

Safety Committee Members Comments on DS439
Appendix IV “Reprocessing Facilities” and Appendix V “Fuel Cycle
Research and Development Facilities” of NS-R-5

CONTENTS

JAPAN (NUSSC)

UNITED KINGDOM (NUSSC)

UNITED STATES OF AMERICA (WASSC)

Japan NUSSC comments on

Appendix IV "Reprocessing Facilities" and Appendix V "Fuel Cycle Research and Development Facilities" of NS-R-5 (DS439 DPP)

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Ueda, Oshima							
Country Organization; JNES, NISA/ Japan		Date 10/05/2010					
Comment No.	Para./Line No.	Comments/Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modif./rejection
Note: <u>inserted</u> and deleted							
1	6. OVERVIEW Line No.10	“Confinement of nuclear and <u>radioactive</u> material	Confinement of radioactive material is also important for a reprocessing facility.	Y			
3	6. OVERVIEW Between Line No.12 and 13	Add a heading of <u>Radioactive Waste Management</u> after Instrumentation & Control.	In reprocessing facilities radioactive waste management is an important issue to be requested.	Y			
Editorial comments							
2	6. OVERVIEW Line No.12	Instrumentation & Control should be “Instrumentation & Control Systems.”	To be consistent with the other Appendix I, II and III in NS-R-5. have “Instrumentation & Control Systems.”	Y			

DS 439 DPP Appendix IV “Reprocessing Facilities” and Appendix V “Fuel Cycle Research and Development Facilities” of NS-R-5 FOR
SUBMISSION AT IAEA NUCLEAR SAFETY STANDARDS COMMITTEE (NUSSC) MEETING

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Country/Organisation: UK(NUSSC)/HSE(ND) comments for DS 439 DPP Date: 4 May 2010							
Comment No.	Para/Line No.	Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	General		We support the production of this DPP taking account of the comments below.				
2	General		<p>The scope of Appendix IV is not entirely clear. In the Safety Requirements No. NS-R-5 (Safety of Nuclear Fuel Cycle Facilities, 2008), the scope includes <i>waste conditioning and storage</i> (Para 1.7). However Para 1.11 states that the safety requirements for waste treatment and storage facilities are addressed in WS-R-2, though more detailed safety requirements are presented in this publication (i.e. NS-R-5).</p> <p>We suggest that the DPP makes it clear that <i>associated waste conditioning and storage</i> are included under the title of "Reprocessing</p>		The DPP for DS360, approved at the 19 th CSS (June 2006) provides the clarification required. The DPP for DS360 states that:, “ <i>The proposed Guide will apply to facilities which use the PUREX process for the reprocessing of spent fuel from NPPs (metallic or oxide fuel, including MOX and fast breeders fuel) and research reactors. It will cover the safety</i>		

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			Facilities". Note: This also needs to be made clear for the forthcoming guide DS 360.		<i>issues of the installations for the mechanical treatment and the dissolution of the irradiated fuel, the chemical cycles of separations and purification, the plutonium and uranium conversions in oxides (including into MOX powder) and the storage of the products. It will cover also the interim waste storage from the process stream, prior conditioning (e.g. fission products solutions in vessels). This safety Guide will not cover the installation out of the core reprocessing process, like cask</i>		

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					<p><i>unloading facilities, spent fuel storage facilities and radioactive waste conditioning facilities like e.g. facilities for vitrification of high active liquid waste or for bituminisation of radioactive sludge.”</i></p> <p>The following modification has been made to the text in Section 3 to clarify the scope of reprocessing and to improve conformance with the DPP for DS360: <i>The proposed appendices will identify the specific safety requirements for spent fuel reprocessing,</i></p>		

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					<i>including storage and prior conditioning of process waste streams.....</i>		
3	General		<p>Cooling is a critical safety function for some reprocessing facilities, e.g. Highly Active Liquid Evaporation and Storage facility at Sellafield. We would therefore expect this to be explicitly covered under a topic heading.</p> <p>Similarly we would expect "Radioactive Waste Management" to have its own section in both Appendix IV and V, as it does in Appendix II of NS-R-5.</p>	Y			
4	General		<p>It is not clear where the important topic of "Limits and Conditions" will be covered.</p> <p>We suggest a separate topic heading "Limits and Conditions" is needed for</p>		It is noted that NS-R-5 currently establishes requirements applicable to limits & conditions, for all fuel cycle facilities, in		

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			the new appendices proposed in this DPP.		Chapter 2 “The Safety Objective, Concepts and Safety Principles”, Chapter 6 “Design of the Facility” and Chapter 9 “Operation of the Facility”. These general requirements will be reviewed and any additional requirements specific to reprocessing or fuel cycle R&D facilities will be added to the proposed appendices in the design and operation sections.		

**USA WASSC Comments on DS439 (DPP) [Appendix IV “Reprocessing Facilities” and
Appendix V “Fuel Cycle Research and Development Facilities” of NS-R-5]**

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Contact: Bobby Abu-Eid Page 1 of 2 Country/Organization: USA/U.S. NRC				Date: 05-13-2010			
Comment No.	Para/Line No.	Comments/Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
1	General	We recommend the DPP includes an independent section, or sub-section (under Operation), on <i>Management System</i> ” to address/describe specific requirements for the operating organization of the reprocessing and fuel cycle R&D facilities, to establish, implement, assess, and continually improve a management system that integrates safety and security and ensures health and environmental protection, and high quality.	Completeness	Y			
2	General	We note that specific requirements on “Waste Management, Treatment, and Disposal,” would be necessary to include as an independent Section. We believe this topic is of paramount importance particularly for reprocessing facilities.	Completeness		Agree. Reference to radioactive waste management also added as a result of comments received from UK and Japan.		

COMMENTS BY REVIEWER				RESOLUTION			
Reviewer: Contact: Boby Abu-Eid Page 1 of 2 Country/Organization: USA/U.S. NRC				Date: 05-13-2010			
Comment No.	Para/Line No.	Comments/Proposed new text	Reason	Accepted	Accepted, but modified as follows	Rejected	Reason for modification/rejection
3	General	We note the DPP should include a special Section to address specific requirements involving discharges, effluents, and environmental monitoring, as this topic of importance to reprocessing and fuel cycle R&D facilities.	Completeness	Y			
4	Page 2, Section 6, Operation	Change sub-section title " <i>Maintenance, Inspection, and Testing,</i> " to " <i>Maintenance, Inspection, Record-keeping, and Testing.</i> "	Record-keeping is an important aspect of the reprocessing and fuel cycle R&D facilities operation.	Y			