SIEMENS

150978

May 22, 1997 JBE:97:099

U.S. Nuclear Regulatory Commission
Attn: Ms. K. J. Hardin
Licensing branch
Division of Fuel Cycle Safety and Safeguards, NMSS
Washington, DC 20555

70-1257

Dear Ms. Hardin:

Siemens Power Corporation (SPC) will, in the near future, begin shipping UO₂ powder and/or pellets in shipping containers that require a neutron absorbing sleeve inside of each inner powder and pellet container. The inner containers will contain powder and pellets in quantities and with moderator contents allowed by the shipping container certificate and will be stored for a short time prior to their being loaded into the shipping container. In order to describe the use of mechanical neutron absorbers in the approximately three and one-half gallon inner containers outside of shipping containers, Table I-4.1 of SPC's license application must be revised. SPC, therefore, requests that its license be amended to include a revised Table I-4.1 for this purpose. Enclosed in support of this request are six copies of revised Page 4-21 of SPC's license application.

If you have questions regarding the information presented, please call me at (509) 375-8663.

Very truly yours,

James B. Edgar

Staff, Engineer, Licensing

/mah

Enclosures

cc:

C.A. Hooker, NRC Region IV

WCFO

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							Tabl	e I-4.1 (6	Cont'd.)				
COMPONENT						co	NTROL 1	TYPE					DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE
	-	SEO	VOL	FNA	NAA	ccu	CCM	MCU	MCM	PPC	ARA	SPA	Charles and a second and
	1	2											
Cylindrical Fanks, Filters, and Other Equipment	Control of the last of the las												
Centrifuges (volume controlled)			х								x	Х	
Calciner s 10" nominal i.D. 0.5" wal! of HX or HP alloy	X			х								х	The calciner diameter combined with the materials of construction provide criticality safety as a passive feature for all densities and moderator contents of ADU / Urania powder the contents of action to be produced by the proc
X columns x 22.25" nominal .D.		x		x		х					х	х	
Containers nominal 5-gallon or less			х	х			х	х			х	х	
Mass controlled dissolvers and eceiver vessels.	X							Х				X	

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							Table	e 1-4.1 (C	cont'd.)				
COMPONENT						co	NTROL 1	TYPE					DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE
	0	EO	VOL	FNA	NAA	ccu	CCM	MCU	мсм	PPC	ARA	SPA	
	1	2											
Cylindrical Fanks, Filters, and Other Equipment													
45-gallon drums				х		E. I.	X				Х	х	
Other unlavorable peometry		x			x	X		X				х	
solution lanks						100						9 3 4	
Complex Secmetry													
complex Geometry Equipment Powder leed hoppers and stacharge chutes	x	X					х					x	These complex geometry equipment have been shown to have a k _{at} of less than 0.97 at worst case credible accident conditions.
Complex Geometry Equipment Powder feed hoppers and	x	×			x		x		x	x		x	equipment have been shown to
Complex Geometry Equipment Cowder feed toppers and Sacherge chutes Infavorable	x	X			x				x	x		×	equipment have been shown to have a k _a of less than 0.97 at worst
Complex Decimetry Equipment Powder feed toppers and lischarge chutes Intervolves tempers	x	×			x		х		×				equipment have been shown to have a k _a of less than 0.97 at worst
Complex Decimetry Equipment Cowder leed toppers and Sacharge chutes Intervorable teometry tenders	x	×			x		x		x	X		×	equipment have been shown to have a k _a of less than 0.97 at worst

			-		The same same		Tabl	e I-4.1 (Cont'd.)				
COMPONENT	Andrew Constitution of the Publishment					co	NTROL 1	TYPE					DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE
		3EO	VOL	FNA	NAA	ccu	CCM	MCU	мсм	PPC	ARA	SPA	
	1	2											
Cylindrical Tanks, Filters, and Other Equipment													
Centrifuges (volume controlled)			X								Х	х	
Calciner < 10" nominal I.D. 0.5" wall of HX or HP alloy	x			х								х	The calciner diameter combined with the materials of construction provide criticality safety as a passive ferture for all densities and moderator contents of ADU / Urania powder that can be produced by the process.
X columns x 22.25* nominal D.	ALTERNATION OF THE PERSONS NAMED IN	х		X	-	A					х	х	
Containers nominal 5-gallon or less			х	x			x	×			х	x	
Mass controlled lissolvers and eceiver vessels.	X							х				X	

