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原子力発電プラント諸元リスト(国内)

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日本の国内で設計・建設・運転されている営業用原子力発電プラント20基について, のべ436項目の諸元を電算機により作表したものである。索引としては, キーワード索引(KWOC), アルファベット順索引を付した。

JAERI-M 5959

Design Data and Safety Features of Commercial
Nuclear Power Plants in Japan

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The design data and safety features of twenty commercial nuclear power plants in Japan are presented for about 400 items. The lists of reactors, items, abbreviations and key words as well as the KWOC index are also given.

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1 はじめに

日本国内の原子力発電プラントの性能・諸元についての一覧表を作成し、索引を付した。収録した国内の動力炉は20基（うち試験炉1基）であり、比較対照のために米国の動力炉10基を加えた。

諸元のアイテム（項目）としてとり上げたものは436項目であるが、炉型の相違、設計の新旧などの差によって、一部のアイテムを欠く原子炉もある。

データは公開された資料のうち、入手しうるもののみによったため、大部分は設計段階のものである。したがって、建設、工事、運転、補修などの過程で変更されたものも多いと考えられるが、これらについては新しいデータが公開された際に逐次、増補、改計を加える予定である。

このリストは、原子炉の各部の形状、材質、寸法、性能などといった、ハードウェアのデータだけではなく、各原子炉の歴史的経過、原子炉敷地の状況、安全対策、安全性解析などの、いわばソフトウェアについての記述にも若干の工夫をこらして収録している。

データの加除、作表、索引作成などの処理はすべてコンピュータを用いており、これらを効率的に、またとくに経済的に処理するプログラム“FREP-1”を開発した。

FREP-1は、コア、計算時間、出力ページ数などの経済性に特に意を用いたプログラムである。

入手しうる公開のデータだけを用いたために、不備な点も多々あるので、各方面のご批判を得て逐次改善をすすめたいと考えている。

なお、計算時間の経済性を考慮して、索引をA4で実施するようにプログラムしたため、一部に読みにくい点が生じているが、このような言語処理の一つの試みとして採用したものである。

FREP-1は、FORTRANにより、FACOM-230-60およびCDC-6600用の2種を作成した。この部分については、センチュリ・リサーチ・センターの石橋明弘、小野正夫両氏の助力をいただいた。

2 諸元リストの内容

2.1 対象とした原子炉

収録の対象とした原子炉はつぎのとおりである。

発電炉（国内）

原子炉名	炉型
東海 - 2	BWR
高浜 - 1	PWR
" - 2	PWR
玄海 - 1	PWR
大飯 - 1	PWR
" - 2	PWR
美浜 - 1	PWR
" - 2	PWR
" - 3	PWR
福島 - 1	BWR
" - 2	BWR
" - 3	BWR
" - 4	BWR
" - 5	BWR
女川	BWR
浜岡 - 1	BWR
" - 2	BWR
島根	BWR
伊方	PWR

発電炉（米国）

原子炉名	炉型
Vermont Yankee	BWR
Browns Ferry	BWR
Millston	BWR
Dresden - 1	BWR
Dresden - 2	BWR
Oyster Creek	BWR
Daune Arnold	BWR
Yankee	PWR
Burlington	PWR（設計のみ）

発電試験炉

原子炉名	炉型
J PDR - II	BWR
Saxton	PWR

2.2 諸元アイテム

諸元の項目(以下アイテム)としては436アイテムを収録した。

以下はそのコード番号順リストであり、左から順に、コード番号、アイテム、データ収録ページの順に示してある。

100	SOURCE	DOCUMENT						1
110	HISTORY	OF	CONSTRUC	TION	PERMIT			1
120	HISTORY	OF	CONSTRUC	TION	PERMIT	APPLICAT		2
122	REVISE	OF	CONSTRUC	TION	PERMIT			2
130	REVISE	OF	CONSTRUC	TION	PERMIT	APPLICAT		2
200	IMPORTED		COMPONEN	TS				4
300	HISTORY	OF	CONSTRUC	TION AND	OPERATI	ON		4
10000	SA	DFIN.OF	AB-TRA					5
10020	SA	DEFINITI	ON	OF	ACCIDENT			5
10100	SAFETY	STANDARD	UNDER	AB-TRA				5
10120	SAFETY	STANDARD	UNDER	ACCIDENT				6
20000	KIND OF	AB-TRA	FROM	VARIOUS	SYSTEMS			8
21000	KIND OF	AB-TRA	FROM	RECIRC.	SYSTEM			8
21110	AB-TRA		RECIRC.	PUMP	TRIP			9
21120	AB-TRA		RECIRC.	PUMP	SHAFT	STICK		9
21200	AB-TRA	RECIRC.	FLOW	REGULATOR		MALFUNC.		9
21320	AB-TRA	MISS	START-UP	OF COLD	RECIRC.	LOOP (1)		10
21340	AB-TRA	MISS	START-UP	OF COLD	RECIRC.	LOOP (2)		10
21360	AB-TRA	MISS	START-UP	OF COLD	RECIRC.	LOOP (3)		11
22000	KIND OF	AB-TRA	FROM	FEEDWATE	R	SYSTEM		11
22100	AB-TRA	TROUBLE	OF	FEED	WATER	CONTROLL	ER	11
22200	AB-TRA	LOSS	OF	FEED	WATER	HEATER		12
22300	AB-TRA	LOSS	OF	FEED	WATER			12
23000	KIND OF	AB-TRA	FROM	MAINSTEAM		SYSTEM		12
23100	AB-TRA	GENERATO	R	TRIP				13
23200	AB-TRA	TURBINE	TRIP	SUMMARY				13
23210	AB-TRA	TURBINE	TRIP (1)	WITH	BY PASS	V. ACT		13
23220	AB-TRA	TURBINE	TRIP (2)	WITHOUT	BY PASS	V. ACT		14
23230	AB-TRA	TURBINE	TRIP (3)					14
23300	AB-TRA	MAIN	STEAM	ISOLATE	VALVE	CLOSE		15
23400	AB-TRA	MALFUNC.	OF	INITIAL	PRESSURE	ADJUSTER		15
23500	AB-TRA	PRESSURE	RELIEF	VALVE	OPEN			16
24000	KIND OF	AB-TRA	FROM	CONTROL	SYSTEM			16
24100	AB-TRA	CONTROL	ROD	WITHDRAW	SUBCRI.	STATE		17
24200	AB-TRA	CONTROL	ROD	WITHDRAW	ON	POWER		17
25100	AB-TRA	OTHERS	LOSS OF	AUX.	POWER	SUPPLY		18
31000	KIND OF	ACCIDENT	IN BWR					18
32100	ACCIDENT	CAUSE	AND	RESULT	CONTROL	ROD DROP		18
32200	ACCIDENT	COUNTERP	LAN TO	CONTROL	ROD DROP	OUT		19
32310	ACC.ANA.	CONTROL	ROD	DROPOUT				19
32320	ACC.ANA.	CONTROL	ROD	DROPOUT	RESULT			20
33100	ACCIDENT	CAUSE	RESULT	CONTROL	ROD	RUNAWAY		20
33200	ACCIDENT	COUNTERP	LAN TO	CONTROL	ROD	RUNAWAY		20
34100	ACCIDENT	CAUSE	COUNTERP	LAN	FUEL	HANDLING		21
35200	ACCIDENT	LOSS OF	COOLANT	PRECONDI	TION	KIND		21
35210	ACCIDENT	LOSS OF	COOLANT	MINOR	DESTRUCT	ION		22
35220	ACCIDENT	LOSS OF	COOLANT	MEDIUM	DESTRUCT	ION		22
35230	ACCIDENT	LOSS OF	COOLANT	MAJOR	DESTRUCT	ION		22
35300	ACC.ANA.	RECIRC.	RUPTURE	LOCA				22
35310	ACC.ANA.	RECIRC.	RUPTURE	LOCA				23

35320	ACC.ANA.	RECIRC.	RUPTURE	DRY-WELL	P-CHANGE	LOC	23
35340	FUEL	CLADDING	PERFORAT	AND ZR-W	REACTION	RATE	23
35600	PERFORMA	NCE	EVALUATI	ON OF	ECCS	LOCA FW	24
36200	ACCIDENT		MAIN	STEAM	TUBE	RUPTURE	25
36310	ACC.ANA.			M.STEAM	TUBE	RUPTURE	25
36320	ACC.ANA.			M.STEAM	TUBE	RUPTURE	25
43000	MCA HA	ITEMS					26
43110	MCA HA	BWR LOC	FP LEAK	RATE	FROM	DRY-WELL	26
43120	MCA HA	BWR LOC	FP	RELEASE	FROM	FUEL	26
43130	MCA HA	PWR LOPC	FP GAS	RELEASE	FROM	FUEL	27
43140	MCA HA	BWR LOC	FP GAS	RELEASE	FROM	BUILDING	27
43150	MCA HA	PWR LOPC	FP GAS	RELEASE	FROM	BUILDING	27
43160	MCA	BWR LOC	ESTIMATI	ON OF	IRRADIAT	ION DOSE	28
43170	MCA HA	PWR LOPC	ESTIMATI	ON OF	IRRADIAT	ION DOSE	28
43180	HA	BWR LOC	ESTIMATI	ON OF	IRRADIAT	ION DOSE	28
43190	NATIONAL	HEREDITY	IRRADIAT	ION DOSE	HA		29
43220	MCA HA	BWR MSTR	FP	RELEASE	FROM	FUEL	29
43240	MCA HA	BWR MSTR	FP GAS	RELEASE	FROM	BUILDING	29
43250	MCA HA	PWR SGTR	FP GAS	RELEASE	FROM	BUILDING	30
43260	BWR MCA	BWR MSTR	ESTIMATI	ON OF	IRRADIAT	ION DOSE	30
43270	MCA HA	PWR SGTR	ESTIMATI	ON OF	IRRADIAT	ION DOSE	30
43280	BWR HA	BWR MSTR	ESTIMATI	ON OF	IRRADIAT	ION DOSE	31
43500	DISTANCE	SITE	BOUNDARY	AND	PLANT	CENTER	31
110100	REACTOR	COUNTRY	SITE	OWNER	CRITICAL	DATE	7
110110	REACTOR	PLANT	SITE				0
110200	REACTOR	TYPE					8
520200	ENGINEER						32
611000	REACTOR	SITE	SITUTAI	ON	AREA		32
621220	SITE	WATER	QUALITY	WATER	SOURCE		32
621240	SITE	WATER	QUALITY	PH	E.CDTVTY	NIGORID	33
621260	SITE	WATER	QUALITY	HARDNESS	ALKALI		33
621280	SITE	WATER	QUALITY	SO-4 ION	CL ION	NH-4 ION	34
621420	SITE	WATER	QUALITY	NO-3 ION	NO-2 ION		34
621440	SITE	WATER	QUALITY	SILICA			34
621460	SITE	WATER	QUALITY	CATION	ANION	TOTAL	35
621480	SITE	WATER	QUALITY	FE TOTAL			35
621620	SITE	WATER	QUALITY				35
641200	POPULATI	ON FROM	1KM	RADIUS	TO 15KM	RADIUS	36
641400	POPULATI	ON FROM	20KM	RADIUS	TO 30KM	RADIUS	36
731100	RATED	OUTPUT	PER	REACTOR	MWT MWE		37
731120	REACTOR	OUTPUT	POWER	ELECTRIC	AL	MWE	38
731140	REACTOR	CORE	COOLANT	FLOW	RATE	T/H	39
731160	CORE	INLET	SUBCOOL	KCAL/KG			40
731180	REACTOR	BWR CORE	COOLANT	INLET	OUTLET	TEMP.	40
731190	REACTOR	PWR CORE	COOLANT	INLET	OUTLET	TEMP.	41
731200	CORE	OUTLET	STEAM	QUALITY	AND VOID	RATIO	41
731220	PLANT	PRESSURE					42
731240	REACTOR	CORE	SIZE	DIA *	HEIGHT		43
731260	FUEL	LOADING	WEIGHT	TON-U02	TON-U	TON-U235	44
731300	REACTOR	STEAM	FLOW	RATE	T/H		45

732200	CORE	FUEL	ASSY	NUMBER				46
732220	FUEL	SPACER	NUMBER	PER ASSY	MATERIAL	TYPE		46
732240	FUEL	CHANNEL	BOX	MATERIAL	SIZE	THICK		69
732260	UD-2	WEIGHT	PER FUEL	ASSY	KGUD-2/	ASSY		48
732280	FUEL	ASSY	TOTAL	WEIGHT	KG	(INC .H-WARE)		48
732300	THERMAL	CONDUCTI	VITY	OF	UD-2			49
732320	THERMAL	CONDUCTI	VITY	OF	ZRY			49
732340	FISSION	PRODUCT	GENERATE	RATIO	GAS FP	PRESSURE		49
732350	THERMAL	EXPANSIO	N	OF	UD-2	PELLET		50
732360	THERMAL	EXPANSIO	N	OF	ZRY	CLADDING		50
732380	UD-2	PELLET	SOLID	FP	SWELLING	RATE		50
732400	FUEL	UD-2	PELLET	SIZE	DIA AND	LENGTH		51
732440	FUEL ROD	CLADDING	MATERIAL	THICK.	O.D.	DIA.GAP		54
732460	FUEL	ROD	EFFECT.	LENGTH	AND ASSY	LENGTH		56
732480	FUEL	ROD NO.	PER ASSY	AND ROD	PITCH	ARRANGE		57
732490	FUEL	ASSY	VERTICAL	ITY	CHECK	METHOD		58
732500	SPACER	ALIGNMEN	T		CHECK	METHOD		58
732600	PLENUM	VS FUEL	VOLUME	RATIO	OR	LENGTH		59
732620	FUEL	UD-2	PELLET	ENRICH				60
732640	BURN-UP	1ST CORE	AVG.	FINAL-C.	AVG.	1ST ASSY	MAX	61
732650	EXPOSURE	ACTUAL	RESULT	MWD/TON	BURN-UP			62
732660	FUEL	LINEAR	HEAT-	RATING	W/CM			64
732680	FUELROD	PELLET	CENTER	TEMP.	MAX C			65
732700	GAP	CONDUCTA	NCE	PELLET	AND	CLADDING		65
732720	FUEL	CLADDING	MECHANCA	L	PROPERTY			66
732740	FUEL	CLADDING	CRUD	DEPOSITE	CORROSI	N	RATE	66
732760	HEAT	TRANSFER	COEF.	CLADDING		WATER		66
732800	FUEL	CLADDING	SURFACE	TEMP.	MAX C			70
732810	PELLET	CLADDING	TEMP.	FROM	ROL TO	EOL		67
732820	FUEL	ASSY	CONTROL	CLUSTER	GUIDE	THIMBLE		67
732880	FUEL	CLADDING	SURFACE	TEMP.	MAX C			0
733220	CONTROL	ROD	EFFECT.	LENGTH	AND	STROKE		68
733240	CONTROL	ROD	CLADDING	MATERIAL	NUMBER	SIZE		69
733260	CONTROL	ROD	FOLLOWER	MATERIAL	WIDTH	OTHER		70
733280	CONTROL	ROD	PITCH	MM				71
733310	CORE	CONTROL	CLUSTER	NUMBER	FORM			71
733320	CONTROL	CLUSTER	CLADDING	MATERIAL	NUMBER	SIZE		72
733340	CONTROL	CLUSTER	ABSORBER	MATERIAL				73
733360	CONTROL	CLUSTER	PITCH	MM				73
733510	CONTROL	CLUSTER	D.MECH.	NUMBER	TYPE	SPEED		73
733550	P.DIST.	ADJUSTER	D.MECH.	NUMBER	TYPE			74
733730	BURNABLE	POISON	MATERIAL		CONTROL	WORTH		74
734200	POISON	CURTAIN	MATERIAL	NUMBER	LENGTH	WIDTH		75
736100	PRESSURE	VESSEL	DESIGN-P	OPERAT-P	DESIGN-T	OPERAT-T		76
736200	PRESSURE	VESSEL	SIZE					77
736300	P.V.NDT	INITIAL	FINAL	HEAT AND	COOLING	RATE		78
736400	PRESSURE	VESSEL	BASE	OVERLAY	MATERIAL			79
736600	PRESSURE	VESSEL	APPLIED	STANDARD	LIFE AND	N.DOSE		80
737220	STEAM	SEPARAT.	UNIT NO.	TYPE	MATERIAL			80
737240	STEAM	SEPARAT.	INLET	QUALITY	CARRY	UNDER		80

737410	STEAM	DRYER	NUMBER	CAPACITY	OPERATABLE	TEMP	81
737420	STEAM	DRYER	TYPE	INLET	OUTLET	WETNESS	81
738200	JET PUMP	NUMBER	CAPACITY				81
738400	JET PUMP	FLOW AND	PRESSURE	RATIO	AND	EFFICIE.	82
738600	JET PUMP	SIZE AND	VELOCITY	AT	NOZZLE		82
751120	RECIRC.	SYSTEM	MAIN	PROPERTY			82
751140	MAIN	STEAM	SYSTEM	AND FEED	WATER	TEMP.	83
751160	RECIRC.	SYSTEM	PUMP AND	LOOP	DESIGN-P	DESIGN-T	83
751180	RECIRC.	SYSTEM	PUMP AND	LOOP	TUBE	SIZE	84
752220	RECIRC.	SYSTEM	(PUMP)	VALVE	NUMBER	SIZE	84
752240	RECIRC.	SYSTEM	(PUMP)	VALVE	MATERIAL		84
752260	RECIRC.	SYSTEM	(PUMP)	VALVE	DESIGN-P	DESIGN-T	84
752410	RECIRC.	PUMP	TYPE	NUMBER			85
752420	RECIRC.	PUMP	CAPACITY	DESIGN-P	DESIGN-T		85
752430	RECIRC.	PUMP	HEAD	COOL-P	NPSH	INPUT-P	86
752440	RECIRC.	PUMP	MATERIAL				86
752450	RECIRC.	PUMP	MOTOR	POWER	AND	SPEED	86
753220	M.STEAM	TUBE	NUMBER	SIZE AND	DESIGN-P		87
753310	M.STEAM	FLOW	LIMITER	TYPE	NUMBER		87
753320	M.STEAM	FLOW	LIMITER	P-LOSS	SIZE		87
753330	M.STEAM	FLOW	LIMITER	MATERIAL			87
753400	M.STEAM	ISOLATE	VALVE	TYPE AND	SIZE		87
753420	M.STEAM	ISOLATE	VALVE	NUMBER	DESIGN-P	DESIGN-T	88
753430	M.STEAM	ISOLATE	VALVE	P-LOSS	RATED	FLOW	88
753440	M.STEAM	ISOLATE	VALVE	SHUT-OFF	TIME SET	POINT	88
753450	M.STEAM	ISOLATE	VALVE	CONTROL	SOURCE		88
753620	SAFETY	VALVE	TYPE	NUMBER			88
753640	SAFETY	VALVE	SET	PRESSURE	CAPACITY		89
753820	RELIEF	VALVE	TYPE	NUMBER			89
753840	RELIEF	VALVE	SET	PRESSURE			89
753860	RELIEF	VALVE	CAPACITY				90
757220	STEAM-G.	DESIGN-P	OPERAT-P				90
757240	STEAM-G.	CAPACITY	WETNESS	TUBE	SURFACE	AREA	91
757400	PRIMARY	COOLING	PUMP	TYPE AND	MATERIAL		92
757430	PRIMARY	COOLING	SYSTEM	DESIGN-T	DESIGN-P		92
757450	PRIMARY	LOOP	TUBE	SIZE			93
757620	PRESSURI	ZER TYPE	SIZE				93
757640	PRESSURI	ZER	HEATER	TYPE AND	CAPACITY		94
757650	PRESSURI	ZER	RELIEF	TANK	DESIGN-P	CAPACITY	94
761100	KIND OF	REACTOR	AUXILIAR	Y	SYSTEM	PWR	94
762100	FUNCTION	OF CVCS	PWR				95
762130	MAIN	COMPONEN	TS OF	CVCS	PWR		95
762200	RWPS	REACTOR	WATER	PURIFIC.	SYSTEM	DESIGN-F	96
762220	RWPS		REACTOR	WATER	QUALITY		96
762230	RWPS	DEMINE.	PUMP	TYPE	NUMBER	CAPACITY	96
762240	RWPS	DEMINE.	NUMBER	AND	CAPACITY		97
762250	RWPS	PIPING	DESIGN-P	DESIGN-T	MATERIAL		97
762260	RWPS	CVCS	REGENE.	H.EXCH.	TYPE NO.	CAPACITY	97
762280	RWPS	CVCS	NON-REG.	H.EXCH.	TYPE NO.	CAPACITY	98
762300	SURPLUS	HEET EXT	RACTION	CVCS	H.EXCH.	TYPE	98

762320	CVCS	SHAFT	SEAL	WATER	H.EXCH.		99
762340	CVCS	PRIMARY	COOLANT	MIXED	BED	DEMINE.	99
762350	CVCS	BORDN	REMOVE	DEMINE.			99
762360	CVCS	VOLUME	CONTROL	TANK	NUMBER	CAPACITY	100
762380	CVCS	BORIC	ACID	CHARGE	PUMP		100
762500	CVCS	BORIC	ACID	PUMP	TYPE	NUMBER	101
762520	CVCS	BORIC	ACID	TANK	NUMBER	CAPACITY	101
763100	MAIN	COMPONEN	TS OF	SIS	PWR		101
763120	SIS	BORIC	ACID	TANK FOR	REFUEL		101
763140	SIS	BORIC	ACID	HIGH-P	INJECT	PUMP	102
763160	SIS	P-RIZED	BORIC	ACID	TANK		102
763180	SIS	BORIC	ACID	INJECT	TANK		102
763220	ISOLATED	R.COOL.	SYSTEM	TURBINE	TYPE AND	NUMBER	102
763240	ISOLATED	R.COOL.	SYSTEM	TURBINE	CAPACITY	OTHERS	103
763300	SIS	BORIC	ACID	CHARGE	PUMP		103
763420	ISOLATED	R.COOL.	SYSTEM	PUMP	TYPE AND	NUMBER	103
764000	RESIDUAL	HEAT	REMOVE.S	SYSTEM	NUMBER		103
764100	MAIN	COMPONEN	TS OF	RHRS	PWR		104
764220	RESIDUAL	HEAT	REMOVE.S	W-PUMP	TYPE AND	NUMBER	104
764420	RESIDUAL	HEAT	REMOVE.S	S.W-PUMP	TYPE AND	NUMBER	105
764620	RESIDUAL	HEAT	REMOVE.S	H.EXCH.	TYPE AND	NUMBER	106
765220	CORE	SPRAY	SYSTEM	NUMBER	FLOW AND	OTHERS	106
765240	CORE	SPRAY	SYSTEM	PUMP	TYPE AND	NUMBER	107
765260	CORE	SPRAY	SYSTEM	PUMP	MATERIAL		0
765620	SAMPLE	H.EXCH.		TYPE	NUMBER	CAPACITY	107
765660	SAMPLE	BOX	CAPACITY	DESIGN-P	DESIGN-T	NUMBER	108
766020	HIGH-P.	INJECT.	SYSTEM	DRIVER	TYPE		108
766030	HIGH-P.	INJECT.	SYSTEM	DRIVER	PROPERTY		108
766040	HIGH-P.	INJECT.	SYSTEM	DRIVER	PROPERTY		109
766050	HIGH-P.	INJECT.	SYSTEM	DRIVER	MATERIAL		109
766440	HIGH-P.	INJECT.	SYSTEM	PUMP	PROPERTY		109
767220	BORDN	INJECT	SYSTEM	NUMBER	CONTROL	WORTH	110
767420	BORDN	INJECT	SYSTEM	PUMP NO.	TYPE	CAPACITY	110
768000	REACTOR	AUX.COOL	SYSTEM	DESIGN-P	DESIGN-T	DESIGN-F	111
768100	MAIN	COMPONEN	TS OF	CCS	PWR		111
768220	REACTOR	AUX.COOL	SYSTEM	H.EXCH.	TYPE AND	NUMBER	112
768420	REACTOR	AUX.COOL	SYSTEM	W-PUMP	TYPE AND	NUMBER	113
768620	REACTOR	AUX.COOL	SYSTEM	S.W-PUMP	TYPE	NUMBER	113
768720	CCS	SPENT	FUEL	PIT	H.EXCH.		113
768760	CCS	SPENT	FUEL	PIT	PUMP	TYPE	114
768780	CCS	SPENT	FUEL	PIT	DEMINE.		114
769100	SAMPLE	SAMPLING	POINT	PWR			114
772220	MAIN	TURBINE	TYPE				115
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2.3 略語リスト

アイテム，索引などの冗長を省くために略語を使用した。以下にそのリストを示す。

ABBREVIATION

AB-TRA	ABNORMAL TRANIGENT
ACC.	ACCIDENT
AFWS	AUXILIARY FEEDWATER SYSTEM
ALAP	AS LOW AS PRACTICABLE
AOO	ANTICIPATED OPERATIONAL OCCURENCE
ANA.	ANALYSIS
APQMS	
APDC	ANTICIPATED PROBABILITY OCCURENCE
APRM	AVERAGE POWER RANGE MONITOR
ASSY	ASSEMBLY, OR ASSEMBLIES
ATWS	ANTICIPATED TRANSIENTS WITHOUT SCRAM
(AT EOL)	AT THE END OF LIFE
AUX.	AUXILIARY COMPONENTS OR AUXILIARY SYSTEM
BOL	BEGINNIG OF LIFE
CCS	GENSIRO HOKI REIKYAKU SETUBI
CI	CONTANIMENT INTEGRITY
CDTVTY	CONDUCTIVITY
COM	COMMON
COMPO.	COMPONENTS
COND.	CONDENCER
COND.W	CONDENSED WATER
CORR-P	CORROSION PRODUCTS
CR	CORE
CRD	CONTROL ROD
CREST	COMMITTEE ON REACTOR SAFETY TECHNOLOGY
(CREST)	COMMITTEE ON THE SAFETY OF NUCLEAR INSTALLATION
CSS	CORE SPRAY SYSTEM
CU3M	CUBIC METER
CVCS	CHEMICAL AND VOLUME CONTROL SYSTEM
(D)	DUMP CONDENSER SYSTEM (JPDR-2)
DEMINE.	DEMINERALIZER
DES.	DESIGN
DESIGN-F	DESIGN FLOW RATE
DESIGN-P	DESIGN PRESSURE
DESIGN-T	DESIGN TEMPERATURE
D.G.	DIESEL GENERATOR
DIA	DIAMETER
DIA.GAP	DIAMETRAL GAP
(DISH)	DISHED PELLET
D.MECH.	DRIVE MECHANISM
DNBR	DEPARTURE FROM NUCLEATE BOILING
(D.S)	DUMP CONDENSER SYSTEM (JPDR-2)
E.C.	EMERGENCY COOLING
E.CDTVTY	ELECTRO CONDUCTIVITY
E.GENER.	ELECTRIC GENERATOR
EME.	EMERGENCY
EOL	END OF LIFE
ESF	ENGINEERED SAFETY FEATURE
EVAP.	EVAPOLATOR
EVAP.C.W	EVAPOLATED AND CONDENSATED WATER
-F	---FLOW
FEED.W	FEED WATER
(FLAT)	FLAT PELLET
FLECHT	FULL LENGTH EMERGENCY COOLING HEAT TRANSFER
FP	FISSION PRODUCT
FRAP-S	FUEL ROD ANALYSIS PROGRAM-STEADY
FRAP-T	FUEL ROD ANALYSIS PROGRAM-TEMPERATURE
FSAR	FINAL SAFETY ANALYSIS REPORT

GE	GREATER OR EQUAL
GESMO	GENERIC ENVIRONMENTAL STATEMENT MIXED OXIDE FUEL
GT	GREATER THAN
GSK-19	GENSIRYOKU SANGYOO KAIGI GENSIRYOKU SIRYOO NO.19
HA	HYPOTHETICAL ACCIDENT
H.EXCH.	HEAT EXCHANGER
HIGH-P	HIGH PRESSURE
HPIS	HIGH PRESSURE INJECT SYSTEM
H-WARE	HARD WARE
ICE COND	ICE CONDENSER
ID	INNER DIAMETER
INC.	INCLUDE
INIS	INTERNATIONAL NUCLEAR INFORMATION SYSTEM
IPR	INITIAL PRESSURE REGULATOR
IRM	INTERMEDIATE RANGE MONITOR
KON-5	KOOJIKEIKAKU NINKASHINSEI SANKOOSHO
KON-6	KOOJI NINKA SINSEISYO NO.6
LAB	LABORATORY TEST, LOCATION AND SCOPE TO BE DEFINED
LE	LESS OR EQUAL
LHGR	LINEAR HEAT GENERATION RATE
LIT	LITERATURE SURVEY
LOC	LOSS OF COOLANT
LOCA	LOSS OF COOLANT ACCIDENT
LOPC	LOSS OF PRIMARY COOLANT
LPIS	LOW PRESSURE INJECTION SYSTEM
LPRM	LOCAL POWER RANGE MONITOR
LT	LESS THAN
LWD	LIQUID WASTE DISPOSAL
LWST	LIQUID WASTE STORAGE TANK
MALFUNC.	MALFUNCTION
MAPLHGR	MAXIMUM AVERAGE PLANER LINEAR HEAT GENERATION RATE
MCA	MAXIMUM CREDIBLE ACCIDENT
MCFR	MINIMUM CRITICAL HEAT FLUX RATIO
M CPR	MINIMUM CRITICAL POWER RATIO
MGM	MOTOR-GENERATOR-MOTOR
MOTOR.D	MOTOR DRIVE
MPC	MAXIMUM PERMISSIBLE CONCENTRATIONS
MSIV	MAIN STEAM ISOLATION VALVE
MSTR	MAIN STEAM TUBE RUPTURE
M.STEAM	MAIN STEAM
N.DATA	NUCLEAR DATA
N.DOSE	NEUTRON DOSE
NDT	NIL DUCTILITY TRANSITION TEMPERATURE
NOM	NOMINAL
LWDS	LIQUID WASTE DISPOSAL SYSTEM
NPSH	NET POSITIVE SUCTION HEAD
NTRALIZE	NEUTRALIZED OR NEUTRALIZER
OBE	OPERATING BASIS EARTHQUAKE
OPERAT-P	OPERATION PRESSURE
O.D.	OUTER DIAMETER
-P	---PRESSURE
PAHR	POST ACCIDENT HEAT REMOVAL
PARR	POST ACCIDENT RADIOACTIVITY REMOVAL
PBF	POWER BURST FACILITY
PC	PERCENT
PCIDMR	PRECONDITIONING INTERIM OPERATING MANAGEMENT RECOMMENDATION
PCM	POWER / COOLING MISMATCH (IN PBF)
PCT	PEAK CLADDING TEMPERATURE
PIF	POST IRRADIATION EXPERIMENTS
PIOM	PRECONDITIONING INTERIM OPERATING MANAGEMENT
PMF	PROBABLE MAXIMUM FLOOD
PPIF	PROJECT AND PROGRAM INFORMATION FILE
PV	PRESSURE VESSEL

RAD.	RADIATION
RBM	ROD BLOCK MONITOR (CONTROL ROD HIKINUKI KANSI SOOTI)
R.COOL.	REACTOR COOLING
RCPS	REACTOR COOLANT PURIFICATION SYSTEM
RCS	REACTOR COOLANT SYSTEM
RECIRC.	RECIRCULATION
REG	REGION
RG AND E	ROCHESTER GAS AND ELECTRIC CORPORATION
RHR	RESIDUAL HEAT REMOVE SYSTEM
RPS	REACTOR PROTECTION SYSTEM
RS	RETROSPECTIVE SEARCH
RT	REACTOR TRIP
RWPS	REACTOR WATER PURIFICATION SYSTEM
SA	SAFETY ANALYSIS
SEPARAT.	SERARATOR
S.CHAMB	SUPPRESSION CHAMBER
S.C.RATIO	SHORT CIRCUIT RATIO
SDI	SELECTIVE DISSEMINATION OF INFORMATION
SFSP	SPENT FUEL STORAGE POOL
SGTR	STEAM GENERATOR THIN TUBE RUPTURE
SHK	GENSIRO SETTI HENKOD KYOKA SINSEI SYO TENPU SYORUI
SIS	SAFETY INJECTION SYSTEM
SKS	GENSIRO SETTI KYOKA SINSEI SYO TENPU SYORUI
SN RATIO	SIGNAL VS NOISE RATIO
SRM	SOURCE RANGE MONITOR
SSE	SAFE SHUTDOWN EARTHQUAKE
STEAM-P	STEAM PRESSURE
STRIP	SHORT-TERM REALISTIC IRRADIATION PROOF-TEST
SUS	STAINLESS STEEL
SWD	SOLID WASTE DISPOSAL
SWDS	SOLID WASTE DISPOSAL SYSTEM
S.W-PUMP	SEA WATER PUMP
SQ	STEAM QUALITY OR SQUARE
-T	---TEMPERATURE
(T)	TURBINE SYSTEM (JPDR-2)
TC	TANDEM COMPOUND
T.D.	THEORETICAL DENSITY
TEMP	TEMPERATURE
THICK	THICKNESS
TIP	TRAVERSING INCORE PROBE
TK	TANK
(T.S)	TURBINE SYSTEM (JPDR-2)
TURB. D	TURBINE DRIVE
UHI	
VOL.PC.	VOLUME PERCENT
VR	VOID RATIO OR VOLUME RATIO
WGST	WASTE GAS STORAGE TANK
WT	WEIGHT
W-PUMP	WATER PUMP
ZR-W	ZIRCONIUM-WATER REACTION

2.4 キーワード

以下に219のキーワードリストを示す。利用者は、このキーワードリスト(2列になつて
いる)から必要な語を選び、右側の索引ページ数(S-〇〇〇で示されている)を求め、第3
章の索引部の右上に示されたページの中に収録されたアイテムを見出すことができる。つづい
て、アイテムの右側のデータ・ページ数(D-〇〇〇で示されている)を読みとり、第4章の
本データを求めることができる。

このキーワードは、OKワード、アンド結合方式の索引のために採用したものである。

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OKワードによるKWOK索引である。

キーワード、キーワードを含むアイテム、コード番号、データ・ページ(D-〇〇〇で示す)から成っている。利用者は、アルファベット順のキーワードによりアイテムを探し、第4章の中からデータを探することができる。

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AB-TRA

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ACCIDENT

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ACCIDENT

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AIR COMPRES. SYSTEM

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ANNULUS

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BATTERY

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BORIC ACID

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BORON INJECT SYSTEM

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BUILDING

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BURNABLE POISON

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BURN-UP

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BURN-UP

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CENTER TEMP.

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CHANNEL

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CHANNEL FACTOR

CHANNEL FACTOR

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CLADDING

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COMPARTMENT DOOR

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COMPONENTS

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CONTAINER

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CONTAINER

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CONTROL ROD

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CONTROL CLUSTER

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CONTROL WORTH

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N.DATA K-EFF SHUTDOWN MARGINE CONTROL WORTH 842230

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CORE SPRAY SYSTEM

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CORROSION

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COUNTERP LAN

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 RWPS CVCS NON-REG. H.EXCH. TYPE NO. CAPACITY 762280
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 CVCS SHAFT SEAL WATER H.EXCH. 762320
 CVCS PRIMARY COOLANT MIXED BED DEMINE. 762340
 CVCS HORIZ. REMOVE DEMINE. 762350
 CVCS VOLUME CONTROL TANK NUMBER CAPACITY 762360
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DUMP COND.

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E.GENER.

E.GENER. TYPE AND NUMBER 793220

E.GENER.

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ENGINEER 520200

ENGINEER

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ENRICH

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FISSION	PRODUCT	GENERATE	RATIO	GAS FP	PRESSURE	732340
FLOW LIMITER					FLOW LIMITER	
M.STEAM	FLOW	LIMITER	TYPE	NUMBER	753310	SEE PAGE***D-
M.STEAM	FLOW	LIMITER	P-LOSS	SIZE	753320	SEE PAGE***D-
M.STEAM	FLOW	LIMITER	MATERIAL		753330	SEE PAGE***D-
FLOW RATE COOLANT					FLOW RATE COOLANT	
REACTOR	CORE	COOLANT	FLOW	RATE	T/H	731140
FLOW RATE STEAM					FLOW RATE STEAM	
REACTOR	STEAM	FLOW	RATE	T/H	731300	SEE PAGE***D-
FP					FP	
MCA HA	BWR LOC	FP	LEAK	RATE	FROM	DRY-WELL
MCA HA	BWR LOC	FP	RELEASE	FROM	FUEL	43110
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	FUEL
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	FUEL
MCA HA	BWR LOC	FP	GAS	RELEASE	FROM	BUILDING
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	BUILDING
MCA HA	BWR MSTR	FP	GAS	RELEASE	FROM	FUEL
MCA HA	BWR MSTR	FP	GAS	RELEASE	FROM	BUILDING
MCA HA	PWR SGR	FP	GAS	RELEASE	FROM	BUILDING
FISSION	PRODUCT	GENERATE	RATIO	GAS FP	PRESSURE	732340
UD-2	PELLET	SOLID	FP	SMELLING	RATE	732380
FUEL ASSY					FUEL ASSY	
CORE	FUEL	ASSY	NUMBER		732200	SEE PAGE***D-
FUEL	SPACER	NUMBER	PER ASSY	MATERIAL TYPE	732220	SEE PAGE***D-
UD-2	WEIGHT	PER FUEL	ASSY	KGUO-2/ ASSY	732260	SEE PAGE***D-

PLANT PERFORMANCE DATA SAKUIN				DATE	12/16/74	PAGE***S- 8***
FUEL ASSY					FUEL ASSY	
FUEL	ASSY	TOTAL	WEIGHT	KG (INC	H-WARE)	732280
FUEL	ROD	EFFECT	LENGTH	AND ASSY	LENGTH	732460
FUEL	ROD NO.	PER ASSY	AND ROD	PITCH	ARRANGE	732480
FUEL	ASSY	VERTICAL	ITY	CHECK	METHOD	732490
FUEL	ASSY	CONTROL	CLUSTER	GUIDE	THIMBLE	732820
FW					FW	
PERFORMA	NCE	EVALUATI	ON OF	ECCS	LOCA FW	35600
GAP					GAP	
FUEL	ROD	CLADDING	MATERIAL	THICK.	O.D.	DIA.GAP
GAP	CONDUCTA	NCE	PELLET	AND	CLADDING	732440
GAS					GAS	
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	FUEL
MCA HA	BWR LOC	FP	GAS	RELEASE	FROM	BUILDING
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	BUILDING
MCA HA	BWR MSTR	FP	GAS	RELEASE	FROM	BUILDING
MCA HA	PWR SGR	FP	GAS	RELEASE	FROM	BUILDING
FISSION	PRODUCT	GENERATE	RATIO	GAS FP	PRESSURE	732340
OFF GAS	PRE	HEATER	NUMBER	AND TYPE		801220
OFF GAS	RECOMBIN	ER	NUMBER	AND TYPE		801240
OFF GAS	COND.	NO.				801260
OFF GAS	COMPRESS	OR	NUMBER	TYPE AND	PRESSURE	801280
OFF GAS	CHARCOAL	HOLD UP				801320
OFF GAS	VACUUM	PUMP				801340
OFF GAS	AIR	EJECTOR				801350
OFF GAS	DECAY	TANK	NUMBER	CAPACITY	PRESSURE	801400
OFF GAS	FILTER	FROM	AIR	EXTRACTO	R	801420
OFF GAS	POST	FILTER				801421
OFF GAS	FILTER	FROM	GRAND	STEAM		801430
DEAERATO	R	OFF	GAS	ISOLATE	VALVE	NUMBER
OFF GAS	DECAY	TUBE	SIZE	AND	HOLD UP	TIME
RAD.	LEVEL	NORMAL	WASTE	GAS	DISPOSAL	942000
GENERATOR				SEE E.GENER.	GENERATOR	
AB-TRA	GENERATOR	TRIP				23100
D.G.	GENERATOR	NUMBER	TYPE	CAPACITY		794240
GENERATOR TRIP					GENERATOR TRIP	
AB-TRA	GENERATOR	TRIP				23100
HA					HA	
MCA HA	ITEMS					43000
MCA HA	BWR LOC	FP	LEAK	RATE	FROM	DRY-WELL
MCA HA	BWR LOC	FP	RELEASE	FROM	FUEL	43110
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	FUEL
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	FUEL
MCA HA	BWR LOC	FP	GAS	RELEASE	FROM	BUILDING
MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	BUILDING

PLANT PERFORMANCE DATA SAKUIN										DATE 12/16/74	PAGE***- 9***
HA										HA	
MCA HA	PWR LDC	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43170	SEE PAGE***D-	28***		
HA	BWR LDC	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43180	SEE PAGE***D-	28***		
NATIONAL	HEREDITY	IRRADIAT	ION DOSE	HA			43190	SEE PAGE***D-	29***		
MCA HA	BWR MSTR	FP	RELEASE	FROM	FUEL		43220	SEE PAGE***D-	29***		
MCA HA	BWR MSTR	FP	GAS	RELEASE	FROM	BUILDING	43240	SEE PAGE***D-	29***		
MCA HA	PWR SGR	FP	GAS	RELEASE	FROM	BUILDING	43250	SEE PAGE***D-	30***		
MCA HA	PWR SGR	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43270	SEE PAGE***D-	30***		
BWR HA	BWR MSTR	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43280	SEE PAGE***D-	31***		
HEAT FLUX										HEAT FLUX	
H-TRANS.	HEAT	FLUX	MAX	MEAN			443220	SEE PAGE***D-	165***		
HEAT GENERATE RATIO										HEAT GENERATE RATIO	
HEAT	GENERATE	RATIO	FUEL	VS	TOTAL		443840	SEE PAGE***D-	169***		
HEAT TRANS. AREA										HEAT TRANS. AREA	
FUEL	HEAT	TRANS.	AREA	AND	FLOW	AREA	443240	SEE PAGE***D-	166***		
HEAT TRANSFER										HEAT TRANSFER	
HEAT	TRANSFER	COEF.	CLADDING	WATER			732760	SEE PAGE***D-	66***		
HEREDITY										HEREDITY	
NATIONAL	HEREDITY	IRRADIAT	ION DOSE	HA			43190	SEE PAGE***D-	29***		
H.EXCH.										H.EXCH.	
RMPS	CVCS	HEGENE.	H.EXCH.	TYPL	NO.	CAPACITY	762260	SEE PAGE***D-	97***		
RMPS	CVCS	NON-NEG.	H.EXCH.	TYPL	NO.	CAPACITY	762280	SEE PAGE***D-	98***		
SURPLUS	HEET	EXT	REACTION	CVCS	H.EXCH.	TYPE	762300	SEE PAGE***D-	98***		
CVCS	SHAFT	SEAL	WATER	H.EXCH.			762320	SEE PAGE***D-	99***		
RESIDUAL	HEAT	REMOVES	H.EXCH.	TYPE	AND	NUMBER	764620	SEE PAGE***D-	106***		
SAMPLE	H.EXCH.	TYPE	NUMBER	CAPACITY			765620	SEE PAGE***D-	107***		
REACTOR	AUX.COOL	SYSTEM	H.EXCH.	TYPE	AND	NUMBER	768220	SEE PAGE***D-	112***		
CCS	SPENT	FUEL	PIT	H.EXCH.			768720	SEE PAGE***D-	113***		
TURBINE	AUX.	COOL	H.EXCH.	TYPE	AND	NUMBER	779240	SEE PAGE***D-	125***		
CONTAIN	H	SPRAY	H.EXCH.				825450	SEE PAGE***D-	158***		
HIGH-P. INJECT. SYSTEM										HIGH-P. INJECT. SYSTEM	
HIGH-P.	INJECT.	SYSTEM	DRIVER	TYPE			766020	SEE PAGE***D-	108***		
HIGH-P.	INJECT.	SYSTEM	DRIVER	PROPERTY			766030	SEE PAGE***D-	108***		
HIGH-P.	INJECT.	SYSTEM	DRIVER	PROPERTY			766040	SEE PAGE***D-	109***		
HIGH-P.	INJECT.	SYSTEM	DRIVER	MATERIAL			766050	SEE PAGE***D-	109***		
HIGH-P.	INJECT.	SYSTEM	PUMP	PROPERTY			766440	SEE PAGE***D-	109***		
HISTORY										HISTORY	
HISTORY	OF	CONSTRUC	TION	PERMIT			110	SEE PAGE***D-	1***		
HISTORY	OF	CONSTRUC	TION	PERMIT	APPLICAT		120	SEE PAGE***D-	2***		
HISTORY	OF	CONSTRUC	TION	AND	OPERATI	DN	300	SEE PAGE***D-	4***		
ICE COND										ICE COND	
ICE	COND.	SIZE					825000	SEE PAGE***D-	158***		
PLANT PERFORMANCE DATA SAKUIN										DATE 12/16/74	PAGE***- 10***
ICE COND										ICE COND	
ICE	COND	CAPACITY	COMPARTM	ENT	DOOR	OPERAT-P	825200	SEE PAGE***D-	158***		
IN-CORE MONITOR										IN-CORE MONITOR	
KIND	OF	IN-CORE	MONITOR	CHANNEL	NUMBER		781100	SEE PAGE***D-	125***		
IN-CORE	MONITOR	NEUTRON	FLUX	LEVEL	NV		781200	SEE PAGE***D-	125***		
INITIAL										INITIAL	
AB-TRA	MALFUNC.	OF	INITIAL	PRESSURE	ADJUSTER		23400	SEE PAGE***D-	15***		
P.V.NOT	INITIAL	FINAL	HEAT	AND	COOLING	RATE	736300	SEE PAGE***D-	78***		
N.DATA	EFFECT.	MULTIPL	CATION	CONST.	OF	INITIAL	802280	SEE PAGE***D-	163***		
N.DATA	BORON	CONCENTR	ATION	INITIAL	CURE		802300	SEE PAGE***D-	163***		
IRRADIAT ION DOSE										IRRADIAT ION DOSE	
MCA	BWR LDC	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43160	SEE PAGE***D-	28***		
MCA HA	PWR LDC	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43170	SEE PAGE***D-	28***		
HA	BWR LDC	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43180	SEE PAGE***D-	28***		
NATIONAL	HEREDITY	IRRADIAT	ION DOSE	HA			43190	SEE PAGE***D-	29***		
BWR MCA	BWR MSTR	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43260	SEE PAGE***D-	30***		
MCA HA	PWR SGR	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43270	SEE PAGE***D-	30***		
BWR HA	BWR MSTR	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43280	SEE PAGE***D-	31***		
ISOLATED R.COOL. SYSTEM										ISOLATED R.COOL. SYSTEM	
ISOLATED	R.COOL.	SYSTEM	TURBINE	TYPE	AND	NUMBER	763220	SEE PAGE***D-	102***		
ISOLATED	R.COOL.	SYSTEM	TURBINE	CAPACITY	OTHERS		763240	SEE PAGE***D-	103***		
ISOLATED	R.COOL.	SYSTEM	PUMP	TYPE	AND	NUMBER	763420	SEE PAGE***D-	103***		
JET PUMP										JET PUMP	
JET	PUMP	NUMBER	CAPACITY				738200	SEE PAGE***D-	81***		
JET	PUMP	FLOW	AND	PRESSURE	RATIO	AND	EFFICIE.	738400	SEE PAGE***D-	82***	
JET	PUMP	SIZE	AND	VELOCITY	AT	NOZZLE	738600	SEE PAGE***D-	82***		
LEAK										LEAK	
MCA HA	BWR LDC	FP	LEAK	RATE	FROM	DRY-WELL	43110	SEE PAGE***D-	26***		
COND.	DEWEL.	ALLOWABL	E	SEA	WATER	LEAK	775280	SEE PAGE***D-	121***		
DRY-WELL	DESIGN-P	DESIGN-T	DESIGN	LEAK	WATE		822260	SEE PAGE***D-	155***		
REACTOR	CONTAIN	H	PWR	DESIGN-P	DESIGN-T	LEAKRATE	822330	SEE PAGE***D-	156***		
REACTOR	BUILDING	DESIGN	LEAK	RATE			827400	SEE PAGE***D-	159***		
LINEAR HEAT RATING										LINEAR HEAT RATING	
FUEL	LINEAR	HEAT	RATING	M/CM			732660	SEE PAGE***D-	60***		
LOC										LOC	
ACC.ANA.	RECIRC.	RUPTURE	DRY-WELL	P-CHANGE	LOC		35320	SEE PAGE***D-	23***		
MCA HA	BWR LDC	FP	LEAK	RATE	FROM	DRY-WELL	43110	SEE PAGE***D-	26***		
MCA HA	BWR LDC	FP	RELEASE	FROM	FUEL		43120	SEE PAGE***D-	26***		
MCA HA	BWR LDC	FP	GAS	RELEASE	FROM	BUILDING	43140	SEE PAGE***D-	27***		
MCA	BWR LDC	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43160	SEE PAGE***D-	28***		
HA	BWR LDC	ESTIMATI	DN	OF	IRRADIAT	ION DOSE	43180	SEE PAGE***D-	28***		

LOCA	ECCS	PERFORMANCE	EVALUATION OF	ECCS	LOCA FW	35600	SEE PAGE***D-	24***
LUPC								
MCA HA	PWR LUPC	FP GAS	RELEASE FROM	FUEL	43130	SEE PAGE***D-	27***	
MCA HA	PWR LUPC	FP GAS	RELEASE FROM	BUILDING	43150	SEE PAGE***D-	27***	
MCA HA	PWR LUPC	ESTIMATE	ON OF	IRRADIAT ION DOSE	43170	SEE PAGE***D-	28***	
LWD								
LWD	(LIQUID WASTE DISPOSAL)	QUANTITY	953100	SEE PAGE***D-	174***			
LWDS								
LWDS	TANK LIST	PWR	802100	SEE PAGE***D-	138***			
LWDS	CONDENSED	DRUM STORAGE TANK	802110	SEE PAGE***D-	139***			
LWDS	LIQUID WASTE	STORAGE TANK	802120	SEE PAGE***D-	139***			
LWDS	LIQUID WASTE	HOLD UP TANK	802130	SEE PAGE***D-	139***			
LWDS	LIQUID WASTE	EVAPILATOR CONDENSE TANK	802140	SEE PAGE***D-	139***			
LWDS	LIQUID WASTE	SUMP TANK	802150	SEE PAGE***D-	139***			
LWDS	ADJ. BUILDING	SUMP TANK	802160	SEE PAGE***D-	140***			
LWDS	HOLDUP	TANK	802170	SEE PAGE***D-	140***			
LWDS	RESIN RECLAIM	LIQUID WASTE HOLDUP	802180	SEE PAGE***D-	140***			
LWDS	CHEMICALS	DRAIN TANK	802190	SEE PAGE***D-	140***			
LWDS	WATCH TANK	TANK	802200	SEE PAGE***D-	140***			
LWDS	MONITOR	TANK	802210	SEE PAGE***D-	141***			
LWDS	WASHING WATER	TANK	802220	SEE PAGE***D-	141***			
LWDS	PROCESS WATER	HOLDUP TANK	802230	SEE PAGE***D-	141***			
LWDS	CHEMICAL FLUID	DRAIN TANK	802240	SEE PAGE***D-	141***			
LWDS	FLUOR DRAIN	TANK	802250	SEE PAGE***D-	141***			
LWDS	PRIMARY COOLANT	STORAGE TANK	802260	SEE PAGE***D-	142***			
LWDS	PRIMARY COOLANT	STORAGE TANK	802270	SEE PAGE***D-	142***			
LWDS	LIQUID WASTE	EVAPILATOR	802290	SEE PAGE***D-	142***			
LWDS	ADJIC ACID	RECOVERY SYSTEM	802300	SEE PAGE***D-	142***			
LWDS	HORIC ACID	PURIFY DEMINE. FILTER	802310	SEE PAGE***D-	143***			
LWDS	HORIC ACID	PURIFY DEMINE. FILTER	802330	SEE PAGE***D-	143***			
LWDS	HORIC ACID	EVAP.C.M DEMINERALIZER	802350	SEE PAGE***D-	143***			
LWDS	LIQUID WASTE	EVAP. COND.W TANK	802370	SEE PAGE***D-	143***			
LWDS	ION EXCH.		802390	SEE PAGE***D-	143***			
LWDS	TANK LIST	ANNEXING TANK	802400	SEE PAGE***D-	143***			
LWDS	NEUTRALIZER	ANNEXING TANK	802410	SEE PAGE***D-	144***			
LWDS	CONDENSED	WATER SAMPLE TANK	802420	SEE PAGE***D-	0***			
LWDS	CONDENSED	WATER COLLECT TANK	802430	SEE PAGE***D-	0***			
LWDS	LIQUID WASTE	NEUTRALIZATION TANK	802440	SEE PAGE***D-	144***			
LWDS	LIQUID WASTE	SAMPLING TANK	802450	SEE PAGE***D-	144***			
LWDS	LIQUID WASTE	SURGE TANK	802460	SEE PAGE***D-	145***			
LWDS	LIQUID WASTE	COLLECT TANK	802470	SEE PAGE***D-	145***			
LWDS	EVAPILATOR	SURGE TANK	802480	SEE PAGE***D-	145***			
LWDS	DISTILLED WATER	SURGE TANK	802490	SEE PAGE***D-	145***			
LWDS	SYSTEM DRAIN	FILTRATE TANK	802500	SEE PAGE***D-	146***			
LWDS	SYSTEM DRAIN	SAMPLING TANK	802510	SEE PAGE***D-	146***			

LWDS							LWDS	
LWDS	SYSTEM DRAIN	SURGE TANK	802520	SEE PAGE***D-	0***			
LWDS	SYSTEM DRAIN	COLLECT TANK	802530	SEE PAGE***D-	146***			
LWDS	LAUNDRY DRAIN	TANK	802540	SEE PAGE***D-	146***			
LWDS	PREDRAT	TANK	802550	SEE PAGE***D-	147***			
LWDS	FILTRATE ON AUX.	AGENT TANK	802560	SEE PAGE***D-	147***			
LWDS	FILTRATE D WASTE	COLLECT TANK	802570	SEE PAGE***D-	0***			
LWDS	WASHING WASTE	COLLECT TANK	802580	SEE PAGE***D-	147***			
LWDS	PRODR DRAIN	FILTRATE TANK	802590	SEE PAGE***D-	147***			
LWDS	PRODR DRAIN	SAMPLING TANK	802600	SEE PAGE***D-	148***			
LWDS	PRODR DRAIN	COLLECT TANK	802610	SEE PAGE***D-	148***			
LWDS	GENERAL WASTE	SURGE TANK	802620	SEE PAGE***D-	0***			
LWDS	FILTER TYPE AND NUMBER		802630	SEE PAGE***D-	148***			
LWDS	DECJNTAM I. FACTOR OF FILTRATE		802640	SEE PAGE***D-	148***			
LWDS	DEMINE. TYPE AND NUMBER		802660	SEE PAGE***D-	149***			
LWDS	DECJNTAM I. FACTOR OF DEMINE.		802680	SEE PAGE***D-	149***			
LWDS	LIQUID WASTE	CONCENTRATOR NO. TYPE	802820	SEE PAGE***D-	149***			
LWDS	LIQUID WASTE	CONCENTRATOR	802840	SEE PAGE***D-	149***			
MAIN COND.							MAIN COND.	
MAIN	COND.	TYPE	NUMBER	773220	SEE PAGE***D-	118***		
MAIN	COND.	H. TRANS	AREA AND EXHAUST FLOW	773240	SEE PAGE***D-	118***		
MAIN	COND.	TUBE	MATERIAL	773280	SEE PAGE***D-	119***		
SEA	WATER	CIRC.	SYSTEM FOR MAIN COND.	778220	SEE PAGE***D-	124***		
MAIN STEAM SYSTEM							MAIN STEAM SYSTEM	
MAIN	KIND OF STEAM	FROM SYSTEM	MAINSTEAM AND FEED WATER	23000	SEE PAGE***D-	12***		
MAIN	STEAM	TEMP.		751140	SEE PAGE***D-	83***		
MAIN TURBINE							MAIN TURBINE	
MAIN	TURBINE	TYPE		772220	SEE PAGE***D-	115***		
MAIN	TURBINE	NUMBER	CAPACITY SPEED	772240	SEE PAGE***D-	116***		
MAIN	TURBINE	MIST SEPARATOR	R TYPE NUMBER	772320	SEE PAGE***D-	116***		
MAIN	TURBINE	MIST SEPARATOR	R SIZE	772330	SEE PAGE***D-	117***		
MAIN	TURBINE	MIST SEPARATOR	R SIZE	772340	SEE PAGE***D-	117***		
MAIN	TURBINE	MIST SEPARATOR	R MATERIAL	772350	SEE PAGE***D-	117***		
MAKE-UP							MAKE-UP	
MAKE-UP	WATER	DEMINE.	CAPACITY	831220	SEE PAGE***D-	159***		
MAKE-UP	WATER	DEMINE.	QUALITY	831240	SEE PAGE***D-	159***		
MALFUNC.							MALFUNC.	
AB-1RA	RECIRC.	FLOW	REGULATOR	21200	SEE PAGE***D-	9***		
AB-1THA	MALFUNC.	OF	INITIAL PRESSURE ADJUSTER	23400	SEE PAGE***D-	15***		
MCA							MCA	
MCA HA	ITEMS			43000	SEE PAGE***D-	26***		
MCA HA	BWR LOC FP	LEAK RATE	FROM DRY-WELL	43110	SEE PAGE***D-	26***		
MCA HA	BWR LOC FP	RELEASE	FROM FUEL	43120	SEE PAGE***D-	26***		

MCA

MCA HA PWR LDPC FP GAS RELEASE FROM FUEL 43130
 MCA HA BWR LOC FP GAS RELEASE FROM BUILDING 43140
 MCA HA PWR LDPC FP GAS RELEASE FROM BUILDING 43150
 MCA HA BWR LOC ESTIMATI ON OF IRRADIAT ION DOSE 43160
 MCA HA PWR LDPC ESTIMATI ON OF IRRADIAT ION DOSE 43170
 MCA HA BWR MSTR FP GAS RELEASE FROM FUEL 43220
 MCA HA BWR MSTR FP GAS RELEASE FROM BUILDING 43240
 MCA HA PWR SGR FP GAS RELEASE FROM BUILDING 43250
 BWR MCA BWR MSTR ESTIMATI ON OF IRRADIAT ION DOSE 43260
 MCA HA PWR SGR ESTIMATI ON OF IRRADIAT ION DOSE 43270

MCA

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MCHFR

MCHFR UR DNHR 803820
 MISS START-UP
 AB-TRA MISS START-UP OF COLD RECIRC. LOOP (1) 21320
 AB-TRA MISS START-UP OF COLD RECIRC. LOOP (2) 21340
 AB-TRA MISS START-UP OF COLD RECIRC. LOOP (3) 21360

