System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Cask Clean & Purge System could lead to a radioactive release above the federal limits if loose radioactive material is present as a result the transportation and handling process.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask Clean & Purge System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask Clean & Purge System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Clean & Purge System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes?

Rationale:

The Cask Clean & Purge System may collect and contain radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Cask Clean & Purge System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the Cask Clean & Purge System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Cask Clean & Purge System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSC's function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Cask Clean & Purge System does not provide a special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Clean & Purge System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Cask Clean & Purge System may require access to components containing contaminated gas.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Cask Clean & Purge System is not expected to provide any area radiation monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Cask Clean & Purge System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Cask Clean & Purge System has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Decontamination System decontaminates unloaded casks and transfer carts if necessary. This system is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Decontamination System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Decontamination System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Decontamination System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Decontamination System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00
Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The Decontamination System may perform a site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Decontamination System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure of the Decontamination System as a result of a DBE could impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function since portions of the Decontamination System have a failure mode resulting in flooding or missile as a result of a DBE.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Decontamination System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Decontamination System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Decontamination System will reduce dose rates on casks and transfer carts.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Decontamination System is not expected to perform any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

Failure of the Decontamination System as a result of a DBE could impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function since portions of the Decontamination System have a failure mode resulting in flooding or missile as a result of a DBE.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty Cask Preparation System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Empty Cask Preparation System prepares empty shipping casks for off-site transfer and loads empty shipping casks on rail or truck carriers for on-site transfer to the Carrier Staging Shed. This system is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Empty Cask Preparation System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Empty Cask Preparation System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Empty Cask Preparation System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Empty Cask Preparation System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty Cask Preparation System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Empty Cask Preparation System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty Cask Preparation System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Empty Cask Preparation System does not provide shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Empty Cask Preparation System is not expected to have any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Empty Cask Preparation System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Empty Cask Preparation System has not been specifically analyzed or included on the Q-List.

O-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty DPC Packaging System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Empty DPC Packaging System packages empty DPCs for off-site shipment after SFAs have been removed. This system is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Empty DPC Packaging System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Empty DPC Packaging System will not result in a DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Empty DPC Packaging System is not a part of the natural or engineered barriers important to waste isolation.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Empty DPC Packaging System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty DPC Packaging System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes?

Rationale:

The Empty DPC Packaging System may be required to remove cuttings from the DPC lid removal process for shipment off-site.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Empty DPC Packaging System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the Empty DPC Packaging System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Empty DPC Packaging System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Empty DPC Packaging System performs no special nuclear material accountability function.

O-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Assembly Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty DPC Packaging System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Empty DPC Packaging System is not expected to provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Empty DPC Packaging System is not expected to perform any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Empty DPC Packaging System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Empty DPC Packaging System has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Cart System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask Cart System transfers casks between the operating stations in the WHF, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Cask Cart System is required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Cask Cart System could lead to a radioactive release above the federal limits due to a collision type DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask Cart System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask Cart System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Cart System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Cask Cart System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Cask Cart System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Cask Cart System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Cask Cart System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Cask Cart System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Cart System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Cask Cart System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Cask Cart System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Cask Cart System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Cask Cart System has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Clean & Purge System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask Clean & Purge System checks the cask cavity pressure and gas for contamination which includes introducing a small negative pressure into the cask cavity, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Cask Clean & Purge System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Cask Clean & Purge System could lead to a radioactive release above the federal limits if loose radioactive material is present as a result the transportation and handling process..

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask Clean & Purge System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask Clean & Purge System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Clean & Purge System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?**

Rationale:

The Cask Clean & Purge System may collect and contain radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Cask Clean & Purge System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Cask Clean & Purge System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Cask Clean & Purge System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Cask Clean & Purge System does not provide a special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Clean & Purge System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Cask Clean & Purge System may require access to components containing contaminated gas.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Cask Clean & Purge System is not expected to provide any area radiation monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Cask Clean & Purge System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Cask Clean & Purge System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Hoist System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask Hoist System may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Cask Hoist System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Cask Hoist System could lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask Hoist System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask Hoist System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Hoist System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Cask Hoist System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Cask Hoist System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Cask Hoist System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Cask Hoist System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Cask Hoist System does not provide a special nuclear material accountability function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Hoist System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Cask Hoist System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Cask Hoist System is not expected to provide any area radiation monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Cask Hoist System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Cask Hoist System has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Lid Unbolter System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask Lid Unbolter System provides a remote method of removing the cask lid, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Cask Lid Unbolter System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Cask Lid Unbolter System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask Lid Unbolter System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask Lid Unbolter System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Lid Unbolter System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Cask Lid Unbolter System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Cask Lid Unbolter System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Cask Lid Unbolter System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Cask Lid Unbolter System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Cask Lid Unbolter System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Cask Lid Unbolter System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Cask Lid Unbolter System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Cask Lid Unbolter System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Cask Lid Unbolter System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Cask Lid Unbolter System has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Decontamination System decontaminates unloaded casks and transfer carts if necessary. This system is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Decontamination System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Decontamination System in the CSS will not result in a DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Decontamination System is not a part of the natural or engineered barriers important to waste isolation.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Decontamination System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The Decontamination System may perform a site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Decontamination System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure of the Decontamination System as a result of a DBE could impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function since portions of the Decontamination System have a failure mode resulting in flooding or missile as a result of a DBE.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Decontamination System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Decontamination System performs no special nuclear material accountability function.

Q-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Decontamination System will reduce dose rates on casks and transfer carts.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Decontamination System is not expected to perform any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

Failure of the Decontamination System as a result of a DBE could impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function since portions of the Decontamination System have a failure mode resulting in flooding or missile as a result of a DBE.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty Cask Preparation System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Empty Cask Preparation System prepares empty shipping casks for off-site transfer and loads empty shipping casks on rail or truck carriers for on-site transfer to the Carrier Staging Shed. This system is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Empty Cask Preparation System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Empty Cask Preparation System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Empty Cask Preparation System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Empty Cask Preparation System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty Cask Preparation System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Empty Cask Preparation System would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Empty Cask Preparation System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00
Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Canister Transfer Line Cask Systems

Level 4: N/A

Level 3: Empty Cask Preparation System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Empty Cask Preparation System does not provide shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Empty Cask Preparation System is not expected to have any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Empty Cask Preparation System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Empty Cask Preparation System has not been specifically analyzed or included on the Q-List.

O-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Carrier Bay Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Carrier Bay Crane System lifts the shipping cask from a truck or rail carrier and places the cask on a preparation cart, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Carrier Bay Crane System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Carrier Bay Crane System could lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Carrier Bay Crane System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Carrier Bay Crane System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Carrier Bay Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Carrier Bay Crane System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Carrier Bay Crane System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Carrier Crane System resulting from a DBE would not cause damage to the shipping cask or the preparation cart other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Carrier Bay Crane System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSC's function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Carrier Bay Crane System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU09 - Cask/Canister Handling System

SSC: Carrier Bay Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The Carrier Bay Crane System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Carrier Bay Crane System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Carrier Bay Crane System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Cask-handling Facilities, SSA 3.2.1.1.2, as QA-1 but the Carrier Bay Crane System has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Cask Lid Removal & Installation System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask Lid Removal & Installation System removes the cask lid in the Cask Unload Pool, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Cask Lid Removal & Installation System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Cask Lid Removal & Installation System could lead to a radioactive release above federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask Lid Removal & Installation System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask Lid Removal & Installation System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Cask Lid Removal & Installation System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Cask Lid Removal & Installation System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Cask Lid Removal & Installation System does not protect QA-1 or QA-2 SSCs from the effect of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Cask Lid Removal & Installation System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Cask Lid Removal & Installation System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Cask Lid Removal & Installation System performs no special nuclear material accountability function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Cask Lid Removal & Installation System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The Cask Lid Removal & Installation System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Cask Lid Removal & Installation System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Cask Lid Removal & Installation System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the Cask Lid Removal & Installation System has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Cask/Canister Purge & Fill System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Cask/Canister Purge & Fill System checks the cask cavity pressure and gas for contamination which includes introducing a small negative pressure into the cask cavity, and performs cask cooldown and fill. This function may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Cask/Canister Purge & Fill System is required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Cask/Canister Purge & Fill System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Cask/Canister Purge & Fill System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Cask/Canister Purge & Fill System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Cask/Canister Purge & Fill System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes?

