

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Hoisting Circuit

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 subsurface electrical distribution system provides primary and standby power for the development and emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the development electrical distribution system and its component SSCs (including the development hoisting circuit) do not provide assurance that high-level waste can be 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:

No radioactive material is located in the development portion of the repository. Loss of the development hoisting circuit or the development electrical distribution system will not result in a DBE which otherwise would lead to a radioactive release.

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 development electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 development electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 development electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

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PART 3

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Hoisting Circuit

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 development electrical distribution system (and its component SSCs) are not associated with 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 development electrical distribution system (and its component SSCs) are not associated with fire protection.

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 development electrical distribution system (and its component SSCs) as a result of a DBE would not impact the ability of QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation functions (there is no radioactive material in the development portion of the repository).

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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Hoisting Circuit

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 development electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not permanently installed radiation monitors.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1 .

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution Level 4: N/A

Level 3: Lighting System Level 5: N/A

QA-1 QA-2 QA-3 QA-4 QA-5 QA-6 QA-7 Non-Q

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 subsurface electrical distribution system provides primary and standby power for the development and emplacement operations, including emergency and uninterruptable power for personnel safety and critical operations. However, the development electrical distribution system and its component SSCs (including the development lighting system) do not provide assurance that high-level waste can be 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:
No radioactive material is located in the development portion of the repository. Loss of the development lighting system or the development electrical distribution system will not result in a DBE which otherwise would lead to a radioactive release.

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 development electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 development electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 development electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

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SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: 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 development electrical distribution system (and its component SSCs) are not associated with 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 development electrical distribution system (and its component SSCs) are not associated with fire protection.

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 development electrical distribution system (and its component SSCs) as a result of a DBE would not impact the ability of QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation functions (there is no

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 development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: 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 development electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not permanently installed radiation monitors.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Muck 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 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 subsurface electrical distribution system provides primary and standby power for the development and emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the development electrical distribution system and its component SSCs (including the development muck removal electrical distribution system) do not provide assurance that high-level waste can be 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:

No radioactive material is located in the development portion of the repository. Loss of the development electrical distribution system will not result in a DBE which otherwise would lead to a radioactive release.

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 development electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 development electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 development electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

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SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Muck 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 development electrical distribution system (and its component SSCs) are not associated with 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 development electrical distribution system (and its component SSCs) are not associated with fire protection.

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 development electrical distribution system (and its component SSCs) as a result of a DBE would not impact the ability of QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation functions (there is no radioactive material in the development portion of the repository).

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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

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SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Muck 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 development electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not permanently installed radiation monitors.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Support 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 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 subsurface electrical distribution system provides primary and standby power for the development and emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the development electrical distribution system and its component SSCs (including the development support system) do not provide assurance that high-level waste can be 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:

No radioactive material is located in the development portion of the repository. Loss of the development support system or the development electrical distribution system will not result in a DBE which otherwise would lead to a radioactive release.

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 development electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 development electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 development electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Support 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 development electrical distribution system (and its component SSCs) are not associated with 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 development electrical distribution system (and its component SSCs) are not associated with fire protection.

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 development electrical distribution system (and its component SSCs) as a result of a DBE would not impact the ability of QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation functions (there is no radioactive material in the development portion of the repository).

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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

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SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Support 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 development electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not permanently installed radiation monitors

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: TBM 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 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 subsurface electrical distribution system provides primary and standby power for the development and emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the development electrical distribution system and its component SSCs (including the development TBM system) do not provide assurance that high-level waste can be 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:

No radioactive material is located in the development portion of the repository. Loss of the development TBM system or the development electrical distribution system will not result in a DBE which otherwise would lead to a radioactive release.

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 development electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 development electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 development electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: TBM 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 development electrical distribution system (and its component SSCs) are not associated with 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 development electrical distribution system (and its component SSCs) are not associated with fire protection.

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 development electrical distribution system (and its component SSCs) as a result of a DBE would not impact the ability of QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation functions (there is no radioactive material in the development portion of the repository)

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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: TBM 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 development electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not permanently installed radiation monitors.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Trackless Mining 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 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 subsurface electrical distribution system provides primary and standby power for the development and emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the development electrical distribution system and its component SSCs (including the development trackless mining system) do not provide assurance that high-level waste can be 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:

No radioactive material is located in the development portion of the repository. Loss of the development trackless mining system or the development electrical distribution system will not result in a DBE which otherwise would lead to a radioactive release.

