R10007444

DOCUMENT INFORMATION

Sheet 1 of 1

The following information is required when submitting a document to PDC for issuance.	**Correspondence (CCN) No:** 057212 **Document No:** **Rev:**

Project Information (Check Applicable Box)

☐ Balance of Facilities ☐ HLW Vitrification ☐ Analytical Laboratory ☒ Across all areas

☐ Pretreatment ☐ LAW Vitrification ☐ External Interfaces

Document is applicable to ALARA? ☐ Yes ☒ No

Applicability to ALARA means that the item has the potential to affect doses, contamination levels, or releases to the environment. (See 24590-WTP-GPP-SRAD-002, *Application of ALARA in the Design Process*, sections 4.1 and 4.2 for more information.)

Subject code(s): 4152 (for correspondence only)

ACTION ITEM INFORMATION (for correspondence other than meeting minutes)

Commitments: ☒ Yes ☐ No (if yes, brief description below)

After DOE approval of ABAR 24590-WTP-ABAR-ENS-02-014, Revision 1, closeout DTD.

Tracked by RITS

Commitment Owed to: Don Scribner Due Date: 8/1/03

Actionee(s)			
	Dave Houghton		

Tracked by PADC

Written Response Required: ☐ Yes ☒ No

Owed to: Due Date:

This correspondence closes action on Correspondence Number

☐ Subcontract Files Copies

☐ PAAA Coordinator MS14-4B

☐ Contains SENSITIVE Information

Additional Departmental Info (to facilitate keyword search)

Internal ☐ DNFSB ☐ ORP ☒ OSR ☒ WDOE ☐ WDOH ☐ Other

Special Instructions for PDC

Document links:

24590-WTP-DTD-CSA-03-001, Rev. 0

24590-WTP-ABAR-ENS-02-014, Rev. 1

24590-WTP-SE-ENS-02-055, Rev. 1

24590-WTP-SRD-ESH-01-001-02

4/29/03

☒ Processed Data Entry ☐ Copied QA ☐ Scanned ☐ Filed

Concurrence Sheet

 DH 4/28/03

CCN: 057212

Required Reviewers

Title	Name	Concurrence required (Check appropriately)	Initials	Date
Project Manager	J. P. Betts	☒	see attached	
Operations Manager	S. F. Piccolo	☐		
Engineering Manager	R. J. Tosetti	☐		
Environmental & Nuclear Safety	F. Beranek	☒	NA/F13	4/24/03
Construction Manager	T. L. Horst	☐		
Project Controls Manager	D. S. Hardin	☐		
Business Manager	C. E. Rogers	☑	CR	4/29/03
Contracts Manager	A. R. Veirup	☒	AV	4/28/03
Project QA Manager	G. T. Shell	☐		
HLW Area Project Manager	P. W. Schuetz	☐		
LAW Area Project Manager	W. Clements	☐		
Pretreatment Area Project Manager	R. E. Lawrence	☐		
BOF Area Project Manager	J. Q. Hicks	☐		
Interface Management Manager	T. M. Brown	☐		
Lab Area Project Manager	P. J. Keuhlen	☐		
Process Operations	K. J. Rueter	☐		
Research and Technology	W. L. Tamosaitis	☐		
Commissioning	M. N. Brosee	☐		
Acquisition Services Manager	K. M. Chalmers	☐		
BNI Legal	D. M. Curtis	☐		
Project Manager Special Project 14-3C	H. N. Taylor	☐		

Additional Reviewers

Title	Name	Initials	Date
N/A if None			

W. R. Spezialetti	W R Spezialetti	4/24/03
Print/Type Applicable Line Manager's Name	*Signature*	*Date*
M. A. Platt	Mark Platt	4/24/03
Print/Type Originator's Name	*Signature*	*Date*