Rationale:

The Cask/Canister Purge & Fill System may collect and contain radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Cask/Canister Purge & Fill System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the Cask/Canister Purge & Fill System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Cask/Canister Purge & Fill System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Cask/Canister Purge & Fill System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Cask/Canister Purge & Fill System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ **Yes?** **Rationale:**

The Cask/Canister Purge & Fill System will contain radioactive gas after the sample and purge process, and may require personnel access in a radiation area by its contents of radioactive gas. The Cask/Canister Purge & Fill System may also reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Cask/Canister Purge & Fill System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Cask/Canister Purge & Fill System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the Cask/Canister Purge & Fill System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: DPC Opening System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DPC Opening System provides the means for opening dual purpose canisters, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DPC Opening System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DPC Opening System could lead to a radioactive release above federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DPC Opening System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geoméchanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the DPC Opening System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: DPC Opening System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DPC Opening System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DPC Opening System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DPC Opening System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DPC Opening System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DPC Opening System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: DPC Opening System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The DPC Opening System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DPC Opening System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DPC Opening System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the DPC Opening System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Pool Crane System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Pool Crane System will provide receiving and handling operations for high-level waste in the waste handling building, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Pool Crane System will be designed and required to function to prevent, or mitigate DBEs such as cask drop.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Pool Crane System could result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Pool Crane System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Pool Crane System is not expected to affect the waste isolation functions of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Pool Crane System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Pool Crane System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Pool Crane System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Pool Crane System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Pool Crane System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Pool Crane System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00
Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Cask/Canister Handling Systems

Level 4: N/A

Level 3: Pool Crane System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Pool Crane System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Pool Crane System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Pool Crane System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the Pool Crane System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Cart System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Cart System transfers high-level waste between operating stations in the Waste Handling Building, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Cart System is required to function to prevent or mitigate any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Cart System could result in the tipover of the container which may lead to a radioactive release above federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Cart System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the DC Cart System is not expected to affect the waste isolation functions of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Cart System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Cart System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Cart System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Cart System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Cart System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSC's function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Cart System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Cart System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The DC Cart System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Cart System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Cart System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the DC Cart System has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Decontamination System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Decontamination System decontaminates loaded Disposal Containers and purges the container with nitrogen inerting gas. This function may be required to provide reasonable assurance that high-level waste can be handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Decontamination System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the DC Decontamination System will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Decontamination System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Direct failure of the DC Decontamination System could affect the characteristics of an engineered barrier as a result of contamination of the Disposal Container causing increased corrosion rates.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Decontamination System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The DC Decontamination System may perform collection and containment functions of site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Decontamination System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

By meeting requirements of Questions 1.1 and 2.2, failure of the DC Decontamination System as a result of a DBE would not impair QA-1 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Decontamination System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Decontamination System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Decontamination System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The DC Decontamination System will reduce surface contamination on the Disposal Container.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Decontamination System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Decontamination System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the DC Decontamination System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Inner Lid Weld Inspection System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Inner Lid Weld Inspection System provides remote visual and inspection equipment to ensure proper closure of disposal containers, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Inner Lid Weld Inspection System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the DC Inner Lid Weld Inspection System will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Inner Lid Weld Inspection System is not a part of the natural or engineered barriers important to waste isolation.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Direct failure of the DC Inner Lid Weld Inspection System could affect a Disposal Container's waste isolation function by not detecting an inadequate weld.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Inner Lid Weld Inspection System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System does not protect any QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Inner Lid Weld Inspection System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area. does not perform any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Inner Lid Weld Inspection System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The DC Inner Lid Weld Inspection System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Inner Lid Weld Inspection System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Inner Lid Weld Inspection System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the DC Inner Lid Weld Inspection System has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Inner Lid Weld System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Inner Lid Weld System seals the inner lid of the disposal container, and may be required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Inner Lid Weld System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the DC Inner Lid Weld System will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Inner Lid Weld System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Direct failure of the DC Inner Lid Weld System could result in failure of a Disposal Container's waste isolation function by producing an inadequate weld.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Inner Lid Weld System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Inner Lid Weld System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: DC Inner Lid Weld System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The DC Inner Lid Weld System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Inner Lid Weld System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Inner Lid Weld System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the DC Inner Lid Weld System has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: Waste Transfer Port System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Waste Transfer Port System provides access for a fuel assembly to be loaded into the disposal container. The Waste Transfer Port has a port plug with an inflatable seal capable of being inflated and deflated to assure that the high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Waste Transfer Port System may be required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Waste Transfer Port System could result in a DBE that would lead to a radioactive release above the federal limits due to a loss of a contamination barrier.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Waste Transfer Port System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Waste Transfer Port System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: Waste Transfer Port System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Waste Transfer Port System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Waste Transfer Port System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Waste Transfer Port System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Waste Transfer Port System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Waste Transfer Port System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: DC Assembly Transfer Line Systems

Level 4: N/A

Level 3: Waste Transfer Port System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The Waste Transfer Port System may be required to provide shielding, and reduce dose rates between rooms in the waste transfer area.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Waste Transfer Port System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Waste Transfer Port System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the Waste Transfer Port System has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Leak Detection System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Pool Leak Detection System is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits since pool water is normally only slightly contaminated.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Pool Leak Detection System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Pool Leak Detection System will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Pool Leak Detection System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Pool Leak Detection System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Leak Detection System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The Pool Leak Detection System may be required to contain and/or monitor site-generated radioactive waste water.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Pool Leak Detection System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Pool Leak Detection System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Pool Leak Detection System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Pool Leak Detection System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Leak Detection System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The Pool Leak Detection System may require access into radiation areas by its own source term from containing contaminated pool water.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Pool Leak Detection System is not a permanently installed area radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Pool Leak Detection System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the Pool Leak Detection System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Waste Removal System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Pool Waste Removal System is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits since pool water is normally only slightly contaminated.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Pool Waste Removal System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Pool Waste Removal System will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Pool Waste Removal System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Pool Waste Removal System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Waste Removal System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes? Rationale:

The Pool Waste Removal System provides for the collection of site-generated radioactive waste from the pool water.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The Pool Waste Removal System does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ Yes? Rationale:

Failure of the Pool Waste Removal System as a result of a DBE could impair QA-1 SSCs from performing their radiological safety or waste isolation function since portions of the system could have a failure mode resulting in flooding or a missile hazard.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes? Rationale:

The Pool Waste Removal System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes? Rationale:

The Pool Waste Removal System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Waste Removal System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Pool Waste Removal System may require access to radiation areas by containing its own source term from radioactive waste from the pool.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Pool Waste Removal System is not a permanently installed area radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Pool Waste Removal System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the Pool Waste Removal System has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Water Supply & Treatment System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Pool Water Supply & Treatment System is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits since pool water is normally only slightly contaminated.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Pool Water Supply & Treatment System is not required to function to prevent, mitigate, or monitor any DBEs that would otherwise result in a radioactive release above federal limits since pool water provides shielding but not cooling.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Pool Water Supply & Treatment System will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Pool Water Supply & Treatment System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Pool Water Supply & Treatment System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Water Supply & Treatment System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The Pool Water Supply & Treatment System provides for the collection of site-generated radioactive waste from the pool water.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Pool Water Supply & Treatment System does not protect any QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure of the Pool Water Supply & Treatment System as a result of a DBE could impair QA-1 SSCs from performing their radiological safety or waste isolation function since portions of the system could have a failure mode resulting in flooding or a missile hazard.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Pool Water Supply & Treatment System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Pool Water Supply & Treatment System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: Pool Systems

Level 4: N/A

Level 3: Pool Water Supply & Treatment System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The Pool Water Supply & Treatment System may reduce dose rates in the pool area or require access to radiation areas by containing radioactive waste from the pool.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Pool Water Supply & Treatment System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Pool Water Supply & Treatment System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the Pool Water Supply & Treatment System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Dry Transfer Systems

Level 4: N/A

Level 3: SFA Dry Transfer Crane System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The SFA Dry Transfer Crane System moves SFAs into the SFA Drying Chamber, and loads the assemblies in the disposal container, and is required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The SFA Dry Transfer Crane System is required to prevent SFA drops and may be required to mitigate the effects of a DBE which might result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the SFA Dry Transfer Crane System may result in a SFA drop which may lead to a radioactive release to the Waste Handling Building above set limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The SFA Dry Transfer Crane System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the SFA Dry Transfer Crane System is not expected to affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Dry Transfer Systems

Level 4: N/A

Level 3: SFA Dry Transfer Crane System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes?

Rationale:

The SFA Dry Transfer Crane System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The SFA Dry Transfer Crane System does not protect QA-1 or QA-2 SSCs from the effect of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes?

Rationale:

Failure of the SFA Dry Transfer Crane System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The SFA Dry Transfer Crane System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The SFA Dry Transfer Crane System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Dry Transfer Systems

Level 4: N/A

Level 3: SFA Dry Transfer Crane System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The SFA Dry Transfer Crane System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The SFA Dry Transfer Crane System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The SFA Dry Transfer Crane System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the SFA Dry Transfer Crane System has not been specifically analyzed or included on the Q-List.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Dry Transfer Systems

Level 4: N/A

Level 3: SFA Drying Chamber System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The SFA Drying Chamber System is required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The SFA Drying Chamber System is required to mitigate or monitor the effects of a DBE, such as a SFA drop, which might result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the SFA Drying Chamber System may result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The SFA Drying Chamber System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the SFA Drying Chamber System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Dry Transfer Systems

Level 4: N/A

Level 3: SFA Drying Chamber System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes? Rationale:**

The SFA Drying Chamber System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes? Rationale:**

The SFA Drying Chamber System does not protect QA-1 or QA-2 SSCs from the effect of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes? Rationale:**

Failure of the SFA Drying Chamber System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes? Rationale:**

The SFA Drying Chamber System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes? Rationale:**

The SFA Drying Chamber System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Dry Transfer Systems

Level 4: N/A

Level 3: SFA Drying Chamber System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The SFA Drying Chamber System could possibly require personnel access into the radiation area its own source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The SFA Drying Chamber System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The SFA Drying Chamber System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the SFA Drying Chamber System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Conveyor System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The SFA Conveyor System transfers SFA between the wet staging pool and disposal container loading operations, and is required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The SFA Conveyor System is required to function to prevent and mitigate DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

The direct failure of the SFA Conveyor System could result result in a SFA drop that could lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The SFA Conveyor System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the SFA Conveyor System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Conveyor System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The SFA Conveyor System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The SFA Conveyor System does not protect QA-1 or QA-2 SSCs from the effect of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the SFA Conveyor System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The SFA Conveyor System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The SFA Conveyor System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Conveyor System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ **Yes?** **Rationale:**