MCHFR

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 MISS START-UP
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M.STEAM ISOLATE VALVE

M.STEAM ISOLATE VALVE TYPE AND SIZE 753400
 M.STEAM ISOLATE VALVE NUMBER DESIGN-P DESIGN-T 753420
 M.STEAM ISOLATE VALVE P-LOSS RATED FLOW 753430
 M.STEAM ISOLATE VALVE SHUT-OFF TIME SET POINT 753440
 M.STEAM ISOLATE VALVE CONTROL SOURCE 753450

M.STEAM ISOLATE VALVE

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M.STEAM

ACC.ANA. M.STEAM TUBE RUPTURE 36310
 ACC.ANA. M.STEAM TUBE RUPTURE 36320
 M.STEAM TUBE NUMBER SIZE AND DESIGN-P 753220
 M.STEAM FLOW LIMITER TYPE NUMBER 753310
 M.STEAM FLOW LIMITER P-LOSS SIZE 753320
 M.STEAM FLOW LIMITER MATERIAL 753330
 M.STEAM ISOLATE VALVE TYPE AND SIZE 753400
 M.STEAM ISOLATE VALVE NUMBER DESIGN-P DESIGN-T 753420
 M.STEAM ISOLATE VALVE P-LOSS RATED FLOW 753430
 M.STEAM ISOLATE VALVE SHUT-OFF TIME SET POINT 753440
 M.STEAM ISOLATE VALVE CONTROL SOURCE 753450

M.STEAM

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M.STEAM SIZE

M.STEAM TUBE NUMBER SIZE AND DESIGN-P 753220
 M.STEAM FLOW LIMITER P-LOSS SIZE 753320
 M.STEAM ISOLATE VALVE TYPE AND SIZE 753400

M.STEAM SIZE

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MSTR

MCA HA BWR MSTR FP GAS RELEASE FROM FUEL 43220
 MCA HA BWR MSTR FP GAS RELEASE FROM BUILDING 43240
 BWR MCA BWR MSTR ESTIMATI ON OF IRRADIAT ION DOSE 43260
 BWR HA BWR MSTR ESTIMATI ON OF IRRADIAT ION DOSE 43280

MSTR

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NATIONAL HEREDITY

NATIONAL HEREDITY IRRADIAT ION DOSE HA 43190

NATIONAL HEREDITY

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N.DATA

N.DATA K-EFF SHUTDOWN MARGINE CONTROL WURTH 842220
 N.DATA K-EFF SHUTDOWN MARGINE CONTROL WURTH 842230
 CORE COOLANT VS FUEL VOLUME RATIO N.DATA 842240
 N.DATA EFFECT. MULTIPLI CATION CONST.OF INITIAL 842280
 N.DATA BORMN CONCENTR ATION INITIAL CURE 842300
 N.DATA OF REAC TIVITY TEMP. DOPPLER VOID 842320
 N.DATA NEUTRON FLUX FAST EPI-TH THERMAL 842420
 NDT CHANNEL FACTOR N.DATA THERMAL DATA 843640

N.DATA

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NDT

P.V.NDT INITIAL FINAL HEAT AND COOLING RATE 736300
 DRY-WELL S.C.HAMB. MATERIAL NDT 822280

NDT

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NEUTRON SOURCE

NEUTRON SOURCE NUMBER 783000

NEUTRON SOURCE

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OFF GAS

OFF GAS PRE HEATER NUMBER AND TYPE 801220
 OFF GAS RECMBIN ER NUMBER AND TYPE 801240
 OFF GAS COND. NO. 801260
 OFF GAS COMPRESS UR NUMBER TYPE AND PRESSURE 801280
 OFF GAS CHARCOAL HOLD UP 801320
 OFF GAS VACUUM PUMP 801340
 OFF GAS AIR EJECTOR 801350
 OFF GAS DECAY TANK NUMBER CAPACITY PRESSURE 801400
 OFF GAS FILTER FROM AIR EXTRACTOR 801420
 OFF GAS POST FILTER 801421
 OFF GAS FILTER FROM GRAND STEAM 801430
 DEGRATER R OFF GAS ISOLATE VALVE NUMBER 801440
 OFF GAS DECAY TUBE SIZE AND HOLD UP TIME 801480

OFF GAS

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OPERAT-P

PRESSURE VESSEL DESIGN-P OPERAT-P DESIGN-T OPERAT-T 736100
 STEAM-G. DESIGN-P OPERAT-P 757220
 ICE COND CAPACITY COMPART ENT DOOR OPERAT-P 825200

OPERAT-P

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OUTPUT POWER

REACTOR OUTPUT POWER ELECTRIC AL MWE 731120

OUTPUT POWER

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OVERLAY

PRESSURE VESSEL BASE OVERLAY MATERIAL 736400

OVERLAY

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OWNER

REACTOR COUNTRY SITE OWNER CRITICAL DATE 110100

OWNER

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P.DIST. ADJUSTER								P.DIST. ADJUSTER
P.DIST. ADJUSTER O.MECH. NUMBER	TYPE	733550				SEE PAGE***D-	74***	
PEAKING FACTOR								PEAKING FACTOR
PEAKING FACTOR TOTAL	CHANNEL AXIAL LOCAL	843620				SEE PAGE***D-	167***	
PELLET								PELLET
THERMAL EXPANSION OF UO-2 PELLETS	SOLID FP SWELLING RATE	732350				SEE PAGE***D-	50***	
FUEL UO-2 PELLETS	SIZE DIA AND LENGTH	732360				SEE PAGE***D-	50***	
FUEL UO-2 PELLETS	ENRICH	732620				SEE PAGE***D-	51***	
FUELROD PELLETS	TEMP. MAX C	732680				SEE PAGE***D-	60***	
GAP PELLETS	CONDUCTANCE FROM AND BOL TO CLADDING EUL	732700				SEE PAGE***D-	65***	
		732810				SEE PAGE***D-	67***	
PERFORAT								PERFORAT
FUEL CLADDING PERFORAT	AND ZK-W REACTION RATE	35340				SEE PAGE***D-	23***	
PHASE SEPARAT.								PHASE SEPARAT.
SHDS ROPS PHASE SEPARAT. NO. CAPACITY		803210				SEE PAGE***D-	0***	
PIT								PIT
CCS SPENT FUEL PIT H.EXCH. PUMP TYPE		768720				SEE PAGE***D-	113***	
CCS SPENT FUEL PIT DEMINE.		768760				SEE PAGE***D-	114***	
CCS SPENT FUEL PIT		768780				SEE PAGE***D-	114***	
PITCH								PITCH
FUEL ROD NO. PER ASSY AND ROD PITCH MM		732480				SEE PAGE***D-	57***	
CONTROL ROD PITCH MM		733280				SEE PAGE***D-	71***	
CONTROL CLUSTER PITCH MM		733360				SEE PAGE***D-	73***	
PLANT PRESSURE								PLANT PRESSURE
PLANT PRESSURE		731220				SEE PAGE***D-	42***	
PLENUM								PLENUM
PLENUM VS FUEL VOLUME RATIO DR LENGTH		732600				SEE PAGE***D-	59***	
POISON CURTAIN								POISON CURTAIN
POISON CURTAIN MATERIAL NUMBER LENGTH WIDTH		734200				SEE PAGE***D-	75***	
POPULATION								POPULATION
POPULATION FROM 1KM RADIUS TO 15KM RADIUS		641200				SEE PAGE***D-	36***	
POPULATION FROM 20KM RADIUS TO 30KM RADIUS		641400				SEE PAGE***D-	36***	
POWER DENSITY								POWER DENSITY
CORE POWER FUEL DENSITY MEAN KW/L		843420				SEE PAGE***D-	166***	
CORE FUEL DENSITY DENSITY KW/KG02 KW/KGU		843440				SEE PAGE***D-	167***	

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PRESSURE VESSEL								PRESSURE VESSEL
PRESSURE VESSEL DESIGN-P OPERAT-P DESIGN-T OPERAT-T		736100				SEE PAGE***D-	76***	
PRESSURE VESSEL SIZE		736200				SEE PAGE***D-	77***	
PRESSURE VESSEL BASE OVERLAY MATERIAL		736400				SEE PAGE***D-	79***	
PRESSURE VESSEL APPLIED STANDARD LIFE AND N.DUSE		736600				SEE PAGE***D-	80***	
PRESSURI ZER								PRESSURI ZER
PRESSURI ZER TYPE SIZE		757620				SEE PAGE***D-	93***	
PRESSURI ZER HEATLR TYPE AND CAPACITY		757640				SEE PAGE***D-	94***	
PRESSURI ZER RELIEF TANK DESIGN-P CAPACITY		757650				SEE PAGE***D-	94***	
PRIMARY COOLING PUMP								PRIMARY COOLING PUMP
PRIMARY COOLING PUMP TYPE AND MATERIAL		757400				SEE PAGE***D-	92***	
PRIMARY COOLING SYSTEM								PRIMARY COOLING SYSTEM
PRIMARY COOLING SYSTEM DESIGN-T DESIGN-P		757430				SEE PAGE***D-	92***	
PRIMARY LOOP								PRIMARY LOOP
PRIMARY LOOP TUBE SIZE		757450				SEE PAGE***D-	93***	
PUMP								PUMP
AB-TRA RECIRC. PUMP TRIP		21110				SEE PAGE***D-	9***	
AB-THA RECIRC. PUMP SHAFT STICK		21120				SEE PAGE***D-	9***	
JET PUMP NUMBER CAPACITY		738200				SEE PAGE***D-	81***	
JET PUMP FLOW AND PRESSURE RATIO AND EFFICIE.		738400				SEE PAGE***D-	82***	
JET PUMP SIZE AND VELOCITY AT NOZZLE		738600				SEE PAGE***D-	82***	
RECIRC. SYSTEM PUMP AND LOOP DESIGN-P DESIGN-T		751160				SEE PAGE***D-	83***	
RECIRC. SYSTEM PUMP AND LOOP TUBE SIZE		751180				SEE PAGE***D-	84***	
RECIRC. PUMP TYPE NUMBER		752410				SEE PAGE***D-	85***	
RECIRC. PUMP CAPACITY DESIGN-P DESIGN-T		752420				SEE PAGE***D-	85***	
RECIRC. PUMP HEAD COOL-P NPSH INPUT-P		752430				SEE PAGE***D-	86***	
RECIRC. PUMP MATERIAL		752440				SEE PAGE***D-	86***	
RECIRC. PUMP MOTION POWER AND SPEED		752450				SEE PAGE***D-	86***	
PRIMARY COOLING PUMP TYPE AND MATERIAL		757400				SEE PAGE***D-	92***	
CVCS DEMINE. PUMP TYPE NUMBER CAPACITY		762230				SEE PAGE***D-	96***	
CVCS BDRIC ACID CHARGE PUMP		762380				SEE PAGE***D-	100***	
CVCS BDRIC ACID PUMP TYPE NUMBER		762500				SEE PAGE***D-	101***	
SIS BDRIC ACID HIGH-P INJECT PUMP		763140				SEE PAGE***D-	102***	
SIS BDRIC ACID CHARGE PUMP		763300				SEE PAGE***D-	103***	
ISOLATED R.CJDL. SYSTEM PUMP TYPE AND NUMBER		763420				SEE PAGE***D-	103***	
RESIDUAL HEAT REMOVE.S W-PUMP TYPE AND NUMBER		764220				SEE PAGE***D-	104***	
RESIDUAL HEAT REMOVE.S S.W-PUMP TYPE AND NUMBER		764420				SEE PAGE***D-	105***	
CORE SPRAY SYSTEM PUMP TYP AND NUMBER		765240				SEE PAGE***D-	107***	
CORE SPRAY SYSTEM PUMP MATERIAL		765260				SEE PAGE***D-	0***	
HIGH-P. INJECT. SYSTEM PUMP PROPERTY		766480				SEE PAGE***D-	109***	
90RDN INJECT. SYSTEM PUMP NO. TYPE CAPACITY		767420				SEE PAGE***D-	110***	
REACTOR AUX.COOL SYSTEM W-PUMP TYPE AND NUMBER		768420				SEE PAGE***D-	113***	
REACTOR AUX.COOL SYSTEM S.W-PUMP TYPE NUMBER		768620				SEE PAGE***D-	113***	
CCS SPENT FUEL PIT PUMP TYPE		768760				SEE PAGE***D-	114***	

PUMP						PUMP					
COND. FEED.W. PUMP	PUMP TYPE AND NO.				774220	SEE PAGE***D-	119***				
AUX. FEED.W. PUMP	PUMP TYPE AND NO.				777260	SEE PAGE***D-	123***				
TURBINE AUX. COOL PUMP	PUMP TYPE AND NO.				773280	SEE PAGE***D-	123***				
OFF GAS VACUUM PUMP	PUMP TYPE AND NO.				779220	SEE PAGE***D-	124***				
					801340	SEE PAGE***D-	136***				
CONTAIN R	SPRAY PUMP				825410	SEE PAGE***D-	158***				
QUANTITY						QUANTITY					
LWD (LIQUID WASTE DISPOSAL)					953100	SEE PAGE***D-	174***				
KIND OF SMD DRUM QUANTITY					954100	SEE PAGE***D-	174***				
RAD. LEVEL						RAD. LEVEL					
RAD. LEVEL					942000	SEE PAGE***D-	171***				
MAX RAD. LEVEL	NORMAL IN REACTOR WATER				943220	SEE PAGE***D-	171***				
MAX RAD. LEVEL	IODINE IN REACTOR WATER				943240	SEE PAGE***D-	171***				
MAX RAD. LEVEL	HR.TC.MD IN REACTOR WATER				943260	SEE PAGE***D-	172***				
MAX RAD. LEVEL	CORR-P. (1) IN REACTOR WATER				943280	SEE PAGE***D-	172***				
MAX RAD. LEVEL	CORR-P. (2) IN REACTOR WATER				943400	SEE PAGE***D-	172***				
RAD. SHIELD						RAD. SHIELD					
RAD. SHIELD REGION	STANDARD				920000	SEE PAGE***D-	170***				
RCPS						RCPS					
SMS RCPS PHASE SEPARAT. NO. CAPACITY					803210	SEE PAGE***D-	0***				
REACTOR AUX.COOL SYSTEM						REACTOR AUX.COOL SYSTEM					
REACTOR AUX.COOL SYSTEM DESIGN-P DESIGN-T DESIGN-F					768000	SEE PAGE***D-	111***				
REACTOR AUX.COOL SYSTEM H.EXCH. TYPE AND NUMBER					768220	SEE PAGE***D-	112***				
REACTOR AUX.COOL SYSTEM W-PUMP TYPE AND NUMBER					768420	SEE PAGE***D-	113***				
REACTOR AUX.COOL SYSTEM S.W-PUMP TYPE AND NUMBER					768620	SEE PAGE***D-	113***				
REACTOR TYPE						REACTOR TYPE					
REACTOR TYPE					110200	SEE PAGE***D-	8***				
REACTOR AUX.COOL SYSTEM H.EXCH. TYPE AND NUMBER					768220	SEE PAGE***D-	112***				
REACTOR AUX.COOL SYSTEM W-PUMP TYPE AND NUMBER					768420	SEE PAGE***D-	113***				
REACTOR AUX.COOL SYSTEM S.W-PUMP TYPE AND NUMBER					768620	SEE PAGE***D-	113***				
PWR REACTOR CONTAIN R TYPE					822310	SEE PAGE***D-	155***				
RECIRC. PUMP						RECIRC. PUMP					
AB-TRA RECIRC. PUMP TRIP					21110	SEE PAGE***D-	9***				
AB-TRA RECIRC. PUMP SHAFT STICK					21120	SEE PAGE***D-	9***				
RECIRC. SYSTEM PUMP AND LOOP DESIGN-P DESIGN-T					751160	SEE PAGE***D-	83***				
RECIRC. SYSTEM PUMP AND LOOP TUBE SIZE					751180	SEE PAGE***D-	84***				
RECIRC. PUMP TYPE NUMBER					752410	SEE PAGE***D-	85***				
RECIRC. PUMP CAPACITY DESIGN-P DESIGN-T					752420	SEE PAGE***D-	85***				
RECIRC. PUMP HEAD COOL-P NPSH INPUT-P					752430	SEE PAGE***D-	86***				
RECIRC. PUMP MATERIAL					752440	SEE PAGE***D-	86***				
RECIRC. PUMP MOTOR POWER AND SPEED					752450	SEE PAGE***D-	86***				

RECIRC. SYSTEM						RECIRC. SYSTEM					
KIND OF AB-TRA FROM RECIRC. SYSTEM					21000	SEE PAGE***D-	8***				
RECIRC. SYSTEM MAIN PROPERTY					751120	SEE PAGE***D-	82***				
RECIRC. SYSTEM PUMP AND LOOP DESIGN-P DESIGN-T					751160	SEE PAGE***D-	83***				
RECIRC. SYSTEM PUMP AND LOOP TUBE SIZE					751180	SEE PAGE***D-	84***				
RECIRC. SYSTEM (PUMP) VALVE NUMBER SIZE					752220	SEE PAGE***D-	84***				
RECIRC. SYSTEM (PUMP) VALVE MATERIAL					752240	SEE PAGE***D-	84***				
RECIRC. SYSTEM (PUMP) VALVE DESIGN-P DESIGN-T					752260	SEE PAGE***D-	84***				
REFLECT.						REFLECT.					
REFLECT. THICK. RADIAL AXIAL					842260	SEE PAGE***D-	162***				
REGULATOR						REGULATOR					
AB-TRA RECIRC. FLOW REGULATOR MALFUNC.					21200	SEE PAGE***D-	9***				
RELIEF VALVE						RELIEF VALVE					
AB-TRA PRESSURE RELIEF VALVE OPEN					23500	SEE PAGE***D-	16***				
RELIEF VALVE TYPE NUMBER					753820	SEE PAGE***D-	89***				
RELIEF VALVE SET PRESSURE					753840	SEE PAGE***D-	89***				
RELIEF VALVE CAPACITY					753860	SEE PAGE***D-	90***				
RESIDUAL HEAT REMOVE.S						RESIDUAL HEAT REMOVE.S					
RESIDUAL HEAT REMOVE.S SYSTEM NUMBER					764000	SEE PAGE***D-	103***				
RESIDUAL HEAT REMOVE.S W-PUMP TYPE AND NUMBER					764220	SEE PAGE***D-	104***				
RESIDUAL HEAT REMOVE.S S.W-PUMP TYPE AND NUMBER					764420	SEE PAGE***D-	105***				
RESIDUAL HEAT REMOVE.S H.EXCH. TYPE AND NUMBER					764620	SEE PAGE***D-	106***				
REVISE						REVISE					
REVISE OF CONSTRUCTION PERMIT					122	SEE PAGE***D-	2***				
REVISE OF CONSTRUCTION PERMIT APPLICAT					130	SEE PAGE***D-	2***				
ROD PITCH ARRANGE						ROD PITCH ARRANGE					
FUEL ROD NO. PER ASSY AND ROD PITCH ARRANGE					732480	SEE PAGE***D-	57***				
RUPTURE						RUPTURE					
ACC.ANA. RECIRC. RUPTURE LDCA					35300	SEE PAGE***D-	22***				
ACC.ANA. RECIRC. RUPTURE LDCA					35310	SEE PAGE***D-	23***				
ACC.ANA. RECIRC. RUPTURE DRY-WELL P-CHANGE LOC					35320	SEE PAGE***D-	23***				
ACCIDENT MAIN STEAM TUBE RUPTURE					36200	SEE PAGE***D-	25***				
ACC.ANA. M.STEAM TUBE RUPTURE					36310	SEE PAGE***D-	25***				
ACC.ANA. M.STEAM TUBE RUPTURE					36320	SEE PAGE***D-	25***				
RWPS						RWPS					
RWPS REACTOR WATER PURIFIC. SYSTEM DESIGN-F					762200	SEE PAGE***D-	96***				
RWPS REACTOR WATER QUALITY					762220	SEE PAGE***D-	96***				
RWPS DEMINE. PUMP TYPE NUMBER CAPACITY					762230	SEE PAGE***D-	96***				
RWPS DEMINE. NUMBER AND CAPACITY					762240	SEE PAGE***D-	97***				
RWPS PIPING DESIGN-P DESIGN-T MATERIAL					762250	SEE PAGE***D-	97***				
RWPS CVCS REGENE. H.EXCH. TYPE NO. CAPACITY					762260	SEE PAGE***D-	97***				

RWPS							RWPS	
RWPS	CVCS	NON-REG.	H.EXCH.	TYPE NO.	CAPACITY	742280	SEE PAGE***D- 98***	
SAFETY STANDARD							SAFETY STANDARD	
SAFETY	STANDARD	UNDER	AB-TRA			10100	SEE PAGE***D- 5***	
SAFETY	STANDARD	UNDER	ACCIDENT			10120	SEE PAGE***D- 6***	
SAFETY VALVE							SAFETY VALVE	
SAFETY	VALVE	TYPE	NUMBER			753020	SEE PAGE***D- 88***	
SAFETY	VALVE	SET	PRESSURE	CAPACITY		753640	SEE PAGE***D- 89***	
SAMPLE BOX							SAMPLE BOX	
SAMPLE	BOX	CAPACITY	DESIGN-P	DESIGN-T	NUMBER	705660	SEE PAGE***D- 108***	
SAMPLE H.EXCH.							SAMPLE H.EXCH.	
SAMPLE	H.EXCH.		TYPE	NUMBER	CAPACITY	765620	SEE PAGE***D- 107***	
S.CHAMB.							S.CHAMB.	
DRY-WELL	S.CHAMB.	MATERIAL	NOT			822280	SEE PAGE***D- 155***	
S.CHAMB.	TYPE	SIZE AND	VOLUME			822420	SEE PAGE***D- 157***	
S.CHAMB.	DESIGN-P	DESIGN-T				822440	SEE PAGE***D- 157***	
S.CHAMB.	VENT	TUBE	NUMBER	AND SIZE		822460	SEE PAGE***D- 157***	
S.CHAMB.	DOWN-C.	TUBE	NUMBER	HEADER	DIA	822480	SEE PAGE***D- 158***	
SCRAM							SCRAM	
KIND OF	REACTOR	SCRAM	SIGNAL	LIMIT	OWN	783210	SEE PAGE***D- 126***	
KIND OF	REACTOR	SCHAM	SIGNAL	LIMIT	PWR	783230	SEE PAGE***D- 127***	
SEA WATER							SEA WATER	
SEA	WATER	CIRC.	SYSTEM	FOR MAIN	COND.	778220	SEE PAGE***D- 124***	
SGTR							SGTR	
MCA HA	PWR SGTR	FP GAS	RELEASE	FROM	BUILDING	43250	SEE PAGE***D- 30***	
MCA HA	PWR SGTR	ESTIMATI	ON	OF	IRADIAT	ION DOSE	43270	SEE PAGE***D- 30***
SHAFT STICK							SHAFT STICK	
AB-TRA		RECIRC.	PUMP	SHAFT	STICK	21120	SEE PAGE***D- 9***	
SHUTDOWN MARGINE							SHUTDOWN MARGINE	
N.DATA	K-EFF	SHUTDOWN	MARGINE	CONTRDL	WORTH	842220	SEE PAGE***D- 161***	
N.DATA	K-EFF	SHUTDOWN	MARGINE	CONTROL	WORTH	842230	SEE PAGE***D- 161***	
SIS							SIS	
MAIN	COMPONEN	IS	OF	SIS	PWR	763100	SEE PAGE***D- 101***	
SIS	BORIC	ACID	TANK	FRM	REFUEL	763120	SEE PAGE***D- 101***	
SIS	BORIC	ACID	HIGH-P	INJECT	PUMP	763140	SEE PAGE***D- 102***	
SIS	P-RIZED	BORIC	ACID	TANK		763160	SEE PAGE***D- 102***	
SIS	BORIC	ACID	INJECT	TANK		763180	SEE PAGE***D- 102***	

SIS							SIS
SIS	BORIC	ACID	CHARGE	PUMP		763300	SEE PAGE***D- 103***
SITE WATER							SITE WATER
SITE	WATER	QUALITY	WATER	SOURCE		621220	SEE PAGE***D- 32***
SITE	WATER	QUALITY	PH	E.CDTVTY	NIGORIDO	621240	SEE PAGE***D- 33***
SITE	WATER	QUALITY	HARDNESS	ALKALI		621260	SEE PAGE***D- 33***
SITE	WATER	QUALITY	SO-4 ION	CL ION	NH-4 ION	621280	SEE PAGE***D- 34***
SITE	WATER	QUALITY	NO-3 ION	NO-2 ION		621420	SEE PAGE***D- 34***
SITE	WATER	QUALITY	SILICA		TOTAL	621440	SEE PAGE***D- 34***
SITE	WATER	QUALITY	CATION	ANION		621460	SEE PAGE***D- 35***
SITE	WATER	QUALITY	FE TOTAL			621480	SEE PAGE***D- 35***
SITE	WATER	QUALITY				621620	SEE PAGE***D- 35***
REACTOR CORE							REACTOR CORE
REACTOR	CORE	COOLANT	FLOW	RATE	T/H	731140	SEE PAGE***D- 39***
REACTOR	BW CORE	COOLANT	INLET	OUTLET	TEMP.	731180	SEE PAGE***D- 40***
REACTOR	PWR CORE	COOLANT	INLET	OUTLET	TEMP.	731190	SEE PAGE***D- 41***
REACTOR	CORE	SIZE	DIA	HEIGHT		731240	SEE PAGE***D- 43***
SPACER							SPACER
FUEL	SPACER	NUMBER	PER ASSY	MATERIAL	TYPE	732220	SEE PAGE***D- 46***
SPACER	ALIGNMEN	T		CHCK	METHOD	732500	SEE PAGE***D- 58***
SPRAY							SPRAY
CORE	SPRAY	SYSTEM	NUMBER	FLOW AND	OTHERS	765220	SEE PAGE***D- 106***
CORE	SPRAY	SYSTEM	PUMP	TYPE AND	NUMBER	765240	SEE PAGE***D- 107***
CORE	SPRAY	SYSTEM	PUMP	MATERIAL		765260	SEE PAGE***D- 108***
CONTAINER	SPRAY	SYSTEM	PUMP			825410	SEE PAGE***D- 158***
CONTAINER	SPRAY	H.EXCH.				825450	SEE PAGE***D- 158***
STACK							STACK
STACK	HEIGHT					801460	SEE PAGE***D- 137***
START-UP							START-UP
AB-TRA	MISS	START-UP	OF COLO	RECIRC.	LOOP (1)	21320	SEE PAGE***D- 10***
AB-TRA	MISS	START-UP	OF COLO	RECIRC.	LOOP (2)	21340	SEE PAGE***D- 10***
AB-TRA	MISS	START-UP	OF COLO	RECIRC.	LOOP (3)	21360	SEE PAGE***D- 11***
STEAM DRYER							STEAM DRYER
STEAM	DRYER	NUMBER	CAPACITY	DRENTAB	LE TEMP	737410	SEE PAGE***D- 81***
STEAM	DRYER	TYPE	INLET	OUTLET	WETNESS	737420	SEE PAGE***D- 81***
STEAM-G.							STEAM-G.
STEAM-G.	DESIGN-P	OPERAT-P				751220	SEE PAGE***D- 90***
STEAM-G.	CAPACITY	WETNESS	TUBE	SURFACE	AREA	751240	SEE PAGE***D- 91***
STEAM QUALITY							STEAM QUALITY
CORE	OUTLET	STEAM	QUALITY	AND VOID	RATIO	731200	SEE PAGE***D- 41***

STEAM QUALITY						STEAM QUALITY	
STEAM	SEPARAT.	INLET	QUALITY	CARRY	UNDER	737240	SEE PAGE***D- 80***
STEAM SEPARAT.							
STEAM	SEPARAT.	UNIT NO.	TYPE	MATERIAL		737220	SEE PAGE***D- 80***
STEAM	SEPARAT.	INLET	QUALITY	CARRY	UNDER	737240	SEE PAGE***D- 80***
STRIKE							
CONTROL	ROD	EFFECT.	LENGTH	AND	STROKE	733220	SEE PAGE***D- 88***
SUBCOOL							
CORE	INLET	SUBCOOL	KCAL/KG			731160	SEE PAGE***D- 40***
SWD							
SWD USED	RESIN	PRODUCTI	ON RATE			944220	SEE PAGE***D- 172***
SWD USED	POWDER	RESIN	PRODUCTI	ON RATE	ACTIVITY	944240	SEE PAGE***D- 173***
SWD	FILTER	SLUDGE	PRODUCTI	ON RATE	ACTIVITY	944260	SEE PAGE***D- 173***
SWD FROM	CONCENTR	ATOR	PRODUCTI	ON RATE	ACTIVITY	944280	SEE PAGE***D- 173***
SWD	CONTROL	ROD	CHANNEL	BOX	CURTAIN	944320	SEE PAGE***D- 173***
KIND OF	SWD	DRUM	QUANTITY			954100	SEE PAGE***D- 174***
SWDS							
SWDS	REPS	PHASE	SEPARAT.	NO.	CAPACITY	803210	SEE PAGE***D- 0***
SWDS	COND. S	RESIN	STORAGE	TANK NO.	CAPACITY	803220	SEE PAGE***D- 0***
SWDS	FILTER	SLUDGE	STORAGE	TANK NO.	CAPACITY	803230	SEE PAGE***D- 0***
SWDS	CONC.LIQ	WASTE	STORAGE	TANK NO.	CAPACITY	803240	SEE PAGE***D- 0***
SWDS	USEJ	RESIN	STORAGE	TANK NO.	CAPACITY	803250	SEE PAGE***D- 0***
SWDS	SLUDGE	SEPARATO	R TANK	NO.	CAPACITY	803260	SEE PAGE***D- 0***
SWDS	TANK	LIST	BWK			803400	SEE PAGE***D- 150***
SWDS	CONCENTR	ATED WAS	TE STOR	AGE	TANK	803410	SEE PAGE***D- 150***
SWDS	SPENT	RESIN	STORAGE	TANK		803420	SEE PAGE***D- 151***
SWDS	PHASE	SEPARATO	R	TANK		803430	SEE PAGE***D- 151***
SWDS	WASTE	SLUDGE	STORAGE	TANK		803440	SEE PAGE***D- 152***
SWDS	WASTE	SLUDGE	SEPARATE	TANK		803450	SEE PAGE***D- 152***
SWDS	FILTRATE	D SLUDGE	STORAGE	TANK		803460	SEE PAGE***D- 152***
SWDS	CONDENSE	SYSTEM	RESIN PU	WDER STOR	AGE	803470	SEE PAGE***D- 152***
SWDS	PURIFY	SYSTEM	FILT. SL	UDGE STOR	AGE	803480	SEE PAGE***D- 152***
SWDS	FUEL PDM	D SLUDGE	STORAGE	TANK STOR	AGE	803490	SEE PAGE***D- 153***
SWDS	SYSTEM	DRAIN	FILTEM	SLUDGE	STORAGE	803500	SEE PAGE***D- 153***
SWDS	SINKING	TANK OF	CONDENSE	D WATER	PURIFY	803510	SEE PAGE***D- 153***
SWDS	CONCENTR	ATED	LIQUID	WASTE	WEIGHING	803520	SEE PAGE***D- 153***
SWDS	SPENT	RESIN	STORAGE	TANK		803530	SEE PAGE***D- 153***
SWDS	WASTE	SLUDGE	STORAGE	TANK	UNDERGRD	803540	SEE PAGE***D- 154***
SWELLING							
UD-2	PELLET	SOLID	FP	SWELLING	RATE	732380	SEE PAGE***D- 50***
TANK							
PRESSURE	ZER	RELIEF	TANK	DESIGN-P	CAPACITY	757650	SEE PAGE***D- 94***

TANK						TANK	
CVCS	VOLUME	CONTROL	TANK	NUMBER	CAPACITY	762360	SEE PAGE***D- 100***
CVCS	BURIC	ACID	TANK	NUMBER	CAPACITY	762520	SEE PAGE***D- 101***
SIS	BURIC	ACID	TANK FOR	REFUEL		763120	SEE PAGE***D- 101***
SIS	P-RIZED	BURIC	ACID	TANK		763160	SEE PAGE***D- 102***
SIS	BURIC	ACID	INJECT	TANK		763180	SEE PAGE***D- 102***
DEAERATO	R TYPE	NUMBER	STORAGE	TANK	CAPACITY	776260	SEE PAGE***D- 122***
OFF GAS	DECAY	TANK	NUMBER	CAPACITY	PRESSURE	801400	SEE PAGE***D- 136***
LMDS	TANK	LIST	PWR			802100	SEE PAGE***D- 138***
LMDS	CONDENSE	D BOND	N STORAG	E TANK		802110	SEE PAGE***D- 139***
LMDS	LIQUID	WASTE	STORAGE	TANK		802120	SEE PAGE***D- 139***
LMDS	LIQUID	WASTE	HOLD UP	TANK		802130	SEE PAGE***D- 139***
LMDS	LIQUID	WASTE	EVAPULAT	OR CONDE	NSE TANK	802140	SEE PAGE***D- 139***
LMDS	LIQUID	WASTE	SUMP	TANK		802150	SEE PAGE***D- 139***
LMDS	AUX. BUT	LOADING	SUMP	TANK		802160	SEE PAGE***D- 140***
LMDS	HOLDUP			TANK		802170	SEE PAGE***D- 140***
LMDS	CHEMICAL	S	DRAIN	TANK		802190	SEE PAGE***D- 140***
LMDS	WATCH	TANK				802200	SEE PAGE***D- 140***
LMDS	MONITOR			TANK		802210	SEE PAGE***D- 141***
LMDS	WASHING	WATER	TANK			802220	SEE PAGE***D- 141***
LMDS	PROCESS	WATER	HOLDUP	TANK		802230	SEE PAGE***D- 141***
LMDS	CHEMICAL	FLUID	DRAIN	TANK		802240	SEE PAGE***D- 141***
LMDS	FLUOR	DRAIN	TANK			802250	SEE PAGE***D- 141***
LMDS	PRIMARY	COOLANT	STORAGE	TANK		802260	SEE PAGE***D- 142***
LMDS	PRIMARY	COOLANT	STORAGE	TANK		802270	SEE PAGE***D- 142***
LMDS	LIQUID	WASTE	EVAP.	COND.W	TANK	802370	SEE PAGE***D- 143***
LMDS	TANK	LIST				802400	SEE PAGE***D- 143***
LMDS	NEUTRALI	ZER	ANNEXING	TANK		802410	SEE PAGE***D- 144***
LMDS	CONDENSE	D	WATER	SAMPLE	TANK	802420	SEE PAGE***D- 0***
LMDS	CONDENSE	D	WATER	COLLECT	TANK	802430	SEE PAGE***D- 0***
LMDS	LIQUID	WASTE	NEUTRALI	ZATION	TANK	802440	SEE PAGE***D- 144***
LMDS	LIQUID	WASTE	SAMPLING	TANK		802450	SEE PAGE***D- 144***
LMDS	LIQUID	WASTE	SURGE	TANK		802460	SEE PAGE***D- 145***
LMDS	LIQUID	WASTE	COLLECT	TANK		802470	SEE PAGE***D- 145***
LMDS	EVAPORAT	OR	SURGE	TANK		802480	SEE PAGE***D- 145***
LMDS	DISTILLED	WATER	SURGE	TANK		802490	SEE PAGE***D- 145***
LMDS	SYSTEM	DRAIN	FILTRATE	TANK		802500	SEE PAGE***D- 146***
LMDS	SYSTEM	DRAIN	SAMPLING	TANK		802510	SEE PAGE***D- 146***
LMDS	SYSTEM	DRAIN	SURGE	TANK		802520	SEE PAGE***D- 0***
LMDS	SYSTEM	DRAIN	COLLECT	TANK		802530	SEE PAGE***D- 146***
LMDS	LAUNDRY	DRAIN		TANK		802540	SEE PAGE***D- 146***
LMDS	PRECOAT			TANK		802550	SEE PAGE***D- 147***
LMDS	FILTRATE	ON AUX.	AGENT	TANK		802560	SEE PAGE***D- 147***
LMDS	FILTRATE	D WASTE	COLLECT	TANK		802570	SEE PAGE***D- 0***
LMDS	WASHING	WASTE	COLLECT	TANK		802580	SEE PAGE***D- 147***
LMDS	FRODR	DRAIN	FILTRATE	TANK		802590	SEE PAGE***D- 147***
LMDS	FRODR	DRAIN	SAMPLING	TANK		802600	SEE PAGE***D- 148***
LMDS	FRODR	DRAIN	COLLECT	TANK		802610	SEE PAGE***D- 148***
LMDS	GENERAL	WASTE	SURGE	TANK		802620	SEE PAGE***D- 0***
SWDS	COND. S	RESIN	STORAGE	TANK NO.	CAPACITY	803220	SEE PAGE***D- 0***

TANK							TANK	
SWDS	FILTER	SLUDGE	STORAGE	TANK NO.	CAPACITY	803230	SEE PAGE***D-	0***
SWDS	CONC. LIQ	WASTE	STORAGE	TANK NO.	CAPACITY	803240	SEE PAGE***D-	0***
SWDS	USED	RESIN	STORAGE	TANK NO.	CAPACITY	803250	SEE PAGE***D-	0***
SWDS	SLUDGE	SEPARATOR	TANK	NO.	CAPACITY	803280	SEE PAGE***D-	0***
SWDS	TANK	LIST	BWR			803400	SEE PAGE***D-	150***
SWDS	CONCENTRATED	WASTE	STORAGE	TANK		803410	SEE PAGE***D-	150***
SWDS	SPENT	RESIN	STORAGE	TANK		803420	SEE PAGE***D-	151***
SWDS	PHASE	SEPARATOR				803430	SEE PAGE***D-	151***
SWDS	WASTE	SLUDGE	STORAGE	TANK		803440	SEE PAGE***D-	152***
SWDS	WASTE	SLUDGE	SEPARATE	TANK		803450	SEE PAGE***D-	152***
SWDS	FILTRATED	SLUDGE	STORAGE	TANK		803460	SEE PAGE***D-	152***
SWDS	FUEL POND	SLUDGE	STORAGE	TANK	STORAGE	803490	SEE PAGE***D-	153***
SWDS	SINKING	TANK	CONDENSE	D WATER	PURIFY	803510	SEE PAGE***D-	153***
SWDS	SPENT	RESIN	STORAGE	TANK		803530	SEE PAGE***D-	153***
SWDS	WASTE	SLUDGE	STORAGE	TANK	UNDERGRD	803590	SEE PAGE***D-	154***
CONTAINER	IODINE	REMOVE	CHEMICAL	TANK		825490	SEE PAGE***D-	159***
TEMP. COOLANT							TEMP. COOLANT	
REACTOR	BWR CORE	COOLANT	INLET	OUTLET	TEMP.	731180	SEE PAGE***D-	40***
REACTOR	PWR CORP	COOLANT	INLET	OUTLET	TEMP.	731190	SEE PAGE***D-	41***
THERMAL CONDUCTIVITY							THERMAL CONDUCTIVITY	
THERMAL	CONDUCTIVITY	UF	UH-2			732300	SEE PAGE***D-	49***
THERMAL	CONDUCTIVITY	UF	ZRY			732320	SEE PAGE***D-	49***
TRIP							TRIP	
AB-TRA	GENERATOR	RECIRC.	PUMP	TRIP		21110	SEE PAGE***D-	9***
AB-TRA	TURBINE	TRIP	SUMMARY			23100	SEE PAGE***D-	13***
AB-TRA	TURBINE	TRIP (1)	WITH	BY PASS	V. ACT	23200	SEE PAGE***D-	13***
AB-TRA	TURBINE	TRIP (2)	WITHOUT	BY PASS	V. ACT	23210	SEE PAGE***D-	13***
AB-TRA	TURBINE	TRIP (3)				23220	SEE PAGE***D-	14***
AB-TRA	TURBINE	TRIP (3)				23230	SEE PAGE***D-	14***
TURBINE AUX. COOL							TURBINE AUX. COOL	
TURBINE	AUX.	COOL	PUMP	TYPE	NO.	779220	SEE PAGE***D-	124***
TURBINE	AUX.	COOL	H.EXCH.	TYPE AND	NUMBER	779240	SEE PAGE***D-	125***
TURBINE TRIP							TURBINE TRIP	
AB-TRA	TURBINE	TRIP	SUMMARY			23200	SEE PAGE***D-	13***
AB-TRA	TURBINE	TRIP (1)	WITH	BY PASS	V. ACT	23210	SEE PAGE***D-	13***
AB-TRA	TURBINE	TRIP (2)	WITHOUT	BY PASS	V. ACT	23220	SEE PAGE***D-	14***
AB-TRA	TURBINE	TRIP (3)				23230	SEE PAGE***D-	14***
VALVE							VALVE	
AB-TRA	MAIN	STEAM	ISOLATE	VALVE	CLOSE	23300	SEE PAGE***D-	15***
AB-TRA	PRESSURE	RELIEF	VALVE	OPEN		23500	SEE PAGE***D-	16***
RECIRC.	SYSTEM	(PUMP)	VALVE	NUMBER	SIZE	752220	SEE PAGE***D-	80***
RECIRC.	SYSTEM	(PUMP)	VALVE	MATERIAL		752240	SEE PAGE***D-	80***

VALVE							VALVE	
RECIRC.	SYSTEM	(PUMP)	VALVE	DESIGN-P	DESIGN-T	752260	SEE PAGE***D-	84***
M.STEAM	ISOLATE	VALVE	NUMBER	AND	SIZE	753400	SEE PAGE***D-	87***
M.STEAM	ISOLATE	VALVE	NUMBER	DESIGN-P	DESIGN-T	753420	SEE PAGE***D-	88***
M.STEAM	ISOLATE	VALVE	P-LOSS	WATER	FLUID	753430	SEE PAGE***D-	88***
M.STEAM	ISOLATE	VALVE	SHUT-OFF	TIME	SET	753440	SEE PAGE***D-	88***
M.STEAM	ISOLATE	VALVE	CONTROL	SOURCE		753450	SEE PAGE***D-	88***
SAFETY	VALVE	TYPE	NUMBER			753620	SEE PAGE***D-	88***
SAFETY	VALVE	SET	PRESSURE	CAPACITY		753640	SEE PAGE***D-	89***
RELIEF	VALVE	TYPE	NUMBER			753820	SEE PAGE***D-	89***
RELIEF	VALVE	SET	PRESSURE			753840	SEE PAGE***D-	89***
RELIEF	VALVE	CAPACITY				753860	SEE PAGE***D-	90***
DEAERATOR	OFF	GAS	ISOLATE	VALVE	NUMBER	801440	SEE PAGE***D-	137***
VOID							VOID	
CORE	OUTLET	STEAM	QUALITY	AND	VOID	731200	SEE PAGE***D-	41***
N.DATA	OF	REACTIVITY	TEMP.	DOPPLER	VOID	842320	SEE PAGE***D-	163***
WATER QUALITY							WATER QUALITY	
SITE	WATER	QUALITY	WATER	SOURCE		621220	SEE PAGE***D-	32***
SITE	WATER	QUALITY	PH	E.COVITY	NIGRIDO	621240	SEE PAGE***D-	33***
SITE	WATER	QUALITY	HARDNESS	ALKALI		621260	SEE PAGE***D-	33***
SITE	WATER	QUALITY	SO-4 ION	CL ION	NH-4 ION	621280	SEE PAGE***D-	34***
SITE	WATER	QUALITY	NO-3 ION	NO-2 ION		621420	SEE PAGE***D-	34***
SITE	WATER	QUALITY	SILICA			621440	SEE PAGE***D-	34***
SITE	WATER	QUALITY	CATION	ANION	TOTAL	621460	SEE PAGE***D-	35***
SITE	WATER	QUALITY	FE TOTAL			621480	SEE PAGE***D-	35***
SITE	WATER	QUALITY				621620	SEE PAGE***D-	35***
WPS	REACTOR	WATER	QUALITY			762220	SEE PAGE***D-	96***
MAKE-UP	WATER	DEMIN.	WATER	QUALITY		831240	SEE PAGE***D-	159***
WEIGHT FUEL							WEIGHT FUEL	
FUEL	LOADING	WEIGHT	TGN-U02	TGN-U	TGN-U235	731260	SEE PAGE***D-	44***
UN-2	WEIGHT	PER FULL	ASSY	KGUO-2/	ASSY	732260	SEE PAGE***D-	48***
FUEL	ASSY	TOTAL	WEIGHT	KG	(INC. H-WARE)	732280	SEE PAGE***D-	48***
ZR-W							ZR-W	
FUEL	CLADDING	PERFORM	AND	ZR-W	REACTION	35340	SEE PAGE***D-	23***

4 データ

この諸元データには、機器の箇數、寸法、材質などの一般的データのほかに、アイテムの定義、事故の想定、安全対策なども含ませたため、一般のデータ集とは異なった様式をとった部分がある。

定義などは、簡単な記述とそれらの論理式で表示したり、想定を条件を列記するような方式も併用した。

配列は、アイテムをコード番号順に示し、原子炉のデータを並べる方式である。

この章のページは、プリントアウトのシートの右肩に D-○○○で示されている。

SOURCE DOCUMENT

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JPOR-2	BWR	2	KDN-6			/
TSURUGA	BWR	3	80-3-3(70/5),81-3-2(70/7/22),KONS			/
DNAGAWA	BWR	4	80-6-3(70/5)SKST,85-6(70/11),			/
HAMAOKA-1	BWR	5	80-2-3(70/5)SKST,85-4(70/11),95-2(71/9)SHKS,			/
FUKUSIMA-1	BWR	6	82-3-3(70/8),82-3-4(70/8)			/
FUKUSIMA-2,3	BWR	7	82-2-2(70/8),82-2-3(70/8)			/
FUKUSIMA-2,3	BWR	7	HENRYDU TAI SEKKEI NINKA SINSEI GAIYOD(JNF) KOMMON KAI	F2N1		71/ 2
FUKUSIMA-2,3	BWR	7	CHUUI ZIKOU NI TUIITE NO HOOKOKU (TOODEN) KOMMON KAI	F2N2		71/ 2
SHIMANE	BWR	8	70/6/20			/
SHIMANE	BWR	8	89-8-2(71/3)			/
FUKUSIMA-5	BWR	9	89-2-3(71/2)			/
FUKUSIMA-4	BWR	10	94-3-3(71/8)			71/ 8
FUKUSIMA-6	BWR	11	98-3-3(71/12)			72/ 1
TODKAI-2	BWR	12	98-2-3(71/12)			72/ 1
HAMAOKA-2	BWR	13	106-2-3(72/ 9) SHKS, 93BUKAI			/
TAKAHAMA-2	PWR	23	SHK(70/10)			/
TAKAHAMA-2	PWR	23	80-4-3(70/5)SHKT,85-9(70/11),			/
GENKAI-1	PWR	24	6783-5			/
GENKAI-1	PWR	24	80-5-3(70/5)SKST,85-5(70/11),			/
OOI -1,2	PWR	26	88-2-2(71/1)			/
MIHAMA-3	PWR	27	94-2-3(71/8)			/
VERMONT YANKEE	BWR	52	A-2(70/7) 68BUKAI-SANKOD SIRYOD			/
BROWNS FERRY	BWR	53	GSK-19(69/2)			/
MILLSTON	BWR	54	R-9(66/8)			/
DRESDEN-1	BWR	55	DIRECTORY OF NUCLEAR REACTORS VOL.4 IAEA(1962)			/
DRESDEN-2	BWR	56	R-9(66/8)			/
DRESDEN-2	BWR	56	DIRECTORY OF NUCLEAR REACTORS VOL.7 IAEA(1968)			/
DYSTER CREEK	BWR	57	R-9(66/8)			/
DUANE ARNOLD	BWR	58	A-2(70/7) 68BUKAI-SANKOD SIRYOD			/
YANKEE	BWR	69	DIRECTORY OF NUCLEAR REACTORS VOL.4 IAEA(1961)			/
SAXTON	PWR	70	DIRECTORY OF NUCLEAR REACTORS VOL.4 IAEA(1961)			/
BURLINGTON	PWR	71	GSK-19(69/2)			/

HISTORY OF CONSTRUCTION PERMIT 110

FUKUSIMA-1	BWR	6	66/7/5(REV.0),66/12/19(R.1),70/6/10(R.2),70/10/8(R.3)			70/11
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HISTORY OF CONSTRUCTION PERMIT APPLICAT 120

DNAGAWA	BWR	4	70/5/30(REV.0),70/11/4(R.1),			/
HAMAOKA-1	BWR	5	70/5/22(REV.0),7			/
SHIMANE	BWR	8	69/11/13(OK)			/
GENKAI-1	PWR	24	70/5/30(REV.0),70/11/6(R.1),			/

HISTORY OF CONSTRUCTION PERMIT APPLICAT 120

OOI -1,2	PWR	26	71/1(REV.0),			/
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REVISE OF CONSTRUCTION PERMIT 122

HAMAOKA-1	BWR	5	45/12/10(45-7660) SK			/
FUKUSIMA-2,3	BWR	7	41/12/ 1(41-4591) SK			/
FUKUSIMA-2,3	BWR	7	43/ 3/29(43-1617) SHK	2-600 RO ZD0SETU		/
FUKUSIMA-2,3	BWR	7	44/ 2/10(44- 419) SHK	1-600 SISETU HENKOD		/
FUKUSIMA-2,3	BWR	7	44/ 4/ 7(44-1121) SHK	1-600 POWER UP		/
FUKUSIMA-2,3	BWR	7	45/ 1/ 7(44-6070) SHK	1,2-600 SISETU HENKOD		/
FUKUSIMA-2,3	BWR	7	45/ 1/23(44-6670) SHK	3-600 RO ZD0SETU		/
FUKUSIMA-2,3	BWR	7	45/ 3/13(45- 374) SHK	1-600 SISETU HENKOD		/
FUKUSIMA-2,3	BWR	7	45/ 7/30(45-3499) SHK	2-600 SISETU HENKOD		/
FUKUSIMA-2,3	BWR	7	45/ 9/14(45-6097) SHK	1-600 SISETU HENKOD		/
FUKUSIMA-2,3	BWR	7	45/12/19(45-7663) SKHK	2-600 SISETU HENKOD		/
FUKUSIMA-2,3	BWR	7	45/12/19(45-7665) SKHK	1-600 SISETU HENKOD		/
SHIMANE	BWR	8	44/11/13(44-5540) SK			/
SHIMANE	BWR	8	45/10/13(45-4965) SHK			/

REVISE OF CONSTRUCTION PERMIT APPLICAT 130

SHIMANE	BWR	8	70/10/13(1ST-OK)			/
SHIMANE	BWR	8	71/ 3/ 6(2ND-SINSEI)			/
FUKUSIMA-5	BWR	9	71/2/22(REV.0)			/
FUKUSIMA-4	BWR	10	71/ / (REV.0)			/
FUKUSIMA-6	BWR	11	71/12/21(REV.0)			72/ 1
TODKAI-2	BWR	12	71/12/21(REV.0)			72/ 1
TAKAHAMA-2	PWR	23	70/5/29(REV.0),70/10/13(R.1),			71/ 1
MIHAMA-3	PWR	27	71/7/12(REV.0)			/

IMPORTED COMPONENTS 200

DNAGAWA	BWR	4	SAFETY VALVE, RELIEF VALVE, MAIN STEAM ISOLATION VALVE			70/ 6
DNAGAWA	BWR	4	HPCI TURBINE PUMP, RCIC TURBINE PUMP, RECIRC. PUMP,			70/ 6
DNAGAWA	BWR	4	MG-SET FLUID COUPLING, SOME OF NUCLEAR INSTRUMENTS,			70/ 6
DNAGAWA	BWR	4	**KOOJI KEIKAKU GAIYOD PAGE 13,	70/6/20		70/ 6
HAMAOKA-1	BWR	5	VALVES (PRIMARY COOLANT SYSTEM)	POCK.B P196		/
HAMAOKA-1	BWR	5	RECIRCULATION PUMPS	POCK.B P197		/
HAMAOKA-1	BWR	5	INSTRUMENTS,	POCK.B P197		/
HAMAOKA-1	BWR	5	PARTS (OFF GAS SYSTEM)	POCK.B P197		71/
FUKUSIMA-1	BWR	6	INITIAL CHARGE FUEL ASSEMBLIES,	POCK.B P190		71/
FUKUSIMA-1	BWR	6	STEAM SEPARATOR, DRYER, CORE SUPPORT STRUCTURE	POCK.B P190		71/
FUKUSIMA-1	BWR	6	RECIRCULATION PIPING	POCK.B P190		71/

IMPORTED		COMPONENTS		PLANT PERFORMANCE DATA	DATE 12/16/74	PAGE***D- 3***
				200		
FUKUSIMA-1	BWR	6	VALVES(RECIRC.-LOOP-STOP-V., MAIN-STEAM-ISOLATION-V., SAFETY-V., RELIEF-V.)	POCK.R P190	71/	
FUKUSIMA-1	BWR	6	RECIRC.-PUMPS, INSTRUMENTS, CONTROL ROD AND DRIVE-MECH.	POCK.R P190	71/	
FUKUSIMA-1	BWR	6	MAIN TURBINE AND GENERATOR	POCK.R P191	71/	
FUKUSIMA-1	BWR	6	FILTER, RECOMBINER, COMPRESSOR (OFF GAS SYSTEM)	POCK.R P191	71/	
FUKUSIMA-1	BWR	6	CENTRIFUGAL WATER SEPARATOR, DRUM PACKING MACHINE (SWDS)	POCK.R P191	71/	
FUKUSIMA-2+3	BWR	7	(2-GOD) STEAM SEPARATOR, DRYER, CORE SUPPORT STRUCTURE	POCK.R P190	71/	
FUKUSIMA-2+3	BWR	7	(2-GOD) SAFETY VALVES	POCK.R P190	71/	
FUKUSIMA-2+3	BWR	7	(BOTH 2,3) MAIN-STEAM-ISOLATION-V., RELIEF-V	POCK.R P190	71/	
FUKUSIMA-2+3	BWR	7	(BOTH 2,3) RECIRC.-PUMPS	POCK.R P191	71/	
FUKUSIMA-2+3	BWR	7	(2-GOD) INSTRUMENTS (WHOLE)	POCK.R P191	71/	
FUKUSIMA-2+3	BWR	7	(3-GOD) INSTRUMENTS (PARTS)	POCK.R P191	71/	
FUKUSIMA-2+3	BWR	7	CONTROL ROD AND DRIVE MECHANISM	POCK.R P191	71/	
FUKUSIMA-2+3	BWR	7	(2-GOD) MAIN TURBINE, AND GENERATOR	POCK.R P191	71/	
FUKUSIMA-2+3	BWR	7	(2-GOD) FILTER, RECOMBINER, COMPRESSOR (OFF GAS SYSTEM)	POCK.R P191	71/	
FUKUSIMA-2+3	BWR	7	(2-GOD) CENT.-WATER-SEPARATOR, DRUM-PACK.-M. (SWDS)	POCK.R P191	71/	
SHIMANE	BWR	8	RECIRCULATION PUMPS	POCK.R P195	/	
SHIMANE	BWR	8	INSTRUMENTS, CONTROL-ROD AND DRIVE MECHANISM	POCK.R P195	/	
SHIMANE	BWR	8	FILTER ELEMENTS, COMPRESSOR (OFF GAS SYSTEM)	POCK.R P195	/	
MIHAMA-1	PWR	21	INITIAL CHARGE FUEL ASSEMBLIES	POCK.R P192	71/	
MIHAMA-1	PWR	21	PRESSURE VESSEL	POCK.R P192	71/	
MIHAMA-1	PWR	21	CORE SUPPORT STRUCTURE, STEAM GENERATOR	POCK.R P192	71/	
MIHAMA-1	PWR	21	PRIMARY PIPING AND ISOLATION VALVE	POCK.R P192	71/	
MIHAMA-1	PWR	21	CHARGE PUMP, FILTER (CVCS)	POCK.R P193	71/	
MIHAMA-1	PWR	21	PUMPS (PRIMARY COOLANT CIRCULATION)	POCK.R P193	71/	
MIHAMA-1	PWR	21	HEATER AND SPRAY NOZZLE (PRESSURIZER)	POCK.R P193	71/	
MIHAMA-1	PWR	21	INSTRUMENTS, CONTROL ROD AND DRIVE MECHANISM,	POCK.R P193	71/	
MIHAMA-1	PWR	21	MONITOR AND OIL CLEANER (STEAM TURBINE)	POCK.R P193	/	
MIHAMA-1	PWR	21	FLEXIBLE JOINT (ELECTRIC GENERATOR)	POCK.R P193	/	
MIHAMA-1	PWR	21	COMPRESSOR+FILTER (OFF-GAS SYSTEM)	POCK.R P193	/	
MIHAMA-1	PWR	21	TANK,PUMP,ION-EXCHANGER (LWDS)	POCK.R P193	/	
MIHAMA-2	PWR	22	INITIAL CHARGE FUEL ASSEMBLIES	POCK.R P192	71/	
MIHAMA-2	PWR	22	CORE SUPPORT STRUCTURE,	POCK.R P192	71/	
MIHAMA-2	PWR	22	INCONEL TUBES AND STEAM SEPARATOR (PARTS OF STEAM GENE.)	POCK.R P192	71/	
MIHAMA-2	PWR	22	CHARGE PUMP, FILTER (CVCS)	POCK.R P193	71/	
MIHAMA-2	PWR	22	PUMPS (PRIMARY COOLANT CIRCULATION)	POCK.R P193	71/	
MIHAMA-2	PWR	22	HEATER (PRESSURIZER),	POCK.R P193	71/	
MIHAMA-2	PWR	22	INSTRUMENTS, CONTROL ROD AND DRIVE MECHANISM,	POCK.R P193	/	
MIHAMA-2	PWR	22	COMPRESSOR+FILTER (OFF-GAS SYSTEM)	POCK.R P193	/	
MIHAMA-2	PWR	22	EVAPULATOR (LWDS)	POCK.R P193	/	
GENKAI-1	PWR	24	RECIRCULATION PUMPS	POCK.R P195	/	
GENKAI-1	PWR	24	HEATER (PRESSURIZER)	POCK.R P195	/	
GENKAI-1	PWR	24	INSTRUMENT-PARTS, CONTROL-ROD AND DRIVE MECHANISM-PARTS	POCK.R P195	/	
TAKAHAMA-1	PWR	25	INITIAL CHARGE FUEL ASSEMBLIES	POCK.R P192	71/	
TAKAHAMA-1	PWR	25	CORE SUPPORT STRUCTURE, STEAM GENERATOR	POCK.R P192	71/	

