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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

ATOMIC SAFETY AND LICENSING BOARD

Before Administrative Judges:
James P. Gleason, Chairman
Dr. Jerry R. Kline
Mr. Glenn O. Bright

SERVED JUL 12 1985

DOCKETED
USNRC

In the Matter of

CLEVELAND ELECTRIC ILLUMINATING
COMPANY, et al.

(Perry Nuclear Power Plant,
Units 1 & 2)

Docket Nos. 50-440-OL
50-441-OL '85 JUL 12 A11:41

ASLBP No. 81-457-04 OL

July 11, 1985

OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

ERRATA
(Emergency Planning Contention)

The following corrections will be made in the transcript of the
hearings held in this proceeding on April 9 - 12 and April 30 -
May 3, 1985.

<u>Page</u>	<u>Line</u>	<u>Change</u>
2514	5,15	Change "Beverly J. Kirkland" to "B.J. Kirkwood"
2155	9	Change "eight" to "nine"
2156	15	Change "Mrs." to "Ms."
2159	15	Change "Murry Eddleman" to "Murray Edelman"
2160	24	Change "Torsigraph" to "Torsiograph"
2160	25	Change "Poser" to "Power"
2172	18	Change "subject to" to "substituted for"

8507150250 850711
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<u>Page</u>	<u>Line</u>	<u>Change</u>
2172	23	Change "Shadt" to "Shaft"
2175	18	Change "right. And" to "right, and"
2178	15	Change "previously previously?" to "previously?"
2181	1	Change "recommendats" to "recommendations"
2182	18	Change "and affected" to "at"
2187	15	Change "Mr." to "Ms."
2187	22	Change "tortional" to "torsional"
2191	2,7	Change "Delavel" to "Delaval"
2191	7	Change "ad" to "at"
2191	10	Change "preiodically" to "periodically"
2192	3	Change "copies" to "copy"
2192	15	Change "nuclear" to "weakly"
2193	3	Change "--" to "in"
2193	24	Change "8.3.1.3.2" to "8.3.1.1.3.2"
2193	25	Change "seismic" to "sizing"
2195	21	Change "ours" to "hours"
2196	1	Change "36 rpm" to "436 rpm"
2196	14	Change "deliterious" to "deleterious"
2197	5	Delete "don't"
2197	17	Change "Delavel" to "Delaval"
2201	12, passim	Change "break" to "brake"
2203	15	Change "Edleman" to "Edelman"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2205	17-18	Change "specifi-ccations" to "specifi-cations"
2206	14	Change "conclussions" to "conclusions"
2210	2	Change "air" to "oil"
2210	18	Change "portion and as the" to "torsion that results in"
2216	12	Change "Animax" to "Anamax"
2219	5	Change "calcualtions" to "calculations"
2219	11, passim	Change "loop LOCA" to "LOOP/LOCA"
2219	25	Change "expoential" to "exponential"
2222	23	Change "check" to "checklist"
2223	3	Change "blocking" to "locking"
2223	13	Change "assorted" to "shorter"
2223	19	Delete (second occurrence) "and"
2228	4	Change "jn" to "in"
2230	3	Change "pumps" to "plugs"
2230	10	Change "hold" to "hole"
2232	25	Change "cracing" to "cracking"
2235	21	Change "Delavel" to "Delaval"
2237	2	Change "CEI/BEN 899 QA" to "CEI/VEN 899 QA"
2237	6	Before "Mr." insert -- " --
2237	15	After "actions." insert -- " --
2237	16	Before "This" insert -- " --
2237	19	After "report." insert -- " --

