

memorandumCarlsbad Field Office
Carlsbad, New Mexico 88221

DATE: May 22, 2008

REPLY TO
ATTN OF: CBFO:OSO:RFF:GS:08-0524:UFC 1000.00

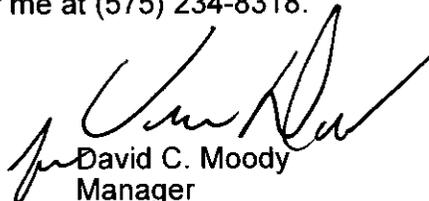
SUBJECT: Request for Approval of Page Change 2008-001 to the WIPP Safety Basis Documents

TO: Dae Chung, Deputy Assistant Secretary for Safety Management and Operations, EM

Washington TRU Solutions (WTS) in preparation to transition waste disposal operations from Panel 4 to Panel 5 at the Waste Isolation Pilot Plant (WIPP) has prepared draft changes to the Contact-Handled (CH) and Remote-Handled (RH) Documented Safety Analyses (DSAs) and Technical Safety Requirements (TSRs). This letter transmits for your approval Page Change 2008-001, the subject DSA and TSR page changes and supporting justification text explaining the changes, both included as attachments to the Safety Evaluation Report. The attached SER provides the basis for approval of Page Change 2008-001 that upon DOE approval amends the facility safety basis to support waste disposal operations in Panel 5.

This approval request for Page Change 2008-001 results from the need to add Panel 5 to the waste disposal ventilation circuit, to modify the underground ventilation components, and to make corresponding changes to the combustible loading control and flammable liquid control programs credited in both the CH and RH DSAs in order to accommodate waste disposal operations in Panel 5. Based on the CBFO review team's assessment of Page Change 2008-001, it is concluded that the page changes are consistent with the derivation of controls in the approved CH and RH DSAs.

If you have any questions or comments regarding this matter, please contact Dr. Gary Scott at (575) 234-7336 or me at (575) 234-8318.



David C. Moody
Manager

Attachment(s)

cc: w/attachments	
P. Agee, DOE-EM	* ED
V. Daub, CBFO	ED
JR Stroble, CBFO	ED
G. Scott, CBFO	ED
J. Plum,	ED
R. Farrell, CBFO	ED
E. Preciado, CBFO	ED
F. Sharif, WTS	ED
P. Yocum, WTS	ED
D. Steffen, WTS	ED
D. Busche, WTS	ED
R. Chavez, WRE	ED
CBFO M & RC	

*ED denotes electronic distribution

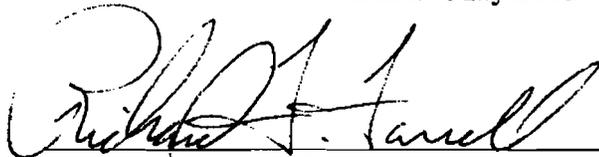
AUTHORITY APPROVAL

**Safety Evaluation Report
of the Waste Isolation Pilot Plant
Contact Handled (CH) Waste Documented Safety Analysis (Revision 10),
Contact Handled (CH) Technical Safety Requirements (Revision 10),
Remote Handled (RH) Waste Documented Safety Analysis (Revision 0), and
Remote Handled (RH) Technical Safety Requirements (Revision 0)**

Page Change 2008-001

**U. S. Department of Energy
Carlsbad Field Office**

Date: May 2008



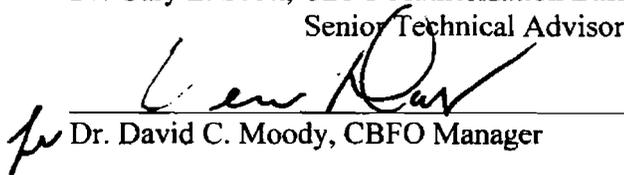
Richard F. Farrell, CBFO Safety Basis
Review Team Leader

Date: 22 May 2008



Dr. Gary L. Scott, CBFO Authorization Basis
Senior Technical Advisor

Date: 22 May 2008



Dr. David C. Moody, CBFO Manager

Date: 5/27/08

Approved: _____

Dae Y. Chung, Deputy Assistant Secretary
Safety Management and Operations,
Office of Environmental Management

Date: _____

memorandum

DATE: JUN 02 2008

REPLY TO
ATTN OF: EM-60 (Chung, 202-586-5151)

SUBJECT: Request for Approval of Page Change 2008-001 to the WIPP Safety Basis Documents

TO: David Moody, Manager, Carlsbad Field Office

Based on my review of the *Safety Evaluation Report of the Waste Isolation Pilot Plant Contact Handled (CH) Waste Documented Safety Analysis (Revision 10), Contact Handled (CH) Technical Safety Requirements (Revision 10), Remote Handled (RH) Waste Documented Safety Analysis (Revision 0), and Remote Handled (RH) Technical Safety Requirements (Revision 0) Page Change 2008-001*, I am approving the SER. There are no conditions of approval.

I have signed the attached SER for your records and transmittal to the contractor. If you have any further questions, please call me at (202) 586-5151.



Dae Y. Chung
Deputy Assistant Secretary for
Safety Management and Operations
Environmental Management

Attachment

AUTHORITY APPROVAL

**Safety Evaluation Report
of the Waste Isolation Pilot Plant
*Contact Handled (CH) Waste Documented Safety Analysis (Revision 10),
Contact Handled (CH) Technical Safety Requirements (Revision 10),
Remote Handled (RH) Waste Documented Safety Analysis (Revision 0), and
Remote Handled (RH) Technical Safety Requirements (Revision 0)***

Page Change 2008-001

**U. S. Department of Energy
Carlsbad Field Office**

Date: May 2008

Signature On File
Richard F. Farrell, CBFO Safety Basis
Review Team Leader

Date: 22 May 2008

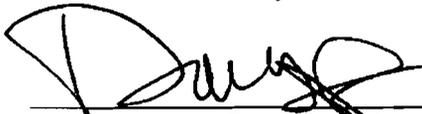
Signature On File
Dr. Gary L. Scott, CBFO Authorization Basis
Senior Technical Advisor

Date: 22 May 2008

Signature On File
Dr. David C. Moody, CBFO Manager

Date: 27 May 2008

Approved:


Dae Y. Chung, Deputy Assistant Secretary
Safety Management and Operations,
Office of Environmental Management

Date: 5/2/08

3.4.2.2.5 Summary of Safety Class SSCs and TSR Controls

Credited SSC or TSR Control	Safety Function
<p><u>UG1-2 and UG1-3A</u></p> <p>(SSC) Automatic/manual fire suppression system on the diesel powered waste handling equipment.</p> <p>(AC) Waste Handling Restrictions</p> <ul style="list-style-type: none"> - Use of a spotter when vehicles are within 75 ft of the waste array. - No non-waste handling vehicles in the active disposal room during waste handling <p>(AC) Combustible Loading Control Program - Disposal Room:</p> <ul style="list-style-type: none"> - Only diesel and electric powered vehicles are used in the underground - No use of flammable gas/liquid or flammable compressed gas cylinders in the active disposal room during waste handling. - No hot work within 75 ft of the waste without a fire watch - No lube truck in active disposal panel - No non-waste handling equipment within 75 ft of waste face without a fire watch - No storage of flammable gas/liquid or flammable compressed gas cylinders in the active disposal room. 	<p>Prevents small fires associated with waste handling vehicles including fuel line leaks or the engine from becoming large fires with the potential to impact waste containers.</p> <p>Prevent fires resulting from collisions between vehicles and prohibits combustible/flammable material storage in areas with the potential to impact waste, controls use of combustibles and flammable compressed gas cylinders in the proximity of the waste and prohibits the underground vehicle with the largest fuel inventory from close proximity to waste.</p>
<p><u>UG1-4 and UG1-5</u></p> <p>(AC) Combustible Loading Control for the Disposal Path</p> <p>-No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations.</p>	<p>Prevents fires by prohibiting activities and storage of flammable compressed gas cylinders in areas adjacent to the disposal path.</p>

