



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: 062218

JUL 08 2003

Dear Mr. Schepens:

**CONTRACT NO. DE-AC27-01RV14136 – TRANSMITTAL OF 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 Preliminary Safety Analysis Report and project procedures. This letter satisfies the 72-hour written notification requirement.

DTD 24590-LAW-DTD-CSA-03-001 (Attachment 1) describes a deviation from the *Safety Requirements Document (SRD)*, 24590-WTP-SRD-ESH-01-001-02, Revision 2g, Safety Criteria 4.1-2 and 4.1-3. The specific deviation from the AB is the immediate adoption of updated "daughter" codes to AISC MO16-89, *Manual for Steel Construction- Allowable Stress Design, Ninth Edition*. This DTD allows the erection and welding of structural steel for the low-activity waste facility.

Safety Evaluation (SE) 24590-WTP-SE-ENS-03-409 (Parts 1 and 2) is attached (Attachment 2) as required by procedure. This SE will become an AB amendment request and will be submitted for OSR approval by August 1, 2003. Approval is requested by October 1, 2003, to meet procedural requirements and to correct this deviation within 90 days.

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

This deviation was discussed with Mr. Lew Miller of OSR on July 2, 2003.

**BECHTEL NATIONAL, INC.**

2435 Stevens Center Place  
Richland, WA 99352

te. (509) 371-2000

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Attachment to  
CCN 062218

Attachment 1

Decision to Deviate from the Authorization Basis  
24590-LAW-DTD-CSA-03-001



# Decision to Deviate from the Authorization Basis

DTD No: 24590-LAW-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-03-409

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

The Safety Requirements Document (SRD) Section 4.1-3, cites AISC M016-89 'Manual for Steel Construction - 9th Edition' as the Implementing Standard for the design and construction of the LAW facility.

AISC M016-89 makes reference to the following publications:

- AISC 303-86 'Code of Standard Practice'
- AISC 348-85 'Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts'
- AWS D1.1-88 'Structural Welding Code'

The following Engineering Specifications adopt the later 2000 editions of each of the above publications:

- 24590-WTP-3PS-SS01-T0002 'Purchase of Structural Steel'
- 24590-WTP-3PS-SS01-T0001 'Purchase of Miscellaneous Steel'
- 24590-WTP-3PS-SS02-T0001 'Erection of Structural Steel'

These 2000 editions of the publications are adequate to support the safety function of the facility.

Affected Design Documents		
Number	Rev.	Title
24590-WTP-SRD-ESH-01-001-02	2g	Safety Requirements Document (SRD)

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

Refer to above and attached Safety Evaluation.

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:

David Houghton

Print/Type Name

*D Houghton*  
Signature

07/01/03

Date

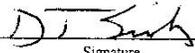


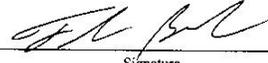
# Decision to Deviate from the Authorization Basis

DTD No: 24590-LAW-DTD-CSA-03-001

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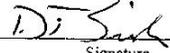
Decision to deviate from the AB concurred with by:

Don Scribner		7/1/03
ADS / DEM Staff Supervisor (Print/Type Name)	Signature	Date

Fred Beranek		7/1/03
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:

Don Scribner		7/1/03
APEM / DEM (Print/Type Name)	Signature	Date

Bill Clements		7/1/03 8:01 P.M
Area Project Manager (Print/Type Name)	Signature	Date

Decision to deviate from the AB closed.

	Signature	Date
APEM / DEM (Print/Type Name)		

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Attachment to  
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Attachment 2

Safety Evaluation for Design  
24590-WTP-SE-ENS-03-409  
(Parts 1 and 2)



# Safety Evaluation For Design

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Safety Evaluation No.: 24590-WTP-SE-ENS-03-409		Rev. # 0	
Design Document Evaluated: 24590-LAW-DTD-CSA-03-001		Rev. # 0	
Consists of Parts: <input checked="" type="checkbox"/> 1 <input checked="" type="checkbox"/> 2 <input type="checkbox"/> 3 <input type="checkbox"/> 4			
Title: SRD REFERENCED STANDARDS UPDATES			
Description of design change: DTD 24590-LAW-DTD-CSA-03-001 requires updating the following referenced standards in the SRD Safety Criteria 4.1-2 and 4.1-3: SRD standard (Parent) AISC M016-89 makes reference to the following codes; <ul style="list-style-type: none"> <li>• AISC 303-86 "Code of Standard Practice", <b>REVISE</b> to AISC 303-2000</li> <li>• AISC 348-85 "Specification for Structural Joints Using ASTM A325 or ASTM A490 Bolts" <b>REVISE</b> to AISC 348-2000</li> <li>• AWS D1.1-88 "Structural Welding Code", <b>REVISE</b> to AWS D1.1-2000</li> </ul>			
Reason for design change: BNI wants to upgrade to the most current codes to provide the most recent technology and guidance from national authority for structural steel welding and erection. This change is being made to ensure that the correct codes and standards are used consistent with the approved Authorization Basis.			
Complete the following parts as appropriate:			
<b>Part 1 Safety Screening</b>			
Complete Part 1 for all design changes requiring this form. Refer to Appendix 2 of 24590-WTP-GPP-SREG-002 for guidance. If all Part 1 answers are 'No', or for a 'Yes' answer the design is safe and consistent with the AB, the design change does not require further safety review or an AB change. If this is the case, sign this form after Part 1 and submit to PDC. After each question briefly describe the basis for each answer.			
		YES	NO
1.	Does the change modify or delete a standard prescribed in the <i>Safety Requirements Document Volume II (SRD)</i> ?  Basis: The change adds updated "Daughter" standards for use in the field. The standards called out in the SRD are listed above and subsequent engineering evaluation of the codes will be used to show equivalency (the newer standards meet or exceed the previous standard.)	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2.	Does the change alter the location, function, or reliability of an SSC as described in the AB? <i>This question refers to SSCs described in the LCAR and PSAR, including text descriptions and tables in chapter 2 of the PSAR.</i>  Basis: There is no change to system design or operation or no change to system safety function, location or reliability as described in the AB. The standards selected will only affect the way structural steel is erected and welded.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	Is there a change in classification, new items being classified, or existing items deleted as described in the PSAR?  Basis: No items are classified or reclassified. The safety classification of structural steel remains unchanged.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Does the change affect the safety function descriptions in chapter 4 of the PSAR?  Basis: This change will not affect any safety function described in the PSAR. The safety function of structural steel remains unchanged.	<input type="checkbox"/>	<input checked="" type="checkbox"/>