IMPORTED		COMPONENTS		PLANT PERFORMANCE DATA	DATE 12/16/74	PAGE***D- 4***
				200		
TAKAHAMA-1	PWR	25	PRIMARY PIPING AND ISOLATION VALVE	POCK.R P192	71/	
TAKAHAMA-1	PWR	25	PRIMARY COOLANT PURIFICATION SYSTEM	POCK.R P193	71/	
TAKAHAMA-1	PWR	25	PRIMARY COOLANT CIRCULATION SYSTEM	POCK.R P193	71/	
TAKAHAMA-1	PWR	25	HEATER (PRESSURIZER),	POCK.R P193	/	
TAKAHAMA-2	PWR	23	INSTRUMENTS, CONTROL ROD AND DRIVE MECHANISM,	POCK.R P193	/	
TAKAHAMA-1	PWR	25	FILTER (OFF-GAS SYSTEM)	POCK.R P193	/	
TAKAHAMA-1	PWR	25	EVAPULATOR+FILTER (LWDS)	POCK.R P193	/	
FUGEN	ATR	81	PRESSURE TUBES	POCK.R P197	71/	

HISTORY OF		CONSTRUCTION AND OPERATION		300		
JPOR-1	BWR	1	63/10/26 FULL POWER OPERATION	/		
MIHAMA-1	PWR	21	72/ 6/14 STEAM GENERATOR THIN TUBE FAILURE	/		
MIHAMA-2	PWR	22	72/ 8/11 MAIN TRANS OIL LEAK	/		
DRESOEN-1	BWR	55	57/ 3/ START OF CONSTRUCTION	DNR V4 P91	62/	
DRESOEN-1	BWR	55	59/10/ REACTOR CRITICAL	DNR V4 P91	62/	
DRESOEN-1	BWR	55	60/ 6/ FULL POWER OPERATION	DNR V4-P91	62/	
FUKUSIMA-1	BWR	6	66/12/ 8 CONSTRUCTION START (CONTRACT)	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	67/ 9/19 REACTOR-CONTAINER SETTING START	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	68/ 6/17-21 CONTAINER INITIAL PRESSURE-LEAK TEST	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	69/ 5/21 PRESSURE VESSEL SETTING	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	69/12/23 PRESSURE VESSEL, PRIMARY SYSTEM PRESSURE TEST	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 3/31 275 KV SOURCE RECEIVE	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 4/ 4 TURBINE AND GENERATOR SETTING START	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 6/25-29 CONTAINER FINAL PRESSURE-LEAK TEST	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 7/ 4 FUEL LOADING START	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 7/ 5 MINIMUM CRITICAL	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 7/22 FUEL LOADING FINISH	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 9/ 8 TURBINE-GENERATOR TURNING START	KOONIN MEMO	70/ 3	
FUKUSIMA-1	BWR	6	70/ 9/26 HEATING-UP START	KOONIN MEMO	70/ 3	
TAKAHAMA-1	PWR	25	71/ 9/ 7 CONTAINER INITIAL PRESSURE-LEAK TEST	/		
YANKEE	69	57/11/	START OF CONSTRUCTION	DNR V4 P33	61/	
YANKEE	69	60/ 8/	REACTOR CRITICAL	DNR V4 P33	61/	
YANKEE	69	61/ 1/	PRELIMINARY OPERATION AND TESTS (392 MW)	DNR V4 P33	61/	
YANKEE	69	61/ 6/	FULL DESIGN POWER (495 MW)	DNR V4 P33	61/	
SAXTON	70	60/ 2/	START OF CONSTRUCTION	DNR V4 P47	61/	

SA		DEFIN. OF AB-TRA		10000		
				(A)=SINGLE COMPONENT FAILURE, OR SINGLE COMPONENT MALFUNCTION		
				(B)=SINGLE MISS OF OPERATOR		
				ABNORMAL TRANSIENT IS DEFINED AS ONE WHICH IS INDUCED BY (AS FOLLOWS).		
ONAGAWA	BWR	4	((A).OR.(B))	10-1-(1)	70/ 5	
HAMAOKA-1	BWR	5	((A).OR.(B))	10-1	70/ 5	

SA	DEFIN. OF AB-TRA	10000
		(A)=SINGLE COMPONENT FAILURE, OR SINGLE COMPONENT MALFUNCTION (B)=SINGLE MISS OF OPERATOR *ABNORMAL TRANSIENT* IS DEFINED AS ONE WHICH IS INDUCED BY (AS FOLLOWS).
	PLANT NAME	
	FUKUSIMA-5	BWR 9 ((A).OR.(B)) 10-1-(1) 71/ 2
	FUKUSIMA-4	BWR 10 ((A).OR.(B)) 10-1-(1) 71/ 8
	HAMAOKA-2	BWR 13 ((A).OR.(B)) 10-1 73/ 5

SA	DEFINITION OF ACCIDENT	10020
		(A)=TWO OR MORE COMPONENTS FAILURES (B)=TWO OR MORE MISSES BY OPERATOR (C)=COMBINED MISSES (COMPONENT AND OPERATOR) (D)=DEFECT OF (PRIMARY SYSTEM PIPING OR OTHERS) (X)=PROBABILITY OF (RADIO ACTIVES LEAK OUT TO THE SURROUNDINGS). *ACCIDENT* IS DEFINED AS ONE WHICH IS INDUCED BY (1),AND IS LEAD (2).
	PLANT NAME	
	DNAGAWA	BWR 4 (1)=((A).OR.(B).OR.(C).OR.(D)), (2)=(X) 10-1-(1) 70/ 5
	HAMAOKA-1	BWR 5 (1)=((A).OR.(B).OR.(C).OR.(D)), (2)=(X) 10-1 70/ 5
	FUKUSIMA-5	BWR 9 (1)=((A).OR.(B).OR.(C).OR.(D)), (2)=(X) 10-1-(1) 71/ 2
	FUKUSIMA-4	BWR 10 (1)=((A).OR.(B).OR.(C).OR.(D)), (2)=(X) 10-1-(1) 71/ 8
	HAMAOKA-2	BWR 13 (1)=((A).OR.(B).OR.(C).OR.(D)), (2)=(X) 10-1 73/ 5

SAFETY	STANDARD UNDER	AB-TRA	10100
			ABNORMAL TRANSIENT IS DEFINED IN 10000. (A)=DO NOT EXCEED THE (FUEL DEFECT LIMITATION). (B)=DO NOT EXCEED THE DESIGN LIMIT OF (REACTOR COOLANT PRES.BOUNDARY).
	PLANT NAME		
	DNAGAWA	BWR 4 (A) 10-1-(1) 70/ 5	
	HAMAOKA-1	BWR 5 (A) 10-1 70/ 5	
	FUKUSIMA-5	BWR 9 ((A).AND.(B)) 10-1-(1) 71/ 2	
	FUKUSIMA-4	BWR 10 ((A).AND.(B)) 10-1-(1) 71/ 8	
	HAMAOKA-2	BWR 13 ((A).AND.(B)) 10-1 73/ 5	

SAFETY	STANDARD UNDER	ACCIDENT	10120
			ACCIDENT IS DEFINED IN 10020. (A)=THE EFFECT OF RADIAL RAYS TO GENERAL PUBLIC DOES NOT EXCEED THE STANDARD WHICH IS DECIDED BY JAPANESE LAW OR GUIDE. (B)=DOES NOT GIVE A DAMAGE TO (REACTOR COOLANT PRESSURE BOUNDARY) BY SOME FORCE WHICH IS INDUCED BY ACCIDENT. (C)=IN CASE OF HYPOTHETICAL ACCIDENT WHICH MIGHT LEAD THE DAMAGE TO (REACTOR PRESSURE BOUNDARY), IT DOES NOT LEAD TO ANY MORE OTHER DAMAGE OR DAMAGE OF OTHER BOUNDARY.
	PLANT NAME		
	DNAGAWA	BWR 4 ((A).AND.(B).AND.(C)) 10-1-(1) 70/ 5	
	HAMAOKA-1	BWR 5 ((A(EXCEPT LAW)).AND.(B).AND.(C)) 10-1 70/ 5	
	FUKUSIMA-5	BWR 9 ((A).AND.(B).AND.(C)) 10-1-(1) 71/ 2	
	FUKUSIMA-4	BWR 10 ((A).AND.(B).AND.(C)) 10-1-(1) 71/ 8	

SAFETY	STANDARD UNDER	ACCIDENT	10120
			ACCIDENT IS DEFINED IN 10020. (A)=THE EFFECT OF RADIAL RAYS TO GENERAL PUBLIC DOES NOT EXCEED THE STANDARD WHICH IS DECIDED BY JAPANESE LAW OR GUIDE. (B)=DOES NOT GIVE A DAMAGE TO (REACTOR COOLANT PRESSURE BOUNDARY) BY SOME FORCE WHICH IS INDUCED BY ACCIDENT. (C)=IN CASE OF HYPOTHETICAL ACCIDENT WHICH MIGHT LEAD THE DAMAGE TO (REACTOR PRESSURE BOUNDARY), IT DOES NOT LEAD TO ANY MORE OTHER DAMAGE OR DAMAGE OF OTHER BOUNDARY.
	PLANT NAME		
	HAMAOKA-2	BWR 13 ((A).AND.(B).AND.(C)) 10-1 73/ 5	

REACTOR	COUNTRY	SITE	OWNER	CRITICAL DATE	110100
					CW.E.CO. =COMMONWEALTH EDISON COMPANY
		JPDR-1	BWR 1	JPDR-1	BWR JAPAN JAERI 1963/B /22 /
		JPDR-2	BWR 2	JPDR-2	BWR JAPAN JAERI / /
		TSURUGA	BWR 3	TSURUGA	BWR JAPAN GENDEN 1969/1 0/3 /
		DNAGAWA	BWR 4	DNAGAWA-1	BWR JAPAN TOOHOKU 1975(P ROGRAM) /
		HAMAOKA-1	BWR 5	HAMAOKA-1	BWR JAPAN CHUUBU 1974(P ROGRAM) /
		FUKUSIMA-1	BWR 6	FUKUSIMA-1	BWR JAPAN TOODEN 1970/7 /15 /
		FUKUSIMA-2,3	BWR 7	FUKUSIMA-2,3	BWR JAPAN TOODEN 1972,7 3(PROGRAM) /
		SHIMANE	BWR 8	SHIMANE	BWR JAPAN CHUUGOKU / /
		FUKUSIMA-5	BWR 9	FUKUSIMA-5	BWR JAPAN TOODEN / /
		FUKUSIMA-4	BWR 10	FUKUSIMA-4	BWR JAPAN TOODEN / /
		FUKUSIMA-6	BWR 11	FUKUSIMA-6	BWR JAPAN TOODEN / /
		TOOKAI-2	BWR 12	TOOKAI-2	BWR JAPAN GENDEN / /
		HAMAOKA-2	BWR 13	HAMAOKA-2	BWR JAPAN CHUUBU / /
		MIHAMA-1	PWR 21	MIHAMA-1	PWR JAPAN KANDEN 1970/7/29 /
		MIHAMA-2	PWR 22	MIHAMA-2	PWR JAPAN KANDEN 1972(P ROGRAM) /
		TAKAHAMA-2	PWR 23	TAKAHAMA-2	PWR JAPAN KANDEN 1974(P ROGRAM) /
		GENKAI-1	PWR 24	GENKAI-1	PWR JAPAN KYUSHUU 1975(P ROGRAM) /
		TAKAHAMA-1	PWR 25	TAKAHAMA-1	PWR JAPAN KANDEN 1973(P ROGRAM) /
		DDI-1,2	PWR 26	DDI-1,2	PWR JAPAN KANDEN / /
		MIHAMA-3	PWR 27	MIHAMA-3	PWR JAPAN KANDEN / /
		IKATA	PWR 28	IKATA	PWR JAPAN SHIKOKU / /
		HALDEN	HBWR 51	HALDEN	HBWR NORWAY / /
		VERMONT YANKEE	BWR 52	VERMONT YANKEE	BAR UUSA X.Y.NUCLEAR CO. / /
		BROWNS FERRY	BWR 53	BROWNS FERRY	BWR USA / /
		DRESDEN-1	BWR 55	DRESDEN-1	BWR USA CW.E.CO. / /
		DRESDEN-2	BWR 56	DRESDEN-2	BWR USA CW.E.CO. / /
		OYSTER CREEK	BWR 57	OYSTER CREEK	BWR USA / /
		DUANE ARNOLD	BWR 58	DUANE ARNOLD	BWR USA IUMA.ELEC.L.P.CO A-2 P1 70/ 7
		YANKEE	69	YANKEE POWER ST.	PWR USA YANKEE A.ELEC.CO DNR V4 P33 61/
		SAXTON	70	SAXTON EXP.	PWR USA SAXTON N.EXP.COP DNR V4 P47 61/
		BURLINGTON	PWR 71	BURLINGTON	PWR USA / /
		FUGEN	ATR 81	FUGEN ATR PROTO	JAPAN / /

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REACTOR	COUNTRY	SITE	OWNER	CRITICAL DATE	110100		
PLANT NAME CW.E.CO. =COMMONWEALTH EDISON COMPANY							
JOYO	FAST 91	JOYO	FAST	JAPAN			/
MONJU	FAST 92	MONJU	FAST	JAPAN			/
JPOX-1	BWR 1	IBARAGI -KEN	NAKA -GUN	DOUKAI -MURA	SIRAKATA AZA 5	IRANE	/
TSURUGA	BWR 3	FUKUI -KEN	TSURUGA-SHI	MYOZIN -MACHI			/
DNAGAWA	BWR 4	MIYAGI -KEN	OZIKA -GUN	DNAGAWA-MACHI AND OZIKA-MACH		I)	/
HAMAOKA-1	BWR 5	SIZUOKA -KEN	OGASA -GUN	HAMAOKA-MACHI	SAKURA		/
FUKUSIMA-1	BWR 6	FUKUSIMA-KEN	FUTABA -GUN	DOKUMA-MACHI AND FUTABA-MACH		I)	/
FUKUSIMA-2,3	BWR 7	FUKUSIMA-KEN	FUTABA -GUN	DOKUMA-MACHI AND FUTABA-MACH		I)	/
SHIMANE	BWR 8	SHIMANE -KEN	YATABA -GUN	KASINA-MACHI	OUZA KATAKU		/
FUKUSIMA-5	BWR 9	FUKUSIMA-KEN	FUTABA -GUN	DOKUMA-MACHI AND FUTABA-MACH		I)	/
FUKUSIMA-4	BWR 10	FUKUSIMA-KEN	FUTABA -GUN	DOKUMA-MACHI AND FUTABA-MACH		I)	/
DOUKAI-2	BWR 12	IBARAGI -KEN	NAKA -GUN	DOUKAI -MURA	OUZA SIRAKATA	1-1	/
MIHAMA-1	PWR 21	FUKUI -KEN	MIKATA -GUN	MIHAMA-MACHI	NIU		/
TAKAHAMA-2	PWR 23	FUKUI -KEN	ODII -GUN	TAKAHAMA-MACHI	TANOURA		/
GENKAI-1	PWR 24	SAGA -KEN	HIGASHI-MATSU-URA-GUN	GENKAI-MACHI	OUZA	IMAHURA	/
TAKAHAMA-1	PWR 25	FUKUI -KEN	ODII -GUN	TAKAHAMA-MACHI	TANOURA		/
ODI -1,2	PWR 26	FUKUI -KEN	ODII -GUN	ODII -MACHI	GOSHIMA		/
MIHAMA-3	PWR 27	FUKUI -KEN	MIKATA -GUN	MIHAMA-MACHI	NIU		/
IKATA	PWR 28	EHIME -KEN	NISHI-UMA-GUN	IKATA-MACHI			/
MILLSTON	BWR 54	MILLSTONE POINT	BWR	USA			/
DRESDEN-1	BWR 55	GRUNDY COUNTRY, 3.	USA				/

REACTOR	TYPE	110200		
JPOX-1	BWR 1	NATURAL CIRCULATION	BWR	/
JPOX-2	BWR 2	FORCED CIRCULATION	BWR	/
TSURUGA	BWR 3	FORCED CIRCULATION	BWR	/
DNAGAWA	BWR 4	JET PUMP FORCED CIRCULATION	BWR	/
HAMAOKA-1	BWR 5	JET PUMP FORCED CIRCULATION	BWR	/
FUKUSIMA-1	BWR 6		BWR	/
FUKUSIMA-2,3	BWR 7		BWR	/
SHIMANE	BWR 8		BWR	/
FUKUSIMA-5	BWR 9	JET PUMP FORCED CIRCULATION	BWR	71/ 2
FUKUSIMA-4	BWR 10	JET PUMP FORCED CIRCULATION	BWR	71/ 8
FUKUSIMA-6	BWR 11	JET PUMP FORCED CIRCULATION (FRUSTUM CONE DRY-WELL)	BWR	72/ 1
DOUKAI-2	BWR 12	JET PUMP FORCED CIRCULATION (FRUSTUM CONE DRY-WELL)	BWR	72/ 1
HAMAOKA-2	BWR 13	JET PUMP FORCED CIRCULATION (FLASK TYPE)	BWR	72/ 9
MIHAMA-1	PWR 21	2-LOOPS	PWR	/
MIHAMA-2	PWR 22	2-LOOPS	PWR	/
TAKAHAMA-2	PWR 23	3-LOOPS	PWR	/
GENKAI-1	PWR 24	2-LOOPS	PWR	/
TAKAHAMA-1	PWR 25	3-LOOPS	PWR	/
ODI -1,2	PWR 26	4-LOOPS(ICE CONDENSER)	PWR	/

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REACTOR	TYPE	110200		
MIHAMA-3	PWR 27	3-LOOPS	PWR	/
IKATA	PWR 28	2-LOOPS	PWR	6-70 72/11
BROWNS FERRY	BWR 53	FORCED CIRCULATION	BWR	GSK-19 59/ 2
DRESDEN-1	BWR 55	DUAL CYCLE	BWR	DNR V4 62/
DRESDEN-2	BWR 56	JET PUMP FORCED CIRCULATION	BWR	DNR V7 68/
HURLINGTON	PWR 71		PWR	GSK-19 69/ 2
TURKEY POINT-3,4	PWR 72		PWR	/
H.B.ROBINSON-2	PWR 73	3-LOOPS	PWR	/
SURRY-1,-2	PWR 74	3-LOOPS	PWR	/
BEAVER VALLEY	PWR 75	3-LOOPS	PWR	/
NORTH ANNA-12	PWR 76	3-LOOPS	PWR	/
JOSEPH M.FARLEY	PWR 77	3-LOOPS	PWR	/

KIND OF	AB-TRA	FROM	VARIOUS SYSTEMS	20000	
(A)=ABNORMAL TRANSIENT INDUCED FROM RECIRC. SYSTEM					
(B)=ABNORMAL TRANSIENT INDUCED FROM FEED WATER SYSTEM					
(C)=ABNORMAL TRANSIENT INDUCED FROM MAIN STEAM SYSTEM					
(D)=ABNORMAL TRANSIENT INDUCED FROM CONTRL SYSTEM					
(E)=OTHERS SUCH AS AUX. POWER SUPPLY SYSTEM					
PLANT NAME					
DNAGAWA	BWR 4	(A),(B),(C),(D),(E)		10-2-(1,8)	70/ 5
HAMAOKA-1	BWR 5	(A),(B),(C),(D),(E)		10-2,11	70/ 5
FUKUSIMA-5	BWR 9	(A),(B),(C),(D),(E)		10-2-(1,9)	71/ 2
FUKUSIMA-4	BWR 10	(A),(B),(C),(D),(E)		10-2-(1,9)	71/ 8
HAMAOKA-2	BWR 13	(A),(B),(C),(D),(E)		10-1	73/ 5

KIND OF	AB-TRA	FROM	RECIRC. SYSTEM	21000	
(A)=TROUBLE OF M-G OR RECIRCULATION PUMP					
(B)=MULFUNCTION OF REGULATOR ON RECIRCULATION SYSTEM					
(C)=MISS START UP OF RECIRC. LOOP WITHOUT WARM-UP					
PLANT NAME					
DNAGAWA	BWR 4	(A),(B),(C)	(A)=21110,21120. (B)=21200. (C)=21320,21360	10-2-(1)	70/ 5
HAMAOKA-1	BWR 5	(A),(B),(C)	(A)=21110,21120. (B)=21200. (C)=21320,21360	10-2	70/ 5
FUKUSIMA-5	BWR 9	(A),(B),(C)	(A)=21110,21120. (B)=21200. (C)=21320,21360	10-2-(1)	71/ 2
FUKUSIMA-4	BWR 10	(A),(B),(C)	(A)=21110,21120. (B)=21200. (C)=21320,21360	10-2-(1)	71/ 8
HAMAOKA-2	BWR 13	(A),(B),(C)	(A)=21110,21120. (B)=21200. (C)=21320,21360	10-2	73/ 5
AB-TRA	RECIRC. PUMP	TRIP	21110		
(A)=TWO RECIRC PUMPS TRIP					
(X)=REACTOR POWER WILL SETTLE DOWN TO NAT. CIRC. CONDITION.					
PLANT NAME			CONDITION MIN. THERMAL MARGIN	SCRAM RESULT	
DNAGAWA	BWR 4	(A)	MCHFR=1.6 AFTER 1.4 SEC.	NONE (X)	10-2-(1) 70/ 5
HAMAOKA-1	BWR 5	(A)	MCHFR=1.6 AFTER 1.4 SEC	NONE (X)	10-2 70/ 5
FUKUSIMA-5	BWR 9	(A)	MCHFR=1.5 AFTER 2.8 SEC	NONE (X)	10-2-(1) 71/ 2

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AB-TRA RECIRC. PUMP TRIP 21110
 (A)=TWO RECIRC PUMPS TRIP
 (X)=REACTOR POWER WILL SETTLE DOWN TO NAT. CIRC. CONDITION.
 PLANT NAME CONDITION MIN. THERMAL MARGIN SCRAM RESULT

FUKUSIMA-4	BWR 10	(A)	MCHFR=1.5 AFTER 2.8 SEC	NONE	(X)	10-2-(1)	71/ 8
HAMAOKA-2	BWR 13	(A)	MCHFR=1.26 AFTER 2.5 SEC	NONE	(X)	10-2	73/ 5

AB-TRA RECIRC. PUMP SHAFT STICK 21120
 (A)=SINGLE RECIRC. PUMP SHAFT STICK (SUDDENLY STOP)
 (X)=MCHFR IS RECOVER IN A SHORT TIME. (ABOUT 5 SEC)
 (Y)=MCHFR IS RECOVER IN A SHORT TIME
 PLANT NAME CONDITION MIN. THERMAL MARGIN SCRAM RESULT

ONAGAWA	BWR 4	(A)	MCHFR=1.1 AFTER 1.2 SEC	NONE	(X)	10-2-(1)	70/ 5
HAMAOKA-1	BWR 5	(A)	MCHFR=1.1 AFTER 1.2 SEC	NONE	(X)	10-3	70/ 5
FUKUSIMA-5	BWR 9	(A)	MCHFR=1.1 AFTER 1.05 SEC	NONE	(X)	10-2-(1)	71/ 2
FUKUSIMA-4	BWR 10	(A)	MCHFR=1.1 AFTER 1.05 SEC	NONE	(X)	10-2-(1)	71/ 8
HAMAOKA-2	BWR 13	(A)	MCHFR=1.08 AFTER 1.7 SEC	NONE	(Y)	10-2	73/ 5

AB-TRA RECIRC. FLOW REGULATO R MALFUNC. 21200
 (A)=MAX. CHANGE RATIO OF RECIRC. FLOW. (B)=RELATED FLOW
 (C)=CHANGE RATIO OF THERMAL POWER
 (1)=(A) IS RESTRICTED BY (SOKUDO YOKYUU GOSA SEIGENKI).
 (2)=(A) IS RESTRICTED BY (SCDUP TUBE SOOSA SOKUDO SEIGENKI).
 PLANT NAME BWR CASE(1)---(A)=4.0 PC/SEC(CORRESPOND TO 3.6 PC/SEC OF(C)) 10-2-(2) 70/ 5

ONAGAWA	BWR 4	CASE(1)---(A)=4.0 PC/SEC(CORRESPOND TO 3.6 PC/SEC OF(C))	10-2-(2)	70/ 5
ONAGAWA	BWR 4	CASE(2)---(A)=5.7 PC/SEC OF (B)	10-2-(2)	71/ 5
ONAGAWA	BWR 4	CASE(1) AND (2) ARE BOTH SAFE SIDE THAN (ONE PUMP TRIP)	10-2-(2)	70/ 5
HAMAOKA-1	BWR 5	CASE(1) AND (2) ARE BOTH SAFE SIDE THAN (TWO PUMPS TRIP)	10-3	70/ 5
FUKUSIMA-5	BWR 9	CASE(1)---(A)=4.3 PC/SEC(CORRESPOND TO 2.9 PC/SEC OF(C))	10-2-(2)	71/ 2
FUKUSIMA-5	BWR 9	CASE(2)---(A)=6.3 PC/SEC OF (B)	10-2-(2)	71/ 2
FUKUSIMA-5	BWR 9	CASE(1) AND (2) ARE BOTH SAFE SIDE THAN (ONE PUMP TRIP).	10-2-(2)	71/ 2
FUKUSIMA-4	BWR 10	CASE(1)---(A)=4.3 PC/SEC(CORRESPOND TO 2.9 PC/SEC OF(C))	10-2-(2)	71/ 8
FUKUSIMA-4	BWR 10	CASE(2)---(A)=6.3 PC/SEC OF (B)	10-2-(2)	71/ 8
FUKUSIMA-4	BWR 10	CASE(1) AND (2) ARE BOTH SAFE SIDE THAN (ONE PUMP TRIP).	10-2-(2)	71/ 8
HAMAOKA-2	BWR 13	CASE(1) AND (2) ARE BOTH SAFE SIDE THAN (TWO PUMPS TRIP)	10-3	73/ 5

AB-TRA MISS START-UP OF COLD RECIRC. LOOP (1) 21320

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AB-TRA MISS START-UP OF COLD RECIRC. LOOP (1) 21320
 INITIAL CONDITION BEFORE MISS START UP
 (A)=STANDSTILL COLD LOOP IS FILLED UP WITH (A) DEG C WATER.
 (B)=COOLANT IS FLOWING IN CORE AT (B) PC/RATED FLOW AND A PART FLOW OF NORMAL LOOP IS FLOWING THROUGH STANDSTILL LOOP IN THE OPPOSITE DIRECTION.
 (C)=REACTOR IS BEING OPERATED AT (C) PC/RATED POWER.
 (D)=NORMALLY RECIRC. PUMP IS BEING OPERATED AT THE SPEED WHICH PRODUCE (D) PC/RATED FLOW THROUGH JET PUMP DIFFUSER.
 (E)=SUCTION VALVE IS OPEN (PUMP OF STANDSTILL LOOP)
 =BY PASS VALVE IS OPEN (PUMP OF STANDSTILL LOOP)
 =DELIVER VALVE IS CLOSE (PUMP OF STANDSTILL LOOP)
 (F)=FLUID COUPLING OF STANDSTILL PUMP IS BEING PRESETTED SO THAT THE GENERATOR SPEED MAY APPROACH TO (F) PC/RATED SPEED AFTER START.
 (A) (B) (C) (D) (E) (F)
 WATER IN CORE REACTOR J.PUMP GENER.
 TEMP. FLOW POWER DIFFUS.F SPEED

ONAGAWA	BWR 4	38 DEG C	40. PC	60. PC	95. PC	YES	50. PC	10-2-(2)	70/ 5
HAMAOKA-1	BWR 5	38 DEG C	40. PC	60. PC	96. PC	YES	50. PC	10-3,4	70/ 5
FUKUSIMA-5	BWR 9	38 DEG C	40. PC	60. PC	96. PC	YES	50. PC	10-2-(2)	71/ 2
FUKUSIMA-4	BWR 10	38 DEG C	40. PC	60. PC	96. PC	YES	50. PC	10-2-(2)	71/ 8
HAMAOKA-2	BWR 13	38 C	40. PC	60. PC	96. PC	YES	50PC	10-3	73/ 5

AB-TRA MISS START-UP OF COLD RECIRC. LOOP (2) 21340

PROCEDURE (COLD RECIRC. LOOP MISS START UP)
 (A)= AT 0 SEC, M-G TURN DN
 (R)=MOTOR(M-G) RUNS OF SYNCHRO SPEED IMMEDIATELY
 AT (B2) SEC, GENERATOR REACHES (B1) PC SPEED/RATED POWER.
 (C)=GENERATOR SUPPLIES POWER TO PUMP MOTOR,
 AT (C2) SEC, PUMP SPEED REACHS (C1) PC/RATED, AND
 AT (C4) SEC, PUMP SPEED DECREASE (C3) PC/RATED.
 (D)=SIMULTANEOUSLY WITH THE INTERLOCK FREE OF DRIVE MOTOR BREAKER,
 PUMP DELIVER VALVE BEGINS TO OPEN, AND REACHES FULL OPEN AT
 (D1) SEC.

PLANT NAME	BWR	GEN.SPD/TIME	(C1)/(C2) PUMP SPD/TIME	(C3)/(C4) PUMP SPD/TIME	(D1) VALVE		
ONAGAWA	BWR 4	65. PC/ 6.SEC	50PC/7SEC	20. PC/50. SEC	30. SEC	10-2-(2)	70/ 5
HAMAOKA-1	BWR 5	100. PC/ 6.SEC	F.BEGIN/7SEC	20. PC/	30. SEC	10-4	70/ 5
FUKUSIMA-5	BWR 9	80. PC/ 5.SEC	50PC/6SEC	20. PC/40. SEC	30. SEC	10-2-(2,3)	71/ 2
FUKUSIMA-4	BWR 10	80. PC/ 5.SEC	50PC/6SEC	20. PC/40. SEC	30. SEC	10-2-(2,3)	71/ 8
HAMAOKA-2	BWR 13	75. PC/ 6.SEC	F.BEGIN/6,5SEC	20. PC/40. SEC	30. SEC	10-3,4	73/ 5

AB-TRA MISS START-UP OF COLD RECIRC. LOOP (3) 21360

RESULTS (COLD RECIRC. LOOP MISS START-UP)
 (A)=NEUTRON FLUX INCREASES UP TO ABOUT (A1) PC IN A VERY SHORT SPAN,
 BUT SURFACE HEAT FLUX INCREASES GRADUALLY BECAUSE FUEL HAS HEAT CAPACITY.

PLANT NAME	BWR	(A1)=100.PERCENT	MCHFR=2.0			10-2-(3)	70/ 5
ONAGAWA	BWR 4	(A1)=100.PERCENT	MCHFR=2.0			10-2-(3)	70/ 5

PLANT PERFORMANCE DATA

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AB-TRA MISS START-UP OF COLD RECIRC. LOOP (3) 21360

RESULTS (COLD RECIRC. LOOP MISS START-UP)
(A)=NEUTRON FLUX INCREASES UP TO ABOUT (A1) PC IN A VERY SHORT SPAN,
BUT SURFACE HEAT FLUX INCREASES GRADUALLY BECAUSE FUEL HAS HEAT CAPACITY.

PLANT NAME	BWR	(A1)=	PERCENT	MCHFR=		
HAMAOKA-1	5	(A1)=	110. PERCENT	MCHFR=2.0	10-4	70/ 5
FUKUSIMA-5	9	(A1)=	91. PERCENT	MCHFR=2.0	10-2-(3)	71/ 2
FUKUSIMA-4	10	(A1)=	91. PERCENT	MCHFR=2.0	10-2-(3)	71/ 8
HAMAOKA-2	13	(A1)=	108. PERCENT	MCHFR=1.1	10-4	73/ 5

KIND OF AB-TRA FROM FEEDWATER SYSTEM 22000

(A)=TROUBLE OF FEED WATER CONTROLLER
(B)=LOSS OF FEED WATER HEATER
(C)=LOSS OF FEED WATER

PLANT NAME	BWR	(A),(B),(C)	(A)=22100,(B)=22200,(C)=		
ONAGAWA	4	(A),(B),(C)	(A)=22100,(B)=22200,(C)=	10-2-(3)	70/ 5
HAMAOKA-1	5	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300,	10-4	70/ 5
FUKUSIMA-5	9	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300,	10-2-(3)	71/ 2
FUKUSIMA-4	10	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300,	10-2-(3)	71/ 8
HAMAOKA-2	13	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300	10-4	73/ 5

AB-TRA TROUBLE OF FEED WATER CONTROLLER 22100

(1)=INITIAL CONDITION (A)PC/RATED POWER, (B)PC/RATED FLOW IN CORE
(2)=TROUBLE PROCESS. IN THE CAUSE OF CONTROLLER TROUBLE
FEED WATER FLOW INCREASE (C)PC/RATED FLOW
SUBCOOL INCREASE
VOID DECREASE
POWER INCREASE
TURBINE TRIP AT (D) SEC. BY THE SIGNAL OF WATER LEVEL HIGH
SCRAM AT THE SAME TIME TURBINE TRIP
RV=RELIEF VALVE, SV=SAFETY VALVE, NA=DO NOT ACT
POWER FLOW FLOW MAX.PRESS.
(A) (B) (C) (D) SCRAM MCHFR KG/SQCMG RV, SV.

PLANT NAME	BWR	(A)	(B)	(C)	(D)	SCRAM	MCHFR	KG/SQCMG	RV, SV.		
ONAGAWA	4	65PC	45PC	110PC	7. SEC	YES	2.0	73.2	NA NA	10-2-(3)	70/ 5
HAMAOKA-1	5	65PC	45PC	110PC	7. SEC	YES	2.0	73.2	NA NA	10-5	70/ 5
FUKUSIMA-5	9	65PC	45PC	110PC	8. SEC	YES	2.0	76.5	NA	10-2-(3)	71/ 2
FUKUSIMA-4	10	65PC	45PC	110PC	7. SEC	YES	2.0	73.	NA	10-2-(3)	71/ 8
HAMAOKA-2	13	65PC	40PC	110PC	6 SEC	YES	1.6	74.4	NA	10-4	73/ 5

AB-TRA LOSS OF FEED WATER HEATER 22200

PLANT PERFORMANCE DATA

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AB-TRA LOSS OF FEED WATER HEATER 22200

CASE(1)=LOSS OF EXTRACTED STEAM BY EXTRACT VALVE TRIP
CASE(2)=FEED WATER BY PASS
(A)=WHEN FEED WATER TEMP. FALL DOWN (A) DEG C FROM RATED TEMP.
(B)=DELAY TIME WHICH FEED WATER FLOWS THROUGH FROM HEATER TO SPARGER
IS (B) SEC. BUT THIS DELAY EFFECT IS NEGLECTED.
TRANSIENT= POWER UP, RECIRC. FLOW CONTROLLER ACT, AND RECIRC. FLOW
DECREASE TO (C)PC/RATED FLOW.

PLANT NAME	(A)	(B)	(C)	SCRAM	MCHFR		
ONAGAWA	45 DEG C	25. SEC	96 PC	NOT.	1.6	10-2-(4)	70/ 5
HAMAOKA-1	45 DEG C	25. SEC	95 PC	NOT.	1.6	10-7	70/ 5
FUKUSIMA-5	55 DEG C	25. SEC	86 PC	NOT.	1.4	10-2-(#)	71/ 2
FUKUSIMA-4	55 DEG C	25. SEC	86 PC	NOT.	1.4	10-2-(4)	71/ 8
HAMAOKA-2	55 DEG C		91 PC	NOT	1.25	10-5	73/ 5

AB-TRA LOSS OF FEED WATER 22300

ASSUMPTION=IT TAKES (A) SECONDS FROM THE BEGINNING OF DECREASE TO
ENTIRELY STOP IN FLOW.
SCRAM =AT (B) SEC. (SCRAM ITEM IS (WATER LEVEL LOW))
PUMP SPEED=DECREASE TO (C)PC, WITH DELAY TIME (E)SEC, IN ORDER TO AVOID
CAVITATION WHEN THE FEED WATER FLOW DECREASE TO (D)PC WITH
INTERLOCK FROM RECIRC. FLOW CONTROLLER.
MCHFR(1) =IS MILDER THAN THE CASE OF (TWO RECIRC. PUMPS TRIP-21110)

PLANT NAME	(A)	SCRAM/(B)	(C)	(D)	(E)	MCHFR	
ONAGAWA	4. SEC	YES/12. SEC	20. PC	20. PC		(1)	10-2-(4) 70/ 5
HAMAOKA-1	4-5 SEC	YES/12. SEC	20. PC	20. PC		(1)	10-6 70/ 5
FUKUSIMA-5	4. SEC	YES/11. SEC	20. PC	20. PC		(1)	10-2-(4) 71/ 2
FUKUSIMA-4	4. SEC	YES/8.5 SEC	20. PC	20. PC	15. SEC	GT 1.9	10-2-(4) 71/ 8
HAMAOKA-2	4. SEC	YES/7.6 SEC	20. PC	20. PC	15. SEC	(1)	10-5 73/ 5

KIND OF AB-TRA FROM MAINSTEAM SYSTEM 23000

(A)=GENERATOR TRIP (TURBINE REGULATE VALVE PROMPT CLOSE) 23100
(R)=TURBINE TRIP (MAIN STEAM STOP VALVE PROMPT CLOSE) 23200
(C)=MAIN STEAM ISOLATION VALVE CLOSE 23300
(D)=MALFUNCTION OF INITIAL PRESSURE ADJUSTER 23400
(E)=PRESSURE RELIEF VALVE OPEN 23500

AB-TRA GENERATOR TRIP 23100

AB-TRA GENERATOR TRIP

23100

SUMMARY=ON THIS CONDITION, REACTOR FALL INTO SCRAM, BUT THIS SCRAM CONDITION IS Milder THAN THE TURBINE-TRIP-SCRAM.

TRANSIENT PROCEDURE

- (A)=LOSS OF LOAD ON GENERATOR AT HIGH POWER CAUSES TURBINE-REGULATE VALVE-PROMPT-CLOSE (CLOSE TIME IS (A)SEC.).
- (B)=REACTOR PROTECT SYSTEM DETECT THE TRVPC, AND MAKE SCRAM.
- (C)=TURBINE BY PASS VALVE IS BEING OPENED AS TURBINE-REGULATE-VALVE-CLOSE.
- (D)=REACTOR PRESSURE INCREASE UP TO PRESET PRESSURE OF RELIEF VALVE AND RELIEF VALVE ACTS AT ONE TIME.

PLANT NAME

PLANT NAME	BWR	4	(A)=0.2 SEC			10-2-(4)	70/ 5
ONAGAWA	BWR	4	(A)=0.2 SEC			10-7	70/ 5
HAMAOKA-1	BWR	5	(A)=0.2 SEC			10-2-(5)	71/ 2
FUKUSIMA-5	BWR	9	(A)=0.2 SEC			10-2-(5)	71/ 8
FUKUSIMA-4	BWR	10	(A)=0.2 SEC			10-6	73/ 5
HAMAOKA-2	BWR	13	(A)=0.2 SEC				

AB-TRA TURBINE TRIP SUMMARY

23200

SUMMARY=TURBINE TRIP IS CAUSED BY VIBRATION OF TURBINE SYSTEM OR MALFUNCTION OF REACTOR SYSTEM. WHEN TURBINE TRIP OCCURS, MAIN STEAM STOP VALVE IS ENTIRELY CLOSED WITHIN (A) SEC.

PLANT NAME

PLANT NAME	BWR	4	(A)=0.1 SEC.			10-2-(5)	70/ 5
ONAGAWA	BWR	4	(A)=0.1 SEC.			10-6	70/ 5
HAMAOKA-1	BWR	5	(A)=0.1 SEC.			10-2-(5)	71/ 2
FUKUSIMA-5	BWR	9	(A)=0.1 SEC.			10-2-(5)	71/ 8
FUKUSIMA-4	BWR	10	(A)=0.1 SEC			10-6	73/ 5
HAMAOKA-2	BWR	13	(A)=0.1 SEC				

AB-TRA TURBINE TRIP (1) WITH

BY PASS V. ACT 23210

CASE(1)=TURBINE TRIP AT HIGH POWER WITH BY-PASS-VALVE-ACT SUMMARY=ON THIS CASE, TRANSIENT PHENOMENA IS SAME AS GENERATOR TRIP. THE CLOSE OF MAIN-STEAM-STOP-VALVE IS DETECTED BY VALVE POSITION-DETECTOR, AND MAKE SCRAM, CONSEQUENTLY BY-PASS-VALVE OPEN, AND RELIEF-VALVE ACTS AT ONE TIME.

- (A)=AT (A)SEC. PEAK OF NEUTRON FLUX IS (A2)PC.
- (B)= SURFACE HEAT FLUX IS LOWER THAN (B)PC/RATED, SO MCHFR MARGIN IS SUFFICIENT.
- (C)=AS BY PASS VALVE ACT, PRESSURE PEAK IS RESTRICTED WITHIN (C)KG/SQCMG, SO SAFETY VALVE DOES NOT ACT.

PLANT NAME

PLANT NAME	BWR	4	(A)	(A2)	(B)	(C)			10-2-(5)	70/ 5
ONAGAWA	BWR	4	0.4 SEC	133.PC	100.PC	77.4KG/SQCMG			10-7	70/ 5
HAMAOKA-1	BWR	5	0.4 SEC	130.PC	100.PC	77.1KG/SQCMG(FIG 2.3-1)			10-2-(5)	71/ 2
FUKUSIMA-5	BWR	9	0.4 SEC	120.PC	100.PC	78.0KG/SQCMG			10-2-(5)	71/ 8
FUKUSIMA-4	BWR	10	0.4 SEC	108.PC	100.PC	78.0KG/SQCMG			10-6	73/ 5

AB-TRA TURBINE TRIP (2) WITHOUT

BY PASS V. ACT 23220

AB-TRA TURBINE TRIP (2) WITHOUT

BY PASS V. ACT 23220

CASE(2)=TURBINE TRIP AT HIGH POWER WITHOUT-BY-PASS-VALVE-ACT SUMMARY=ON THIS CASE, PRESSURE TRANSIENT IS MOST SEVERE ONE ON BWR. THIS PHENOMENA OCCUR BY PROMPT LOSS OF CONDENSER VACUUM, OR BY-PASS-SIGNAL-TRANSMITTER-MALFUNCTION, OR MALFUNC. OF VALVE DRIVE MECHANISM.

- (A)=AT (A)SEC. PEAK OF NEUTRON FLUX IS (A2) PC.
- (B)=BUT SURFACE HEAT FLUX IS LOWER THAN (B)PC/RATED, SO MCHFR MARGIN IS SUFFICIENT.
- (C)=AT (C1)SEC. PRESSURE REACHES (C2)KG/SQCMG, SO RELIEF VALVE IS OPENED, MAX. PRESSURE IS (C3)KG/SQCMG, SAFETY VALVE DOES NOT ACT.
- (D)=SAFETY VALVE PRESET PRESSURE IS (D)KG/SQCMG.

PLANT NAME

PLANT NAME	BWR	4	(A)	(A2)	(B)	(C1)	(C2)	(C3)	(D)			10-2-(5)	70/ 5
ONAGAWA	BWR	4	0.4SEC	143.PC	100.PC	0.8SEC	75.9	78.6	(87.2)			10-8	70/ 5
HAMAOKA-1	BWR	5	0.4SEC	143.PC	100.PC	0.8SEC	75.9	78.6	(87.2)			10-2-(6)	71/ 2
FUKUSIMA-5	BWR	9	0.4 SEC	125.PC	100.PC	0.7SEC	75.9	81.	NA			10-2-(6)	71/ 8
FUKUSIMA-4	BWR	10	0.4 SEC	109.PC	100.PC	1.6SEC	78.0	80.	NA			10-7	73/ 5
HAMAOKA-2	BWR	13	0.9SEC	337.PC	115.3PC	1.3SEC	78.0	83.8	NA				

AB-TRA TURBINE TRIP (3)

23230

CASE(3)=TURBINE TRIP AT LOW POWER WITHOUT-BY-PASS-VALVE-ACT SUMMARY=IN ORDER TO AVOID AN UNNECESSARY SCRAM AT LOW POWER, DIRECT SCRAM SIGNAL BY POSITION DETECTOR ON MAIN-STEAM-STOP VALVE IS BY PASSED UP TO (A)PC/RATED POWER. SO WHEN REACTOR POWER IS LESS THAN (A)PC, IF PROMPT LOSS OF CONDENSER VACUUM OCCURS, IT DOES NOT MAKE SCRAM. IF TURBINE TRIP ARRIVES WITHOUT BY-PASS-VALVE-ACT -----

- (A)=INITIAL CONDITION POWER IS (A1)PC, FLOW IS (A2)PC.
- (B)=TRANSIENT PROCEDURE WHEN TURBINE TRIP, REACTOR IS SCRAMMED BY (NEUTRON FLUX SIGNAL HIGH) AT (B1)SEC. (INDIRECTLY) RELIEF VALVE ACTS AT ONE TIME.
- (C)=MAX. HEAT FLUX IS WITHIN (C)PC/RATED ALL OVER THE TRANSIENT
- (D)=MCHFR IS GREATER THAN (D)
- (E)=MAX. TRANSIENT PRESSURE IS (E)KG/SQCMG. SAFETY VALVE DOES NOT ACT.

PLANT NAME

PLANT NAME	BWR	4	(A)	(A1)	(A2)	(B1)	(C)	(D)	(E)			10-2-(6)	70/ 5
ONAGAWA	BWR	4	30.PC	30.PC	40.PC	1.3SEC	42.PC	2.0	76.6			10-8	70/ 5
HAMAOKA-1	BWR	5	30.PC	30.PC	40.PC	1.3SEC	42.PC	2.0	76.6			10-2-(6)	71/ 2
FUKUSIMA-5	BWR	9	30.PC	30.PC	30.PC	1.3SEC	40.PC	2.0	81.			10-2-(6)	71/ 8
FUKUSIMA-4	BWR	10	30.PC	30.PC	30.PC	1.8SEC	40.PC	2.0	79.0			10-7	73/ 5
HAMAOKA-2	BWR	13	30.PC	30.PC	40.PC		43.PC	2.0	79.7				

AB-TRA MAIN STEAM ISOLATE VALVE

CLOSE 23300

AB-TRA MAIN STEAM ISOLATE VALVE CLOSE 23300

SUMMARY=CLOSING TIME IS PRESETTED FROM (A1)SEC TO (A2)SEC IN GENERAL ASSUMPTION=IT TAKES (A3)SEC TO CLOSE ALL VALVES ENTIRELY.
 SCRAM =REACTOR IS SCRAMMED BY THE VALVE-POSITION-DETECT-SIGNAL WITH (A)PC LOWER FROM FULL OPEN
 SINCE THE VALVE MOVEMENT OF (B)PC HAS NO EFFECT ON FLOW AREA, STEAM FLOW SCARCELY FALL DOWN BEFORE THE BEGINNING OF SCRAM.
 TRANSIENT=AFTER (C)SEC FROM JUST CLOSE, RELIEF VALVE ACT.
 AS THE PRESSURE GOES DOWN, RELIEF VALVES GO TO CLOSE.
 MAX. TRANSIENT PRESSURE IS (D)KG/SQCMG, SO SAFETY VALVE DOES NOT ACT
 (A1)/(A2) (A3) (B) (C) (D)

PLANT NAME

DNAGAWA	BWR	4	3.0/5.0	3. SEC	10. PC	4.4 SEC	76.9	10-2-(6)	70/ 5
HAMAOKA-1	BWR	5	3.0/5.0	3. SEC	10. PC	4.4 SEC	76.9	10-9	70/ 5
FUKUSIMA-5	BWR	9	3.0/4.5	3. SEC	10. PC	3.6 SEC	77.3	10-2-(7)	71/ 2
FUKUSIMA-4	BWR	10	3.0/4.5	3. SEC	10. PC	3.0 SEC	80.0	10-2-(7)	71/ 8
HAMAOKA-2	BWR	13	3.0/5.0	3. SEC	10. PC	2.5 SEC	81.7	10-7	73/ 5

AB-TRA MALFUNC. OF INITIAL PRESSURE ADJUSTER 23400

(1)=DURING TO THE MALFUNCTION OF INITIAL PRESSURE ADJUSTER(=IPA), TURBINE CONTROL VALVE(=TCV) AND BY-PASS VALVE(=BPV) IS MISOPERATED.
 (2)=BUT THE TRANSIENT WHICH IS DUE TO PROMPT CLOSE OF TCV AND BPV IS MILDEN THAN THE CASE OF TURBINE-TRIP-BY-PASS-VALVE-NOT-ACT.
 (3)=EVEN THOUGH THE MALFUNC. OF IPR SUCH AS TO LET TCV AND BPV OPEN AT THE SAME TIME HAPPENS, A GREAT DEAL OF STEAM DOES NOT FLOW AS THE TOTAL OPENING OF TCV AND BPV IS RESTRICTED BY TURBIN FLOW CONTROLLER

PLANT NAME

DNAGAWA	BWR	4	(1),(2),(3)					10-2-(6)	70/ 5
HAMAOKA-1	BWR	5	(1),(2),(3)					10-9	70/ 5
FUKUSIMA-5	BWR	9	(1),(2),(3)					10-2-(7)	71/ 2
FUKUSIMA-4	BWR	10	(1),(2),(3)					10-2-(7)	71/ 8
HAMAOKA-2	BWR	13	(1),(2),(3)					10-8	73/ 5

AB-TRA PRESSURE RELIEF VALVE OPEN 23500

AB-TRA PRESSURE RELIEF VALVE OPEN 23500

(1)=IT IS ASSUMED THAT PRESSURE-RELIEF-VALVE(=PRV) IS KEPT TO OPEN BY TROUBLE FOR SOME REASON
 (2)=IN THAT CASE, PRESSURE AND COOLANT VOLUME IN PRESSURE VESSEL ARE DECREASING GRADUALLY BECAUSE OF THE STEAM FLOW FROM VESSEL IS INCREASE.
 (A)=ASSUMPTION=CAPACITY OF PRV IS PRESETTED BY (A)PC OF TOTAL RATED STEAM FLOW.
 (B)=INITIAL-PRESSURE-ADJUSTER DETECTS THE DECREASE OF PRESSURE IN REACTOR-SYSTEM, AND THROTTLES VALVE TO KEEP THE REACTOR-PRESSURE CONSTANT.
 (C)=REACTOR-POWER IS RECOVERED TO INITIAL POWER BY THE RECIRC.-FLOW CONTROL-SYSTEM. IN THIS CASE MCFR DOES NOT DECREASE.
 (D)=MAX.-FALL-DOWN-RATE IN TEMP.=(D)DEG-C/MINUTE. BUT THIS RATE IS PERMISSIBLE BECAUSE OF THIS TRANSIENT HAS VERY SHORT TIME SPAN, AND SCARCELY OCCURS THROUGH THE REACTOR LIFE.
 (A) (D)

PLANT NAME

DNAGAWA	BWR	4	10. PC	6. DEG-C				10-2-(7)	70/ 5
HAMAOKA-1	BWR	5	10. PC					10-10	70/ 5
FUKUSIMA-5	BWR	9	8. PC	6. DEG-C				10-2-(7)	71/ 2
FUKUSIMA-4	BWR	10	8. PC	6. DEG-C				10-2-(7)	71/ 8
HAMAOKA-2	BWR	13	7. PC					10-8	73/ 5

KIND OF AB-TRA FROM CONTROL SYSTEM 24000

PLANT NAME

			(A)=CONTROL ROD WITHDRAW FROM SUBCRITICAL STATE	24100	
			(B)=CONTROL ROD WITHDRAW FROM DN POWER	24200	
DNAGAWA	BWR	4	(A),(B)		10-2-(7) 70/ 5
HAMAOKA-1	BWR	5	(A),(B)		10-10 70/ 5
FUKUSIMA-5	BWR	9	(A),(B)		10-2-(7) 71/ 2
FUKUSIMA-4	BWR	10	(A),(B)		10-2-(7) 71/ 8

AB-TRA CONTROL ROD WITHDRAW SUBCRI. STATE 24100

AB-TRA CONTROL ROD WITHDRAW SUBCRT. STATE 24100

ASSUMPTION
 (A)=THE CONTROL ROD WHICH IS WITHDRAWN, HAS (A) DELTA-K OF CONTROL WORTH.
 (B)=INITIAL CONDITION OF REACTOR IS JUST BELOW CRITICAL.
 (C)=INITIAL POWER IS (C)/RATED POWER
 (D)=INITIAL TEMPERATURE IS (D)DEG-C WITH FUEL AND MODERATOR
 (E)=UNDER THIS STATE, IF CONTROL ROD IS WITHDRAWN, SCRAM SIGNAL OF NEUTRON-FLUX-UPPER-LIMIT BY THE FIRST RANGE OF MEDIUM-REGION-DETECTOR IS ISSUED, BUT ASSUMING THAT THIS SIGNAL IS NEGLECTED CONSERVATIVELY, AND IT IS ASSUMED THAT REACTOR IS SCRAMMED BY THE SIGNAL OF HIGH NEUTRON FLUX FROM AVERAGE-POWER-MONITOR.
 TRANSIENT
 (U)=POWER PEAKING REACHES (U)PC/RATED BY CALCULATION.
 (V)=FUEL CENTER TEMP. IS (V)DEG-C
 (W)=FUEL CLADDING TEMP. IS (W)DEG-C
 (X)=MAX. ENTHALPY OF UO-2 IS (X)CAL/GRAM, (THIS CONDITION IS Milder THAN THE CASE OF CONTROL-ROD-DROP-ACCIDENT AS MENTIONED 32000.

PLANT NAME	(A)	(C)	(D)	(U)	(V)	(W)	(X)		
ONAGAWA	BWR 4	0.025	1.E-8	20.DEG-C	320.PC	1400.C	450.C	10-2-(7)	70/ 5
HAMAOKA-1	BWR 5	0.025	1.E-8	20.DEG-C	320.PC	1400.C	450.C		70/ 5
FUKUSIMA-5	BWR 9	0.025	1.E-8	20.DEG-C	262.PC	1490.C	534.C	100.CAL/G	10-2-(8)
FUKUSIMA-4	BWR 10	0.025	1.E-8	20.DEG-C	262.PC	1490.C	534.C	100.CAL/G	10-2-(8)
HAMAOKA-2	BWR 13	0.025	1.E-8	20.DEG-C		1510.C	238.C		10-9

AB-TRA CONTROL ROD WITHDRAW ON POWER 24200

ASSUMPTION
 (A)=MISS OPERATION WHICH CONTROL ROD HAVING MAX.-CONTROL-WORTH IS WITHDRAWN AT VERY LOW SPEED SUCH AS THE BALANCE BETWEEN NEUTRON FLUX AND HEAT FLUX IS KEPT, IS ASSUMED.
 (B)=IN THIS CASE, THE CONTROL-ROD-WITHDRAW-MONITOR DETECTS ABNORMAL-POWER-UP, AND RESTRICTS THE WITHDRAWAL OF CONTROL ROD.
 ((B)PC OF PRESETTED VALUE)
 (C)=WHEN CONTROL ROD IS WITHDRAWN BY (C1)PC/FULL STROKE FROM PERFECT INSERT POSITION, WITHDRAWAL IS RESTRICTED AND MCHFR DECREASE UP TO (C2).
 (D)=AS ASSUMPTION THAT STEADY STATE IS KEPT AT ANY CONTROL ROD POSITION, HEAT FLUX CHANGES SIMULTANEOUSLY WITH NEUTRON FLUX, WITHOUT DELAY TIME.
 (E)=IN FACT, AS NEUTRON FLUX IS INCREASED FASTER THAN THAT OF HEAT FLUX, AND CONTROL-ROD-WITHDRAWAL IS RESTRICTED MORE FASTER, SO THERMAL CONDITION IS MORE SAFETY SIDE AND MCHFR IS MORE HIGHER THAN THE CASE OF ASSUMPTION.

PLANT NAME	(B)	(C1)	(C2)		
ONAGAWA	BWR 4	110.PC	40.PC	1.2	10-2-(8)
HAMAOKA-1	BWR 5	110.PC	40.PC	1.2	10-11
FUKUSIMA-5	BWR 9	108.PC	38.PC	1.3	10-2-(8)
FUKUSIMA-4	BWR 10	108.PC	38.PC	1.3	10-2-(8)
HAMAOKA-2	BWR 13	108.PC	58.PC	1.0	10-9

AB-TRA OTHERS LOSS OF AUX. POWER SUPPLY 25100

AB-TRA OTHERS LOSS OF AUX. POWER SUPPLY 25100

(A)=IF WHOLE POWER SUPPLY IS LOST, REACTOR IS SCRAMMED. SCRAM FUNCTION IS KEPT BY HYDRO PRESSURE ENERGY AND REACTOR PRESSURE WHICH ARE ALREADY ACCUMULATED.
 (B)=AFTER SCRAM, REACTOR IS COOLED BY ISOLATED REACTOR COOLING SYSTM.
 (C)=THESE SYSTEMS ARE OPERATED BY DIESEL GENERATOR OR BATTERY
 (D)=SO, THERE IS NO TROUBLE CONCERNING THE PLANT-SAFETY.