<p>- No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations</p>	
<p>UG1-1 (SSC) Automatic/manual fire suppression system on the diesel powered waste handling equipment.</p> <p>(AC) Waste Handling Restrictions - A spotter is required when moving CH waste with CH waste handling vehicles.</p> <p>(AC) Combustible Loading Control Program - Disposal Path - Only diesel and electric powered vehicles are used in the underground - When waste is in transit, vehicles not performing waste handling operations shall be moved to a cross-cut and be secured until the waste transporter has passed and is greater than 75 ft away. Vehicles that have become disabled (excluding the lube truck) may be in the disposal path but must be secured along the wall of the disposal path. - Transporters loaded with waste in the underground shall maintain greater than 75 ft separation distance between them. - No storage of combustibles or flammable compressed gas cylinders in the disposal path - No flammable gas/liquid or flammable compressed gas cylinders shall be used in the disposal path during waste handling operations - The lube truck is prohibited from the disposal path while waste is in transit from the waste shaft station to the active disposal room - No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations. - No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South</p>	<p>Prevents small fires associated with waste handling vehicles including fuel line leaks or the engine from becoming large fires with the potential to impact waste containers.</p> <p>Remaining controls prevent fires resulting from collisions between vehicles and prohibits combustibles/flammable material storage in areas with the potential to impact waste, controls use of combustibles and flammable compressed gas cylinders in the proximity of the waste and prohibits the underground vehicle with the largest fuel inventory from close proximity to waste.</p>

3.4.2.5.3 Consequence Analysis

Unmitigated Scenario

UG2-1 – The consequences of these events were computed in NS-05-001¹⁰ and documented in Table 3.4-1. The consequence of UG2-1 exceeds the EG for dose to the MOI.

Safety Class Mitigated Scenario

UG2-1 – This event is prevented by the implementation of the controls specified in Section 3.4.2.5.5; therefore, the consequences of a mitigated scenario are not calculated.

3.4.2.5.4 Comparison to Guidelines

UG2-1 – The unmitigated consequence of this event exceed the EG. Therefore, SC controls are required to prevent or mitigate this event and are specified in Section 3.4.2.5.5.

3.4.2.5.5 Summary of Safety Class SSCs and TSR Controls

Credited SSC or TSR Control	Safety Function
<p>UG2-1 (AC) - Combustible Loading Control Program:</p> <ul style="list-style-type: none"> - No flammable gas/liquid or flammable compressed gas cylinders stored in disposal path or active disposal room. - No use of flammable gas/liquid or flammable compressed gas cylinders in disposal path or active disposal room during waste handling - No use of flammable gas/liquid or flammable compressed gas cylinders in active disposal room without a fire watch - No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations. - No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations 	<p>Prevents the potential for a gas explosion in the disposal room or disposal path due to introduction of flammable compressed gas sources to the room, the disposal path or areas adjacent to the disposal path that could impact waste containers during transport from the waste shaft station to the active disposal room.</p>

Table A-13 - Site Worker MHE Summary for Risk Rank I and II Events (evaluated at 100 m)

Event	Unmitigated		Credited SSC or AC	Safety Functions	Mitigated			Comments
	Freq.	Conseq.			Freq.	Conseq.	Risk Bin	
<p>UGI-1 Fire in waste disposal path (from the waste shaft station to the active disposal room) and damages waste containers in transit</p>	A	Moderate	<p>Design Features: Non-flammable construction of underground bulkheads, overcasts, and airlocks</p> <p>(SSC) Fire suppression system on diesel powered waste handling equipment</p> <p>(AC) - Combustible Loading Control Program including: - No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations: - No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations</p>	<p>Provides separation between construction ventilation circuit and disposal circuit or construction circuit and waste shaft station</p> <p>Prevents small fires on diesel powered waste handling equipment from becoming large fires that can impact waste</p> <p>Prevents introduction of fire sources to disposal areas from construction areas, restricts use and prohibits storage of combustible materials and flammable compressed gas, and prevents vehicle collisions that could result in fire</p>	Prevented	NA	NA	

Table A-13 - Site Worker MHE Summary for Risk Rank I and II Events (evaluated at 100 m)

Event	Unmitigated		Credited SSC or AC	Safety Functions	Mitigated			Comments
	Freq.	Conseq.			Freq.	Conseq.	Risk Bin	
UG1-4 Fire in construction/ mining ventilation circuit impacts waste containers	A	Moderate	<p>Design Features: Non-Flammable construction of underground bulkheads, overcasts, and airlocks</p> <p>(AC) - No construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations.</p> <p>(AC) - No construction using flammable gas/liquid or flammable compressed gas cylinders at bulkhead 309 during waste handling operations</p> <p>(AC) - No storage of flammable gas/liquid or flammable compressed gas cylinders gas between the AIS and South 1000 in West 30</p>	<p>Provides separation between construction ventilation circuit and disposal circuit or construction circuit and waste shaft station</p> <p>Prevents introduction of fire sources to disposal areas from construction areas</p> <p>Prevents introduction of fire sources to disposal areas from construction areas</p> <p>Prevents introduction of fire sources to disposal areas.</p>	Prevented	NA	NA	
UG1-5 Fire in north ventilation circuit propagates and impacts waste containers	A	Moderate	<p>Design Features: Non-Flammable construction of underground bulkheads, overcasts, and airlocks</p> <p>(AC) - No storage of flammable gas/liquid or flammable compressed gas cylinders within 100 ft of bulkhead 303 on the North ventilation side</p>	<p>Provides separation between construction circuit and waste shaft station</p> <p>Prevents introduction of fire sources to disposal areas</p>	Prevented	NA	NA	

Table A-13 - Site Worker MHE Summary for Risk Rank I and II Events (evaluated at 100 m)

Event	Unmitigated		Credited SSC or AC	Safety Functions	Mitigated			Comments
	Freq.	Conseq.			Freq.	Conseq.	Risk Bin	
UG2-1 Flammable gas explosion and impact to waste containers in the disposal path or active disposal room	A	Moderate	<p>(AC) - Combustible Loading Control Program - Disposal Path and Disposal Room</p> <ul style="list-style-type: none"> - No flammable gas/liquid or flammable compressed gas cylinders stored in disposal path or disposal room - No use of flammable gas/liquid or flammable compressed gas cylinders in disposal path during waste handling - No use of flammable gas/liquid or flammable compressed gas cylinders in active disposal room without a fire watch - No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-146/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations. - No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations <p>(SSC) - Underground Ventilation</p>	<p>Prevents a flammable gas explosion from impacting waste and prevents introduction of fire sources to disposal areas from construction area.</p> <p>Prevents flammable gas concentration from accumulating in the underground.</p>	Prevented	NA	NA	

Table A-14 - Facility Worker MHE Summary

Event	Unmitigated		Credited SSC or AC	Safety Functions	Mitigated			Comments
	Freq.	Conseq.			Freq.	Conseq.	Risk Bin	
UG1-1 Fire in waste disposal path	A	High	<p>Design Features: Non-Flammable construction of underground bulkheads, overcasts, and airlocks</p> <p>(SSC) - Fire suppression system on diesel powered waste handling equipment</p> <p>(AC) - Combustible Loading Control Program including: - No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations: - No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations - No storage of combustibles or flammable gas/liquid or flammable compressed gas cylinders in transport route - No flammable gas/liquid or flammable compressed gas cylinders shall be used in the disposal path during waste handling operations - The lube truck is prohibited from the disposal path while waste is in transit from the waste shaft station to the active disposal room - Only diesel or electrically powered vehicles are used in the underground</p>	<p>Provides separation between construction ventilation circuit and disposal circuit or construction circuit and waste shaft station.</p> <p>Prevents small fires on diesel powered waste handling equipment from becoming large fires that can impact waste</p> <p>Prevents introduction of fire sources to disposal areas from construction areas, restricts use and prohibits storage of combustible materials and flammable compressed gas, and prevents vehicle collisions that could result in fire</p>	Prevented	NA	NA	

Table A-14 - Facility Worker MHE Summary

Event	Unmitigated		Credited SSC or AC	Safety Functions	Mitigated			Comments
	Freq.	Conseq.			Freq.	Conseq.	Risk Bin	
UG1-4 Fire in construction/mining ventilation circuit impacts waste containers	A	High	Design Features: Non-Flammable construction of underground bulkheads, overcasts, and airlocks (AC) - No construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations (AC) - No construction using flammable gas/liquid or flammable compressed gas cylinders at bulkhead 309 during waste handling operations (AC) - No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30	Provides separation between construction ventilation circuit and disposal circuit or construction circuit and waste shaft station Prevents introduction of fire sources to disposal areas from construction areas Prevents introduction of fire sources to disposal areas from construction areas Prevents introduction of fire sources to disposal areas	Prevented	NA	NA	
UG1-5 Fire in north ventilation circuit impacts waste containers	A	High	Design Features: Non-Flammable construction of underground bulkheads, overcasts, and airlocks (AC) - No storage of flammable gas/liquid or flammable compressed gas cylinders within 100 ft of bulkhead 303 on the North ventilation side	Provides separation between construction circuit and waste shaft station Prevents introduction of fire sources to disposal areas	Prevented	NA	NA	