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 development electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 development electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 development electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Trackless Mining 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 development electrical distribution system (and its component SSCs) are not associated with 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 development electrical distribution system (and its component SSCs) are not associated with fire protection.

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 development electrical distribution system (and its component SSCs) as a result of a DBE would not impact the ability of QA-1 and/or QA-2 SSCs from performing their radiological safety or waste isolation functions (there is no radioactive material in the development portion of the repository).

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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Trackless Mining 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 development electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not permanently installed radiation monitors.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Ventilation 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 subsurface electrical distribution system provides primary and standby power for the development and emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. Therefore, the development electrical distribution system and its component SSCs (including the electrical distribution for the development ventilation system) provide assurance that high-level waste can be 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:

No radioactive material is located in the development portion of the repository. Loss of the electrical distribution for the development ventilation system or the development electrical distribution system will not result in a DBE which otherwise would lead to a radioactive release.

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 development electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 development electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 development electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Ventilation 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 development electrical distribution system (and its component SSCs) are not associated with 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 development electrical distribution system (and its component SSCs) are not associated with fire protection.

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 development electrical distribution system (and its component SSCs) as a result of a DBE could impact the ability of QA-1 and/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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Development Electrical Distribution

Level 4: N/A

Level 3: Ventilation 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 development electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The development electrical distribution system (and its component SSCs) are not permanently installed radiation monitors.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Emergency Response 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 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 subsurface electrical distribution system provides primary and standby power for emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the electrical distribution system and its component SSCs (including the emergency response system) do not provide assurance that high-level waste can be 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 subsurface operations electrical distribution system for the emergency response system is not required to provide power to prevent, mitigate or monitor a Design Basis Event.

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 subsurface electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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?

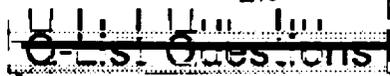
Yes? Rationale:

The operations electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 subsurface electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.



SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution Level 4: N/A

Level 3: Emergency Response 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with 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 operations electrical distribution system (and its component SSCs) are not associated with fire protection.

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 subsurface operations electrical distribution system for the emergency response system as a result of a DBE would not impact the ability of QA-1 and/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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The operations electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Emergency Response 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 operations electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution Level 4: N/A

Level 3: Pumping Distribution 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"/>						

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 subsurface operations electrical distribution system provides primary and standby power for emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the electrical distribution system (and its component SSCs, including pumping distribution) themselves do not provide assurance that high-level waste can be 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 subsurface operations electrical distribution system for the pumping distribution is required to provide emergency power to prevent, mitigate or monitor a Design Basis Event.

- 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 subsurface electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 operations electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 subsurface electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Pumping Distribution

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 subsurface operations electrical distribution system (and its component SSCs) are not associated with 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with fire protection.

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 subsurface operations electrical distribution system for the pumping distribution as a result of a DBE would not impact the ability of QA-1 and/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 subsurface operations electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The subsurface operations electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Pumping Distribution

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 subsurface electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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

Yes? Rationale:

The subsurface electrical distribution system (and its component SSCs) are not permanently installed radiation monitors

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Subsurface 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 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 subsurface electrical distribution system provides primary and standby power for emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the operations electrical distribution system and its component SSCs (including the subsurface lighting system) do not provide assurance that high-level waste can be 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 subsurface operations electrical distribution system subsurface lighting system is not required to provide emergency power to prevent, mitigate or monitor a Design Basis Event.

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 subsurface electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 operations electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 subsurface electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Subsurface 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with fire protection.

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 subsurface operations electrical distribution system for the subsurface lighting system as a result of a DBE would not impact the ability of QA-1 and/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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The operations electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

O-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Subsurface 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 operations electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Support Systems Distribution

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 subsurface electrical distribution system provides primary and standby power for emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the operations electrical distribution system and its component SSCs (including the support systems distribution) do not provide assurance that high-level waste can be 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 subsurface operations electrical distribution system support system distribution is not required to provide emergency power to prevent, mitigate or monitor a Design Basis Event.

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 subsurface electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 operations electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 subsurface electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Support Systems Distribution

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 subsurface operations electrical distribution system (and its component SSCs) are not associated with 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with fire protection.