PLANT NAME

KIND OF ACCIDENT IN BWR

31000

ACCIDENT IS DEFINED IN 10020.
 (1)=CONTROL ROD DROP OUT ACCIDENT 32000
 (2)=CONTROL ROD RUNAWAY ACCIDENT 33000
 (3)=FUEL HANDLING ACCIDENT 34000
 (4)=LOSS OF COOLANT ACCIDENT 35000
 (5)=MAIN STEAM TUBE RUPTURE ACCIDENT 36000

PLANT NAME

ONAGAWA	BWR 4	(1),(2),(3),(4),(5)	10-3-(1)	70/ 5
HAMAOKA-1	BWR 5	(1),(2),(3),(4),(5)	10-12	70/ 5
FUKUSIMA-5	BWR 9	(1),(2),(3),(4),(5)	10-3-(1)	71/ 2
FUKUSIMA-4	BWR 10	(1),(2),(3),(4),(5)	10-3-(1)	71/ 8
HAMAOKA-2	BWR 13	(1),(2),(3),(4),(5)	10-11	73/ 5

ACCIDENT CAUSE AND RESULT CONTROL ROD DROP 32100

CAUSE(1)=MISS OPERATION OF OPERATOR
 CAUSE(2)=MALFUNCTION OF REACTOR CONTROL SYSTEM
 RESULT =REACTOR POWER AND FUEL TEMP. INCREASE PROMPTLY

PLANT NAME

ACCIDENT COUNTERPLAN TO CONTROL ROD DROP OUT 32200

(A)=BLADE IS DESIGNED NOT TO STICK EVEN IF SHAFT-BLADE-SEPARATION.
 (B)=S-B-JOINT-MECHANISM IS WELL DESIGNED NOT TO SEPARATE IF NOT NEEDED.
 (C)=UNDER JUST CRITICAL OR JUST BELOW CRITICAL, MOVEMENT OF BLADE IS MONITORED BY NUCLEAR INSTRUMENTATION.
 (D)=UNDER OPERATION, COUPLING IS CERTIFIED BY WITHDRAWAL TO OVER-TRAVEL-POSITION.
 (E)=UNDER THE CASE TO START-UP OR TO MOVE CONTROL ROD WITH WIDE RANGE, OPERATION PROCEDURE IS SETTED SO AS TO BE ABLE TO CONFIRM THAT CONTROL ROD IS BEING MOVED SURELY.
 (F)=AS FAR AS ROD-WITHDRAWAL-SEQUENCE IS KEPT, DROP-OUT-ROD-WORTH IS LESS THAN (F)DELTA-K.
 (G)=ROD-WORTH-MINIMIZER IS INTERLOCKED SUCH THAT DROP-OUT-ROD-WORTH DOES NOT EXCEED (G)DELTA-K.
 (H)=DESIGNED THAT BLADE-FREE-FALL-SPEED DOES NOT EXCEED (H)M/SEC.
 (I)=MAIN-STEAM-ISOLATE-VALVE CLOSE WHEN STEAM-RAD.-LEVEL-HIGH AND OFF-GAS-ISOLATE-VALVE CLOSE WHEN OFF-GAS-RAD-LEVEL-HIGH AUTOMATICALLY.
 (J)=OTHER PROTECTION WITH SCRAM (HIGH NEUTRON FLUX, ETC)

PLANT NAME

ONAGAWA	BWR 4	0.025 DELTA-K	0.025 DELTA-K	1.52 M/SEC	10-3-(2)	70/ 5
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ACCIDENT COUNTERP LAN TO CONTROL ROD DROP OUT 32200

- (A)=BLADE IS DESIGNED NOT TO STICK EVEN IF SHAFT-BLADE-SEPARATION.
- (B)=S-B-JOINT-MECHANISM IS WELL DESIGNED NOT TO SEPARATE IF NOT NEEDED.
- (C)=UNDER JUST CRITICAL OR JUST BELOW CRITICAL, MOVEMENT OF BLADE IS MONITORED BY NUCLEAR INSTRUMENTATION.
- (D)=UNDER OPERATION, COUPLING IS CERTIFIED BY WITHDRAWAL TO OVER-TRAVEL-POSITION.
- (E)=UNDER THE CASE TO START-UP OR TO MOVE CONTROL ROD WITH WIDE RANGE, OPERATION PROCEDURE IS SETTED SO AS TO BE ABLE TO CONFIRM THAT CONTROL ROD IS BEING MOVED SURELY.
- (F)=AS FAR AS ROD-WITHDRAWAL-SEQUENCE IS KEPT, DROP-OUT-ROD-WORTH IS LESS THAN (F)DELTA-K.
- (G)=ROD-WORTH-MINIMIZER IS INTERLOCKED SUCH THAT DROP-OUT-ROD-WORTH DOES NOT EXCEED (G)DELTA-K.
- (H)=DESIGNED THAT BLADE-FREE-FALL-SPEED DOES NOT EXCEED (H)M/SEC.
- (I)=MAIN-STEAM-ISOLATE-VALVE CLOSE WHEN STEAM-RAD.-LEVEL-HIGH AND OFF-GAS-ISOLATE-VALVE CLOSE WHEN OFF-GAS-RAD-LEVEL-HIGH AUTOMATICALLY.
- (J)=OTHER PROTECTION WITH SCRAM (HIGH NEUTRON FLUX, ETC)

PLANT NAME									
HAMAOKA-1	BWR	5	0.025 DELTA-K	0.025 DELTA-K	1.52 M/SEC		10-13		70/ 5
FUKUSIMA-5	BWR	9	0.025 DELTA-K	0.025 DELTA-K	1.52 M/SEC.		10-3-(2)		71/ 2
FUKUSIMA-4	BWR	10	0.025 DELTA-K	0.025 DELTA-K	1.52 M/SEC		10-3-(2)		71/ 8
HAMAOKA-2	BWR	13	0.025 DELTA-K	0.025 DELTA-K	1.52 M/SEC		10-12		73/ 5

ACC.ANA. CONTROL ROD DROPOUT 32310

- ASSUMPTION
- (A)=UNDER HOT STAND BY, POWER=(A1)/RATED, FUEL TEMP=(A2)DEG-C
- (B)=ONE CONTROL ROD HAVING (B1)DELTA-K WORTH, DROPS OUT AT (B2)M/SEC.
- (C)=HIGH-NEUTRON-FLUX-SCRAM ACTS AT (C1)PC/RATED POWER AND DELAY TIME IS (C2)
- (D)=PROMPT POWER UP IS SUPPRESSED ONLY BY DOPPLER, AND EFFECTS OF TEMP. AND VOID ARE NOT CONSIDERED.

PLANT NAME		(A1)	(A2)	(B1)	(B2)	(C1)	(C2)		
		DEG-C	DELTA-K	M/SEC	PC	SEC			
ONAGAWA	BWR	4	1.E-6 286.	0.025	1.52	120.	0.2	10-3-(2)	70/ 5
HAMAOKA-1	BWR	5	1.E-6 286.	0.025	1.52	120.	0.2	10-14	70/ 5
FUKUSIMA-5	BWR	9	1.E-6 286.	0.025	1.52	120.	0.2	10-3-(2)	71/ 2
FUKUSIMA-4	BWR	10	1.E-6 286.	0.025	1.52	120.	0.2	10-3-(2)	71/ 8
HAMAOKA-2	BWR	13	1.E-6 286.	0.025	1.52	120.	0.2	10-12	73/ 5

ACC.ANA. CONTROL ROD DROPOUT RESULT 32320

ACC.ANA. CONTROL ROD DROPOUT RESULT 32320

- (A)=SHORTEST PERIOD IS (A)MILLI-SEC.
- (B)=GENERATED ENERGY IS (B1)MM*SEC. (= (B2)FULL-POWER*SEC.)
- (C)=HYDROGEN WHICH IS PRODUCED BY ZR-WATER REACTION, GOES TO STACK THROUGH CONDENSER, HYDROGEN CONCENTRATION IS TOO THIN TO COMBUSTION.
- (D)=(D1)FUEL RODS NEAR DROPPED-CONTROL-ROD HAVE ENTHALPY=GT(D2)CAL/GR ASSUMING THAT GT(D2)CAL/GR OF ENTHALPY HAS CLADDING DESTROYED.
- (E)=MAX. UO-2 ENTHALPY IS LT(E1)CAL/GR.
- UO-2 MELTING NEEDS FROM (E2) TO (E3)CAL/GR OF ENTHALPY.
- (F)=ONLY (F1)PC OF GENERATED HEAT IS REMOVED BY COOLANT. REST ENERGY IS TRANSFERED WITH DELAY HAVING (F2),(F3)SEC OF TIME CONST. SO GENERATED STEAM IS TREATED BY TURBINE BY PASS SYSTEM. (TURBINE-BY-PASS-CAPACITY IS (F4)PC/RATED)
- (G)=IF FUEL FAILURE, FP GAS GOES TO CONDENSER, AND IS DETECTED AS FLOWS THROUGH STEAM TUBE, AND MAIN STEAM ISOLATE VALVE IS CLOSED AUTOMATICALLY.

PLANT NAME		(A)	(B1)	(B2)	(D1)	(D2)	(E1)	(E2)/(E3)	F1	F2/F3	(F4)			
ONAGAWA	BWR	4	8.4	4000.	2.4	330.	170.	220.	220/280	3.	8/9	25.	10-3-(3)	70/ 5
HAMAOKA-1	BWR	5	8.4	4000.	2.4	330.	170.	220.	220/280	3.	8/9	25.	10-14	70/ 5
FUKUSIMA-5	BWR	9	8.4	4000.	1.7	330.	170.	220.	220/280	3.	8/9	25.	10-3-(3)	71/ 2
FUKUSIMA-4	BWR	10	8.4	4000.	1.7	330.	170.	220.	220/280	3.	8/9	25.	10-3-(3)	71/ 8
HAMAOKA-2	BWR	13	8.4	4000.	1.6	330.	170.	220.	220/280	3.	8/9	25.	10-13	73/ 5

ACCIDENT CAUSE RESULT CONTROL ROD RUNAWAY 33100

- CAUSE(1)=PERFECT DESTRUCTION OF FLANGE OR THIMBLE OR HOUSING OF CONTROL ROD DRIVE MECHANISM
- RESULT =REACTOR POWER PROMPTLY INCREASES.

PLANT NAME

ACCIDENT COUNTERP LAN TO CONTROL ROD RUNAWAY 33200

- (A)=INTEGRITY AND RELIABILITY ARE CERTIFIED BY PERMEATION, ULTRA SONIC ,X-RAY, OR OTHERS TESTS.
- (B)=PRESSURE TEST OF PRESSURE VESSEL INCLUDING CONTROL-ROD-DRIVE-MECHANISM IS DONE ON ,ITE.
- (C)=OVER-PRESSURE-PROTECTION-DEVICE IS INSTALLED WITH PRESSURE VESSEL INCLUDING CONTROL-ROD-DRIVE-MECHANISM.
- IF THIS ACCIDENT SHOULD ARISE.....
- (1)=THIS ACCIDENT IS DETECTABLE BY WATER-LEVEL-INCREASE, TEMP OR PRESSURE IN DRY WELL SUMP IMMEDIATELY.
- (2)=FINALLY REACTOR IS SCRAMMED BY THE SIGNAL OF DRY-WELL-PRESSURE-HIGH.
- (3)=IN ORDER TO AVOID LONG-STROKE-FALL-DOWN OF CONTROL ROD, THIMBLE SUPPORTER IS INSTALLED JUST BELOW CONTROL ROD, SO ADDITIONAL REACTIVITY IS NOT SO HIGH.

PLANT NAME

ACCIDENT CAUSE COUNTERP LAN FUEL HANDLING 34100

ACCIDENT CAUSE COUNTERPLAN FUEL HANDLING 34100

CAUSE
 (A)=TWO CONTROL RODS ARE PERFECTLY WITHDRAWAL, AND ONE FUEL ASSY IS NOT YET INSERTED AT THE CENTER OF 2#4-FUEL-SET-POSITIONS.
 (B)=ALL INTERLOCKS ARE MALFUNCTION.
 (C)=OPERATOR IGNORES FUEL HANDLING PROCEDURE.
 (D)=FUEL ASSY IS DROPPED BY MALFUNCTION OF FUEL HANDLING MACHINE.
 (E)=FUEL ASSY DROPS INTO JUST THE POSITION WHICH MENTIONED (A).
 COUNTERPLAN
 (A)=CERTIFICATION OF ALL CONTROL RODS INSERT
 (B)=CONTROL-ROD-POSITION MONITORING AT CONTROL CENTER
 (C)=CERTIFICATION OF ENOUGH SUBCRITICALITY BY CONT.ROD UP AND DOWN.
 (D)=INTERLOCK BETWEEN CONT.ROD-ALL-INSERT AND CRANE-FROM-POOL-TO-CORE.
 (E)=CONT.ROD CAN NOT WITHDRAW WITH CRANE-ABOVE-CORE-INTERLOCK.
 (F)=TWO CONT.RODS CAN NOT WITHDRAW BY INTERLOCK EVEN IF CRANE AT POOL.
 (G)=CRANE HAS ENOUGH STRENGTH.
 (H)=FUEL GRAPPLER IS FAIL SAFE DESIGNED EVEN IF AIR-PRESSURE-LOSS.
 (I)=THERE IS ENOUGH LIGHTING IN FUEL-CHANGE-PIT.
 (J)=SHIELD WATER HAS ENOUGH TRANSPARENCY IN FUEL-CHANGE-PIT.

PLANT NAME	BWR	4	FROM (A) TO (E)	FROM (A) TO (J)	10-3-(4,5)	70/ 5
ONAGAWA	BWR	5	FROM (A) TO (E)	FROM (A) TO (J)	10-16,18	/
HAMAOKA-1	BWR	9	FROM (A) TO (E)	FROM (A) TO (J)	10-3-(4,6)	71/ 2
FUKUSIMA-5	BWR	10	FROM (A) TO (E)	FROM (A) TO (J)	10-3-(4,6)	71/ 8
FUKUSIMA-4	BWR	13	FROM (A) TO (E)	FROM (A) TO (J)	10-15	73/ 5

ACCIDENT LOSS OF COOLANT PRECONDITION KIND 35200

PRECONDITION=THERE IS NO FEED WATER WHICH IS SUPPLIED BY NORMAL FEED WATER SYSTEM WITH LOSS OF TURBINE-PUMP-POWER-SUPPLY.
 KIND(1)=MINOR DESTRUCTION OF ANY TUBE WHICH IS CONNECTED WITH PV.
 KIND(2)=MEDIUM DESTRUCTION OF ANY TUBE WHICH IS CONNECTED WITH PV.
 KIND(3)=MAJOR DESTRUCTION OF ANY TUBE WHICH IS CONNECTED WITH PV.

PLANT NAME	BWR	4	(1),(2),(3)	10-3-(6,8)	70/ 5
ONAGAWA	BWR	5	(1),(2),(3)	10-19,21	70/ 5
HAMAOKA-1	BWR	9	(1),(2),(3)	10-3-(7,8)	71/ 2
FUKUSIMA-5	BWR	10	(1),(2),(3)	10-3-(7,8)	71/ 8

ACCIDENT LOSS OF COOLANT MINOR DESTRUCTION 35210

REACTION-ISOLATE-COOLING-SYSTEM START WITH SIGNAL OF REACTOR-WATER-LEVEL-LOW.
 HIGH-PRESSURE-INJECT-SYSTEM START WITH SIGNAL OF REACTOR-WATER-LEVEL-ABNORMAL-LOW
 (A)=DESTRUCTED SECTION AREA WHICH PREVENTS CLAD-MELT-DOWN BY HIGH PRESSURE INJECT SYSTEM ONLY, IS (A1)SQM IN CASE OF LIQUID PHASE, AND (A2)SQM IN CASE OF STEAM PHASE.

PLANT NAME	BWR	4	0.007 SQM	0.07 SQM	10-3-(7)	70/ 5
ONAGAWA	BWR	4	0.007 SQM	0.07 SQM	10-3-(7)	70/ 5

ACCIDENT LOSS OF COOLANT MINOR DESTRUCTION 35210

REACTION-ISOLATE-COOLING-SYSTEM START WITH SIGNAL OF REACTOR-WATER-LEVEL-LOW.
 HIGH-PRESSURE-INJECT-SYSTEM START WITH SIGNAL OF REACTOR-WATER-LEVEL-ABNORMAL-LOW
 (A)=DESTRUCTED SECTION AREA WHICH PREVENTS CLAD-MELT-DOWN BY HIGH PRESSURE INJECT SYSTEM ONLY, IS (A1)SQM IN CASE OF LIQUID PHASE, AND (A2)SQM IN CASE OF STEAM PHASE.

PLANT NAME	BWR	5	0.006 SQM	0.07 SQM	10-20	70/ 5
HAMAOKA-1	BWR	9	0.008 SQM	0.14 SQM	10-3-(7)	71/ 2
FUKUSIMA-5	BWR	10	0.008 SQM	0.14 SQM	10-3-(7)	71/ 8

ACCIDENT LOSS OF COOLANT MEDIUM DESTRUCTION 35220

HPIS=HIGH PRESSURE INJECT SYSTEM
 CSS =CORE SPRAY SYSTEM
 LPIS=LOW PRESSURE INJECT SYSTEM
 (A)=DESTRUCTED SECTION AREA WHICH PREVENTS CLAD-MELT-DOWN BY (HPIS AND CSS),OR (HPIS AND LPIS) FROM (A1)SQM TO (A2)SQM BY (HPIS AND CSS) IN CASE OF LIQUID PHASE, FROM (A1)SQM TO (A3)SQM BY (HPIS AND LPIS) IN CASE OF LIQUID PHASE.

PLANT NAME	BWR	4	(A1)	(A2)	(A3)	10-3-(7)	70/ 5
ONAGAWA	BWR	5	0.006 SQM	0.008 SQM	0.009 SQM	10-20	70/ 5
HAMAOKA-1	BWR	9	0.008 SQM	0.011 SQM	0.015 SQM	10-3-(8)	71/ 2
FUKUSIMA-5	BWR	10	0.01 SQM	0.012 SQM	0.019 SQM	10-3-(8)	71/ 8

ACCIDENT LOSS OF COOLANT MAJOR DESTRUCTION 35230

(A)=DESTRUCTED SECTION MINIMUM AREA WHICH PREVENTS CLAD-MELT-DOWN BY CCS ONLY OR BY LPIS ONLY.
 (A1)=BY CORE SPRAY SYSTEM IN CASE OF LIQUID PHASE
 (A2)=BY LOW PRESSURE INJECT SYSTEM IN CASE OF LIQUID PHASE
 (A3)=BY CORE SPRAY SYSTEM IN CASE OF STEAM PHASE
 (A4)=BY LOW PRESSURE INJECT SYSTEM IN CASE OF STEAM PHASE

PLANT NAME	BWR	4	CSS-LP (A1)	LPIS-LP (A2)	CSS-SP (A3)	LPIS-SP (A4)	10-3-(8)	70/ 5
ONAGAWA	BWR	5	0.008 SQM	0.009 SQM	0.006 SQM	0.007 SQM	10-21	70/ 5
HAMAOKA-1	BWR	9	0.011 SQM	0.015 SQM	0.009 SQM	0.011 SQM	10-3-(8)	71/ 2
FUKUSIMA-5	BWR	10	0.012 SQM	0.019 SQM	0.009 SQM	0.011 SQM	10-3-(8)	71/ 8

ACC.ANA. RECIRC. RUPTURE LOCA 35300

IF RECIRCULATION LOOP RUPTURE, COOLANT FLOWS OUT FROM BOTH RUPTURE END S. AND CAUSES LOSS OF COOLANT.

PLANT NAME	BWR	4	0.008 SQM	0.009 SQM	0.006 SQM	0.007 SQM	10-3-(8)	70/ 5
ONAGAWA	BWR	5	0.008 SQM	0.009 SQM	0.005 SQM	0.007 SQM	10-21	70/ 5
HAMAOKA-1	BWR	9	0.011 SQM	0.015 SQM	0.009 SQM	0.011 SQM	10-3-(8)	71/ 2
FUKUSIMA-5	BWR	10	0.012 SQM	0.019 SQM	0.009 SQM	0.011 SQM	10-3-(8)	71/ 8

ACC.ANA. RECIRC. RUPTURE LOCA 35310

ACC.ANA. RECIRC. RUPTURE LOCA

35310

(A)=AT (A1)SEC. REACTOR WATER IS PERFECTLY LDST.
 (H)=MCHFR IS GT(B1) FROM 0. SEC. TO (H2)SEC.
 (C)=AT (C1)SEC. CORE SPRAY SYSTEM BEGINS TO SPRAY.
 (D)=AT (D1)SEC. LOW PRESSURE INJECT SYSTEM BEGINS TO INJECT
 (E)=CORE IS RESUBMERGED TO HALF CORE LEVEL AT (E1)+(E2)+(E3)SEC
 BY CASE(1)+(2)+(3) RESPECTIVELY.
 CASE(1)=ONE CORE SPRAY AND TWO LOW PRESSURE INJECT PUMPS ACT
 CASE(2)=ONE CORE SPRAY ACTS
 CASE(3)=TWO LOW PRESSURE INJECT PUMPS ACT

PLANT NAME	(A1)	(B1)/(B2)	(C1)	(D1)	(E1)	(E2)	(E3)		
DNAGAWA	BWR 4	1.0/15.5	30.5	43.5	145.5	527.5	151.5	10-3-(9)	/
HAMAOKA-1	BWR 5	30.5	1.0/15.5	30.5	43.5	145.5	150.5	10-22	70/ 5
FUKUSIMA-5	BWR 9	30.5	1.0/14.5	30.5	43.5	128.5	157.5	10-3-(9)	71/ 2
FUKUSIMA-4	BWR 10	30.5	1.0/14.5	30.5	43.5	128.5	157.5	10-3-(9)	71/ 8
HAMAOKA-2	BWR 13	30.5	1.01	30.5	43.5			10-18	73/ 5

ACC.ANA. RECIRC. RUPTURE DRY-WELL P-CHANGE LOC

35320

(A)=AT (A1)SEC. DRY-WELL PRESSURE REACHES (A2)KG/SQCMG (MAX).
 (B)=AT (B1)SEC. DRY-WELL PRESSURE SETTLE DOWN TO (B2)KG/SQCMG.
 (C)=AT (C1)DAYS DRY-WELL PRESSURE RETURN TO ATMOS. PRESSURE.

PLANT NAME	(A1)	(A2)	(B1)	(B2)	(C1)		
DNAGAWA	BWR 4	10.5	2.4KG/SQCMG	30.5	1.8 KG/SQCMG	33.DAYS	10-3-(9) 70/ 5
HAMAOKA-1	BWR 5	10.5	2.8KG/SQCMG	30.5	2.0 KG/SQCMG	37.DAYS	10-23 70/ 5
FUKUSIMA-5	BWR 9	9.5	2.6KG/SQCMG	30.5	2.0 KG/SQCMG	33.DAYS	10-3-(10) 71/ 2
FUKUSIMA-4	BWR 10	9.5	2.6KG/SQCMG	30.5	2.0 KG/SQCMG	33.DAYS	10-3-(10) 71/ 8
HAMAOKA-2	BWR 13	10.5	3.65	30.5	2.0	44.	10-20 73/ 5

FUEL CLADDING PERFRAT AND ZR-W REACTION RATE

35340

CONDITION(A)= TWO-LOW-P INJECTION ACT
 CONDITION(B)=ONE CORE SPRAY AND TWO LOW-P INJECTION ACT
 CONDITION(C)=ONE CORE SPRAY ACT (MCA)
 CONDITION(D)=NON COOLING SYSTEM (HA)
 UNIT PERFORATION RATE PRCENT(REACTION RATE PERCENT)

PLANT NAME	(A)	(B)	(C)=MCA	(D)=HA		
DNAGAWA	BWR 4	14(0.55)	7.5(0.02C)	13.5(0.16)	100(27.5)	10-3-(9) 70/ 5
HAMAOKA-1	BWR 5	14(0.06)	7.5(0.02)	13.5(0.16)	100(27.5)	10-22,10-27 70/ 5
FUKUSIMA-5	BWR 9	13.5(0.084)	7.5(0.014)	13.5(0.13)	100(27.5)	10-3-(9) 71/ 2
FUKUSIMA-4	BWR 10	18.8(0.084)	7.5(0.014)	13.5(0.13)	100(27.5)	10-3-(9) 71/ 8

PERFORMANCE EVALUATION OF ECCS LOCA FW

35600

PERFORMANCE EVALUATION OF ECCS LOCA FW

35600

PERFORMANCE EVALUATION OF ECCS LOCA FW
 A=BLow-DOWN TIME
 B=STARTING TIME OF ECCS
 C=ARRIVAL TIME AT HIGHEST TEMP. OF CLADDING
 D=(1)=HIGHEST TEMP. OF CLADDING
 E=(2)=REACTION RATE OF MATERIAL-WATER
 F=FM RATIO
 G=FITNESS FOR OTHER QUALIFICATIONS
 QUALIFICATION(1) = D IS LT 1250 C
 QUALIFICATION(2) = E IS LT 1.PC
 QUALIFICATION(3) = CORE SHAPE IS KEPT TO COOL DOWN THROUGH ACCIDENT
 QUALIFICATION(4) = COOLING FOR LONG-TIME IS POSSIBLE

PLANT NAME	A. (SEC)	B. (SEC)	C. (SEC)	D. (DEG-C)	E. (PC)	F. (PC)	
TSURUGA	BWR 3	13	30	245	1168	ST.0.25 80/77	(3),(4) 73/ 4
DNAGAWA	BWR 4	30	30	130	1159	ST.0.18 /93	(3),(4) 73/ 4
HAMAOKA-1	BWR 5	30	30	130	1159	ST.0.18 /93	(3),(4) 73/ 4
FUKUSIMA-1	BWR 6	30	30	322	1166	ST.0.12 92/88	(3),(4) 73/ 4
FUKUSIMA-2,3	BWR 7	30	30	151	1165	ST.0.12 94/92	(3),(4) 73/ 4
SHIMANE	BWR 8	30	30	157	1050	ST.0.1 /93	(3),(4) 73/ 4
FUKUSIMA-5	BWR 9	30	30	151	1165	ST.0.12 94/92	(3),(4) 73/ 4
FUKUSIMA-4	BWR 10	30	30	151	1165	ST.0.12 94/92	(3),(4) 73/ 4
FUKUSIMA-6	BWR 11	45	45	109	1024	ST.0.12 98/98	(3),(4) 73/ 4
TOOKAI-2	BWR 12	45	45	109	1024	ST.0.12 98/98	(3),(4) 73/ 4
GENKAI-1	PWR 24	15	7/27	115	1194	ST.0.1 84.	(3),(4) 73/ 4
MIHAMA-1	PWR 21	13.5	6.5/25	105	1143	ST.0.1 84.4	(3),(4) 73/ 4
MIHAMA-2	PWR 22	15.5	6.5/25	75	1141	ST.0.1 88.6	(3),(4) 73/ 4
TAKAHAMA-2	PWR 23	16.6	9.7/25	90	1177	ST.0.1 81.	(3),(4) 73/ 4
TAKAHAMA-1	PWR 25	16.6	9.7/25	90	1177	ST.0.1 81.	(3),(4) 73/ 4
OOI -1,2	PWR 26	20.9	10.7/25	100	1177	ST.0.1	(3),(4) 73/ 4
MIHAMA-3	PWR 27	16.6	9.7/25	90	1177	ST.0.1 81.	(3),(4) 73/ 4
IKATA	PWR 28	15.	7. /27	75	1146	ST.0.1 84/90	(3),(4) 73/ 4

ACCIDENT MAIN STEAM TUBE RUPTURE

36200

(A)=FLOW RATE WHICH FLOWS OUT THROUGH RUPTURE TUBE IS RESTRICTED WITHIN (A1)PC/RATED BY FLOW RESTRICTOR.
 (B)=M.STEAM-ISOLAT.-VALVES BEGIN TO CLOSE BY THE SIGNAL WHICH IS INDUCED BY PRESSURE LOSS THROUGH FLOW-RESTRICTOR.
 (C)=REACTOR IS SCRAMMED WITH (C1)PC-CLOSE OF ISOLAT.-VALVE.

PLANT NAME	(A1)	(C1)		
DNAGAWA	BWR 4	200.PC	10.PC	10-3-(11) 70/ 5
HAMAOKA-1	BWR 5	200.PC	10.PC	10-24 70/ 5
FUKUSIMA-2,3	BWR 7	200.PC	10.PC	89-7-3 P5 71/ 3
SHIMANE	BWR 8	200.PC	10.PC	89-8-2 P4 71/ 3
FUKUSIMA-5	BWR 9	200.PC	10.PC	10-3-(11) 71/ 2
FUKUSIMA-4	BWR 10	200.PC	10.PC	10-3-(11) 71/ 8

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ACCIDENT MAIN STEAM TUBE RUPTURE 36200
 (A)=FLOW RATE WHICH FLOWS OUT THROUGH RUPTURE TUBE IS RESTRICTED WITHIN (A1)PC/RATED BY FLOW RESTRICTOR.
 (B)=M.STEAM-ISOLAT.-VALVES BEGIN TO CLOSE BY THE SIGNAL WHICH IS INDUCED BY PRESSURE LOSS THROUGH FLOW-RESTRICTOR.
 (C)=REACTOR IS SCRAMMED WITH (C1)PC-CLOSE OF ISOLAT.-VALVE.
 (A1) (C1)

PLANT NAME									
HAMAOKA-2	BWR	13	200.PC	10.PC				10-21	73/ 5

ACC.ANA. M.STEAM TUBE RUPTURE 36310
 (A)=CRITICAL FLOW THROUGH FLOW-RESTRICTOR INCREASES UP TO (A1)KG/SEC.
 (B)=PRESSURE IN PV IS DECREASING AT THE RATE OF (B1)KG/SQCM/SEC.
 (C)=BECAUSE OF PRESSURE-DROP IN PV, VOID INCREASE, AND WATER LEVEL INCREASES AT THE RATE OF (C1)M/SEC, AND LEVEL REACHES TO STEAM-TUBE-NOZZLE AT (C2)SEC.
 (D)=M.STEAM-ISOLATE.-VALVE IS PERFECTLY CLOSED AT MAX. (D1)SEC.(INCL. (D2)SEC-DELAY)
 (A1) (A2) (C1) (C2) (D1) (D2)

PLANT NAME			(A1)	(A2)	(C1)	(C2)	(D1)	(D2)		
			KG/S.	KG/SQCM/S.	M/S	SEC.	SEC	SEC		
ONAGAWA	BWR	4	1620.	4.5	2.0	2.2	5.5	0.5	10-3-(11)	70/ 5
HAMAOKA-1	BWR	5	1620.	4.5	2.0	2.2	5.5	0.5	10-25	70/ 5
FUKUSIMA-2,3	BWR	7	2520.	4.5	1.8	2.7	5.0	0.5	89-7-3 P5	71/ 3
SHIMANE	BWR	8	1380(345*4)						89-8-2 P4	71/ 3
FUKUSIMA-5	BWR	9	2520.	4.5	1.8	2.7	5.0	0.5	10-3-(12)	71/ 2
FUKUSIMA-4	BWR	10	2520.	4.5	1.8	2.7	5.0	0.5	10-3-(11)	71/ 8
HAMAOKA-2	BWR	13	2640	4.5	2.	2.7	5.5	0.5	10-22	73/ 5

ACC.ANA. M.STEAM TUBE RUPTURE 36320
 (A)=TOTAL STEAM AND WATER WEIGHT WHICH FLOW OUT FROM RUPTURE PARTS UNTIL ISOLATE-VALVE-PERFECT-CLOSE ARE (A1),(A2)KG RESPECTIVELY.
 (B)=TO MAKE CORE BARE, COOLANT MUST FLOW OUT TO THE AMOUNT OF (B1)KG. SO CORE IS KEPT AS SUBMERGED STATE UNTIL ISOLATE-VALVE-PERFECT-CLOSE.
 (C)=MCHFR IS KEPT GT(C1) THROUGH THIS ACCIDENT.
 (A1) (A2) (B1) (C)

PLANT NAME			(A1)	(A2)	(B1)	(C)		
			STEAM	WATER		MCHFR		
ONAGAWA	BWR	4	5930.KG	7930.KG	46000.KG	1.0	10-3-(11)	70/ 5
HAMAOKA-1	BWR	5	5930.KG	7930.KG	46000.KG	1.0	10-25	70/ 5
FUKUSIMA-2,3	BWR	7	9250.KG	8210.KG	75400.KG	1.0	89-7-3 P5	71/ 3
SHIMANE	BWR	8	4500.KG	6800.KG		1.0	89-8-2 P5	71/ 3
FUKUSIMA-5	BWR	9	9250.KG	8210.KG	75400.KG	1.0	10-3-(12)	71/ 2
FUKUSIMA-4	BWR	10	9250.KG	8210.KG	75400.KG	1.0	10-3-(12)	71/ 8
HAMAOKA-2	BWR	13	8870	9830	76000	1.0	10-22	73/ 5

MCA HA ITEMS 43000

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MCA HA ITEMS 43000
 (A) LOSS OF COOLANT
 (B) MAIN STEAM TUBE RUPTURE
 (C) GAS DECAY TANK RUPTURE
 (D) STEAM GENERATOR THIN TUBE RUPTURE

PLANT NAME			MCA=(A),(B),(C) WITH EME. COOLING	HA=(A),(B) WITHOUT E.C.		
ONAGAWA	BWR	4	MCA=(A),(B),(C) WITH EME. COOLING	HA=(A),(B) WITHOUT E.C.	10-4-(1)	70/ 5
HAMAOKA-1	BWR	5	MCA=(A),(B),(C) WITH EME. COOLING	HA=(A),(B) WITHOUT E.C.	10-26	70/ 5
FUKUSIMA-5	BWR	9	MCA=(A),(B) WITH EME. COOLING	HA=(A),(B) WITHOUT E.C.	10-4-(1)	71/ 2
FUKUSIMA-4	BWR	10	MCA=(A),(B) WITH ONE ECCS	HA=(A),(B) WITHOUT E.C.	10-4-(1)	71/ 8
TAKAHAMA-2	PWR	23	MCA=(A),(D) WITH EME. COOLING	HA=(A),(D) WITHOUT E.C.		70/ 5
GENKAI-1	PWR	24	MCA=(A),(D) WITH EME. COOLING	HA=(A),(D) WITHOUT E.C.		70/11
FUGEN	ATR	81	MCA=(A),(B),(C) WITH EME. COOLING	HA=(A),(B) WITHOUT E.C.		

MCA HA BWR LOC FP LEAK RATE FROM DRY-WELL 43110
 ASSUMPTION (THIS LEAK RATE IS APPLIED TO *LOSS OF COOLANT ANALYSIS*.)
 (A)=AT MCA, FP RELEASE RATE CORRESPONDS (A1)PC PERFORATION, AND LEAK RATE FROM DRY-WELL IS (A2)PC/DAY *(A3)DAYS
 (B)=AT HA, FP RELEASE RATE CORRESPONDS ALL FUEL MELT DOWN, AND LEAK RATE FROM DRY-WELL IS (B1)PC/DAY * INFINITE TIME.

PLANT NAME			(A1)	(A2)	(A3)	(B1)		
ONAGAWA	BWR	4	100.PC	0.5PC/DAY * 33. DAYS		0.5PC/DAY * INF.	10-4-(2)	70/ 5
HAMAOKA-1	BWR	5	100.PC	0.5PC/DAY * 37. DAYS		0.5PC/DAY * INF.	10-27	70/ 5
FUKUSIMA-5	BWR	9	100.PC	0.5PC/DAY * 33. DAYS		0.5PC/DAY * INF.	10-4-(2)	71/ 2
FUKUSIMA-4	BWR	10	100.PC	0.5PC/DAY * 33. DAYS		0.5PC/DAY * INF.	10-4-(2)	71/ 8
HAMAOKA-2	BWR	13	100.PC	0.5PC/DAY * 44. DAYS		0.5PC	10-24	73/ 5

MCA HA BWR LOC FP RELEASE FROM FUEL 43120
 ASSUMPTION
 (A)=REACTOR HAS OPERATED CONTINUOUSLY (A1)YEAR AT RATED POWER
 (C)=FP TRANSFER RATE FROM PV TO DRY-WELL (IN PC)
 (B)=FP RELEASE RATE FROM FUEL ROD TO COOLANT (IN PC/ACCUMULATE TOTAL)
 (D)=RARE GAS DOES NOT DISOLVE, NOT FALL OUT, NOT PLATE OUT.
 (E)=SHARING RATE OF INORGANIC HALOGEN WHICH RELEASED OUT TO DRY-WELL IS (E1)
 (F)=RATE OF ORGANIC/TOT. HALOGEN IS (F1)PC, AND ORGANIC HALOGEN IS HANDLED AS SAME AS RARE GAS.
 (A1) (B) (C) (E1) (F1)

PLANT NAME			RARE GAS	HALOGEN	(C)	(E1)	(F1)			
			MCA	HA	MCA	HA				
ONAGAWA	BWR	4	1.YEAR	2. 100.	1. 50.	50.PC	1.E2	10.PC	10-4-(2)	70/ 5
HAMAOKA-1	BWR	5	1.YEAR	2. 100.	1. 50.	50.PC	1.E2	10.PC	10-28	70/ 5
FUKUSIMA-5	BWR	9	1.YEAR	2. 100.	1. 50.	50.PC	1.E2	10.PC	10-4-(2)	71/ 2
FUKUSIMA-4	BWR	10	1.YEAR	2. 100.	1. 50.	50.PC	1.E2	10.PC	10-4-(2)	71/ 8
HAMAOKA-2	BWR	13	1.YEAR	2. 100.	1. 50.	50/100	1.E2	10.PC	10-24	73/ 5

MCA HA PWR LDPC FP GAS RELEASE FROM FUEL 43130

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MCA HA PWR LOPC FP GAS RELEASE FROM FUEL 43130

ASSUMPTION

REACTOR HAS OPERATED CONTINUOUSLY AT RATED POWER FOR A LONG TIME
 (B1)=FP RELEASE RATE FROM FUEL ROD TO COOLANT (IN PC/ACCUMULATE TOTAL)
 (D)=RATE OF (ORGANIC IODINE)/(TOTAL IODINE) IS (D1)PC.
 (E)=(E1)PC OF FREE IODINE PLATE OUT ON WALL OF CONTAINER.
 -----(B1)----- (D1) (E1)

PLANT NAME		RARE GAS		HALOGEN		SOLID					
		MCA	HA	MCA	HA	MCA	HA				
TAKAHAMA-2	PWR 23	2.	100.	1.0	50.	0.02	1.	10.	50.PC	10-25,27	70/ 5
GENKAI-1	PWR 24	2.	100.	1.0	50.	0.02	1.	10.	50.PC	10-28,32	70/ 5
DOI -1,2	PWR 26	3.	100.	1.5	50.	0.03	1.	10.	50.PC	10-25,28	71/ 1
MIHAMA-3	PWR 27	2.	100.	1.0	50.	0.02	1.	10.	50.PC	10-25,27	71/ 7
IKATA	PWR 28	2.	100.	1.0	50.	0.02	1.	10.	50.PC	10-26,30	72/11

MCA HA BWR LOC FP GAS RELEASE FROM BUILDING 43140

ASSUMPTION (REFER 43120)
 (A)=FILTER EFFICIENCY IS (A1)PC TO HALOGEN, AND NO EFFECT TO RARE GAS
 (B)=VENTILATION RATE IS (B1)PC/DAY

PLANT NAME		RARE GAS		IODINE(I-131)		(A1)	(B1)						
		MCA	HA	MCA	HA								
ONAGAWA	BWR 4	1.14E4	CI	5.76E5	CI	235.	CI	1.23E4	CI	90.	100.	10-4-(3)	70/ 5
HAMAOKA-1	BWR 5	*1.1 E4	CI	*5.8 E5	CI	240.	CI	1.2 E4	CI	90.	100.	*GAMMA10-29	70/ 5
HAMAOKA-1	BWR 5	81.6 E4	CI	88.8 E5	CI							B=BETA10-29	70/ 5
FUKUSIMA-5	BWR 9	1.63E4	CI	8.58E5	CI	355.	CI	1.81E4	CI	90.	100.	10-4-(3)	71/ 2
FUKUSIMA-4	BWR 10	1.63E4	CI	8.58E5	CI	315.	CI	1.81E4	CI	90.	100.	10-4-(3)	71/ 8
HAMAOKA-2	BWR 13					360.	CI	1.8 E4	CI	90.	100.	10-25	73/ 5

MCA HA PWR LOPC FP GAS RELEASE FROM BUILDING 43150

PLANT NAME		RARE GAS		IODINE(I-131)							
		MCA	HA	MCA	HA						
MIHAMA-1	PWR 21	0.182E4	CI	0.78E5	CI	1.1	CI	50.	CI	REF23 P47	71/ 9
MIHAMA-2	PWR 22	0.256E4	CI	1.28E5	CI	2.	CI	97.	CI	REF23 P47	71/ 9
TAKAHAMA-2	PWR 23	0.86E4	CI	4.32E5	CI	29.	CI	1430.	CI	10-26,28	X0/ 5
GENKAI-1	PWR 24	0.26E4	CI	1.3 E5	CI	13.3	CI	666.	CI	10-29,32	70/ 5
TAKAHAMA-1	PWR 25	0.86E4	CI	4.32E5	CI	29.	CI	1430.	CI	REF23 P47	71/ 9
DOI -1,2	PWR 26	2.5 E4	CI	8.4 E5	CI	31.	CI	1030.	CI	10-27,28	71/ 1
MIHAMA-3	PWR 27	0.344E4		1.72E5		28.		1370.		10-27,28	71/ 7
IKATA	PWR 28	0.329E4		1.645E5		20.		994.		10-27,30	72/11

MCA BWR LOC ESTIMATION OF IRRADIATION DOSE 43160

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MCA BWR LOC ESTIMATION OF IRRADIATION DOSE 43160

ACCIDENT=MAXIMUM CREDIBLE ACCIDENT WITH LOSS OF COOLANT
 (A1)=IRRADIATION DOSE AT THE POINT WHICH IS ON (A1)M RADIUS WITH (A2)
 AS THE CENTER.

(T)=INFANTILE THYROID IRRADIATION DOSE IN REM.
 (G)=WHOLE BODY GAMMA IRRADIATION DOSE IN REM.
 (B)=WHOLE BODY BETA IRRADIATION DOSE IN REM.

PLANT NAME		METER	(A2) CENTER	(T) REM	(G) REM	(B) REM			
									(A1)
ONAGAWA	BWR 4	600.M	STACK	2.0	0.007	0.013	REM	10-4-(4)	70/ 5
HAMAOKA-1	BWR 5	450.M	REACTOR	2.1	0.0076	0.0143	REM	10-29	70/ 5
FUKUSIMA-5	BWR 9	650.M	REACTOR	6.0	0.026	0.042	REM	10-4-(4)	71/ 2
FUKUSIMA-4	BWR 10	800.M	REACTOR	5.5	0.023	0.038	REM	10-4-(4)	71/ 8
HAMAOKA-2	BWR 13	450	REACTOR	3.2	0.0071	0.019		10-26	73/ 5

MCA HA PWR LOPC ESTIMATION OF IRRADIATION DOSE 43170

ACCIDENT(MCA AND HA) WITH LOSS OF PRIMARY COOLANT (PWR)

(A1)=INFANTILE THYROID IRRADIATION DOSE IN REM
 (A2)=ADULT THYROID IRRADIATION DOSE IN REM
 (B)=WHOLE BODY GAMMA IRRADIATION DOSE IN REM
 (C)=WHOLE BODY (BETA) IRRADIATION DOSE IN REM

PLANT NAME		MCA		HA			
		(A1)/(B)/(C)/KM	(A2)/(B)/(C)/KM	(A1)/(B)/(C)/KM	(A2)/(B)/(C)/KM		
TAKAHAMA-2	PWR 23	1.4/0.12/0.03/0.8		17.0/ 5.5/ 1.7/ 0.8		10-27,28	70/ 5
GENKAI-1	PWR 24	0.8/0.25/0.02/0.6		9.6/12.5/ 0.8/ 0.6		10-29,32	70/ 5
DOI -1,2	PWR 26	1.3/0.11/0.08/0.8		11.0/ 3.6/ 2.7/ 0.8		10-27,28	71/ 1
MIHAMA-3	PWR 27	1.1/0.14/0.017/0.75		13.0/ 6.3/ 0.88/0.75		10-27,28	71/ 7
IKATA	PWR 28	1.9/0.11/0.03 /0.7		23.0/ 5.7/ 1.6 /0.7		10-27,30,31	72/11

HA BWR LOC ESTIMATION OF IRRADIATION DOSE 43180

ACCIDENT=HYPOTHETICAL ACCIDENT WITH LOSS OF COOLANT

(A)=ADULT THYROID IRRADIATION DOSE IN REM.
 (G)=WHOLE BODY GAMMA IRRADIATION DOSE IN REM.
 (B)=WHOLE BODY BETA IRRADIATION DOSE IN REM.

PLANT NAME		(A)/(G)/(B) / KM		(A)/(G)/(B)/KM		(A)/(G)/(B) /KM		
		(A)/(G)/(B) / KM	(A)/(G)/(B)/KM	(A)/(G)/(B) /KM	(A)/(G)/(B)/KM			
ONAGAWA	BWR 4	27./1.330/0.73/0.60,		9./0.14/1.25/2.0		5./1.060/0.10/5.	10-4-(4)	70/ 5
HAMAOKA-1	BWR 5	27./1.38 /0.84/0.45,					10-30	70/ 5
FUKUSIMA-5	BWR 9	85./1.4 /2.9 /0.65,		33./0.73/1.1/2.0		13./1.49 /0.44/5.	10-4-(4)	71/ 2
FUKUSIMA-4	BWR 10	78./1.2 /2.6 /0.80,		33./0.73/1.1/2.0		13./1.49 /0.44/5.	10-4-(4)	71/ 8
HAMAOKA-2	BWR 13	41./0.4 /1.1 /0.45					10-26	73/ 5

NATIONAL HEREDITY IRRADIATION DOSE HA 43190

PLANT NAME		MAN*REM	MAN*REM		
ONAGAWA	BWR 4	8. E4 (LUC)		10-4-(4)	70/ 5
HAMAOKA-1	BWR 5	15. E4 (LUC)		10-30	70/ 5

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NATIONAL HEREDITY IRRADIATION DOSE HA 43190

PLANT NAME	MAN*REM	MAN*REM		
FUKUSIMA-5	BWR 9 12. E4 (LUC)		10-4-(4)	71/ 2
FUKUSIMA-4	BWR 10 12. E4 (LUC)		10-4-(4)	71/ 8
TAKAHAMA-2	PWR 23 5.9E4 (LUPC)	1.3E4 (SGTR)	10-29	70/ 5
GENKAI-1	PWR 24 5.5E4 (LUPC)	3.1E4 (SGTR)	10-33,34	70/ 5
DDI -1,2	PWR 26 14. E4 (LUPC)	1.4E4 (SGTR)	10-29	71/ 1
MIHAMA-3	PWR 27 2.7E4 (LUPC)	1.1E4 (SGTR)	10-29	71/ 7
IKATA	PWR 28 6.7E4 (LUPC)	2.4E4 (SGTR)	10-31,32	72/11

MCA HA BWR MSTR FP RELEASE FROM FUEL 43220

(A)=ACTUALLY, MAX. AMOUNT OF FP WHICH LEAK OUT FROM FUEL ROD WITH PIN-HOLE TO COOLANT WITH DECREASING OF PRESSURE AS REACTOR SHUT DOWN, IS (A) CURIE OF I-131.
 (B)=FOR ANALYSIS, LET US ASSUME THAT AMOUNT OF FP WHICH CORRESPOND TO (B) CURIE OF I-131 LEAK OUT FROM FUEL PIN TO REACTOR WATER.
 (C)=THIS AMOUNT(=B) CORRESPOND TO (C1), (C2), AND (C3).
 (C1) CI (AS I-131 EQUIVALENT) OF WHOLE RADIOACTIVE IODINE.
 (C2) CI (AS EFFECTIVE GAMMA ENERGY 0.5MEV) OF HALOGEN EXCEPT IODINE.
 (C3) CI (AS EFFECTIVE GAMMA ENERGY 0.5MEV) OF RARE GAS.

PLANT NAME	(A1)	(B1)	(C1)	(C2)	(C3)		
	(I-131)	(I-131)	IODINE	HALOGEN	RARE GAS		
DNAGAWA	BWR 4						70/ 5
HAMAOKA-1	BWR 5						70/ 5
FUKUSIMA-2,3	BWR 7 20000.	40000.	75000.	1.06E5	8.99E5	89-7-3 P6	71/ 3
SHIMANE	BWR 8	10000.	19000.			89-8-2 P4	71/ 3
FUKUSIMA-5	BWR 9 20000.	40000.	75000.	1.06E5	8.99E5	10-4-(4)	71/ 2
FUKUSIMA-4	BWR 10 20000.	40000.	75000.	1.06E5	8.99E5	10-4-(4)	71/ 8
HAMAOKA-2	BWR 13 20000.	38000.	5.56E5(G)	4.1 E4(G)	4.67E5(G)	10-27	73/ 5
HAMAOKA-2	BWR 13		1.64E5(B)	7.9 E4(B)	3.69E5(B)	10-27	73/ 5

MCA HA BWR MSTR FP GAS RELEASE FROM BUILDING 43240

--RARE GAS-- --HALOGEN-- --IODINE-- --IODINE-- (UNIT CURIE)
 (I-131)

PLANT NAME	MCA	HA	MCA	HA	MCA	HA	MCA	HA			
DNAGAWA	BWR 4	531.	845.	537	813.		27.	71.	10-4-(6)	70/ 5	
HAMAOKA-1	BWR 5	1361.G	2186.G	209.G	349.G	900.G	1475.G	66.	182.	10-32	70/ 5
HAMAOKA-1	BWR 5	1042.B	1633.B	192.B	394.B	316.B	501.B				
FUKUSIMA-5	BWR 9	3020.	5040.	2080.	2620.			121.	193.	10-4-(6)	71/ 2
FUKUSIMA-4	BWR 10	3020.	5040.	2080.	2620.			121.	193.	10-4-(6)	71/ 8
HAMAOKA-2	BWR 13	1390.G	2042.G	175.G	285.G	2900.G	4604.G	173	416	10-28	73/ 5
HAMAOKA-2	BWR 13	1152.B	1671.B	340.B	615.B	842.B	1365.B			10-28	73/ 5

MCA HA PWR SGTR FP GAS RELEASE FROM BUILDING 43250

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MCA HA PWR SGTR FP GAS RELEASE FROM BUILDING 43250

----RARE GAS----- ----IODINE(I-131)---

PLANT NAME	MCA	HA	MCA	HA		
TAKAHAMA-2	PWR 23 25400. CI	64600. CI	56. CI	313. CI	10-27,28	70/ 5
GENKAI-1	PWR 24 26800. CI	74000. CI	61. CI	359. CI	10-31,33	70/ 5
DDI -1,2	PWR 26 28400. CI	68400. CI	59. CI	323. CI	1v 27,28	71/ 1
MIHAMA-3	PWR 27 19100.	53600.	56.	313.	10-27,28	71/ 7
IKATA	PWR 28 19380.	58180.	61.	359.	10-29,31	72/11

BWR MCA BWR MSTR ESTIMATI ON OF IRRADIATION DOSE 43260

ACCIDENT=MAXIMUM CREDIBLE ACCIDENT WITH MAIN STEAM TUBE RUPTURE.
 (A)=IRRADIATION DOSE AT THE POINT WHICH IS ON (A)M RADIUS WITH A CENTER OF (A2)

(T)=INFANTILE THYROID IRRADIATION DOSE IN REM
 (G)=WHOLE BODY GAMMA IRRADIATION DOSE IN REM
 (B)=WHOLE BODY BETA IRRADIATION DOSE IN REM
 (C)=T(=TOTAL), PR(=PRE ISOLATE.-V-CLOSE), PD(=POST ISOLATE.-V-CLOSE)

PLANT NAME	(A1)	(A2)	(T)	(G)	(B)	(C)		
DNAGAWA	BWR 4 600.M REACTOR		11.8 REM	0.0061 REM	0.0203 REM	T	10-4-(6)	70/ 5
HAMAOKA-1	BWR 5 450.M REACTOR		22.0 REM	0.011 REM	0.035 REM	T	10-33	70/ 5
FUKUSIMA-2,3	BWR 7 1000.M REACTOR		35. REM	0.038 REM	0.051 REM	T	89-7-3 P5	71/ 3
SHIMANE	BWR 8		7.8 REM	0.0049 REM	0.011 REM	PR	89-8-2 P6	71/ 3
SHIMANE	BWR 8		3.4 REM	0.0023 REM	0.0069 REM	PD	89-8-2 P7	71/ 3
SHIMANE	BWR 8 820.M REACTOR		11.2 REM	0.0071 REM	0.0179 REM	T	89-8-2 P7	71/ 3
FUKUSIMA-5	BWR 9 650.M REACTOR		45. REM	0.046 REM	0.075 REM	T	10-4-(6)	71/ 2
FUKUSIMA-4	BWR 10 800.M REACTOR		39. REM	0.040 REM	0.060 REM	T	10-4-(6)	71/ 8
HAMAOKA-2	BWR 13 450.M REACTOR		58.(MCA)	0.019(MCA)	0.049(MCA)	1	0-29	73/ 5
HAMAOKA-2	BWR 13		45.(HA)	0.26 (HA)	0.91 (HA)		10-29	73/ 5

MCA HA PWR SGTR ESTIMATI ON OF IRRADIATION DOSE 43270

ACCIDENT(MCA AND HA) WITH STEAM GENERATOR TWIN TUBE RUPTURE (PWR)

(A1)=INFANTILE THYROID IRRADIATION DOSE IN REM
 (A2)=ADULT THYROID IRRADIATION DOSE IN REM
 (B)=WHOLE BODY IRRADIATION DOSE IN REM
 (C)=WHOLE BODY (BETA) IRRADIATION DOSE IN REM

PLANT NAME	(A1)/ (B)/ (C)/ KM	(A2)/ (B)/ (C)/ KM		
TAKAHAMA-2	PWR 23 31./0.24/ 1.5/ 0.8		35.0/0.6 / 3.9/ 0.8	10-27,28 70/ 5
GENKAI-1	PWR 24 29./0.1 / 0.7/ 0.6		34.0/0.3 / 1.6/ 0.6	10-31,33 70/ 5
DDI -1,2	PWR 26 33./0.26/ 1.8/ 0.8		34.0/0.62/ 4.3/ 0.8	10-27,28 71/ 1
MIHAMA-3	PWR 27 17./0.1 / 0.13/0.75		21.0/0.32/ 0.27/0.75	10-27,28 71/ 7
IKATA	PWR 28 33./0.1 / 0.7 /0.7		38.0/0.3 / 1.5 /0.7	10-29,31,32 72/11

BWR HA BWR MSTR ESTIMATI ON OF IRRADIATION DOSE 43280

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BWR HA BWR MSTR ESTIMATI ON OF IRKADIAI ION DOSE 43280

ACCIDENT=HYPOTHETICAL ACCIDENT WITH MAIN STEAM TUBE RUPTURE
 (A)=ADULT THYROID IRRADIATION DOSE IN REM
 (G)=WHOLE BODY GAMMA IRRADIATION DOSE IN REM
 (H)=WHOLE BODY BETA IRRADIATION DOSE IN REM
 (A)/(G) / (B) / KM , (A)/(G) / (B) / KM , (A)/(G) / (B) / KM

PLANT NAME	BWR	4	13./011/042/0.6 , 3.0/006/013/2.0 , 2.0/005/010/5.0	10-4-(7)	70/ 5
DNAGAWA	BWR	4	13./011/042/0.6 , 3.0/006/013/2.0 , 2.0/005/010/5.0	10-4-(7)	70/ 5
FUKUSIMA-5	BWR	9	15./067/103/0.65 , 7.8/035/040/2.0 , 6.8/024/032/5.0	10-4-(6)	71/ 2
HAMAOKA-1	BWR	5	20./016/067/0.45 , / / / / / / / / / / / / / / / /	10-33	70/ 5
FUKUSIMA-2,3	BWR	7	11./053/064/1.0 , 7.8/035/040/2.0 , 6.8/024/032/5.0	89-7-3 P8	71/ 3
SHIMANE	BWR	8	2.0/0049/011 /0.82KM (PRE ISOLATE--VALVE-CLOSE)	89-8-2 P7	71/ 3
SHIMANE	BWR	8	7.9/0087/0273/0.82KM (POST ISOLATE--VALVE-CLOSE)	89-8-2 P8	71/ 3
SHIMANE	BWR	8	9.8/0136/0383/0.82KM (TOTAL)	89-8-2 P8	71/ 3
FUKUSIMA-4	BWR	10	12./058/080/0.80 , 7.8/035/040/2.0 , 6.8/024/032/5.0	10-4-(6)	71/ 8

DISTANCE SITE BOUNDARY AND PLANT CENTER 43500

PLANT NAME	BWR	4	600. M	10-4-(6)	70/ 5
DNAGAWA	BWR	4	600. M	10-4-(6)	70/ 5
HAMAOKA-1	BWR	5	450. M	10-33	70/11
FUKUSIMA-5	BWR	9	650. M	10-4-(6)	71/ 2
FUKUSIMA-4	BWR	10	800. M	10-4-(6)	71/ 8
HAMAOKA-2	BWR	13	450. M	10-29	72/ 9
MIHAMA-1	PWR	21	700. M	/	/
TAKAHAMA-2	PWR	23	800. M	10-28	70/ 5
GENKAI-1	PWR	24	600. M	10-33	70/ 5
TAKAHAMA-1	PWR	25	800. M	/	/
OOI -1,2	PWR	26	800. M	10-28	71/ 1
MIHAMA-3	PWR	27	750. M	10-28	71/ 7
IKATA	PWR	28	700. M	10-27	72/11

ENGINEER 520200

PLANT NAME	BWR	4	44.	28.	3.	1.	4.	19.	8.	3.	107.	5-(2)	70/ 5
DNAGAWA	BWR	4	44.	28.	3.	1.	4.	19.	8.	3.	107.	5-(2)	70/ 5
HAMAOKA-1	BWR	5	54.	56.	3.	4.	12.	24.	13.		169.	5-3	70/ 5
FUKUSIMA-5	BWR	9	80.	55.	15.	5.	8.	25.	11.	3.	202.	5-(3)	71/ 2
FUKUSIMA-4	BWR	10	82.	59.	19.	5.	8.	26.	11.	4.	214.	5-(3)	71/ 8
FUKUSIMA-6	BWR	11	82.	59.	19.	5.	8.	27.	12.	4.	216.	5-(3)	72/ 1
TODKAI-2	BWR	12	71.	38.	21.	17.	11.	5.	7.	3.	173.	5-(4)	72/ 1
HAMAOKA-2	BWR	13	17.	24.				18.	12.	1.	72	5-4 (SITE)	72/ 9
MIHAMA-1	PWR	21	101.	32.	2.			8.			143.	5-5	71/ 8
TAKAHAMA-2	PWR	23	10.	6.	0.	0.	0.	8.	6		30	5-4 (SITE)	70/ 5
TAKAHAMA-2	PWR	23	23.	22.				1.	11.	11.	69.	5-5	71/ 8
TAKAHAMA-2	PWR	23	(153)	(79)	(8)	(3)	(15)	(26)	(23)	(3)	(310)	ALL INC.SITE	70/ 5

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ENGINEER 520200

PLANT NAME	BWR	4	35.	42.	2.	6.	15.	22.	14.		136	5-3	70/ 5	
GENKAI-1	PWR	24	35.	42.	2.	6.	15.	22.	14.		136	5-3	70/ 5	
OOI -1,2	PWR	26	1.	2.				3.			6	5-5 (SITE)	71/ 1	
OOI -1,2	PWR	26	5.	4.				8.			17.	5-5	71/ 8	
OOI -1,2	PWR	26	(161)	(88)	(11)	(3)	(14)	(32)	(27)	(4)	(340)	5-5 INC.SITE	71/ 1	
MIHAMA-3	PWR	27	16.	8.	1.			6.	7.		38.	5-5	71/ 8	
MIHAMA-3	PWR	27	(195)	(97)	(10)	(1)	(13)	(42)	(31)	(2)	(391)	5-5	71/ 8	
IKATA	PWR	28	42	30	8			7	23	19	1	130	5-2	72/11