Table A-14 - Facility Worker MHE Summary

Event	Unmitigated		Credited SSC or AC	Safety Functions	Mitigated			Comments
	Freq.	Conseq.			Freq.	Conseq.	Risk Bin	
UG2-1 Flammable gas explosion and impact to waste containers in the disposal path or active disposal room	A	High	<p>(AC) Combustible Loading Control Program:</p> <ul style="list-style-type: none"> - No flammable gas/liquid or flammable compressed gas cylinders stored in disposal path - No use of flammable gas/liquid or flammable compressed gas cylinders in disposal path during waste handling - No use of flammable gas/liquid or flammable compressed gas cylinders in active disposal room without a fire watch - No storage of flammable gas or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. - When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations. - No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations <p>(SSC) - Underground ventilation</p>	<p>Prevents a flammable gas explosion from impacting waste and prevents introduction of fire sources to disposal areas from construction areas</p> <p>Prevents flammable gas concentration from accumulating in the underground</p>	Prevented	NA	NA	
UG2-2 Battery explosion on underground vehicles impacts waste	A	High	<p>(AC) - Only metal waste containers that meet DOT Type 7A or equivalent requirements are acceptable for disposal at WIPP. This requirement is implemented at generator sites in accordance with the CH WAC.</p> <p>(AC) - Waste handling restrictions require a standoff distance greater than 75 ft. between the CH waste transporter loaded with waste and other underground vehicles and prevents non-waste handling vehicles in the disposal room during waste handling.</p>	<p>Withstand low energy missile impact without breach</p> <p>Minimizes impact to waste from non-waste handling equipment</p>	U	Low	III	Though a battery explosion can occur, the missiles generated by the explosion (primarily plastic and lead projectiles) would not be expected to produce significant damage to the metal waste containers.

Combustibles and flammable compressed gas cylinders shall not be stored in the waste transport route from the waste shaft station to the active disposal room. Note that a parked vehicle is not considered to be storage.

~~Flammable compressed gas cylinders shall not be used in the disposal path during waste handling. No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations.~~ No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations

Transporters loaded with waste in the underground shall maintain greater than 75 ft separation between them. This separation distance does not apply if a transporter becomes disabled while loaded with waste and it is necessary to either move another loaded transporter past or move waste from a disabled transporter to another transporter. If this situation occurs, a fire watch is required.

The lube truck is not allowed in the disposal path during waste handling.

The functional requirements are necessary to prevent radiological consequences to workers or the public for events identified in Section 3.4, Tables A-13 and A-14, in Chapter 3 and in Table 4.5-1 of this DSA. The functional requirements are procedurally implemented and are visually verified each day by operations personnel. The SAC for combustible loading control in the disposal path does not require any support SSCs to accomplish.

4.5.5.4 SAC Evaluation

There are no special responses or capabilities required of underground personnel to ensure that combustible loading controls are maintained as specified in the functional requirements other than adherence to the combustible loading control procedure. Since neither the combustible loading controls or the waste handling process need to be performed in any specified amount of time, there is adequate time to ensure that any combustible material transported to the underground can be done at a time other than when waste is being moved or is in transit from the base of the waste shaft to the disposal room. The underground has specified storage areas for flammable gas/liquid or flammable compressed gas cylinders. The transport of waste from the base of the waste shaft to the active disposal room does not introduce combustible materials into the waste handling process. There is adequate time prior to the start of waste handling in the underground to ensure that the transport path is free of transient combustibles and that any combustible material, if present, can be immediately removed prior to the start of waste handling operations.

The adequacy of the specific administrative control for a combustible loading control program for the WHB is ensured through procedural requirements and periodic inspections performed by trained operations personnel. Adherence to the combustible loading control program is required continuously when waste is in the WHB with specific requirements applicable based on the location of stored waste.

The specific directive action was chosen rather than an LCO approach as any period of time that combustibles are not controlled increases the risk of fire propagation. Since no waste handling activity or maintenance activity requires introducing a significant amount of combustible material into the WHB, the

Table 4.5-1 Specific Administrative Controls					
Chapter 4 Section	Specific Administrative Control	Chapter 3 Accident/Rationale	Safety Function	Functional Requirements	Performance Criteria that requires TSR coverage
4.5.5	Combustible Loading Control Program - Disposal Path	HA Events UG1-1, UG1-4, UG1-5, UG2-1, UG3-4, UG3-5 AA CH-5	Prevents fires that may result from collisions between vehicles. Prevents construction activities from impacting waste in transit from the waste shaft station to the active disposal room. Prevents collisions between waste handling and non-waste handling equipment during waste handling operation. Prevents fires/explosions from impacting waste.	<p>Only diesel or electric powered vehicles are allowed in the underground.</p> <p>When the waste is in transit, non-waste handling equipment shall be moved to a cross cut and be secured until the waste transporter has passed and is greater than 75 ft away. Vehicles that may have become disabled (excluding the lube truck) may be in the disposal path but must be secured along the wall of the disposal path.</p> <p>No storage of combustibles or flammable compressed gas cylinders in the waste transport route from the waste shaft station to the active disposal room. Note that parked vehicle is not storage. No use of flammable gas/liquid or flammable compressed gas cylinders in the disposal path during waste handling. No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations. No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations</p> <p>Transporters loaded with waste in the underground shall maintain greater than 75 ft separation between them. This separation distance does not apply if a transporter becomes disabled while loaded with waste and it is necessary to either move another loaded transporter past or move waste from a disabled transporter to another transporter. If this situation occurs, a fire watch is required.</p> <p>The lube truck is not allowed in the disposal circuit during waste handling.</p>	SAC for the functional requirements

Table 5-1 Summary of TSR Controls and Design Features

Control	Operating Limits Required	Safety Function	Selection Basis
<p>Combustible Loading Control Program - Disposal Path</p> <p>Only diesel or electric powered vehicles are allowed in the underground.</p> <p>When the waste is in transit, non-waste handling equipment shall be moved to a cross cut and be secured until the waste transporter has passed and is greater than 75 ft away. Vehicles that may have become disabled (excluding the lube truck) may be in the disposal path but must be secured along the wall of the disposal path.</p> <p>No storage of combustibles or flammable compressed gas cylinders in the waste transport route from the waste shaft station to the active disposal room. Note that parked vehicle is not storage. No use of flammable gas/liquid or flammable compressed gas cylinders in the disposal path during waste handling. No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH waste handling operations. No storage of flammable gas/liquid or flammable compressed gas cylinders between the AIS and South 1000 in West 30 or within 100 ft of bulkhead 303 on the North ventilation side, and no use in these locations during CH waste handling operations</p> <p>Transporters loaded with waste in the underground shall maintain greater than 75 ft separation between them. This separation distance does not apply if a transporter becomes disabled while loaded with waste and it is necessary to either move another loaded transporter past or move waste from a disabled transporter to another transporter. If this situation occurs, a fire watch is required.</p> <p>The lube truck is not allowed in the disposal circuit during waste handling.</p>	SAC	Prevents fires that may result from collisions between vehicles. Prevents construction activities from impacting waste in transit from the waste shaft station to the active disposal room. Prevents collisions between waste handling and non-waste handling equipment during waste handling operation. Prevents fires/explosions from impacting waste.	HA Events UG1-1, UG1-4, UG1-5, UG1-6, UG1-7, UG2-1, UG3-4, and UG3-5 AA CH-5

Basis:

The purpose of this requirement is to prevent vehicles from breaching the WHB wall and impacting CH WASTE stored in the SW corner of the CH BAY.