The SFA Conveyor System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The SFA Conveyor System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The SFA Conveyor System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the SFA Conveyor System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Pool Lag Storage System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?
- ☒ Yes? Rationale:
The SFA Pool Lag Storage System receives and stores SFAs awaiting transfer and loading into the disposal container, and is required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.
- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?
- ☒ Yes? Rationale:
The SFA Pool Lag Storage System may be required to function to monitor a DBEs that would otherwise result in a radioactive release above federal limits.
- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?
- ☒ Yes? Rationale:
The direct failure of the SFA Pool Lag Storage System could result in a postulated criticality DBE that could lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?
- ☐ Yes? Rationale:
The SFA Pool Lag Storage System is not a part of the natural or engineered barriers important to waste isolation.
- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?
- ☐ Yes? Rationale:
Direct failure of the SFA Pool Lag Storage System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Pool Lag Storage System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The SFA Pool Lag Storage System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The SFA Pool Lag Storage System does not protect QA-1 or QA-2 SSCs from the effect of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the SFA Pool Lag Storage System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The SFA Pool Lag Storage System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The SFA Pool Lag Storage System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Pool Lag Storage System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ **Yes?** **Rationale:**

The SFA Pool Lag Storage System may provide shielding.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The SFA Pool Lag Storage System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The SFA Pool Lag Storage System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the SFA Pool Lag Storage System has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Pool Transfer Crane System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The SFA Pool Transfer Crane System transfers loaded and unloaded SFA casks in and out of the pool area, and is required to provide reasonable assurance that high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The SFA Pool Transfer Crane System is required to prevent cask drops and may be required to mitigate the effects of a DBE which might result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the SFA Pool Transfer Crane System may result in a cask drop which may lead to a radioactive release to the Waste Handling Building above set limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The SFA Pool Transfer Crane System is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the SFA Pool Transfer Crane System is not expected to affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Pool Transfer Crane System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes? Rationale:**

The SFA Pool Transfer Crane System does not collect, contain, or monitor any site-generated radioactive waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes? Rationale:**

The SFA Pool Transfer Crane System does not protect QA-1 or QA-2 SSCs from the effect of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes? Rationale:**

Failure of the SFA Pool Transfer Crane System as a result of a DBE will not impair QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes? Rationale:**

The SFA Pool Transfer Crane System does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes? Rationale:**

The SFA Pool Transfer Crane System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU10 - Uncanistered Waste Transfer System

SSC: SFA Pool Transfer

Level 4: N/A

Level 3: SFA Pool Transfer Crane System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The SFA Pool Transfer Crane System may reduce dose rates by providing remote operation.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The SFA Pool Transfer Crane System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The SFA Pool Transfer Crane System was previously on the Q-List by direct inclusion of the Waste Handling Facilities, Waste Handling and Packaging System, SSA 3.2.1.1.6, as QA-1 but the SFA Pool Transfer Crane System has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Canister Lag Storage System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Canister Lag Storage System temporarily stores disposal canisters before loading into disposal containers and may be required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Canister Lag Storage System is required to function to prevent postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

The direct failure of the Canister Lag Storage System could result in a postulated DBE which leads to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Canister Lag Storage System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Canister Lag Storage System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Canister Lag Storage System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Canister Lag Storage System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Canister Lag Storage System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Canister Lag Storage System would not impair the capability of other QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Canister Lag Storage System performs no physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Canister Lag Storage System is not expected to perform any nuclear material accountability functions.

Q-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Canister Lag Storage System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Canister Lag Storage System does not provide shielding or reduce radiological dose rates.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Canister Lag Storage System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Canister Lag Storage System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: DC Canister Transfer Line Systems

Level 4: N/A

Level 3: DC Cart System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Cart System moves the disposal containers (DCs) inside the WHF during receipt of empty and retrieved DCs, preparation of filled DCs, and corrective actions for DCs. It may be required to provide reasonable assurance the high level waste can be retrieved without exceeding federal limits

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Cart System may be required to function to prevent postulated DBEs.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Failure of the DC Cart System could result in a credible DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Cart System is not part of the natural or engineered barriers.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the DC Cart System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: DC Canister Transfer Line Systems

Level 4: N/A

Level 3: DC Cart System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The DC Cart System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The DC Cart System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the DC Cart System would not impair the capability of other QA-1 and QA-2 SSCs from performing their radiological safety or waste isolation functions other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The DC Cart System performs no physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The DC Cart System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: DC Canister Transfer Line Systems

Level 4: N/A

Level 3: DC Cart System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The DC Cart System does not provide shielding or reduce radiological dose rates. The cart system does not have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The DC Cart System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The DC Cart System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: DC Canister Transfer Line Systems

Level 4: N/A

Level 3: Waste Transfer Port System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Waste Transfer Port System provides access through which the crane lifts canisters through the port into the disposal container cell. The Waste Transfer Port has a port plug with an inflatable seal capable of being inflated and deflated to assure that the high-level waste can be received, handled, and packaged without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Waste Transfer Port System may be required to prevent or mitigate a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Waste Transfer Port System could result in a DBE by not providing access to the SFA canisters or the DHLW canisters.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Waste Transfer Port System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Waste Transfer Port System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: DC Canister Transfer Line Systems

Level 4: N/A

Level 3: Waste Transfer Port System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Waste Transfer Port System does not have any site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Waste Transfer Port System does not have any fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Waste Transfer Port System resulting from a DBE would not impair the ability of the crane system to access to the SFA canisters or the DHLW canisters other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Waste Transfer Port System does not provide any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Waste Transfer Port System does not provide any special nuclear material accountability functions.

Q-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: DC Canister Transfer Line Systems

Level 4: N/A

Level 3: Waste Transfer Port System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes?

Rationale:

The Waste Transfer Port System provides shielding and reduces dose rates between floor levels and cells of the canister handling area.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Waste Transfer Port System does not provide any radiation monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Waste Transfer Port System, although not mentioned specifically, is on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Large Canister Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Large Canister Crane System lifts and moves empty, retrieved, and filled large disposal canisters and loads them into disposal containers. It may be required to provide assurance that high level waste handled without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Large Canister Crane System may be required to prevent and/or mitigate postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Large Canister Crane System could result in a canister drop or other design basis events.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Large Canister Crane System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Large Canister Crane System is not expected to affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Large Canister Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Large Canister Crane System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Large Canister Crane System performs no fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Large Canister Crane System would not impair the capability of the large canisters to perform their intended functions other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Large Canister Crane System performs no physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Large Canister Crane System performs no special nuclear material accountability functions.

O-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Large Canister Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The Large Canister Crane System does not provide radioactive shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Large Canister Crane System does not have any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Large Canister Crane System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Small Canister Hoist System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Small Canister Hoist System lifts and moves small canister systems and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Small Canister Hoist System may be required to prevent and/or mitigate postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Small Canister Hoist System could result in a canister drop.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Small Canister Hoist System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Small Canister Hoist System is not expected to affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Small Canister Hoist System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes? Rationale:

The Small Canister Hoist System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The Small Canister Hoist System performs no fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes? Rationale:

Failure of the Small Canister Hoist System would not impair the capability of the small canisters to perform their intended functions other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes? Rationale:

The Small Canister Hoist System performs no physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes? Rationale:

The Small Canister Hoist System performs no special nuclear material accountability functions.

Q-List Questions

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Attachment IV

SDD: SU11 - Canistered Waste Transfer System

SSC: Small Canister Hoist System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The Small Canister Hoist System does not provide radioactive shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Small Canister Hoist System does not have any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Small Canister Hoist System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Crane System will be used for moving the retrieved disposal container between stations for testing and lid removal and will be required to handle high level waste without exceeding federal limits..

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Crane System will be required to prevent and/or mitigate a credible DBE which might otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Crane System could result in a drop accident which may lead to a radioactive release above federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Crane System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the DC Crane System could cause a container drop or collision which may affect the characteristics of the waste package preventing it from performing its waste isolation function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The DC Crane System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The DC Crane System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the DC Crane System would not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function other than identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The DC Crane System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The DC Crane System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Crane System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The DC Crane System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The DC Crane System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The DC Crane System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Non-Destructive Examination System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Non-Destructive Examination System takes evaluation measurements which may include dimensional checks and dye penetrant tests on the disposal container, and SFA canister if necessary. These examinations may help assure that the waste package can stay in emplacement without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Non-Destructive Examination System would not be required to prevent or mitigate a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the DC Non-Destructive Examination System would result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Non-Destructive Examination System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Failure of the DC Non-Destructive Examination System may affect the final characteristics of the engineered barriers prior to emplacement, preventing them from performing their waste isolation function.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Non-Destructive Examination System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Non-Destructive Examination System is not expected to perform any site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Non-Destructive Examination System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Non-Destructive Examination System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Non-Destructive Examination System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Non-Destructive Examination System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Non-Destructive Examination System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The DC Non-Destructive Examination System is not expected to provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The DC Non-Destructive Examination System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The DC Non-Destructive Examination System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Welding System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Welding System seals the disposal container and canister, if necessary, by using a remote welding system and may be required to handle high level waste without exceeding federal limits..

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Welding System would not be required to function to prevent or mitigate postulated DBEs.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Welding System may result in fuel damage by burn through during welding.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Welding System is not part of the natural or engineered barriers.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Failure of the DC Welding System may affect the characteristics of the disposal container during welding which may prevent the container from performing its waste isolation function.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Welding System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Welding System is not expected to perform any site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Welding System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Welding System as a result of a DBE during welding would not impair the capability of the disposal container to perform its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Welding System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Welding System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC Welding System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The DC Welding System is not expected to provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The DC Welding System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The DC Welding System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC/Canister Opening System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC/Canister Opening System unseals the disposal container and canister, if necessary, by using the laser cutter to cut the lids off while being rotated by the cart it is riding on and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC/Canister Opening System would not be required to function to prevent or mitigate postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC/Canister Opening System may result in fuel damage by burn through during laser cutting.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC/Canister Opening System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the DC/Canister Opening System would not affect the characteristics of the disposal container during laser cutting which could prevent the container from performing its waste isolation function.