<u>Page</u>	<u>Line</u>	<u>Change</u>
2238	25	Delete "ER/QR" insert "DR/QR"
After page 2243, insert attached additional pages to Applicants' Exhibit No. 16-1.		
2241	9	Change "nameplace" to "nameplate"
2241	20	Change "loaded" to "loading"
2244	13	Change "5,630" to "5,634"
2245	4	Change "RPMs" to "rpm"
2250	4	Change "cosideration" to "consideration"
2251	9	Change "IMPEL" to "IMPELL"
225.	5	Change "one: Describe" to "one which describes"
2252	20	Change "techniccal" to "technical"
2253	17	Change "that that" to "then that"
2256	25	Change "oncc" to "once"
2260	15	Change "Christiansen" to "Kammeyer"
2260	18	Change "meeting" to "mating"
2260	22	Change "met" to "meant"
2261	2, passim	Change "CDI's" to "CEI's"
2262	3	Change "underlining" to "underlying"
2262	8	Change "crack" to "cracked"
2262	12	Change "flows" to "holes"
2263	8	Change "CDI" to "CEI"
2263	24	Change "nine" to "non-"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2265	5	Change "The fact that" to "In fact, in"
2265	5, passim	Change "B-16" to "V-16"
2265	6	Delete "has been"
2266	8	Change "of" to "for"
2268	12	Change "Christiansen" to "Kammeyer"
2269	4	Change "factor to three" to "factors of safety"
2269	7	Change "or forever" to "for whatever"
2270	9	Change "CHRISTIANSEN" to "KAMMEYER"
2271	15	Change "assme" to "assume"
2271	21	Change "B-16" to "V-16"
2272	25	Change "WOOD" to "KAMMEYER"
2273	4,9	Change "JUDGE GLEASON" to "WITNESS KAMMEYER"
2274	10	Change "KAMMEYER" to "CHRISTIANSEN"
2275	17	Change "KIRKLAND" to "KIRKWOOD"
2277	15	Change "spped" to "speed"
2277	17	Change 450 rmp" to "450 rpm"
2282	14	Change "Beuna Vista" to "Buena Vista"
2283	23	Change "SILBERT" to "SILBERG"
2298	17	Change "GGLEASON" to "GLEASON"
2305	16	Change "during our NRSERs" to "in our SERs"
2308	17	Change "pressure-graph" to "torsigraph"
2310	3	Change "money" to "monkey"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2310	7,9,10	Change "licensed" to "license"
2313	17	Change "an effective" to "an ineffective"
2317	14	Change "MS. HIATT" to "MR. SILBERG"
2319	5	Change "the" to "they"
2320	10	Change "eroding" to "loading"
2320	19	Change "advice is" to "advice"
2324	4	Change "torsial" to "torsional"
2324	7	Change "need" to "used"
2324	8	Change "They" to "The"
2324	22	Change "5511" to "5411"
2326	2	Change "was an expert is" to "is an expert in"
2326	25	Change "old" to "low"
2327	9	Change "cold" to "slow"
2330	15	Change "luch" to "luck"
2334	8	Change "on balance" to "imbalance"
2347	12	Change "in balance" to "imbalance"
2347	24	Change "incluce" to "include"
2347	25	Change "imbalanced" to "imbalance"
2348	4	Change "plant" to "planned"
2350	17	Change "securities" to "impurities"
2351	3	Change "many" to "any"
2352	21, passim	Change "vein" to "vane"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2353	12	Change "view of" to "view of where"
2355	10	Change "turbine charger" to "turbocharger"
2355	19	Change "turbin" to "turbine"
2356	13	Change "of" to "or"
2356	14	Change "on" to "of"
2357	23	Change "stream" to "steam"
2358	4,7,23	Change "threading" to "fretting"
2358	13	Change "of" to "or"
2358	23	Change "failure" to "fairly"
2359	5	Change "likely" to "unlikely"
2359	16	Change "has" to "ask"
2362	10	Change "Crystalson" to "Christensen"
2362	10	Change "Hewey" to "Eley"
2363	25	Change "Burlinger" to "Berlinger"
2364	5,17	Change "Burlinger" to "Berlinger"
2364	13	Change "law" to "lay"
2365	8,25-26	Change "Christiansen and Eeley" to "Christensen and Eley"
2367	9,10,12	Change "circumvential" to "circumferential"
2367	18	Change "pass" to "past"
2368	4	Change "seting" to "setting"
2368	5	Change "circumferencial" to "circumferential"
2368	6	Change "propogates" to "propagates"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2368	11	Change "radiants" to "gradients"
2368	12	Change "more" to "no"
2368	12	Delete "as"
2368	13	Change "Christiansen and Neeley intended" to "Christensen and Eley tended"
2370	12	Change "DD" to "DG"
2370	14	Change "Bush" to "Berlinger"
2373	8	Change "experimentals" to "experiments"
2373	9	Change "propogation" to "propagation"
2373	15	Change "drop" to "crop"
2376	15	Change "U." to "Hugh"
2377	1	Change "instruction" to "construction"
2379	21	Change "Resources" to "Resource Service"
2381	18	Change "the baby" to "that they be"
2387	8	Change "she" to "he"
2394	2	Change "Burlinger" to "Berlinger"
2394	17	Change "down of" to "down one of"
2395	14	Change "Burlinger" to "Berlinger"
2397	1	Change "Burlinger" to "Berlinger"
2397	10	Change "MS. HIATT" to "MR. SILBERG"
2397	11	Change "bve" to "be"
2400	8	Change "U-its" to "Units"
2402	2	Change "Kirkland" to "Kirkwood"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2404	1	"Change tertiary" to "party"
2404	4	Change "irreversible" to "reversibie"
2405	5	Change "Appliccant" to "Applicant"
2409	13	Change "differenes" to "differences"
2409	20	Change "integration" to "vibration"
2414	21	Change "quetions" to "questions"
2415	15	Change "DINGLE" to "DINGEE"
2415	17	Change "dispells" to "expells"
2416	21, passim	Change "shock" to "chock"
2418	2	Change "86" to "85"
2421	2	Change "Inspector" to "Inspection"
2421	3	Change "close" to "closed"
2422	22	Change "ansering" to "answering"
2424	10	Change "psib" to "psig"
2424	17, passim	Change "break" to "brake"
2424	17	Change "effect of" to "effective"
2425	5,9	Change "counterrates" to "counterweights"
2425	20	Change "you" to "your"
2426	14	Change "MCRA" to "OCRE"
2426	18	Change "OCRE" to "Owners Group"
2426	19	Change "answser" to "answer"
2428	16	Change "Bolinger" to "Berlinger"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2433	10	Change "our Staff" to "their Staff"
2433	22	After (first occurrence) "roll" insert "after"
2436	6	Change "(Continuin" to "(Continuing)"
2436	13	Change "indicccates" to "indicates"
2439	8	Change "lost" to "loss"
2441	13	After "be" insert "an"
2442	17	Change "pressed" to "compressive"
2443	10	Change "A Let's" to "Q Let's"
2443	21	Change "KENRIKSEN" to "HENRIKSEN"
2444	15	Change "Kenriksen" to "Henriksen"
2444	16	Change "9 PG" to "90 G"
2445	8	Change "250" to "25"
2446	8	Change "FaA" to "FaAA"
2446	22	Change "gargon" to "jargon"
2447	5	Change "machine" to "machined"
2448	6	Change "TDI" to "CEI"
2448	8	Change "minor" to "liner"
2449	4	Change "Board" to "panel"
2451	21	Change "at" to "and"
2454	21	Change "CIE" to "CEI"
2456	15, passim	Change "Burlinger" to "Berlinger"
2459	21,23	Change "veins" to "vanes"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2462	11	Change "Burlinger" to "Berlinger"
2463	6	Change "mangement" to "management"
2465	12	Change "nova" to "novo"
2475	19	Change "specifically these" to "specifically for these"
2477	19	Change "flat wheel" to "flywheel"
2479	12	Change "worn" to "borne"
2483	8	Change "summary responses" to "the summary response is"
2485	9	Change "procedure" to "properties"
2485	13	Change "cought" to "caught"
2485	18	Change "basis" to "bases"
2488	17	Change "refutting" to "rebutting"
2489	1	Change "Chrisiansen" to "Christiansen"
2489	24	Change "both" to "bolt"
2490	2	Change "both" to "bolt"
2493	1	Change "INPEL" to "IMPELL"
2493	8	Change "major" to "majority"
2493	18, passim	Change "unit cooler" to "intercooler"
2494	11	Change "rockarm" to "rockerarm"
2496	4	Change "shock" to "chock"
2496	19	After "it" insert "at"
2500	18	Change "craftshafts" to "crankshafts"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2502	25	Change "What" to "Why"
2507	16	Change "houses" to "stresses"
2508	22	Change "qualified" to "quantified"
2515	3	Change "as" to "is"
2539	2	Change "Just states the regulations, that it" to "It just states the regulations. It"
2541	14	Change line 14 to "because your challenge on expertise - your challenge of the"
2546	3	Change "1.714" to "2.714"
2562	12	Insert "hear" after "will"; insert "the" after "from"
2572	4	Insert period after "level"
2572	5	Change "that" to "That"
2594	24	Change "me" to "him"
2633	5	Change "Yes" to "Not yet"
2643	1,3	Change "Stuart" to "Stewart"
2666	8	Change "Pump Work" to "Plumbrook"
2674	5	Change "thermal luminescent" to "thermoluminescent"
2686	8	Delete "of"
2744	8	Change "Stuart" to "Stewart"
2794	9	Change "of" to "and"
2795	6	Change "significant" to "significantly to the"
2796	19	Change second "of" to "or"
2800	3	Delete "a"; change "official" to "officials"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2802	12	Change "PSA" to "DSA"
2802	20	Change "Geogoga" to "Geauga"
2804	6	Change "GSA" to "DSA"
2804	23	Insert period after "police"
2804	24	Change "dealing" to "Dealing"; insert comma after "organizations"
2805	6	Insert "as" after "just"
2809	13	Change "Revina" to "Ravenna"
2815	12	Delete first "not"
2817	22	Insert period after "twice"; change "on" to "On"
2817	23	Delete period after "occasion"; change "We" to "we"
2818	8	Change "the meeting, discussion" to "leading the discussions,"
2818	11	Change "by" to "with"
2820	8	Change "ETA" to "ETE"
2822	20	Change "the" to "a"
2823	13	Change "in that comment;" to "and that comments of"
2824	4	Change "JUDGE GLEASON" to "MR. CASSIDY"
2825	15	Change "Not" to "No,"
2827	12	Change "Jane" to "Jan"
2828	12	Change "Majec" to "Hajec"
2828	15	Delete second "that"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2829	21	Change "in" to "and"
2831	14	Change "certainly" to "said he"
2832	2	Change first "time" to "the"
2832	6	Change "Leonard" to "Larry"
2838	16	Change "2" to "1"
2844	14	Change "means" to "teams"
2868	17	Change "mones" to "homes"
2873	9	Change "calculation" to "situations"
2880	20	Change "our" to "your"
2891	3	Change "devisions" to "decisions"
2900	12	Change ".05" to ".5"
2902	21	Change "me" to "him"
2916	10	Insert "the" after "100,"
2916	11	Change "exception" to "estimate"
2916	14	Change "to a pressurized iron" to "about a pressurized ion"
2917	5	Change "I thought we" to "We also"
2918-A	18	Change "location" to "locations"
2923	18	Change "us" to "up"
2928	4	Change "they" to "dose rates"
2932	11	Change "transverse" to "traverse"
2932	19	Change "asked" to "ask"
2934	10	Change "when" to "for"