5.6.5 Combustible Loading Control Program - DISPOSAL PATH

a. **AC Statement:** The following requirements for combustible loading control in the DISPOSAL PATH shall be met:

- Only diesel or electrically powered vehicles are used in the UNDERGROUND
- When CH WASTE is in transit, vehicles not performing CH WASTE HANDLING OPERATIONS shall be moved to a cross-cut and be secured until the CH WASTE transporter has passed and is greater than 75 ft away. Vehicles that may have become disabled (excluding the lube truck) may be in the DISPOSAL PATH but must be secured along the wall of the DISPOSAL PATH.
- No combustibles or flammable gas/liquid or flammable compressed gas cylinders shall be stored in the DISPOSAL PATH. (Note: a disabled vehicle is not considered to be in storage.)
- No flammable gas/liquid or flammable compressed gas cylinders shall be used in the DISPOSAL PATH during CH WASTE HANDLING OPERATIONS.
- Transporters loaded with CH WASTE in the UNDERGROUND shall maintain greater than 75 ft separation between them. This separation distance does not apply if a transporter becomes disabled while loaded with CH WASTE and it is necessary to either move another loaded transporter past or move CH WASTE from a disabled transporter to another transporter. If this situation occurs, a FIRE WATCH is required.
- The lube truck shall not be allowed in the DISPOSAL PATH while CH WASTE is in transit from the waste shaft station to an ACTIVE DISPOSAL ROOM.
- No flammable gas/liquid or flammable compressed gas cylinders stored between the air intake shaft and South 1000 in West 30 or on the North ventilation side within 100 ft of bulkhead 303 and no use in these locations during CH WASTE HANDLING OPERATIONS.
- ~~No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH WASTE HANDLING OPERATIONS.~~

Combustible Loading Control Program - Disposal Path

The SAC for a combustible loading control program, as it applies to the disposal path, places limits on the amount and location of flammable material in order to reduce the likelihood of a fire in the disposal path in the underground area. The program prohibits storage of flammable gas and flammable compressed gas cylinders in the disposal path and prevents their use during waste handling. This also includes prohibitions on the storage or use flammable gas in construction areas that are close to the waste transport path including bulkhead 309 in West 30 ~~and between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste transit from the waste shaft station to the active disposal room~~, and between the Air Intake Shaft and South 1000 in West 30 and within 100 ft of bulkhead 303 on the north ventilation side. This program is supplemented by waste handling restrictions that imposing standoff distances and other controls to prevents collisions between waste handling equipment and non-waste handling equipment during waste handling operations and the automatic/manual fire suppression system on RH waste handling equipment.

Combustible Loading Control Program - Disposal Room

The SAC for a combustible loading control program, as it applies to the disposal room, prohibits storage of flammable gas and flammable compressed gas cylinders in the active RH disposal room and prohibits their use during waste handling in the active disposal room and prohibits the lube truck from the active RH disposal room. The program also limits equipment used in the underground to be powered either electrically or by diesel. This program is supplemented by waste handling restrictions that impose standoff distances and use of a spotter to prevent collisions with the CH disposal array that could result in fire with the potential to breach RH or RH and CH waste.

Waste Handling Restrictions

Waste handling restrictions limit the amount of RH waste stored within the RH portion of the WHB (see Table 5.1 for the specifics), specifies that loaded 10-160B shipping cask cannot be left unattended in the RH bay with the lid bolts loosened and shall only be stored in the CUR with the CUR shield door closed when the lid bolts are removed, restricts the removal of RH waste from a shipping cask to be performed only within the shielded hot cell complex, and ensures that RH waste is only transported to the underground using the waste hoist and is not moved outside the disposal path in the underground. Additional restrictions requires use of a spotter when backing the RH transportation trailers into the RH bay, requires use of a spotter when operating any vehicle within 15 ft of the common RH/CH wall when waste is present in the NE corner of the CH bay, requires a verification of canister weight to determine whether the maintenance platform may be left on the waste shaft conveyance prior to loading the facility cask onto the conveyance to prevent overloading the waste hoist, restricting worker access from E-300 in the underground during waste handling, requiring a spotter when operating the 41-ton forklift loaded with waste, and requiring a spotter when operating the 41-ton, 20-ton, or 6-ton RH waste handling forklifts near the CH disposal array. Waste handling restrictions also specifies the distance boreholes are placed from the corners of salt pillars that separate the disposal room, that they are placed on 8 ft. center-to-center spacing, and requires placement of a shield plug in a borehole prior to removal of the facility cask from the HERE when a waste canister is already in the borehole. Waste handling restrictions will also require that drum carriages loaded with RH waste shall be carried over and stored on the concrete portion or the upper hot cell floor. Facility canisters loaded with RH waste are carried over the concrete portion of the upper hot cell floor and are only stored in the upper hot cell canister storage wells. A full listing of the restrictions is included in Table 5.1-1 with the safety function provided and the associated hazard event that it prevents.

Table 5-1 Summary of TSR Controls and Design Features

Control	Operating Limits Required	Safety Function	Selection Basis
<p>Combustible Loading Control Program - Disposal Path</p> <p>Only diesel or electric powered vehicles are allowed in the underground.</p> <p>No storage of combustibles, flammable gas or flammable compressed gas cylinders in the waste disposal path from the waste shaft station to the active disposal room.</p> <p>No use of flammable gas cylinders in the disposal path during waste handling. No use of flammable compressed gas cylinders in the construction area at bulkhead 309 in West 30 and between the disposal panel supply overcast and the bulkhead to the south in East 300 during waste handling in the underground. No flammable gas or flammable gas cylinders stored between the Air Intake Shaft and South 1000 in West 30 or within 100 ft of bulkhead 303 on the north ventilation side during waste handling. No storage of flammable gas or flammable compressed gas cylinders in those areas.</p> <p>The lube truck is not allowed in the waste transport path circuit during waste handling.</p>	SAC	<p>Reduce the frequency of and severity of fires in the disposal path.</p> <p>Prevents fires and explosion/fires in the disposal path</p> <p>Prevents introduction of fire sources and explosives to disposal areas from construction areas.</p> <p>Prevents fire source in the disposal path</p>	HA Events UG1-1, UG1-2, UG1-3, UG1-4, UG2-1,UG2-2

- No combustibles, flammable gas, or flammable compressed gas cylinders shall be stored in the DISPOSAL PATH. (Note: a disabled vehicle is not considered to be in storage.)
- No flammable gas or flammable compressed gas cylinders shall be used in the DISPOSAL PATH during RH WASTE HANDLING OPERATIONS.
- The RH 41-ton waste handling forklift with WASTE and a loaded CH WASTE transporter must maintain at least 75 ft. separation between each other during transport of WASTE in the DISPOSAL PATH. This separation distance does not apply if either waste handling vehicle becomes disabled while loaded with WASTE and it is necessary to move the other vehicle past the disabled vehicle. If this occurs a FIRE WATCH is required to move a vehicle loaded with WASTE past another vehicle loaded with WASTE.
- The lube truck shall not be allowed in the DISPOSAL PATH while RH WASTE is in transit from the waste shaft station to the ACTIVE RH DISPOSAL ROOM.
- No flammable gas or flammable gas cylinders stored between air intake shaft and South 1000 in West 30 or on the North ventilation side within 100 ft. of bulkhead 303.
- No construction work involving flammable gas cylinders at bulkhead 309 during RH WASTE HANDLING OPERATIONS.
- † ~~• No construction work involving flammable gas between the disposal panel supply overcast and the construction bulkhead to the south in E-300 during RH WASTE HANDLING OPERATIONS. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during RH WASTE HANDLING OPERATIONS.~~

Basis:

The purpose of these requirements is to prevent fires and flammable gas explosions in the DISPOSAL PATH or other areas with the potential to affect RH WASTE in the DISPOSAL PATH. In addition, these requirements prevent vehicle collisions that could result in a fire during RH WASTE HANDLING OPERATIONS with the potential to impact RH or CH WASTE.

5.6.6 Combustible Loading Control Program - ACTIVE RH DISPOSAL ROOM

AC Statement: The following requirements for combustible loading control in the ACTIVE RH DISPOSAL ROOM shall be met:

- No non-waste handling vehicles are allowed in the ACTIVE RH DISPOSAL ROOM during RH WASTE HANDLING OPERATIONS.
- No flammable gas or flammable compressed gas cylinders shall be used in the ACTIVE RH DISPOSAL ROOM without a FIRE WATCH being posted.
- No use of flammable gas or flammable compressed gas cylinders in the ACTIVE RH DISPOSAL ROOM during RH WASTE HANDLING OPERATIONS.
- No flammable gas and flammable gas cylinders shall be stored in the ACTIVE RH DISPOSAL ROOM.
- The lube truck shall not be allowed in the ACTIVE RH DISPOSAL ROOM.

Justification for RH and CH TSR/DSA Page Changes 2008-001 to Add Panel 5 to the Disposal Ventilation Circuit

The attached page changes to the RH and CH DSAs and TSRs are required to allow panel 5 to be moved from the construction ventilation circuit to the disposal ventilation circuit.

