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	INTTED	STATES OF AMERICA	OFFICE OF THE SECRETARY
			ADJUDICATIONS STAFF
	NUCLEAR	REGULATORI COMMISSIC	
	Before the Atomi	c Safety and Licensi	ng Board
	In the Matter of) Docket No. 72-22) ASLPB No. 97-732	2 -02-ISFSI
	PRIVATE FUEL STORAGE L.L.C.) DEPOSITION OF:	
	(Private Fuel Storage Facility)) <u>DR. WEN-SHOU TSE</u>	ENG
)) (Utah Contentior	L/QQ)
	Tuesday, Ma Location: Uta 160 Salt	h Attorney General's East 300 South Lake City, Utah	s Office
	Report Notary Public i	er: Vicky McDaniel n and for the State	of Utah
			State's Exhibit 113
	THE	ECOUPT, LLC REPORTING GROUP	50 South Main, Suite 920 Salt Lake City, Utah 84144

ULEAH HEGULATORY COMMISSION

in the matter of	Official Exh. No. 113
Staff Applicant Intervenor Other DATE5-8-02 Clerk	IDENTIFIED RECEIVED REJECTED WITHDRAWN Witness

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In the Matter of Private Fuel Storage Dr. Wen-Shou Tseng * March 12, 2002

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	PAGE 69		Dr Wen-Shou Tseng, 3/12/02 71
	Dr. Wen-Shou Tseng, 3/12/02		DL, Well Should Isely 5/12/02
1	calculation, and he indicated that the differential is	1	Q. Did you evaluate any adverse effect of
÷	the order of 001 second and at 001 second one would	2	inclined strike that. Did you evaluate any adverse
2	the order of .vvi second. And at .vvi become one would	2	offects of inclined waves on the seismic response of
3	consider, you know, for that small pad the effect would	5	CIECCO DI INCIINCO WARDO ON ONO COLOMAI INFINITA
4	be very, very high frequencies, something on the order	4	the pads:
ר ב	another than 50 Hz which is beyond the frequency range	5	A. We in our calculation for pad design we
2	greater than 50 hz, which is bejond the request	6	did not explicitly consider that. But this incline is
6	of our interest, actually. So I would expect this	7	uld not explicitly encoded which had estimated to be the
7	effect would be insignificant.	1	a small angle, which bob loungs had escinated to be the
ó	• What about for a quadrant of pads in soil	8	case, X minus like 11 degree from vertical, which is
O	V. Milat about for a quadrant of pado in cost	Q	worv small. The effect of that will be very small, as
9	cement that would act as one integrated pau:	110	ter shaked combine
10	A. Would you say that again?	10	1 stated earlier.
11	0 What about for a quadrant of pads, which I	11	And in addition, you know, if you look at
11	y, what about for a quality of fact,	12	the ASCE's 4-86, some of this variation of soil
12	believe is 125 pads, and the solid cement in between	12	anonety from best estimate to lover bound to upper
13	that act as an integrated structure?	13	property from best estimate to forten of two in modulus
14	MR. GAUKLER: Objection, lack of foundation.	14	bound with a large factor, a factor of two in modulus,
11	leaves if you can	15	is partially to cover some of these uncertainties, 1
10	Answer II you can.	16	would call, nonvertical propagating wave, some slide
16	A. Well, even though you have soll cement in	11	model bully differentiale and many other uncertainties
17	between the pad, but there is no structure continuing	17	possibility differentials, and many other uncertained
10	through in other words, there is no rebar going	18	which cannot be quantified.
10	Chicough - In Conce works, shows to be shows to be	19	So that variation of soil property from
19	through it. So even though it may appear to be	20	lower to upper bound in the right range is partially
20	integrated, that structurally they are still	20	Tower to upper bound an one adjust sunge as personally
21	constants So I wouldn't consider that to be a credible	21	intended to cover some of this effect.
21	separate internation all the made together.	22	Q. Do you anticipate conducting any additional
22	Case of integrating all the pads together.	22	analyses or calculations on the PFS project?
23	Q. So do you believe the pads will act	123	analyses of curverence on one and projects is
24	independently of each other, out of phase in their	24	A. AS TAI as pau uesign and analysis as
25	motions?	25	concerned, I do not foresee other than 11 we need to
25	citicourt IIC	t i	CitiCourt, LLC
			(801) 532-3441
	(801) 532-3441		
┞	DACE 70		PAGE 72 2/10/00 70
	Dr Won-Shou Tseng, 3/12/02 70		Dr. Wen-Shou Tseng, 3/12/02 /2
	DI, Well block isolay of iterat	1	ensuer certain questions, we may do a few calculations
11			
1 1	A. Well, each pau of course is by itself a		La hack up any popones
$\frac{1}{2}$	A. Well, each par of course is by itself a structural element. It may have some minor interaction	2	to back up our response.
2	A. Well, each pau of course is by itself a structural element. It may have some minor interaction between pad to pad through the underlying soil, but	23	to back up our response. MS. NAKAHARA: If you'll excuse us for one
23	A. Well, each pad of course is by itself a structural element. It may have some minor interaction between pad to pad through the underlying soil, but	234	to back up our response. MS. NAKAHARA: If you'll excuse us for one moment.
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