REACTOR SITE SITUATION AREA 611000

PLANT NAME	BWR	4	NORTH 38.DEG 24.MIN	EAST 141.DEG 30.MIN	1610000.	6-1-(1)	70/ 5
DNAGAWA	BWR	4	NORTH 38.DEG 24.MIN	EAST 141.DEG 30.MIN	1610000.	6-1-(1)	70/ 5
HAMAOKA-1	BWR	5	NORTH 34.DEG 37.MIN	EAST 138.DEG 09.MIN	1600000.	6-1	70/ 5
FUKUSIMA-5	BWR	9	NORTH 37.DEG 25.MIN	EAST 141.DEG 00.MIN	3200000.	6-1-(1)	71/ 2
FUKUSIMA-4	BWR	10	NORTH 37.DEG 25.MIN	EAST 141.DEG 00.MIN	3200000.	6-1-(1)	71/ 8
FUKUSIMA-6	BWR	11	NORTH 37.DEG 25.MIN	EAST 141.DEG 00.MIN	3200000.	6-1-(1)	72/ 1
TODKAI-2	BWR	12	NORTH 36.DEG 27.MIN	EAST 140.DEG 36.MIN	240000.	6-1-(1)	72/ 1
HAMAOKA-2	BWR	13	SAME AS HAMAOKA-1			6-1	72/ 9
MIHAMA-1	PWR	21			500000.	/	/
MIHAMA-2	PWR	22			500000.	/	/
TAKAHAMA-2	PWR	23	NORTH 35.DEG 31.MIN	EAST 135.DEG 31.MIN		6-1	70/ 5
GENKAI-1	PWR	24	NORTH 33.DEG 31.MIN	EAST 129.DEG 50.MIN	800000.	6-64	70/ 5
OOI -1,2	PWR	26	NORTH 35.DEG 32.MIN	EAST 135.DEG 39.MIN		6-1	71/ 1
MIHAMA-3	PWR	27	NORTH 35.DEG 42.MIN	EAST 135.DEG 58.MIN	*560000.	6-1	71/ 9
MIHAMA-3	PWR	27	*AREA IS ADDED BY 60000SQM (INCLUDE WITH MIHAMA-1,2)				71/ 9
IKATA	PWR	28	NORTH 33.DEG 29.MIN	EAST 132.DEG 19.MIN	*750000.	6-70	72/11
IKATA	PWR	28	*AREA INCLUDES (KAIWEN-UMETATE(ABOUT 90000SQM))			6-70	72/11

SITE WATER QUALITY WATER SOURCE 621220

PLANT NAME	BWR	4	(A)=KITAKAMI GAWA(69/8-69/10),(B)=KITAKAMI (69/12-70/2)	6-2-(1)	70/ 5
DNAGAWA	BWR	4	(A)=KITAKAMI GAWA(69/8-69/10),(B)=KITAKAMI (69/12-70/2)	6-2-(1)	70/ 5
HAMAOKA-1	BWR	5	(A)=HAMAOKA SERVICE WATER ,(B)=UNDER GROUND	6-6	70/ 5
FUKUSIMA-5	BWR	9	(A)=MAX,(B)=MIN. (FROM 67/2 TO 68/3)	6-5-(10)	71/ 2
FUKUSIMA-6	BWR	11	(A)=MAX,(B)=MIN. (FROM 67/2 TO 68/3)	6	72/ 1
TODKAI-2	BWR	12	(A)=MAX,(B)=MIN. (FROM 68/4 TO 71/8) AKDGIGAUARA	6-2-(2)	72/ 1
TAKAHAMA-2	PWR	23	(A)=SEKIYA GAWA ,(B)=SEKIYA UNDER GROUND	6-11	70/ 5
GENKAI-1	PWR	24	(A)=SIRE GAWA ,(B)=HAIITA GAWA	6-74	70/ 5
OOI -1,2	PWR	26	(A)=SABURI GAWA ,(B)=SABURI-G UNDER GROUND	6-12	71/ 1
MIHAMA-3	PWR	27	(A)=UTIAI GAWA, (B)=MAJID GAWA, (C)=MAJID UNDER GROUND	6-11-12	71/ 8

SITE WATER QUALITY PH E.CDTVY NIGORIOO 621240

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SITE	WATER QUALITY PH	E.CDTVY NIGRIDO 621240						NIGRIDO			
		---PH---		ELECT.CONDUCTIVITY				(A)	(B)		
		(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)		
ONAGAWA	BWR 4	7.2	7.2	112.	122.	27.0	17.4	PPM	6-2-(1)	70/ 5	
ONAGAWA	BWR 4	7.2	7.1	138.	112.	6.7	29.3	PPM	6-2-(1)	70/ 5	
HAMAOKA-1	BWR 5	6.73	7.16(MEAN)	286.	245.(MEAN)	1.9(MEAN)	1.1	DEG	6-6	70/ 5	
HAMAOKA-1	BWR 5	7.15	7.55(MAX)	300.	257.(MAX)	4.5(MAX)	3.4	DEG	6-6	70/ 5	
HAMAOKA-1	BWR 5	6.61	6.90(MIN)	259.	223.(MIN)	0.0(MIN)	0.3	DEG	6-6	70/ 5	
FUKUSIMA-5	BWR 9	7.6	7.1	81.	55.	3.7	1.0	DEG	6-5-(10)	71/ 2	
FUKUSIMA-6	BWR 11	7.6	7.1	81.	55.	3.7	1.0		6-5-(10)	72/ 1	
TODKAI-2	BWR 12	9.22	7.32	172.5	99.9				6-2-(2)	72/ 1	
TAKAHAMA-2	PWR 23	7.0	6.6	81.	123.	0.24	0.23	PPM	6-11	70/ 5	
GENKAI-1	PWR 24	7.4	7.4	142.	254.	2.1	7.9	PPM	6-74	70/ 5	
DDI -1,2	PWR 26	7.5	6.4		144.	258.	2.0		6-12	71/ 1	
MIHAMA-3	PWR 27	7.1	7.0 6.4	57.	59.	138.	1.0	1.0 1.0	6-11,12	71/ 8	
FUGEN	ATR 81	5.5	8.5(25DEG.C)	.LE.	1.					/	

SITE	WATER QUALITY	HARDNESS ALKALI 621260						ALKALI-TOTAL			
		KOUDD(TOTAL)		KOUDD CALCIUM				(A)	(B)		
		(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)		
ONAGAWA	BWR 4	38.0	40.0	25.0	29.4	15.5	12.9		6-2-(1)	70/ 5	
ONAGAWA	BWR 4	44.2	35.2	34.2	21.8	19.7	13.3		6-2-(1)	70/ 5	
HAMAOKA-1	BWR 5	89.2	79.3(MEAN)			47.9	48.2 (MEAN)		6-6	70/ 5	
HAMAOKA-1	BWR 5	93.4	81.4(MAX)			54.0	50.0 (MAX)		6-6	70/ 5	
HAMAOKA-1	BWR 5	85.0	74.0(MIN)			44.4	41.4 (MIN)		6-6	70/ 5	
FUKUSIMA-5	BWR 9	24.0	15.0						6-5-(10)	71/ 2	
FUKUSIMA-6	BWR 11	24.0	15.0						6-5-(10)	72/ 1	
TODKAI-2	BWR 12	51.5	40.9	29.5	20.0				6-2-(2)	72/ 1	
TAKAHAMA-2	PWR 23	27.7	37.4			26.3	37.2		6-11	70/ 5	
GENKAI-1	PWR 24	47.	88.0			37.0	59.0		6-74	70/ 5	
DDI -1,2	PWR 26	47.1	94.4			50.6	91.5		6-12	71/ 1	
MIHAMA-3	PWR 27			4.0	4.0 6.8				6-11,12	71/ 8	

SITE	WATER QUALITY	SO-4 ION CL ION NH-4 ION 621280						NH-4 ION(PPM NH-4)			
		SO-4 ION(PPM-SO-4)		CL ION(PPM-CL)				(A)	(B)		
		(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)		
ONAGAWA	BWR 4	33.5	38.0	8.9	10.2	0.11	0.14		6-2-(1)	70/ 5	
ONAGAWA	BWR 4	31.5	18.8	11.4	11.4	0.07	0.26		6-2-(1)	70/ 5	
HAMAOKA-1	BWR 5	47.0	40.2(MEAN)	34.6	30.0(MEAN)				6-6	70/ 5	
HAMAOKA-1	BWR 5	54.4	42.0(MAX)	37.4	31.5(MAX)	0.02(MAX)			6-6	70/ 5	
HAMAOKA-1	BWR 5	40.2	32.1(MIN)	32.3	28.3(MIN)				6-6	70/ 5	
FUKUSIMA-5	BWR 9	4.8	TR	5.5	3.1	0.3	TR		6-5-(10)	71/ 2	

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SITE	WATER QUALITY	SO-4 ION CL ION NH-4 ION 621280						NH-4 ION(PPM NH-4)			
		SO-4 ION(PPM-SO-4)		CL ION(PPM-CL)				(A)	(B)		
		(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)		
FUKUSIMA-6	BWR 11	4.8	TR	5.5	3.1	0.3	TR		6-5-(10)	72/ 1	
TODKAI-2	BWR 12			10.9	7.2	0.2	0		6-2-(2)	72/ 1	
TAKAHAMA-2	PWR 23	50.2	6.4	9.47	9.1	0.055	0.097		6-11	70/ 5	
GENKAI-1	PWR 24	13.9	27.4	23.5	39.5	TRACE	TRACE		6-74	70/ 5	
DDI -1,2	PWR 26	8.75	20.5	11.34	18.53	0.275	0.12		6-12	71/ 1	
MIHAMA-3	PWR 27	2.0	2.0	11.1	11.5 22.5	0.008	0.008	TR	6-11,12	71/ 8	

SITE	WATER QUALITY	NO-3 ION NO-2 ION 621420						NH-2 ION(PPM-NH-2)			
		NO-3 ION(PPM-NO-3)						(A)	(B)		
		(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)		
ONAGAWA	BWR 4	0.58	0.64						6-2-(1)	70/ 5	
ONAGAWA	BWR 4	0.59	0.82						6-2-(1)	70/ 5	
HAMAOKA-1	BWR 5	4.6	0.3(MEAN)						6-6	70/ 5	
HAMAOKA-1	BWR 5	6.8	1.3(MAX)	0.02(MAX)					6-6	70/ 5	
HAMAOKA-1	BWR 5	1.9	0.0(MIN)	0.02(MAX)					6-6	70/ 5	
FUKUSIMA-5	BWR 9	0.85	0.3						6-5-(10)	71/ 2	
FUKUSIMA-6	BWR 11	0.85	0.3						6-5-(10)	72/ 1	
TAKAHAMA-2	PWR 23	0.734	0.89						6-11	70/ 5	
GENKAI-1	PWR 24			TRACE	TRACE				6-74	70/ 5	
DDI -1,2	PWR 26	0.883	0.91						6-12	71/ 1	
MIHAMA-3	PWR 27	0.04	0.04	TR					6-11,12	71/ 8	

SITE	WATER QUALITY	SILICA 621440						SILICA ION) PPM AS CaCO3			
		SILICA		(SILICA TOTAL)		(SILICA COLLOID)		(A)	(B)		
		(A)	(B)	(A)	(B)	(A)	(B)	(A)	(B)		
ONAGAWA	BWR 4	16.5	13.8						6-2-(1)	/	
ONAGAWA	BWR 4		15.1						6-2-(1)	/	
HAMAOKA-1	BWR 5	17.5	15.8	(21.0)	(17.3)	(6.0)	(2.5)	(MAX)	6-6	/	
HAMAOKA-1	BWR 5	15.2	15.0	(17.5)	(16.6)	(2.3)	(1.6)	(MEAN)	6-6	/	
HAMAOKA-1	BWR 5	12.9	13.6	(15.1)	(15.8)	(0.0)	(0.9)	(MIN)	6-6	/	
FUKUSIMA-5	BWR 9	40.9	26.7						6-5-(10)	71/ 2	
FUKUSIMA-6	BWR 11	40.9	26.7						6-5-(10)	72/ 1	
TODKAI-2	BWR 12	13.4	4.2						6-2-(2)	72/ 1	
TAKAHAMA-2	PWR 23					0.22	0.28	12.6 6.5	6-11	/	
GENKAI-1	PWR 24					1.3	3.5	14.3 13.9	6-74	/	
DDI -1,2	PWR 26	12.12	18.6						6-12	71/ 1	
MIHAMA-3	PWR 27	12.9	12.2	21.2					6-11,12	71/ 8	

SITE	WATER QUALITY	CATION	ANION	TOTAL	621460
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SITE	WATER QUALITY	CATION	ANION	TOTAL	621460					
PLANT NAME		CATION TOTAL (A)	(B)	ANION TOTAL (A)	(B)	PPM AS CaCO3				
HAMAOKA-1	BWR	5	139.1	116.6	172.4	140.5(MEAN)	6-6	70/ 5		
HAMAOKA-1	BWR	5	144.7	121.0	195.0	147.1(MAX)	6-6	70/ 5		
HAMAOKA-1	BWR	5	127.7	109.9	161.3	134.0(MIN)	6-6	70/ 5		
TAKAHAMA-2	PWR	23	43.1	56.3	64.3	89.8	6-11	70/ 5		
GENKAI-1	PWR	24	75.0	137.0	98.0	159.0	6-74	70/ 5		
OOI -1,2	PWR	26	67.4	127.0	78.3	127.1	6-12	71/ 1		
MIHAMA-3	PWR	27	24.4	24.4	73.9	39.8	40.6	148.9	6-11,12	71/ 8

SITE	WATER QUALITY	FE TOTAL	621480								
PLANT NAME		FE-TOTAL PPM AS FE (A)	(B)	NA-METAL PPM AS NA (A)	(B)	K-METAL PPM AS K (A)	(B)	NA+K METAL PPM AS CaCO3 (A)	(B)		
ONAGAWA	BWR	4	1.39	2.11				6-2-(1)	70/ 5		
ONAGAWA	BWR	4	0.46	1.07				6-2-(1)	70/ 5		
HAMAOKA-1	BWR	5	0.36	0.21			45.5	37.1(MEAN)	6-6	70/ 5	
HAMAOKA-1	BWR	5	0.85	0.33			53.9	40.8(MAX)	6-6	70/ 5	
HAMAOKA-1	BWR	5	0.04	0.11			37.7	31.6(MIN)	6-6	70/ 5	
FUKUSIMA-5	BWR	9	0.031	TR	(12.9)	9.4	1.2	0.5	10N	6-5-(10)	71/ 2
FUKUSIMA-6	BWR	11	0.031	TR	(12.9)	9.4	1.2	0.5	10N	6-5-(10)	72/ 1
TOOKAI-2	BWR	12	0.51	0.17						5-2-(2)	72/ 1
TAKAHAMA-2	PWR	23	0.22	0.372	6.4	7.68	0.71	0.875		6-11	70/ 5
GENKAI-1	PWR	24	0.76	0.27	11.8	20.5	1.1	2.5		6-74	70/ 5
OOI -1,2	PWR	26	4.07	28.5	9.1	13.8	1.22	4.28		6-12	71/ 1
MIHAMA-3	PWR	27	0.1	0.1	1.2					6-11,12	71/ 8

SITE	WATER QUALITY	621620									
PLANT NAME		CALCIUM ION PPM AS CaCO3 (A)	(B)	MG ION PPM AS CaCO3 (A)	(B)	SOLID PPM (A)	(B)	CONSUM. OXYGEN PPM AS O (A)	(B)		
ONAGAWA	BWR	4				104.	92.	2.30	2.10	6-2-(1)	70/ 5
ONAGAWA	BWR	4				126.	126.	2.49	1.02	6-2-(1)	70/ 5
HAMAOKA-1	BWR	5	33.0	29.6	46.8	43.2		0.2	0.3(MIN)	6-6	70/ 5
HAMAOKA-1	BWR	5	37.2	33.3	51.4	46.2		1.0	0.3(MEAN)	6-6	70/ 5
HAMAOKA-1	BWR	5	39.4	38.2	54.0	48.4		1.6	1.3(MAX)	6-6	70/ 5
FUKUSIMA-5	BWR	9	19.6	10.2	5.4	1.7	118.	22.		6-5-(10)	71/ 2
FUKUSIMA-6	BWR	11	19.6	10.2	5.4	1.7	118.	22.		6-5-(10)	72/ 1
TOOKAI-2	BWR	12					282.	70.	5.00	6-2-(2)	72/ 1

POPULATION FROM 1KM RADIUS TO 15KM RADIUS 641200

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POPULATION FROM	1KM RADIUS	TO 15KM RADIUS	641200								
PLANT NAME		LE 1KM	LE 2KM	LE 3KM	LE 5KM	LE 10KM	LE 15KM (RADIUS)				
JPDR-2	BWR	2	0.	973.	3271.	12931.	80212.	233160.	70/11		
ONAGAWA	BWR	4			1850.	2991.	28797.	66512.	6-4-(1)69/7	70/ 5	
HAMAOKA-1	BWR	5	40.	1900.		16949.	60499.	98917.	6-35	69/7	70/ 5
FUKUSIMA-5	BWR	9				10765.	35213.	53083.	6-4-(1)	71/ 2	
FUKUSIMA-4	BWR	10				9579.	35314.	50225.	6-4-(1)	71/ 8	
FUKUSIMA-6	BWR	11				9241.	35934.	52539.	6-4-(1)	72/ 1	
TOOKAI-2	BWR	12				37411.	142099.	404005.	6-4-(1)	72/ 1	
HAMAOKA-2	BWR	13		(S46-11 GENZAI)		17388.	61617.	102629.	6-37	72/ 9	
HAMAOKA-2	BWR	13		(S47-3 GENZAI)		17558.	61738.	102913.	6-37	73/ 5	
MIHAMA-1	PWR	21		595.	595.	700.	7603.	64946.	6-94	66/11	
TAKAHAMA-2	PWR	23				4992.	19915.	77510.	6-121	70/ 5	
GENKAI-1	PWR	24				7395.	36846.	91405.	6-87	70/ 5	
OOI -1,2	PWR	26	0.	412.	670.	981.	38053.		6-100	71/ 1	
MIHAMA-3	PWR	27	0.	784.	784.	873.	5183.	62088.	6-80	71/ 8	
IKATA	PWR	28		1791.	3651.	7982.	22534.	70783.	6-92	72/11	

POPULATION FROM	20KM RADIUS	TO 30KM RADIUS	641400			
PLANT NAME		LE 20KM	LE 30KM			
JPDR-2	BWR	2	377289.		70/11	
ONAGAWA	BWR	4		231092.	6-4-(1)69/7	70/ 5
HAMAOKA-1	BWR	5	175836.		6-35	70/ 5
FUKUSIMA-5	BWR	9		134027.	6-4-(1)	71/ 2
FUKUSIMA-4	BWR	10		134747.	6-4-(1)	71/ 8
FUKUSIMA-6	BWR	11		130255.	6-4-(1)	72/ 1
TOOKAI-2	BWR	12	627879		6-4-(1)	72/ 1
HAMAOKA-2	BWR	13	176499.	(S46-11 GENZAI)	6-37	72/ 9
HAMAOKA-2	BWR	13	178441.	(S47-3 GENZAI)	6-37	73/ 5
MIHAMA-1	PWR	21	78148.		6-94	66/11
TAKAHAMA-2	PWR	23	113743.		6-121	70/ 5
GENKAI-1	PWR	24	137661.		6-87	70/ 5
OOI -1,2	PWR	26	47063.		6-100	71/ 1
MIHAMA-3	PWR	27	73215.		6-80	71/ 8
IKATA	PWR	28	99804.	(S46-9 GENZAI)	6-92	72/11

RATED	OUTPUT PER	REACTOR	MWT	MWE	731100	
PLANT NAME					(D)=SELF-CONSUMPTION	(E)=NET EFFICIENCY
		(A)	(B)	(C)	(D)	(E)
		GRUSS HEAT (MWT)	GRUSS ELECT. (MWE)	NET ELECT. (MWE)	SELF-CONSUMP (O/O)	NET EFFI. (O/O)
JPDR-1	BWR	1	45.	12.5		

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RATED	OUTPUT	PER	REACTOR	MWT	MWE	731100		
				(D)=SELF-CONSUMPTION	(E)=NET EFFICIENCY			
				(A)	(B)	(C)	(D)	(E)
				GROSS	GROSS	NET	SELF-	NET
				HEAT	ELECT.	ELECT.	CONSUMP	EFFI.
				(MWT)	(MWE)	(MWE)	(O/O)	(O/O)
PLANT NAME								
JPDR-2	BWR	2		90.	12.5			/
TSURUGA	BWR	3		968.4*	322.41*		R-9	66/ 8
TSURUGA	BWR	3		1070.	357.025		80-3-3	70/ 5
TSURUGA	BWR	3	(1)	POWER-UP	MITI SINSEI 70/6.	1970/9/21(65-BUKAI) OK		/
ONAGAWA	BWR	4		1593.	524.		8-14-(3)	70/ 5
HAMADOKA-1	BWR	5		1593.	540.		2-1	70/ 5
FUKUSIMA-1	BWR	6		1380.	460.		70/6/20	70/ 5
FUKUSIMA-2,3	BWR	7		2381.	780.		70/6/20	70/ 5
SHIMANE	BWR	8		1380.	460.		70/6/20	70/ 5
FUKUSIMA-5	BWR	9		2381.	784.		2-1-(1)	71/ 2
FUKUSIMA-4	BWR	10		2381.	784.		2-1-(1)	71/ 8
HAMADOKA-2	BWR	13		2436.	840.		2-1	72/ 9
MIHAMA-1	PWR	21		1031.	340.			/
MIHAMA-2	PWR	22		1456.	500.		6783-5	70/10
TAKAHAMA-2	PWR	23		2440.	826.		80-9-1	70/ 5
GENKAI-1	PWR	24		1650.	559.		6783-5	70/10
TAKAHAMA-1	PWR	25		2440.	826.		8-15	71/ 1
ODI -1,2	PWR	26		3423.	1175.		8-15	71/ 8
MIHAMA-3	PWR	27		2440.	826.		8-18	72/11
IKATA	PWR	28		1650.	566.			/
HALDEN	BWR	51		.	-----		A-2	70/ 5
VERMONT YANKEE	BWR	52		1593.	537.		GSK-19	69/ 2
ROBINS FERRY	BWR	53		3293.	.		R-9	66/ 8
MILLSTON	BWR	54		1727.	.		DNR V4 P91	61/
DRESDEN-1	BWR	55		626.	192.8			/
DRESDEN-2	BWR	56		2255.	752.		DNR V4 P189	66/ 8
OYSTER CREEK	BWR	57		1600.*	540.*		R-9	66/ 8
OYSTER CREEK	BWR	57		1950.	670.			/
OYSTER CREEK	BWR	57	(1)	POWER-UP				/
DUANE ARNOLD	BWR	58		1593.	574.		A-2	70/ 7
YANKEE		69		485.	150.		DNR V4 P33	61/
SAXTON		70		20.	4.		DNR V4 P47	61/
HURLINGTON	PWR	71		3083.			GSK-19	69/ 2
TURKEY POINT-3,4	PWR	72		2200.	688.		BK80-4 P1	71/ 9
H.B.ROBINSON-2	PWR	73		2200.	700.		BK80-4 P1	71/ 9
SURRY-1,-2	PWR	74		2449.	822.6		BK80-4 P1	71/ 9
BEAVER VALLEY	PWR	75		2660.	847.		BK80-4 P1	71/ 9
NORTH ANNA-12	PWR	76		2660.	800.		BK80-4 P2	71/ 9
JOSEPH W.FARLEY	PWR	77		2660.	861.		BK80-4 P2	71/ 9
FUGEN	ATR	81		557.	165.			/

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REACTOR	OUTPUT	POWER	ELECTRIC AL	MWE	731120		
JPDR-1	BWR	1		12.5 MWE			/
JPDR-2	BWR	2		12.5 MWE			70/ 8
TSURUGA	BWR	3		322.41*MWE	357.025MWE	POWER UP MITI SINSEI 70/6,	R-9
TSURUGA	BWR	3		357.025MWE*	1970/9/21(65-BUKAI) OK		80-3-3
TSURUGA	BWR	3		357. MWE			KUGE
ONAGAWA	BWR	4		524. MWE			2-1-(1)
HAMADOKA-1	BWR	5		540. MWE			2-1
FUKUSIMA-1	BWR	6		460. *MWE			70/ 5
FUKUSIMA-1	BWR	6		461. MWE			KUGE
FUKUSIMA-2,3	BWR	7		780. MWE			71/ 1
SHIMANE	BWR	8		460. MWE			70/ 5
FUKUSIMA-5	BWR	9		784. MWE			2-1-(1)
FUKUSIMA-4	BWR	10		784. MWE			2-1-(1)
MIHAMA-1	PWR	21		340. MWE			/
MIHAMA-2	PWR	22		500. MWE			6783-5
TAKAHAMA-2	PWR	23		826. MWE			80-9-1
GENKAI-1	PWR	24		559. MWE			80-9-1
TAKAHAMA-1	PWR	25		826. MWE			6783-5
ODI -1,2	PWR	26		1175. MWE			2-1
MIHAMA-3	PWR	27		826. MWE			2-1
IKATA	PWR	28		566. MWE			
VERMONT YANKEE	BWR	52		537. MWE			A-2
DRESDEN-1	BWR	55		192.8 MWE			DNR V4 P91
DRESDEN-2	BWR	56		752. MWE			R-9
OYSTER CREEK	BWR	57		540.* MWE	670.MWE	POWER UP	R-9
DUANE ARNOLD	BWR	58		574. MWE			A-2 P6
YANKEE		69		150. MWE			DNR V4 P33
SAXTON		70		4. MWE			DNR V4 P47
TURKEY POINT-3,4	PWR	72		688. MWE			BK80-4 P1
H.B.ROBINSON-2	PWR	73		700. MWE			BK80-4 P1
SURRY-1,-2	PWR	74		822.6 MWE			BK80-4 P1
BEAVER VALLEY	PWR	75		847. MWE			BK80-4 P1
NORTH ANNA-12	PWR	76		800. MWE			BK80-4 P2
JOSEPH W.FARLEY	PWR	77		861. MWE			BK80-4 P2
FUGEN	ATR	81		165. MWT			70/11

REACTOR	CORE	COOLANT	FLOW	RATE	T/H	731140		
				-----TOTAL FLOW-----				
								EFFECTIVE FLOW FOR HEAT TRANSFER
JPDR-1	BWR	1		1860.	T/H			/
JPDR-2	BWR	2		3260.	T/H			70/ 8
TSURUGA	BWR	3		17700.	T/H			80-3-3 P6
ONAGAWA	BWR	4		22500.	T/H			8-3-(2)
HAMADOKA-1	BWR	5		22900.	T/H			8-10,8114
FUKUSIMA-1	BWR	6		21800.	T/H			R-9

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REACTOR	CORE	COOLANT	FLDN	RATE	T/H	731180			
PLANT NAME		-----TOTAL FLOW-----				EFFECTIVE FLOW FOR HEAT TRANSFER			
	FUKUSIMA-2,3	BWR	7	33800.	T/H		70/6/20	70/ 6	
	SHIMANE	BWR	8	21800.	T/H		70/6/20	70/ 6	
	FUKUSIMA-5	BWR	9	33800.	T/H		8-3-(2)	71/ 2	
	FUKUSIMA-4	BWR	10	33800.	T/H		8-3-(2)	71/ 8	
	FUKUSIMA-6	BWR	11	48300.	T/H		8-3-(2)	72/ 1	
	TOOKAI-2	BWR	12	48300.	T/H		8-3-(2)	72/ 1	
	HAMAOKA-2	BWR	13	35600.	T/H		8-8	72/ 9	
	MIHAMA-1	PWR	21	23500	T/H		8-14	66/11	
	MIHAMA-1	PWR	21	23300.	T/H (= 51.3E6 LB/H)	21818. T/H(48.1E6 LB/H)	HK80-4 P2	71/ 9	
	MIHAMA-2	PWR	22	30000.	T/H (= 66.0E6 LB/H)	27578. T/H(60.8E6 LB/H)	HK80-4 P2	71/ 9	
	TAKAHAMA-2	PWR	23	45000.	T/H	454000. T/H	8-49,8-130,	70/ 5	
	TAKAHAMA-2	PWR	23	45000.	T/H (=100.0E6 LB/H)	*41276. T/H(91.0E6 LB/H)	HK80-4 P2	71/ 9	
	GENKAI-1	PWR	24	30000.	T/H		8-50	70/ 5	
	TAKAHAMA-1	PWR	25	45000.	T/H (=100.0E6 LB/H)	*41276. T/H(91.0E6 LB/H)	HK80-4 P2	71/ 9	
	DUI -1,2	PWR	26	60100.	T/H		8-133	71/ 1	
	MIHAMA-3	PWR	27	45000.	T/H (=100.0E6 LB/H)	43318. T/H(95.5E6 LB/H)	HK80-4 P2	71/ 9	
	IKATA	PWR	28	30000.	T/H		8-18	72/11	
	VERMONT YANKEE	BWR	52	21800.	T/H		A-2	70/ 5	
	BROWNS FERRY	BWR	53	45178.	T/H		GSK	69/ 2	
	MILLSTON	BWR	54	31300.	T/H		R-9	66/ 8	
	DRESDEN-1	BWR	55	11600.	T/H		DNR V4 P94	62/	
	DRESDEN-2	BWR	56	44500.	T/H		R-9	66/ 8	
	OYSTER CREEK	BWR	57	27700.	T/H		R-9	66/ 8	
	DUANE ARNOLD	BWR	58	22900.	T/H		A-2 P1	70/ 7	
	YANKEE	BWR	59	19010.	T/H		DNR V4 P36	61/	
	SAXTON	BWR	70	1270.	T/H		DNR V4 P50	61/	
	BURLINGTON	PWR	71	55247.	T/H		GSK-19	69/ 2	
	TURKEY POINT-3,4	PWR	72	46039.	T/H (=101.5E6 LB/H)	43998. T/H(=97.0E6 LB/H)	HK80-4 P1	71/ 9	
	H.B.ROBINSON-2	PWR	73	46039.	T/H (=101.5E6 LB/H)	43998. T/H(=97.0E6 LB/H)	HK80-4 P1	71/ 9	
	SURRY-1,2	PWR	74	45677.	T/H (=100.7E6 LB/H)	43635. T/H(=96.2E6 LB/H)	HK80-4 P1	71/ 9	
	BEAVER VALLEY	PWR	75	45677.	T/H (=100.7E6 LB/H)	43635. T/H(=96.2E6 LB/H)	HK80-4 P1	71/ 9	
	NORTH ANNA-12	PWR	76	45677.	T/H (=100.7E6 LB/H)	43635. T/H(=96.2E6 LB/H)	HK80-4 P2	71/ 9	
	FUGEN	ATR	81	7600.	T/H		105-8-3-(2)	73/11	
	JOSEPH M.FARLEY	PWR	77	45677.	T/H (=100.7E6 LB/H)	43635. T/H(=96.2E6 LB/H)	HK80-4 P2	71/ 9	
	MONJU	FAST	92	70.2	T/H / ONE ASSY(MAX)		GAKKAI5143P	72/ 5	

CORE INLET SUBCOOL KCAL/KG 731160

JPDR-1	BWR	1	3.06	KCAL/KG			
JPDR-2	BWR	2	7.8	KCAL/KG			
TSURUGA	BWR	3	11.1*	KCAL/KG		R-9	66/ 8
TSURUGA	BWR	3	11.7	KCAL/KG		80-3-3	70/ 5
ONAGAWA	BWR	4	15.0	KCAL/KG		8-14-(10)	70/ 5
HAMAOKA-1	BWR	5	15.8	KCAL/KG		8-10,8-114	70/ 5

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REACTOR	CORE	INLET	SUBCOOL	KCAL/KG	731160		
	FUKUSIMA-1	BWR	6	11.8*	KCAL/KG	R-9	/
	FUKUSIMA-1	BWR	6	12.9	KCAL/KG	KUGE	71/ 1
	FUKUSIMA-5	BWR	9	13.2	KCAL/KG	8-3-(2)	71/ 2
	FUKUSIMA-4	BWR	10	13.2	KCAL/KG	8-3-(2)	71/ 8
	FUKUSIMA-6	BWR	11	11.2	KCAL/KG	8-3-(2)	72/ 1
	TOOKAI-2	BWR	12	11.2	KCAL/KG	8-3-(2)	72/ 1
	HAMAOKA-2	BWR	13	11.5	KCAL/KG	8-8	72/ 9
	VERMONT YANKEE	BWR	52	15.1	KCAL/KG	A-2 P1	70/ 7
	BROWNS FERRY	BWR	53	14.1	KCAL/KG	GSK-19	69/ 2
	MILLSTON	BWR	54	11.7	KCAL/KG	R-9	66/ 8
	DRESDEN-2	BWR	56	11.5	KCAL/KG	R-9	66/ 8
	OYSTER CREEK	BWR	57	11.7	KCAL/KG	R-9	66/ 8
	DUANE ARNOLD	BWR	58	13.6	KCAL/KG	A-2 P1	70/ 7
	BURLINGTON	PWR	71	82.1	KCAL/KG	GSK-19	69/ 2

REACTOR BWR CORE COOLANT INLET OUTLET TEMP. 731180

PLANT NAME	FEED-WATER TEMPERATURE	CORE-INLET TEMPERATURE	CORE-OUTLET STEAM TEMP	PRESS. VESSEL OUTLET-TEMP
JPDR-1	BWR 1 127. DEG C	272. DEG C	277. DEG C	70/ 8
JPDR-2	BWR 2 101. DEG C	271. DEG C	277. DEG C	70/ 8
TSURUGA	BWR 3 *184. DEG C	*277.5 DEG C		R-9 (REV.0)
TSURUGA	BWR 3 189. DEG C	SEE SUB COOL	285.4 DEG C	80-3-3 P20
ONAGAWA	BWR 4 188.8 DEG C	SEE SUB COOL	286. DEG C	8-3-(3)
HAMAOKA-1	BWR 5 188.8 DEG C	SEE SUB COOL	286. DEG C	8-10,8-114
FUKUSIMA-1	BWR 6 176.7 DEG C	277. DEG C	285.4 DEG C	R-9
FUKUSIMA-5	BWR 9		286. DEG C	66/ 8
FUKUSIMA-4	BWR 10		286.0 DEG C	8-3-(2)
FUKUSIMA-6	BWR 11 215.6 DEG C	SEE SUB COOL	286. DEG C	8-3-(2)
TOOKAI-2	BWR 12 215.6 DEG C	SEE SUB COOL	286. DEG C	8-3-(2)
HAMAOKA-2	BWR 13	SEE SUB COOL	286.0 DEG C	72/ 9
VERMONT YANKEE	BWR 52 188.8 DEG C			8-8
BROWNS FERRY	BWR 53 191. DEG C		285.7 DEG C	A-2
DRESDEN-1	BWR 55	262.2 DEG C	285.9 DEG C	GSK-19
DRESDEN-2	BWR 56	269.6 DEG C		DNR V4 P94
DRESDEN-2	BWR 56	277.2 DEG C	286.1 DEG C	62/
DUANE ARNOLD	BWR 58 215.6 DEG C			R-9
FUGEN	ATR 81	277. DEG C	284. DEG C	A-2 P1
				105-8-3-(2)

REACTOR PWR CORE COOLANT INLET OUTLET TEMP. 731190

PLANT NAME	NOMINAL/MAXIMUM	CORE INLET TEMP. NOMINAL/	CORE OUTLET TEMP. MEAN /HOT CHANNEL NOMINAL
MIHAMA-1	PWR 21 294.2 / 296.4 C	322. /	344.8 C

BK80-4 P2,4 71/ 9

REACTOR	PWR	CORE	CORLANT	INLET	OUTLET	TEMP.	731190						
				CORE INLET TEMP.		CORE OUTLET TEMP.							
				NOMINAL/MAXIMUM		MEAN /HOT CHANNEL							
						NOMINAL / NOMINAL							
MIHAMA-2	PWR	22		289.0	/	291.2	C	324.	/	342.5	C	HK80-4 P2,4	71/ 9
TAKAHAMA-2	PWR	23		287.2	/	289.4	C	322.	/	343.	C	HK80-4 P2,4	71/ 9
GENKAI-1	PWR	24		288.	/		C	323.	/		C	8-16	70/ 5
TAKAHAMA-1	PWR	25		287.2	/	289.4	C	322.	/	343.	C	HK80-4 P2,4	71/ 9
DDI -1,2	PWR	26		289.	/		C	325.	/		C	8-15	71/ 1
MIHAMA-3	PWR	27		287.2	/	289.4	C	322.	/	343.	C	HK80-4 P2,4	71/ 9
IKATA	PWR	28		288.0	/		C	323.	/		C	8-18	72/11
YANKEE	PWR	59		258.	/		C	278.	/		C (AT 485.MMT)	DNR V4 P36	61/
SAXTON	PWR	70		271.1	/		C	282.2	/		C	DNR V4 P50	61/
BURLINGTON	PWR	71		285.	/		C	321.1	/		C	GSK-19	69/ 2
TURKEY POINT-3,4	PWR	72		285.7	/	287.9	C		/	338.9	C	HK80-4 P1,3	71/ 9
H.B.ROBINSON-2	PWR	73		285.7	/	287.9	C		/	338.9	C	HK80-4 P1,3	71/ 9
SURRY-1,-2	PWR	74		283.9	/	286.1	C		/	338.9	C	HK80-4 P1,3	71/ 9
REAVEN VALLEY	PWR	75		283.9	/	286.4	C		/	340.3	C	HK80-4 P1,3	71/ 9
NORTH ANNA-12	PWR	76		283.9	/	286.4	C		/	340.3	C	HK80-4 P2,4	71/ 9
JOSEPH W.FARLEY	PWR	77		283.9	/	286.4	C		/	340.3	C	HK80-4 P2,4	71/ 9
MUNJU	FAST	92						390.	DEG C	540.	DEG C	GAKKATSU43P	72/ 5

CORE	OUTLET	STEAM	QUALITY	AND	VOID	RATIO	731200		
JPDR-1	HWR	1	SQ= 4.7	WT.PC.			VR=27.	VOL.PC.	/
JPDR-2	HWR	2	SQ= 4.36(100)*	5.45(125)			VR=16.1	VOL.PC.	/
TSURUGA	HWR	3	SQ=10.0*	WT.PC.			VR=31.	VOL.PC.	R-9
TSURUGA	HWR	3	SQ=11.0	WT.PC.			VR=36.5	VOL.PC.(CORE MEAN)	80-3-3
ONAGAWA	HWR	4	SQ=12.9	WT.PC.					8-14-(10)
HAMAOKA-1	BWR	5	SQ=13.0	WT.PC.			VR=37.	VOL.PC.	8-10
FUKJSIMA-1	HWR	6	SQ=10.0*	WT.PC.					R-9
FUKJSIMA-1	HWR	6	SQ=11.0	WT.PC.					KUGL
FUKJSIMA-5	HWR	9	SQ=13.3	WT.PC.			VR=36.8	VOL.PC.	8-3-(2)
FUKJSIMA-4	HWR	10	SQ=13.3	WT.PC.			VR=36.8	VOL.PC.	8-3-(2)
FUKJSIMA-6	BWR	11	SQ=13.5	WT.PC.			VR=38.0	VOL.PC.	8-3-(2)
TOOKAI-2	HWR	12	SQ=13.5	WT.PC.			VR=38.0	VOL.PC.	8-3-(2)
HAMAOKA-2	BWR	13	SQ=13.2	WT.PC.					8-8
VERMONT YANKEE	HWR	52	SQ=13.6	WT.PC.					A-2 P1
BROWNS FERRY	HWR	53	SQ=13.6	WT.PC.			VR=37.3(MEAN)*	75.4(CR.MAX)	GSK-19
MILLSTON	HWR	54	SQ= 9.97	WT.PC.					R-9
DRESDEN-2	HWR	56	SQ= 9.9	WT.PC.					R-9
OYSTER CREEK	HWR	57	SQ= 9.8	WT.PC.(REF.PINW.UP)					R-9
OYSTER CREEK	HWR	57	SQ=12.1	WT.PC.(AFT.PINW.UP)					/
DUANE ARNOLD	HWR	58	SQ=14.3	WT.PC.					A-2 P1

PLANT	PRESSURE	731220
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PLANT	PRESSURE	731220		
JPDR-1	HWR	1	61.5	KG/SWCMG
JPDR-2	HWR	2	61.5	KG/SWCMG
TSURUGA	HWR	3	70.3	KG/SWCMG
ONAGAWA	HWR	4	70.7	KG/SWCMG
HAMAOKA-1	BWR	5	70.7	KG/SWCMG
FUKJSIMA-1	BWR	6	70.7	KG/SWCMG
FUKJSIMA-2,3	HWR	7	70.7	KG/SWCMG
SHIMANE	BWR	8	70.7	KG/SWCMG
FUKJSIMA-5	BWR	9	70.7	KG/SWCMG
FUKJSIMA-4	BWR	10	70.7	KG/SWCMG
FUKJSIMA-6	BWR	11	70.7	KG/SWCMG
TOOKAI-2	BWR	12	70.7	KG/SWCMG
HAMAOKA-2	BWR	13	70.7	KG/SWCMG
MIHAMA-1	PWR	21	158.	KG/SWCMG
MIHAMA-2	PWR	22	157.	KG/SWCMG
TAKAHAMA-2	PWR	23	157.	KG/SWCMG
GENKAI-1	PWR	24	157.	KG/SWCMG
TAKAHAMA-1	PWR	25	157.	KG/SWCMG
DDI -1,2	PWR	26	157.	KG/SWCMG
MIHAMA-3	PWR	27	157.	KG/SWCMG
IKATA	PWR	28	157.	KG/SWCMG
VERMONT YANKEE	BWR	52	70.7	KG/SWCMG
BROWNS FERRY	HWR	53	70.3	KG/SWCMG
MILLSTON	HWR	54	70.3	KG/SWCMG
DRESDEN-1	HWR	55	70.505	KG/SWCMG
DRESDEN-1	HWR	55	70.365	KG/SWCMG
DRESDEN-1	HWR	55	68.610	KG/SWCMG
DRESDEN-2	HWR	56	70.36	KG/SWCMG
DRESDEN-2	HWR	56	70.3	KG/SWCMG
OYSTER CREEK	HWR	57	70.3	KG/SWCMG
DUANE ARNOLD	BWR	58	70.7	KG/SWCMG
YANKEE	PWR	69	139.6	KG/SWCMG
YANKEE	PWR	69	137.2	KG/SWCMG
SAXTON	PWR	70	139.6	KG/SWCMG
SAXTON	PWR	70	0.457	KG/SWCM
SAXTON	PWR	70	1.05	KG/SWCM
BURLINGTON	PWR	71	157.3	KG/SWCMG
TURKEY POINT-3,4	PWR	72	157.	KG/SWCMG
H.B.ROBINSON-2	PWR	73	157.	KG/SWCMG
SURRY-1,-2	PWR	74	157.	KG/SWCMG
REAVEN VALLEY	PWR	75	157.	KG/SWCMG
NORTH ANNA-12	PWR	76	157.	KG/SWCMG
JOSEPH W.FARLEY	PWR	77	157.	KG/SWCMG
FUGEN	ATR	91	68.	KG/SWCMG

REACTOR	CURE	SIZE	DIA	HEIGHT	731240
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REACTOR CORE	SIZE	DIA	HEIGHT	731240		
PLANT NAME	(NOTE 1)=CIRCUMSCRIBED CORE DIAMETER					
JPDR-1	BWR	1	127. CM	DIA	* 147. CM HEIGHT	70/ 8
JPDR-2	BWR	2	127. CM	DIA	* 147. CM HEIGHT	70/ 8
TSURUGA	BWR	3	301.8 301.752 CM	DIA	* 365.8 CM HEIGHT	8-9 66/ 8
ONAGAWA	BWR	4	328. CM	DIA	* 366. CM HEIGHT	8-3-(2) 70/ 5
HAMAOKA-1	BWR	5	328. CM*	DIA	* 366. CM HEIGHT	8-10 70/ 5
HAMAOKA-1	BWR	5	330. CM	DIA	* 366. CM HEIGHT	85-4-2 70/11
FUKJISIMA-1	BWR	6	344. CM	DIA	* 366. CM HEIGHT	/
FUKJISIMA-2,3	BWR	7	403. 402.59 CM	DIA	* 366. CM HEIGHT	82-2-3 70/ 8
SHIMANE	BWR	8	344. CM	DIA	* 366. CM HEIGHT	/
FUKJISIMA-5	BWR	9	403. CM	DIA	* 366. CM HEIGHT	8-3-(2) 71/ 2
FUKJISIMA-4	BWR	10	403. CM	DIA	* 366. CM HEIGHT	8-3-(2) 71/ 8
FUKJISIMA-6	BWR	11	475. CM	DIA	* 366. CM HEIGHT	8-3-(2) 72/ 1
TODOKAI-2	BWR	12	475. CM	DIA	* 366. CM HEIGHT	8-3-(2) 72/ 1
HAMAOKA-2	BWR	13	407. CM	DIA	* 366. CM HEIGHT	8-8 72/ 9
MIHAMA-1	BWR	21	247. CM	DIA	* 305. CM HEIGHT	/
MIHAMA-2	PWR	22	247. CM	DIA	* 365.8 CM HEIGHT	HK80-4 P6 71/ 9
TAKAHAMA-2	PWR	23	304. CM	DIA	* 366. CM HEIGHT	8-121 70/ 5
GENKAI-1	PWR	24	246. CM	DIA	* 366. CM HEIGHT	70/ 5
TAKAHAMA-1	PWR	25	303.5 CM	DIA	* 365.8 CM HEIGHT	HK80-4 P6 71/ 9
ODI -1,2	PWR	26	337. CM	DIA	* 366. CM HEIGHT	8-15 71/ 1
MIHAMA-3	PWR	27	304. CM	DIA	* 366. CM HEIGHT	8-15 71/ 8
IKATA	PWR	28	246. CM	DIA	* 366. CM HEIGHT	8-18 72/11
VERMONT YANKEE	BWR	52	330. CM	DIA	* 366. CM HEIGHT	A-2 70/ 5
BROWNS FERRY	BWR	53	475. CM	DIA	* 365.8 CM HEIGHT	GSK-19 69/ 2
MILLSTON	BWR	54	449.8 CM	DIA	* 365.8 CM HEIGHT	R-9 66/ 8
DRESDEN-1	BWR	55	327.4 CM (NOTE 1)	DIA	* 269.2 CM HEIGHT	DNR V4 P91 62/
DRESDEN-2	BWR	56	462.8 CM	DIA	* 365.8 CM HEIGHT	R-9 66/ 8
DRESDEN-2	BWR	56	481.8 CM (NOTE 1)	DIA	* 365.8 CM HEIGHT	DNR V7 P192 68/
OYSTER CREEK	BWR	57	396.2 CM	DIA	* 365.8 CM HEIGHT	R-9 66/ 8
DUANE ARNOLD	BWR	58	330. CM	DIA	* 366. CM HEIGHT	A-2 P1 70/ 7
YANKEE		69	190.5 CM	DIA	* 233.7 CM HEIGHT	DNR V4 P33 61/
SAXTON		70	71.1 CM	DIA	* 91.4 CM HEIGHT	DNR V4 P47 61/
HURLINGTON	PWR	71	339.5 CM	DIA	* 365.8 CM HEIGHT	GSK-19 69/ 2
TURKEY POINT-3,4	PWR	72	303.5 CM	DIA	* 365.8 CM HEIGHT	HK80-4 P5 71/ 9
H.B.ROBINSON-2	PWR	73	303.5 CM	DIA	* 365.8 CM HEIGHT	HK80-4 P5 71/ 9
SURRY-1,2	PWR	74	303.5 CM	DIA	* 365.8 CM HEIGHT	HK80-4 P5 71/ 9
BEAVER VALLEY	PWR	75	303.5 CM	DIA	* 365.8 CM HEIGHT	HK80-4 P5 71/ 9
NORTH ANNA-12	PWR	76	303.5 CM	DIA	* 365.8 CM HEIGHT	HK80-4 P6 71/ 9
JOSEPH W.FARLEY	PWR	77	303.5 CM	DIA	* 365.8 CM HEIGHT	HK80-4 P6 71/ 9
FUGEN	ATR	81	405. CM	DIA	* 370. CM HEIGHT	105-8-3-(3) 73/11
MONJU	FAST	92	CM	DIA	* 90.0 CM HEIGHT	GAKKAISI43P 72/ 5

FUEL LOADING WEIGHT TON-U02 TON-U TON-U235 731260

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FUEL	LOADING WEIGHT	TON-U02	TON-U	TON-U235	731260	
JPDR-1	BWR	1	4.8 T-U02			/
JPDR-2	BWR	2	4.8 T-U02		0.111T-U235	KDN-6 P2 70/ 8
TSURUGA	BWR	3	69. T-U02			R-9 66/ 8
ONAGAWA	BWR	4	81.3 T-U02	71.7 T-U (15T-CORE=1.6T, HEIKO0=2.0T-U235)		8-3-(3) 70/ 5
HAMAOKA-1	BWR	5	81.3 T-U02			8-10 70/ 5
FUKJISIMA-1	BWR	6	89.4 T-U02			R-9 66/ 8
FUKJISIMA-5	BWR	9		106.8 T-U		8-3-(2) 71/ 2
FUKJISIMA-4	BWR	10		106.8 T-U		8-3-(2) 71/ 8
FUKJISIMA-6	BWR	11		148.3 T-U		8-3-(2) 72/ 1
TODOKAI-2	BWR	12		148.3 T-U		8-3-(2) 72/ 1
HAMAOKA-2	BWR	13		105.0 T-U		8-8 72/ 9
MIHAMA-1	PWR	21		40. T-U		8-14 66/11
TAKAHAMA-2	PWR	23		71. T-U		80-9-1 70/ 5
GENKAI-1	PWR	24		48. T-U		80-9-1 70/ 5
ODI -1,2	PWR	26		87. T-U		8-15 71/ 1
MIHAMA-3	PWR	27		70. T-U		8-15 71/ 8
IKATA	PWR	28		48. T-U		8-18 72/11
VERMONT YANKEE	BWR	52	81.3 T-U02			A-2 P1 70/ 7
BROWNS FERRY	BWR	53	(170.2)T-U02	149.8 T-U		GSK-19 69/ 2
MILLSTON	BWR	54	129.7 T-U02			R-9 66/ 8
DRESDEN-1	BWR	55	57.56T-U02			DNR V4 P91 62/
DRESDEN-2	BWR	56	161.9 T-U02			R-9 66/ 8
DRESDEN-2	BWR	56	139.5 T-U02			DNR V7 P192 68/
DUANE ARNOLD	BWR	58	81.3 T-U02			A-2 P1 70/ 7
YANKEE		69		20.88T-U		DNR V4 P33 61/
SAXTON		70	1.0 T-U02			DNR V4 P47 61/
HURLINGTON	PWR	71	(100.7)T-U02	88.6 T-U		GSK-19 69/ 2
FUGEN	ATR	81	0.4 T-U235	0.1 T-PU (HEIKO0=0.3T-U235 0.3-PU)		105-8-3-(3) 73/11

REACTOR STEAM FLOW RATE T/H 731300

JPDR-1	BWR	1	69. T/H			/
JPDR-2	BWR	2	136. T/H	135.2 T/H		70/11
TSURUGA	BWR	3	1930. T/H			80-3-3 P7 70/ 5
ONAGAWA	BWR	4	2910. T/H			8-3-(3) 70/ 5
HAMAOKA-1	BWR	5	2920. T/H			8-10,8-114 70/ 5
FUKJISIMA-5	BWR	9	4440. T/H			8-3-(2) 71/ 2
FUKJISIMA-4	BWR	10	4440. T/H			8-3-(2) 71/ 8
FUKJISIMA-6	BWR	11	6430. T/H			8-3-(2) 72/ 1
TODOKAI-2	BWR	12	6430. T/H			8-3-(2) 72/ 1
HAMAOKA-2	BWR	13	4750. T/H			8-8 72/ 9
VERMONT YANKEE	BWR	52	2920. T/H			A-2 P1 70/ 7
BROWNS FERRY	BWR	53	6069. T/H			GSK-19 69/ 2
DUANE ARNOLD	BWR	58	3100. T/H			A-2 P1 70/ 7

REACTOR	STEAM	FLOW	RATE	T/H	731300		
	FUGEN		ATM 81	910	T/H		105-B-3-(2) 73/11
CORE	FUEL	ASSY	NUMBER		732200		
	JPOR-1	BWR	1	72			/
	JPOR-2	BWR	2	72			70/ 8
	TSURUGA	BWR	3	308		R-9	66/ 8
	ONAGAWA	BWR	4	368		8-3-(3)	70/ 5
	HAMAOKA-1	BWR	5	368		8-10+8-108*	70/ 5
	HAMAOKA-1	BWR	5	368	69(TYPE 1)+299(TYPE 2 WITH BURNABLE P)	95-2-3 P10	71/ 9
	HAMAOKA-1	BWR	5	TYPE-1	FUEL ASSY HAS AN DRIFICE IN LOWER TIEPLATE	95-2-3 P12	71/ 9
	FUKJISIMA-1	BWR	6	400		R-9	66/ 8
	FUKJISIMA-2+3	BWR	7	548	124+424	82-2-3	70/18
	FUKJISIMA-2+3	BWR	7	548	124+424*	82-2-3	70/18
	FUKJISIMA-2+3	BWR	7	548	116+432	85-7-2	70/12
	FUKJISIMA-2+3	BWR	7	548	117(TYPE 1)+431(TYPE 2 WITH BURNABLE P)	REV-2 F2N1 P5	71/ 2
	FUKJISIMA-2+3	BWR	7	TYPE 1 = 117TAI+(1 YUJI)		REV-2 F2N1 P1	71/ 2
	FUKJISIMA-2+3	BWR	7	DUMMY FUEL ASSY---NO.12HON		REV-2 F2N1 P5	71/ 2
	SHIMANE	BWR	8	400			/
	FUKJISIMA-5	BWR	9	548	117(TYPE 1)+431(TYPE 2 WITH BURNABLE P(GD2-D3))	8-3-(3)	71/ 2
	FUKJISIMA-4	BWR	10	548	117(TYPE 1)+431(TYPE 2)	M-3-(3)	71/ 8
	FUKJISIMA-6	BWR	11	764	168(TYPE 1)+596(TYPE 2 WITH BURNABLE P)	8-3-(3)	72/ 1
	TOOKAI-2	BWR	12	764	168(TYPE 1)+596(TYPE 2 WITH BURNABLE P)	8-3-(3)	72/ 1
	HAMAOKA-2	BWR	13	560	120(TYPE 1)+440(TYPE 2 WITH BURNABLE P)	8-9	72/ 9
	MIHAMA-1	PWR	21	121(+2)	(+2)=MAPI SPARE		/
	MIHAMA-2	PWR	22	121		HK80-2 P4	71/ 8
	TAKAHAMA-2	PWR	23	157		80-9-1	70/ 6
	GENKAI-1	PWR	24	121		80-9-1+A-16	70/ 6
	TAKAHAMA-1	PWR	25	157		HK80-2 P4	71/ 8
	UJI -1+2	PWR	26	193		8-16	71/ 1
	MIHAMA-1	PWR	27	157		8-16	71/ 8
	IKATA	PWR	28	121		8-19	72/11
	VERMONT YANKEE	BWR	52	368		A-2	70/ 5
	BROWNS FERRY	BWR	53	764		GSK-19	69/ 2
	MILLSTON	BWR	54	580		R-9	66/ 8
	DRESDEN-1	BWR	55	452	(TOTAL CHANNEL NO.=488)	DNR V4 P91	62/
	DRESDEN-2	BWR	56	724		R-9	66/ 8
	OYSTER CREEK	BWR	57	560		R-9	66/ 8
	DUANE ARNOLD	BWR	58	368		A-2 P2	70/ 7
	YANKEE		69	76	38(TYPE A)+ 38(TYPE B)	DNR V4 P33	61/
	SAXTON		70	32	POSSIBLE POSITION(A*6 ARRAY WITH CORNERS MISSING)	DNR V4 P47	61/
	SAXTON		70	21	OCCUPIED BY STANDARD FUEL ELEMENTS	DNR V4 P47	61/
	SAXTON		70	10	BY DUMMY ASSYS, AND ONE BY A SUPERHEATER TUBE	DNR V4 P47	61/
	SAXTON		70	9	L-SHAPED FUEL ELEMENTS OCCUPY INTERSTITIAL POSITION	DNR V4 P47	61/