<u>Page</u>	<u>Line</u>	<u>Change</u>
2934	11	Change "are" to "to be"
2934	17	Change "be" to "find"
2935	3,8	Change "Paynesville" to "Painesville"
2937	13	Change "old" to "whole"
2938	1	Change "old" to "whole"
2941	22	Change "reduces" to "produces a"
2943	18	Change "we exercise" to "were exercised"
2949	7	Insert "dose projections at" after "with"
2970	16	Insert "a" before "protective"
2972	13	Change "left outside the scope" to "let this go"
2972	17	Change "Current" to "With the current"
2972	18	Change "computer-base" to "computer-based"
2983	7	Delete "and"
2984	24	Change "initials" to "initial"
2985	14	Change "Ashtabula Emergency Hospital" to "the Ashtabula Hospital emergency room"
2988	12	Insert "are" after "but"
2989	19	Change "compared to" to "what is being compared"
2998	11	Insert "handle" after "Hospital"
3001	12	Insert "this large" after "doses"
3026	22	Change "bedatine" to "betadine"
3027	23	Change "thauomatic injuries," to "traumatic injuries, is"

<u>Page</u>	<u>Line</u>	<u>Change</u>
3030	8	Change "while" to "white"
3055	13	Change "554" to "564"
3075	6	Change "me" to "him"
3081	16	Change "wouldn't" to "couldn't"
3104	15	Change "Time" to "Plan"
3114	23	Change "reasonable" to "unreasonable"
3121	23	Change "of course" to "in accordance with"
3128	2	Change "in" to "and"
3132	8	Change "Doctor" to "document"
3138	23	Change "8" to "A"
3150	24	Insert "9" after "No."
3164	1	Change "cause" to "case"
3166	25	Insert "term" after "source"
3176	11	Change "it spray" to "its way"
3176	23	Change "mirror logical" to "meteorological"
3201	7	Insert "me" after "informed"
3212	4, passim	Change "RICHARD" to "JOHN"
3213	17	Change "Mr. Frank Sted" to "Mr. Frank Stead"
3218	10	Change "resading" to "reading"
3218	16	Change "the rest of minor" to "the rest are of a minor"
3229	18	Change "in material" to "and material"
3230	25	Change "process to applicants" to "process which applicants"

<u>Page</u>	<u>Line</u>	<u>Change</u>
3234	12	Change "of the rule" to "of the testimony"
3234	20	Change "the set out" to "they set out"
3235	12 passim	Change "Classics III" to "CLASIX 3"
3235	20	Change "Hitatt" to "Hiatt"
3236	5	Change "service level B" to "service level D"
3236	20	Change "level C limit" to "level C limits"
3237	8	Change "stentence" to "sentence"
3237	23	Change "corss" to "cross"
3238	20-21	Change 5044 C.3, Roman Numeral VI, B3" to "50.44(c)(3)(vi)(B)(3)"
3242	6	Change "to the" to "the"
3242	7	Change "ASMI" to "ASME"
3242	10	Change "thpes" to "types"
3242	21	Change "Fiar" to "Fair"
3244	4	Change "qualifiactions" to "qualifications"
3246	9	Change "referringf" to "referring"
3246	15	Change "Manger" to "Manager"
3246	22	Change "One is area" to "One area"
3246	25	Change "also involves" to "also involved"
3247	25	Change "Licesning" to "Licensing"
3248	21	Change "anlayses" to "analyses"
3249	6	Change "concentartions" to "concentrate"

<u>Page</u>	<u>Line</u>	<u>Change</u>
3249	21	Change "b\cw plug" to "glow plug"
3249	23	Change "as you said" to "as I said"
3250	6	Change "pressures that results" to "pressure that result"
3250	9	Change "evlauation" to "evaluation"
3250	13	Change "safety accomodate" to "safely accomodate"
3250	15	Change "Riochardson" to "Richardson"
3251	17-18	Change "It would ignite before it goes up" to "It did ignite"
3253	4	Change "Manger" to "Manager"
3253	9	Change "the ultimate capacity report" to "the Ultimate Capacity Report"
3253	11	Change "That report, in mid-1981" to "In mid 1981"
3254	4	Change "penetration 144" to "penetration 414"
3255	5	Change "1060" to "1960"
3255	12,16	Change "Classics" to "CLASIX"
3255	18-19	Change "Classics III" to "CLASIX 3"
3255	20	Change "also familair" to "also familiar"
3255	21, passim	Change "Hector" to "HECTR"
3256	14-16	Change "Our group developed a fundamental understanding and properties, what propagation values increase turbulence can give," to "Our group developed a fundamental understanding of properties, what propagation values increased turbulence can give,"

<u>Page</u>	<u>Line</u>	<u>Change</u>
3256	15	Change "values increase" to "values increased"
3256	21	Change "since time time" to "since that time"
3256	22	Change "exposive" to "explosive"
3258	3	Change "and the" to "we were involved in"
3258	4	Change "possible" to "and possible"
3258	7	Change "obligation" to "application"
3261	19	Change "March 15, 1985 Order" to "March 14, 1985 Order"
3262	6	Change "ol" to "to"
3265	13	Change "zero point two percent" to "0.2%"
3265	15-16	Change "to six point seven two percent" to "6.72%"
3266	5	Change "Mr. Hiatt" to "Ms. Hiatt"
3266	14	Change "eleven point seven two" to "11.72"
3266	20	Change "Do you -ant" to "Do you want"
3267	4	Change "FOI" to "FOIA"
3271	3	Change "to pose" to "to propose"
3271	10-11	Change "pressure capacity containment" to "pressure capacity of the containment"
3271	14	Change "direction and inspection" to "erection and inspection"
3271	14	Change "providions" to "provisions"
3271	25	Change "establish which" to "establish the"
3272	2	Change "release of radioactive release of material" to "release of radioactive material"

<u>Page</u>	<u>Line</u>	<u>Change</u>
3272	11	Change "and as a design limit for -- as established" to "and at a design limit as established"
3272	16	Change "through -- leakage" to "to prevent leakage"
3273	1	Change "rate pressure" to "rated pressure"
3273	5	Change "enclosure bolts" to "closure bolts."
3273	12	Change "pre-torgue" to "pre-torque"
3273	19	Change "stating" to "citing"
3274	15	Change "could not be increased. It was" to "could not be increased, it was"
3274	18	Change "in this session" to "in this section"
3275	7,12	Change "Smith" to "Gleason"
3275	12	Change "Richardson" to "Alley"
3275	15	Change "plant" to "flanges"
3276	16	Change "Certain" to "Certainly"
3277	12	Change "prolemeric" to "polymeric"
3277	12	Change "etholene propolene" to "ethylene, propylene"
3277	14	Change "polomer elastimeric" to "polymer elastomeric"
3278	3	Change "during the legnth" to "during the life"
3278	8	Change "requirment" to "requirement"
3278	13	Change "thermo" to "thermal"
3278	16	Change "requirments" to "requirements"
3278	23	Change "cosidered" to "considered"