O-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC/Canister Opening System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC/Canister Opening System is not expected to perform any site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC/Canister Opening System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC/Canister Opening System as a result of a DBE during laser cutting would not impair the capability of the disposal container to perform its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC/Canister Opening System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC/Canister Opening System performs no nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: DC/Canister Opening System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The DC/Canister Opening System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC/Canister Opening System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC/Canister Opening System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Decontamination System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Decontamination System may be required to decontaminate the disposal container before tests and examination, and before leaving the WHF and would not be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Decontamination System to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Decontamination System would not result in a credible design basis accident.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Decontamination System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Decontamination System should not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Decontamination System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes?

Rationale:

The Decontamination System may collect and contain the site-generated waste water produced from the decontamination process.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes?

Rationale:

The Decontamination System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ Yes?

Rationale:

Failure of the Decontamination System is could impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes?

Rationale:

The Decontamination System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes?

Rationale:

The Decontamination System is not expected to perform any nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Decontamination System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ **Yes?**

Rationale:

The Decontamination System will reduce dose rates on the disposal container.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?**

Rationale:

The Decontamination System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?**

Rationale:

The Decontamination System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Filler Material Addition System (as required)

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Filler Material Addition System adds a filler material such as carbon steel shot to SFA canisters that need a criticality control measure to assure the waste can be packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Filler Material Addition System is required to prevent a criticality event in some SFA canisters.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Filler Material Addition System is not expected to result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Filler Material Addition System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Failure of the Filler Material Addition System could affect the characteristics of the filler materials which are part of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Filler Material Addition System (as required)

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Filler Material Addition System is not expected to perform any site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Filler Material Addition System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Filler Material Addition System as a result of a DBE is not expected impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Filler Material Addition System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Filler Material Addition System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Filler Material Addition System (as required)

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The Filler Material Addition System is remotely operated in a closed cell and should not be required to provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Filler Material Addition System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Filler Material Addition System is on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Sampling System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Sampling System may provide functions to open the disposal container and any internal canisters to test and sample the waste materials. This system may also involve internal gas sampling through a hole cut in the container. These system functions would be required to provide assurance that the waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Sampling System may be required to monitor waste after a credible DBE affecting the waste emplacement.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Sampling System during destructive testing and sampling could result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Sampling System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Sampling System during destructive testing and sampling is not expected to affect the characteristics of the engineered barriers which may prevent them from performing their waste isolation function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00
Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Sampling System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ Yes? Rationale:

The Sampling System requirement have not been specifically defined, however this system functions may be required to collect and contain site-generated waste from the destructive cuttings of the container/canister.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The Sampling System will not perform any fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes? Rationale:

Failure of the Sampling System as a result of a DBE during destructive testing and sampling would not affect the characteristics of the engineered barriers which may prevent them from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes? Rationale:

The Sampling System will not provide physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes? Rationale:

It is not expected that the Sampling System will be required to provide special nuclear material accountability functions.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU12 - Waste Package (WP) Remediation System

SSC: Sampling System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

It is expected that the Sampling System functions will be performed remotely in a closed cell, and will not be required to provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Sampling System is not expected to be required to perform radiological monitoring.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Sampling System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: DC Horizontalizer System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Horizontalizer System receives the disposal container from the DC cell crane and rotates the container horizontal for delivery to the subsurface waste package transporter and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Horizontalizer System is required to prevent a container drop or slap down, and may be required to mitigate other DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Horizontalizer System may result in a credible DBE such as waste package drop.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Horizontalizer System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the DC Horizontalizer System will not prevent the natural or engineered barriers from performing their waste isolation function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: DC Horizontalizer System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Horizontalizer System does not perform any site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Horizontalizer System does not perform any fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Horizontalizer System from a DBE would not result in a drop of the container impairing its ability to perform its radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Horizontalizer System does not perform any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Horizontalizer System does not perform any special nuclear material accountability functions.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: DC Horizontalizer System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The DC Horizontalizer System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The DC Horizontalizer System does not perform any radiation monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The DC Horizontalizer System, although not mentioned specifically, is on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: DC Transfer Gantry System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Transfer Gantry System lifts the disposal container from the horizontalizer and moves the container to the decontamination area and places it on a saddle and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Transfer Gantry System is required to prevent a container drop and may be required to mitigate other credible DBEs that would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

The direct failure of the DC Transfer Gantry System may result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Transfer Gantry System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

The direct failure of the DC Transfer Gantry System will not prevent the natural or engineered barriers from performing their waste isolation function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: DC Transfer Gantry System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Transfer Gantry System does not perform any site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Transfer Gantry System does not perform any fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

A DBE causing damage to the transfer gantry resulting in disposal container drop would not impair the capability of the container to perform its radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Transfer Gantry System does not provide any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Transfer Gantry System does not provide any special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: DC Transfer Gantry System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The DC Transfer Gantry System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Transfer Gantry System does not provide any radiation monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Transfer Gantry System, although not mentioned specifically, is on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: Final DC Decontamination

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

Final DC Decontamination, if necessary, is completed before being placed in the emplacement railcar by the subsurface transfer gantry and is not required to assure high level waste handling will not exceed the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require Final DC Decontamination to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure to complete final decontamination would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

Final decontamination is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure to complete the final decontamination would not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: Final DC Decontamination

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

Final Decontamination may require collection and containment of site-generated radioactive waste from cleaning the disposal container.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

Final Decontamination does not provide any fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure to perform final decontamination is could impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

Final Decontamination does not perform any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

Final Decontamination does not perform any special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: Final DC Decontamination

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ **Yes?**

Rationale:

Final decontamination will reduce radiological dose rates on the disposal container.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?**

Rationale:

Final decontamination performs no radiation monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?**

Rationale:

Final Decontamination is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: Transporter Loading System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Transporter Loading System consists of a railcar with the loaded disposal container being pushed partially into the waste package transporter after which the transporter push/pull mechanism pulls the railcar with loaded container fully into the transporter ready for underground emplacement and will be required to handle high level waste without exceeding federal limits..

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Transporter Loading System may be required to function to prevent and mitigate postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the Transporter Loading System could result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Transporter Loading System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Transporter Loading System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: Transporter Loading System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Transporter Loading System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Transporter Loading System does not provide any fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Transporter Loading System resulting from a credible DBE would not impair the capability of other QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Transporter Loading System does not perform any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Transporter Loading System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Emplacement Preparation Systems

Level 4: N/A

Level 3: Transporter Loading System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The Transporter Loading System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Transporter Loading System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Transporter Loading System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Staging System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Staging System is an area in the disposal container cell where the disposal container is placed when welding the lid cannot take place immediately, or where the container is placed after the lid is welded on and the DC awaits transfer to the subsurface waste package transporter and may be required to handle high level waste without exceeding federal limits. Empty disposal containers are also staged here awaiting loading operations.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Staging System may be required to prevent, mitigate, or monitor a DBE during an earthquake.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Staging System could result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Staging System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the DC Staging System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Staging System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Staging System performs no site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Staging System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Staging System as a result of a DBE will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Staging System does not perform any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Staging System is not expected to perform any special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Staging System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The DC Staging System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Staging System performs no radiation monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Staging System although not mentioned specifically, is on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Storage Crane System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Storage Crane System consists of a crane system in the disposal container cell used to move disposal containers between welding, staging, and transfer to the subsurface waste package transporter and may be required to handle high level waste without exceeding federal limits..

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Storage Crane System may be required to function to prevent postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Storage Crane System could result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Storage Crane System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the DC Storage Crane System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Storage Crane System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Storage Crane System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Storage Crane System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Storage Crane System would not impair the capability of other QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Storage Crane System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Storage Crane System is not expected to perform any special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Storage Crane System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The DC Storage Crane System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Storage Crane System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Storage Crane System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Storage Transfer Cart System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Storage Transfer Cart System moves the DCs in the storage and transfer area during receipt of empty and retrieved DCs, preparation of filled DCs, and corrective action and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The DC Storage Transfer Cart System may be required to function to prevent postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Storage Transfer Cart System could result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Storage Transfer Cart System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the DC Storage Transfer Cart System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Storage Transfer Cart System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes? Rationale:**

The DC Storage Transfer Cart System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes? Rationale:**

The DC Storage Transfer Cart System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes? Rationale:**

Failure of the DC Storage Transfer Cart System would not impair the capability of other QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes? Rationale:**

The DC Storage Transfer Cart System performs no physical protection function.

6.2 Is the SSC's function required for special nuclear material accountability?

☐ **Yes? Rationale:**

The DC Storage Transfer Cart System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Storage and Handling Systems

Level 4: N/A

Level 3: DC Storage Transfer Cart System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The DC Storage Transfer Cart System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The DC Storage Transfer Cart System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The DC Storage Transfer Cart System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

O-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Inner Lid Weld Inspection System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Inner Lid Weld Inspection System consists of remote visual and inspection equipment to ensure the inner lid weld closure of the disposal containers and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Inner Lid Weld Inspection System would not be required to function to prevent postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the DC Inner Lid Weld Inspection System would not result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Inner Lid Weld Inspection System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Failure of the DC Inner Lid Weld Inspection System may affect the characteristics of the engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Inner Lid Weld Inspection System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Inner Lid Weld Inspection System is not expected to impair the capability of other QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld Inspection System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Inner Lid Weld Inspection System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** Rationale:

The DC Inner Lid Weld Inspection System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** Rationale:

The DC Inner Lid Weld Inspection System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** Rationale:

The DC Inner Lid Weld Inspection System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Inner Lid Weld System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Inner Lid Weld System seals the inner lid of the disposal container and may be required to handle high level waste without exceeding federal limits..