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 subsurface operations electrical distribution system (and its component SSCs) as a result of a DBE could impact the ability of QA-1 and/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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The operations electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Support Systems Distribution

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 operations electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Ventilation 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"/>						

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 subsurface electrical distribution system provides primary and standby power for emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the operations electrical distribution system and its component SSCs (including the electrical distribution system for the ventilation system) do not provide assurance that high-level waste can be 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 subsurface operations electrical distribution system (including its component SSCs) is required to provide emergency power to personnel safety and critical operations, including providing uninterruptible power to the subsurface ventilation system. In the event of a DBE that results in a radioactive release, the safety and critical systems (such as the ventilation system) must be supplied with power to be operable to mitigate the consequences of the 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 subsurface electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 operations electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 subsurface electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Ventilation 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with fire protection.

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 subsurface operations electrical distribution system for the ventilation system as a result of a DBE would not impact the ability of QA-1 and/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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The operations electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Ventilation 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 operations electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Waste Emplacement 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"/>						

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 subsurface electrical distribution system provides primary and standby power for emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the operations electrical distribution system and its component SSCs (including the waste emplacement system) do not provide assurance that high-level waste can be 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 subsurface operations electrical distribution system (including its component SSCs) is required to provide emergency power to personnel safety and critical operations, including providing uninterruptible power to the subsurface waste emplacement system. In the event of a DBE that results in a radioactive release, the safety and critical systems (such as the waste emplacement system) must be supplied with power to be operable to mitigate the consequences of the 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 subsurface electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 operations electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 subsurface electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Waste Emplacement 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with fire protection.

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 subsurface operations electrical distribution system waste emplacement system as a result of a DBE would not impact the ability of QA-1 and/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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The operations electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Waste Emplacement 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 operations electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Waste Transportation 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"/>						

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 subsurface electrical distribution system provides primary and standby power for emplacement operations, including emergency and uninterruptible power for personnel safety and critical operations. However, the operations electrical distribution system and its component SSCs (including the waste transportation distribution system) do not provide assurance that high-level waste can be 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 subsurface operations electrical distribution system (including its component SSCs) is required to provide emergency power to personnel safety and critical operations, including providing uninterruptible power to the subsurface Waste Transportation Distribution System which interfaces with the Subsurface Emplacement Transportation System. In the event of a DBE that results in a radioactive release, the safety and critical systems (such as the Waste Transportation Distribution System) must be supplied with power to be operable to mitigate the consequences of the 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 subsurface electrical distribution system (including its component SSCs) would not directly lead to a credible DBE that would produce a radioactive release.

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 operations electrical distribution system (and its component SSCs) do not perform waste isolation functions as 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 subsurface electrical distribution system (and its component SSCs) will not significantly affect the waste isolation function of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Waste Transportation 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with 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 subsurface operations electrical distribution system (and its component SSCs) are not associated with fire protection

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 subsurface operations electrical distribution system Waste Transportation Distribution System as a result of a DBE would not impact the ability of QA-1 and/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 development electrical distribution system (and its component SSCs) do not function to provide detection or alarm of unauthorized intrusion or the presence of unauthorized explosive materials.

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

Yes? Rationale:

The operations electrical distribution system (and its component SSCs) are not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS06 - Subsurface Electrical Distribution System

SSC: Operations Electrical Distribution

Level 4: N/A

Level 3: Waste Transportation 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 operations electrical distribution system (and its component SSCs) do not have their own radioactive source terms and are not associated with radiation shielding or the reduction of dose rates in radioactive areas.

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:

This SSC is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, SSA 3.5.2 Power Distribution System, as QA-1.

Q-List Questions

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Development Transportation System

Level 5: N/A

QA-1 QA-2 QA-3 QA-4 QA-5 QA-6 QA-7 Non-Q

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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Development Transportation 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Development Transportation 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Excavation Systems

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Excavation Systems

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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Excavation Systems

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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

O-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Muck 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 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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Muck 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Muck 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Primary 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 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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Primary 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Primary 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Refuge Chamber 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 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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Refuge 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Refuge 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Ventilation Control 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Ventilation Control 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Warehouse/Shops 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 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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Warehouse/Shops 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Development Compressed Air System

Level 4: N/A

Level 3: Warehouse/Shops 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Emplacement Drift 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"/>						

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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the emplacement sides of the repository. This subsystem may be associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Emplacement Drift 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Emplacement Drift 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Primary 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 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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the emplacement sides of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Primary 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Primary 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Refuge Chamber 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 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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the emplacement sides of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Refuge 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Refuge 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Ventilation Control 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"/>						