<u>Page</u>	<u>Line</u>	<u>Change</u>
3279	5	Change "heads" to "hatch"
3280	13	Change "whether those" to "where those"
3280	21	Change "event, they exceed the two" to "event are expected in the two"
3284	1	Change "yeild" to "yield"
3284	9	Change "give" to "given"
3286	6	Change "material will" to "material which will"
3286	9	Change "and allowable" to "in allowables"
3286	18	Change "to" to "at"
3288	9	Change "presumptions" to "assumptions"
3289	23	Change "I do not all the top" to "I do not off the top"
3291	11	Change "on page 12" to "on page 212"
3292	25	Change "welds to being them" to "welds to bring them"
3295	9	Change "effect attest" to "effect attempts"
3300	7	Change "NDERT" to "NDE, RT"
3301	8	Change "NNICRT" to "NNIC RT"
3306	5	Change "wetwall" to "wetwell"
3306	5	Change "depredations" to "deflagrations"
3306	19, passim	Change "Case of A" to "K sub A"
3307	2	Change "K of I" to "K sub I"
3309	12	Change "perogative" to "prerogative"
3311	19	Change "Case A" to "K sub A"

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3312	19	Change "Case" to "K"
3313	13	Change "annulous" to "annulus"
3313	13	Change "concrete for" to "concrete or"
3314	1	Change "Gruffel" to "Griffel"
3314	6,10	Change "cylindrical" to "cylindrical"
3314	7	Change "maridional" to "meridional"
3314	16,20	Change "stiffners" to "stiffeners"
3315	17	Change "Rich Mayo" to "Rich Schmehl"
3316	9	Change "alone is the cause" to "is low because"
3316	10	Change "stiffness" to "stiffeners"
3316	19	Change "OCRA's" to "OCRE's"
3316	24	Change "having burns" to "hydrogen burns"
3317	24-25	Change "already going to" to "afraid you would"
3319	8	Change "by doing" to "about doing"
3321	12	Change "in excess of" to "below"
3323	5	Change "estimate" to "estimated"
3323	15	Change "law" to "flaw"
3324	15	Change "At times are" to "At times there are"
3325	5, passim	Change "hydrogen deprodatons" to "hydrogen deflagrations"
3325	19	Change "poor" to "short"
3325	22	Change "Classics" to "CLASIX"
3326	5	Change "Classics" to "CLASIX"

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3326	11	Change "supplied" to "applied"
3328	25	Change "anlaysis" to "analysis"
3332	12	Change "He is going" to "He is doing"
3332	14	Change "line questions" to "line of questions"
3334	12	Change "50.44 C-3/4-B" to "50.44(c)(3)(iv)(B)"
3334	23	Change "50.44 C-3/5-3" to "50.44(c)(3)(v)(A)"
3336	9	Change "aren't" to "are"
3337	1	Change "deflagration" to "detonation"
3337	3	Change "sort" to "short"
3338	6	Change "evluated" to "evaluated"
3339	18	Change "much higher level" to "much lower level"
3339	20	Change "lower" to "higher"
3340	8	Change "that Mr. Alley's" to "of Mr. Alley's"
3340	8	Change "is incompetent" to "as incompetent"
3341	11	Change "industry in" to "industry as"
3341	13	Change "evaluations" to "evaluation"
3342	1	Change "undermine" to "determine"
3346	3	Change "lithium" to "little"
3346	6	Change "of the more penetration" to "of the controlling penetration"
3346	17	Change "psi increase" to "ksi increase"
3346	20	Change "Could" to "Did"
3350	10	Change "Mosar" to "Bosar"

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3351	5	Change "troubling region" to "controlling region"
3353	19	Change "there code" to "there is code"
3355	1	Change "document that is" to "document is"
3357	4	Change "conducts" to "contains"
3357	10	Change "siad" to "said"
3358	10	Change "of the plastic range" to "of the elastic range"
3358	22	Change "taken for" to "taken to"
3361	9,10, 12,19	Change "Myses" to "Mises"
3361	15,18	Change "sheer" to "shear"
3362	7, passim	Change "inflatable shields" to "inflatable seals"
3362	11	Change "resistence" to "resistance"
3362	18	Change "design case" to "design basis"
3362	21	Change "Classic" to "CLASIX"
3362	25	Change "NUREG CR 2855" to "NUREG/CR 3855"
3364	23	Change "with a touch of" to "touch of"
3364	23	Change "asked Ms." to "asks Ms."
3367	20	Change "wehther" to "whether"
3368	1	Change "inflatted" to "inflated"
3368	4, passim	Change "inflattable" to "inflatable"
3369	7	Change "I cann't" to "I can't"
3370	21	Change "sequences that" to "event sequences or scenarios that"

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3370	22	Change "about" to "about event"
3371	7,10	Change "CLASIXS" to "CLASIX"
3371	19	Change "energey" to "energy"
3373	8	Change "oint" to "point"
3374	15	Change "testing with subjected" to "testing when subjected"
3375	1	Change "qualifiaction" to "qualification"
3375	9	Change "hearing" to "nearing"
3375	17	Change "Tables 561 and 562" to "Tables 5.6-1 and 5.6-2"
3378	8	Change "precluded" to "concluded"
3379-80	12	Change "in excess of a limiting" to "in excess of the limiting"
3379-80	13	Change "expectred to be" to "expected to be"
3383	16	Change "NUREG CR 2529" to "NUREG/CR 2549"
3395	1	Change "James F. Bastello" to "James F. Costello"
3396	23	Change "FOI" to "FOIA"
3397	6	Change "for Ms. Buzzelli" to "for Ms. Hiatt"
3402	6	Change "Thomas Blayliss" to "Thomas Blejwas"
3403	11	Change "Klaus" to "Clauss"
3404	19	Change "direction" to "correction"
3405	18	Change "HAITT" to "HIATT"
3405	19	Change "walk" to "airlock"
3405	20	Change "capapcity" to "capacity"
3409	6	Change "would you" to "would your"

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3413	12	Change "sincce" to "since"
3416	20	Change "on welds" to "on walls"
3420	9	Change "ingegrity" to "integrity"
3421	11	Change "CLASIX's" to "CLASIX"
3421	19	Change "it needs" to "there needs"
3422	13	Change "though you" to "thought you"
3423	13	Change "50.44(c)(3)(5)(a)" to "50.44(c)(3)(v)(A)"
3424	13	Change "evaluted" to "evaluated"
3424	24	Change "to them to" to "to them and to"
3425	11	Change "basis is" to "basis accidents is"
3427	4	Change "Does the" to "Has the"
3427	8	Change "proceures" to "procedures"
3428	16	Change "blackout is" to "blackout as"
3428	17	Change "power, correct onsite and offsite" to "power, both onsite and offsite"
3428	23	Change "up the showing the showing" to "up the showing"
3428	24	Change "preliminary analyses" to "preliminary analysis"
3428	24	Change "final analyses" to "final analysis"
3429	15	Change "plans" to "plants"
3430	8	Change "contest of the text" to "context of the test"
3430	12	Change "I may agree" to "I made agreeing"

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3430	24	Change "dealth" to "death"
3437	14	Change "camble" to "cable"
3438	3	Change "insolation" to "isolation"
3440	7, passim	Change "frame" to "flame"
3440	12	Change "Montrael" to "Montreal"
3440	25	Change "loss" to "lowest"
3443	23	Change "be fore" to "be for"
3449	6, passim	Change "seal end" to "seal in"
3452	20	Change "tests" to "steps"
3453	12, passim	Change "exchange even" to "exchanger"
3454	7	Change "may" to "would"
3455	4	Change "you have" to "you don't have"
3455	15	Change "dropped" to "trapped"
3455	18	Change "bzck" to "back"
3455	24	Change "AC" to "RCIC"
3456	21	Change "nps" to "npsh"
3457	4	Change "condenser" to "condensate"
3457	5	Change "HPSI" to "HPCS"
3457	18	Change "report" to "reports"
3457	18	Change "limit" to "limits"
3458	23	Change "codes" to "curves"