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Inner Lid Weld System would not be required to function to prevent postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Inner Lid Weld System could result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Inner Lid Weld System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Failure of the DC Inner Lid Weld System may affect the characteristics of the engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Inner Lid Weld System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the DC Inner Lid Weld System would not impair the capability of the disposal container from performing its radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The DC Inner Lid Weld System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Inner Lid Weld System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The DC Inner Lid Weld System does not provide shielding, reduce dose rates, or have its own source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The DC Inner Lid Weld System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The DC Inner Lid Weld System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

O-List Questions

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Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Outer Lid Weld Inspection System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Outer Lid Weld Inspection System consists of remote visual and inspection equipment to ensure proper closure of the outer disposal container lid and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Outer Lid Weld Inspection System would not be required to function to prevent postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the DC Outer Lid Weld Inspection System would not result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Outer Lid Weld Inspection System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Failure of the DC Outer Lid Weld Inspection System may affect the characteristics of the engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Outer Lid Weld Inspection System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld Inspection System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld Inspection System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the DC Outer Lid Weld Inspection System is not expected to impair the capability of other QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld Inspection System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld Inspection System performs no special nuclear material accountability function.

Q-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Outer Lid Weld Inspection System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The DC Outer Lid Weld Inspection System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The DC Outer Lid Weld Inspection System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The DC Outer Lid Weld Inspection System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Outer Lid Weld System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The DC Outer Lid Weld System seals the outer lid of the disposal container making it ready for the staging area before going to the subsurface waste package transporter and may be required to handle high level waste without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The DC Outer Lid Weld System would not be required to function to prevent postulated DBEs.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Direct failure of the DC Outer Lid Weld System could result in fuel damage resulting in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The DC Outer Lid Weld System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☒ Yes?

Rationale:

Failure of the DC Outer Lid Weld System may affect the characteristics of the engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Outer Lid Weld System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the DC Outer Lid Weld System would not impair the capability of the disposal container from performing its radiological safety or waste isolation function other than what was already identified in Question 1.3.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The DC Outer Lid Weld System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: DC Welding/Inspection Systems

Level 4: N/A

Level 3: DC Outer Lid Weld System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The DC Outer Lid Weld System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The DC Outer Lid Weld System performs no special nuclear material accountability function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The DC Outer Lid Weld System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: Empty DC Receiving System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Empty DC Receiving System receives empty disposal containers from the on-site transportation system into the Waste Handling Building to replace the loaded containers dispatched for emplacement. This system consists of bridge cranes, DC tilting station, and lifting fixtures.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Empty DC Receiving System is not required to function to prevent, mitigate, or monitor a DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Failure of the Empty DC Receiving System will not result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Empty DC Receiving System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Empty DC Receiving System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: Empty DC Receiving System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Empty DC Receiving System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Empty DC Receiving System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Empty DC Receiving System as a result of a DBE would not impair an QA-1 or QA-2 SSCs from performing its radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Empty DC Receiving System does not perform any physical protection functions.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Empty DC Receiving System does not perform any special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU13 - Disposal Container (DC) Handling System

SSC: Empty DC Receiving System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Empty DC Receiving System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Empty DC Receiving System performs no radiation monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Empty DC Receiving System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.6 Waste Handling and Packaging System for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Carrier/Cask Rail System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Carrier/Cask Rail System consists of rails supported on concrete pads isolated from building foundations that receive cask carriers from RCA parking and enable transport to the WHB or the CMF. This system performs no radiological safety functions.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Carrier/Cask Rail System to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Carrier/Cask Rail System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Carrier/Cask Rail System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Carrier/Cask Rail System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Carrier/Cask Rail System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Carrier/Cask Rail System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Carrier/Cask Rail System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Carrier/Cask Rail System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Carrier/Cask Rail System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Carrier/Cask Rail System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Carrier/Cask Rail System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The Carrier/Cask Rail System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Carrier/Cask Rail System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Carrier/Cask Rail System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Carrier/Cask Road System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Carrier/Cask Road System consists of the roads required for the incoming and outgoing waste shipments, including the transport of shipments between the surface waste handling facilities. This system performs no radiological safety functions.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Carrier/Cask Road System to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Carrier/Cask Road System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Carrier/Cask Road System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Carrier/Cask Road System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Carrier/Cask Road System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Carrier/Cask Road System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Carrier/Cask Road System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Carrier/Cask Road System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation functions.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Carrier/Cask Road System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Carrier/Cask Road System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Carrier/Cask Road System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Carrier/Cask Road System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Carrier/Cask Road System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Carrier/Cask Road System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: On-Site Prime Mover System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1** Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ **Yes?**

Rationale:

The On-Site Prime Mover System consists of a diesel tractor used to deliver the cask carrier from the RCA parking area to the cask staging shed (CSS). This system performs no radiological safety functions.

- 1.2** Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ **Yes?**

Rationale:

There are no postulated DBEs that require the On-Site Prime Mover System to function.

- 1.3** Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ **Yes?**

Rationale:

There are no scenarios where direct failure of the On-Site Prime Mover System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1** Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ **Yes?**

Rationale:

The On-Site Prime Mover System is not part of the natural or engineered barriers.

- 2.2** Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ **Yes?**

Rationale:

Failure of the On-Site Prime Mover System will not affect characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: On-Site Prime Mover System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The On-Site Prime Mover System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The On-Site Prime Mover System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the On-Site Prime Mover System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The On-Site Prime Mover System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The On-Site Prime Mover System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: On-Site Prime Mover System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The On-Site Prime Mover System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The On-Site Prime Mover System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The On-Site Prime Mover System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Shipment Inspection System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Shipment Inspection System consists of equipment and materials necessary to perform radiation level measurements external to the cask, levels of contamination on the cask surface, and the surface temperatures of the cask. This system provides reasonable assurance that the shipment can be received and handled without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Shipment Inspection System to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Shipment Inspection System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Shipment Inspection System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Shipment Inspection System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00
Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Shipment Inspection System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes? Rationale:

The Shipment Inspection System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The Shipment Inspection System performs no fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes? Rationale:

Failure of the Shipment Inspection System will not impair the capability of other QA-1 and QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes? Rationale:

The Shipment Inspection System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes? Rationale:

The Shipment Inspection System is not expected to perform any special nuclear material accountability function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Carrier/Cask Transportation Systems

Level 4: N/A

Level 3: Shipment Inspection System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The Shipment Inspection System does not provide shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Shipment Inspection System is not a permanently installed radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Shipment Inspection System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Building

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?**

☐ **Yes?**

Rationale:

The Transporter Maintenance Building houses the equipment and support systems required for the maintenance of the rail transportation equipment. This building provides no radiological safety functions.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?**

☐ **Yes?**

Rationale:

There are no postulated DBEs that require the Transporter Maintenance Building to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?**

☐ **Yes?**

Rationale:

There are no scenarios where direct failure of the Transporter Maintenance Building would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?**

☐ **Yes?**

Rationale:

The Transporter Maintenance Building is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?**

☐ **Yes?**

Rationale:

Failure of the Transporter Maintenance Building will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Building

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Transporter Maintenance Building performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Transporter Maintenance Building performs no fire protection functions.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Transporter Maintenance Building will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Transporter Maintenance Building performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Transporter Maintenance Building and its subsystems will not perform any special nuclear material accountability functions.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Building

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Transporter Maintenance Building is not expected to provide radiation shielding, reduce dose rates, or have a radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Transporter Maintenance Building is not expected to perform any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Transporter Maintenance Building is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Battery Charging System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Battery Charging System performs no radiological safety functions.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Battery Charging System is not required to prevent, mitigate, or monitor a DBE.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Failure of the Battery Charging System will not result in a DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Battery Charging System is not part of the natural or engineered barriers.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Battery Charging System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Battery Charging System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Battery Charging System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Battery Charging System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Battery Charging System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Battery Charging System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Battery Charging System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Battery Charging System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Battery Charging System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Battery Charging System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Battery Charging System for the Transporter Maintenance System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Decontamination System does not provide any radiological safety functions.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Decontamination System to function.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where failure of Decontamination System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Decontamination System is not part of the natural or engineered barriers.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Decontamination System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

Transporters are not expected to become contaminated. Should a transporter become contaminated the equipment will be decontaminated before entering the Transporter Maintenance Building but it may be expected that site-generated radioactive waste will be handled.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Decontamination System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Decontamination System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Decontamination System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Decontamination System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Decontamination System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

Transporters are not expected to become contaminated. Should a transporter become contaminated the equipment will be decontaminated using the decon system before entering the Transporter Maintenance Building so it is not expected that decontamination will be needed.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

It is not expected that the Decontamination System for the Transporter Maintenance System will perform any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Decontamination System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Electromechanical Equipment Maintenance System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Electromechanical Equipment Maintenance System is not required to provide any radiological safety function.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Electromechanical Equipment Maintenance System to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Electromechanical Equipment Maintenance System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Electromechanical Equipment Maintenance System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Electromechanical Equipment Maintenance System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Electromechanical Equipment Maintenance System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Electromechanical Equipment Maintenance System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Electromechanical Equipment Maintenance System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Electromechanical Equipment Maintenance System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Electromechanical Equipment Maintenance System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Electromechanical Equipment Maintenance System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Electromechanical Equipment Maintenance System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Electromechanical Equipment Maintenance System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Electromechanical Equipment Maintenance System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List.

