

START ENGINEERING CHANGE NOTICE

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1. ECN 105276

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Proj. ECN

2. ECN Category (mark one) Supplemental <input checked="" type="checkbox"/> Direct Revision <input type="checkbox"/> Change ECN <input type="checkbox"/> Temporary <input type="checkbox"/> Supersedure <input type="checkbox"/> Discovery <input type="checkbox"/> Cancel/Void <input type="checkbox"/>	3. Originator's Name, Organization, MSIN, and Telephone No. D. H. Shuford, PUREX Systems & Tech./S6-01/3-5336		4. Date 5/19/89
	5. Project Title/No./Work Order No. KP - PUREX chemical Processing	6. Bldg./Sys./Fac. No. 202-A	7. Impact Level 1
	8. Document Number Affected (include rev. and sheet no.) SD-HS-SAR-001, Rev 5	9. Related ECN No(s).	10. Related PO No. N/A
11a. Modification Work <input type="checkbox"/> Yes (fill out Blk. 11b) <input checked="" type="checkbox"/> No (NA Blks. 11b, 11c, 11d)	11b. Work Package Doc. No. N/A	11c. Complete Installation Work N/A _____ Cog. Engineer Signature & Date	11d. Complete Restoration (Temp. ECN only) N/A _____ Cog. Engineer Signature & Date

12. Description of Change

Revise PUREX Final Safety Analysis Report per changes #1-13 on attached sheets. *DHS 5/22/89*



APPROVED FOR PUBLIC RELEASE

13a. Justification (mark one) Criteria Change <input checked="" type="checkbox"/> Design Improvement <input type="checkbox"/> Environmental <input type="checkbox"/> As-Found <input type="checkbox"/> Facilitate Const. <input type="checkbox"/> Const. Error/Omission <input type="checkbox"/> Design Error/Omission <input type="checkbox"/>	13b. Justification Details <i>DHS 5/22/89</i> - Change # 2 reflects WHC policy on response to OSR violations. - Change # 7 makes PUREX requirements consistent with WHC policy and DOE Order 5480.5 requirements. <i>DHS 5/22/89</i> - Other changes include correction of typographical errors, updating of references and organizations based on consolidation under WHC and technical clarifications.
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DATE JUN 26 1989

Sta # 1

Change #1: Revise Section 11.1 as follows:

Section 11.1.1, First Sentence -- change "5480.1A, Chapter V" to "5480.5"

Section 11.1.2, 3rd bullet, 2nd sentence -- change "Rockwell Hanford Operations (Rockwell)" to "Westinghouse Hanford Company (Westinghouse)"

Section 11.1.5, First Bullet -- change "Rockwell" to "Westinghouse"

Section 11.1.6, Third Sentence -- change "RHO-RE-MA-5" to "WHC-CM-5-24"

Change #2: Replace sections 11.1.4.1 and 11.1.4.2 with the following:

"11.1.4.1 Violation Detected at Time of Occurrence. When an OSR violation is detected at the time of occurrence, the following action shall be taken:

- o The affected process shall be stabilized and brought to an orderly, safe shutdown condition. This may require shutdown of the entire facility. If the violation or response is addressed in an emergency procedure, that procedure shall be followed.
- o Recovery from a criticality prevention specification violation shall be in accordance with an approved written plan per Nuclear Criticality Safety Manual (WHC-CM-4-29).
- o The following people (by position) shall be promptly notified: Plant Manager, PUREX; Manager, PUREX/UO₃ Process Operations; Manager, PUREX Process Systems; Manager, PUREX Nuclear Safety; Chief, Nuclear Processing Branch, U.S. Department of Energy-Richland Operations Office (DOE-RL); Chief, Nuclear and Facility Safety, DOE-RL; or their assigned delegates.
- o Westinghouse Hanford shall investigate the violation, develop, and implement corrective actions to prevent further violations. This investigation will be documented initially on an event fact sheet, followed by an unusual occurrence report. This report shall be reviewed by the Westinghouse Hanford Process and Facility Sub-Council and DOE-RL.
- o The facility shall not restart until the following tasks have been completed:
 - The facility system or process has been returned to a safe condition.
 - Actions or controls have been established to reduce probability of a recurrence.
 - Approval to restart has been obtained from the Manager, Chemical Processing Division; Manager, Safety; and the Director, Defense Production Division, DOE-RL.