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3459	2	Change "hearing" to "nearing"
3459	12	Change "gravitate" to "cavitate"
3460	5	Change "gravitate" to "cavitate"
3460	6	Change "theories" to "curves"
3460	16	Change "245 pre-cool" to "245° suppression pool"
3460	20	Change "mpsh" to "npsh"
3460	22	Change "suctional" to "suction of the"
3461	10	Change "possitive" to "positive"
3461	15	Change "by-pressure" to "high pressure"
3462	4	Change "emply" to "employ"
3462	10	Change "SYGNA" to "CYGNA"
3462	14	Change "sunction" to "suction"
3462	22	Change "designer" to "design or"
3462	25	Change "fuel" to "coolant"
3468	24	Change "aggitation" to "agitation"
3469	9	Change "heighter" to "height"
3470	24	Change "analysis" to "analyses"
3471	1	Change "where the" to ", where it is acceptable for the"
3471	2	Change "as demonstrated" to "bounded"
3471	10	Change "Management" to "Methodology"
3471	5, passim	Change "RSMAP" to "RSSMP"

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3472	11	Change "purose" to "purpose"
3477	7	Change "in containment" to "and containment"
3478	3	Change "but Event I" to "but in the event it"
3478	20	Change "cooling" to "core cooling"
3479	1	Change "speciality" to "specialty"
3480	1	Change "that is" to "that his"
3482	22	Change "through" to "to"
3484	1	Change "loccalized" to "localized"
3489	16	Change "(Continauing)" to "(Continuing)"
3490	7	Change "falling pool flow" to "forward pool swell"
3493	3	Change "Perry plant" to "program plan"
3493	11	Change "the" to "the HCOG"
3493	14	Change "does does" to "does"
3493	15, passim	Change "drywall" to "drywell"
3493	15	Change "introductions" to "interactions"
3494	2	Change "task" to "tasks"
3494	5	Change "mainly" to "mainly combining the"
3495	3	Change "owners groups" to "owners in the owners' group"
3495	17	Change "brake case" to "break case"
3497	1	Change "release" to "relief"
3497	3	Change "purged" to "purge"

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3497	11	Change "graded" to "rated"
3497	21	Change "of" to "or"
3502	4	Change "Case" to "Page"
3502	16	Change "code" to "cone"
3502	21	Change "type" to "pipe"
3502	22	Change "code" to "cone"
3503	4	Change "conditions" to "obstructions"
3504	24	Change "evaluations" to "evaluation"
3506	19	Change "asmuth" to "azmuth"
3510	14	Change "hard" to "hand"
3514	19	Change "Barry Shot" to "Gary Shott"
3515	23	Change "assembly" to "experiment"
3517-3518	4	Change "adiobatic" to "adiabatic"
3520	4	Change "comparable" to "competent"
3520	16	Change "ignitable" to "ignitible"
3520	22	Change "CLASIXS" to "CLASIX"
3521	14	Change "CLASIXS" to "CLASIX"
3523	21	Change "all" to "old"
3523	25	Change "detonation range" to "detonation"
3523	25	Change "propogate" to "propagate"
3524	1	Change "the way" to "by the way"
3524	12-13	Change "Petrol. Petrol or TNT are that strength of explosives" to "Tetryl. Tetryl or TNT are high strength explosives"
3524	15	Change "detonation into a--" to "detonation"

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3526	3	Change "Gene" to "Guenther"
3527	2	Change "into" to "from"
3527	3	Change "and" to "to"
3527	6	Change "has" to "have"
3528	16-17	Change "he also used, not hydrogen but, propane and air as a form of a mixture" to "he also used, not hydrogen, but propane and air mixture"
3535	15	Change "that" to "that is"
3535	25	Change "condensate" to "condense"
3540	17	Change "forgotten" to "forgot"
3540	19	Change "percent orders" to "percent, order"
3541	12	Change "conbustion" to "combustion"
3541	23	Change "Fels" to "Fuls"
3542	7	Change "light" to "right"
3542	11	Change "T" to "P"
3542	23, passim	Change "Marsh" to "MARCH"
3545	5, passim	Change "IMPEL" to "CONTEMPT-LT"
3545	25	Change "import" to "input"
3546	6	Change "RUSMAP" to "RSSMAP"
3547	24, passim	Change "Penwall" to "Fenwal"
3548	8	Change "CLASIXs" to "CLASIX"
3548	18, passim	Change "Hector" to "HECTR"

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3549	1	Change "temperaturs" to "temperatures"
3549	11	Change "increasing" to "decreasing"
3549	16	Change "welwall" to "wetwell"
3549	20	Change "6-89" to "689"
3549	21	Change "floor" to "flow"
3551	15	Change "at one point on your" to "the 1/20th"
3551	20	Change "Feel" to "We feel"
3552	1, passim	Change "fusion" to "diffusion"
3552	6	Change "cnoducting" to "conducting"
3552	19	Change "standing diffusion standing diffusion" to "standing diffusion"
3555	8	Change "simply" to "simple"
3557	15	Change "one in ten" to "one tenth"
3557	21	Change "HCM" to "HCU"
3559	16	Change "fluses and estrapolate" to "fluxes and extrapolate"
3559	19	Change "methodlogies" to "methodologies"
3560	3	Change "what" to "in the 1/4 scale facility what"
3560	12	Change "did you Mr. Karlovitz" to "did you or Mr. Karlovitz"
3561	2	Change "level out come" to "level outcome"
3561	7	Change "entering" to "entraining"

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3561	14	Change "of particularly" to "particularly"
3562	8	Change "angular" to "annular"
3563	14	Change "put a 747 into a 747" to "put a 747"
3563	17	Change "turbine" to "turbulence"
3563	25	Change "Froud" to "Froude"
3564	9	Change "order" to "or"
3574	4	Change "loop" to "liquid"
3575	25	Change "with the" to "liquid"
3576	2	Change "with the" to "liquid"
3578	2	Change "Not" to "It is not"
3578	3	Change "possibility" to "survivability"
3578	14-15	Change "drywell containment" to "drywell and containment"
3579	5	Change "Whay?" to "What?"
3579	2,19	Change "sheaths" to "seats"
3579	24	Change "high" to "high of"
3580	8	Change "sheet" to "seat"
3580	14	Change "for a" to "or the"
3581	7	Change "Diffusion" to "Flames"
3582	2-3	Change "etholene, propalene dyamene" to "ethylene, propylene diamene"
3582	4	Change "Pethra" to "Presray Corporation"
3582	7	Change "an erraneous equation" to "an Arrhenius equation"
3583	5	Change "We really manufacture" to "We reviewed manufactures'"

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3583	6	Change "mating surfaces because" to "mating surfaces. Because"
3583	11	Change "mean lower" to "mean and lower"
3584	1	Change "finally report" to "final report"
3584	6	Change "necessary that we" to "necessary to show that we"
3586	1	Change " 35 psig" to "45 psig"
3586	25	Change "penetration four one four." to "penetration 414."
3588	9,22	Change "C-3-4-B" to "(c)(3)(iv)(B)"
3588	25	Change "C-3-4" to "(c)(3)(iv)"
3590	18	Change "15 psi" to "50 psi"
3591	6	Change "touchenss" to "toughness"
3592	24	Change "you knowledge" to "your knowledge"
3593	1,7	Change "annulous" to "annulus"
3594	2	Change "one is was" to "one was"
3594	8-9	Change "of course the" to "a pro se"
3594	12	Change "inforamtion" to "information"
3596	3	Change "NCR 17-426" to "NR 17-426"
3596	12	Change "79 KSI" to "79 psi"
3596	20	Change "region is limited" to "region is limiting"
3598	4	Change "non linear" to "non-linear"
3601	3	Change "a less" to "at least"
3605	25	Change "recoverable 4" to "recoverable full"