### Safety Evaluation For Design

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5.	Does the change create a new hazard or affect the hazard or accident analysis contained in the PSAR? <b>Basis:</b> This change will not create a new hazard or affect the hazard or accident analysis. Structural steel remains as designed.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.	Does the change affect criticality safety? <b>Basis:</b> This change does not affect criticality safety. It relates only to structural steel welding and erection.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7.	Does the change have the ability to affect exposures to radiation (doses), contamination levels, or releases of radioactivity to the environment? If so, has an ADR been completed? <b>Basis:</b> This change does not affect ALARA attributes. It relates only to structural steel welding and erection.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
8.	Are any other Authorization Basis documents affected by this change? <b>Basis:</b> One PSAR Question, HLW-PSAR-056, referenced one of the standards being changed. A reference in this question response to AWS D1.1 does not mention the year of publication and only invokes the national standard as a general reference. No other portions of the authorization basis are affected.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
9.	As a result of this design change, is an ISM meeting required? <b>Basis:</b> This change will require an ISM to formally select the updated standards. These will be recommended by the PMT to the PSC prior to submittal to DOE in this SE/ABAR.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Further safety review required?  Yes  No  
 AB change required?  Yes  No

If either answer above is 'Yes', continue with this form. If both answers are 'No', sign here and send Part 1 of this form to PDC.

Safety Evaluation Preparer:	Belinda Niemi <i>Belinda Niemi</i>	07/01/03 Date
Design Document Originator/Supervisor:	Dave Houghton <i>DHoughton</i>	07/01/03 Date
Only required for screenings requiring NQ ABCN or ABAR:		
H&SA Lead:	Dana Cresci <i>Dana Cresci</i>	07/01/03 Date



## Safety Evaluation For Design

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**Part 2 Safety Evaluation (Complete Part 2 for all AB changes)**

*Complete Part 2 to determine the approval authority for the AB change. Obtain concurrence from H&SA Lead.*

REGULATORY		YES	NO
1.	Based on the answers to the above technical questions and any other analysis, does the change create a new DBE?  <b>Basis:</b> Updating to more recent national standards does not create a new DBE.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
2.	Based on the answers to the above technical questions and any other analysis, does the change result in more than a minimal ( $\geq 10\%$ ) increase in the frequency or consequence of an analyzed DBE as described in the Safety Analysis Report?  <b>Basis:</b> Adoption of more recent standards does not affect the facility processes or change any SSC configurations. As there is no change to system design or operation or no change to calculations or assumptions used in the DBE analysis, there is no change in DBE frequency or consequence.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
3.	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?  <b>Basis:</b> Adoption of more recent standards does not affect safety functions of SSCs or change the way an SDC SSC meets its safety function because no facility processes or SSC configurations have changed. The standards selected will only affect the way structural steel is erected and welded.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
4.	Does the change result in a noncompliance with applicable laws and regulations (i.e., 10 CFR 820, 830, and 835) or nonconformance to top-level safety standards (i.e., DOE/RL-96-0006)?  <b>Basis:</b> These changes to the SRD standards for structural steel work are compliant with applicable laws and regulations and conform to top-level standards. BNI continues to use versions of national standards already approved (by reference) in the SRD.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
5.	Does the change fail to provide adequate safety?  <b>Basis:</b> These changes provide adequate safety to the extent that: <b>a. The changes conform with applicable laws and regulations, top-level standards and principles, and continue to maintain SRD Safety Criteria, and</b> <b>b. The specific changes to be authorized do not cause or threaten imminent danger to the workers, the public, or the environment from radiological, nuclear, or chemical hazards.</b>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
6.	Does the change result in nonconformance to the contract requirements associated with the authorization basis document(s) affected by the change? See Contract Standard 7(e)(2).  <b>Basis:</b> These standards updates do not result in a nonconformance with contract requirements associated with the SRD. SRD changes are allowed as long as they are processed in accordance with the requirements of RL/REG-97-13 and project procedures.	<input type="checkbox"/>	<input checked="" type="checkbox"/>
7.	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?  <b>Basis:</b> One PSAR Question, HLW-PSAR-056, referenced one of the standards being changed. A reference in this question response to AWS D1.1 does not mention the year of publication and only invokes the national standard as a general reference. No other	<input type="checkbox"/>	<input checked="" type="checkbox"/>



# Safety Evaluation For Design

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portions of the authorization basis or any authorization agreement are affected.

*If all Part 2 questions are answered 'No', a BNI-approved AB change (ABCN) is permitted. Complete Part 3 of this form and send it to the E&NS AB Coordinator. If any Part 2 question is answered 'Yes', a DOE-approved AB change (ABAR) is required. Complete Parts 3 AND 4 of this form and send to the E&NS AB coordinator.*

BNI-approved AB change?  Yes  No  
 DOE-approved AB change?  Yes  No

Concurrence:	Initial	Date
H&SA Lead: Dana Cresci	DC	7/1/03