Page 2 of 2

HOT
Due to ORP
by Wed., 4-30

Concurrence Sheet

CCN: 057212

Required Reviewers

Title	Name	Concurrence required (Check appropriately)	Initials	Date
Project Manager	J. P. Betts	☒	JPB	4/28/03
Operations Manager	S. F. Piccolo	☐		
Engineering Manager	R. J. Tonetti	☐		
Environmental & Nuclear Safety	F. Beranek	☒	FBERANEK	4/24/03
Construction Manager	T. L. Horst	☐		
Project Controls Manager	D. S. Hardin	☐		
Business Manager	C. B. Rogers	☐		
Contracts Manager	A. R. Veirup	☒	ARV	4/28/03
Project QA Manager	G. T. Shell	☐		
HLW Area Project Manager	P. W. Schuetz	☐		
LAW Area Project Manager	W. Clements	☐		
Pretreatment Area Project Manager	R. E. Lawrence	☐		
BOF Area Project Manager	J. Q. Hicks	☐		
Interface Management Manager	T. M. Brown	☐		
Lab Area Project Manager	P. J. Keuhlen	☐		
Process Operations	K. J. Rueter	☐		
Research and Technology	W. L. Tamosaitis	☐		
Commissioning	M. N. Brosee	☐		
Acquisition Services Manager	K. M. Chalmers	☐		
BNI Legal	D. M. Curtis	☐		
Project Manager Special Project 14-3C	H. N. Taylor	☐		

Additional Reviewers

Title	Name	Initials	Date
N/A if None			

W. R. Spezialetti	WRSpezialetti	4/24/03
Print/Type Applicable Line Manager's Name	*Signature*	*Date*
M. A. Platt	MAPlatt	4/24/03
Print/Type Originator's Name	*Signature*	*Date*

U.S. Department of Energy
Office of River Protection
Mr. R. J. Schepens
Manager
P.O. Box 450, MSIN H6-60
Richland, Washington 99352

CCN: 057212

APR 2 9 2003

Dear Mr. Schepens:

CONTRACT NO. DE-AC27-01RV14136 – DECISION TO DEVIATE FROM THE AUTHORIZATION BASIS FOR THE HANFORD TANK WASTE TREATMENT AND IMMOBILIZATION PLANT

The purpose of this letter is to provide notification to U.S. Department of Energy, Safety Regulation Division (OSR) of a decision to deviate (DTD) from the authorization basis (AB) for the Hanford Tank Waste Treatment and Immobilization Plant. This DTD is being processed in accordance with the Integrated Safety Management Plan (ISMP) Section 3.3.3.3 and project procedures. This letter satisfies the 72-hour written notification requirement.

The DTD (Attachment 1) describes a deviation from the *Safety Requirements Document Volume II* (SRD), 24590-WTP-SRD-ESH-01-001-02, Revision 2f, Appendix C, Section 6.0. The specific deviation from the AB is to proceed with procurement of special protective coatings with potential heat requirement greater than 3,500 btu/lb, a limit directed by the currently applicable SRD standard NFPA 801-95, as tailored by NFPA 801-98. An SRD change will be processed to replace NFPA 801-95 (and the part of 801-95 tailored by 801-98) with NFPA 801-2003. This newer standard eliminates potential heat requirements as a consideration for special protective coatings.

In association with this DTD, an Authorization Basis Amendment Request (ABAR) 24590-WTP-ABAR-ENS-02-014, Revision 1, has been initiated to change the SRD consistent with this DTD and effectively correct the deviation. The ABAR will be submitted for OSR approval on or about April 30, 2003. Approval of this ABAR is requested by July 23, 2003, to meet ISMP and procedural requirements to correct the AB deviation within 90 days. The safety evaluation performed for the ABAR has also been provided with this DTD (Attachment 2) as assurance that the deviation from the AB is safe.

This DTD will be tracked in the Recommendation and Improvement Tracking System to ensure attention to process and closure schedules.

This deviation has been discussed with Mr. Lew Miller of OSR.

CCN: 057212

Please contact Mr. Mark Platt at 371-3589 for any questions or comments on this transmittal.