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3606	16	Change "L-P-C-I, LPSC, L-D-S-C" to "L-P-C-I, LPCS, L-P-S-C"
3609	23	Change "containing" to "containment"
3610	13	Change "restore power even" to "even restore power"
3612	11	Change "anumber" to "a number"
3612	20	Change "pressure" to "suppression"
3613	17	Change "exchanges" to "exchangers"
3615	10	Change "not -- it" to "not -- if"
3616	21	Change "He had all of his openings -- he has all of his" to "He had"
3616	23	Change "propogation" to "propagation"
3616	24	Change "calculatiaons" to "calculations"
3617	5	Change "baffels" to "baffles"
3617	6	Change "propogated" to "propagated"
3617	14	Change "as the hatch stobs and the glow plug" to "as the glow plug"
3619	11	Change "CA" to "DBA"
3620	23	Change "program has" to "program have"
3621	2, passim	Change "HECTOR" to "HECTR"
3621	7,15	Change "CLASIXS" to "CLASIX"
3623	3	Change "anlaysia" to "analysis"
3623	24	Change "ceiling" to "sealing"
3624	13	Change "scale" to "scaled"

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3625	15	Change "With respect" to "Q. With respect"
3627	2	Change "tests, first" to "tests are not the same. First"
3627	11	Change "would expect" to "would not expect"
3628	13	Change "controlled system" to "control system"
3628	15	Change "are hugh" to "are huge"
3629	6	Change "bypass I guess" to "bypass"
3629	14	Change "occurred of" to "occurred to"
3630	19	Change "MARCH" to "MARC"
3631	2	Change "My Hiatt" to "Ms. Hiatt"
3633	12	Change "loop" to "LOOP"
3634	21	Change "some" to "sound"
3634	23	Change "turbulent, involved." to "turbulent."
3635	1	Change "rate" to "wave"
3637	17	Change "is the low" to "is of low"
3639	19, passim	Change "Fenwall" to "Fenwal"
3639	24	Change "room" to "bomb"
3640	1	Change "respected --" to "respected company"
3640	2	Change "room" to "bomb"
3642	8	Change "loccations" to "locations"
3642	20	Change "reevaluating" to "re-evaluating"
3643	18	Change "might" to "might change"
3649	11	Change "igiter" to "igniter"

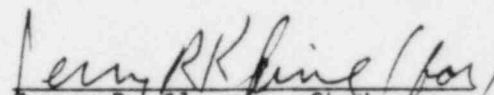
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3660	19	Change "initially -- however," to "initially -- however"
3661	3	Change "else" to "since"
3663	9	Change "specified" to "specifies"
3663	9	Change "is" to "as"
3663	10, passim	Change "iodide" to "iodine"
3663	10	Change "sesium" to "cesium"
3663	23	Change "scenareo" to "scenario"
3663	25	Change "them" to "from"
3664	7	Change "Reference" to "Referring to"
3664	9	Change "procecure" to "procedure"
3664	13	Change "A Yes." to "A (Buzzelli) yes."
3673	20	Change "VonElby" to "von Elbe"
3674	6	Change "Mr. Notagrancesco's" to "Mr. Notafrancesco's"
3678	3	Change "them to shortly" to "them to me shortly"
3681	3,7	Change "(OCRE Exhibit No. 8," to "(OCRE Exhibit No. 18"
3682	4	Change "from Mr. Dalwyn" to "to Mr. Dalwyn"
3686	9,17	Change "The DVA" to "The DBA"
3690	9	Change "LASSO" to "Los Alamos"
3690	20	Change "was to duplicate" to "were to duplicate"

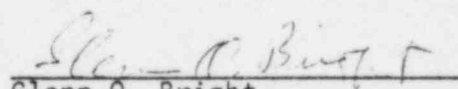
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3698	17	Change "industry the industry" to "the industry"
3698	17	Change "heat core" to "IDCOR"
3698	17	Change "map code" to "Maap code"
3699	18	Change "Ros" to "Ron"
3700	12	Change "Hector" to "HECTR"
3700	15,18	Change "Ball" to "BOIL"
3700	17	Change "soft" to "source"
3701	3	Change "Hector" to "HECTR"
3702	13	Change "flood" to "reflood"
3702	15	Change "the fuel" to "of the fuel"
3711	18	Change "youy have" to "you have"
3713	15	Change "depends no" to "depends on"
3713	20	Change "Juang" to "Jaung"
3715	3	Change "form" to "from"
3715	11	Change "OCRE Exhibit No. 8" to "OCRE Exhibit No. 24"
3721	22	Change "CLASIXS" to "CLASIX"
3721	24	Change "reservatrions" to "reservations"
3724	20,24	Change "Marshal" to "Marshall"
3727	8	Change "one six area" to "one six eight area"
3727	18	Change "and whether in your" to "and in your"
3727	19	Change "opinion these results" to "opinion do these results"
3730	7	Change "Mr. Young" to "Mr. Juang"

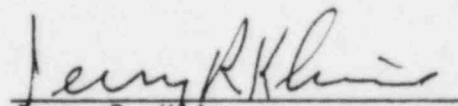
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3730	22	Change "Reference 4" to "Reference 14"
3730	23	Change "a program 2 unit" to "Pilgrim Unit 2"
3733	1	Change "defect weld" to "defective welds"
3733	4	Change "Defect" to "Defective"
3733	13	Change "that the way" to "that by the way"
3734	16, passim	Change "Fenwall" to "Fenwal"
3734	16,20,23	Change "Teflon" to "teflon"
3738	2	Change "Marshal" to "Marshall"
3740	24	Change "before the" to "for the above"
3741	16	Change "we could feel" to "we could see"
3744	4	Change "for five" to "for above five"
3746	20	Change "Various tests done" to "various tests are done"
3747	9	Change "combusting" to "combustion"
3749	14	Change "LOCA" to "occur"
3752	9	Change "Support Group." to "Support Group at Perry."
3755	21	Change "jsut" to "just"
3756	12	Change "detemrined" to "determined"
3759	11	Change "inforamtion" to "information"
3760	1	Change "contruing" to "construing"
Qualifications of of Bernard Lewis (following Tr. 3241) at 2.		Change "Author of five books" to "Editor of five books"

Ordered:

FOR THE ATOMIC SAFETY AND
LICENSING BOARD


James P. Gleason, Chairman
ADMINISTRATIVE JUDGE


Glenn O. Bright
ADMINISTRATIVE JUDGE


Jerry R. Kline
ADMINISTRATIVE JUDGE

Bethesda, Maryland

TABLE 8.3-1 (Continued)