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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the emplacement sides of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system for the ventilation control system may be required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Ventilation Control 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system would 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Ventilation Control 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Waste Transportation 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:

This subsurface compressed air system supplies compressed air in sufficient quantity and pressure to meet requirements for the emplacement sides of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface compressed air system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface compressed air system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface compressed air system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface compressed air system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Waste Transportation 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 subsurface compressed air system is not associated with 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 subsurface compressed air system does not perform 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 subsurface compressed air system could 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 subsurface compressed air system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface compressed air system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS08 - Subsurface Compressed Air System

SSC: Operations Compressed Air System

Level 4: N/A

Level 3: Waste Transportation 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 subsurface compressed air system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface compressed air system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Compressed Air Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Miscellaneous Excavation System

Level 3: Excavation Takeoff 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 subsurface water distribution system distributes water to the underground areas to be used by personnel and in construction for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Miscellaneous Excavation System

Level 3: Excavation Takeoff 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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system could 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Miscellaneous Excavation System

Level 3: Excavation Takeoff 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 subsurface Water Distribution System does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Muck Removal Dust Control System

Level 3: Excavation Takeoff 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 subsurface water distribution system distributes water to the underground areas to be used by personnel and in construction for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

- 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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

- 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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Muck Removal Dust Control System

Level 3: Excavation Takeoff 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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system could 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Muck Removal Dust Control System

Level 3: Excavation Takeoff 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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Raise Bore Supply System

Level 3: Excavation Takeoff 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 subsurface water distribution system distributes water to the underground areas to be used by personnel and in construction for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Raise Bore Supply System

Level 3: Excavation Takeoff 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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system may have the potential to 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: Raise Bore Supply System

Level 3: Excavation Takeoff 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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: TBM Supply System

Level 3: Excavation Takeoff 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 subsurface water distribution system distributes water to the underground areas to be used by personnel and in construction for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: TBM Supply System

Level 3: Excavation Takeoff 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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system could 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: TBM Supply System

Level 3: Excavation Takeoff 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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

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 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 subsurface water distribution system distributes water to the underground areas to be used by personnel and in construction for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

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 subsurface water distribution system is not associated with 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 subsurface water distribution system, development fire suppression subsystem performs fire protection functions which may protect ground control systems and the natural barriers.

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 subsurface water distribution system could 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.8 Water Distribution System, as QA-1.

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: N/A

Level 3: Primary Piping, Valving and Controls

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 subsurface water distribution system distributes water to the underground areas to be used by personnel and in construction for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: N/A

Level 3: Primary Piping, Valving and Controls

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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system could 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: N/A

Level 3: Primary Piping, Valving and Controls

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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: N/A

Level 3: Warehouse/Shop 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 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 subsurface water distribution system distributes water to the underground areas to be used by personnel and in construction for the development of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: N/A

Level 3: Warehouse/Shop 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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system would 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Development Water Distribution

Level 4: N/A

Level 3: Warehouse/Shop 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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Fire Suppression

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 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 subsurface water distribution system distributes water to the underground areas to be used by personnel for the emplacement sides of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

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SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Fire Suppression

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 subsurface water distribution system is not associated with 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 subsurface water distribution system, operations fire suppression subsystem performs 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 subsurface water distribution system could 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Fire Suppression

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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Support Area 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 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 subsurface water distribution system distributes water to the underground areas to be used by personnel for the emplacement sides of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Support Area 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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system would 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Support Area 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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Waste Transportation 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 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 subsurface water distribution system distributes water to the underground areas to be used by personnel for the emplacement sides of the repository. This subsystem is not associated with the emplacement, storage, packaging or retrieval of high-level waste.

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 subsurface water distribution system is not required to function to prevent or mitigate DBEs that would otherwise result in a radioactive release above the 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 subsurface water distribution system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface water distribution system is not part of the natural or engineered barriers that perform a waste isolation function.

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 subsurface water distribution system would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Waste Transportation 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 subsurface water distribution system is not associated with 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 subsurface water distribution system does not perform 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 subsurface water distribution system would 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 subsurface water distribution system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface water distribution system is not associated with special nuclear material accountability.