CORE	FUEL	ASSY	NUMBER	732200		
	HURLINGTON	PWR	71	193		GSK-19 69/ 2
	TURKEY POINT-3+4	PWR	72	157		HK80-4 P5 71/ 9
	H.B.ROBINSON-2	PWR	73	157		HK80-4 P5 71/ 9
	SURRY-1,-2	PWR	74	157		HK80-4 P5 71/ 9
	BEAVER VALLEY	PWR	75	157		HK80-4 P5 71/ 9
	NORTH ANNA-12	PWR	76	157		HK80-4 P6 71/ 9
	JOSEPH M.FARLEY	PWR	77	157		HK80-4 P6 71/ 9
	FUGEN	ATM	81	224		105-B-3-(2) 73/11
	MUNJU	FAST	92	102(CORE INNER REGION), 90(CORE OUTER REGION)		GAKKAI5143P 72/ 5
FUEL	SPACER	NUMBER	PER ASSY	MATERIAL TYPE	732220	
	PLANT NAME	SPACER	NUMBER	MATERIAL	TYPE	
	JPOR-1	BWR	1	NO 1	ZRY-2	PLATE-TYPE 70/ 8
	JPOR-2	BWR	2	NO 2	INCONEL-750	70/ 8
	TSURUGA	BWR	3	NO 7		/
	ONAGAWA	BWR	4	NO 7	ZRY-4 AND INCONEL-X	8-3-(4) 70/ 5
	HAMAOKA-1	BWR	5	NO 7		8-12 70/ 5
	FUKJISIMA-1	BWR	6	NO 7	ZRY-4 WITH INCONEL SPRING	HWR/6 7 47/11
	FUKJISIMA-2+3	BWR	7	NO 7	ZRY PLATE	F2N1 P9 71/ 2
	FUKJISIMA-5	BWR	9	NO 7	ZRY-4	8-3-(4) 71/ 2
	FUKJISIMA-4	BWR	10	NO 7	ZRY-4	8-3-(4) 71/ 8
	FUKJISIMA-6	BWR	11	NO 7	ZRY-4	8-3-(4) 72/ 1
	TOOKAI-2	BWR	12	NO 7	ZRY-4	8-3-(4) 72/ 1
	HAMAOKA-2	BWR	13	NO 7	ZRY-4	8-10 72/ 9
	MIHAMA-1	PWR	21	NO 7	INCONEL-718	A-16 66/11
	MIHAMA-2	PWR	22	NO 7	INCONEL	HK80-4 P4 71/ 9
	TAKAHAMA-2	PWR	23	NO 7	INCONEL	8-17 70/ 5
	GENKAI-1	PWR	24	NO 7	INCONEL	8-18 70/ 5
	TAKAHAMA-1	PWR	25	NO 7	INCONEL	HK80-4 P4 71/ 9
	UJI -1+2	PWR	26	NO 7	INCONEL	8-17 71/ 1
	MIHAMA-1	PWR	27	NO 7	INCONEL	8-17 71/ 8
	IKATA	PWR	28	NO 7	INCONEL	8-20 72/11
	VERMONT YANKEE	BWR	52	NO 7		A-2 70/ 5
	BROWNS FERRY	BWR	53	NO 7	ZRY-4	GSK-19 69/ 2
	HURLINGTON	PWR	71	NO 9	INCONEL-718	GSK-19 69/ 2
	TURKEY POINT-3+4	PWR	72	NO 7		HK80-4 P3 71/ 9
	H.B.ROBINSON-2	PWR	73	NO 7		HK80-4 P3 71/ 9
	SURRY-1,-2	PWR	74	NO 7		HK80-4 P3 71/ 9
	BEAVER VALLEY	PWR	75	NO 7		HK80-4 P3 71/ 9
	NORTH ANNA-12	PWR	76	NO 7		HK80-4 P4 71/ 9
	JOSEPH M.FARLEY	PWR	77	NO 7		HK80-4 P4 71/ 9
	FUGEN	ATM	81	NO 12	INCONEL (SUPPORT = ZRY-2 TUBE)	105-B-3-(6) 73/11
FUEL	CHANNEL BOX	MATERIAL	SIZE	THICK	732240	

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FUEL	CHANNEL	BOX	MATERIAL	SIZE	THICK	732280		
PLANT NAME			MATERIAL SIZE(SQ.MM)	THICK MM				
JPDR-1	BWR	1	ZRY-4	1.5				70/ 8
JPDR-2	RWR	2	ZRY-4	1.5				70/ 8
TSURUGA	BWR	3	ZRY-4	2.0	2.03			/
ONAGAWA	BWR	4	ZRY-4	2.0		8-3-(4)		70/ 5
HAMAOKA-1	BWR	5	ZRY-4			8-12		70/ 5
FUKUSIMA-1	BWR	6	ZRY-4					/
FUKUSIMA-1	BWR	6		2.03				/
FUKUSIMA-2*3	BWR	7	ZRY-4	134. (INNER)	2.03	F2N1 P9		71/ 2
SHIMANE	BWR	8	ZRY-4					/
FUKUSIMA-5	BWR	9	ZRY-4			8-3-(4)		71/ 2
FUKUSIMA-4	BWR	10	ZRY-4	138. (OUTER)	(FIG 3.2-2)	8-3-(4)		71/ 8
FUKUSIMA-6	BWR	11	ZRY-4	138. (OUTER)	(FIG 3.2-2)	8-3-(4)		72/ 1
TOOKAI-2	BWR	12	ZRY-4	138. (OUTER)	(FIG 3.2-2)	8-3-(4)		72/ 1
HAMAOKA-2	BWR	13	ZRY-4			8-10		72/ 9
MIHAMA-1	PWR	21	CANLESS	197.18 (SQUARE FUEL ASSY SIZE)		HK80-4 P4		71/ 9
MIHAMA-2	PWR	22	CANLESS	197.18 (SQUARE FUEL ASSY SIZE)		HK80-4 P4		71/ 9
TAKAHAMA-2	PWR	23	NONE	214. (FUEL ASSY SIZE)		8-17		70/ 5
GENKAI-1	PWR	24	NONE	200. (FUEL ASSY SIZE)		8-16		70/ 5
TAKAHAMA-1	PWR	25	CANLESS	214.02 (SQUARE FUEL ASSY SIZE)		HK80-4 P4		71/ 9
OUI -1*2	PWR	26	NONE	214. (FUEL ASSY SIZE)		8-17		71/ 1
MIHAMA-3	PWR	27	NONE	214. (FUEL ASSY SIZE)		8-17		71/ 8
IKATA	PWR	28	CANLESS	200. (SQUARE FUEL ASSY SIZE)		8-20		72/11
VERMONT YANKEE	BWR	52	ZRY-4		2.0	A-2		70/ 5
BROWNS FERRY	BWR	53	ZRY-4	138.125		GSK-19		69/ 2
DRESDEN-1	BWR	55	ZRY-2	109. (INNER)		DNR V4 P91		62/
DRESDEN-2	BWR	56	ZRY-4	138.125		DNR V7 P192		68/
DUANE ARNOLD	BWR	58	ZRY-4		2.0 MM	A-2 P2		70/ 7
YANKEE		69		(191.668 + 2.896(TUBE TO TUBE))	ASSEMBLY PITCH	DNR V4 P34		61/
SAXTON		70		137.668	ASSEMBLY PITCH	DNR V4 P48		61/
RURLINGTON	PWR	71	NONE	214.02 (FUEL ASSY SIZE)		GSK-19		59/ 2
TURKEY POINT-3,4	PWR	72	CANLESS	214.02 (SQUARE FUEL ASSY SIZE)		HK80-4 P3		71/ 9
H.B.ROBINSON-2	PWR	73	CANLESS	214.02 (SQUARE FUEL ASSY SIZE)		HK80-4 P3		71/ 9
SURRY-1,-2	PWR	74	CANLESS	214.02 (SQUARE FUEL ASSY SIZE)		HK80-4 P3		71/ 9
BEAVER VALLEY	PWR	75	CANLESS	214.02 (SQUARE FUEL ASSY SIZE)		HK80-4 P3		71/ 9
NORTH ANNA-12	PWR	76	CANLESS	214.02 (SQUARE FUEL ASSY SIZE)		HK80-4 P4		71/ 9
JOSEPH M.FARLEY	PWR	77	CANLESS	214.02 (SQUARE FUEL ASSY SIZE)		HK80-4 P4		71/ 9
MONJU	FAST	92		104.6 (HEXAGONAL WRAPPER TUBE)		GAKKA[SI43P		72/ 5

UD-2 WEIGHT PER FUEL ASSY KGUO-2/ ASSY 732260

JPDR-2	BWR	2	1.37*49KGUO2/ASSY(DISH),					/
ONAGAWA	BWR	4	222.4 KGUO2/ASSY(FLAT),	219.3	KGUO2/ASSY(DISH)	A-2		70/ 5
VERMONT YANKEE	BWR	52	222.4 KGUO2/ASSY(FLAT),	219.3	KGUO2/ASSY(DISH)	A-2		70/ 5

PLANT PERFORMANCE DATA

DATE 12/16/74

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UD-2 WEIGHT PER FUEL ASSY KGUO-2/ ASSY 732260

BROWNS FERRY	BWR	53	221.1 KGUO2/ASSY(FLAT),			GSK-19		69/ 2
DUANE ARNOLD	BWR	58	222.4 KGUO2/ASSY(FLAT),	219.3	KGUO2/ASSY(DISH)	A-2 P2		70/ 7
RURLINGTON	PWR	71	517.55KG			GSK-19		69/ 2

FUEL ASSY TOTAL WEIGHT KG (INC .H-WARE) 732280

JPDR-1	BWR	1	100. KG(FLAT)			ABOUT		/
JPDR-2	BWR	2			100.0 KG(DISH)	AMOUNT		70/ 8
ONAGAWA	BWR	4	309.1 KG(FLAT)		306.0 KG(DISH)			70/ 5
FUKUSIMA-1	BWR	6	184. KG			BWR/6	7.	4/11
MIHAMA-1	PWR	21	(483.5 KG) * 121 = 58.51 TON			HK80-4 P4		71/ 9
MIHAMA-2	PWR	22	(573.2 KG) * 121 = 69.352 TON			HK80-4 P4		71/ 9
TAKAHAMA-2	PWR	23	(646.4 KG) * 157 = 101.48 TON			HK80-4 P4		71/ 9
TAKAHAMA-1	PWR	25	(646.4 KG) * 157 = 101.48 TON			HK80-4 P4		71/ 9
MIHAMA-3	PWR	27	(646.4 KG) * 157 = 101.48 TON			HK80-4 P4		71/ 9
VERMONT YANKEE	BWR	52	309.1 KG(FLAT)		306.0 KG(DISH)	A-2		70/ 5
DUANE ARNOLD	BWR	58	309.1 KG(FLAT)		306.0 KG(DISH)	A-2 P2		70/ 7
TURKEY POINT-3,4	PWR	72	(653.5 KG) * 157 = 102.6 TON			HK80-4 P3		71/ 9
H.B.ROBINSON-2	PWR	73	(653.5 KG) * 157 = 102.6 TON			HK80-4 P3		71/ 9
SURRY-1,-2	PWR	74	(653.5 KG) * 157 = 102.6 TON			HK80-4 P3		71/ 9
BEAVER VALLEY	PWR	75	(646.4 KG) * 157 = 101.48 TON			HK80-4 P3		71/ 9
NORTH ANNA-12	PWR	76	(646.4 KG) * 157 = 101.48 TON			HK80-4 P4		71/ 9
JOSEPH M.FARLEY	PWR	77	(646.4 KG) * 157 = 101.48 TON			HK80-4 P4		71/ 9

THERMAL CONDUCTIVITY OF UD-2 732300

JPDR-1	BWR	1	$K(W/CM.C) = (30.0 / (T(K) + 10.0)) * (R/RD) + 2.55E-12 * (T**3)$			BATES		/
JPDR-1	BWR	1	WHERE (R/RD) = PERCENT OF T.D					/
JPDR-2	BWR	2	$K(W/CM.C) = (36.2 / (T(K) + 129.0)) + 4.79E-13 * (T**3)$			LYONS		/
ONAGAWA	BWR	4	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T**3)$			8-3-(5)		70/ 5
HAMAOKA-1	BWR	5	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T**3)$					70/ 5
FUKUSIMA-2,3	BWR	7	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + (6.1256E-13) * (T(K)**3)$			F2N1 P10		71/ 2
FUKUSIMA-5	BWR	9	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T(K)**3)$			8-3-(5)		71/ 2
FUKUSIMA-4	BWR	10	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T**3)$			8-3-(5)		71/ 8
FUKUSIMA-6	BWR	11	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T**3)$			8-3-(5)		72/ 1
TOOKAI-2	BWR	12	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T**3)$			8-3-(5)		72/ 1
HAMAOKA-2	BWR	13	$K(W/CM.C) = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T**3)$			8-11		72/ 9
MIHAMA-5	PWR	21	$K(W/CM.C) = (40.4 / (T(C) + 464.0)) + 1.32E-4 * EXP(1.88E-3 * T(C))$					/
MIHAMA-1	PWR	21	WHERE T(C) = 0 TO 1650					/
MIHAMA-1	PWR	21	$K(W/CM.C) = 0.019 + 1.32E-4 * EXP(1.88-3 * T(C))$					/
MIHAMA-1	PWR	21	WHERE T(C) = 1650 TO 2800					/
MIHAMA-2	PWR	22	SEE MIHAMA-1					/
TAKAHAMA-2	PWR	23	SEE MIHAMA-1					/

THERMAL CONDUCTIVITY	OF	UD-2	732300		
GENKAI-1	PWR	24	SEE MIHAMA-1		71/ 2
OOI -1*2	PWR	26	SEE MIHAMA-1		72/11
IKATA	PWR	28	4*(PI)*INTEG. KDT(7530 TO 2800C) = 717 W/CM	8-21	72/11
IKATA	PWR	28	4*(PI)*INTEG. KDT(TO 2800C) = 691 W/CM (1120P)	8-21	72/11

THERMAL CONDUCTIVITY	OF	ZRY	732320		
JPOR-1	BWR	1	K(KCAL/M.HR.C)= 11		71/ 2
JPOR-2	BWR	2	K(KCAL/M.HR.C)= 11		71/ 2
ONAGAWA	BWR	4	K(KCAL/M.HR.C)= 13.6		70/ 7
FUKUSIMA-2*3	BWR	7	K(KCAL/M.HR.C)= FROM 13.0 TO 14.4	MCAP-3269-41	71/ 2
GENKAI-1	PWR	24	K(KCAL/M.HR.C)= 12.009+0.00846T(C)	688UKAI A-5 F2N1 P10 6783-5	70/10
OOI -1*2	PWR	26	(RTU/FT.HR.F)=7.97+0.00316T(F) SAME AS GENKAI		71/ 2
OOI -1*2	PWR	26	K(8TU/FT.HR.F)=7.97+0.00316T(F) SAME AS GENKAI		71/ 2
FUGEN	ATR	81	K(KCAL/M.HR.C)= 1.72 (CMUD)		105-5 P9 73/12
FUGEN	ATR	81	K(KCAL/M.HR.C)= 1.204 (OXIDE)		105-5 P9 73/12
FUGEN	ATR	81	K(W/CM.F)=0.016(7.23+2.41E-3*T(C))+1.3E-6((C)**2)		105-5 P9 73/12

FISSION PRODUCT GENERATE RATIO	GAS FP	PRESSURE	732340			
PLANT NAME	BWR	4	FP GAS GENERATE RATIO GRAM MOLES / MW	RELEASE RATE VS TEMP.	PRESSURE KG/SQCM	
ONAGAWA	BWR	4	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	120.	8-3-(5) 70/ 5
ONAGAWA	BWR	4		100. P.C AT(LE 1650.DEG C) (AT EOL)		8-3-(5) 70/ 5
HAMAOKA-1	BWR	5	1.35 E-3	SAME AS ONAGAWA	120.	8-13 70/ 5
FUKUSIMA-2*3	BWR	7	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)		F2N1 P12 71/ 2
FUKUSIMA-2*3	BWR	7		100. P.C AT(LE 1650.DEG C)		F2N1 P12 71/ 2
FUKUSIMA-2*3	BWR	7		RELEASE RATE= 18 P.C AT 607 W/CM (TEIKAKU)		F2N1 P12 71/ 2
FUKUSIMA-2*3	BWR	7		RELEASE RATE= 30 P.C AT 705 W/CM (16 PC OVER POWER)		F2N1 P12 71/ 2
FUKUSIMA-5	BWR	9	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C) ASSUME		8-3-(5) 71/ 2
FUKUSIMA-5	BWR	9		100. P.C AT(LE 1650.DEG C) ASSUME		8-3-(5) 71/ 2
FUKUSIMA-4	BWR	10	1.35 E-3	4. P.C AT(LE 1650.DEG C)	118.	8-3-(5) 71/ 8
FUKUSIMA-4	BWR	10		100. P.C AT(LE 1650.DEG C) (AT EOL)		8-3-(5) 71/ 8
FUKUSIMA-6	BWR	11	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	118.	8-3-(5) 72/ 1
FUKUSIMA-6	BWR	11		100. P.C AT(LE 1650.DEG C) (AT EOL)		8-3-(5) 72/ 1
TOKAI-2	BWR	12	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	118	8-3-(5) 72/ 1
TOKAI-2	BWR	12		100. P.C AT(LE 1650.DEG C)		8-3-(5) 72/ 1
HAMAOKA-2	BWR	13	1.35 E-3	SAME AS HAMAOKA-1	120.	8-11 72/ 9

THERMAL EXPANSION	OF	UD-2	PELLET	732350	
FUKUSIMA-2*3	BWR	7	PERCENT DELTA(L)/L=(2.9E-7)*T**2+(5.8E-4)*T-(4.1E-4)		F2N1 P12 71/ 2
FUKUSIMA-2*3	BWR	7	WHERE T=DEG C		F2N1 P12 71/ 2

THERMAL EXPANSION	OF	UD-2	PELLET	732350	
FUGEN	ATR	81	ALPHA(U02)=9.61E-6*(1+1.57E-3*T(C)) (AECL-2143)		105-5 P9 73/12

THERMAL EXPANSION	OF	ZRY	CLADDING	732360	
OOI -1*2	PWR	26	ALPHA/F=1.937E(-6) + 2.183E(-9)*T(F) ZRY-4		105-5 P9 73/12
FUGEN	ATR	81	ALPHA(CLAD)=5.675E-6*(1+1.7E-3*T(C)) (WAPD-24-9)		105-5 P9 73/12

UD-2	PELLET	SOLID	FP	SWELLING RATE	732380	
FUKUSIMA-2*3	BWR	7	0.35 PERCENT DELTA(V)/V /10**20 FISSIONS /CC		F2N1 P12 71/ 2	
FUGEN	ATR	81	INITIAL =0.16 PERCENT DELTA(V)/V /10** FISSIONS /CC		105-5 P10 73/12	
FUGEN	ATR	81	FINAL =0.70 PERCENT DELTA(V)/V /10** FISSIONS /CC		105-5 P10 73/12	

FUEL	UD-2	PELLET	SIZE	DIA AND LENGTH	732400	
(1)PELLET DIA (2)PELLET LENGTH NOM=NOMINAL LENGTH MIN=MINIMUM LENGTH MAX=MAXIMUM LENGTH (3)PELLET MATERIAL *1=SINTERED PELLET (4)DENSITY P.C.T.D=PER CENT THEORETICAL DENSITY *2=UO-2 + G02-03 *3=URANIA + GADOLINIA *4=1.5P.C.UO2 + NATURAL U + + NOM.D.8P.C.PUO2 (BOTH SIDES DISHED PELLET)						
PLANT NAME				(1) MM. (2) NOM. MIN. MAX. (3) (4) P.C.T.D		
JPOR-1	BWR	1	12.5		UD-2	95
JPOR-2	BWR	2	10.66		UD-2	95
TSURUGA	BWR	3	12.4	22.4 18.6 24.8	UD-2	92-97
ONAGAWA	BWR	4	12.4	18.6 24.8	UD-2	94
HAMAOKA-1	BWR	5	12.4		UD-2	94
HAMAOKA-1	BWR	5	12.4	18.6 24.8	UD-2	94 *2
FUKUSIMA-1	BWR	6	12.4	18.6 24.8	UD-2	95
FUKUSIMA-1	BWR	6	10.6	11.0(ABOUT)	UD-2 *1	95
FUKUSIMA-2*3	BWR	7	12.4		UD-2	93
FUKUSIMA-2*3	BWR	7	12.4	18.6 24.8	UD-2	93 *2
FUKUSIMA-2*3	BWR	7	12.37		UD-2	91-97
FUKUSIMA-2*3	BWR	7	(+0.03)			
FUKUSIMA-5	BWR	9	12.4	18.6 24.8	UD-2	93 *3
FUKUSIMA-4	BWR	10	12.4	18.6 24.8	UD-2	93 *3
FUKUSIMA-6	BWR	11	12.4	18.6 24.8	UD-2	93 *2

(1)PELLET DIA
 (2)PELLET LENGTH
 NUM=NDMINAL LENGTH
 MIN=MINIMUM LENGTH
 MAX=MAXIMUM LENGTH
 (3)PELLET MATERIAL
 *1=SINTERED PELLET
 (4)DENSITY
 P.C.T.O=PER CENT THEORETICAL DENSITY
 *2=UO-2 + G02-03
 *3=URANIA + GAOLINIA
 *4=1.5P.C.UO2 + NATURAL U + + NOM.0.8P.C.PUO2
 (BOTH SIDES DISHED PELLET)

PLANT NAME			(1)			(3)	(4)		
			MM.	NDM.	MIN.					MAX.	P.C.T.O
TOKAI-2	BWR	12	12.4		18.6	24.8	UO-2	93 *2	8-3-(5) 72/ 1
HAMADKA-2	BWR	13	12.1	13.0			UO-2	94	8-11 72/ 9
MIHAMA-1	PWR	21	9.32	15.3/1ST-REGION			UO-2 *1	94,92/1ST,2ND	REF23 70/11
MIHAMA-1	PWR	21	9.319*15.24H						8-15 66/11
MIHAMA-1	PWR	21	9.29	10.4/2,3-REGION			UO-2 *1	91 /3RD	/
MIHAMA-2	PWR	22	9.319	15.24			UO-2 *1	94,93	BK80-4 P4 71/ 9
TAKAHAMA-2	PWR	23	9.32	15.2			UO-2 *1	94,93	8-16 70/ 5
GENKAI-1	PWR	24	9.319	15.24			UO-2	93	8-17 70/ 5
TAKAHAMA-1	PWR	25	9.319	15.24			UO-2 *1	94,93	BK80-4 P4 71/ 9
TAKAHAMA-1	PWR	25	9.294						/
DDI -1,2	PWR	26	9.29	15.2			UO-2	93	8-16 71/ 1
MIHAMA-1	PWR	27	9.32	15.2			UO-2	93	8-16 71/ 8
IKATA	PWR	28	9.32	15.2			UO-2	93	8-19 72/11
VERMONT YANKEE	BWR	52	12.4		12.7		UO-2	94	A-2 70/ 5
HOWNS FERRY	BWR	53	12.3952		17.78		UO-2	93.25	GSK-19 69/ 2
MILLSTON	BWR	54	12.4				UO-2		R-9 66/ 8
DRESDEN-1	BWR	55	12.548	12.7			UO-2 *1		ONR V4 P94 62/
DRESDEN-2	BWR	56	12.4	19.05			UO-2		R-9 66/ 8
DYSTER CREEK	BWR	57	12.4	19.05			UO-2		R-9 66/ 8
DUANE ARNOLD	BWR	58	12.4		12.7		UO-2	94	A-2 P2 70/ 7
YANKEE		69	7.468	15.24/150 PELLETS/ROD			UO-2 *1		DNR V4 P36 61/
SAXTON		70	9.068	18.59			UO-2 *1		DNR V4 P50 61/
RURLINGTON	PWR	71	9.3193	15.24			UO-2	93-94	GSK-19 69/ 2
TURKEY POINT-3,4	PWR	72	9.319	15.24			UO-2 *1	94,92,91	BK80-4 P3 71/ 9
H.B.ROBINSON-2	PWR	73	9.319	15.24			UO-2 *1	94,92,91	BK80-4 P3 71/ 9
SURRY-1,-2	PWR	74	9.319	15.24			UO-2 *1	94,92,91	BK80-4 P3 71/ 9
BEAVER VALLEY	PWR	75	9.319	15.24			UO-2 *1	94,92,91	BK80-4 P3 71/ 9
NORTH ANNA-12	PWR	76	9.319	15.24			UO-2 *1	94,92,91	BK80-4 P3 71/ 9
FUGEN	ATR	81	20.					10.41 G/MM3 *4	105-8-(3) 73/11
JOSEPH W.FARLEY	PWR	77	9.319	15.24					BK80-4 P3 71/ 9

FUEL ROD CLADDING MATERIAL THICK. 0.0. DIA.GAP 732440

(1)MATERIAL Z2=ZRY-2
 Z4=ZRY-4
 Z =ZRY
 S4=304SS
 S8=348SS
 (2)CLADDING THICKNESS MM.
 (3)CLADDING OUTER DIA. MM.
 (4)DIAMETRAL GAP MM.
 (5)TYPE
 REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
 REF.2=GENSHIHYOKU SHIRYOO NO.19(1969.2)
 *1=A TOTAL OF 109 RODS WITH 449MIL DIA,12CORNER RODS WITH 344MIL DIA.
 *2=DRESDEN NUCLEAR PLANT-1. *5=CONSUMERS POWER CO. (BIG ROCK POINT)
 *3=GARIGLIANO (SENN) *6=CURRENT BWR
 *4=HUMBOLDT BAY
 1)=ANNEALED 5)=NUCLEAR POWER DEMONSTRATION REACTOR IN CANADA
 2)=COLD WORKED 6)=MIN. 7)=MAX. 8)=MIN.
 3)=IN ITALY 9)=HEAVY-WATER COMPONENTS TEST REACTOR AT SOUTH CAROLINA
 4)=IN BELGIUM 10)=CAROLINAS VIRGINIA TUBE REACTOR AT SOUTH CAROLINA

PLANT NAME			(1)		(3)	(4)	(5)	
			MAT	T				
JPDR-1	BWR	1	Z2	0.76	14.14	0.12		70/ 8
JPDR-2	BWR	2	Z2	0.7	12.23	0.17		70/ 8
TSURUGA	BWR	3	Z2	0.902	14.49	0.28	R-9	66/ 8
TSURUGA	BWR	3				(0.25)		/
ONAGAWA	BWR	4	Z2	0.81	14.3	0.31		8-3-(5) 70/ 5
HAMADKA-1	BWR	5	Z2	0.81	14.3	0.31		8-13 70/ 5
FUKUSIMA-1	BWR	6	Z2	0.902	14.5	0.28	10=12.67	MEMO P17 70/ 3
FUKUSIMA-1	BWR	6		(+7.5PC)		(+0.076)	(+0.05)	MEMO P18 70/ 3
FUKUSIMA-1	BWR	6	Z2	86	12.5	0.23		BWR/6 7 4//11
FUKUSIMA-2,3	BWR	7	Z2	0.81	14.3	0.28		82-2-3 P8 70/ 8
FUKUSIMA-2,3	BWR	7	Z2	(+0.08)	14.3	0.31		F2N1 P8 71/ 2
SHIMANE	BWR	8	Z2		14.5			1970/6/20 70/ 6
FUKUSIMA-5	BWR	9	Z2	0.81	14.3	0.28		8-3-(6) 71/ 2
FUKUSIMA-4	BWR	10	Z2	0.81	14.3	0.28		8-3-(6) 71/ 8
FUKUSIMA-6	BWR	11	Z2	0.81	14.3	0.31		8-3-(5) 72/ 1
TOKAI-2	BWR	12	Z2	0.81	14.3	0.31		8-3-(5) 72/ 1
HAMADKA-2	BWR	13	Z2	0.94	14.3	0.31		8-12 72/ 9
MIHAMA-1	PWR	21	ZRY-4		T=0.617 MM	DD=10.718MM	G=0.165 MM	8-15 66/11
MIHAMA-1	PWR	21	Z4	0.617	10.72	0.02032		/
MIHAMA-2	PWR	22			10.72			6783-5 70/10
TAKAHAMA-2	PWR	23	Z4	0.617	10.72	0.165		8-16 70/ 5
GENKAI-1	PWR	24	Z4	0.617	10.718	0.165		8-17 70/ 5
TAKAHAMA-1	PWR	25			10.72			6783-5 70/10
DDI -1,2	PWR	26	Z4	0.617	10.72	0.196		8-16 71/ 1
MIHAMA-3	PWR	27	Z4	0.62	10.72	0.16		8-16 71/ 8
IKATA	PWR	28	Z4	0.62	10.72	0.16		8-19 72/11

FUEL ROD CLADDING MATERIAL THICK. D.D. DIA.GAP 732440

(1) MATERIAL Z2=ZRY-2
Z4=ZRY-4
Z=ZRY
S4=304SS
S8=348SS

(2) CLADDING THICKNESS MM.
(3) CLADDING OUTER DIA. MM.
(4) DIAMETRAL GAP MM.
(5) TYPE

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
REF.2=GENSHIRYOKU SHIRYODU NO.19(1969.2)
*1=A TOTAL OF 109 RODS WITH 449MIL DIA. 12 CORNER RODS WITH 344MIL DIA.
*2=DRESDEN NUCLEAR PLANT-1 *5=CONSUMERS POWER CO. (BIG ROCK POINT)
*3=GARIGLIANO (SENN) *6=CURRENT BWR
*4=HUMBOLDT BAY

1)=ANNEALED 5)=NUCLEAR POWER DEMONSTRATION REACTOR IN CANADA
2)=COLD WORKED 6)=MIN. 7)=MAX. 8)=MIN.
3)=IN ITALY 9)=HEAVY-WATER COMPONENTS TEST REACTOR AT SOUTH CAROLINA
4)=IN BELGIUM 10)=CAROLINAS VIRGINIA TUBE REACTOR AT SOUTH CAROLINA

PLANT NAME		MAT	T	(1)	(2)	(3)	(4)	(5)		
				MM.	MM.	MM.	GAP	TYPE		
VERMONT YANKEE	BWR	52	Z2	0.81	14.3	0.31			A-2	70/ 5
BROWNS FERRY	BWR	53	Z2	0.81	10.718				GSK-19 P4	69/ 2
MILLSTON	BWR	54	Z2	0.902	14.49	0.28			R-9	66/ 8
DRESDEN-1	BWR	55	Z	0.762	14.40	0.0762	TP1		*2 REF.1	/
DRESDEN-1	BWR	55	Z	0.889	14.217	0.191	TP3H		*2 REF.1	/
DRESDEN-1	BWR	55	Z	0.889	14.333	0.254	TP3F		*2 REF.1	/
DRESDEN-1	BWR	55	Z	0.889	14.333	0.254	TP5		*2 REF.1	/
DRESDEN-1	BWR	55	Z2	0.762	14.478				DNR V4 P98	62/
DRESDEN-2	BWR	56	Z2	0.902	14.49	0.28			R-9	66/ 8
DRESDEN-2	BWR	56	Z2	0.914					DNR V7 P192	68/
OYSTER CREEK	BWR	57	Z2	0.902	14.49	0.28			R-9	66/ 8
DUANE ARNOLD	BWR	58	Z2	0.81	14.3	0.31			A-2 P2	70/ 7
RURLINGTON	PWR	71	Z4	0.617	14.27				GSK-19 P4	69/ 2
TURKEY POINT-3,4PWR	PWR	72	Z4	0.617	10.718	0.165			BK80-4 P3	71/ 9
H.B.ROBINSON-2	PWR	73	Z4	0.617	10.718	0.165			BK80-4 P3	71/ 9
SURRY-1,-2	PWR	74	Z4	0.617	10.718	0.165			BK80-4 P3	71/ 9
BEAVER VALLEY	PWR	75	Z4	0.617	10.718	0.165			BK80-4 P3	71/ 9
NORTH ANNA-12	PWR	76	Z4	0.617	10.718	0.165			BK80-4 P4	71/ 9
JOSEPH M.FARLEY	PWR	77	Z4	0.617	10.718	0.165			BK80-4 P4	71/ 9
FUGEN	ATR	81	Z2	0.84	16.46	0.31			105-8-(3)	73/11
MONJU	FAST	92			6.5				GAKKAISI P43	72/ 5
OTHERS		-0	Z	0.762	13.564	0.127	TP1		*3 REF.1	/
OTHERS		-0	Z	0.94	15.062	0.279	TP2		*3 REF.1	/
OTHERS		-0	Z	0.838	14.453	0.127		KAHL	*3 REF.1	/
OTHERS		-0	Z	0.838	12.344	0.254	TP2		*4 REF.1	/
OTHERS		-0	Z	0.813	14.300	0.279	TP3		*4 REF.1	/

FUEL ROD CLADDING MATERIAL THICK. D.D. DIA.GAP 732440

(1) MATERIAL Z2=ZRY-2
Z4=ZRY-4
Z=ZRY
S4=304SS
S8=348SS

(2) CLADDING THICKNESS MM.
(3) CLADDING OUTER DIA. MM.
(4) DIAMETRAL GAP MM.
(5) TYPE

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
REF.2=GENSHIRYOKU SHIRYODU NO.19(1969.2)
*1=A TOTAL OF 109 RODS WITH 449MIL DIA. 12 CORNER RODS WITH 344MIL DIA.
*2=DRESDEN NUCLEAR PLANT-1. *5=CONSUMERS POWER CO. (BIG ROCK POINT)
*3=GARIGLIANO (SENN) *6=CURRENT BWR
*4=HUMBOLDT BAY

1)=ANNEALED 5)=NUCLEAR POWER DEMONSTRATION REACTOR IN CANADA
2)=COLD WORKED 6)=MIN. 7)=MAX. 8)=MIN.
3)=IN ITALY 9)=HEAVY-WATER COMPONENTS TEST REACTOR AT SOUTH CAROLINA
4)=IN BELGIUM 10)=CAROLINAS VIRGINIA TUBE REACTOR AT SOUTH CAROLINA

PLANT NAME		MAT	T	(1)	(2)	(3)	(4)	(5)		
				MM.	MM.	MM.	GAP	TYPE		
OTHERS		-0	Z	0.889	14.333	0.254			KRB	REF.1 /
OTHERS		-0	Z	0.864	11.405	*1 0.203			BRP-B	*5 REF.1 /
OTHERS		-0	Z	1.016	14.333	0.279			BRP-E	*5 REF.1 /
OTHERS		-0	Z	1.016	14.333	0.279			BRP-EG	*5 REF.1 /
OTHERS		-0	Z	0.889	14.333	0.267			TARAPUR	REF.1 /
OTHERS		-0	Z	0.813	14.300	0.279			*6	REF.1 /
OTHERS		-0	S8	0.533	8.636	0.102			YANKEE	(PWR) REF.2 /
OTHERS		-0	S410	0.889	12.70	0.178			SAVANNA	(PWR) REF.2 /
OTHERS		-0	S4	0.521	7.722	0.102			IND.P.	(PWR) REF.2 /
OTHERS		-0	S420	0.305	8.674	0.114			IND.P.	(PWR) REF.2 /
OTHERS		-0	S420	0.381	9.931	0.102			SAXTON	(PWR) REF.2 /
OTHERS		-0	S420	0.381	9.779	0.102			SELNI 3)	(PWR) REF.2 /
OTHERS		-0	S810	0.533	8.738	0.102			BR-3 4)	(PWR) REF.2 /
OTHERS		-0	Z2	0.635	25.4	0.152			NPU 5)	HW PWR REF.2 /
OTHERS		-0	Z2	0.381 6)	15.240	0.076			NPD	HW PWR REF.2 /
OTHERS		-0	Z4	0.610	12.243	0.165			CVTR 10)	(PWR) REF.2 /
OTHERS		-0	Z4	0.584	9.931	0.165			SAXTON	(PWR) REF.2 /
OTHERS		-0	Z2	0.559	10.439	0.203			SHIP.PORT	(PWR) REF.2 /
OTHERS		-0	Z2	0.762	64.516 7)				HWCTR 9)	HW PWR REF.2 /
OTHERS		-0	Z4	0.432 8)	12.243	0.198			CVTR	(PWR) REF.2 /
OTHERS		-0	Z4	0.584	9.931	0.165			SAXTON PU-U	(PWR) REF.2 /

FUEL ROD EFFECT. LENGTH AND ASSY LENGTH 732460

FUEL	ROD	EFFECT.	LENGTH	AND ASSY LENGTH	732460		
(1)FUEL ROD EFFECTIVE LENGTH (2)ROD LENGTH (INCLUDE END PLUGS) (3)ASSEMBLY TOTAL LENGTH (4)TYPE *1=REACTOR TECHNOLOGY 1971 *2=FUKUSIMA-1 S1RY00							
PLANT NAME			(1) MM.	(2) MM.	(3) MM.	(4)	
JPDR-1	BWR	1	1467.		1954.		/
JPDR-2	BWR	2	1467.		1954.		70/11
TSURUGA	BWR	3	3658.				66/ 8
DNAGAWA	BWR	4	3660.		4466.		8-3-(5) 70/ 5
HAMADKA-1	BWR	5	3660.		4460.		8-11 70/ 5
FUKUSIMA-1	BWR	6	3660.				/
FUKUSIMA-1	BWR	6	3660.				BWR/6 7 4//11
FUKUSIMA-2,3	BWR	7	3660.		4467.		82-2-2 70/ 8
FUKUSIMA-2,3	BWR	7	3657.				F2N1 P8 71/ 2
SHIMANE	BWR	8	3660.				/
FUKUSIMA-5	BWR	9	3660.		4460.		8-3-(6) 71/ 2
FUKUSIMA-5	BWR	9	3658.		4467.		FIG 3.2-2 71/ 2
FUKUSIMA-4	BWR	10	3660.		4460.		8-3-(6) 71/ 8
FUKUSIMA-6	BWR	11	3660.		4466.		8-3-(6) 72/ 1
TOOKAI-2	BWR	12	3660.		4466.		8-3-(6) 72/ 1
HAMADKA-2	BWR	13	3660.		4460.		8-12 72/ 9
MIHAMA-1	PWR	21	3046.	3214.			RFF23 P121 70/11
MIHAMA-2	PWR	22	3660.				6783-5 70/10
TAKANAWA-2	PWR	23	3660.	3880.	4170.		8-17 70/ 5
GENKAI-1	PWR	24	3660.	3810.	4170.		8-18 70/10
TAKANAWA-1	PWR	25	3660.				6783-5 70/10
DOI -1,2	PWR	26	3660.	3860.	4070.		8-17 71/ 1
MIHAMA-3	PWR	27	3660.	3400.	4170.		8-17 71/ 8
IKATA	PWR	28	3660.	3800.	4170.		8-20 72/11
VERMONT YANKEE	BWR	52			4466.		A-2 70/ 5
AROWNS FERRY	BWR	53	3658.				GSK-19 69/ 2
MILLSTON	BWR	54	3658.				R-9 66/ 8
DRESDEN-1	BWR	55	2769.			DRESDEN TP38*1	VOL.14-1 P82 /
DRESDEN-1	BWR	55	2705.			DRESDEN TP1 *1	VOL.14-1 P82 /
DRESDEN-1	BWR	55	2750.			DRESDEN TP3F*1	VOL.14-1 P82 /
DRESDEN-1	BWR	55	2750.			DRESDEN TP5 *1	VOL.14-1 P82 /
DRESDEN-1	BWR	55	2692.4	2971.8	3403.6		DNR V4 P94 62/
DRESDEN-1	BWR	55	(4SEG./ROD)				/
DRESDEN-2	BWR	56	3658.				R-9 66/ 8
OYSTER CREEK	BWR	57	3658.				R-9 66/ 8
YANKEE		69		2336.8	2825.8		DNR V4 P36 61/
SAXTON		70	914.4				DNR V4 P50 61/
HURLINGTON	PWR	71	3658.				GSK-19 69/ 2

FUEL	ROD	EFFECT.	LENGTH	AND ASSY LENGTH	732460		
(1)FUEL ROD EFFECTIVE LENGTH (2)ROD LENGTH (INCLUDE END PLUGS) (3)ASSEMBLY TOTAL LENGTH (4)TYPE *1=REACTOR TECHNOLOGY 1971 *2=FUKUSIMA-1 S1RY00							
PLANT NAME			(1) MM.	(2) MM.	(3) MM.	(4)	
FUGEN	ATR	81	3700.		4100.		105-8-(3) 73/11
OTHERS		-0	2685.			GARIGLIANO TP1 *1	VOL.14-1 P82 /
OTHERS		-0	2718.			GARIGLIANO TP2 *1	VOL.14-1 P82 /
OTHERS		-0	2604.			GARIGLIANO TP2 *1	MEMO P6 70/ 3
OTHERS		-0	1519.			KAHL *1	VOL.14-1 P82 /
OTHERS		-0	2007.			HUMBOLDT TP2 *1	VOL.14-1 P82 /
OTHERS		-0	2007.			HUMBOLDT TP3 *1	VOL.14-1 P82 /
OTHERS		-0	1969.			HUMBOLDT TP3 *2	MEMO P6 70/ 3
OTHERS		-0	3302.			KRB *1	VOL.14-1 P82 /
OTHERS		-0	1778.			BIG ROCK P TPH *1	VOL.14-1 P82 /
OTHERS		-0	1778.			BIG ROCK P TPE *1	VOL.14-1 P82 /
OTHERS		-0	1718.			BIG ROCK P TPE *2	MEMO P6 70/ 3
OTHERS		-0	1778.			BIG ROCK P TPEG*1	VOL.14-1 P82 /
OTHERS		-0	3658.			TARAPUR *1	VOL.14-1 P82 /
OTHERS		-0	3658.			CURRENT BWR *1	VOL.14-1 P82 /

FUEL	ROD NO.	PER ASSY	AND ROD PITCH	ARRANGE	732480		
(1)FUEL RODS NUMBER (2)RODS NUMBER PER ASSEMBLY *1)=SEGMENTS NUMBER PER ASSEMBLY *2)=RODS NUMBER PER TYPE A ASSEMBLY *3)=RODS NUMBER PER TYPE B ASSEMBLY *4)=RODS NUMBER PER STANDARD *5)=RODS NUMBER PER L-SHAPED *6)=PINS NUMBER PER ASSEMBLY (3)ROD PITCH (4)RODS NUMBER PER CORE							
PLANT NAME			(1) MM.	(2) MM.	(3) MM.	(4)	
JPDR-1	BWR	1	6*6	72	*1) 19.56	(3024/2.7)(504/2.0)	/
JPDR-2	BWR	2	7*7	49	16.6	(3024/2.7)	/
TSURUGA	BWR	3	7*7	49			/
DNAGAWA	BWR	4	7*7	49	18.8		8-14-(5) 70/ 5
HAMADKA-1	BWR	5	7*7	49			70/ 5
FUKUSIMA-1	BWR	6	7*7	49			/
FUKUSIMA-1	BWR	6	8*8	64	16.3		BWR/6 7 4//11
FUKUSIMA-2,3	BWR	7	7*7	49	18.75		F2N1 P9 71/ 2
SHIMANE	BWR	8	7*7	49			/
FUKUSIMA-5	BWR	9	7*7	49			8-3-(6) 71/ 2

PLANT PERFORMANCE DATA

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FUEL ROD NO. PER ASSY AND ROD PITCH ARRANGE 732480

- (1) FUEL RODS NUMBER
- (2) RODS NUMBER PER ASSEMBLY
- *1)=SEGMENTS NUMBER PER ASSEMBLY
- *2)=RODS NUMBER PER TYPE A ASSEMBLY
- *3)=RODS NUMBER PER TYPE B ASSEMBLY
- *4)=RODS NUMBER PER STANDARD
- *5)=RODS NUMBER PER L-SHAPED
- *6)=PINS NUMBER PER ASSEMBLY

(3) ROD PITCH

(4) RODS NUMBER PER COKE

PLANT NAME		(1)	(2)	PER	COKE	(4)		
							MM.	MM.
FUKUSIMA-4	BWR	10	7*7	49			8-3-(6)	71/ 8
FUKUSIMA-6	BWR	11	7*7	49			8-3-(4)	72/ 1
TOOKAI-2	BWR	12	7*7	49			8-3-(4)	72/ 1
HAMAOKA-2	BWR	13	7*7	49			8-10	72/ 9
MIHAMA-1	PWR	21	14*14	179	14.1	21659	RK80-4 P4	71/ 9
MIHAMA-2	PWR	22	14*14	179	14.1	21659	6783-5	70/10
TAKAHAMA-2	PWR	23	15*15	204	14.3	32028	8-17	70/ 5
GENKAI-1	PWR	24	14*14	179	14.1	21659	8-18	70/ 5
TAKAHAMA-1	PWR	25	15*15	204	14.3	32028	6783-5	70/10
OUI -1+2	PWR	26	15*15	204	14.3	39372	8-17	71/ 1
MIHAMA-3	PWR	27	15*15	204	14.3	32028	8-17	71/ 8
IKATA	PWR	28	14*14	179	14.1	21659	8-20	72/11
VERMONT YANKEE	BWR	52	7*7	49			A-2	/
BROWNS FERRY	BWR	53	7*7	49	18.745		GSK-19	69/ 2
MILLSTON	BWR	54	7*7	49				/
DRESDEN-1	BWR	55	6*6	4* 36	*1) 18.034		DNR V4 P94	62/
DRESDEN-2	BWR	56	7*7	49				/
OYSTER CREEK	BWR	57	7*7	49				/
OUAYE ARNOLD	BWR	58	7*7	49			A-2 P2	70/ 7
YANKEE	BWR	59	18*18	305	*2) 11.53	23142	DNR V4 P36	61/
YANKEE		69	18*18	304	*3)		DNR V4 P36	61/
SAXTON		70			14.732	1953	DNR V4 P48	61/
SAXTON		70	9*9-4	72	*4)		DNR V4 P50	61/
SAXTON		70		9	*5)		DNR V4 P50	61/
BURLINGTON	PWR	71	15*15	204	14.3		GSK-19	69/ 2
TURKEY POINT-3+4	PWR	72	15*15	204	14.3	32028	BK80-4 P3	71/ 9
H.B.ROBINSON-2	PWR	73	15*15	204	14.3	32028	BK80-4 P3	71/ 9
SURRY-1--2	PWR	74	15*15	204	14.3	32028	BK80-4 P3	71/ 9
BEAVER VALLEY	PWR	75	15*15	204	14.3	32028	BK80-4 P3	71/ 9
NORTH ANNA-12	PWR	76	15*15	204	14.3	32028	BK80-4 P4	71/ 9
JOSEPH W.FARLEY	PWR	77	15*15	204	14.3	32028	BK80-4 P4	71/ 9
FUGEN	ATR	81	28	224		(128/U02)(96/P002)	105-8-(3)	73/11
MONJU	FAST	92		169	*6) 7.9		GASKASIP43	72/ 5

FUEL ASSY VERTICALITY CHECK METHOD 732490

PLANT PERFORMANCE DATA

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FUEL ASSY VERTICALITY CHECK METHOD 732490

MIHAMA-1 PWR 21 TRANSIT IS USUALLY USED. (WITHIN 40 MILLS=1.016 MM) 71/ 9

SPACER ALIGNMENT CHECK METHOD 732500

MIHAMA-1 PWR 21 AIR MICROMETER IS USUALLY USED.

PLENUM VS FUEL VOLUME RATIO OR LENGTH 732600

- (1) PLENUM VS FUEL VOLUME RATIO
- (2) PLENUM LENGTH.
- (3) PLENUM VOLUME.
- (4) REACTOR TYPE
- (A) REACTOR TECHNOLOGY 1971. (B) FUKUSIMA-1 SIRYOD

(1) (2) (3) (4)
VOLUME PLENUM PLENUM TYPE
RATIO LENGTH VOLUME
MM CC

PLANT NAME		(1)	(2)	(3)	(4)		
JPDR-1	BWR	1		13.			/
JPDR-2	BWR	2		13.			70/ 8
TSURUGA	BWR	3		32.8		80-3-3P14	70/ 5
ONAGAWA	BWR	4	0.11			8-3-(5)	70/ 5
HAMAOKA-1	BWR	5	0.11			95-2-3 P7	71/ 9
FUKUSIMA-1	BWR	6	0.08			MEMO P6	70/ 3
FUKUSIMA-2+3	BWR	7	0.11			82-2-3 P8	70/ 8
FUKUSIMA-2+3	BWR	7		44.3		F2N1 P8	71/ 2
FUKUSIMA-2+3	BWR	7	0.11	406.	44.3	F2N1	/
FUKUSIMA-5	BWR	9	0.11	406.		8-3-(6)	71/ 2
FUKUSIMA-4	BWR	10	0.11	406.		8-3-(6)	71/ 8
FUKUSIMA-6	BWR	11	0.11	406.		8-3-(6)	72/ 1
TOOKAI-2	BWR	12	0.11	406.		8-3-(6)	72/ 1
HAMAOKA-2	BWR	13	0.11			8-12	72/ 9
MIHAMA-1	PWR	21		131.	13.	REF23,P122	70/11
BROWNS FERRY	BWR	53		406.4		GSK-19	69/ 2
DRESDEN-1	BWR	55	0.013			DRESDEN-1 (A)	VOL.14.1 P82
DRESDEN-1	BWR	55	0.040			DRESDEN-3B (A)	/
DRESDEN-1	BWR	55	0.048			DRESDEN-3F (A)	VOL.14.1 P82
DRESDEN-1	BWR	55	0.048			DRESDEN-5 (A)	VOL.14.1 P82
BURLINGTON	PWR	71		GT.101.6		GSK-19	69/ 2
FUGEN	ATR	81		316.(UPPER)		105-8-(3)	73/11
FUGEN	ATR	81		24.(LOWER)		105-8-(3)	73/11
OTHERS	-0	0.031				GARIGLIANO-1(A)	VOL.14.1 P82
OTHERS	-0	0.030				GARIGLIANO-2(A)	/
OTHERS	-0	0.060				GARIGLIANO-2(B)	MEMO P6
OTHERS	-0	0.017				KARL (A)	VOL.14.1 P82

PLENUM VS FUEL VOLUME RATIO OR LENGTH 732600

(1) PLENUM VS FUEL VOLUME RATIO
 (2) PLENUM LENGTH
 (3) PLENUM VOLUME
 (4) REACTOR TYPE
 (A) REACTOR TECHNOLOGY 1971 (B) FUKUSIMA-1 SIHYOU
 (1) (2) (3) (4)
 VOLUME PLENUM PLENUM
 RATIO LENGTH VOLUME
 MM CC

PLANT NAME	RATIO	LENGTH (MM)	VOLUME (CC)	TYPE		
OTHERS	-0	0.043		HUMBOLDT (A)	VOL.14.1	P82 /
OTHERS	-0	0.062		HUMBOLDT (A)	VOL.14.1	P82 /
OTHERS	-0	0.058		KWB (A)	VOL.14.1	P82 /
OTHERS	-0	0.048		RTG ROCK P-B(A)	VOL.14.1	P82 /
OTHERS	-0	0.048		RTG ROCK P-F(A)	VOL.14.1	P82 /
OTHERS	-0	0.080		RTG ROCK P-F(A)	MEMO P6	70/ 3
OTHERS	-0	0.046		RTG ROCK P-EG(H)	VOL.14-1	P82 /
OTHERS	-0	0.059		TARAPUR (A)	VOL.14-1	P82 /
OTHERS	-0	0.11		CURRENT HWR (A)	VOL.14-1	P82 /

FUEL UO-2 PELLET ENRICH 732620

PLANT NAME	HWR	1	2.6	WT.P.C	(UNIFORM)				
JPOR-1	HWR	1	2.6	WT.P.C	(UNIFORM)		/		
JPOR-2	HWR	2	2.6 (I)	WT.P.C	(MEAN)	2.7/42RUOS	2.0/7RUOS 70/ 8		
TSURUGA	HWR	3	2.04(I)	2.54(F)	WT.P.C	(MEAN)	KUGE 71/ 1		
ONAGAWA	HWR	4	2.25(I)	2.7 (F)	WT.P.C	(MEAN)	8-14-(5) 70/ 5		
HAMAOKA-1	HWR	5	2.3 (I)	2.7 (F)	WT.P.C	(MEAN)*	8-14/R113 70/ 5		
HAMAOKA-1	HWR	5	2.4 (I)	2.8 (F)	WT.P.C	(MEAN)	85-4-2 70/11		
HAMAOKA-1	HWR	5	2.2	WT.P.C	(MEAN)	TYPE 1=1.1	WT.P.C TYPE 2=2.5 71/ 9		
HAMAOKA-1	HWR	5		(FROM 2ND CORE)=	2.8	WT.P.C	95-2-3 P7 71/ 9		
FUKUSIMA-1	HWR	6	2.09(I)	2.31(F)	WT.P.C	(MEAN)	70/ 5		
FUKUSIMA-1	HWR	6		2.79/28RUOS	2.09/10RUOS	1.80/6RUOS	1.40/1RUOS /		
FUKUSIMA-1	HWR	6		2.79+602U3/4RUOS			/		
FUKUSIMA-1	HWR	6	2.62(I)		(F) WT.P.C	(MEAN)	2.87/40RUOS	2.14/14RUOS	HWR/6 7 4/11
FUKUSIMA-1	HWR	6		1.87/4RUOS	1.45/1RUOD	2.87+602U3/4RUOS	W.R0D/1RUOD	HWR/6 7 4/11	
FUKUSIMA-2,3	HWR	7	2.2 (I)	2.69(F)	WT.P.C	(MEAN)*	82-2-3P8 70/ 8		
FUKUSIMA-2,3	HWR	7	2.2	WT.P.C	(MEAN)	TYPE 1=1.10	WT.P.C TYPE 2=2.50 70/12		
FUKUSIMA-2,3	HWR	7		(TYPE 1=0.711/1.33)	(TYPE 2=(1.33/1.69)	(1.94/2.93)	WT.P.C	F2N1 P8 71/ 2	
FUKUSIMA-2,3	HWR	7		(3-GUON)	SAME AS	5-GOO		B9-7-2 71/ 3	
SHIMANE	HWR	8	2.09(I)	2.31(F)	WT.P.C	(MEAN)		70/ 5	
FUKUSIMA-5	HWR	9	2.2	WT.P.C	(MEAN)	TYPE 1=1.10	WT.P.C TYPE 2=2.50 71/ 2		
FUKUSIMA-5	HWR	9		(FROM 2ND CORE)=	2.70	WT.P.C		8-3-(6) 71/ 2	
FUKUSIMA-4	HWR	10	2.2	WT.P.C	(MEAN)	TYPE 1=1.10	WT.P.C TYPE 2=2.50 71/ 8		
FUKUSIMA-4	HWR	10		(FROM 2ND CORE)=	2.70	WT.P.C		8-3-(6) 71/ 8	
FUKUSIMA-6	HWR	11	2.2	WT.P.C	(MEAN)	TYPE 1=1.1	WT.P.C TYPE 2=2.5 72/ 1		
FUKUSIMA-6	HWR	11		(FROM 2ND CORE)=	2.7	WT.P.C		8-3-(6) 72/ 1	
TOKAI-2	HWR	12	2.2	WT.P.C	(MEAN)	TYPE 1=1.1	WT.P.C TYPE 2=2.5 72/ 1		

FUEL UO-2 PELLET ENRICH 732620

PLANT NAME	HWR	12	(FROM 2ND CORE)= <th>2.7 <th>WT.P.C <th></th> <th></th> </th></th>	2.7 <th>WT.P.C <th></th> <th></th> </th>	WT.P.C <th></th> <th></th>		
TOKAI-2	HWR	12	(FROM 2ND CORE)=	2.7	WT.P.C		8-3-(6) 72/ 1
HAMAOKA-2	HWR	13	2.2	WT.P.C	(MEAN)	TYPE 1=1.1	WT.P.C TYPE 2=2.5 72/ 9
HAMAOKA-2	HWR	13		(FROM 2ND CORE)=	2.7	WT.P.C	8-12 72/ 9
MIHAMA-1	PWR	21	CENTER R.	=2.36	WT.P.C	MEO-R=2.51	OUT-R=2.81 66/11
MIHAMA-1	PWR	21		3.07	WT.P.C	(FINAL)	8-15 66/11
MIHAMA-1	PWR	21	1ST REGION=	2.3	WT.P.C	2ND-R=3.0	3RD-R=3.4 (INITIAL) REF23 P7 70/11
MIHAMA-1	PWR	21		3.1	WT.P.C	(FINAL)	2.89 (INITIAL MEAN) REF23 P120 70/11
MIHAMA-2	PWR	22	1ST REGION=	2.3	WT.P.C	2ND-R=3.0	3RD-R=3.4 (INITIAL) REF23 P7 70/11
MIHAMA-2	PWR	22		3.4	WT.P.C	(FINAL)	2.9 (INITIAL MEAN) REF23 P7 70/11
TAKAHAMA-2	PWR	23	1ST REGION=	2.26	WT.P.C	2ND-R=2.80	3RD-R=3.42 (INITIAL) 8-16 70/ 5
TAKAHAMA-2	PWR	23		3.33	WT.P.C	(FINAL)	8-16 70/ 5
GENKAI-1	PWR	24	1ST REGION=	2.27	WT.P.C	2ND-R=3.03	3RD-R=3.40 8-17 70/ 5
GENKAI-1	PWR	24		3.40	WT.P.C	(FINAL)	8-17 70/ 5
OOI -1,2	PWR	26	1ST REGION=	2.04	WT.P.C	2ND-R=2.58	3RD-R=3.20 (INITIAL) 8-16 71/ 1
OOI -1,2	PWR	26		3.21	WT.P.C	(FINAL)	8-16 71/ 1
MIHAMA-3	PWR	27	1ST REGION=	2.00	WT.P.C	2ND-R=2.70	3RD-R=3.35 (INITIAL) 8-16 71/ 8
MIHAMA-3	PWR	27		3.33	WT.P.C	(FINAL)	8-16 71/ 8
IKATA	PWR	28	1ST REGION=	2.27	WT.P.C	2ND-R=3.03	3RD-R=3.40 (INITIAL) 8-19 72/11
IKATA	PWR	28		3.40	WT.P.C	(FINAL)	8-19 72/11
VERMONT YANKEE	HWR	52	2.5 (I)				A-2 P2 70/ 7
MILLSTON	HWR	54	2.07 (I)		WT.P.C	(MEAN)	R-9 66/ 8
DRESDEN-1	HWR	55	1.5 (I)		WT.P.C		DNR V4 P94 62/
DRESDEN-2	HWR	56	2.00 (I)	2.36 (F)	WT.P.C	(MEAN)	R-9 66/ 8
DYSTER CREEK	HWR	57	2.10 (I)		WT.P.C	(MEAN)	R-9 66/ 8
YANKEE		69	3.4	WT.P.C			DNR V4 P36 61/
SAXTON		70	5.7	WT.P.C			DNR V4 P50 61/
FUGEN	ATR	81	1.5	WT.P.C	+ NATUNAL UO2 + AVERAGE	0.8	WT.P.C PUO2 105-B-(3) 73/11

BURN-UP 1ST CORE AVG. FINAL-C. AVG. 1ST ASSY MAX 732640

PLANT NAME	HWR	1	8800.	25000.	28000.		
JPOR-1	HWR	1	8800.				/
JPOR-2	HWR	2	12000.				70/11
TSURUGA	HWR	3	16500.				80-3-2 70/ 6
ONAGAWA	HWR	4	19500.	27500.	32000.		70/ 5
HAMAOKA-1	HWR	5	20000.*	27500.	35000.		70/ 5
HAMAOKA-1	HWR	5	21000.	27500.	35000.		85-4-2 70/11
FUKUSIMA-1	HWR	6	16500.	22000.	26000.		R-9 70/ 5
FUKUSIMA-2,3	HWR	7	21000.	27500.	35000.		82-2-3 P8 70/ 5
SHIMANE	HWR	8	16500.	22000.	26000.		70/ 5
FUKUSIMA-5	HWR	9	21000.	27500.	35000.		8-3-(6) 71/ 2
FUKUSIMA-4	HWR	10	21000.	27500.	35000.		8-3-(6) 71/ 8
FUKUSIMA-6	HWR	11	21000.	27500.	35000.		8-3-(6) 72/ 1

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BURN-UP 1ST CORE AVG. FINAL-C. AVG. 1ST ASSY MAX 732640