Very truly yours,

R. F. Naventi
Project Director

MP/slr

Attachments: 1) Decision to Deviate 24590-WTP-DTD-CSA-03-001, Revision 0
2) Safety Evaluation 24590-WTP-SE-ENS-02-055, Revision 1

cc:

Barr, R. C. w/a (1 hard copy and 1 electronic copy)	OSR	H6-60
Barrett, M. K. w/o	ORP	H6-60
Beranek, F. w/o	WTP	MS4-A1
Coutts, T. R. w/a	WTP	MS4-B2
DeGarmo, T. w/a	WTP	MS4-C1
DOE Correspondence Control w/a	ORP	H6-60
Duke, J. D. w/a	WTP	MS4-B1
Ensign, K. R. w/o	ORP	H6-60
Erickson, L. w/o	ORP	H6-60
Gibson, K. D. w/a	WTP	MS4-B1
Hamel, W. F. w/o	ORP	H6-60
Hanson, A. J. w/o	ORP	H6-60
Houghton, D. w/a	WTP	MS4-B2
Klein, D. A. w/o	WTP	MS4-A1
PDC w/a	WTP	MS11-B
Platt, M. A. w/a	WTP	MS4-B1
QA Project Files w/a	WTP	MS14-4B
Ryan, T. B. w/a	WTP	MS4-B1
Scribner, D. w/a	WTP	MS4-B2
Spezialetti, W. R. w/o	WTP	MS4-B1
Taylor, W. J. w/a	ORP	H6-60
Tosetti, R. J. w/o	WTP	MS4-A2
Veirup, A. R. w/o	WTP	MS14-3B

Attachment 1

Decision to Deviate
24590-WTP-DTD-CSA-03-001, Revision 0

Decision to Deviate from the Authorization Basis

DTD No: 24590-WTP-DTD-CSA-03-001 Rev No: 0

The approvers of this form have determined that it is critical to project progress to temporarily deviate from the Authorization Basis (AB) as allowed in RL/REG-97-13. This temporary situation will be corrected no later than 90 days from the date this form is approved by the Area Project Manager. Environmental and Nuclear Safety (E&NS) is responsible for notifying DOE verbally within 24 hours, and in writing (including a copy of this form) within 72 working hours, after the DTD is approved.

Safety Evaluation No. 24590-WTP-SE-ENS-02-55, Rev. 1

Identify the specific design changes that are not in compliance with the AB (include the document numbers of affected design documents).

The current issued special protective coating specifications contain candidate coating materials that cannot comply with the current WTP project Potential Heat Requirements of 3500 btu/lb for interior finishes in areas processing or storing radioactive materials. To support the placement of major equipment, the status of these coating materials currently listed in the two field coating specifications as candidate materials, must be changed to prequalified materials to allow the field coating subcontractor to procure materials.

Affected Design Documents		
Number	**Rev.**	**Title**
24590-WTP-3PS-AFPS-T001	0	Shop Applied Special Protective Coatings for Steel Items and Equipment
24590-WTP-3PS-AFPS-T003	0	Field Applied Special Protective Coatings for Steel Items and Equipment
24590-WTP-3PS-AFPS-T004	0	Field Applied Special Protective Coatings for Concrete Surfaces

Describe the specific deviation from the AB associated with implementing the change. Identify the AB document(s) and the affected section(s).

Concurrent to this DTD, the E&NS group is preparing an ABAR, 24590-WTP-ABAR-ENS-02-014 (*Adoption of NFPA 801-2003 and Removal of Fire Protection Tailoring from the Safety Requirements Document*) for submittal to ORP.

This deviation is contrary to 24590-SRD-ESH-01-001-02, Rev 2f, Appendix C, Section 6.0 which references NFPA 801-98 edition Section 3-8. NFPA 801-2003 edition section 5-8 will be applied for the subject special coatings. NFPA 801-2003 requires interior wall and ceiling finish to be Class A, in accordance with NFPA 255, *Standard Method of Test of Surface Burning Characteristics of Building Materials* and shall be Class I, in accordance with NFPA 253, *Standard Test Method of Test for Critical Radiant Flux of Floor Covering Systems Using a Radiant Heat Energy Source.*

It has been determined that the Critical Radian Flux (CRF) test specifically applies to carpeting and resiliant flooring and does not apply to Special Protective Coatings (SPC's) that are directly bonded to concrete or steel floor surfaces currently specified for the WTP project. However, the CRF testing, will be performed on the *F-T4- E or N version floor coating system, expected to be installed onto the largest total surface area. The resultant CRF screening test data, one test per floor coating manufacturer, will be evaluated and if it is equal or greater than 0.45 watts/cm2 minimum required, all currently specified floor coating systems, and any future floor coating systems, with a dry film thickness of 1/8" or less will not require any further CRF testing.