Q-List Questions

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SDD: SS09 - Subsurface Water Distribution System

SSC: Operations Water Distribution

Level 4: N/A

Level 3: Waste Transportation 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 subsurface Water Distribution system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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 subsurface water distribution system is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.6 Water Distribution System, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Excavation Systems

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 development subsurface safety and monitoring system - excavation system monitors provide monitoring of the excavation system subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - excavation system monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - excavation system monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Excavation Systems

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - excavation system monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Excavation Systems

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - excavation system monitors are not radiation monitors.

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 development subsurface safety and monitoring system - excavation system monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Fire Detection

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 development subsurface safety and monitoring system - fire detection monitors provide monitoring of the subsurface conditions for a fire to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - fire detection monitors provides monitoring for a credible fire DBE which has the potential for 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - fire detection monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Fire Detection

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - fire detection monitors perform fire protection functions which may protect QA-1 or QA-2 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 development subsurface safety and monitoring system - fire detection monitors 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Fire Detection

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - fire detection monitors are not radiation monitors.

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 development subsurface safety and monitoring system - fire detection monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.9 Fire Protection and Control System, as QA-1.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Fuel Handling 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 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 development subsurface safety and monitoring system - fuel handling system monitors provide monitoring of the fuel handling system subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - fuel handling system monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - fuel handling system monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Fuel Handling 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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - fuel handling system monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

Q-List Questions

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Fuel Handling 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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - fuel handling system monitors are not radiation monitors.

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 development subsurface safety and monitoring system - fuel handling system monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Ground Control Monitoring

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"/>						

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 development subsurface safety and monitoring system - ground control monitors provide monitoring of the ground control subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - ground control monitors provide monitoring of the QA-1 ground control system against future postulated failures which may result in a radioactive release above the 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - ground control monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Ground Control Monitoring

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - ground control monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Ground Control Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - ground control monitors are not radiation monitors.

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 development subsurface safety and monitoring system - ground control monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5 17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Personnel Safety

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 development subsurface safety and monitoring system - personnel safety monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - personnel safety monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - personnel safety monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Personnel Safety

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - personnel safety monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Personnel Safety

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - personnel safety monitors are not radiation monitors.

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 development subsurface safety and monitoring system - personnel safety monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

O-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Radiological Safety & Monitoring

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 development subsurface safety and monitoring system - radiological safety monitors provide radiation monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system radiological safety monitors are not required for radiation monitoring for a credible DBE which has the potential for 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - radiological safety monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Radiological Safety & Monitoring

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - radiological safety monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Radiological Safety & Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The radiological safety & monitoring system is a permanently installed radiation monitor which monitors areas 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 development subsurface safety and monitoring system - radiological safety monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.1 Radiological Monitoring, as QA-1.

Q-List Questions

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: Rail System

Level 3: Transportation Safety & Monitoring

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 development subsurface safety and monitoring system - rail system monitors provide monitoring of the rail system subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - rail system monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - rail system monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

Q-List Questions

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: Rail System

Level 3: Transportation Safety & Monitoring

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - rail system monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: Rail System

Level 3: Transportation Safety & Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - rail system monitors are not radiation monitors.

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 development subsurface safety and monitoring system - rail system monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: Trackless Equipment Systems

Level 3: Transportation Safety & Monitoring

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 development subsurface safety and monitoring system - trackless equipment system monitors provide monitoring of the trackless equipment system subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - trackless equipment system monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - trackless equipment system monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: Trackless Equipment Systems

Level 3: Transportation Safety & Monitoring

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - trackless equipment system monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: Trackless Equipment Systems

Level 3: Transportation Safety & Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - trackless equipment system monitors are not radiation monitors.

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 development subsurface safety and monitoring system - trackless equipment system monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Ventilation Monitoring

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"/>						

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 development subsurface safety and monitoring system - ventilation monitors provide monitoring of the ventilation system subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 development subsurface safety and monitoring system - ventilation monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not required to function to prevent, mitigate, or monitor a credible DBE. However, this system may be required to monitor pressure differential between the development and the operation side of the repository.

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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 development subsurface safety and monitoring system - ventilation monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Ventilation Monitoring

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 subsurface safety and monitoring system is not associated with 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 development subsurface safety and monitoring system - ventilation monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Development Safety & Monitoring

Level 4: N/A

Level 3: Ventilation Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The development subsurface safety and monitoring system - ventilation monitors are not radiation monitors.