PLANT NAME		1ST CORE AVG	FINAL-C. AVG	1ST ASSY MAX			
TOOKAI-2	BWR 12	21000.	27500.	35000.	MWD/TU	8-3-(6)	72/ 1
HAMAOKA-2	BWR 13	21000.	27500.	35000.	MWD/TU	8-12	72/ 9
MIHAMA-1	PWR 21	21800.	27000.			8-16	66/11
MIHAMA-1	PWR 21	23900.		39000.	MWD/TU	REF23 P120	70/11
TAKAHAMA-2	PWR 23	23900.	31500.	48000.	MWD/TU	80-9-1	70/ 5
GENKAI-1	PWR 24	23900.	31500.	48000.	MWD/TU	80-9-1	70/ 5
ODI -1,2	PWR 26	24100.	33000.		MWD/MT	8-17	71/ 1
MIHAMA-3	PWR 27	23900.	31500.		MWD/TU	8-17	71/ 8
IKATA	PWR 28	23900.	31500.			8-20	72/11
VERMONT YANKEE	BWR 52	20900.				A-2 P2	70/ 7
BROWNS FERRY	BWR 53	20900.	27500.		MWD/TU	GSK-19	69/ 2
MILLSTON	BWR 54	16500.	22000.		MWD/TU	R-9	66/ 8
DRESDEN-1	BWR 55	6700.(MINIMUM)	12000.			DNR V4 P91	62/
DRESDEN-2	BWR 56	16500.	22000.		MWD/TU	R-9	66/ 8
DRESDEN-2	BWR 56	15000.				DNR V7 P192	68/
DYSTER CREEK	BWR 57	16500.	22500.		MWD/TU	R-9	66/ 8
YANKEE	69	7830.(RATED.AV.)	15000.(RATED MAX.)		MWD/TU	DNR V4 P33	61/
FUKUSIMA-1	BWR 6			34200	MWD/TU	BWR/6	47/11
SAXTON	70	7300.(AVERAGE)	30000.(MAX.ALLOWABLE)		MWD/TU	DNR V4 P47	61/
HURLINGTON	PWR 71	21800.	33000.		MWD/TU	GSK-19	69/ 2
FUGEN	ATR 81	12000.		20000.		105-5 P10	73/12
FUGEN	ATR 81	23000. (FUEL ELEMENT MAX.)		29000. (PELLET MAX.)		105-5 P6	73/12

EXPOSURE ACTUAL RESULT MWD/TON BURN-UP 732650

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
 REF.2=GENSIRYOKU SIRYOD NO.19(1969.2)(GENSIRYOKU SANGYOD KAIGI) PAGE24
 REACTOR NAME ---REFER 73244
 *1=NO. IS NUMBER OF SEGMENTS OR RODS.
 1) YANKEE (CORE 1,2,3,4,5)
 2) INDIAN POINT 300PPM B(THD2,UO2)
 3) CVTR (FOR EXPERIMENT)
 11) AN=ANNEALED
 12) CW=COLD WORKED

PLANT NAME		(MWD/TON)/(MWD/TON) PEAK PELLETT/AVERAGE PER ASSEMBLY	IN CORE YEARS	NO. *1		
JPDR-1	BWR 1	8200/ 3800(69/ 9/ 5)	5.60	5184	REF.1	/
DRESDEN-1	BWR 55	DNP1 TP1 33800/23500(LEAD TP1 ASSY)	9.25	144	REF.1	/
DRESDEN-1	BWR 55	DNP1 TP1---A TOTAL OF 100 ASSYS(14400 SEGMENTS)			REF.1	/
DRESDEN-1	BWR 55	DNP1 TP1 DISCHARGED JAN.1/67, WITH AVERAGE EXPOSURE			REF.1	/
DRESDEN-1	BWR 55	DNP1 TP1 OF 12600MWD/TON.			REF.1	/
DRESDEN-1	BWR 55	DNP1 TP3R 29600/15400(69/ 9/ 5)	4.95	5868	REF.1	/
DRESDEN-1	BWR 55	DNP1 TP3F 27800/15600(69/ 9/ 5)	3.95	3360	REF.1	/
DRESDEN-1	BWR 55	DNP1 TP5 15700/ 7400(69/ 9/ 5)	1.95	3816	REF.1	/
OTHERS	-0	GAK. TP1 24700/12700(69/12/31)	6.40	11502	REF.1	/

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EXPOSURE ACTUAL RESULT MWD/TON BURN-UP 732650

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
 REF.2=GENSIRYOKU SIRYOD NO.19(1969.2)(GENSIRYOKU SANGYOD KAIGI) PAGE24
 REACTOR NAME ---REFER 73244
 *1=NO. IS NUMBER OF SEGMENTS OR RODS.
 1) YANKEE (CORE 1,2,3,4,5)
 2) INDIAN POINT 300PPM B(THD2,UO2)
 3) CVTR (FOR EXPERIMENT)
 11) AN=ANNEALED
 12) CW=COLD WORKED

PLANT NAME		(MWD/TON)/(MWD/TON) PEAK PELLETT/AVERAGE PER ASSEMBLY	IN CORE YEARS	NO. *1		
OTHERS	-0	GAR. TP2 8800/ 5400(69/12/31)	1.20	3456	REF.1	/
OTHERS	-0	KABL 21400/11000(68/ 8/31)	7.60	1368	REF.1	/
OTHERS	-0	HUMB. TP2 20300/11700(69/12/31)	4.00	6468	REF.1	/
OTHERS	-0	HUMB. TP3 5050/ 2500(69/12/31)	0.75	1872	REF.1	/
OTHERS	-0	KRB 17100/10100(69/12/31)	3.10	10512	REF.1	/
OTHERS	-0	BRP-B 29500/19500(69/12/31)	3.70	1694	REF.1	/
OTHERS	-0	BRP-L 13400/ 6600(69/12/31)	1.50	2926	REF.1	/
OTHERS	-0	BRP-EG 5300/ 3500(69/12/31)	0.75	1694	REF.1	/
OTHERS	-0	TARAPUR 2700/ 1400(69/12/31)	0.85	27832	REF.1	/
OTHERS	-0	CURRENT BWR 45000/27500(TARGET)	5.0	18032	REF.1	/
OTHERS	-0	YANKEE 1) 46000/31000 348-SS AN 11)	3.5	80000	(PWR) REF.2	/
OTHERS	-0	SAVAN. 10000/ 6600 304-SS AN	4.	5248	(PWR) REF.2	/
OTHERS	-0	IND.P. 2) 39000/24000 304-SS	3.	23400	(PWR) REF.2	/
OTHERS	-0	IND.P. 12000/ 8000 304-SS CW 12)	1.	20760	(PWR) REF.2	/
OTHERS	-0	SAXT. 24000/16000 304-SS CW	3.5	1572	(PWR) REF.2	/
OTHERS	-0	SELNI 20000/13000 304-SS CW	1.5	24960	(PWR) REF.2	/
OTHERS	-0	BR-3 10500/ 7000 348-SS AN	1.5	3536	(PWR) REF.2	/
OTHERS	-0	NPD 9000/ 7020 ZRY-2	3.6	5950	(HWPWR)REF.2	/
OTHERS	-0	NPD 12600/ 9700 ZRY-2	3.6	16105	(HWPWR)REF.2	/
OTHERS	-0	CVTR 23000/ ZRY-4	3.2	1368	(PWR) REF.2	/
OTHERS	-0	SAXT 18000/12000 ZRY-4	1.1	70	(PWR) REF.2	/
OTHERS	-0	SHIP.P. 36600/ ZRY-2	6.1	16000	(PWR) REF.2	/
OTHERS	-0	HWCTR. 17300/12000 ZRY-2	2.2	31	(HWPWR)REF.2	/
OTHERS	-0	CVTR 3) 11100/ 8920 ZRY-4	0.5	22	(PWR) REF.2	/
OTHERS	-0	SAXT.PU-U 24000/15000 ZRY-4	1.8	504	(PWR) REF.2	/

FUEL LINEAR HEAT RATING W/CM 732660

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
 FUK.1=FUKUSIMA-1 SIRYOD
 (1)100 PERCENT (W/CM)
 (2)112 PERCENT OVER POWER (W/CM)
 (3)MEAN (W/CM)

PLANT NAME		(1)	(2)	(3)		
JPDR-1	BWR 1		120			70/ 8
JPDR-2	BWR 2		170			70/ 8

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
 FUK.1=FUKUSIMA-1 S1RY00
 (1)100 PERCENT (W/CM)
 (2)112 PERCENT OVER POWER (W/CM)
 (3)MEAN (W/CM)

PLANT NAME	(1)	(2)	(3)		
TSURUGA	BWR 3	570		81-3-2	70/ 6
ONAGAWA	BWR 4	607		8-3-(6)	70/ 5
HAMAOKA-1	BWR 5	607		8-14	70/ 5
HAMAOKA-1	BWR 5	610		95-2-3 P7	71/ 9
FUKUSIMA-1	BWR 6	574		70/6/20	70/ 5
FUKUSIMA-1	BWR 6	440(DESIG.MAX.)	144	BWR/6	7 47/11
FUKUSIMA-2,3	BWR 7	607		70/6/20	70/ 5
SHIMANE	BWR 8	574		70/6/20	70/ 5
FUKUSIMA-5	BWR 9	610		8-3-(6)	71/ 2
FUKUSIMA-4	BWR 10	610		8-3-(6)	71/ 8
FUKUSIMA-6	BWR 11	610		8-3-(6)	72/ 1
TOOKAI-2	BWR 12	610		8-3-(6)	72/ 1
HAMAOKA-2	BWR 13	610		8-12	72/ 9
MIHAMA-1	PWR 21	499	558 154	BK80-4 P4	71/ 9
MIHAMA-2	PWR 22	505	565 187	BK80-4 P4	71/ 9
TAKAHAMA-2	PWR 23	568	637	8-17,8-131	70/ 5
GENKAI-1	PWR 24	568	636	8-18	70/ 5
TAKAHAMA-1	PWR 25	568	636	6783-5	70/10
DDI -1,2	PWR 26	617	689	8-17 8-18	71/ 1
MIHAMA-3	PWR 27	568	637 203	BK80-4 P4	71/ 9
IKATA	PWR 28	542	607	8-20	72/11
VERMONT YANKEE	BWR 52	607		A-2	70/ 5
HRODONS FERRY	BWR 53		231	GSK-19	69/ 2
DRESDEN-1	BWR 55	499		DRESDEN-1 TYPE-1	/
DRESDEN-1	BWR 55	505		DRESDEN-1 TYPE-3H	REF.1 /
DRESDEN-1	BWR 55	509		DRESDEN-1 TYPE-3F	REF.1 /
DRESDEN-1	BWR 55	509		DRESDEN-1 TYPE-5	REF.1 /
DUANE ARNOLD	BWR 58	607		A-2 P1	70/ 7
BURLINGTON	PWR 71		209	GSK-19	69/ 2
TURKEY POINT-3,4	PWR 72	587	656 180	BK80-4 P3	71/ 9
H.B.ROBINSON-2	PWR 73	587	656 180	BK80-4 P3	71/ 9
SURRY-1,-2	PWR 74	568	676 203	BK80-4 P3	71/ 9
BEAVER VALLEY	PWR 75	587	656 220	BK80-4 P3	71/ 9
NORTH ANNA-12	PWR 76	587	656 220	BK80-4 P3	71/ 9
JOSEPH M.FARLEY	PWR 77	617	692 220	BK80-4 P3	71/ 9
FUGEN	ATR 81	574	689	105-8-(3)	73/11
MONJU	FAST 92		462	GAKKAISI43P	72/ 5
OTHERS	-0	338		GARIGLIANO TYPE-1	/
OTHERS	-0	479		GARIGLIANO TYPE-2	/
OTHERS	-0	427		KAHL	/

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
 FUK.1=FUKUSIMA-1 S1RY00
 (1)100 PERCENT (W/CM)
 (2)112 PERCENT OVER POWER (W/CM)
 (3)MEAN (W/CM)

PLANT NAME	(1)	(2)	(3)		
OTHERS	-0	397		HUMBOLDT TYPE-2	REF.1 /
OTHERS	-0	551		HUMBOLDT TYPE-3	REF.1 /
OTHERS	-0	518		KRB	REF.1 /
OTHERS	-0	492		BIG ROCK P TYPE-E	REF.1 /
OTHERS	-0	581		BIG ROCK P TYPE-EG	REF.1 /
OTHERS	-0	581		BIG ROCK P TYPE-EG	REF.1 /
OTHERS	-0	518		TARAPUR	REF.1 /
OTHERS	-0	607		CURRENT BWR	REF.1 /
OTHERS	-0	530		GARIGLIANO TYPE-2	FUK.1 MEMO P6 70/ 3
OTHERS	-0	335		HUMBOLDT	FUK.1 MEMO P6 70/ 3
OTHERS	-0	450		HUMBOLDT	FUK.1 MEMO P6 70/ 3

FUELRD	PELLET	CENTER	TEMP.	MAX C	732680
JPR-1	BWR	1	1899.(AT 125 OP) DEG C	1610.(AT 100 NORMAL P) DEG C	/
JPR-2	BWR	2	2540.(AT 125 OP)*DEG C	1970.(AT 100 NORMAL P)*DEG C	70/ 8
JPR-2	BWR	2	2550.(AT 100 NORMAL P) DEGC		71/ 1
TSURUGA	BWR	3	2540.(AT 120 OP)*DEG C	2350.(AT 100 NORMAL P) DEG C	80-3-3 70/ 5
TSURUGA	BWR	3	2350.(AT 100 NORMAL P) DEG C		KUGE 71/ 1
ONAGAWA	BWR	4		2460.(AT 100 NORMAL P) DEG C	8- 70/ 5
HAMAOKA-1	BWR	5		2420.(AT 100 NORMAL P) DEG C*	8-14 70/ 5
HAMAOKA-1	BWR	5		2460.(AT 100 NORMAL P) DEG C	85-4-2 70/11
FUKUSIMA-1	BWR	6	2480.(AT 120 OP)*DEG C		/
FUKUSIMA-1	BWR	6	2390.(AT 100 NORMAL P) DEG C		KUGE 71/ 1
FUKUSIMA-2,3	BWR	7		2420.(AT 100 NORMAL P) DEG C	82-2-3 P8 70/ 8
FUKUSIMA-2,3	BWR	7		2440.(AT 100 NORMAL P) DEG C	89-7-2 P15 71/ 3
FUKUSIMA-5	BWR	9		2440.(AT 100 NORMAL P) DEG C	8-3-(6) 71/ 2
FUKUSIMA-4	BWR	10	(UO-2) = 2440.(AT 100 NORMAL P) DEG C		8-3-(6) 71/ 8
FUKUSIMA-4	BWR	10	(UO-2)+(GD2-B3)= 2185.(AT 100 NORMAL P) DEG C		8-3-(6) 71/ 8
FUKUSIMA-6	BWR	11	(UO-2)	2420.(AT 100 NORMAL P) DEG C	8-3-(6) 72/ 1
FUKUSIMA-6	BWR	11	(UO-2)+(GD2-B3)	2200.(AT 100 NORMAL P) DEG C	8-3-(6) 72/ 1
TOOKAI-2	BWR	12	(UO-2)	2420.(AT 100 NORMAL P) DEG C	8-3-(6) 72/ 1
TOOKAI-2	BWR	12	(UO-2)+(GD2-B3)	2200.(AT 100 NORMAL P) DEG C	8-3-(6) 72/ 1
HAMAOKA-2	BWR	13	= 2480.(AT 100 NORMAL P) DEG C		8-12 72/ 9
MIHAMA-1	PWR	21	2230.(AT 112 OP) DEG C	2150.(AT 100 NORMAL P) DEG C	BK80-4 P4 71/ 9
MIHAMA-2	PWR	22	2390.(AT 112 OP) DEG C	2180.(AT 100 NORMAL P) DEG C	6783-5 70/10
TAKAHAMA-2	PWR	23	2570.(AT 112 OP) DEG C	2360.(AT 100 NORMAL P) DEG C	8-16 70/ 5
GENKAI-1	PWR	24	2340.(AT 112 OP) DEG C	2200.(AT 100 NORMAL P) DEG C	8-17 70/ 5
GENKAI-1	PWR	24	2570.(AT 112 OP) DEG C	2360.(AT 100 NORMAL P) DEG C	45/11/6 70/11

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FUEL ROD PELLETT CENTER TEMP. MAX C	732680		
TAKAHAMA-1 PWR 25	2570.(AT 112 OP) DEG C	2360.(AT 100 NORMAL P) DEG C	6783-5 70/10
001 -1,2 PWR 26	2480.(AT 112 OP) DEG C	2350.(AT 100 NORMAL P) DEG C	8-16 71/ 1
MIHAMA-3 PWR 27	2570.(AT 112 OP) DEG C	2360.(AT 100 NORMAL P) DEG C	8-16 71/ 8
IKATA PWR 28	2640.(AT 112 OP) DEG C	2440.(AT 100 NORMAL P) DEG C	8-19 72/11
VERMONT YANKEE BWR 52		2420.(AT 100 NORMAL P) DEG C	A-2 P1 70/ 7
HADDONS FERRY BWR 53		2415.(AT 100 NORMAL P) DEG C	GSK-19 69/ 2
DIANE ARNOLD BWR 54		2420.(AT 100 NORMAL P) DEG C	A-2 P1 70/ 7
MILLSTON BWR 54		1930.(AT 100 NORMAL P) DEG C	R-9 66/ 8
DRESDEN-1 BWR 55	2649.(AT 125 OP) DEG C		DNR V4 P94 62/
DRESDEN-2 BWR 56		2050.(AT 100 NORMAL P) DEG C	R-9 66/ 8
OYSTER CREEK BWR 57	2430.(AT 120 OP) DEG C		/
YANKEE BWR 69		2155.(AT 100 NORMAL P) DEG C	DNR V4 P36 61/
BURLINGTON PWR 71		2260.(AT 100 NORMAL P) DEG C	GSK-19 69/ 2
TURKEY POINT-3,4 PWR 72	2427.(AT 112 OP) DEG C	2288.(AT 100 NORMAL P) DEG C	BK80-4 P3 71/ 9
H.B.ROBINSON-2 PWR 73	2371.(AT 112 OP) DEG C	2221.(AT 100 NORMAL P) DEG C	BK80-4 P3 71/ 9
SURRY-1,-2 PWR 74	2371.(AT 112 OP) DEG C	2232.(AT 100 NORMAL P) DEG C	BK80-4 P3 71/ 9
BEAVER VALLEY PWR 75	2360.(AT 112 OP) DEG C	2193.(AT 100 NORMAL P) DEG C	BK80-4 P3 71/ 9
NORTH ANNA-12 PWR 76	2360.(AT 112 OP) DEG C	2193.(AT 100 NORMAL P) DEG C	BK80-4 P4 71/ 9
JOSEPH M.FARLEY PWR 77	2482.(AT 112 OP) DEG C	2316.(AT 100 NORMAL P) DEG C	BK80-4 P4 71/ 9
FUGEN ATR 81	LE.2790		105-8-3-(5) 73/11
MUNJU FAST 92	2600.(AT TRANGIENT) DEG C		GAKKAI1S143P 72/ 5
GAP CONDUCTANCE PELLETT AND CLADDING 732700			
PLANT NAME	BTU/H.SQFT.F		
JPDR-1 BWR 1	1000.		/
JPDR-2 BWR 2	1400.		70/
TSURUGA BWR 3	1000.		KDN-S P5 68/ 8
ONAGAWA BWR 4	1000.		A-5 70/ 7
HAMAOKA-1 BWR 5	1000.		70/ 5
FUKUSIMA-1 BWR 6	1000.		/
FUKUSIMA-2,3 BWR 7	1000. (4880 KCAL/SQM.H.C)		F2N1 P10 71/ 2
SHIWANE BWR 8	1000.		/
MIHAMA-1 PWR 21	1000.		/
MIHAMA-2 PWR 22	1000.		678 3-5 70/ 5
TAKAHAMA-2 PWR 23	1000.		70/ 5
GENKAI-1 PWR 24	2700. (AT 100 PC POWER), 4560. (AT 112 PC POWER),	REV-0	678 3-5 70/ 5
GENKAI-1 PWR 24	1000.	REV-1	70/11
TAKAHAMA-1 PWR 25	1000.		678 3-5 70/ 5
001 -1,2 PWR 26	5400. (AT 112 PC POWER)		8-133 71/ 1
001 -1,2 PWR 26	H(GAP)=0.6P+ K(GAS)/(14.4E-6)	AT CONTACT	71/ 2
001 -1,2 PWR 26	H(GAP)= K(GAS)/(GAP +14.4E-6)	NONE CONTACT	71/ 2
001 -1,2 PWR 26	WHERE UNIT P=PSI, K=BTU/HR.FT.F, GAP=INCH(RADIAL)		105-5 P9 73/12
FUGEN ATR 81	1000.		

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FUEL CLADDING MECHANICAL PROPERTY 732720			
PLANT NAME	UTS KG/SQMM	YS KG/SQMM	ELONG PERCENT
FUKUSIMA-2,3 BWR 7	GE 49.2 (AT RT)	42.2 (AT RT)	16.PC(AT RT)
FUKUSIMA-2,3 BWR 7	GE 28.8 (344 C)	22.4 (344 C)	5.4
FUEL CLADDING CRUD DEPOSITE CORROSION RATE 732740			
FUKUSIMA-2,3 BWR 7	0.01 MM/YEAR		F2N1 P10 71/ 2
FUGEN ATR 81	0.01 MM/YEAR		105-8-3-(5) 73/11
HEAT TRANSFER COEF. CLADDING WATER 732760			
FUKUSIMA-2,3 BWR 7	BOILING REGION (JENS LOTTES)		F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	$H=1.22*(Q/A)^{0.75}*(EXP(63.3))$	----JENS LOTTES	F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	NONE BOILING REGION (DITTS BOELTER)		F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	$H=0.023*(K/D)^{0.8}*((RE)^{0.4})$	----DITTS B.	F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	WHERE H=KCAL/SQM.H.C, Q/A=HEAT FLUX(KCAL/SQM.H)		F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	P=PRESSURE(KG/SQCM)		F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	K=THERMAL CONDUCTIVITY OF COOLANT(KCAL/M.H.C)		F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	D=EQUIVALENT HYDRAULIC DIAMETER		F2N1 P10 71/ 2
FUKUSIMA-2,3 BWR 7	RE=REYNOLDS NUMBER, PR=PRANDTLE NUMBER		F2N1 P10 71/ 2
FUEL CLADDING SURFACE TEMP. MAX C 732800			
JPDR-1 BWR 1	ST=298 C (125 O.P)	ST=293 C (100)	70/ 8
JPDR-2 BWR 2	ST=305 C (125 O.P)	ST=293 C (100)	70/ 8
JPDR-2 BWR 2	ST=400 (125 O.P INSIDE)	ST=310 (125 O.P OUTSIDE)	NAIT00 71/ 1
TSURUGA BWR 3	ST=294 C (120 O.P)	ST=292 C (100)	MT=400 C (MAX) 82-2-3 P8 70/ 8
TSURUGA BWR 3	ST=295 (125 O.P)		KUGE 70/ 1
ONAGAWA BWR 4			MT=400 C (MAX)* 8-3-(6) 70/ 5
ONAGAWA BWR 4	ST=300		87-4-4 70/12
ONAGAWA BWR 4			MT=300 C (MAX) 87-4-4 70/12
HAMAOKA-1 BWR 5			MT=400 C (MAX) 8-14 70/ 5
HAMAOKA-1 BWR 5		ST=300 C (100)	95-2-3 P7 71/ 9
FUKUSIMA-1 BWR 6	ST=295 (125 O.P)		KUGE 70/ 1
FUKUSIMA-2,3 BWR 7			89-7-2 P15 71/ 3
FUKUSIMA-5 BWR 9			MT=400 C (MAX) 8-3-(6) 71/ 2
FUKUSIMA-4 BWR 10			MT=400 C (MAX) 8-3-(6) 71/ 8
FUKUSIMA-6 BWR 11			MT=400 C (MAX) 8-3-(6) 72/ 1
TOKAI-2 BWR 12			MT=400 C (MAX) 8-3-(6) 72/ 1
HAMAOKA-2 BWR 13		ST=300 C (100)	8-12 72/ 9
MIHAMA-1 PWR 21	ST=350 C (112 O.P)		BK80-2 P5 71/ 8
MIHAMA-2 PWR 22	ST=348 C (112 O.P)	ST=347 C (100)	6783-5 70/10

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FUEL CLADDING SURFACE TEMP. MAX C 732800

TAKAHAMA-2	PWR	23	ST=348 C (112 O.P.)	ST=347 C (100)	80-9-1	70/ 6
GENKAI-1	PWR	24	ST=347 C (112 O.P.)	ST=347 C (100)	80-9-1	70/ 6
TAKAHAMA-1	PWR	25	ST=348 C (112 O.P.)	ST=347 C (100)	67B3-5	70/10
OOI -1,2	PWR	26	ST=347 C (112 O.P.)	ST=347 C (100)	8-16	71/ 1
MIHAMA-3	PWR	27	ST=347 C (112 O.P.)	ST=347 C (100)	8-16	71/ 8
IKATA	PWR	28	ST=347 C (112 O.P.)	ST=347 C (100)	8-19	72/11
BROWNS FERRY	BWR	53		ST=296 C (100)	GSK-19 P4	69/ 2
MILLSTON	BWR	54		ST=292 C (100)	R-9	66/ 8
DRESDEN-1	BWR	55	ST=294 C (125 O.P.)		DNR V4 P94	62/
DRESDEN-2	BWR	56		ST=292 C (100)	DNR V7 P192	68/
SAXTON		70		ST=338.9 (100)	DNR V4 P50	61/
TURKEY POINT-3,4	PWR	72		ST=347 C (100)	BK80-4 P3	71/ 9
H.B.ROBINSON-2	PWR	73		ST=347 C (100)	BK80-4 P3	71/ 9
SURRY-1,-2	PWR	74		ST=347 C (100)	BK80-4 P3	71/ 9
BEAVER VALLEY	PWR	75		ST=347 C (100)	BK80-4 P3	71/ 9
NORTH ANNA-12	PWR	76		ST=347 C (100)	BK80-4 P4	71/ 9
JOSEPH M.FARLEY	PWR	77		ST=347 C (100)	BK80-4 P4	71/ 9
MONJU	FAST	92			GAKKAI5143P	72/ 5

MT=700 C (RATED P.)

PELLET CLADDING TEMP. FROM BDL TO EOL 732810

FUKUSIMA-2,3	BWR	7	(NORMAL POWER (607 W/CM)) / (16PC OVER POWER (705 W/CM))		F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	CLADDING TEMPERATURE (C) OUTER	MEAN INNER	F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	BDL= 296/297	334/340 372/384	F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	MOL= 359/370	390/405 421/441	F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	EOL= 394/411	420/440 446/470	F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	PELLET TEMPERATURE (C) SURFACE	CENTER MEAN	F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	BDL= 641/692	2464/2809 1507/1738	F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	MOL= 647/702	2021/2347 1292/1493	F2N1 P11	71/ 2
FUKUSIMA-2,3	BWR	7	EOL= 642/696	1719/2012 1152/1327	F2N1 P11	71/ 2

FUEL ASSY CONTROL CLUSTER GUIDE THIMBLE 732820

PLANT NAME	THIMBLE MATERIAL	NO./ASSY	OUTER DIA(MM) UPPER	LOWER	THICKNESS(MM) UPPER	LOWER				
TAKAHAMA-2	PWR	23	ZRY-4	NO.=20	13.61	11.94	0.33	0.31	8-17	70/ 5
GENKAI-1	PWR	24	ZRY-4	NO.=16	13.69	12.20	0.43	0.43	8-18	70/ 5
OOI -1,2	PWR	26	ZRY-4	NO.=20	13.87	12.42			8-17	71/ 1
MIHAMA-3	PWR	27	ZRY-4	NO.=20	13.61	11.94	0.33	0.31	8-17	71/ 8
IKATA	PWR	28	ZRY-4	NO.=16	13.69	12.20	0.43	0.43	8-20	72/11

CONTROL ROD EFFECT. LENGTH AND STROKE 733220

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CONTROL ROD EFFECT. LENGTH AND STROKE 733220

- (1)CONTROL ROD NUMBER
 (2)FORM
 CRU.-CRUCIFORM
 CR.1= CRUCIFORM REGULATING RODS WITH ZRY-2 FOLLOWERS
 CR.2= FIXED CRUCIFORM SHIM ELEMENTS
 CR.3= OFFSET CRUCIFORM CONTROL RODS WITH FUEL FOLLOWER CONTAINING FUEL RODS.
 *1)=ZRY-2 FOLLOWERS
 (3)EFFECTIVE LENGTH (CM)
 TL=TOTAL LENGTH
 (4)STROKE (CM)
 (5)ABSORBER MATERIAL
 B4C=B4C POWDER
 *2)=AG-IN-CD 80-15-5
 (6)DENSITY (PER CENT THEORETICAL DENSITY = P.C.TD)
 *3)=BEFORE SWAGED
 (7)WEIGHT (KG)

PLANT NAME	(1) NO.	(2) FORM	(3) CM.	(4) CM.	(5)	(6) P.C.TD	(7) KG.				
JPDR-1	BWR	1	16	CRU. *1)	146.	150.	B4C	60.-76.	90.7	JM-1654	64/ 8
JPDR-2	BWR	2	16	CRU. *1)		150.	B4C	60.-76	90.7		70/ 8
TSURUGA	BWR	3	73	CRU.			B4C			R-9 80-3-3	66/ 8
ONAGAWA	BWR	4	89	CRU.	363.		B4C	70.	107.	8-3-(6),(7)	70/ 5
HAMAOKA-1	BWR	5	89	CRU.			B4C			8-108	70/ 5
FUKUSIMA-1	BWR	6	97	CRU.			B4C			R-9	66/ 8
FUKUSIMA-2,3	BWR	7	137	CRU.			B4C			82-2-3	70/ 8
SHIMANE	BWR	8	97	CRU.			B4C			1970/6/20	70/ 6
FUKUSIMA-5	BWR	9	137	CRU.	363.2		B4C	70.		8-3-(7)	71/ 2
FUKUSIMA-4	BWR	10	137	CRU.	363.2		B4C	70.		8-3-(7)	71/ 8
FUKUSIMA-6	BWR	11	185	CRU.	363.2		B4C	70.	110.	8-3-(7)	72/ 1
TOOKAI-2	BWR	12	185	CRU.	363.2		B4C	70.	110.	8-3-(7)	72/ 1
HAMAOKA-2	BWR	13					B4C			/	
VERMONT YANKEE	BWR	52	89	CRU.			B4C			8-96	72/ 9
BROWNS FERRY	BWR	53	185	CRU.	365.8	365.8	B4C			GSK-19 P4	69/ 2
MILLSTON	BWR	54	145	CRU.			B4C			R-9	66/ 8
DRESDEN-1	BWR	55	80	CRU.	259.1		B4C			DNR V4 P94	62/
DRESDEN-2	BWR	56	177	CRU.			B4C			R-9	66/ 8
OYSTER CREEK	BWR	57	129	CRU.			B4C			R-9	66/ 8
DUANE ARNOLD	BWR	58	89	CRU.			B4C			A-2 P2	70/ 7
YANKEE		69	24	CR.1			* 2)</td <td></td> <td></td> <td>DNR V4 P36</td> <td>61/</td>			DNR V4 P36	61/
YANKEE		69	8	CR.2			* 2)</td <td></td> <td></td> <td>DNR V4 P36</td> <td>61/</td>			DNR V4 P36	61/
SAXTON		70	6	CR.3	251.5TL		* 2)</td <td></td> <td></td> <td>DNR V4 P50</td> <td>61/</td>			DNR V4 P50	61/

CONTROL ROD CLADDING MATERIAL NUMBER SIZE 733240

CONTROL ROD CLADDING MATERIAL NUMBER SIZE 733240

- (1)CONTROL ROD CLADDING MATERIAL.
- SUS=STAINLESS STEEL.
- MT2=TYPE 304 STAINLESS STEEL
- (2)CLADDING NUMBER. (/ CONTROL ROD)
- (3)CLADDING OUTER DIA.(MM)
- (4)CLADDING INNER DIA.(MM)
- (5)BLADE THICKNESS.(MM)
- (6)BLADE WIDTH.(MM)
- (7)SHEATH THICKNESS.(MM)

PLANT NAME			CLADDING				BLADE				
			(1)	(2)	(3)	(4)	(5)	(6)			(7)
			NO.	MM	MM	MM	MM	MM			
JPDR-1	BWR	1	SUS	64	6.05	5.05	9.524	225.4	1.5	JM-165P14	/
JPDR-2	BWR	2	SUS	64	6.05	5.05	9.524	225.4	1.5		/
DNAGAWA	BWR	4	SUS	84	4.8	3.5	7.9	248.	1.4	8-3-(6),(7)	70/ 5

FUEL CHANNEL BOX MATERIAL SIZE THICK 732240

FUKUSIMA-1 BWR 6 ZRY-4 134. (INNER) 2.0 BWR/6 7 4//11

CONTROL ROD CLADDING MATERIAL NUMBER SIZE 733240

PLANT NAME											
FUKUSIMA-5	BWR	9	SUS	84	4.78	3.51	7.92	247.6	1.42	8-3-(7)	71/ 2
FUKUSIMA-4	BWR	10	SUS	84	4.78	3.51	7.92	247.6	1.42	8-3-(7)	71/ 8
FUKUSIMA-6	BWR	11	SUS	84	4.78	3.51	7.92	247.6	1.42	8-3-(7)	72/ 1
TOOKAI-2	BWR	12	SUS	84	4.78	3.51	7.92	247.6	1.42	8-3-(7)	72/ 1
BROWNS FERRY	BWR	53	MT2	84				247.6		GSK-19 P4	69/ 2
DRESDEN-1	BWR	55					9.525	165.1		DNR V4 P94	62/
YANKEE		69					6.731	199.8		DNR V4 P34	61/

CONTROL ROD FOLLOWER MATERIAL WIDTH OTHER 733260

- (1)FOLLOWER MATERIAL
- Z2=ZRY-2
- *1)=FUEL-FOLLOWER CONTAINING FUEL RODS
- (2)FOLLOWER WIDTH.(MM)
- (3)FOLLOWER THICKNESS. (MM)
- (4)FOLLOWER EFFECTIVE LENGTH.(MM)
- (5)DRIVE MECHANISM NORMAL.
- E.M=E.MUTER
- HYD=HYDRAULIC
- (6)DRIVE MECHANISM SCRAM.
- (7)DRIVE MECHANISM NORMAL SPEED.(CM/SEC)
- (8)DRIVE MECHANISM SCRAM SPEED.(S/90PC)

PLANT NAME			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			MM	MM	MM	MM	CM/S	CM/S	CM/S	CM/S	
JPDR-1	BWR	1	Z2	114.3	6.35	1283	E.M	AIR	1.26		70/ 8

CONTROL ROD FOLLOWER MATERIAL WIDTH OTHER 733260

- (1)FOLLOWER MATERIAL
- Z2=ZRY-2
- *1)=FUEL-FOLLOWER CONTAINING FUEL RODS
- (2)FOLLOWER WIDTH.(MM)
- (3)FOLLOWER THICKNESS. (MM)
- (4)FOLLOWER EFFECTIVE LENGTH.(MM)
- (5)DRIVE MECHANISM NORMAL.
- E.M=E.MUTER
- HYD=HYDRAULIC
- (6)DRIVE MECHANISM SCRAM.
- (7)DRIVE MECHANISM NORMAL SPEED.(CM/SEC)
- (8)DRIVE MECHANISM SCRAM SPEED.(S/90PC)

PLANT NAME			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	
			MM	MM	MM	MM	CM/S	CM/S	CM/S	CM/S	
JPDR-2	BWR	2	Z2	114.3	6.35	1283	E.M	AIR	1.26		70/ 8
TSURUGA	BWR	3						7.6		5.	80-3-2
DNAGAWA	BWR	4						7.6			80-3-(8)
HAMAOKA-1	BWR	5									70/ 5
FUKUSIMA-2,3	BWR	7									70/ 5
SHIMANE	BWR	8									/
FUKUSIMA-6	BWR	11						HYD	HYD	0.9/20.2/50.5/	8-3-(10)
TOOKAI-2	BWR	12						HYD	HYD	0.9/20.2/50.5/	8-3-(10)
HAMAOKA-2	BWR	13						HYD	HYD	5.	8-16
VERMONT YANKEE	BWR	52						HYD	HYD		A-2
DRESDEN-1	BWR	55						HYD	15.24	259.1 CM/SEC	DNR V4 P94
DRESDEN-2	BWR	56						HYD	7.5	1.6-2.6	DNR V7 P193
YANKEE		69	Z2								DNR V4 P36
SAXTON		70	*1)								DNR V4 P50

CONTROL ROD PITCH MM 733280

JPDR-1	BWR	1	P=273.2	MM							70/ 8
JPDR-2	BWR	2	P=273.2	MM							70/ 8
TSURUGA	BWR	3	P=305.	MM							R-9,80-3-3
DNAGAWA	BWR	4	P=304.8	MM							8-3-(6)
HAMAOKA-1	BWR	5	P=304.8	MM							8-113
FUKUSIMA-2,3	BWR	7	P=304.8	MM							82-2-3 P13
FUKUSIMA-5	BWR	9	P=304.8	MM							8-3-(7)
FUKUSIMA-4	BWR	10	P=304.8	MM							8-3-(7)

FUEL CLADDING SURFACE TEMP. MAX C 732800

YANKEE		69				ST=345 C (100)					DNR V4 P36	61/
BURLINGTON	PWR	71				ST=347 C (100)					GSK-19 P4	69/ 2

CONTROL ROD PITCH MM 733280

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CONTROL ROD PITCH MM 733280

FUKUSIMA-6	BWR	11	P=304.8	MM	8-3-(7)	72/ 1
TOOKAI-2	BWR	12	P=304.8	MM	8-3-(7)	72/ 1
HAMAOKA-2	BWR	13	P=304.8	MM	8-96	72/ 9
VERMONT YANKEE	BWR	52	P=304.8	MM	A-2	/
HOWANS FERRY	RWR	53	P=304.8	MM	GSK-19	69/ 2
MILLSTON	BWR	54	P=304.8	MM	R-9	66/ 8
DRESDEN-2	BWR	56	P=304.8	MM	R-9	66/ 8
OYSTER CREEK	BWR	57	P=304.8	MM	R-9	66/ 8
DUANE ARNOLD	BWR	58	P=304.8	MM	A-2 P2	70/ 7
FUGEN	ATR	81	P=480.	MM	105	/

CORE CONTROL CLUSTER NUMBER FORM 733310

MIHAMA-3	PWR	21	NO= 32		8-20	66/11
MIHAMA-1	PWR	21	NO= 29+4		BK80-4 P6	71/ 9
MIHAMA-2	PWR	22	NO= 29+4		BK80-4 P6	71/ 9
TAKAHAMA-2	PWR	23	NO= 45+8	45=FULL LENGTH, 8=PART LENG.	8-20	70/ 5
GENKAI-1	PWR	24	NO= 29+4	29=FULL LENGTH, 4=PART LENG.	8-20,8-144	70/ 5
OOI -1,2	PWR	26	NO= 53+8	53=FULL LENGTH, 8=PART LENG.	8-20	71/ 1
MIHAMA-3	PWR	27	NO= 48+5	48=FULL LENGTH, 5=PART LENG.	8-20	71/ 8
IKATA	PWR	28	NO= 29+4	29=FULL LENGTH, 4=PART LENG.	8-24	72/11
BURLINGTON	PWR	71	NO= 53	CLUSTERS	GSK-19 P4	69/ 2
TURKEY POINT-3,4PWR	PWR	72	NO= 45+8		BK80-4 P5	71/ 9
H.B.ROBINSON-2	PWR	73	NO= 45+8		BK80-4 P5	71/ 9
SURRY-1,-2	PWR	74	NO= 48+5		BK80-4 P5	71/ 9
BEAVER VALLEY	PWR	75	NO= 45+8		BK80-4 P5	71/ 9
NORTH ANNA-12	PWR	76	NO= 45+8		BK80-4 P6	71/ 9
JOSEPH M.FARLEY	PWR	77	NO= 45+8		BK80-4 P6	71/ 9

CONTROL CLUSTER CLADDING MATERIAL NUMBER SIZE 733320

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CONTROL CLUSTER CLADDING MATERIAL NUMBER SIZE 733320

CONTROL CLUSTER CLADDING
 (1) MATERIAL
 34S=304SS
 *1)=COLO WORKED
 SUS=STAINLESS STEEL
 (2) TUBE NUMBER
 *2)=TUBE NO. / CONTROL CLUSTER
 (3) TUBE OUTER DIA.(MM)
 (4) TUBE THICKNESS.(MM)
 (5) CONTROL CLUSTER EFFECTIVE LENGTH.(CM)
 (6) CONTROL CLUSTER STROKE.(CM)
 (7) CONTROL CLUSTER PART LENGTH.(CM)

PLANT NAME		(1)	(2)	(3)	(4)	(5)	(6)	(7)		
		NO.	NO.	OD. MM.	THICK MM.	CM.	CM	CM		
MIHAMA-1	PWR	21	34S	20					BK80-4 P6	71/ 9
MIHAMA-2	PWR	22	34S	20					BK80-4 P6	71/ 9
TAKAHAMA-2	PWR	23	SUS*1)20	*2) 10.	0.5	366.		90.	8-20	70/ 5
GENKAI-1	PWR	24	SUS*1)20	*2) 10.3	0.61	360.			8-21	70/ 5
GENKAI-1	PWR	24		10.1	0.495*4)				8-22	70/ 5
TAKAHAMA-1	PWR	25	34S	20					BK80-4 P6	71/ 9
OOI -1,2	PWR	26	SUS	20 *2)	10.	0.5	361.	90.	8-20	71/ 1
MIHAMA-3	PWR	27	SUS	20 *2)	10.	0.5	366.	90.	8-20	71/ 8
IKATA	PWR	28	SUS	16 *2)	10.	0.5	360.	90.	8-23	72/11
BURLINGTON	PWR	71	34S	20 *2)	11.176	0.483	366.4	365.8	GSK-19 P4	69/ 2
TURKEY POINT-3,4PWR	PWR	72	34S*1)20		0.483				BK80-4 P5	71/ 9
H.B.ROBINSON-2	PWR	73	34S*1)20		0.483				BK80-4 P5	71/ 9
SURRY-1,-2	PWR	74	34S*1)20		0.495				BK80-4 P5	71/ 9
BEAVER VALLEY	PWR	75	34S*1)20		0.495				BK80-4 P5	71/ 9
NORTH ANNA-12	PWR	76	34S*1)20		0.495				BK80-4 P6	71/ 9
JOSEPH M.FARLEY	PWR	77	34S*1)20		0.495				BK80-4 P6	71/ 9

CONTROL CLUSTER ABSORBER MATERIAL 733340

MIHAMA-1	PWR	21	AG-IN-CD	80-15-5					BK80-4 P6	71/ 9
MIHAMA-2	PWR	22	AG-IN-CD	80-15-5					BK80-4 P6	71/ 9
TAKAHAMA-2	PWR	23	B4C						8-20	70/ 5
GENKAI-1	PWR	24	B4C	CD-IN-AG					8-21	70/ 5
TAKAHAMA-1	PWR	25	B4C						BK80-4 P6	71/ 9
OOI -1,2	PWR	26	B4C						8-20	71/ 1
MIHAMA-3	PWR	27	B4C						8-20	71/ 8
IKATA	PWR	28	AG-IN-CD						8-24	72/11
BURLINGTON	PWR	71	CD-IN-AG	5-15-80					GSK-19	69/ 2
TURKEY POINT-3,4PWR	PWR	72	AG-IN-CD	80-15-5					BK80-4 P5	71/ 9
H.B.ROBINSON-2	PWR	73	AG-IN-CD	80-15-5					BK80-4 P5	71/ 9

CONTROL CLUSTER ABSORBER MATERIAL 733340

SURRY-1--2	PWR 74	AG-IN-CD 80-15-5	BK80-4 P5	71/ 9
BEAVER VALLEY	PWR 75	B4C	BK80-4 P5	71/ 9
NORTH ANNA-12	PWR 76	B4C	BK80-4 P6	71/ 9
JOSEPH M. FARLEY	PWR 77	B4C	BK80-4 P6	71/ 9

CONTROL CLUSTER PITCH MM 733360

BURLINGTON	PWR 71	P=304.1 MM	GSK-19	69/ 2
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CONTROL CLUSTER D.MECH. NUMBER TYPE SPEED 733510

- CONTROL CLUSTER DRIVE MECHANISM
 (1)NUMBER
 (2)TYPE(NORMAL)
 M.J.=MAGNETIC JACK
 *1)=LATCH TYPE MAGNETIC JACK MECHANISM
 *2)=BOTTOM-MOUNTED MAGNETIC JACK WITH FRICTION GRIP)
 (3)TYPE(SCRAM)
 GR.=GRAVITY
 (4)NORMAL SPEED. (MAXIMUM = CM / MINUTE)
 (5)SCRAM TIME.(SEC)
 (6)ONE STEP DISTANCE.(MM)
 (7)POWER SOURCE.(VOLT)

PLANT NAME	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
	NO.	TP.	TP.	CM/M	SEC	MM.	VOLT		
MIHAMA-1	PWR 21	ND.=32	MAG. JACK	GRAVITY	MAX= 38. CM/MINUTE			8-23	66/11
MIHAMA-1	PWR 21	29	M.J	GR.	38.			BK80-2 P20	71/ 8
MIHAMA-2	PWR 22	29	M.J	GR.	114.			BK80-2 P20	71/ 8
TAKAHAMA-2	PWR 23	45	M.J	GR.	114.	ABOUT 2.0	ABOUT 16.	DC 125	70/ 5
GENKAI-1	PWR 24	29	M.J	GR.	114.	ABOUT 1.7	ABOUT 15.9	DC 125	70/ 5
TAKAHAMA-1	PWR 25	45	M.J	GR.	114.			BK80-2 P20	71/ 8
DDI -1+2	PWR 26	53	M.J	GR.	114.	ABOUT 2.0	ABOUT 16.	AC 260	71/ 1
MIHAMA-3	PWR 27	48	M.J	GR.	114.	ABOUT 2.0	ABOUT 16.	AC 260	71/ 8
IKATA	PWR 28	29	M.J	GR.	114.	ABOUT 2.0	ABOUT 16.	AC 260	72/11
YANKEE	69	24	*1)		LT 2.0			DNR V4 P36	61/
SAXTON	70	6	*2)		LT 1.5			DNR V4 P50	/

P.DIST. ADJUSTER D.MECH. NUMBER TYPE 733550

P.DIST. ADJUSTER D.MECH. NUMBER TYPE 733550

- (1)NUMBER
 (2)DRIVE MECHANISM AT NORMAL OPERATION
 (3)HOLD UP DEVICE AT POWER LOSS
 (4)NORMAL DRIVE SPEED
 (5)POWER SOURCE FOR DRIVE
 (1) (2) (3) (4) (5)
 CM/M
- DM1=ROLLER NUT
 DM2=MAGNETIC JACK
 HD1=BRAKE(HOLD)
 CM/MINUTE
 PS1=AC 440 VOLT 3-P

PLANT NAME	(1)	(2)	(3)	(4)	(5)				
	NO.								
MIHAMA-1	PWR 21	4	DM1	HD1	3A			KB80-2 P20	71/ 8
MIHAMA-2	PWR 22	4	DM1	HD1	3B			BK80-2 P20	71/ 8
TAKAHAMA-2	PWR 23	8	DM1	HD1	3B	PS1		8-23	70/ 5
GENKAI-1	PWR 24	4	DM1	HD1	3A	PS1		8-24	70/ 5
TAKAHAMA-1	PWR 25	8	DM1	HD1	3B			BK80-2 P20	71/ 8
DDI -1+2	PWR 26	8	DM1	HD1	3B	PS1		8-25	71/ 1
MIHAMA-3	PWR 27	5	DM1	HD1	3B	PS1		8-25	71/ 8
IKATA	PWR 28	4	DM1	HD1	3B	PS1		8-28	72/11

BURNABLE POISON MATERIAL CONTROL WORTH 733730

- (1)CLADDING MATERIAL FOR BURNABLE POISON
 (2)NUMBER OF BURNABLE POISON
 (3)EFFECTIVE LENGTH OF BURNABLE POISON
 (4)OUTER DIAMETER OF CLADDING
 (5)MATERIAL OF POISON
 (6)CONTROL WORTH AT BOL
 (7)CONTROL WORTH AT EOL
 (1) (2) (3) (4) (5) (6) (7)
 NO. M MM
- CL1=STAINLESS STEEL
 M
 MM
 BP1=HOOKEISAN GLASS
 DELTA K
 UELTA K

PLANT NAME	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
	NO.	M	MM						
FUKUSIMA-1	BWR 6		4350					BWR/6	7 47/11
TAKAHAMA-2	PWR 23	CL1	816	3.66	10	BP1	0.07	8-25,127	70/ 5
GENKAI-1	PWR 24	CL1	688	3.6	10	BP1	0.07	8-27,144	70/ 5
DDI -1+2	PWR 26	CL1	1500	3.61	10	BP1	0.09	8-25,130	71/ 1
MIHAMA-3	PWR 27	CL1	816	3.66	10	BP1	0.07	8-25,127	71/ 8
IKATA	PWR 28	CL1	704	3.6	10	BP1	0.07	8-29,142	72/11
YANKEE	69	NONE						DNR V4 P36	/
SAXTON	70	NONE						DNR V4 P50	/

POISON CURTAIN MATERIAL NUMBER LENGTH WIDTH 734200

POISON CURTAIN MATERIAL NUMBER LENGTH WIDTH 734200

POISON CURTAIN
(1) MATERIAL
H.S.=HORDON SUS
*1)=NO POISON CURTAIN
*2)=3-REGIION
*3)=SEE REV-1
(2) NUMBER
(3) LENGTH (MM)
(4) WIDTH (MM)
(5) THICK (MM)

PLANT NAME	(1) PPM	(2) NO.	(3) MM.	(4) MM.	(5) MM			
JPDR-1	HWR 1	930-1130	8.5	24	1667.	248	3.2	70/ 8
JPDR-2	HWR 2	930-1130	8.5	24	1667.	248	3.2	70/ 8
TSURUGA	HWR 3	*2)	8.5	124	3454.	216		H-9 66/ 8
TSURUGA	BWR 3		8.5	140				80-3-3 P28 70/ 5
ONAGAWA	HWR 4	5400	8.5	156	3590.			8-3-(11) 70/ 5
HAMAOKA-1	BWR 5		8.5	156	3590.			8-20 70/ 5
HAMAOKA-1	BWR 5	*1)						95-2-3 71/ 9
FUKJISIMA-1	BWR 6		8.5	196	3630.			82-3-3 P3 71/ 8
FUKJISIMA-1	BWR 6		8.5	172				(1970/9/21 UK) 70/ 9
FUKJISIMA-2+3	BWR 7	*3)	8.5	248				REV-0 /
FUKJISIMA-2+3	HWR 7			0				82-2-3(RV-1) 70/
SHIMANE	BWR 8		8.5	172				89-8-2(R-1) 71/ 3
HAMAOKA-2	BWR 13	*1)						72/ 9
VERMONT YANKEE	BWR 52		8.5	156				A-2 70/ 5
BROWNS FERRY	BWR 53	5700	8.5	356	3632.2	215.9	1.6	GSK-19 P4 69/ 2
BROWNS FERRY	BWR 53	*1)						95-2-3 P4 71/ 9
MILLSTON	BWR 54	4200+6500+4200H.S	264	3632.	191.			R-9 66/ 8
DRESDEN-2	BWR 56	4200+6500+4200H.S	3454.	216.				R-9 66/ 8
OYSTER CREEK	BWR 57	3000	8.5					R-9 66/ 8
DUANE ARNOLD	BWR 58		8.5	156				A-2 P3 70/ 7

PRESSURE VESSEL DESIGN-P OPERAT-P DESIGN-T OPERAT-T 736100

PLANT NAME		---PRESSURE(KG/SQCMG)-----			---TEMPERATURE(DEG C)---				
		WORKING	DESIGN	TEST	WORKING	DESIGN	TEST		
JPDR-1	HWR 1	61.5	77.3		345.			JM-1654 P23 /	
JPDR-2	HWR 2	61.5	77.3		343.			KDN.6 P3 70/11	
TSURUGA	HWR 3	70.3	88.		302.			80-3-2 70/ 6	
ONAGAWA	HWR 4	70.7	87.9	286.	302.			8-3-(13) 70/ 5	
HAMAOKA-1	HWR 5	70.7	87.9		302.			8-23 70/ 5	
FUKJISIMA-1	BWR 6	70.7	87.9		302.			/	
FUKJISIMA-2+3	BWR 7	70.7	87.9		302.			/	
SHIMANE	BWR 8	70.7	87.9		302.			/	
FUKJISIMA-5	BWR 9	70.7	87.9	286.	302.			8-3-(13) 71/ 2	
FUKJISIMA-4	BWR 10	70.7	87.9	286.	302.			8-3-(13) 71/ 8	

PRESSURE VESSEL DESIGN-P OPERAT-P DESIGN-T OPERAT-T 736100

PLANT NAME		---PRESSURE(KG/SQCMG)-----			---TEMPERATURE(DEG C)---				
		WORKING	DESIGN	TEST	WORKING	DESIGN	TEST		
FUKJISIMA-6	BWR 11	70.7	87.9		286.	302.		8-3-(13) 72/ 1	
TOOKAI-2	BWR 12	70.7	87.9		286.	302.		8-3-(13) 72/ 1	
HAMAOKA-2	BWR 13	70.7	87.9		286.	302.		8-19 72/ 9	
MIHAMA-1	PWR 21	158.	175.					/	
MIHAMA-2	PWR 22	.	175.					BK80-4 P8 71/ 9	
TAKAHAMA-2	PWR 23	157.	175.		343.			/	
GENKAI-1	PWR 24	157.	175.		343.			8-30 /	
TAKAHAMA-1	PWR 25	.	175.					/	
DDI -1+2	PWR 26	157.	175.		343.			8-28 71/ 1	
MIHAMA-3	PWR 27	157.	175.		343.			8-28 71/ 8	
IKATA	PWR 28		175.		343.			8-32 72/11	
VERMONT YANKEE	BWR 52	70.7	87.9		302.			A-2 70/ 5	
MILLSTON	BWR 54	.	87.9		302.			R-9 66/ 8	
DRESDEN-1	HWR 55	71.4	87.9					DNR V4 P94 62/	
DRESDEN-2	HWR 56	71.4	87.9	286.	302.			DNR V7 P194 68/	
OYSTER CREEK	HWR 57		87.9		302.			R-9 66/ 8	
DUANE ARNOLD	BWR 58		87.9		302.			A-2 P3 70/ 7	
YANKEE	BWR 69	139.6		262.7				DNR V4 P36 61/	
SAXTON	BWR 70	138.6		263.7				DNR V4 P50 61/	
TURKEY POINT-3,4PWR	BWR 72		175.					BK80-4 P7 71/ 9	
H.B.ROBINSON-2	PWR 73		175.					BK80-4 P7 71/ 9	
SURRY-1,-2	PWR 74		175.					BK80-4 P7 71/ 9	
BEAVER VALLEY	PWR 75		175.					BK80-4 P7 71/ 9	
NORTH ANNA-12	PWR 76		175.					BK80-4 P8 71/ 9	
JOSEPH M.FARLEY	PWR 77		175.					BK80-4 P8 71/ 9	
FUGEN	ATR 81	72.0	82.0		286.			105-5 P6 73/12	

PRESSURE VESSEL SIZE 736200

(1)OVERALL HEIGHT.(M)
(2)INNER DIAMETER.(M)
(3)THICKNESS.(MM) SIDE WALL
(4) TOP
(5) BOTTOM

PLANT NAME	(1) METER	(2) METER	(3) MM	(4) MM	(5) MM		
JPDR-1	BWR 1	8.18	2.083	67+6.4			JM-1654 P23 /
JPDR-2	BWR 2	8.13	2.083	67+6.4			KDN.6-P3 70/11
TSURUGA	BWR 3	18.060	4.343	146+5.56			80-3-2 70/ 6
ONAGAWA	BWR 4	21.24	4.7	+3.2			8-3-(13) 70/ 5
HAMAOKA-1	BWR 5	21.24	4.7				8-23 70/ 5
FUKJISIMA-1	BWR 6	19.0	4.6	160+5.56			R-9 70/ 5
FUKJISIMA-1	BWR 6	18.847	4.775				/

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PRESSURE VESSEL SIZE

736200

PLANT NAME		(1) METER	(2) METER	(3) WALL		(4) MM	(5) MM
				TOP	BOTTOM		
FUKUSIMA-2,3	BWR	7	22.0	5.57			70/ 5
SHIMANE	BWR	8	19.0	4.8	120		70/ 5
FUKUSIMA-5	BWR	9	22.0	5.57			8-3-(14) 71/ 2
FUKUSIMA-4	BWR	10	22.0	5.538(GT)			8-3-(14) 71/ 8
FUKUSIMA-6	BWR	11	23.0	6.375			8-3-(13) 72/ 1
TODOKAI-2	BWR	12	23.0	6.375			8-3-(13) 72/ 1
HAMAOKA-2	BWR	13	22.0	5.6			8-19 72/ 9
MIHAMA-1	PWR	21	10.736	3.3	235+4		/
MIHAMA-1	PWR	21		3.339			/
MIHAMA-1	PWR	21	10.922	3.327	165		BK80-4 P8 71/ 9
MIHAMA-2	PWR	22	11.887	3.353	168		BK80-4 P8 71/ 9
TAKAHAMA-2	PWR	23	13.	4.	200		8-28,8-140 70/ 5
GENKAI-1	PWR	24	11.467	3.353			8-30 70/ 5
TAKAHAMA-1	PWR	25	13.	4.	197		BK80-4 P8 71/ 9
DDI -1,2	PWR	26	13.	4.4			8-28 71/ 1
MIHAMA-3	PWR	27	13.	4.			8-28 71/ 8
IKATA	PWR	28	11.5	3.3			8-32 72/11
VERMONT YANKEE	BWR	52	19.24	5.23	+3.2		A-2 70/ 5
MILLSTON	BWR	54	19.71	5.68	144+3.2		R-9 66/ 8
DRESDEN-1	BWR	55	12.44	3.71	140+9.5	229+9.5	DNR V4 P94 62/
DRESDEN-1	BWR	55	10.67 DIA	21.3 HIGH(WITH SHIELDING)			DNR V4 P94 62/
DRESDEN-2	BWR	56	20.73	6.38	162+3.2		R-9 66/ 8
DRESDEN-2	BWR	56	10.67 DIA	29. HIGH(WITH SHIELDING)			DNR V7 68/
OSTER CREEK	BWR	57	18.54	5.41	187+4.0		R-9 66/ 8
DUANE ARNOLD	BWR	58	20.22	4.65	+3.2		A-2 P3 70/ 7
YANKEE		69	9.60	2.7686	200		DNR V4 P36 61/
YANKEE		69	25.15 DIA	19.05 HIGH(WITH BIOLOGICAL SHILD)			DNR V4 P36 61/
SAXTON		70	5.4864	1.4732	130.175=(114.3+12.7+3.175)		DNR V4 P50 61/
TURKEY POINT-3,4	PWR	72	12.9794	3.9497			BK80-4 P7 71/ 9
H.B.ROBINSON-2	PWR	73	12.6492	3.9497			BK80-4 P7 71/ 9
SURRY-1,-2	PWR	74	12.319	3.9878			BK80-4 P7 71/ 9
BEAVER VALLEY	PWR	75	12.9794	3.9878			BK80-4 P7 71/ 9
NORTH ANNA-12	PWR	76	12.319	3.9878			BK80-4 P8 71/ 9
JOSEPH M.FARLEY	PWR	77	12.9794	3.9878			BK80-4 P8 71/ 9