Equipment Description	Number on Bus	HP Each	Full Load (Amperes)	Inrush Current (Amperes)	Maximum Operating Requirements Without Offsite Power Available					
					Forced Shutdown			Loss of Coolant Accident		
					(9) Time of Start	Req'd Running Time	Type of Control	(9) Time of Start	Req'd Running Time	Type of Control
Unit 2, Division 1 (Cont'd)										
Safety Feature Loads (Cont'd)										
Annulus Exhaust Fan A	1	15	19	105	0 sec	Cont	(2)	0 sec	Cont	(3)
Annulus Exhaust System Heating Coil A	1	15 kW	19	-	0 sec	Cont	(2)	0 sec	Cont	(3)
Control Complex Chiller C	1	680	94	540	50 sec	Cont	(2)	50 sec	Cont	(2)
Control Complex Chiller C Oil Pump	1	1.5	2.2	13.4	50 sec	Cont	(2)	50 sec	Cont	(2)
Control Complex Chilled Water Pump C	1	100	115	710	0 sec	Cont	(1)	0 sec	Cont	(1)
Off-Gas Building Vent Fan A	1	40	50	280	0 sec	Cont	(2)	0 sec	Cont	(2)
Reactor Core Isolation Cooling Pump Room Cooling Fan	1	5	7	42.7	0 sec	Cont	(2)	0 sec	Cont	(2)
Emergency Service Water Pumphouse Vent Supply Fan A	1	30	38	290	0 sec	Cont	(2)	0 sec	Cont	(2)
Diesel Generator Fuel Oil Transfer Pump	1	15	20	130	0 sec	Cycled ⁽⁶⁾	(2)	0 sec	Cycled ⁽⁶⁾	(2)
Diesel Generator Fuel Oil Transfer Backup Pump	1	15	20	130	0 sec	Cycled ⁽⁶⁾	(2)	0 sec	Cycled ⁽⁶⁾	(2)
Diesel Generator Jacket Water Keep Warm Pump	1	3	4.1	32	-	-	(2)	-	-	(2)
Diesel Generator Jacket Water Keep Warm Heater	1	75 kW	94	-	-	-	(2)	-	-	(2)
Diesel Generator Lube Oil Keep Warm Pump	1	15	19	116	-	-	(2)	-	-	(2)
Diesel Generator Lube Oil Keep Warm Heater	1	50 kW	63	-	-	-	(2)	-	-	(2)

0.3-82

AS. 15 (12-11-84)

TABLE 8.3-7 (Continued)

Equipment Description	Number on Bus	HP Each	Full Load (Amperes)	Inrush Current (Amperes)	Maximum Operating Requirements Without Offsite Power Available							
					Forced Shutdown			Loss of Coolant Accident				
					(9) Time of Start	Req'd Running Time	Type of Control	(9) Time of Start	Req'd Running Time	Type of Control		
Unit 2, Division 1 (Cont'd)												
Safety Feature Loads (Cont'd)												
Main Steam Isolation Valve Leakage Control Pipe Heaters	4	4 kW	5	-	0 sec	Cont	(2)	0 sec	Cont	(2)		
Main Steam Isolation Valve Leakage Control Air Blower	1	4	6.5	42.25	0 sec	Cont	(2)	0 sec	Cont	(2)		
125 Volt D-C Battery Charger	1	50 kW	87	-	0 sec	Cont	(4)	0 sec	Cont	(4)		
Hydrogen Recombiner A	1	75 kW	95	-	-	-	(1)	18.4 hr	Cont	(1)		
Hydrogen Mixing Compressor A	1	60	77	436	-	-	(2)	287 hr	Cont	(2)		
Motor Operated Valves	100	1.2(7)	-	-	0 sec	30 sec	-	0 sec	30 sec	-		
Non-safety Feature Loads												
Nuclear Closed Cooling Pump C	1	700	90.5	588	1 min	Cont	(1)	-	-	(1)		
Control Rod Drive Pump A	1	400	52	312	-	-	(1)	-	-	(1)		
					Time Sequence			Forced Shutdown			Loss of Coolant Accident	
Subtotal, kW per Time Sequence												

Unit 2, Division 2Safety Feature Loads

Residual Heat Removal Pump B	1	900	115	747	10 min	Cont	(1)	5 sec	Cont	(3)
Residual Heat Removal Pump C	1	900	115	747	-	Cont	(1)	0 sec	Cont	(3)

TABLE 8.3-1 (Continued)

Equipment Description	Number on Bus	HP Each	Full Load (Amperes)	Inrush Current (Amperes)	Maximum Operating Requirements Without Offsite Power Available					
					Forced Shutdown		Loss of Coolant Accident			
					(9) Time of Start	Req'd Running Time	Type of Control	(9) Time of Start	Req'd Running Time	Type of Control
Unit 2, Division 2 (Cont'd)										
Safety Feature Loads (Cont'd)										
Emergency Service Water Pump B	1	800	102	618	10 sec	Cont	(2)	10 sec	Cont	(2)
Emergency Closed Cooling Pump B	1	100	112	728	0 sec	Cont	(1)	0 sec	Cont	(3)
Residual Heat Removal B and C Water Leg Pump	1	5	6.35	46	0 sec	Cont	(1)	0 sec	Cont	(1)
Standby Liquid Control Pump B	1	40	48.8	317	-	-	(1)	-	-	(1)
Diesel Room Supply Fans	2	50	57.5	376	0 sec	Cont	(2)	0 sec	Cont	(2)
Residual Heat Removal B Pump Room Cooling Fan	1	20	25	130	10 min	Cont	(2)	5 sec	Cont	(2)
Residual Heat Removal C Pump Room Cooling Fan	1	20	25	130	-	-	(2)	0 sec	Cont	(2)
Annulus Exhaust Fan B	1	15 kW	19	105	0 sec	Cont	(2)	0 sec	Cont	(3)
Annulus Exhaust System Heating Coil B	1	15	19	-	0 sec	Cont	(2)	0 sec	Cont	(3)
Off-Gas Building Vent Fan B	1	40	50	280	0 sec	Cont	(2)	0 sec	Cont	(2)
Emergency Service Water Pumphouse Vent Supply Fan B	1	30	38	290	0 sec	Cont	(2)	0 sec	Cont	(2)
Diesel Generator Fuel Oil Transfer Pump	1	15	20	130	0 sec	Cycled ⁽⁶⁾	(2)	0 sec	Cycled ⁽⁶⁾	(2)
Diesel Generator Fuel Oil Transfer Backup Pump	1	15	20	130	0 sec	Cycled ⁽⁶⁾	(2)	0 sec	Cycled ⁽⁶⁾	(2)
Diesel Generator Jacket Water Keep Warm Pump	1	3	4.1	32	-	-	(2)	-	-	(2)
Diesel Generator Jacket Water Keep Warm Heater	1	75 kW	94	-	-	-	(2)	-	-	(2)
Diesel Generator Lube Oil Keep Warm Pump	1	15	19	116	-	-	(2)	-	-	(2)

TABLE 8.3-1 (Continued)