To allow the facility change to be made, it is proposed that the following portions of CH and RH TSRs 5.6.5 be eliminated:

CH TSR 5.6.5

No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH WASTE HANDLING OPERATIONS.

RH TSR 5.6.5

No construction work involving flammable gas between the disposal panel supply overcast and the construction bulkhead to the south in E-300 during RH WASTE HANDLING OPERATIONS. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during RH WASTE HANDLING OPERATIONS.

Justification for Elimination:

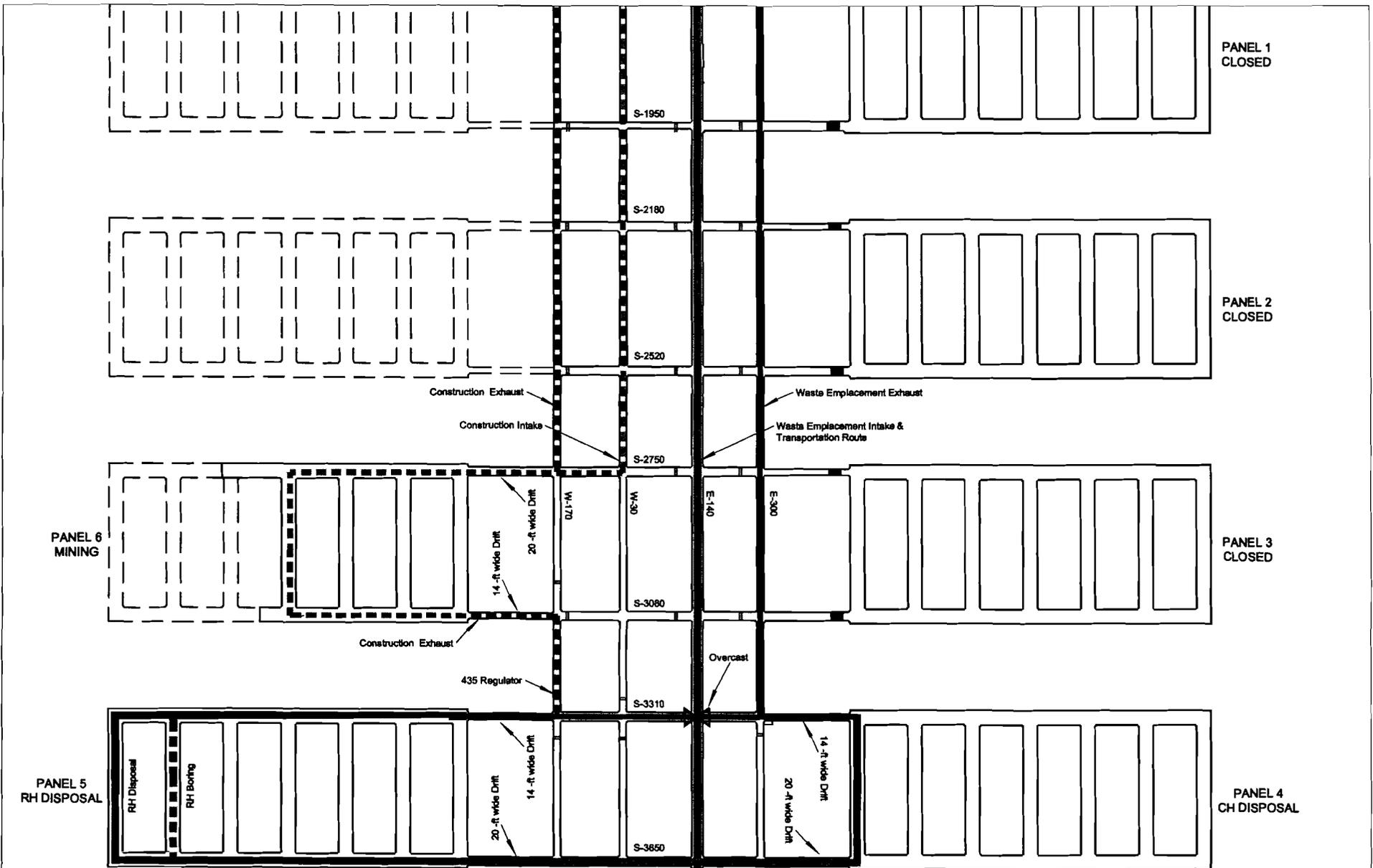
These TSR requirements were appropriate during construction of panels 3 and 4 as construction activities could occur near the supply overcast for panels 2 and 3. Waste traversed through the overcast to enter the active disposal panel. Further, during construction of panel 5 construction activities near the overcast at E-140/S-3310 had the potential to impact waste being transported through the overcast enroute to panel 4.

For panels 5 through 8 this part of the TSR is no longer required. Only two overcasts are proposed to facilitate mining panels 6 through 8, the one already installed at E-140/S3310 and one yet to be installed at S2180 which are used to divert exhaust air. The proposed ventilation changes to accommodate mining new panels 5 through 8 and moving completed panels into the disposal ventilation circuit are shown in Figures 1 through 6.

Justification for RH and CH TSR/DSA Page Changes 2008-001 to Add Panel 5 to the Disposal Ventilation Circuit

Figures 2 and 3 show that when panel 5 is added to the disposal ventilation circuit, there is no longer construction activities near the overcast at E-140/S-3310 that could impact waste traversing through the overcast. Figure 5 shows that when panel 6 is added to the disposal circuit, the panel supply will be separated from construction by bulkheads in W-30 and W170 just north of S-2750. Similarly, panels 7 and 8 will be added to the disposal circuit when mining is complete in much the same way as panels 5 and 6 will be added.

Historically, through panels 1 through 5, there was very little construction activity near the supply overcasts such that the TSR control to protect waste traversing through those supply overcasts from fires and explosions on the other side of the overcast were unnecessarily conservative. The control of flammable gas/liquid and flammable compressed gas in the waste transport path provide the necessary and sufficient control to protect waste.