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N -	CCU CCM M	×		×	×	×	×	×	×
N -		×	×	×	×	×	×	×	×
	SU MCM PPC				×	×	×	×	×
	C ARA SPA	×	×	×	×	×	×	×	×
DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE				These complex geometry equipment have been shown to have a k _a of less then 0.97 at worst case credible accident conditions.					

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							Table	e I-4.1 (C	Cont'd.)				
COMPONENT						CO	NTROL 1	YPE					DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE
	-	2	VOL	FNA	NAA	ccu	CCM	MCU	мсм	PPC	ARA	SPA	
Cylindrical Tanks, Fitters, and Other Equipment													
Centrifuges (volume controlled)			х								х	х	
Calciner s 10° nominal I.D. 0.5° wall of HX or HP alloy	×			х								х	The calciner diameter combined with the materials of construction provide criticality safety as a passive feature for all densities and moderator contents of ADU / Urania powder that can be produced by the process.
EX columns < 22.25" nominal I.D.		x		х		X					X	х	
Containers nominal 5-gallon or less			x	х			х	х			X	х	
Mass controlled dissolvers and receiver vessels.	X							X				х	

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FNA NAA CCU X	FINA NA X X X X X X X X X X X X X X X X X	8 2	8 3 ×		Table 1-4 Table 1-4 X X X X X X X X X X X X X X X X X X X	4.1 (Conf'd		O O	AP ×	ARA × × × × × × × × × × × × × × × × × ×	Table I-4.1 (Cont'd.)	NTROL TYPE	CCM MCU MCM PPC	×	×	×	×			
	¥ ×			8 8 ×		Table I.	Table 14.1 (Control MCL TYPE X X X X X X X X X X X X X X X X X X	X X	i (Cont'd.) X X X X X	1 (Cont'd.) NCM PPC ARA X X X X X X X X X X X X X		S	-				~			
			ž × ×		8 *	X X	X X	CONTROL TYPE CONTROL TYPE X X X X X X X X X X X X X	Table I-4.1 (Cont'd.) CONTROL TYPE	Table I-4.1 (Cont'd.) CONTROL TYPE X			PERSONAL PRINCIPAL PRINCIP	×	×		×		1	-
DO NOT THE PROPERTY OF THE PRO	ğ	I management of the second of		§ × ×	8 × × ×	CONTRA CCU C	X X X X X	Table 14.1 (Cont'd.) CONTROL TYPE	Table I-4.1 (Cont'd.) CONTROL TYPE	Table 14.1 (Cont'd.) CONTROL TYPE	(8)			×					-	-

g-man	Contraction of the last	подниковани							
	DISCUSSION OF ANY SPECIAL CONTROLS USED / ADCITIONAL EXPLANATION OF CONTROL PAGE				The calciner diameter combined with the materials of construction provide criticative safety as a passive feature for all densities and moderator contents of ADU / Urania powder that can be produced by the process.				
		SPA		×	×	×	×	×	
		ARA		×		×	×		
		РРС							
ont'd.)		MCM							
Table I-4.1 (Cont'd.)	YPE	MC					×	×	
Table	CONTROL WPE	CCM					×		
	O	200		0		×			
Contraction of		§							
-		FR			×	×	×		
		VOL		×			×		
		GEO			×	×			
I	<u> </u>					9	-	×	
	COMPONENT		Cyfindrical Tanka, Filtera, and Other Equipment	Centrituges (volume controlled)	calciners 10° nominel 1.D. 0.5° wall of HX or HP alloy	s 22.25° nominal	Containers nominal 5-gallon or less	Mass controlled dissolvers and receiver vessels	