Where floor coating systems will be required for heavy loads, extreme chemicals or unusual physical abuse, the required dry film thicknesses may be greater than 1/8". In these cases, a specific case by case exception will be submitted for each and every situation.

* Refer to 24590-WTP-3PS-AFPS-T0004 Field Applied Special Protective Coatings for Concrete Surfaces, Appendix C, Tables 1 & 2.

Decision to Deviate from the Authorization Basis

DTD No: 24590-WTP-DTD-CSA-03-001 Rev No: 0

In addition to the Safety Evaluation referenced above, perform an evaluation to determine the following:

☒ The specific design changes do not cause or threaten imminent danger to the workers, the public, or the environment from radiological, nuclear, or chemical hazards.

Prepared by:

Tom R. Coutts	Tom R. Coutts	4/23/03
Print/Type Name	Signature	Date

Decision to deviate from the AB concurred with by:

Larry Kessie	Larry Kessie	4-23-03
ADS / DEM Staff Supervisor (Print/Type Name)	Signature	Date
Fred Beranek FB 4/23/03		4/23/03
E&NS Manager (Print/Type Name)	Signature	Date

NOTE: E&NS is responsible for the 24-hour verbal and 72-hour written notifications to DOE-OSR as described above.

Decision to deviate from the AB approved by:

D.T. Scribner	DT Scribner	4/23/03
APEM / DEM (Print/Type Name)	Signature	Date
J.R. Coutts		4/24/03
Area Project Manager (Print/Type Name)	Signature	Date

Decision to deviate from the AB closed.

APEM / DEM (Print/Type Name)	Signature	Date

Attachment 2

Safety Evaluation
24590-WTP-SE-ENS-02-055, Revision 1

Safety Checklist for Design

This checklist shall be used for a safety screening of primary design drawings and specifications. The checklist shall be used for safety evaluations associated with actual authorization basis changes (ABCN or ABAR).

Design Document No: 24590-WTP-SRD-ESH-01-001-02 **Rev:** 2

ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-014, Rev. 1

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-055, Rev. 1

Brief description of Design Change:

1) Elimination of Sections 4, 5, and 6 of Appendix C in the SRD.

2) Request to move from the 1995 version of NFPA 801 to the 2003 version. This change effects Section 4.5 Fire Safety and Section 4.3 Engineered Safety Systems Safety Criterion.

AB Documents Impacted:

Document Number	Rev	Section
24590-WTP-SRD-ESH-01-001-02	2	Section 4.3 & 4.5 of the SRD Safety Criterion & Appendix C, Sections 4, 5, & 6

This safety checklist aids in determining if this design change falls within the threshold of changes that may be made without prior DOE approval. It also serves to document the engineering safety evaluation of this design change.

GENERAL REVIEW		YES	NO
1.	Does the change modify or delete a standard prescribed in the Safety Requirements Document Volume II (SRD)?	☒	☐
2.	Does the change alter the location, function, or reliability of an SSC described in the AB[1]?	☐	☒
3.	Is there a change in classification, new items being classified, or existing items deleted? (SDC, SDS, RRC, SC-I, SC-II, SC-III, PC-3, PC-2)	☐	☒
4.	Does the change affect the safety function descriptions in Chapter 4 of the PSAR?	☐	☒
5.	For any of the SSCs, does this change affect any of the associated control strategy development (CSD) records?	☐	☒
6.	Are any other Authorization Basis documents affected by this change? (ISMP, QAM, or RPP) (Also ISAR & HAR)[2]	☐	☒

If any question above is checked "YES", an ABCN or ABAR is probably required. Contact E&NS for assistance.