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 development subsurface safety and monitoring system - ventilation monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Criticality Monitoring

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"/>					

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 operations subsurface safety and monitoring system - criticality monitors provide monitoring for potential nuclear criticalities underground to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 operations subsurface safety and monitoring system - criticality monitors provide monitoring for a credible criticality DBE which has the potential for 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 operations subsurface safety and monitoring system - criticality monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Criticality Monitoring

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 subsurface safety and monitoring system is not associated with 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 operations subsurface safety and monitoring system - criticality monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Criticality Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The operations subsurface safety and monitoring system - criticality monitors are permanently installed radiation monitors which monitors areas 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 operations subsurface safety and monitoring system - criticality monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.1 Radiological Monitoring, as QA-1.

Q-List Questions

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Fire Detection

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 operations subsurface safety and monitoring system - gas detection and fire detection monitors provide monitoring of the subsurface conditions for a fire to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 operations subsurface safety and monitoring system - fire detection monitors provide monitoring for a credible fire DBE which has the potential for 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 operations subsurface safety and monitoring system - fire detection monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

Q-List Questions

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Fire Detection

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 subsurface safety and monitoring system is not associated with 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 operations subsurface safety and monitoring system - fire detection monitors perform fire protection functions which may protect ground control systems and the natural barriers.

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 operations subsurface safety and monitoring system - fire detection monitors 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

Q-List Questions

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Fire Detection

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The operations subsurface safety and monitoring system - fire detection monitors are not radiation monitors.

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 operations subsurface safety and monitoring system - fire detection monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.9 Fire Protection and Control System, as QA-1

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Ground Control Monitoring

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"/>						

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 operations subsurface safety and monitoring system - ground control monitors provide monitoring of the ground control subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 operations subsurface safety and monitoring system - ground control monitors provide monitoring of the QA-1 ground control system against future postulated failures which may result in a radioactive release above the 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 operations subsurface safety and monitoring system - ground control monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Ground Control Monitoring

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 subsurface safety and monitoring system is not associated with 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 operations subsurface safety and monitoring system - ground control monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Ground Control Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The operations subsurface safety and monitoring system - ground control monitors are not radiation monitors.

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 operations subsurface safety and monitoring system - ground control monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Personnel Safety

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 operations subsurface safety and monitoring system - personnel safety monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.
- 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 operations subsurface safety and monitoring system - personnel safety monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.
- 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 operations subsurface safety and monitoring system - personnel safety monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

Q-List Questions

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Personnel Safety

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 subsurface safety and monitoring system is not associated with 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 operations subsurface safety and monitoring system - personnel safety monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

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SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Personnel Safety

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The operations subsurface safety and monitoring system - personnel safety monitors are not radiation monitors.

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 operations subsurface safety and monitoring system - personnel safety monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Radiological Safety & Monitoring

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"/>					

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 operations subsurface safety and monitoring system - radiological safety monitors provide radiation monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 operations subsurface safety and monitoring system - radiological monitors provide radiation monitoring for a credible DBE which has the potential for 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 operations subsurface safety and monitoring system - radiation safety monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Radiological Safety & Monitoring

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 subsurface safety and monitoring system is not associated with 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 operations subsurface safety and monitoring system - radiation safety monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Radiological Safety & Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The radiological safety & monitoring system is a permanently installed radiation monitor which monitors areas 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 operations subsurface safety and monitoring system - radiological safety monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.1 Radiological Monitoring, as QA-1.

Q-List Questions

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Transportation Safety

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 operations subsurface safety and monitoring system - transportation safety monitors provide monitoring of the transportation system subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 operations subsurface safety and monitoring system - transportation safety monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This 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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 operations subsurface safety and monitoring system - transportation safety monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Transportation Safety

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 subsurface safety and monitoring system is not associated with 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 operations subsurface safety and monitoring system - transportation safety monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Transportation Safety

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The operations subsurface safety and monitoring system - transportation safety monitors are not radiation monitors.

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 operations subsurface safety and monitoring system - transportation safety monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Ventilation Monitoring

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"/>						

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 operations subsurface safety and monitoring system - ventilation monitors provide monitoring of the ventilation system subsurface conditions to ensure a safe workplace for subsurface personnel. This system is not associated with the receipt, handling, storage, packaging, emplacement, or retrieval of high-level waste.

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 operations subsurface safety and monitoring system - ventilation monitors provide monitoring of the subsurface conditions to ensure a safe workplace for subsurface personnel. This system is required to function to prevent, mitigate, or monitor a credible DBE by monitoring operability of QA-1 ventilation systems.