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Electromechanical Equipment Maintenance System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Oily Water Separation System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Oily Water Separation System is not required to provide any radiological safety function.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Oily Water Separation System to function.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Oily Water Separation System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Oily Water Separation System is not part of the natural or engineered barriers.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Oily Water Separation System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Oily Water Separation System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Oily Water Separation System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Oily Water Separation System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Oily Water Separation System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Oily Water Separation System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Oily Water Separation System performs no special nuclear material accountability function.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Oily Water Separation System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Oily Water Separation System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Oily Water Separation System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Oily Water Separation System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Transporter Maintenance Facility System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1** Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ **Yes?**

Rationale:

The Transporter Maintenance Facility System is not required to provide any radiological safety function.

- 1.2** Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ **Yes?**

Rationale:

There are no postulated DBEs that require the Transporter Maintenance Facility System to function.

- 1.3** Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ **Yes?**

Rationale:

There are no scenarios where direct failure of the Transporter Maintenance Facility System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1** Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ **Yes?**

Rationale:

The Transporter Maintenance Facility System is not part of the natural or engineered barriers.

- 2.2** Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Transporter Maintenance Facility System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00
Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Transporter Maintenance Facility System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** Rationale:

The Transporter Maintenance Facility System is not expected to perform any site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** Rationale:

The Transporter Maintenance Facility System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** Rationale:

Failure of the Transporter Maintenance Facility System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** Rationale:

The Security Subsystem for the Transporter Maintenance Facility System will provide for physical protection, intrusion alarms and communications, but this facility contains no radioactive waste.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** Rationale:

The Transporter Maintenance Facility System and its subsystems will not perform any special nuclear material accountability functions.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Transporter Maintenance Facility System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Transporter Maintenance Facility System is not expected to provide radiation shielding, reduce dose rates, or have a radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Transporter Maintenance Facility System is not expected to perform any radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Transporter Maintenance Facility System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

O-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Transporter Service System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Transporter Service System maintains, inspects, and repairs rail transportation equipment and the site prime mover. This system performs no radiological safety functions.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Transporter Service System to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Transporter Service System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Transporter Service System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Transporter Service System will not affect characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Transporter Service System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes? Rationale:

The Transporter Service System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The Transporter Service System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes? Rationale:

Failure of the Transporter Service System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes? Rationale:

The Transporter Service System performs no physical protection function.

6.2 Is the SSC's function required for special nuclear material accountability?

☐ Yes? Rationale:

The Transporter Service System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU16 - Carrier/Cask Transport System

SSC: Transporter Maintenance Systems

Level 4: N/A

Level 3: Transporter Service System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Transporter Service System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Transporter Service System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Transporter Service System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1.

O-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: General Offsite Transportation

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The General Offsite Transportation performs no radiological safety functions. QA Classification Analysis of Off-Site Transportation, BCB00000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation. No further classification required or appropriate. Remainder of checklist is not applicable.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated Design Basis Events that require this SSC to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Offsite Rail and Road System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Offsite Rail and Road System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Offsite Rail and Road System will not affect characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: General Offsite Transportation

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Offsite Rail Road System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Offsite Rail and Road System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: General Offsite Transportation

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Offsite Rail and Road System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Offsite Rail and Road System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☐ Yes? Rationale:

The Offsite Rail and Road System is not contained on the Q-List. QA Classification Analysis of Off-Site Transportation, BCB100000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation.

Q-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Nevada Rail Subsystem

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Nevada Rail Subsystem performs no radiological safety functions. QA Classification Analysis of Off-Site Transportation, BCB100000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation. No further classification required or appropriate. Remainder of checklist is not applicable.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated Design Basis Events that require this SSC to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Offsite Rail and Road System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Offsite Rail and Road System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Offsite Rail and Road System will not affect characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Nevada Rail Subsystem

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Offsite Rail Road System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Offsite Rail and Road System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Nevada Rail Subsystem

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Offsite Rail and Road System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Offsite Rail and Road System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☐ Yes? Rationale:

The Offsite Rail and Road System is not contained on the Q-List. QA Classification Analysis of Off-Site Transportation, BCB100000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation.

O-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Nevada Road Subsystem

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes? Rationale:

The Nevada Road Subsystem performs no radiological safety functions. QA Classification Analysis of Off-Site Transportation, BCB100000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation. No further classification required or appropriate. Remainder of checklist is not applicable.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes? Rationale:

There are no postulated Design Basis Events that require this SSC to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes? Rationale:

There are no scenarios where direct failure of the Offsite Rail and Road System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes? Rationale:

The Offsite Rail and Road System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes? Rationale:

Direct failure of the Offsite Rail and Road System will not affect characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Nevada Road Subsystem

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Offsite Rail Road System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Offsite Rail and Road System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Nevada Road Subsystem

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Offsite Rail and Road System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Offsite Rail and Road System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☐ Yes? Rationale:

The Offsite Rail and Road System is not contained on the Q-List. QA Classification Analysis of Off-Site Transportation, BCB100000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation.

O-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Transportation Support Depots and Facilities

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Transportation Support Depots and Facilities performs no radiological safety functions. QA Classification Analysis of Off-Site Transportation, BCB00000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation. No further classification required or appropriate. Remainder of checklist is not applicable.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated Design Basis Events that require this SSC to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where direct failure of the Offsite Rail and Road System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Offsite Rail and Road System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Offsite Rail and Road System will not affect characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Transportation Support Depots and Facilities

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Offsite Rail Road System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Offsite Rail and Road System is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Offsite Rail and Road System performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU17 - Off-Site Rail and Road Systems

SSC: Transportation Support Depots and Facilities

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Offsite Rail and Road System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Offsite Rail and Road System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☐ Yes? Rationale:

The Offsite Rail and Road System is not contained on the Q-List. QA Classification Analysis of Off-Site Transportation, BCB100000-01717-2200-00001 Rev 00, determined that Off-site Transportation SSCs are not required to be licensed or certified in accordance with QAP-2-3, which provides evaluation criteria for SSCs to be licensed or certified in accordance with NRC regulation.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: Backup Electrical Power Distribution System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes? Rationale:

The Backup Electrical Power Distribution System provides backup power to SSCs important to maintaining safety and is required to provide assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes? Rationale:

The Backup Electrical Power Distribution System provides backup power to SSCs important to maintaining safety and is required to prevent, mitigate, and monitor a credible DBE which might otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes? Rationale:

Failure of the Backup Electrical Power Distribution System during loss of normal power to QA-1 SSCs may result in a DBE and possible radioactive release above federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes? Rationale:

The Backup Electrical Power Distribution System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes? Rationale:

Failure of the Backup Electrical Power Distribution System is not expected to affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: Backup Electrical Power Distribution System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Backup Electrical Power Distribution System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Backup Electrical Power Distribution System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure of the Backup Electrical Power Distribution System as a result of a DBE could impair the capability of QA-1 SSCs such as HVAC from performing their radiological safety function. During a fire DBE, cables or equipment could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Backup Electrical Power Distribution System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Backup Electrical Power Distribution System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: Backup Electrical Power Distribution System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?**

Rationale:

The Backup Electrical Power Distribution System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?**

Rationale:

The Backup Electrical Power Distribution System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?**

Rationale:

The Backup Electrical Power Distribution System is contained on the Q-List by direct inclusion for the Balance of Plant, SSA 3.2.3.2 Emergency and Backup Power Generator System, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: Electrical Power Distribution System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Electrical Power Distribution System for the Waste Handling Facility may perform radiological safety functions to provide reasonable assurance that high-level waste can be handled without exceeding the federal limits. However, the final design will provide a power supply to QA-1 and QA-2 SSCs which is supplied by emergency backup power or UPS.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the Electrical Power Distribution System to function.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where failure of the Electrical Power Distribution System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Electrical Power Distribution System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Electrical Power Distribution System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: Electrical Power Distribution System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Electrical Power Distribution System performs no site-generated waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Electrical Power Distribution System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure of the Electrical Power Distribution System as a result of a DBE could impair the capability of QA-1 and QA-2 SSCs from performing their radiological safety or waste isolation function. During a fire DBE, cables or equipment could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Electrical Power Distribution System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Electrical Power Distribution System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: Electrical Power Distribution System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Electrical Power Distribution System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Electrical Power Distribution System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Electrical Power Distribution System is contained on the Q-List by direct inclusion of the Underground Service and Utility Systems for the Power Distribution System.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: UPS System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The UPS System ensures continued operation for the Waste Handling Facility which controls and monitors the QA-1 HVAC system during loss of normal power or DBEs and may be required to provide reasonable assurance that high-level waste can be handled without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The UPS System function that powers the Waste Handling Facility during loss of power is required to prevent, mitigate, or monitor a QA-1 HVAC failure DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☒ Yes?

Rationale:

Failure of the UPS System during loss of normal power may prevent the HVAC system from functioning which may lead to a radioactive release above federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The UPS System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the UPS System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: UPS System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The UPS System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The UPS System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?** **Rationale:**

Failure of the UPS System during a DBE would not impair the capability of QA-1 equipment such as the HVAC system, from performing its radiological safety function. During a fire DBE, cables or equipment could prevent operation or cause maloperation due to hot shorts, open circuits, or shorts to ground.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The UPS System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The UPS System performs no special nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Electrical Power Systems

Level 4: N/A

Level 3: UPS System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The UPS System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The UPS System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The UPS System is contained on the Q-List by direct inclusion for the Balance of Plant, SSA 3.2.3.2 Emergency and Backup Power Generator System, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: Emergency Lighting System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Emergency Lighting System does not perform any radiological safety functions.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Emergency Lighting System is not required to function to prevent, mitigate, or monitor a DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Failure of the Emergency Lighting System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Emergency Lighting System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Emergency Lighting System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: Emergency Lighting System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Emergency Lighting System performs no site-generated radioactive waste control functions.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Emergency Lighting System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Emergency Lighting System as a result of a DBE would not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Emergency Lighting System does not provide a physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Emergency Lighting System performs no nuclear material accountability function.