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DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE					These complex geometry equipment have been shown to have a k _{so} of less then 0.97 at worst case tredible accident conditions.					
EXOL	SPA		×	×	X The equipment have cas	×	×	×	×	×
	ARA		×	- (1)					1	-
	РРС					×	×	×	×	×
wt'd.)	MCM					×				1
Table I-4.1 (Cont'd.) 10t. TYPE	MCU			×						
Table I-4.	ССМ		×		×	×	×	×	×	×
CON	CCU			×						
	NA NA			×		×				
	FNA		×							
	VOL			WAS ASSESSED BY	and the same of th					
	GE0			×	×	-			-	×
COMPONENT		Cylindrical Tanka, Filtera, and Other Equipment	45-gallon drums	Other unfavorable geometry solviton tanks	les		Hammer mills	Roil compactors	1	Powder sleves)

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AME

COMPONENT

Cylindrical Tanks, Filters, and Other

EquipmentCentrifuges

≤ 10° nominal

I.D. 0.5" wall of

HX or HP stloy

IX columns

Containers

or less

nominal 5-gallon

Mass controlled

dissolvers and receiver vessels.

LD.

s 22.25° nominal

(volume controlled) Calciner **GEO**

1 2

X

X

X

X

VOL.

X

FNA

X

X

X

NAA

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r special contional itrol type				hown to 1.97 at worst conditions.					
DISCUSSION OF ANY SPECIAL CONTROLS USED / ACDITIONAL EXPLANATION OF CONTROL TYPE				These complex geometry equipment have been shown to have a k _w of less than 0.97 at worst case credible accident conditions.					
	SPA	×	×	×	×	×	×	×	×
	ABA	×							
	РРС				×	×	×	×	×
nt'd.)	MCM				×				
Table I-4.1 (Cont'd.)	MCU		×						
Table I-4.	CCM	×		×	×	×	×	×	×
NOO	CCC		×						
	N.		×	W.	×				
	FWA	×							
	VOL								
	GEO		×	×					
COMFONENT	-	45 gallon drums		 ×			Roll compactors		×

		Particular Street					Table	e I-4.1 (0	Cont'd.)				
COMPONENT						со	NTROL 1	YPE					DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE
	G 1	2	VOL	FNA	NAA	ccu	CCM	MCU	мсм	PPC	ARA	SPA	
Cylindrical Tanks, Filters, and Otner Equipment		-											
Centrifuges (volume controlled)			х								x	×	
Calciner s 10" nominal I.D. 0.5" wall of HX or HP alloy	X			х								x	The calciner diameter combined with the materials of construction provide criticality safety as a passive feature for all densities and moderator contents of ADU / Urania powder that can be produced by the process.
IX columns < 22.25" nominal I.D.		x		X		х					х	х	
Containers nominal 5-gallon or less			x	x			x	x			Х	х	
Mass controlled dissolvers and receiver vessels.	X							х				×	

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	DISCUSSION OF ANY SPECIAL CONTROLS USED / ADDITIONAL EXPLANATION OF CONTROL TYPE							These complex geometry equipment have been shown to have a k _{at} of less than 0.87 at worst case credible accident conditions.						
		SFA			×	×		×	×	×	×	×	×	
	94E	ARA			×									
		РРС							×	×	×	×	×	
Table 1-4.1 (Cont'd.)		MCivil							×					
		MCU				×								
Table	CONTROL TYPE	CCM			×			×	×	×	×	×	×	
	CON	CCU				×								
		NAA				×			×			1		
		FNA			×									
		VOL		1.54										
		GEO	2			×		×	This Air street was					
П	-		1		9			× s				-	×	
	COMPONENT			Cylindrical Tanka, Filters, and Other Equipment	45 gallon drums	Other unfavorable geometry solution tarke	Complex Geometry Equipment	Powdar feed hoppers and discharge chuies	Unfavorable geometry blenders	Hammer mills	Roil compectors	Granulators	Powder sieves	