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 subsurface safety and monitoring system would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 subsurface safety and monitoring system is not part of the natural or engineered barriers that perform a waste isolation function.

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 operations subsurface safety and monitoring system - ventilation monitors would not impair the capability of natural or engineered barriers from performing their waste isolation function.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Ventilation Monitoring

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 subsurface safety and monitoring system is not associated with 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 operations subsurface safety and monitoring system - ventilation monitors do not perform 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 subsurface safety & monitoring system would 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 subsurface safety and monitoring system is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The subsurface safety and monitoring system is not associated with special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS10 - Subsurface Safety & Monitoring System

SSC: Operations Safety & Monitoring

Level 4: N/A

Level 3: Ventilation Monitoring

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 subsurface safety and monitoring system does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The operations subsurface safety and monitoring system - ventilation monitors are not radiation monitors.

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 operations subsurface safety and monitoring system - ventilation monitors are contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.17.2 Nonradiological Monitoring, as QA-1.

Q-List Questions

SDD: SS12 - Subsurface Operational Monitoring 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 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 Subsurface Operational Monitoring System monitors and reports equipment operational status for all non-safety-related subsurface development and operational systems. The system does not provide reasonable assurance that high level waste is 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 Subsurface Operational Monitoring System is not required to function to prevent or mitigate a Design Basis Event.

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 Subsurface Operational Monitoring System will not result in a 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 Subsurface Operational Monitoring 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:

The direct failure of the Subsurface Operational Monitoring System will not significantly affect the characteristics of the natural or engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS12 - Subsurface Operational Monitoring 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 function of this SSC does not handle 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:

This SSC is not related to Fire Protection.

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 this SSC would not impact or impair a QA-1 or QA-2 SSC from performing its radiological safety or waste isolation function. The Subsurface Operational Monitoring System monitors and reports equipment operational status for all non-safety-related subsurface development and operational systems.

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:

This SSC does not perform a physical protection function.

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

Yes? Rationale:

This SSC does not perform an accountability function.

Q-List Questions

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Attachment IV

SDD: SS12 - Subsurface Operational Monitoring 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:

This SSC has no functions related to minimizing radiological exposure.

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:

This SSC (Subsurface Operational Monitoring) is contained on the Q-List by direct inclusion for the Underground Service and Utility Systems, 3.5.5.1, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: Borehole Monitoring System

Level 4: N/A

Level 3: Water Table

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 Performance Confirmation Borehole Monitoring Water Table System acquires pertinent data associated with verifying the performance of the waste isolation system. This system is not associated with the receipt, handling, emplacement, storage, packaging or retrieval of high-level waste.

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 Performance Confirmation Borehole Monitoring Water Table System is not required to function to prevent a DBE that would otherwise result in a radioactive release above the 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 Performance Confirmation Borehole Monitoring Water Table System would not result in a credible DBE that would lead to a radioactive release above the federal limit.

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 Performance Confirmation Borehole Monitoring Water Table System is not part of the natural or engineered barriers that perform a waste isolation function. However, this SSC monitors the performance of the waste isolation system and can provide data needed to mitigate failure of items 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 Performance Confirmation Borehole Monitoring Water Table System would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: Borehole Monitoring System

Level 4: N/A

Level 3: Water Table

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 Performance Confirmation Borehole Monitoring Water Table System is not designed for the collection, containment, and/or monitoring 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 Performance Confirmation Borehole Monitoring Water Table System does not perform 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 Performance Confirmation Borehole Monitoring Water Table System would 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 Performance Confirmation Borehole Water Table Monitoring System is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The Performance Confirmation Borehole Monitoring Water Table System is not required for special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: Borehole Monitoring System

Level 4: N/A

Level 3: Water Table

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 Performance Confirmation Borehole Monitoring Water Table System does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The Performance Confirmation Borehole Monitoring Water Table System 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 Performance Confirmation Borehole Monitoring Water Table System is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.16 Performance Confirmation Facilities, as QA-1.

Q-List Questions

B00000000-01717-0200-00134 Rev 00

Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: Emplacement Drift Monitoring 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"/>					

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 Performance Confirmation Emplacement Drift Monitoring System acquires pertinent data associated with verifying the performance of the waste isolation system. This system is not associated with the receipt, handling, emplacement, storage, packaging or retrieval of high-level waste.

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 Performance Confirmation Emplacement Drift Monitoring System is required to function to prevent a DBE that would otherwise result in a radioactive release above the 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 Emplacement Drift Monitoring System Monitoring System would not result in a credible DBE that would lead to a radioactive release above the federal limit.