Equipment Description	Number on Bus	HP Each	Full Load (Amperes)	Inrush Current (Amperes)	Maximum Operating Requirements Without Offsite Power Available					
					Forced Shutdown		Loss of Coolant Accident			
					(9) Time of Start	Req'd Running Time	Type of Control	(9) Time of Start	Req'd Running Time	Type of Control
Unit 2, Division 2 (Cont'd)										
Safety Feature Loads (Cont'd)										
Diesel Generator Lube Oil Keep Warm Heater	1	50 kW	63	-	-	-	(2)	-	-	(2)
Main Steam Isolation Valve Leakage Control Air Blower	2	4	6.5	42	0 sec	Cont	(2)	0 sec	Cont	(2)
125 Volt B-C Battery Charger	1	50 kW	87	-	0 sec	Cont	(4)	0 sec	Cont	(4)
Hydrogen Recombiner B	1	75 kW	95	-	-	-	(1)	18.4 hr	Cont	(1)
Hydrogen Mixing Compressor A	1	60	77	436	-	-	(2)	287 hr	Cont	(2)
Motor Operated Valves	70	2.1 ⁽⁷⁾	-	-	0 sec	30 sec	-	0 sec	30 sec	-
Nonsafety Feature Loads										
Control Rod Drive Pump B	1	400	52	312	-	-	(1)	-	-	(1)
Service Water Pump D	1	1000	129	800	1 min	Cont	(1)	-	-	(1)
Standby Liquid Control Operating Heater	1	10 kW	11	-	(8)	Cont	(2)	-	-	(2)
Hydrogen Main Seal Oil Pump	1	20	28.7	145	(8)	Cont	(1)	-	-	(1)
Hydrogen Recirculating Seal Oil Pump	1	7.5	11.2	63.5	(8)	Cont	(1)	-	-	(1)
Hydrogen Seal Oil Vapor Extractor	1	2	3	21	(8)	Cont	(1)	-	-	(1)
Turbine Turning Gear Motor	1	60	80	435	(8)	Cont	(2)	-	-	(2)
Turbine Turning Gear Piggy Back Motor	1	10	15	98	(8)	Cont	(2)	-	-	(2)
Turbine Bearing Lift Pumps	9	5	8.1	46	(8)	Cont	(1)	-	-	(1)
Turbine Lube Oil Motor Suction Pump	1	50	61.5	363	(8)	Cont	(2)	-	-	(2)
Turbine Turning Gear Oil Pump	1	50	61.5	363	(8)	Cont	(2)	-	-	(2)

TABLE 8.3-1 (Continued)

Equipment Description	Number on Bus	HP Each	Full Load (Amperes)	Inrush Current (Amperes)	Maximum Operating Requirements Without Offsite Power Available					
					Forced Shutdown			Loss of Coolant Accident		
					(9) Time of Start	Req'd Running Time	Type of Control	(9) Time of Start	Req'd Running Time	Type of Control
Unit 2, Division 2 (Cont'd)										
Nonsafety Feature Loads (Cont'd)										
Reactor Feedwater Pump Turbine A Turning Gear	1	1.5	2.5	16	(8)	Cont	(2)	-	-	(2)
Reactor Feedwater Pump Turbine B Turning Gear	1	1.5	2.5	16	(8)	Cont	(2)	-	-	(2)
Diesel Generator Starting Air Compressors	4	30	34	217	10 min	Cycled ⁽⁶⁾	(2)	-	-	(2)
Diesel Generator Starting Air Aftercoolers	4	1	1.68	15	10 min	Cycled ⁽⁶⁾	(2)	-	-	(2)
Reactor Protection System Motor Generator Set A	1	25	38.9	253	(8)	Cont	(1)	-	-	(1)
Reactor Water Cleanup Pump A	1	60	66.8	434	(8)	Cont	(1)	-	-	(1)
Reactor Water Cleanup Pump B	1	60	66.8	434	(8)	Cont	(1)	-	-	(1)
Lower Drywell Cooling Fans	2	60	73.5	435	(8)	Cont	(2)	-	-	(2)
Middle Drywell Cooling Fans	2	60	73.5	435	(8)	Cont	(2)	-	-	(2)
Upper Drywell Cooling Fans	2	60	73.5	435	(8)	Cont	(2)	-	-	(2)
Diesel Driven Fire Pump B Fan	1	7.5	10.4	63.5	(8)	Cont	(2)	-	-	(2)
Off-Gas Building Vent Exhaust Radiation Monitor	1	2	2.5	-	(8)	Cont	(4)	-	-	(4)
125 Volt D-C System A Battery Charger	1	75 kW	133	-	(8)	Cont	(4)	0 sec	Cont	(4)
125 Volt D-C System B Battery Charger	1	37.5 kW	67	-	(8)	Cont	(4)	0 sec	Cont	(4)
Essential Lighting	-	24 kW	-	-	(8)	Cont	(4)	0 sec	Cont	(4)
Vital A-C Distribution System Alternate Supply Transformer	1	45 kVA	94	-	(8)	Cont	(4)	0 sec	Cont	(4)

TABLE 8.3-1 (Continued)

Equipment Description	Number on Bus	HP Each	Full Load (Amperes)	Inrush Current (Amperes)	Maximum Operating Requirements Without Offsite Power Available					
					Forced Shutdown			Loss of Coolant Accident		
					(9) Time of Start	Req'd Running Time	Type of Control	(9) Time of Start	Req'd Running Time	Type of Control
<u>Unit 2, Division 2 (Cont'd)</u>										
<u>Non-safety Feature Loads (Cont'd)</u>										
Motor Operated Valves	10	1(7)	-	-	(8)	30 sec	-	-	-	-
		<u>Time Sequence</u>				<u>Forced Shutdown</u>			<u>Loss of Coolant Accident</u>	
Subtotal, kW per Time Sequence		0 sec		522				1450		
		3 sec		-				746		
		10 sec		635				635		
		50 sec		-				-		
		1 min		1751				-		
		10 min		870				-		
		18.4 hr		-				75		
		287 hr		-				60		
Net Total Maximum Continuous Load (kW)				<u>3778</u>				<u>2966</u>		
<u>Units 1 and 2, Division 3</u>										
Woo-C & 1 High Pressure Core Spray Pump	1	3000	372	2418	0 sec	Cont	(1)	0 sec	Cont	(3)
High Pressure Core Spray Emergency Water Pump	1	75	85.4	543	0 sec	Cont	(2)	0 sec	Cont	(2)
High Pressure Core Spray Water Leg Pump	1	5	6.35	46	0 sec	Cont	(1)	0 sec	Cont	(1)
High Pressure Core Spray Pump Room Cooling Fan	1	20	25	130	0 sec	Cont	(2)	0 sec	Cont	(1)
High Pressure Core Spray Diesel Generator Room Fans	2	50	57.5	376	0 sec	Cont	(2)	0 sec	Cont	(2)
High Pressure Core Spray Diesel Generator Fuel Oil Transfer Pump	1	15	20	130	0 sec	Cycled ⁽⁶⁾	(2)	0 sec	Cycled ⁽⁶⁾	(2)
High Pressure Core Spray Diesel Generator Fuel Oil Transfer Backup Pump	1	15	20	130	0 sec	Cycled ⁽⁶⁾	(2)	0 sec	Cycled ⁽⁶⁾	(2)
125 Volt D-C Battery Charger	1	6.6 kW	12	-	0 sec	Cont	(4)	0 sec	Cont	(4)

8.3-87

AM. 15 (12-31-84)

TABLE 8.3-1 (Continued)

[illegible]**NOTES:**

1. Type of control - equipment energized manually.
2. Type of control - equipment started automatically with associated pump, diesel, temperature switch, pressure switch, etc.
3. Type of control - equipment started automatically by LOCA signal or high radiation signal.
4. Type of control - equipment continuously energized; requires no manual or automatic operation.
5. Cycled; 15 minutes on, 3 to 5 hours off.
6. Cycled; 10 minutes on, 20 minutes off.
7. Average value.
8. Energized with manual closing of stub bus breaker (stub bus breaker closure at 1 minute).
9. Zero seconds (0 sec) is the time that the 4.16 kV bus voltage is available after the diesel generator breaker closes. The time period from diesel generator breaker to zero seconds includes undervoltage relay and auxiliary relay pickup and dropout times. Load center transformers, which are not load shed, are energized immediately after diesel generator breaker closure.
10. For each diesel generator, the jacket water and lube oil keep warm heaters are prevented from operating in the event of a LOOP and/or a LOCA signal.
11. Fuel Handling Building Exhaust Fan C and Fan C Misting Coil are shown in Div. 1 and Div. 2 summaries but are key interlocked to be connected to only one division at a time.