Proposed Configuration

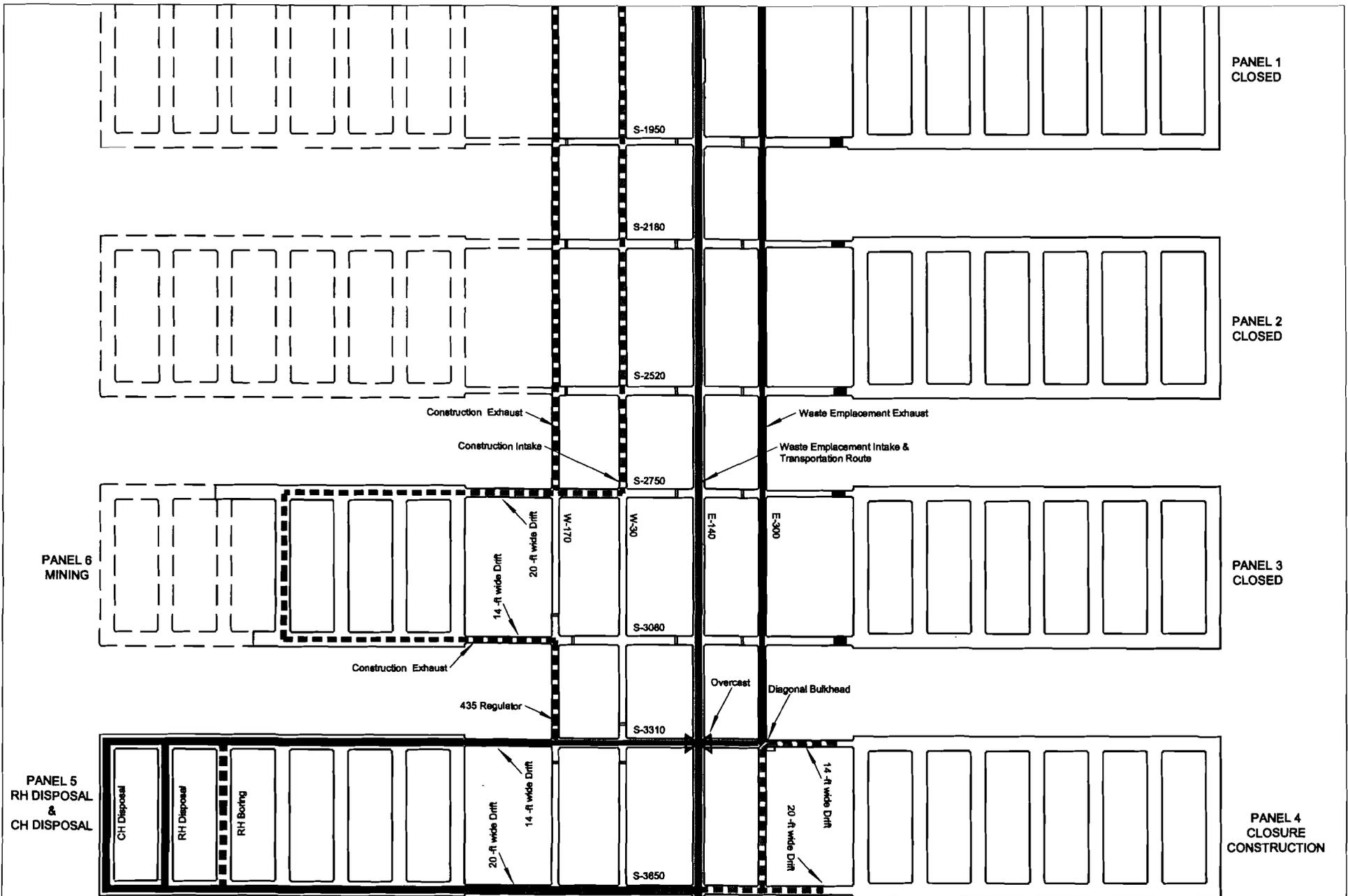
Proposal

- 1) For Panel 5, make S-3650 the intake and waste transportation route.
- 2) For Panel 5 make S-3310 the exhaust drift and install an overcast in S-3310 at E-140 to allow the exhaust and intakes to cross.

This would make S-3650 from W-170 to Room 1 Panel 5 20 feet wide and S-3310 would be 14 feet wide.

Revision 1

Figure 1



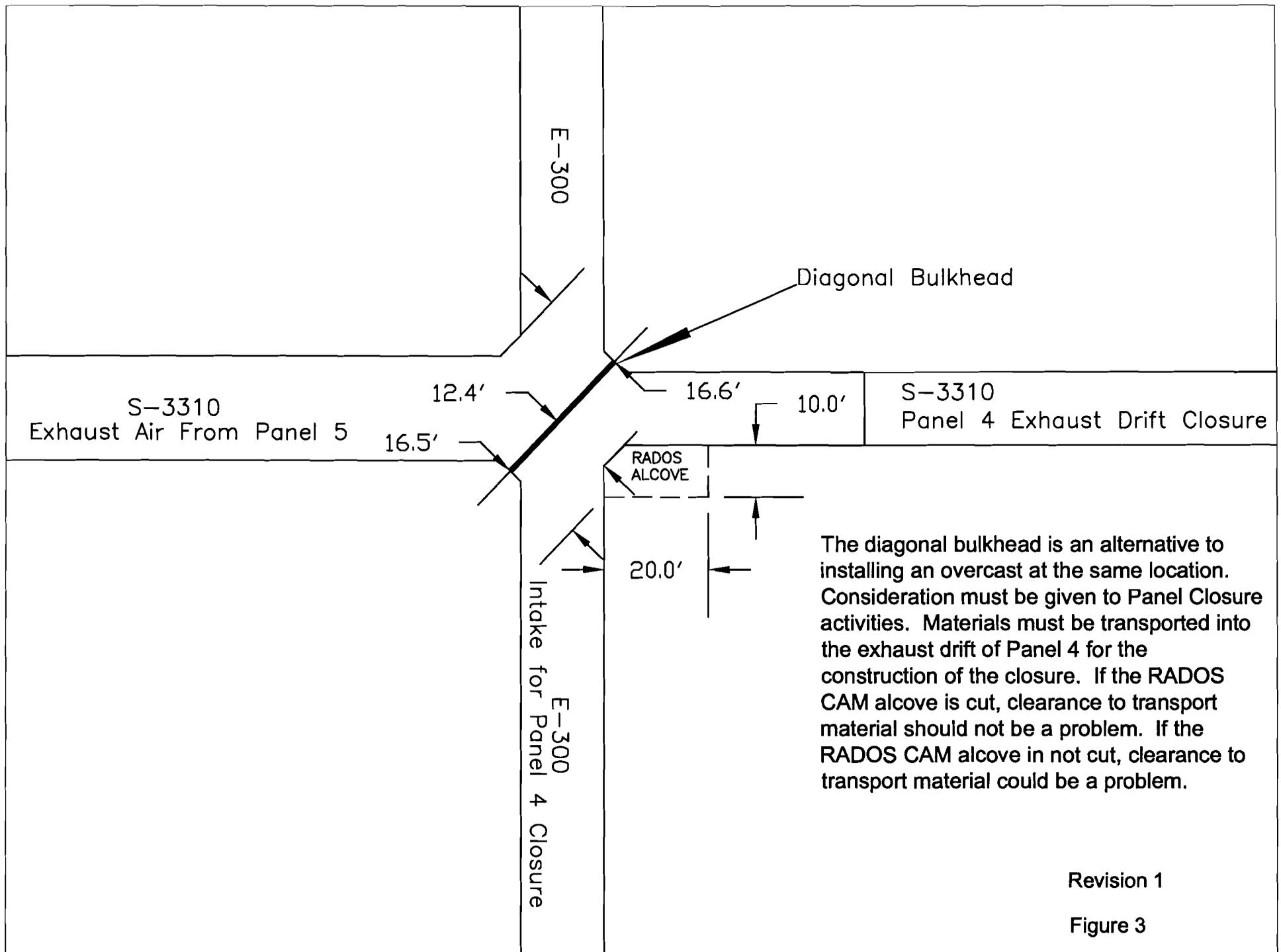
Proposed Configuration

Proposal

When it is time for construction of the Panel 4 Closure, a diagonal bulkhead must be installed in S-3310 at E-300. This bulkhead will allow construction of the exhaust closure in intake air.