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 Performance Confirmation Emplacement Drift Monitoring System is not part of the natural or engineered barriers that perform a waste isolation function. However, this SSC monitors the performance of the waste isolation system and can provide data needed to mitigate failure of items important to waste isolation, licensing and closure.

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 Performance Confirmation Emplacement Drift Monitoring System would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: Emplacement Drift Monitoring 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 Performance Confirmation Emplacement Drift Monitoring System monitor is not designed for the collection, containment, and/or monitoring 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 Performance Confirmation Emplacement Drift Monitoring System monitor does not perform 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 Performance Confirmation Emplacement Drift Monitoring System monitor would 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 Performance Confirmation Emplacement Drift Monitoring System monitor is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The Performance Confirmation Emplacement Drift Monitoring System monitor is not required for special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: Emplacement Drift Monitoring 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 Performance Confirmation Emplacement Drift Monitoring System does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The Performance Confirmation Emplacement Drift Monitoring System monitor 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 Performance Confirmation Emplacement Drift Monitoring System is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.16 Performance Confirmation Facilities, as QA-1.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: General Subsurface Performance Confirmation Assessment System

Level 4: N/A

Level 3: Emplaced Materials Monitoring

Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System acquires pertinent data associated with verifying the performance of the waste isolation system. This system is not associated with the receipt, handling, emplacement, storage, packaging or retrieval of high-level waste.

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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System is not required to function to prevent a DBE that would otherwise result in a radioactive release above the 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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System would not result in a credible DBE that could lead to a radioactive release above the federal limit.

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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System is not part of the natural or engineered barriers that perform a waste isolation function. However, this SSC monitors the performance of the waste isolation system and can provide data needed to mitigate failure of items important to waste isolation and for licensing and closure.

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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: General Subsurface Performance Confirmation Assessment System Level 4: N/A

Level 3: Emplaced Materials Monitoring 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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System is not designed for the collection, containment, and/or monitoring 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 General Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System does not perform 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 General Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System would 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 General Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The General Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System is not required for special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: General Subsurface Performance Confirmation Assessment System

Level 4: N/A

Level 3: Emplaced Materials Monitoring

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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? Rationale:

The General Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System 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 Subsurface Performance Confirmation Assessment Emplaced Materials Monitoring System is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.16 Performance Confirmation Facilities, as QA-1.

Q-List Questions

SDD: SS14 - Performance Confirmation System

SSC: General Subsurface Performance Confirmation Assessment System Level 4: N/A

Level 3: Geochemical/Geomechanical Monitoring Level 5: N/A

QA-1	QA-2	QA-3	QA-4	QA-5	QA-6	QA-7	Non-Q
<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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System acquires pertinent data associated with verifying the performance of the waste isolation system. This system is not associated with the receipt, handling, emplacement, storage, packaging or retrieval of high-level waste.

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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System is not required to function to prevent a DBE that would otherwise result in a radioactive release above the 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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System would not result in a credible DBE that would lead to a radioactive release above the federal limit.

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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System is not part of the natural or engineered barriers that perform a waste isolation function. However, this SSC monitors the performance of the waste isolation system and can provide data needed to mitigate failure of items important to waste isolation, licensing and closure.

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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System would not affect the waste isolation functions performed by the natural and engineered barriers.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: General Subsurface Performance Confirmation Assessment System Level 4: N/A

Level 3: Geochemical/Geomechanical Monitoring 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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System is not designed for the collection, containment, and/or monitoring 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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System does not perform 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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System would 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 General Surface Performance Confirmation Assessment Monitoring System is not associated with the detection or alarming for unauthorized intrusion or the presence of explosive materials.

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

Yes? Rationale:

The Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System is not required for special nuclear material accountability.

Q-List Questions

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Attachment IV

SDD: SS14 - Performance Confirmation System

SSC: General Subsurface Performance Confirmation Assessment System **Level 4: N/A**

Level 3: Geochemical/Geomechanical Monitoring **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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System does not have its own radioactive source term and does not provide for personnel radiation shielding or the reduction of dose rates.

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

Yes? **Rationale:**

The Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System 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 Subsurface Performance Confirmation Assessment Geochemical/Geomechanical Monitoring System is contained on the Q-List by direct inclusion for the Underground Services and Utility Systems, SSA 3.5.16 Performance Confirmation Facilities, as QA-1.