Q-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: Emergency Lighting System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The Emergency Lighting System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Emergency Lighting System performs no radiological monitoring functions.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Emergency Lighting System is contained on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: General Lighting System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The General Lighting System performs no radiological safety functions.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the General Lighting System to function.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where failure of the General Lighting System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The General Lighting System is not part of the natural or engineered barriers.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

The General Lighting System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: General Lighting System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes? Rationale:**

The General Lighting System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes? Rationale:**

The General Lighting System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes? Rationale:**

Failure of the General Lighting System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes? Rationale:**

The General Lighting System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes? Rationale:**

The General Lighting System performs no nuclear material accountability function.

O-List Questions

B000000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: General Lighting System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The General Lighting System does not provide radiation shielding, reduce radiological dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

This SSC is not a radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The General Lighting System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1 Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: In-Cell Lighting System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The In-Cell Lighting System performs no radiological safety functions.

1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no postulated DBEs that require the In-Cell Lighting System to function.

1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

There are no scenarios where failure of the In-Cell Lighting System would result in a postulated DBE.

QA-2 - Important to Waste Isolation:

2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The In-Cell Lighting System is not part of the natural or engineered barriers.

2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

The In-Cell Lighting System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: In-Cell Lighting System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ Yes? Rationale:

The In-Cell Lighting System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ Yes? Rationale:

The In-Cell Lighting System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ Yes? Rationale:

Failure of the In-Cell Lighting System will not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ Yes? Rationale:

The In-Cell Lighting System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ Yes? Rationale:

The In-Cell Lighting System performs no nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lighting Systems

Level 4: N/A

Level 3: In-Cell Lighting System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The In-Cell Lighting System does not provide radiation shielding, reduce radiological dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

This SSC is not a radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The In-Cell Lighting System is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1 Waste Handling Building, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lightning Protection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Lightning Protection System does not provide any radiological safety functions.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Lightning Protection System is expected to be required to prevent, mitigate, or monitor a credible lightning DBEs which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Failure of the Lightning Protection System will not result in a credible DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Lightning Protection System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Failure of the Lightning Protection System will not directly affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lightning Protection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Lightning Protection System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Lightning Protection System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Lightning Protection System as a result of a DBE would not impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Lightning Protection System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Lightning Protection System performs no nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU18 - Waste Handling Facility Electrical System

SSC: Lightning Protection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?**

Rationale:

The Lightning Protection System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?**

Rationale:

The Lightning Protection System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?**

Rationale:

The Lightning Protection System is contained on the Q-List by direct inclusion of the Waste Handling Building Utilities for the Surface Facilities.

O-List Questions

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Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Non-Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System is not required to perform any radiological safety functions. This system only provides ventilation for various contamination free areas such as the Carrier Bay and offices.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System is not required to function to prevent, mitigate, or monitor a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Non-Nuclear HVAC System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Non-Nuclear HVAC System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Non-Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Non-Nuclear HVAC System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Non-Nuclear HVAC System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☒ **Yes?**

Rationale:

Failure of the Non-Nuclear HVAC System as a result of a DBE may impair the capability of QA-1 SSCs in the Carrier Bay from performing their radiological safety functions by collapse on these SSCs.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Non-Nuclear HVAC System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Non-Nuclear HVAC System performs no nuclear material accountability function.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Non-Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Non-Nuclear HVAC System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Non-Nuclear HVAC System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Non-Nuclear HVAC System is contained on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

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Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Primary Confinement System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Primary Confinement Nuclear HVAC System in the waste handling building is required to perform radiological safety functions which provide reasonable assurance that federal limits are not exceeded.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Primary Nuclear HVAC System is required to function to prevent, mitigate, or monitor a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Primary Nuclear HVAC System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Primary Nuclear HVAC System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Primary Nuclear HVAC System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Primary Confinement System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Nuclear HVAC Systems perform no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Nuclear HVAC System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

By meeting requirements of Question 1.2, failure of the Nuclear HVAC System as a result of a DBE would not impair the capability of QA-1 SSCs in the Carrier Bay from performing their radiological safety functions.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Nuclear HVAC System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Nuclear HVAC System performs no nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Primary Confinement System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The Nuclear HVAC System may have its own radioactive source term and will require personnel access.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Nuclear HVAC System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Nuclear HVAC System is contained on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Secondary Confinement System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Secondary Confinement Nuclear HVAC System in the waste handling building is required to perform radiological safety functions which provide reasonable assurance that federal limits are not exceeded.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Secondary Nuclear HVAC System is required to function to prevent, mitigate, or monitor a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Secondary Nuclear HVAC System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Secondary Nuclear HVAC System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Secondary Nuclear HVAC System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Secondary Confinement System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?**

Rationale:

The Nuclear HVAC Systems perform no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Nuclear HVAC System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

By meeting requirements of Question 1.2, failure of the Nuclear HVAC System as a result of a DBE would not impair the capability of QA-1 SSCs in the Carrier Bay from performing their radiological safety or waste isolation functions.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Nuclear HVAC System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Nuclear HVAC System performs no nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Secondary Confinement System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ Yes? Rationale:

The Nuclear HVAC System may have its own radioactive source term and will require personnel access.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes? Rationale:

The Nuclear HVAC System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Nuclear HVAC System is contained on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Tertiary Confinement System

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Tertiary Confinement Nuclear HVAC System in the waste handling building is required to perform radiological safety functions which provide reasonable assurance that federal limits are not exceeded.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Tertiary Nuclear HVAC System is required to function to prevent, mitigate, or monitor a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Tertiary Nuclear HVAC System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Tertiary Nuclear HVAC System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Tertiary Nuclear HVAC System will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Tertiary Confinement System

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Nuclear HVAC Systems perform no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Nuclear HVAC System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

By meeting requirements of Question 1.2, failure of the Nuclear HVAC System as a result of a DBE would not impair the capability of QA-1 SSCs in the Carrier Bay from performing their radiological safety or waste isolation functions.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Nuclear HVAC System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Nuclear HVAC System performs no nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU22 - Waste Handling Facility (WHF) Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: Tertiary Confinement System

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☒ **Yes?** **Rationale:**

The Nuclear HVAC System may have its own radioactive source term and will require personnel access.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?** **Rationale:**

The Nuclear HVAC System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Nuclear HVAC System is contained on the Q-List by direct inclusion of the Waste Handling Building for the Surface Facilities.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU24 - Radiological Waste Treatment Facility Ventilation System

SSC: Non-Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?**

☐ **Yes?**

Rationale:

The Non-Nuclear HVAC System for the Radiological Waste Treatment Facility is not required to perform any radiological safety functions. This system only provides ventilation for various contamination free areas such as the Shipping/Receiving area, and offices.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?**

☐ **Yes?**

Rationale:

The Non-Nuclear HVAC System is not required to function to prevent, mitigate, or monitor a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?**

☐ **Yes?**

Rationale:

Direct failure of the Non-Nuclear HVAC System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?**

☐ **Yes?**

Rationale:

The Non-Nuclear HVAC System is not part of the natural or engineered barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?**

☐ **Yes?**

Rationale:

Failure of the Non-Nuclear HVAC System will not affect the characteristics of the natural or engineered barriers.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU24 - Radiological Waste Treatment Facility Ventilation System

SSC: Non-Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes? Rationale:**

The Non-Nuclear HVAC System performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes? Rationale:**

The Non-Nuclear HVAC System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes? Rationale:**

Failure of the Non-Nuclear HVAC System as a result of a DBE is not expected to impair the capability of QA-1 SSCs from performing their radiological safety or waste isolation functions.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes? Rationale:**

The Non-Nuclear HVAC System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes? Rationale:**

The Non-Nuclear HVAC System performs no physical protection function.

O-List Questions

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Attachment IV

SDD: SU24 - Radiological Waste Treatment Facility Ventilation System

SSC: Non-Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ Yes?

Rationale:

The Non-Nuclear HVAC System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes?

Rationale:

The Non-Nuclear HVAC System is contained on the Q-List by direct inclusion of the Support Facilities for the Waste Handling Building for the Surface Facilities.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU24 - Radiological Waste Treatment Facility Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Nuclear HVAC System for the Radiological Waste Treatment Facility is required to perform radiological safety functions. This system provides ventilation for various radiologically controlled areas within the facility.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Nuclear HVAC System may be required to function to prevent, mitigate, or monitor a credible DBE.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Nuclear HVAC System will not result in a DBE.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Radiological Waste Treatment Facility Nuclear HVAC System does not form part of the Natural or Engineered Barriers.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Radiological Waste Treatment Facility Nuclear HVAC System will not significantly affect the Natural or Engineered Barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU24 - Radiological Waste Treatment Facility Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?**

Rationale:

The Nuclear HVAC System may collect gaseous radwaste which in turn performs a site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Nuclear HVAC System performs no fire protection function.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Nuclear HVAC System as a result of a DBE is not expected to impair the capability of QA-1 SSCs from performing their radiological safety or waste isolation functions.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Nuclear HVAC System performs no physical protection function.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Nuclear HVAC System performs no physical protection function.