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11.1.4.2, Violation Detected After the Fact. When an OSR violation is detected after the fact, the following action shall be taken:

- o The following people (by position) shall be promptly notified: Plant Manager, PUREX; Manager, PUREX/UF₆ Process Operations; Manager, PUREX Process Systems; Manager, PUREX Nuclear Safety; Chief, Nuclear Processing Branch; U.S. Department of Energy-Richland Operations Office; and Chief of Nuclear and Facility Safety (DOE-RL) or delegates.
- o An immediate investigation shall be made by a PUREX Process Control engineer and PUREX Process Operations shift manager to determine the safety of the processing operation and the immediate corrective action, including consideration of whether a process shutdown is necessary, to ensure safe conditions.
- o The Manager, PUREX/UF₆ Process Operations, with concurrence from PUREX Nuclear Safety, shall decide and document, based on the results of the preliminary investigation, the extent and method of a process shutdown necessary to facilitate corrective actions.
- o Westinghouse Hanford shall investigate the violation and develop and implement corrective actions to prevent further violations. This investigation shall be initially documented on the event fact sheet, followed by an Unusual Occurrence Report. This report shall be reviewed by the Westinghouse Hanford Process and Facility Sub-Council and DOE-RL.
- o The facility or process shall not be restarted (if shutdown is required) or begin the next scheduled processing campaign (if operation is continued) until the following tasks have been completed:
 - Actions or controls have been established to reduce probability of a recurrence.
 - Approval to resume operations has been obtained from the Manager, Chemical Processing Division; Manager, Safety; and Director, Defense Production Division, DOE-RL.

Change #3: Section 11.2.1.5, 2nd sentence--delete "at both UNC Nuclear Industries and Rockwell."

Change #4: Section 11.2.5.4, 4th paragraph, 3rd sentence--replace "separate phase" with "mixed phase."

Change #5: Section 11.2.5.5.B--change "Director, Production Processing" to "Manager, Chemical Processing."

Change #6: Section 11.2.6.1--change "TK-P6 1" to "TK-P6."

Change #7: Change section 11.3.1.4 as follows:

- o In 2nd sentence replace "Rockwell" with "Westinghouse Hanford Company."
- o In 2nd sentence, replace "Nuclear Criticality Safety Standards Manual" with "Nuclear Criticality Safety Manual."
- o In first bullet, delete "in shielded facilities."
- o Delete second bullet.

Change #8: Section 11.3.2.4, 2nd paragraph, 4th sentence--delete redundant "activity of" from beginning of sentence.

Change #9: Change Section 11.3.3.4 as follows:

- o In 3rd sentence, delete "per DOE-RL Order 5820.2 (25)."

Change #10: Replace First Paragraph of Section 11.3.4.4 with the following:

11.3.3.4 Bases. The radionuclide content in liquid wastes discharged to the environment is controlled to maintain the concentrations in the groundwater at the Hanford site boundary below drinking water standards established by federal regulations (40 CFR 141). [Exceptions: Tritium is not included. Also, until best available technology (BAT) is implemented, Interim Concentration Values (ICV) shall be established for specific radionuclides contained in the specific waste streams. In all cases ALARA will be practiced.] Chemicals are also controlled within the plant to prevent dangerous wastes from being discharged in liquid effluents to the soil column.

Change #11: Change Section 11.3.5.5 as follows:

- o Change "Accident Prevention Standards Manual" to "Industrial Safety Manual"
- o Item J - change "Rockwell" to "Westinghouse"

Change #12: Section 11.4, REFERENCES

- o Change #2 to "Westinghouse, PUREX Process Control Manual, WHC-CM-5-24, Westinghouse Hanford Company, Richland, WA (Feb. 1989)"
- o Change #20 to "Westinghouse, Nuclear Criticality Safety Manual, WHC-CM-4-29, Westinghouse Hanford Company, Richland, WA (Sept. 1988)."
- o Change #27 to "Westinghouse, Industrial Safety Manual, WHC-CM-4-3, Westinghouse Hanford Company, Richland, WA (Dec. 1987)."

Change #13: Section 11.2.9.5, Second Paragraph, First Sentence -- delete "nitric acid and"