Continue with answering all the Technical Review questions.

[1] This question refers to SSC's described in the LCAR, PCAR, and PSAR, including text descriptions and figures in Chapter 2 of the PSAR.

[2] Assumes ISAR and HAR have not yet been superseded by PSAR.

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ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-014, Rev. 1

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-055, Rev. 1

TECHNICAL REVIEW These questions evaluate design change affects on DBE hazards analysis.				
SYSTEMS (general)		**YES**	**NO**	**N/A**
7.	Are any new components being added containing radioactive or hazardous materials?	☐	☐	☒
8.	Is a different type of component used to perform the safety function?	☐	☐	☒
9.	Does the change modify SDC/SDS component's function (e.g. auto to manual), failure mode or reliability?	☐	☐	☒
10.	Is there a change in the volume or critical dimension of any tank containing radioactive or hazardous materials?	☐	☐	☒
11.	Does the change increase the concentration or amount of radioactive or hazardous materials being handled?	☐	☐	☒
12.	Is there an increase in system design or operating pressure or temperature?	☐	☐	☒
13.	Are design imposed position control requirements for valves changed?	☐	☐	☒
14.	Does the change route high or moderate energy lines near SDC/SDS SSCs?	☐	☐	☒
15.	For non-ITS modifications, does the design resulting from the modifications affect any SSCs which is SDC (e.g. non-seismic/seismic)?	☐	☒	☐
16.	Are there changes to material selection affecting corrosion/ erosion resistant materials?	☐	☒	☐
17.	Are there changes to position related interlocks?	☐	☐	☒
18.	Does the change reduce the tank purge air flow that may affect hydrogen accumulation?	☐	☐	☒
19.	Is there a change in the chemical composition of the process material that affect chemical reactions or increase hydrogen generation?	☐	☐	☒
CONTROLS & INSTRUMENTATION AND ELECTRICAL		**YES**	**NO**	**N/A**
20.	Are any process level or chemical control points, trips or alarms changed?	☐	☐	☒
21.	Are requirements for redundancy/separation/isolation of SDC/SDS SSCs changed?	☐	☐	☒
22.	Are single failure requirements for ITS SSCs changed?	☐	☐	☒
23.	Does the change add or remove any Vital Bus Loads (Emergency Diesel Generator)?	☐	☐	☒
24.	Are any loads added or removed from SDC uninterruptible power supplies (UPS)?	☐	☐	☒
25.	Are any time delays or actuation times changed?	☐	☐	☒
26.	Does the change reduce the Emergency Diesel Generator operating capabilities (e.g. fuel oil inventory)?	☐	☐	☒

Safety Checklist for Design

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RADIOLOGICAL AND HVAC		YES	NO	N/A
27.	Does the change modify the Radiation Monitoring System location or response?	☐	☐	☒
28.	Does the change modify any portion of HVAC system, including doors and/or walls which may change air flow patterns, that is within the RCA?	☐	☐	☒
29.	Are any door interlocks or alarms changed?	☐	☐	☒
30.	Are there any changes to the C5/R5 zone boundaries?	☐	☐	☒
31.	Is any radiation shielding changed including shield wall openings?	☐	☐	☒
CIVIL/STRUCTURAL		**YES**	**NO**	**N/A**
32.	Are there any increases in loads or changes in load paths?	☐	☒	☐
33.	Are there any increases in floor or wall loads or significant relocation of loads?	☐	☒	☐
34.	Does the change affect the melter glass spill event?	☐	☒	☐
FIRE PROTECTION		**YES**	**NO**	**N/A**
35.	Is there an increase in combustible loading or ignition sources in any fire area including electrical cables?	☒	☐	☐
36.	Does the change affect fire barriers separating fire areas or redundant SDC SSCs?	☐	☒	☐
REGULATORY (These questions to be answered for SE only)		**YES**	**NO**	**N/A**
37.	Based on the answers to the above technical questions and any other analysis, does the change create a new DBE?	☐	☒	☐
38.	Based on the answers to the above technical questions and any other analysis, does the change result in more than a minimal (≥ 10 %) increase in the frequency or consequence of an analyzed DBE as described in the Safety Analysis Report?	☐	☒	☐
39.	Based on the answers to the above technical questions and any other analysis, does the change result in more than a minimal decrease in the Safety Functions of important-to-safety SSCs or change how a Safety Design Class SSC meets its respective safety function?	☐	☒	☐
40.	Does the change result in a noncompliance with applicable laws and regulations (i.e., 10CFR820, 830, and 835), nonconformance to top-level safety standards (i.e., DOE/RL-96-0006), or fail to provide adequate safety?	☐	☒	☐