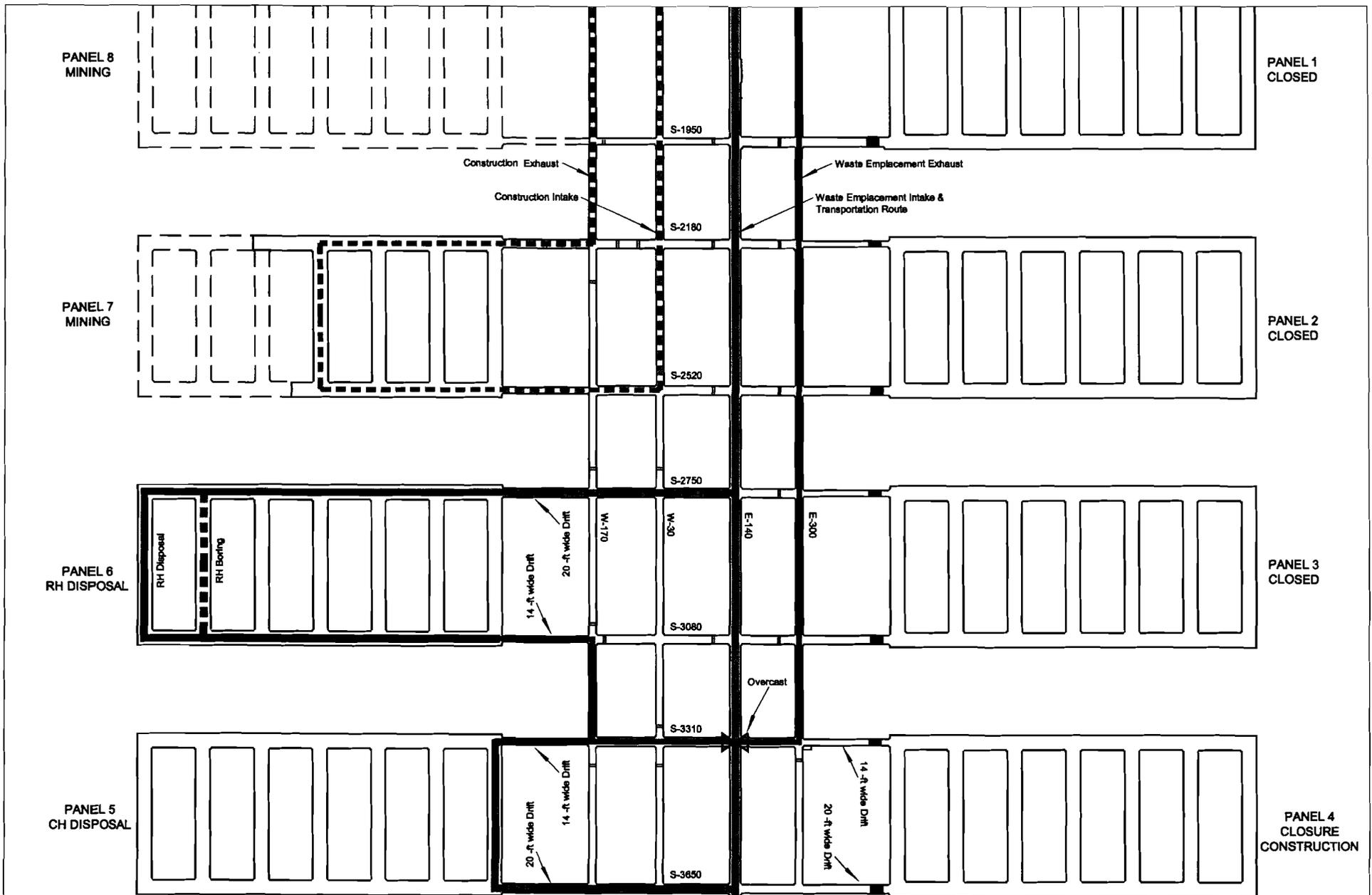
Revision 1

Figure 2



Revision 1

Figure 3



Proposed Configuration

Proposal

For waste disposal in Panel 6 the intake and exhaust will be as currently configured. Exhaust air will travel from S-2750 to S-3310 in W-170. Then over the overcast in S-3310 at E-140 and into E-300. The diagonal bulkhead in S-3310 at E-300 is removed at completion of the Panel 4 Closure.

Revision 1

Figure 4



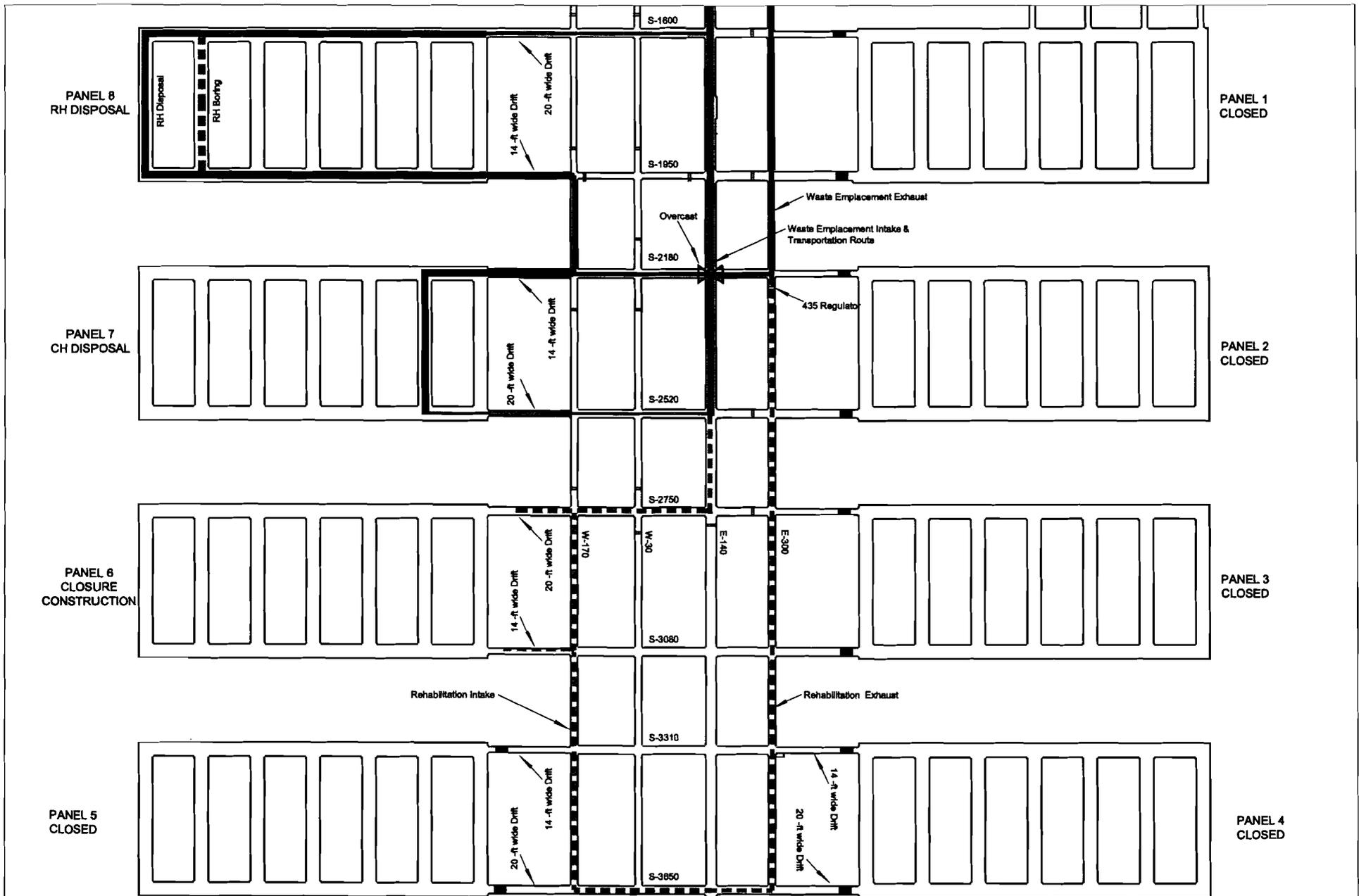
Proposed Configuration

Proposal

For waste disposal in Panel 7 the intake will be S-2520 and exhaust air will travel through S-2180, over an overcast at E-140 and into E-300. The diagonal bulkhead in S-3310 at E-300 will be removed at completion of the Panel 4 Closure.

Revision 1

Figure 5



Proposed Configuration

Proposal

For waste disposal in Panel 8 the intake will be S-1600 and the exhaust will be S-1950. Exhaust air will travel from S-1950 to S-2180 in W-170. Then over the overcast in S-2180 at E-140 and into E-300. Intake air will also be distributed for Panel Closure construction and widening of Panel 9 entries to 33 feet to accommodate RH emplacement.

Revision 1

Figure 6

1.0 INTRODUCTION

This Safety Evaluation Report (SER) addresses the collective changes within Page Change 2008-001 requests to the Waste Isolation Pilot Plant (WIPP) Contact Handled (CH) Waste Documented Safety Analysis (DSA), Revision 10; Remote Handled (RH) Waste DSA, Revision 0; CH Technical Safety Requirements (TSRs), Revision 10; and RH TSRs, Revision 0, as submitted in the Washington TRU Solutions, LLC (WTS) memorandum (AA:08:00744, dated April 17, 2008) to Dr. David C. Moody, Manager, Carlsbad Field Office (CBFO), requesting Department of Energy (DOE) approval of Page Changes to the CH and RH DSAs and TSRs. This request results from the need to add Panel 5 to the Disposal Ventilation Circuit and to modify the Underground Ventilation components in order to accommodate this change and to make corresponding changes to the combustible loading control and flammable liquid control programs credited in both the CH and RH DSAs as analyzed in Chapter 3, and as described in Chapters 4 and 5 of both DSAs.

The text changes to be incorporated in the CH DSA sections summarize several revisions affecting underground fire and explosion with fire events, Combustible Loading Control Program, flammable liquid and flammable gas control requirements, the associated CH TSR-prescribed Specific Administrative Controls (SACs), and the similar set of text changes in the RH DSA, Revision 0, which described underground fire and explosion with fire events and the associated RH TSR, Revision 0, SAC.