O-List Questions

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Attachment IV

SDD: SU24 - Radiological Waste Treatment Facility Ventilation System

SSC: Nuclear HVAC Systems

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?**

Rationale:

The Nuclear HVAC System does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☐ **Yes?**

Rationale:

The Nuclear HVAC System performs no radiological monitoring function.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?**

Rationale:

The Nuclear HVAC System is contained on the Q-List by direct inclusion of the Support Facilities for the Waste Handling Building for the Surface Facilities.

O-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Exhaust Stack Monitor System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Exhaust Stack Monitor System for the WHF performs radiological monitoring for airborne contamination from potentially contaminated HVAC exhaust air, and is required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Exhaust Stack Monitor System for the WHF may be required to monitor a DBE which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Exhaust Stack Monitor System for the WHF will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Exhaust Stack Monitor System for the WHF is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Exhaust Stack Monitor System for the WHF will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Exhaust Stack Monitor System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?**

Rationale:

The Exhaust Stack Monitor System for the WHF may be required to monitor site-generated waste in the HVAC exhaust air.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Exhaust Stack Monitor System for the WHF does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

Failure of the Exhaust Stack Monitor System for the WHF is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Exhaust Stack Monitor System for the WHF does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Exhaust Stack Monitor System for the WHF performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Exhaust Stack Monitor System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The Exhaust Stack Monitor System for the WHF does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☒ **Yes?** **Rationale:**

The Exhaust Stack Monitor System for the WHF is a permanently installed radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Exhaust Stack Monitor System for the WHF is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1, but the Exhaust Stack Monitor System for the WHF has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Operations Area Monitor Systems

Level 4: N/A

Level 3: Continuous Air Monitors

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Continuous Air Monitor System for the WHF monitors airborne contamination levels, and is required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Continuous Air Monitor System for the WHF may be required to monitor a DBE which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Continuous Air Monitor System for the WHF will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Continuous Air Monitor System for the WHF is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Continuous Air Monitor System for the WHF will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Operations Area Monitor Systems

Level 4: N/A

Level 3: Continuous Air Monitors

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?**

Rationale:

The Continuous Air Monitor System for the WHF may be required to monitor site-generated waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?**

Rationale:

The Continuous Air Monitor System for the WHF does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?**

Rationale:

The Continuous Air Monitor System for the WHF is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?**

Rationale:

The Continuous Air Monitor System for the WHF does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?**

Rationale:

The Continuous Air Monitor System for the WHF performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Operations Area Monitor Systems

Level 4: N/A

Level 3: Continuous Air Monitors

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** **Rationale:**

The Continuous Air Monitor System for the WHF does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☒ **Yes?** **Rationale:**

The Continuous Air Monitor System for the WHF is a permanently installed radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** **Rationale:**

The Continuous Air Monitor System for the WHF is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1, but the Continuous Air Monitor System for the WHF has not been specifically analyzed or included on the Q-List.

Q-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Operations Area Monitor Systems

Level 4: N/A

Level 3: General Area Monitors

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes?

Rationale:

The General Area Monitor System for the WHF is not required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The General Area Monitor System for the WHF may be required to monitor a DBE which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the General Area Monitor System for the WHF will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The General Area Monitor System for the WHF is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the General Area Monitor System for the WHF will not affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Operations Area Monitor Systems

Level 4: N/A

Level 3: General Area Monitors

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The General Area Monitor System for the WHF may be required to monitor site-generated waste.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The General Area Monitor System for the WHF does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

The General Area Monitor System for the WHF is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The General Area Monitor System for the WHF does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The General Area Monitor System for the WHF performs no special nuclear material accountability function.

Q-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Operations Area Monitor Systems

Level 4: N/A

Level 3: General Area Monitors

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ **Yes?** Rationale:

The General Area Monitor System for the WHF does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☒ **Yes?** Rationale:

The General Area Monitor System for the WHF is a permanently installed radiation monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ **Yes?** Rationale:

The General Area Monitor System for the WHF is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1, but the General Area Monitor System for the WHF has not been specifically analyzed or included on the Q-List.

O-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Process Monitor System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☒ Yes?

Rationale:

The Process Monitor System for the WHF performs continuous radiological monitoring for process liquid effluents in the Waste Handling Facility, and is required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes?

Rationale:

The Process Monitor System for the WHF may be required to monitor a DBE which would otherwise result in a radioactive release above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes?

Rationale:

Direct failure of the Process Monitor System for the WHF will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes?

Rationale:

The Process Monitor System for the WHF is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes?

Rationale:

Direct failure of the Process Monitor System for the WHF will not affect the characteristics of the natural or engineered barriers.

O-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Process Monitor System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☒ **Yes?** **Rationale:**

The Process Monitor System for the WHF may be required to monitor site-generated waste for the process systems in the Waste Handling Facility.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☐ **Yes?** **Rationale:**

The Process Monitor System for the WHF does not protect QA-1 or QA-2 SSCs from the effects of fire.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Process Monitor System for the WHF is not expected to impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Process Monitor System for the WHF does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Process Monitor System for the WHF performs no special nuclear material accountability function.

O-List Questions

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Attachment IV

SDD: SU29 - Waste Handling Facility Radiological Monitoring System

SSC: Process Monitor System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-7 - Important to Occupational Radiological Exposure:

7.1 Does the SSC provide personnel radiation shielding, reduce dose rates in radioactive areas, or require personnel access into radiation areas by its own radioactive source term?

☐ Yes? Rationale:

The Process Monitor System for the WHF does not provide radiation shielding, reduce dose rates, or have its own radioactive source term.

7.2 Is the SSC a permanently installed radiation monitor which monitors areas for personnel radiation protection?

☒ Yes? Rationale:

The Process Monitor System for the WHF is a permanently installed radiological process monitor.

Previous QA Classification:

This question is for historical and traceability purposes only. A "yes" answer to this question does not provide inclusion to the Q-List

8.0 Are there other factors, such as previous analyses, a body of consensus, or by direct inclusion, that led to the previous conclusion that this SSC is important to radiological safety (QA-1) or waste isolation (QA-2)?

☒ Yes? Rationale:

The Process Monitor System for the WHF is contained on the Q-List by direct inclusion for the Surface Facilities, SSA 3.2.1.1.7 Support Facilities for the Waste Handling Building, as QA-1, but the Process Monitor System for the WHF has not been specifically analyzed or included on the Q-List.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SU33 - Waste Handling Facility Fire Protection System

SSC: Fire Detection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

QA-1 - Important to Radiological Safety:

- 1.1 Is the SSC required to provide reasonable assurance that high-level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding the federal limits?

☐ Yes? Rationale:

The Fire Detection System provides automatic monitoring, and annunciation of fire and potential fire conditions in the Waste Handling Facility (WHF), but performs no radiological safety functions that would provide reasonable assurance that high level waste can be received, handled, packaged, stored, emplaced, and retrieved without exceeding federal limits.

- 1.2 Is the SSC required to function to prevent, mitigate, or monitor a credible Design Basis Event which would otherwise result in a radioactive release above the federal limits?

☒ Yes? Rationale:

Portions of the Fire Detection System in the WHF function to monitor potential fire condition DBEs that could result in radioactive releases above federal limits.

- 1.3 Will the direct failure of the SSC result in a credible Design Basis Event which would lead to a radioactive release above the federal limits?

☐ Yes? Rationale:

Direct failure of the Fire Detection System in the WHF will not result in a DBE that would lead to a radioactive release above the federal limits.

QA-2 - Important to Waste Isolation:

- 2.1 Does the SSC perform a waste isolation function by forming part of the natural or engineered barriers?

☐ Yes? Rationale:

The Fire Detection System in the WHF is not a part of the natural or engineered barriers important to waste isolation.

- 2.2 Can direct failure of the SSC significantly affect the hydrological, geochemical, or geomechanical characteristics of the natural or engineered barriers which may prevent them from performing their waste isolation function?

☐ Yes? Rationale:

Direct failure of the Fire Detection System in the WHF will not affect any characteristics of the natural or engineered barrier that would prevent them from performing their isolation function.

Q-List Questions

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Attachment IV

SDD: SU33 - Waste Handling Facility Fire Protection System

SSC: Fire Detection System

Level 4: N/A

Level 3: N/A

Level 5: N/A

QA-3 - Important to Radioactive Waste Control:

3.1 Is the function of the SSC designed for collection, containment, and/or monitoring of site-generated radioactive waste?

☐ **Yes?** **Rationale:**

The Fire Detection System in the WHF performs no site-generated radioactive waste control function.

QA-4 - Important to Fire Protection:

4.1 Does the SSC protect QA-1 or QA-2 SSCs from the effects of fire?

☒ **Yes?** **Rationale:**

The Fire Detection System in the WHF protects QA-1 SSCs from the effects of fire by initiating the Waste Handling Facility fire suppression system.

QA-5 - Important to Potential Interaction:

5.1 As a result of a Design Basis Event, could failure of the SSC impair the capability of QA-1 or QA-2 SSCs from performing their radiological safety or waste isolation function?

☐ **Yes?** **Rationale:**

Failure of the Fire Detection System in the WHF will not impair the capability of QA-1 and QA-2 SSCs from performing their radiological safety or waste isolation function.

QA-6 - Important to Physical Protection of Facility and Materials:

6.1 Does the SSC's function provide detection or alarm of unauthorized intrusion or unauthorized explosive materials in the restricted area?

☐ **Yes?** **Rationale:**

The Fire Detection System in the WHF does not provide for detection or alarm of unauthorized intrusions or unauthorized explosive materials in the restricted area.

6.2 Is the SSCs function required for special nuclear material accountability?

☐ **Yes?** **Rationale:**

The Fire Detection System in the WHF performs no nuclear material accountability function.