Safety Checklist for Design

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Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-055, Rev. 1

REGULATORY		YES	NO	N/A
41.	Does the change result in nonconformance to the contract requirements associated with the authorization basis document(s) affected by the change?	☐	☒	☐
42.	Does the change result in an inconsistency with other commitments and descriptions contained in portions of the authorization basis or an authorization agreement not being revised?	☒	☐	☐

If any of the Technical Review questions is answered "YES", a DBE hazards analysis may be affected that may require ISM process review prior to proceeding with the change. Contact E&NS for assistance in determining if an ISM review is required or if there are questions on DOE approval of the change.

All "YES" answers for questions 1 through 36 must be explained in greater detail. "Yes" or "No" answers to questions 37-42 must be explained in greater detail. Provide a description and/or explanation below and on the ABCN or ABAR, as appropriate.

Describe or explain answers, as appropriate

Note: Statements following "Tailoring of Section X.YY" and "Justification" are from the SRD, Appendix C, Sections 5 and 6 as they read now. The "Change Justification" represents WTP's reasoning for removing each particular tailoring.

1 – SRD, Appendix C, Section 4, DOE G-420.1/G-440.1, Implementation Guide for Use with DOE Orders 420.1 and 440.1 Fire Safety Program

In a previously approved ABCN (24590-WTP-ABCN-ESH-02-026) WTP replaced DOE G-420.1/G-440.1, Implementation Guide for Use with DOE Orders 420.1 and 440.1 with DOE-O-420.1A. The ABCN overlooked the elimination of Section 4, DOE G-420.1/G-440.1, Implementation Guide for Use with DOE Orders 420.1 and 440.1, Fire Safety Program, from the SRD. This ABAR will finish the documentation process of adopting DOE-O-420.1A.

SRD, Appendix C, Section 5, DOE-STD-1066-97, Fire Protection Design Criteria

Tailoring of Section 9.5.1 – Add the following words: "The fire resistance of special or unique penetration assemblies, such as lead glass windows and shield wall penetrations, may be based on past qualification testing or an equivalency evaluation."
Justification: The WTP facility is expected to have unique penetration configurations that may be impractical to test. This change clarifies that alternate approaches that provide a comparable level of safety, as described in section 1 of DOE-STD-1066-97, may be used.

Change Justification – DOE-STD-1066-97 already allows for the use of penetration assemblies which were qualified by testing or an equivalency evaluation. Therefore, this specific tailoring is no longer needed.

Tailoring of Section 10.4 – Add the following words: "The 75-foot travel distance may be exceeded in areas not normally occupied by personnel, where plant equipment alone is located".
Justification: If an area is not normally occupied an accidental breach of a primary confinement system cannot expose personnel to radioactive material.

Change Justification – The WTP Project design does not have travel distances that exceed 75 ft. in areas that could be affected by a breach of a primary confinement system. Therefore, the specific tailoring is not needed.

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Design Document No: 24590-WTP-SRD-ESH-01-001-02 **Rev:** 2

ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-014, Rev. 1

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Describe or explain answers, as appropriate

Tailoring of Section 10.6.3 – Delete the statement that: "In addition, for explosives environments, exits should reflect the criteria contained in the DOE Explosives Safety Manual (DOE M 440.1-1)."
Justification: The DOE Explosives Safety Manual applies to environments involving munitions, and is not applicable to the WTP.

