Ŕ	NRC FORM 651			XXXXXXXXX			GULATORY COMMISSION	
Ś	(6-2000) 10 CFR 72						SOLATORT COMMISSION	
	10 CFK 72						Page 1 of 4	
ŝ	FOR SPENT FUEL STORAGE CASKS       Page 1       of 4         The U.S. Nuclear Regulatory Commission is issuing this Certificate of Compliance pursuant to Title 10 of the Code of Federal Regulations, Part 72, "Licensing Requirements for Independent Storage of Spent Nuclear Fuel and High-Level Radioactive Waste" (10 CFR Part 72). This certificate is issued in accordance with 10 CFR 72.238, certifying that the storage design and contents described below meet the applicable safety standards set forth in 10 CFR Part 72, Subpart L, and on the basis of the Final Safety Analysis Report (FSAR) of the cask design. This certificate is conditional upon fulfilling the requirements of 10 CFR Part 72, as applicable, and the conditions specified below.							
Ś	Certificate No.	Effective Date	Expiration Date	Docket No.	Amendment No.	Amendment Effective Date	Package Identification No.	
Â	1015	11/20/2000	11/20/2020	72-1015	1	02/20/01	USA/72-1015	
ŝ	Issued To: (Name							
	NAC Interna 655 Enginee Norcross, G	ring Drive		• 12	REO			
				CAN	negu	1		
	Safety Analysis R		. C)	a bar		4.		
			ety Analysis R	eport for the l	JMS Universal	Storage System		
Ì	Docket No. 7	2-1015	2			0		
			6			72,		
	CONDITIONS This certificate is conditioned upon fulfilling the requirements of 10 CFR Part 72, as applicable, the attached Appendix A (Technical Specifications) and Appendix B (Approved Contents and Design Features), and the conditions specified below: 1. CASK							
							atures), and the	
				Enterna	un north	S Alla S		
N	1. CASI	< 0		-9990	1000 m			
Ì	a. Model No. NAC-UMS							
Ŕ	a. Model No. NAC-UMS							
Â						ing components: (1)	transportable	
						(2) vertical concrete of sk, which contains the	cask (VCC), which	
							ater reactor (PWR)	
ŝ	unloading, and transfer operations. The cask stores up to 24 pressurized water reactor (PWR) fuel assemblies, 56 boiling water reactor (BWR) fuel assemblies, or site-specific spent fuel							
		assemblies	and/or configu	rations, as sp	ecified in Appe	ndix B to this Certifica	ate.	
	b.	Description		,				
		The NAC-U	MS system is c	ertified as de	scribed in the S	Safety Analysis Repor	t (SAR) and in	
ŝ		NRC's Safe	ty Evaluation F	Report (SER) a	accompanying	the Certificate of Corr	pliance. The cask	
		comprises t	hree discrete c	omponents: t	the TSC, the V	CC, and the transfer of	transportable cask (VCC), which e TSC during loading, ater reactor (PWR) cific spent fuel ate.	
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10 CFR 72		Certificate No.	1	1015	
	CERTIFICATE OF COMPLIANCE FOR SPENT FUEL STORAGE CASKS	Amendment N	0.	1	
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NRC FORM 651A (6-2000) 10 CFR 72	Description (continued) The TSC is the confinement system for the stored fuel. The TSC circular cylindrical shell with a welded bottom plate, a fuel basket, port covers, and a structural lid. The cylindrical shell, plus the bot the confinement boundary. The stainless steel fuel basket is a rig configuration with either 24 (PWR) or 56 (BWR) stainless steel fu a series of stainless steel (PWR) or carbon steel (BWR) support of in the PWR basket include Boral sheets on all four sides for critical tubes in the BWR basket may include Boral sheets on up to two su Aluminum heat transfer disks are spaced midway between the su primary path for conducting heat from the spent fuel assemblies to basket. A combination of the carbon steel support disks and alum ratio of 2.4 to 1, respectively) are the primary means of conductin assemblies to the TSC wall for the BWR basket. There are three different lengths for PWR and site-specific contents and two TSC lengths for BWR contents. BWR spent fuel rods/assemblies mus specific spent fuel rods/assemblies may be intact or damaged, wir rods/assemblies placed in a fuel can. The VCC is the storage overpack for the TSC and provides struct protection from environmental conditions, and natural convection long-term storage. The VCC has an annular air passage to air around the TSC. The air inlets and outlets take non-planar pa minimize radiation streaming. The spent fuel decay heat is transfer to the tubes in the fuel basket and through the heat transfer disks by convection from the TSC wall to the circulating air, as well as to to the VCC