The following page changes for the CH DSA, Revision 10, and the CH TSR, Revision 10, are attached to facilitate DOE's review and approval of all CH-related page changes:

- DOE/WIPP-95-2065, CH DSA, Revision 10, Chapter 3, page 3-39, section 3.4.2.2.5, associated with events UG1-4 and UG1-5 (a single line-through deletion)
- CH DSA, Chapter 3, page 3-40, section 3.4.2.2.5, associated with event UG1-1 (a single line-through deletion)
- CH DSA, Chapter 3, page 3-44, section 3.4.2.5.5, associated with event UG2-1 (a single line-through deletion)
- CH DSA, Chapter 3, Table A-13, page 3-166, associated with event UG1-1 (a single line-through deletion)
- CH DSA, Chapter 3, Table A-13, page 3-170, associated with event UG1-4 (a single line-through deletion)
- CH DSA, Chapter 3, Table A-13, page 3-172, associated with event UG2-1 (a single line-through deletion)
- CH DSA, Chapter 3, Table A-14, page 3-186, associated with event UG1-1 (a single line-through deletion)
- CH DSA, Chapter 3, Table A-14, page 3-192, associated with event UG1-4 (a single line-through deletion)

- CH DSA, Chapter 3, Table A-14, page 3-194, associated with event UG2-1 (a single line-through deletion)
- CH DSA, Chapter 4, Section 4.5.5.3 text, page 4-29, associated with SACs (a single line-through deletion)
- CH DSA, Chapter 4, Table 4.5-1, page 4-56, associated with the Combustible Loading Control Program – Disposal Path-related SAC requirements for several underground fire events (a single line-through deletion)
- CH DSA, Chapter 5, Table 5-1, page 5-28, associated with the Combustible Loading Control Program – Disposal Path-related SAC requirements for several underground fire events (a single line-through deletion)
- DOE/WIPP-95-2125, Revision 10, CH TSR, Specific Administrative Control 5.6.5.a, entire statement ordered as the eighth bullet, page 5-14, associated with the Combustible Loading Control Program – Disposal Path related requirements (a single line-through deletion)

No new text or controls are proposed to be added to any CH DSA or TSR sections.

Likewise, the following page changes for the RH DSA, Revision 0, and the RH TSR, Revision 0 are attached to facilitate DOE's review and approval of all RH related page changes:

- DOE/WIPP-06-3174, RH DSA, Revision 0, Chapter 5, text on page 5-20, associated with the Combustible Loading Control Program – Disposal Path requirements (a single line-through deletion)
- RH DSA, Chapter 5, Table 5-1, page 5-37, associated with the SAC for Combustible Loading Control Program – Disposal Path (a single line-through deletion)
- DOE/WIPP-06-3178, RH TSR, Revision 0, SAC text 5.6.5, page 5-16, entire statement ordered as the last bullet, associated with the Combustible Loading Control Program – Disposal Path requirements (a single line-through deletion)

Similarly, no new text is proposed to be added to any RH DSA or TSR sections.

2.0 REVIEW PROCESS

Incorporation of these changes is recommended to the Approval Authority based upon review of the specific changes and their supporting documentation by the CBFO staff, with assistance from the CBFO Technical Assistance Contractor (CTAC). This involved (1) verification of the technical accuracy, completeness, and defensibility of the proposed underground ventilation changes prior to transitioning Panel 5, and (2) verifying that the TSR changes are consistent with the derivation of controls in both the CH DSA, Revision 10, and the RH TRU DSA, Revision 0. This SER is prepared in accordance with the guidance provided in DOE-STD-1104-96, *Review and Approval of Nonreactor Nuclear Facility Safety Analysis Reports* (Change Notice 3). This review provides the Director, Deputy Assistant Secretary, Safety Management and Operations,

DOE Office of Environmental Management (Approval Authority), with the basis for approval of these changes.

3.0 APPROVAL BASES

The page changes covered by this SER are required due to normally planned and sequenced project changes in the underground configuration as the emplacement of transuranic (TRU)-mixed waste continues at the WIPP.

The twelve proposed and necessary page changes to the CH DSA and the one change to the CH TSR were made in both safety basis documents. The changes impact Chapters 3, 4, and 5 of Revision 10 of the CH DSA, as well as a single portion of CH TSR, Revision 10, that being a single statement within CH TSR 5.6.5.a, eliminated in order to allow for the transition of Panel 5 to the Disposal Ventilation Circuit. Similarly, the two proposed and necessary page changes to the RH DSA and the one change to the RH TSR were made in both safety basis documents. Both sets of changes were previously described in the Section 1.0, Introduction, of this SER.

To allow the facility change to be made, the following portions of CH and RH TSRs 5.6.5 would be eliminated.

CH TSR 5.6.5

“No storage of flammable gas/liquid or flammable compressed gas cylinders near the panel supply ventilation overcast and no construction work involving flammable gas/liquid or flammable compressed gas cylinders between the disposal panel supply overcast and the construction bulkhead to the south in East 300 during waste handling operations. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during CH WASTE HANDLING OPERATIONS.”

RH TSR 5.6.5

“No construction work involving flammable gas between the disposal panel supply overcast and the construction bulkhead to the south in E-300 during RH WASTE HANDLING OPERATIONS. When panel 4 is added to the disposal path no construction work involving flammable gas/liquid or flammable compressed gas cylinders is allowed between the overcast at E-140/S-3310 and the construction bulkhead to the west of this overcast in S-3310 during RH WASTE HANDLING OPERATIONS.”

These similar CH and RH TSR requirements were appropriate during construction of Panels 3 and 4, as construction activities could occur near the supply overcast for Panels 2 and 3. Waste traversed through the overcast to enter the active disposal panel. Further, during construction of Panel 5, construction activities near the overcast at E-140/S-3310 had the potential to impact waste being transported through the overcast while in route to Panel 4.

For Panels 5 through 8, this part of the TSR is no longer required. Only two overcasts are proposed to facilitate mining Panels 6 through 8, the one already installed at E-140/S3310 and one yet to be installed at E-140/S2180 necessary to divert exhaust air. The proposed ventilation changes to accommodate mining new Panels 5 through 8 and moving completed panels into the disposal ventilation circuit are shown in sequence in Figures 1, 3, 4, 5, and 6 of the WTS Page Change Request Submittal, attached.

Further, Figures 2 and 3 of the request package demonstrates that when Panel 5 is added to the disposal ventilation circuit, there would no longer be construction activities near the overcast at E-140/S-3310 that could impact waste traversing through the overcast. Figure 5 shows that when Panel 6 is added to the disposal circuit, the Panel supply will be separated from construction by bulkheads in W-30 and W-170, just north of S-2750. Similarly, Panels 7 and 8 will be added to the disposal circuit when mining is complete in much the same way as Panels 5 and 6 will be added.

WIPP practices to date document that through the mining of Panels 1 through 5, there was very little construction activity near the supply overcasts such that the TSR controls to protect waste traversing through those supply overcasts from fires and explosions on the other side of the overcast were not necessary. The control of flammable gas and liquid and flammable compressed gas in the waste transport path provide the necessary and sufficient control to protect waste.

4.0 RESULTS

The review resulted in confirmation that the CH TSR, Revision 10, is accurate and complete, and is consistent with the CH DSA, Revision 10, Chapters 3, 4, and 5, as modified by Change 2008-01, and with the TSRs as discussed above. The review also resulted in the confirmation that the RH TSR, Revision 0, is accurate and complete, and is consistent with the RH DSA, Revision 0, Chapters 3, 4, and 5, with only Chapter 5 being modified (by Change 2008-01), and with the TSR as discussed above.

It is the judgment of the reviewers that the CH DSA, Revision 10 changes (Page Changes 2008-01), the CH TRS, Revision 0 changes (Page Change 2008-01), the RH DSA Revision 0, changes (Page Change 2008-001), and the RH TSR Revision 0, change (Page Change 2008-01) meet the 10 CFR 830 Subpart B requirements and are consistent with DOE guidance, and that the implementation of these TSR changes are appropriate for the contractor to operate as established by the safety basis.

5.0 CONDITION OF APPROVAL

No conditions of approval are necessary for Page Change 2008-001 to the CH DSA and CH TSRs and the RH DSA and the RH TSRs.

6.0 CONCLUSIONS

Based on the reviewers' assessment of Change 2008-01 to Revision 10 of the CH DSA and CH TSRs, and to Revision 0 of the RH DSA and RH TSRs, and the evaluation of the Approval

Authority, it is concluded that the page changes are consistent with the derivation of controls in the CH and RH Waste DSAs. Page Change 2008-001 to Revision 10 of the CH DSA and TSRs, and to Revision 0 of the RH DSA and RH TSRs, are thus approved.

SER Attachments
WTS Page Changes Request Submittal

1. Page 2008-001; Modified pages with changes highlighted of the approved WIPP CH and RH Safety Basis Documents
2. Justification for RH and CH TSR/DSA Page Changes 2008-001 to Add Panel 5 to the Disposal Ventilation Circuit (includes figures referenced in the SER text)