Change Justification – The WTP Project does not handle explosives. In accordance with DOE-O-420.1A the WTP Project is not an explosives facility. Therefore, DOE-M-440.1-1 is not applicable. Furthermore, the Hydrogen Mitigation System is a Safety Design Class system which has been analytically proven to prevent hydrogen production from exceeding 25% of the Lower Flammable Limit.

Tailoring of Section 11.4 – Revise this section to read: "Where required by the SAR, critical facilities should be served by dedicated, redundant electric power services. External to the buildings served, the two services should be separated by 4-hour fire-rated construction and should be served from separate sources.
Justification: The term "power services" is more consistent with the sentence that follows. The changes clarify that the requirement applies to site power supplies, not to cable routing within the buildings served.

Change Justification – The tailoring was done for clarification purposes only and was not done to lessen the requirement imposed by this section. The Project meets this section without the tailoring by physically/remotely separating redundant power supplies.

Tailoring of Section 12.4 – Delete this section.
Justification: This section is not applicable because there will be no gas-fired process furnaces in the WTP.

Change Justification – This section does not apply to the WTP Project and did not need to be tailored.

Tailoring of Section 13 – Delete all except Subsection 13.1
Justification: The WTP is not a Plutonium Processing and Handling Facility, a Plutonium Storage Facility, an Enriched Uranium Storage Facility, a Uranium Processing and Handling Facility, a Fuel Reprocessing Facility, or a Uranium Conversion and Recovery Facility.

Change Justification – This section does not apply to the WTP Project and did not need to be tailored.

SRD, Appendix C, Section 6, NFPA 801-95, Standard for Facilities Handling Radioactive Materials

Tailoring of Section 3-5 – Replace "(Type I or Type II in accordance with NFPA 220, Standard on types of Building Construction)" with "(Fire resistance in accordance with the 1997 edition of the Uniform Building Code [UBC])".
Justification: The applicable building code for WTP Project is the 1997 Uniform Building Code (UBC). UBC specifies building requirements for fire resistance, allowable floor area, building height limitations, and building separation.

Change Justification – The WTP design uses UBC 1997 for determination of Type of Construction. The use of the UBC comes from DOE 420.1A which states "All new construction shall, as a minimum, conform to the Model Building Codes applicable for the state or region". The design of the process facilities meets NFPA 801-95, Section

Safety Checklist for Design

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ABCN/ABAR No: (if used as safety evaluation) 24590-WTP-ABAR-ENS-02-014, Rev. 1

Safety Evaluation No: (if used as SE) 24590-WTP-SE-ENS-02-055, Rev. 1

Describe or explain answers, as appropriate

3-5 Construction. NFPA 801 requires fire resistive or noncombustible construction (NFPA 220 Type I or Type II). The process facilities meet this requirement by being designed as Type I FR or Type II FR Construction per UBC-97. These UBC types of construction are noncombustible and correlate with NFPA 220 Type I or Type II in definition and related construction. Therefore, the need for specifically tailoring section 3-5 of NFPA 801-95 is no longer needed with the adoption of DOE-O-420.1A.

Tailoring of Section 3-8 – Replace entire section with the text of the same section from the 1998 version of NFPA 801.
Justification: The NFPA standard was revised in recognition of the impracticality of using only noncombustible surface finishes in areas processing or storing radioactive materials. Conformance with the revised standard will permit the use of limited combustible interior finishes.

Change Justification – The need for specifically tailoring section 3-8 of NFPA 801-95 will not be needed with adoption of the 2003 draft version. The reason for tailoring Section 3-8 was in recognition of the impracticality of using only noncombustible surface finishes in areas processing or storing radioactive materials. The change is safe since the overall combustible loading of the facility, even with interior finishes with increased Potential Heat, is still within the Preliminary Fire Hazards Analysis for each of the WTP facilities.

Tailoring of Section 6.1.1 – Change the code edition for NFPA 70 from 1993 to 1996 and the code edition for NFPA 780 from 1992 to 1995.
Justification: SRD safety criteria 4.3-2 and 4.4-12 reference these more recent editions of NFPA 70 and NFPA 780 as implementing standards. This change resolves the conflict with NFPA 801.