inner liner. The YCC has an annular air passage to air around the TSC. The air inlets and outlets take non-planar pa to the tubes in the fuel basket and through the heat transfer disks by convection from the TSC wall to the circulating air, as well as to to the VCC inner liner. The heat flow to the circulating air from th is exhausted through the air outlets. The top of the VCC is closer of carbon steel plate (gamma shieldin	a shield lid, tw the plate and pht circular cylin el tubes lateral disks. The squ ality control. The sides for critical pport disks and o the TSC wall ninum heat trans g heat from the TSC configura- configurations t be intact. PV th damaged fur ural support, s cooling of the to the analy the allow the nature the to the VCC erred from the to the TSC wall and cement) allow the nature the to the VCC erred from the to the TSC wall and by a shield pl ng material, and s on two of the e-specific content ween work stati design and has y removed throw in the gap betwo on steel extens ational height of specific TSC I	o penetr lids, con hder ly suppo lare fuel he squar lity contro d are the for the F hsfer disl e spent fi ations of of differ VR and s el hielding, TSC duri structure al circula cavity to fuel ass all. Heat m the TS d the VC ug, cons d a carbo bolts. T ents and cons, the s a bolte of the TS ween ion ring of f a trans	ation stitute rted by tubes re fuel ol. PWR ks (in a uel ent site- isite- isite- isite- con be flows C wall C liner isting con   here two   VCC, d top top of er cask C can be sfer	

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		Supplemental Sheet	Page 3 of 4				
	2.	OPERATING PROCEDURES					
	Written operating procedures shall be prepared for cask handling, loading, movement, surveillance and maintenance. The user's site-specific written operating procedures shall be consistent with the technical basis described in Chapter 8 of the SAR.						
	3.	ACCEPTANCE TESTS AND MAINTENANCE PROGRAM					
Written cask acceptance tests and a maintenance program shall be prepared consistent with the technical basis described in Chapter 9 of the SAR.							
	4.	QUALITY ASSURANCE					
	Activities in the areas of design, purchase, fabrication, assembly, inspection, testing, operation, maintenance, repair, modification of structures, systems and components, and decommissioning that are important to safety shall be conducted in accordance with a Commission-approved quality assurance program which satisfies the applicable requirements of 10 CFR Part 72, Subpart G, and which is established, maintained, and executed with regard to the cask system.						
	2 m						
	in accordance with the existing which the lift is made. A plant- ments, if applicable) is required to requirements. Lifting operations ance with Section 3.5 of Appendix						
XXX	6.	APPROVED CONTENTS	11				
		Contents of the NAC-UMS system must meet the fuel specifications g certificate.	ven in Appendix B to this ust be in accordance with				
	7.	2					
<ol> <li>AFFROVED CONTENTS         Contents of the NAC-UMS system must meet the fuel specifications given in Appendix B to th certificate.     </li> <li>DESIGN FEATURES         Features or characteristics for the site, cask, or ancillary equipment must be in accordance w Appendix B to this certificate.     </li> <li>CHANGES TO THE CERTIFICATE OF COMPLIANCE         The holder of this certificate who desires to make changes to the certificate, which includes A (Technical Specifications) and Appendix B (Approved Contents and Design Features), shall s application for amendment of the certificate.     </li> </ol>							
							The holder of this certificate who desires to make changes to the cert (Technical Specifications) and Appendix B (Approved Contents and D application for amendment of the certificate.
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9. AUTHORIZA	ATION				
holders of 10 issued pursu	MS system, which is authorized by this certificate, is hereby O CFR Part 50 licenses for nuclear reactors at reactor sites ant to 10 CFR 72.210, subject to the conditions specified b bendix A and Appendix B.	under the ge	eneral	license	Э
	FOR THE NUCLEAR REG	JLATORY C	OMM	ISSIO	N
	/RA/				
Attachments:	E. William Brach, Director Spent Fuel Project Office Office of Nuclear Material S and Safeguards	Safety			
<ol> <li>Appendix A</li> <li>Appendix B</li> </ol>	STATES	AN COM			
		MISS.			