Change Justification – SRD, Appendix C, Section 6 for NFPA 801-95 was originally tailored to adopt the 1996 version of NFPA 70 in lieu of the 1993 version. Safety Criterion 4.4-12 has since been modified to reflect the adoption of the 1999 version of NFPA 70. This tailoring section is therefore out of date and no longer required. The remainder of this tailoring, dealing with NFPA 780-95, is not required because Safety Criterion 4.3-2 already uses NFPA 780-95 as the implementing standard. Safety Criterion 4.3-2 is the only criterion that implements NFPA 780-95.

Adoption of NFPA 801-2003 (draft)

By adopting the draft version of NFPA 801-2003 the WTP Project will be brought up to the most current version of the standard for fire protection for facilities handling radioactive material. Based on guidance provided by DOE HQ/OSR, the Project would avoid exemptions presently needed under the 1998 version of NFPA 801. The draft version of NFPA 801-2003 no longer considers Potential Heat as a specification for Special Protective Coatings (SPCs). The change to SPCs is safe for the WTP facilities since the overall combustible loading of the facility, even with interior finishes with increased Potential Heat, is still within the Preliminary Fire Hazards Analysis for each of the WTP facilities. Additionally tailoring of NFPA 801-2003 was necessary to: 1) identify the specific code edition to be used by the WTP Project for NFPA 70 (1999) and NFPA 72 (2002); 2) clarify that 10 CFR 1926 Subparts F and J would be followed instead of NFPA 241 per the Non-radiological Worker Health and Safety Plan; and 3) clarify that UBC-1997 will be followed instead of NFPA 220.

~~16 The Draft version of NFPA 801-2003 has eliminated Potential Heat as a specification of SPCs. Adopting the draft version NFPA 801-2003 the corrosion/erosion abilities of the SPCs are not changed. This change only eliminates the Potential Heat specification requirement for SPCs.~~

Safety Checklist for Design

This checklist shall be used for a safety screening of primary design drawings and specifications. The checklist shall be used for safety evaluations associated with actual authorization basis changes (ABCN or ABAR).

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Describe or explain answers, as appropriate

35 – The NFPA 801 committee recently approved a change to the specification of interior finishes that are allowed in facilities that handle radioactive material. Specifically, the Potential Heat criteria was eliminated and is no longer considered a factor for choosing an interior finish. No SPCs meeting the radiological and chemical environment criteria meet the Potential Heat criteria of the NFPA 801-98 of 3500 BTU/ft^2. The change in the standard allows the potential to change the overall combustible loading of the facility, even with interior finishes with increased Potential Heat, is still within the Preliminary Fire Hazards Analysis for each of the WTP facilities.

Below are explanation which address Questions 37-42:

37 – No additional design basis events are created with the change outlined within this ABAR. The addition of SPCs with a greater Potential Heat does not increase the combustible loading of a given room or area. The additional Potential Heat increases the energy (heat) expected per unit area. This in itself would not cause an adverse condition above what already exists, especially in inaccessible areas (C5/R5) and is still within the existing Preliminary Fire Hazards Analysis for each facility.

38 – The changes outlined in this ABAR does not change the frequency or consequence of any DBE. Potential Heat only influences the heat output of a fire after it has started and does not reflect the frequency of fires starting. The consequence of the additional combustible loading is still within the Preliminary Fire Hazards Analysis for each facility.

39 – The changes outlined by this ABAR and specifically the increase in Potential Heat, does not effect the separation of SDC/SDS equipment.

40 – The changes outlined by this ABAR meet applicable laws and regulations.

41 – The changes outlined by this ABAR meet the requirements specified within the Project contract.

42 – References made to NFPA 801 in the PSAR (pages 18-1 and 18-7) need to be revised to reflect the change in the standard version. The PSAR currently references the 1998 version of the of the NFPA 801 standard. The PSAR change will eliminate the revision/version and only refer to NFPA 801. All other proposed ABAR changes are consistent with the Authorization Basis and agreements.

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