P.V.NDT INITIAL FINAL HEAT AND COOLING RATE 736300

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P.V.NDT INITIAL FINAL HEAT AND COOLING RATE 736300

PLANT NAME		(1) DEG C	(2) DEG C	(3) DEG C	(4) C/H		
TSURUGA	BWR	3	- 12.	+ 4.	96.	55.	80-3-3-P20 70/ 5
DNAGAWA	BWR	4	- 12.	+ 4.	59.	55.	8-3-(14) 70/ 5
HAMAOKA-1	BWR	5	- 12.	+ 4.	65.	55.	8-23 70/ 5
FUKUSIMA-1	BWR	6	- 12.	+ 4.	55.	55.	/
FUKUSIMA-5	BWR	9	- 12.	+ 4.	45.	55.	8-3-(14) 71/ 2
FUKUSIMA-4	BWR	10	- 12.	+ 4.	45.	55	8-3-(14) 71/ 2
FUKUSIMA-6	BWR	11	- 12.	+ 4	32.	55	8-3-(13) 72/ 1
TODOKAI-2	BWR	12	- 12.	+ 4	32.	55	8-3-(13) 72/ 1
HAMAOKA-2	BWR	13	- 12.	+ 4	60.	55	8-19 72/ 9
TAKAHAMA-2	PWR	23	- 6.7	*1)			8-29 72/ 1
GENKAI-1	PWR	24	-			55	8-30 70/ 5
DDI -1,2	PWR	26	- 6.7	*1)			8-29 71/ 1
MIHAMA-3	PWR	27	- 6.7	*1)			8-29 71/ 8
IKATA	PWR	28	-			55	8-32 72/11

PRESSURE VESSEL BASE OVERLAY MATERIAL 736400

PLANT NAME		BASE 1	BASE 2	OVERLAY		
JPDR-1	BWR	1	SA-302B		308SS,309SS	/
JPDR-2	BWR	2	SA-302B		308SS,309SS	/
TSURUGA	BWR	3	SA-302B	SA-336	308SS,309SS	R-9 66/ 8
DNAGAWA	BWR	4	SA-533	SA-508		8-3-(14) 70/ 5
HAMAOKA-1	BWR	5	SA-533	SA-508		8-23 /
FUKUSIMA-1	BWR	6	SA-302B	SA-336	309SS,ASTM-371	R-9 70/ 5
FUKUSIMA-2,3	BWR	7	SA-533	SA-508		70/ 5
SHIMANE	BWR	8	SA-533B	SA-508		70/ 5
FUKUSIMA-5	BWR	9	BASE=	GENSIRYOKU HATUDEN-YOO MN.MO.NI.-KOOHAN 2-SYU		8-3-(14) 71/ 2
FUKUSIMA-5	BWR	9		SOOTODHIN (AND) GENSIRYOKU HATUDEN-YOO TANKDHHN		8-3-(14) 71/ 2
FUKUSIMA-5	BWR	9		2-SYU SOOTODHIN		8-3-(14) 71/ 2
FUKUSIMA-5	BWR	9	OVERLAY=	STAINLESS ST. ASTM-371-ER309 KAIRYODGATA SOOTOD)		8-3-(14) 71/ 2
FUKUSIMA-5	BWR	9	SKIRT	=GENSIRYOKU HATUDEN-YOO MN.MO. KOOHAN 1-SYU		8-3-(14) 71/ 2
FUKUSIMA-4	BWR	10	SAME AS	FUKUSIMA-5		8-3-(14) 71/ 8
FUKUSIMA-6	BWR	11	SAME AS	FUKUSIMA-5		8-3-(13) 72/ 1
TODOKAI-2	BWR	12	SAME AS	FUKUSIMA-5		8-3-(13) 72/ 1
HAMAOKA-2	BWR	13	BASE=	SAME AS FUKUSIMA-5, OVERLAY=	SAME AS FUKUSIMA-5	8-19 72/ 9
MIHAMA-1	PWR	21	SA-302B			R-9 66/ 8
TAKAHAMA-2	PWR	23	MU.MO.ST		SUS	8-29 70/ 5
GENKAI-1	PWR	24	MU.MO.ST		SUS	8-30 70/ 5
DDI -1,2	PWR	26	LOW ALLOY	STEEL	304SS(COBALT LT 0.2 PERCENT)	8-29 71/ 1

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PRESSURE VESSEL	BASE	OVERLAY	MATERIAL	736400		
PLANT NAME	BASE 1	BASE 2	OVERLAY			
MIHAMA-3	PWR 27	BODY AND LID=MN.MD.STEEL	(ASTM A533 GR.B CL.1 S00T00)		8-29	71/ 8
MIHAMA-3	PWR 27	OVERLAY	=STAINLESS STEEL(SUS-27 S00T00)		8-29	71/ 8
MIHAMA-3	PWR 27	HDLT	=NI.CR.MD STEEL(ASTM A540 B23 S00T00)		8-29	71/ 8
IKATA	PWR 25	OVERLAY	=STAINLESS STEEL		8-32	72/11
IKATA	PWR 26	BODY AND LID=MN.MD.NI.STEEL	STUD BOLT=ALLY-STEEL		8-32	72/11
MILLSTON	BWR 54	SA-302B	304SS		R-9	66/ 8
DRESDEN-1	BWR 55	CARBON ST WITH MD	304SS		DNR V4 P94	62/
DRESDEN-2	BWR 56	SA-302B	304SS		R-9	66/ 8
OYSTER CREEK	BWR 57	SA-302B	304SS		R-9	66/ 8
YANKEE	69	CARBON STEEL	304SS		DNR V4 P36	61/
SAXTON	70	MULTILAYER DESIGN USING----			DNR V4 P50	61/
SAXTON	70	1/2 IN. THICK ASTM A-212B MODIFIED CARBON STEEL			DNR V4 P50	61/
SAXTON	70	1/2 IN. THICK ASTM A-246GR3 CLAD WITH			DNR V4 P50	61/
SAXTON	70	ASTM A-212B-FBQ BACKING MATERIAL			DNR V4 P50	61/
SAXTON	70	1/8 IN. THICK TYPE 304 STAINLESS STEEL			DNR V4 P50	61/

PRESSURE VESSEL APPLIED STANDARD LIFE AND N.DOSE 736600

- (1)PRESSURE VESSEL APPLIED STANDARD
- ASME.3=ASME SECTION-3
- ASME.8=ASME SECTION-8
- (2)DESIGN LIFE. (YEARS)
- (3)ESTIMATE IRRADIATION DOSE. (* E19 NVT(GT 1MEV))
- (4)PRESSURE VESSEL WEIGHT INCLUDE LID. (W.T=TON)
- *1)=INCLUDE LID
- *2)=INCLUDE PV INTERNALS + WATER
- *3)=BODY(280 TON,LID=55 TON,HOLD-DOWN=26 TON,BARREL=113 TON)
- *4)=FUEL(100 TON,CONTROL-CLUSTER AND OTHERS=10 TON)

PLANT NAME	(1)	(2)	(3)	(4)		
JPDR-1	BWR 1	ASME.8	20		JM-1654 P23	/
JPDR-2	BWR 2	ASME.8	20			/
TSURUGA	BWR 3	ASME.8	40	274.1		/
DNAGAWA	BWR 4	ASME.3		1. 340. *1)	8-3-(13)	70/ 5
HAMAOKA-1	BWR 5	ASME.3		1. 340. *1)	8-23	70/ 5
FUKUSIMA-1	BWR 6	ASME.8	40	440.		70/ 5
FUKUSIMA-2*3	BWR 7	ASME.3		500.		70/ 5
SHINANE	BWR 8	ASME.3		390.		70/ 5
FUKUSIMA-5	BWR 9		40	1. 500. *1)	8-3-(13),14	71/ 2
FUKUSIMA-4	BWR 10		40	1. 500. *1)	8-3-(13),14	71/ 8
FUKUSIMA-6	BWR 11			750. *1)	8-3-(13)	72/ 1
TOOKAI-2	BWR 12			750 *1)	8-3-(13)	72/ 1
HAMAOKA-2	BWR 13		40	1. 550 *1)	8-18	72/ 9
MIHAMA-1	PWR 21		40(30)		8-30	70/ 5
TAKAHAMA-2	PWR 23			700 *2)	8-19	72/ 9
DOI -1*2	PWR 26			900 *2)	8-140	70/ 5

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PRESSURE VESSEL APPLIED STANDARD LIFE AND N.DOSE 736600

- (1)PRESSURE VESSEL APPLIED STANDARD
- ASME.3=ASME SECTION-3
- ASME.8=ASME SECTION-8
- (2)DESIGN LIFE. (YEARS)
- (3)ESTIMATE IRRADIATION DOSE. (* E19 NVT(GT 1MEV))
- (4)PRESSURE VESSEL WEIGHT INCLUDE LID. (W.T=TON)
- *1)=INCLUDE LID
- *2)=INCLUDE PV INTERNALS + WATER
- *3)=BODY(280 TON,LID=55 TON,HOLD-DOWN=26 TON,BARREL=113 TON)
- *4)=FUEL(100 TON,CONTROL-CLUSTER AND OTHERS=10 TON)

PLANT NAME	(1)	(2)	(3)	(4)		
MIHAMA-3	PWR 27			700 *2)	8-142	71/ 1
MIHAMA-3	PWR 27			*3		/
MIHAMA-3	PWR 27			*4	BK80-7 P3	71/ 9
MILLSTON	BWR 54	ASME.3			R-9	66/ 8
DRESDEN-2	BWR 56	ASME.3			R-9	66/ 8
OYSTER CREEK	BWR 57	ASME.8			R-9	66/ 8

STEAM SEPARAT. UNIT NO. TYPE MATERIAL 737220

PLANT NAME	TYPE	UNIT NO.	MATERIAL	---FLOW T/H/UNIT-----				
				STEAM	WATER	TOTAL		
JPDR-2	BWR 2	CENTRIFUGAL					KDM-6 P2	70/11
DNAGAWA	BWR 4	AXIAL FLOW NO.=106	SUS	27.8	184.2	212.	8-3-(15)	70/ 5
HAMAOKA-1	BWR 5	AXIAL FLOW NO.=108	SUS	27.	184.	211.	8-25	70/ 5
FUKUSIMA-1	BWR 6	AXIAL-CENTRIFUG. 109	SUS27TP	23.1	177.0	200.1	MEMO P113	70/ 3
FUKUSIMA-5	BWR 9	AXIAL FLOW NO.=151	SUS	30.	194.	224.	8-3-(16)	71/ 2
FUKUSIMA-4	BWR 10	AXIAL FLOW NO.=151	SUS	30.	194.	224.	8-3-(16)	71/ 8
FUKUSIMA-6	BWR 11	AXIAL CENT.F NO.=225	SUS	30.	194.	224.	8-3-(15)	72/ 1
TOOKAI-2	BWR 12	AXIAL CENT.F NO.=225	SUS	30.	194.	224.	8-3-(15)	72/ 1
HAMAOKA-2	BWR 13	AXIAL FLOW NO.=163	SUS	29.	189.	218.	8-21	72/ 9

STEAM SEPARAT. INLET QUALITY CARRY UNDER 737240

PLANT NAME	INLET QUALITY	CARRY	UNDER			
DNAGAWA	BWR 4		LE	0.2	WT.PC (OF SEPARATED.F)	8-3-(16) 70/ 5
HAMAOKA-1	BWR 5	13. WT.PC(MEAN)	LE	0.2	WT.PC (OF RECIRC FLOW)	8-26 70/ 5
FUKUSIMA-1	BWR 6		LE	0.2	WT.PC (OF RECIRC FLOW)	MEMO P113 70/ 3
FUKUSIMA-5	BWR 9	13.3WT.PC(MEAN)	LE	0.2	WT.PC (OF RECIRC FLOW)	8-3-(16) 71/ 2
FUKUSIMA-4	BWR 10	13.3WT.PC(MEAN)	LE	0.2	WT.PC (OF RECIRC FLOW)	8-3-(16) 71/ 8
FUKUSIMA-6	BWR 11	13.5WT.PC(MEAN)	LE	0.2	WT.PC	8-3-(15) 72/ 1
TOOKAI-2	BWR 12	13.5WT.PC(MEAN)	LE	0.2	WT.PC	8-3-(15) 72/ 1
HAMAOKA-2	BWR 13	13.2WT.PC(MEAN)	LE	0.25	WT.PC	8-21 72/ 9

STEAM DRYER NUMBER CAPACITY DRERATAB LE TEMP 737410

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STEAM DRYER NUMBER	CAPACITY	UREKATAB IE TEMP	737410
PLANT NAME	---	NUMBER---	CAPACITY MAX. OPERATABLE TEMP.
FUKJISIMA-1	BWR 6	14. ELEMENTS	2520. T/H 302. C

MEMO P113 70/ 3

STEAM DRYER TYPE	INLET	OUTLET	WETNESS	737420
PLANT NAME	TYPE	MATERIAL	INLET WETNESS	OUTLET WETNESS /STEAM FLOW
JPDR-2	BWR 2	WIRE MESH BOFFLE		KON-6 P2 70/11
ONAGAWA	BWR 4	DIMPLE PLATE SUS	LE 10. WT.PC	8-3-(16) 70/ 5
HAMADKA-1	BWR 5	DIMPLE PLATE SUS	LE 10. WT.PC	8-26 70/ 5
FUKJISIMA-1	BWR 6	DIMPLE PLATE SUS27TP	LE 11.6 WT.PC	MEMO P113 70/ 3
FUKJISIMA-5	BWR 4	DIMPLE PLATE SUS	LE 10. WT.PC	8-3-(16) 71/ 2
FUKJISIMA-4	BWR 10	DIMPLE PLATE SUS	LE 10. WT.PC	8-3-(16) 71/ 8
FUKJISIMA-6	BWR 11	DIMPLE PLATE SUS	LE 10. WT.PC	8-3-(15) 72/ 1
TOKAI-2	BWR 12	DIMPLE PLATE SUS	LE 10. WT.PC	8-3-(15) 72/ 1
HAMADKA-2	BWR 13	DIMPLE PLATE SUS	LE 10. WT.PC	8-22 72/ 9

JET PUMP NUMBER CAPACITY 738200

PLANT NAME	NUMBER	CAPACITY (A)	TOTAL HEAD (B)	DRIV.FLOW (C)	DRIV. HEAD (D)
TSURUGA	BWR 3	NONE			
ONAGAWA	BWR 4	16. 1410*16 T/H	24.3 M	570.*16 T/H	131.0 M
HAMADKA-1	BWR 5	16. 1430*16 T/H	24.2 M	603.*16 T/H	121. M
FUKJISIMA-1	BWR 6	20. 1090*20 T/H	19.9 M	545.*20 T/H	72.3 M
FUKJISIMA-2,3	BWR 7	20.			
SHIMANE	BWR 8	20.			
FUKJISIMA-5	BWR 9	20. 1690*20 T/H	25.1 M	756.*20 T/H	114.3 M
FUKJISIMA-4	BWR 10	20. 1690*20 T/H	25.1 M	756.*20 T/H	114.3 M
FUKJISIMA-6	BWR 11	20. 2420*20 T/H	24.1 M	805.*20 T/H	135. M
TOKAI-2	BWR 12	20. 2420*20 T/H	24.1 M	805.*20 T/H	135. M
HAMADKA-2	BWR 13	20. 1780*20 T/H	24.8 M	785.*20 T/H	115. M
DRESDEN-2	BWR 56	20.			
OSTER CREEK	BWR 57	NONE			

8-3-(17) 70/ 5
8-27 70/ 5
COM-M P124 70/ 3
/ /
8-3-(17) 71/ 2
8-3-(17) 71/ 8
8-3-(16) 72/ 1
8-3-(16) 72/ 1
8-23 72/ 9
DNR V7 P193 68/
R-9 66/ 8

JET PUMP FLOW AND PRESSURE RATIO AND EFFICIE. 738400

PLANT NAME	FLOW RATIO (E)=(A-C)/C	EFFICIENCY (F)=(A*B)/(C*D)	PRESSURE RATIO (G)=(B)/(C-B)	JET PUMP EFFICIENCY (H)=(E)*(G)
ONAGAWA	BWR 4 (E)=1.48	(F)=0.46	(G)=0.228	(H)=0.337
HAMADKA-1	BWR 5 (E)=1.37	(F)=0.473	(G)=0.249	(H)=0.342
FUKJISIMA-1	BWR 6 (E)=1.00		(G)=0.348	(H)=0.348

8-3-(17) 70/ 5
8-27 /
COM-M P124 70/ 3

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JET PUMP FLOW AND PRESSURE RATIO AND EFFICIE. 738600

PLANT NAME	FLOW RATIO (E)=(A-C)/C	EFFICIENCY (F)=(A*B)/(C*D)	PRESSURE RATIO (G)=(B)/(C-B)	JET PUMP EFFICIENCY (H)=(E)*(G)
FUKJISIMA-5	BWR 9 (E)=1.23	(F)=0.491	(G)=0.281	(H)=0.345
FUKJISIMA-4	BWR 10 (E)=1.23	(F)=0.491	(G)=0.281	(H)=0.345
HAMADKA-2	BWR 13 (E)=1.27	(F)=0.463	(G)=0.256	(H)=0.325

8-3-(17) 71/ 2
8-3-(17) 71/ 8
8-23 72/ 9

JET PUMP SIZE AND VELOCITY AT NOZZLE 738600

PLANT NAME	NOZZLE DIA	VEL. AT NOZZLE	THROAT DIA	DIFFUSER LENGTH
ONAGAWA	BWR 4 71.1 MM	52.5 M/SEC	154.2 MM	2362. MM
HAMADKA-1	BWR 5 71.1 MM	55. M/SEC	155.2 MM	
FUKJISIMA-1	BWR 6 78.4 MM	42.7 M/SEC	143.0 MM	1490. MM
FUKJISIMA-5	BWR 9 86.4 MM	47.5 M/SEC	172.7 MM	2300. MM
FUKJISIMA-4	BWR 10 86.4 MM	47.5 M/SEC	172.7 MM	2300. MM
FUKJISIMA-6	BWR 11 79.8 MM	59.2 M/SEC	207.8 MM	
TOKAI-2	BWR 12 79.8 MM	59.2 M/SEC	207.8 MM	
HAMADKA-2	BWR 13 86.4 MM	46.5 M/SEC	174.2 MM(ID)	

8-3-(17) 70/ 5
8-27 70/ 5
COM-M P124 70/ 3
8-3-(17) 71/ 2
8-3-(17) 71/ 8
8-3-(16) 72/ 1
8-3-(17) 72/ 1
8-23 72/ 9

RECIRC. SYSTEM MAIN PROPERTY 751120

PLANT NAME	P-VESSEL IN/DUT TEMPERATURE C	RECIRC. FLOW	H.AND C. RATE	COOLANT TOT.WEIGHT
JPDR-2	BWR 2	3.26E6 KG/H		KON-6 P3 70/11
TSURUGA	BWR 3 276.4 C/277. C			80-3-3 P20 70/ 5
ONAGAWA	BWR 4 275.7 C/275.2 C	22.5 E6 KG/H	55. C/H	8-5-(1) 70/ 5
HAMADKA-1	BWR 5 276.1 C/275. C	22.9 E6 KG/H	55. C/H	8-33 70/ 5
FUKJISIMA-1	BWR 6 276.1 C/276.7 C			/
FUKJISIMA-5	BWR 9 278.3 C/277.8 C	33.8 E6 KG/H	55. C/H	8-5-(1) 71/ 2
FUKJISIMA-4	BWR 10 276.3 C/275.9 C	33.8 E6 KG/H	55. C/H	8-5-(1) 71/ 8
FUKJISIMA-6	BWR 11 278.9 C/278.3 C	48.3 E6 KG/H	55. C/H	8-5-(2) 72/ 1
TOKAI-2	BWR 12 278.9 C/278.3 C	48.3 E6 KG/H	55. C/H	8-5-(2) 72/ 1
HAMADKA-2	BWR 13 278. C/278. C	35.6 E6 KG/H	55. C/H	8-28 72/ 9
FUGEN	ATR 81	7.6 E6 KG/H		105-8-5-(1) 73/11

MAIN STEAM SYSTEM AND FEED WATER TEMP. 751140

PLANT NAME	STEAM-P KG/SWCMG	STEAM-T DEG C	STEAM-HUM. P.C.	FEED-W. TEMP DEG C
ONAGAWA	BWR 4 70.7	286. C	.LT. 0.1	188.8 C
HAMADKA-1	BWR 5 70.7	286. C	.LT. 0.1	188.8 C
FUKJISIMA-5	BWR 9 70.7	286. C	.LT. 0.1	195.8 C
FUKJISIMA-4	BWR 10 70.7	286. C	.LT. 0.1	196.0 C

8-5-(1) 70/ 5
8-33 70/ 5
8-5-(2) 71/ 2
8-5-(2) 71/ 8

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MAIN	STEAM	SYSTEM	AND FEED WATER	TEMP.	751140			
				STEAM-P	STEAM-T	STEAM-HUM.	FEED.W. TEMP	
				KG/SQCMG	DEG C	P.C.	DEG C	
FUKUSIMA-6	BWR	11		286. C	.LT. 0.1		215.6 C	8-5-(2) 72/ 1
TOKAI-2	BWR	12		286. C	.LT. 0.1		215.6 C	8-5-(2) 72/ 1
HAMAOKA-2	BWR	13		286. C	.LT. 0.1		215.6 C	8-28 72/ 9
FUGEN	ATR	81		284. C			182. C	105-B-5-(1) 73/11

RECIRC.	SYSTEM	PUMP AND LOOP	DESIGN-P	DESIGN-T	751160				
					NOTE	DESIGN VALUE (OPERATION VALUE)			
						-----PIPING-----			
					PUMP-----	-----DERIVELY-----			
					DES /DES	SUCTION DES /DES	DES /DES	DES /DES	
					P T	P T	P T	P T	
					(PUMP-VALVE) (VALVE-P.VESSEL)				
JPDR-2	BWR	2				77.3/293.5		70/11	
ONAGAWA	BWR	4				302 C	98.5 302 C	8-5-(1) 70/ 5	
ONAGAWA	BWR	4	105.5/302.	87.9/302.		98.5/302.		8-5-(1) 70/ 5	
FUKUSIMA-5	BWR	9	105.5	302 C	84.4	296 C	96.0 296 C	8-5-(2) 71/ 2	
FUKUSIMA-5	BWR	9	105.5/302	84.4/296		96.0/296.		8-5-(2) 71/ 2	
FUKUSIMA-4	BWR	10	105.5	302 C	84.4	296 C	96.0 296 C	8-5-(2) 71/ 8	
FUKUSIMA-4	BWR	10	105.5/302	84.4/296		96.0/296.		8-5-(2) 71/ 8	
FUKUSIMA-6	BWR	11	116. /302	87.9/302	116.0/302.	109. /302.		8-5-(2) 72/ 1	
TOKAI-2	BWR	12	116. /302	87.9/302	116.0/302.	109. /302.		8-5-(2) 72/ 1	

RECIRC.	SYSTEM	PUMP AND LOOP	TUBE	SIZE	751180			
			LOOP-PIPING	PV-INLET-PIPE		HEADER OD		
			NO.	NO.	OD			
JPDR-1	BWR	1	NONE					70/ 8
JPDR-2	BWR	2		406.4/323.85	(SUCTION/DERIVER)			70/11
TSURUGA	BWR	3		660. MM			R-9	66/ 8
ONAGAWA	BWR	4		560. MM	8. 270. MM	410. MM	8-5-(2)	70/ 5
HAMAOKA-1	BWR	5		560. MM	8. 250. MM	406. MM	8-33	70/ 5
FUKUSIMA-1	BWR	6		610. MM				70/ 5
FUKUSIMA-2*3	BWR	7		712. MM				70/ 5
SHINANE	BWR	8		610. MM				70/ 5
FUKUSIMA-5	BWR	9		712. MM	10. 320. MM		8-5-(2)	71/ 2
FUKUSIMA-4	BWR	10		712. MM	10. 320. MM		8-5-(2)	71/ 8
FUKUSIMA-6	BWR	11		610. MM	10. 320. MM		8-5-(2)	72/ 1
TOKAI-2	BWR	12		610. MM	10. 320. MM		8-5-(2)	72/ 1
HAMAOKA-2	BWR	13		710. MM	10. 320. MM	560. MM	8-28	72/ 9
VERMONT YANKEE	BWR	52		711. MM			A-2 P3	70/ 5
MILLSTON	BWR	54		711. MM			R-9	66/ 8
DRESDEN-2	BWR	56		711. MM			R-9	66/ 8

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RECIRC.	SYSTEM	PUMP AND LOOP	TUBE	SIZE	751180			
			LOOP-PIPING	PV-INLET-PIPE		HEADER OD		
			NO.	NO.	OD			
OYSTER CREEK	BWR	57		711. MM			R-9	66/ 8
DUANE ARNOLD	BWR	58		559. MM			A-2 P3	70/ 5
FUGEN	ATR	81					105-B-3-(2)	73/11

RECIRC.	SYSTEM	(PUMP)	VALVE	NUMBER	SIZE	752220		
JPDR-2	BWR	2	TYPE=SIKIRI BEN			NO.=2*2		70/11
ONAGAWA	BWR	4	TYPE=MOTOR OPERATE VALVE			NO.=2*2 SIZE=560. MM	8-5-(2)	70/ 5
HAMAOKA-1	BWR	5	TYPE=MOTOR OPERATE VALVE(SIKIRI)			NO.=2*2 SIZE=560. MM	8-34	70/ 5
FUKUSIMA-5	BWR	9	TYPE=MOTOR OPERATE VALVE			NO.=2*2 SIZE=712. MM	8-5-(3)	71/ 2
FUKUSIMA-4	BWR	10	TYPE=MOTOR OPERATE VALVE			NO.=2*2 SIZE=712. MM	8-5-(3)	71/ 8
FUKUSIMA-6	BWR	11	TYPE=MOTOR OPERATE VALVE			NO.=2*2 SIZE=610. MM	8-5-(3)	72/ 1
TOKAI-2	BWR	12	TYPE=MOTOR OPERATE VALVE			NO.=2*2 SIZE=610. MM	8-5-(3)	72/ 1
HAMAOKA-2	BWR	13	TYPE=MOTOR OPERATE VALVE			NO.=2*2 SIZE=710. MM	8-29	72/ 9

RECIRC.	SYSTEM	(PUMP)	VALVE	MATERIAL	752240			
ONAGAWA	BWR	4	BODY=STAINLESS STEEL,	SHEET=STERITE		8-5-(3)		70/ 5
HAMAOKA-1	BWR	5	BODY=STAINLESS STEEL,	SHEET=STERITE		8-34		70/ 5
FUKUSIMA-5	BWR	9	BODY=STAINLESS STEEL,	SHEET=STERITE		8-5-(3)		71/ 2
FUKUSIMA-4	BWR	10	BODY=STAINLESS STEEL,	SHEET=STERITE		8-5-(3)		71/ 8
FUKUSIMA-6	BWR	11	BODY=STAINLESS STEEL,	SHEET=STERITE		8-5-(3)		72/ 1
TOKAI-2	BWR	12	BODY=STAINLESS STEEL,	SHEET=STERITE		8-5-(3)		72/ 1
HAMAOKA-2	BWR	13	BODY=STAINLESS STEEL,	SHEET=STERITE		8-29		72/ 9

RECIRC.	SYSTEM	(PUMP)	VALVE	DESIGN-P	DESIGN-T	752260		
			INLET VALVE	OUTLET VALVE		IN-OUT		
			DESIGN-P	DESIGN-P		DESIGN-T		
ONAGAWA	BWR	4	84.4* KG/SQCMG	96.0* KG/SQCMG (REV. 0)		302.DEG C	8-5-(3)	70/ 8
ONAGAWA	BWR	4	87.9 KG/SQCMG	98.5 KG/SQCMG (REV. 1)		302.DEG C		70/ 8
FUKUSIMA-5	BWR	9	96.0 KG/SQCMG	96.0 KG/SQCMG		302.DEG C	8-5-(3)	71/ 2
FUKUSIMA-4	BWR	10	96.0 KG/SQCMG	96.0 KG/SQCMG		302.DEG C	8-5-(3)	71/ 8
FUKUSIMA-6	BWR	11	87.9 KG/SQCMG	116. KG/SQCMG		302.DEG C	8-5-(3)	72/ 1
TOKAI-2	BWR	12	87.9 KG/SQCMG	116. KG/SQCMG		302.DEG C	8-5-(3)	72/ 1

RECIRC.	PUMP	TYPE	NUMBER	752410				
JPDR-1	BWR	1	NONE		NO.=NONE			/
JPDR-2	BWR	2	TYPE=TATEZIKU TANDAN KATA-SUIKONI UZUMAKI		NO.=1*2	KON-6 P-4		70/11

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RECIRC.	PUMP	TYPE	NUMBER	752410			
	ISURUGA	BWR	3		NO.=3		/
	ONAGAWA	BWR	4	TYPE=TATEGATA UZUMAKI	NO.=1*2	8-5-(4)	70/ 5
	HAMAOKA-1	BWR	5	TYPE=TATEGATA TANDAN ENGIN TEIBU SUIKOMI SIKI	NO.=2	8-35	70/ 5
	FUKUSIMA-1	BWR	6		NO.=2		70/ 5
	FUKUSIMA-2,3	BWR	7		NO.=2		70/ 5
	SHIMANE	BWR	8		NO.=2		70/ 5
	FUKUSIMA-5	BWR	9	TYPE=TATEGATA UZUMAKI	NO.=2	8-5-(4)	71/ 2
	FUKUSIMA-4	BWR	10	TYPE=TATEGATA UZUMAKI	NO.=2	8-5-(4)	71/ 8
	FUKUSIMA-6	BWR	11	TYPE=TATEGATA UZUMAKI	NO.=2	8-5-(4)	72/ 1
	TOOKAI-2	BWR	12	TYPE=TATEGATA UZUMAKI	NO.=2	8-5-(4)	72/ 1
	HAMAOKA-2	BWR	13	TYPE=TATEGATA TANDAN ENGIN TEIBU SUIKOMI SIKI	NO.=2	8-30	72/ 9
	VERMONT YANKEE	BWR	52		NO.=2	A-2	70/ 5
	DRESDEN-2	BWR	56	VARIABLE SPEED CENTRIFUGAL PUMPS DRIVING FLOW		DNR V7 P193	68/
	DRESDEN-2	BWR	56	FDR 20 JET PUMPS INSIDE VESSEL	NO.=2	DNR V7 P193	68/
	DUANE ARNOLD	BWR	58		NO.=2	A-2 P3	70/ 7
	FUGEN	ATR	81	TYPE=TATEGATA UZUMAKISIKI DENDDOKI-KUDDO	NO.=2	105-8-5-(3)	73/11

RECIRC.	PUMP	CAPACITY	DESIGN-P	DESIGN-T	752420		
PLANT NAME		CAPACITY T/H		DESIGN(OPERATION) PRESSURE AND TEMP.			
	JPDR-1	BWR	1	-----			/
	JPDR-2	BWR	2	1630.*2 CUHM/H		KDN-6 P4	70/11
	TSURUGA	BWR	3	5900.*3 T/H			/
	ONAGAWA	BWR	4	4650.*2 T/H	105.5 KG/SQCMG	302. DEG C	8-5-(4),(1)
	HAMAOKA-1	BWR	5	4650.*2 T/H	(71.6) KG/SQCMG	(275.) DEG C(SUCTION)	8-36
	FUKUSIMA-1	BWR	6	5600.*2 T/H			70/ 5
	FUKUSIMA-2,3	BWR	7	7800.*2 T/H			70/ 5
	SHIMANE	BWR	8	5600.*2 T/H			70/ 5
	FUKUSIMA-5	BWR	9	7800.*2 T/H		8-5-(4)	71/ 2
	FUKUSIMA-4	BWR	10	7800.*2 T/H		8-5-(4)	71/ 8
	FUKUSIMA-6	BWR	11	8100.*2 T/H		8-5-(4)	72/ 1
	TOOKAI-2	BWR	12	8100.*2 T/H		8-5-(4)	72/ 1
	HAMAOKA-2	BWR	13	7750.*2 T/H	(71.5) KG/SQCMG	(278.) DEG C(SUCTION)	8-30
	VERMONT YANKEE	BWR	52	5580.*2 T/H		A-2	70/ 5
	DUANE ARNOLD	BWR	58	4650.*2 T/H		A-2 P3	70/ 7
	FUGEN	ATR	81	1900.*2 T/H	(68.5) KG/SQCMG	277. DEG C	105-8-5-(3)

RECIRC.	PUMP	HEAD	COOL-P	NPSH	INPUT-P	752430		
PLANT NAME		TOTAL HEAD	COOL.INLT.PRESS.	NPSH	INPUT POWER			
	JPDR-2	BWR	2	36. M			KDN-6 P4	70/11
	ONAGAWA	BWR	4	164. M	71.5 KG/SQCMG	107. M	2380. KW *2	8-5-(4)
	HAMAOKA-1	BWR	5	168. M	71.6 KG/SQCMG	107. M	2440. KW *2	8-36

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RECIRC.	PUMP	HEAD	COOL-P	NPSH	INPUT-P	752430		
PLANT NAME		TOTAL HEAD	COOL.INLT.PRESS.	NPSH	INPUT POWER			
	FUKUSIMA-5	BWR	9	152. M	72.6 KG/SQCMG		4100. KW*2	8-5-(5)
	FUKUSIMA-4	BWR	10	152. M	72.6 KG/SQCMG			8-5-(5)
	FUKUSIMA-6	BWR	11	245.4 M	70.7 KG/SQCMG			8-5-(4)
	TOOKAI-2	BWR	12	245.4 M	70.7 KG/SQCMG			8-5-(4)
	HAMAOKA-2	BWR	13	162. M	71.5 KG/SQCMG			8-30

RECIRC.	PUMP	MATERIAL	752440				
	ONAGAWA	BWR	4	CASING=SUS,	BLADE=SUS,	SHAFT=SUS	8-5-(4)
	HAMAOKA-1	BWR	5	CASING=SUS,	BLADE=SUS,	SHAFT=SUS	8-36
	FUKUSIMA-5	BWR	9	CASING=SUS,	BLADE=SUS,	SHAFT=SUS	8-5-(5)
	FUKUSIMA-4	BWR	10	CASING=SUS,	BLADE=SUS,	SHAFT=SUS	8-5-(5)
	FUKUSIMA-6	BWR	11	CASING=SUS	BLADE=SUS	SHAFT=SUS	8-5-(4)
	TOOKAI-2	BWR	12	CASING=SUS	BLADE=SUS	SHAFT=SUS	8-5-(4)
	HAMAOKA-2	BWR	13	CASING=SUS,	BLADE=SUS	SHAFT=SUS	8-30

RECIRC.	PUMP	MOTOR	POWER	AND	SPEED	752450		
	JPDR-2	BWR	2	POWER= 335*2 KW			KDN-6 P18	70/11
	ONAGAWA	BWR	4	POWER=2380*2 KW		SPEED=1410.RPM	8-5-(4)	70/ 5
	HAMAOKA-1	BWR	5	POWER=2440*2 KW		SPEED=1680.RPM	8-36	70/ 5
	FUKUSIMA-5	BWR	9	POWER=4100*2 KW		SPEED=1410.RPM	8-5-(5)	71/ 2
	FUKUSIMA-4	BWR	10	POWER=4100*2 KW		SPEED=1410.RPM	8-5-(5)	71/ 8
	FUKUSIMA-6	BWR	11	POWER=9000*2 HP		SPEED=1485.RPM	8-5-(4)	72/ 1
	TOOKAI-2	BWR	12	POWER=9000*2 HP		SPEED=1485.RPM	8-5-(4)	72/ 1
	HAMAOKA-2	BWR	13	POWER=4220*2 KW		SPEED=1680.RPM	8-30	72/ 9
	DRESDEN-2	BWR	56	TYPE=VERTICAL,SOLID,SHAFT DROP PROOF INDUCTION TYPE			DNR V7 P193	68/
	DRESDEN-2	BWR	56	MOTORS DESIGNED FOR VARIABLE FREQUENCY POWER SUPPLY			DNR V7 P193	68/

M.STEAM	TUBE	NUMBER	SIZE AND DESIGN-P	753220				
	JPDR-2	BWR	2	OD=219.1 MM	DESIGN-P= 77.3 KG/SQCMG	(TS)	KDN-6 P6	70/11
	JPDR-2	BWR	2	OD=216.3 MM	DESIGN-P= 77.3 KG/SQCMG	(OS)	KDN-6 P6	70/11
	ONAGAWA	BWR	4	NO.=4	OD=510. MM	DESIGN-P= 87.9 KG/SQCMG(REV.1)	8-5-(4)	70/ 5
	HAMAOKA-1	BWR	5	NO.=4	OD=510. MM	DESIGN-P= 84.4 KG/SQCMG	8-36	70/ 5
	FUKUSIMA-1	BWR	6	NO.=4	OD=406. MM			/
	FUKUSIMA-2,3	BWR	7	NO.=4	OD=610. MM			/
	SHIMANE	BWR	8	NO.=4	OD=406. MM			/
	FUKUSIMA-5	BWR	9	NO.=4	OD=610. MM	DESIGN-P= 84.4 KG/SQCMG	8-5-(5)	71/ 2
	FUKUSIMA-4	BWR	10	NO.=4	OD=610. MM	DESIGN-P= 84.4 KG/SQCMG	8-5-(5)	71/ 8
	FUKUSIMA-6	BWR	11	NO.=4	OD=660. MM	DESIGN-P= 87.9 KG/SQCMG	8-5-(5)	72/ 1
	TOOKAI-2	BWR	12	NO.=4	OD=660. MM	DESIGN-P= 87.9 KG/SQCMG	8-5-(5)	72/ 1

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M.STEAM	TUBE	NUMBER	SIZE AND DESIGN-P	753220				
	HAMAOKA-2	BWR 13	NO.=4 DD=610. MM	DESIGN-P= 87.9 KG/SQCMG		8-30	72/ 9	
	VERMONT YANKEE	BWR 52	NO.=4 DD=457. MM			A-2	70/ 5	
	DUANE ARNOLD	BWR 58	NO.=4 DD=508. MM			A-2 P3	70/ 7	
	FUGEN	ATR 81	NO.=2 DD=410. MM	DESIGN-P= 82. KG/SQCMG		105-8-5-(3)	73/11	
M.STEAM	FLOW	LIMITER	TYPE	NUMBER	753310			
	PLANT NAME		--TYPE--	NUMBER	FLOW-LIMIT	MAX.OPERATABLE P AND T		
	ONAGAWA	BWR 4	VENTURI			8-5-(4)	70/ 5	
	HAMAOKA-1	BWR 5	VENTURI			8-36	70/ 5	
	FUKUSIMA-1	BWR 6	VENTURI	NO.=4	619.T/H*200PC	84.4 KG/SQCMG	302. C	MEMO P145
	FUKUSIMA-5	BWR 9	VENTURI			8-5-(5)	71/ 2	
	FUKUSIMA-4	BWR 10	VENTURI			8-5-(5)	71/ 8	
	FUKUSIMA-6	BWR 11	NO.=4			8-5-(5)	72/ 1	
	TOOKAI-2	BWR 12	NO.=4			8-5-(5)	72/ 1	
	HAMAOKA-2	BWR 13	VENTURI			8-30	72/ 9	
M.STEAM	FLOW	LIMITER	P-LOSS	SIZE	753320			
	PLANT NAME		FLOW-METER ACCURACY	PRESSURE LOSS AT RATED FLOW	-----SIZE (IN MM)----- ID(M.TUBE) THROAT LENGTH			
	FUKUSIMA-1	BWR 6	2. PC	LE 0.63 KG/SQCM	363.6 ID=202.7 712.	MEMO P145	70/ 3	
M.STEAM	FLOW	LIMITER	MATERIAL	753330				
	PLANT NAME		UP-STREAM NOZZLE	DOWN-STREAM NOZZLE	--WELD-RING----			
	FUKUSIMA-1	BWR 6	ASTM A-351 CF-8	ASTM A-351 CF-8	ASTM A-105 GR-2	MEMO P145	70/ 3	
M.STEAM	ISOLATE VALVE	TYPE AND SIZE	753400					
	PLANT NAME		TYPE		SIZE			
	FUKUSIMA-1	BWR 6	AIR-OPERATED-SPRING TYPE (TAMAGATA BEN)		16. INCH	MEMO P151	70/ 3	
M.STEAM	ISOLATE VALVE	NUMBER	DESIGN-P	DESIGN-T	753420			
	PLANT NAME		NUMBER	DESIGN-P	DESIGN-T	DRIVER SOURCE		
	JPDR-2	BWR 2	NO=2(TS)+1(OS)			KON-6 P6	70/11	
	ONAGAWA	BWR 4	NO=2*4	87.9 KG/SQCMG	302 C	AIR	8-5-(5)	70/ 5
	HAMAOKA-1	BWR 5	NO=2*4	87.9 KG/SQCMG	302 C	AIR	8-37	70/ 5
	FUKUSIMA-1	BWR 6	NO=2*4	87.9 KG/SQCMG	302 C	AIR AND SPRING	MEMO P151	70/ 3
	FUKUSIMA-2,3	BWR 7	NO=2*4				70/ 5	
	SHIMANE	BWR 8	NO=2*4				70/ 5	

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M.STEAM	ISOLATE VALVE	NUMBER	DESIGN-P	DESIGN-T	753420			
	PLANT NAME		NUMBER	DESIGN-P	DESIGN-T	DRIVER SOURCE		
	FUKUSIMA-5	BWR 9	NO=2*4	87.9 KG/SQCMG	302 C	AIR	8-5-(6)	71/ 2
	FUKUSIMA-4	BWR 10	NO.=2*4	87.9 KG/SQCMG	302 C	AIR	8-5-(6)	71/ 8
	FUKUSIMA-6	BWR 11	NO=2*4	87.9 KG/SQCMG	302 C	AIR	8-5-(6)	72/ 1
	TOOKAI-2	BWR 12	NO=2*4	87.9 KG/SQCMG	302 C	AIR	8-5-(6)	72/ 1
	HAMAOKA-2	BWR 13	NO=2*4	87.9 KG/SQCMG	302 C	AIR(OUT), NITROGEN(IN)	8-31	72/ 9
	FUGEN	ATR 81	NO.=4	82. KG/SQCMG	296 C	AIR	105-8-5(6)	73/11
M.STEAM	ISOLATE VALVE	P-LOSS	RATED	FLOW	753430			
	PLANT NAME		--PRESSURE LOSS--	-----RATED FLOW-----				
	FUKUSIMA-1	BWR 6	LE 0.42 KG/SQCM	608. T/H(CAT 70.4 KG/SQCMG)		MEMO P151	70/ 3	
M.STEAM	ISOLATE VALVE	SHUT-OFF TIME	SET POINT	753440				
	PLANT NAME		SHUT-OFF TIME ADJUSTABLE-WIDTH	SHUT-OFF-SET-POINT	DRIVER-AIR-PRESSURE			
	FUKUSIMA-1	BWR 8	FROM 3. TO 10.SEC	120.PC/RATED-CURRENT	6.3 KG/SQCMG	MEMO P151	70/ 3	
M.STEAM	ISOLATE VALVE	CONTROL	SOURCE	753450				
	FUKUSIMA-1	BWR 6	AC AND DC			MEMO P151	70/ 3	
SAFETY	VALVE	TYPE	NUMBER	753620				
	JPDR-2	BWR 2	TYPE=SPRING	NO.=2		KON-6 P506	0/	
	ONAGAWA	BWR 4	TYPE=SPRING	NO.=2		8-5-(5)	70/ 5	
	HAMAOKA-1	BWR 5	TYPE=SPRING	NO.=2		8-38	70/ 5	
	FUKUSIMA-5	BWR 9	TYPE=SPRING	NO.=3		8-5-(7)	71/ 2	
	FUKUSIMA-4	BWR 10	TYPE=SPRING	NO.=3		8-5-(7)	71/ 8	
	FUKUSIMA-6	BWR 11	SPRING(IF ACT AS SAFETY V.)	NO=18		8-5-(6)	72/ 1	
	TOOKAI-2	BWR 12	SPRING(IF ACT AS SAFETY V.)	NO=18		8-5-(7)	72/ 1	
	HAMAOKA-2	BWR 13	SPRING(IF ACT AS SAFETY V.)	NO.=13		8-32	72/ 9	
	TAKAHAMA-2	PWR 23		(KANZEN WIPPEI POP TYPE)		8-49	70/ 5	
	DOI -1,2	PWR 26		(KANZEN WIPPEI POP TYPE)		8-49	71/ 1	
	MIHAMA-3	PWR 27		(KANZEN WIPPEI POP TYPE)		8-49	71/ 8	
	IKATA	PWR 28	TYPE=SPRING	NO.=2		8-55	72/11	
SAFETY	VALVE	SET	PRESSURE CAPACITY	753640				

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SAFETY VALVE SET	PRESSURE	CAPACITY	753640		
PLANT NAME	SET PRESSURE	CAPACITY			
JPOR-2	BWR 2	93.842 T/H			/
JPOR-2	BWR 2	91.773 T/H			/
ONAGAWA	BWR 4	87.2 KG/SQCMG	GE 15 PC 440 T/H/2	8-5-(6)	70/ 5
HAMAOKA-1	BWR 5	87.2 KG/SQCMG	GE 15 PC	8-38	70/ 5
FUKUSIMA-5	BWR 9	87.2 KG/SQCMG	19.9 PC/TOTAL STEAM FLOW	8-5-(6)	71/ 2
FUKUSIMA-4	BWR 10	87.2 KG/SQCMG	19.9 PC/TOTAL STEAM FLOW	8-5-(6)	71/ 8
FUKUSIMA-6	BWR 11	85.1(4),85.8(4),86.5(4),87.2(4),87.9(2)	KG/SQCMG(ND.)	8-5-(7)	72/ 1
TOKAI-2	BWR 12	85.1(4),85.8(4),86.5(4),87.2(4),87.9(2)	KG/SQCMG(ND.)	8-5-(7)	72/ 1
HAMAOKA-2	BWR 13	CAPACITY=80.PC/TOTAL STEAM/(13)	5 GUBM/DAY	8-32	72/ 9
TAKAHAMA-2	PWR 23			SHK-P	70/10
GENKAI-1	PWR 24	175. KG/SQCMG		8-55	70/ 5
GENKAI-1	PWR 24	TYPE=SPRING NO.=2		8-55	70/ 5
IKATA	PWR 28	175. KG/SQCMG		8-55	72/11

RELIEF VALVE TYPE	NUMBER	753820			
ONAGAWA	BWR 4	TYPE NO.=6		8-5-(6)	70/ 5
HAMAOKA-1	BWR 5	TYPE NO.=6		8-38	70/ 5
FUKUSIMA-5	BWR 9	TYPE=SENKUBEN SIKI NO.=8		8-5-(7)	71/ 2
FUKUSIMA-4	BWR 10	TYPE=SENKUBEN-SIKI NO.=8		8-5-(7)	71/ 8
FUKUSIMA-6	BWR 11	AIR PRESSURE OPERATE(IF ACT AS REL.V.) NO=12		8-5-(7)	72/ 1
TOKAI-2	BWR 12	AIR PRESSURE OPERATE(IF ACT AS REL.V.) NO=12		8-5-(7)	72/ 1
HAMAOKA-2	BWR 13	NYTROGEN		8-32	72/ 9
GENKAI-1	PWR 24	TYPE=AIR OPEK NO.=2		8-55	70/ 5
IKATA	PWR 28	TYPE=AIR OPERATE NO.=2		8-55	72/11

RELIEF VALVE SET	PRESSURE	753840			
PLANT NAME	LOW-PRESSURE	HIGH-PRESSURE	MED.-PRESSURE		
ONAGAWA	BWR 4	75.4 KG/SQCMG	77.3 KG/SQCMG	76.6 KG/SQCMG	8-5-(6) 70/ 5
HAMAOKA-1	BWR 5	75.4 KG/SQCMG	77.3 KG/SQCMG	76.6 KG/SQCMG	8-38 70/ 5
FUKUSIMA-5	BWR 9	75.4 KG/SQCMG	76.6 KG/SQCMG	77.4 KG/SQCMG	8-5-(7) 71/ 2
FUKUSIMA-4	BWR 10	78.0 KG/SQCMG	78.7 KG/SQCMG	79.5 KG/SQCMG	8-5-(7) 71/ 8
FUKUSIMA-6	BWR 11	78.0(4),	78.8(4),	79.4(3)	8-5-(7) 72/ 1
TOKAI-2	BWR 12	78.0(4),	78.8(4),	79.4(3)	8-32 72/ 9
HAMAOKA-2	BWR 13	78.0(3)	78.7(3)	79.4(3)	8-55 70/ 5
GENKAI-1	PWR 24	164. KG/SQCMG (SET PRESSURE)			8-55 72/11
IKATA	PWR 28	164. KG/SQCMG (SET PRESSURE)			

RELIEF VALVE CAPACITY	753860			
ONAGAWA	BWR 4	CAP.= GE 60PC 1740.T/H		70/ 5

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RELIEF VALVE CAPACITY	753860			
HAMAOKA-1	BWR 5	CAP.= GE 60PC		70/ 5
FUKUSIMA-5	BWR 9	CAP.= 65.2 PC (85.1 PC WITH SAFETY VALVE)		8-5-(6) 71/ 2
FUKUSIMA-4	BWR 10	CAP.= 65.2 PC (85.1 PC WITH SAFETY VALVE)		8-5-(6) 71/ 8
FUKUSIMA-6	BWR 11	(80. PC WITH SAFETY VALVE)		8-5-(6) 72/ 1
TOKAI-2	BWR 12	(80. PC WITH SAFETY VALVE)		8-5-(7) 72/ 1

STEAM-G. DESIGN-P OPERAT-P	757220				
(1)TYPE	TP1=TATE OKI U-TUBE				
	TP2=INVERTED U-TUBE				
	TP3=YOKODOKI ENTOD GATA DRUM				
(2)NUMBER					
(3)DESIGN PRESSURE	SHELL SIDE	KG/SQCMG			
(4)OPERATING PRESSURE (STEAM)	AT FULL POWER	KG/SQCMG			
(5)DESIGN PRESSURE	TUBE SIDE	KG/SQCMG			
(6)OPERATING PRESSURE		KG/SQCMG			
(7)OPERATING TEMPERATURE	STEAM OUTLET	C			
(8)OPERATING TEMPERATURE	PRIMARY IN	C			
(9)OPERATING TEMPERATURE	PRIMARY OUT	C			
(10)PRIMARY COOLANT FLOW RATE		TON/H/1			
(11)STEAM GENERATION RATE		TON/H/1			
W =WETNESS OF OUTLET-STEAM IN WEIGHT PERCENT	LT=LESS THAN				
(1)(2) (3) (4) (5) (6) (7) (8) (9) (10) (11)					
TYPE	-STEAM-- (PRIMARY)STEAM (PRIMARY)				
NU.	---- KG/SQCMG ---- C C C T/H T/H				
MIHAMA-1	PWR 21	TP1 2 76.3(57.) 175		1014	BK80-2 P9 71/ 8
MIHAMA-2	PWR 22	TP1 2 76.3(57.) 175		1429	BK80-2 P9 71/ 8
TAKAHAMA-2	PWR 23	TP1 3 76. 175(157)		15000 1600	8-50 70/ 5
GENKAI-1	PWR 24	TP1 2 76.3(54.5) 175	269(W=LT0.25WPC)	15000 1620	8-51 70/ 5
TAKAHAMA-1	PWR 25	TP1 3 76.3(54.) 175		1600	BK80-2 P9 71/ 8
DOI -1-2	PWR 26	TP1 4 76. 175(157)		15000 1700	8-50 71/ 1
MIHAMA-3	PWR 27	TP1 3 76 175		15000 1600	8-50 71/ 8
IKATA	PWR 28	TP1 2 76.3(58.) 175	273(W=LT0.25WPC)	15000 1620	8-51 72/11
YANKEE	69	TP2 4 (34.2)	278.3 257.8		DNR V4 P36 61/
SAXTON	70	1		1270	DNR V4 P50 61/
TURKEY POINT-3,4	PWR 72	76.3 174.7			BK80-4 P7 71/ 9
H.B.ROBINSON-2	PWR 73	76.3 174.7			BK80-4 P7 71/ 9
SURRY-1,-2	PWR 74	76.3 174.7			BK80-4 P7 71/ 9
BEAVER VALLEY	PWR 75	76.3 174.7			BK80-4 P7 71/ 9
NORTH ANNA-12	PWR 76	76.3 174.7			BK80-4 P8 71/ 9
JOSEPH M.FARLEY	PWR 77	76.3 174.7			BK80-4 P8 71/ 9
FUGEN	ATR 81	TP3 2 82. 296			105-8-5-(2) 73/11

STEAM-G. CAPACITY WETNESS TUBE SURFACE AREA 757240

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STEAM-G. CAPACITY NETSS TURE SURFACE AREA 757240

- (1)TOTAL HEIGHT OF SHELL M
- (2)DIAMETER OF SHELL UPPER (DD) M
- (3) DIAMETER OF SHELL LOWER(DD) M
- (4)DIAMETER OF TURE (DD) MM
- (6)MATERIAL BODY: R1=MN-MO-STEEL
B2=ASTM A533 GRADE A CL1 S00T00
TURE: T1=INCONEL
T2=ASTM B163 S00T00
KAN-ITA OVERLAY: K1=INCONEL
K2=ASTM B163 S00T00
CHANNEL OVERLAY: C1=STAINLESS STEEL
C2=SUS27 S00T00

(5)SURFACE AREA OF TUBE SUM

PLANT NAME		PWR	(1)	(2)	(3)	(4)	(5)	MATERIAL		
			HEIGHT M	DD M	DD M	DD MM	SUM			
MIHAMA-1		21	18	3.6	3.1				HK80-2 P10	71/ 8
MIHAMA-2		22	20	4.3	3.3				HK80-2 P10	71/ 8
TAKAHAMA-2		23	20.3	4.4	3.4				8-50	70/ 5
GENKAI-1		24	21.	4.4	3.4	22.2		R1-T1-K1-C1	8-51	70/ 5
TAKAHAMA-1		25	20	4.4	3.4			R1-T1-K1-C1	HK80-2 P10	71/ 8
DUI -1,2		26	20.6					R1-T1-K1-C1	8-50	71/ 1
MIHAMA-3		27	20.3	4.4	3.4			R1-T1-K1-C1(H2-T2-K2-C2)	8-50	71/ 8
IKATA		28	21	4.4	3.4	22.2		R1-T1-K1-C1	8-51	72/11
YANKEE		69					1247.6		DNR V4 P36	61/
SAXTON		70					213.7		DNR V4 P50	61/

PRIMARY COOLING PUMP TYPE AND MATERIAL 757400

- (1)TYPE TP1=ROEUI SEIGYO ZIKU-HUU SIKI TATE-UKI UZUMAKI
TP2=ROEUI SEIGYO ZIKU-HUU SIKI TATE-UKI SYARYUU

- (2)NUMBER
- (3)CAPACITY CURM/H
- (4)HEAD M
- (5)DESIGN PRESSURE KG/SQCMG
- (6)DESIGN TEMPERATURE C
- (7)SIZE HEIGHT M
- (8)SIZE CASING DD M
- (9)MATERIAL M1= STAINLESS STEEL
- (10) RPM

PLANT NAME		PWR	NO.	CURM/H	M	C	M	M	RPM				
												NO.	CURM/H
MIHAMA-1		21	TP1 2	15900	59.4	175	343.3	7.77	2.59	M1	1150	8-50	66/11
MIHAMA-2		22	TP2 2	20100								HK80-2 P10	71/ 8
TAKAHAMA-2		23	TP2 2	20100	80	175		8.5		M1	1150	8-50	70/ 5
GENKAI-1		24	TP2 2	20200	80	175		8.5		M1	1150	8-53	70/ 5
TAKAHAMA-1		25	TP2 3	20100								HK80-2 P10	71/ 8
DUI -1,2		26	TP2 4	20100	80	175		7.8		M1	1189	8-50	71/ 1

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PRIMARY COOLING PUMP TYPE AND MATERIAL 757400

- (1)TYPE TP1=ROEUI SEIGYO ZIKU-HUU SIKI TATE-UKI UZUMAKI
TP2=ROEUI SEIGYO ZIKU-HUU SIKI TATE-UKI SYARYUU

- (2)NUMBER
- (3)CAPACITY CURM/H
- (4)HEAD M
- (5)DESIGN PRESSURE KG/SQCMG
- (6)DESIGN TEMPERATURE C
- (7)SIZE HEIGHT M
- (8)SIZE CASING DD M
- (9)MATERIAL M1= STAINLESS STEEL
- (10) RPM

PLANT NAME		PWR	NO.	CURM/H	M	C	M	M	RPM				
												NO.	CURM/H
MIHAMA-3		27	TP2 3	20100	80	175		8.5		M1	1150	8-50	71/ 8
IKATA		28	TP2 2	20200	80	175	343	8.5	1.8	M1	1150	8-53	72/11
TURKEY POINT-3,4		72		20100								BK80-4 P7	71/ 9
H.B.ROBINSON-2		73		20100								BK80-4 P7	71/ 9
SURRY-1,-2		74		20100								BK80-4 P7	71/ 9
BEAVER VALLEY		75		20100								BK80-4 P7	71/ 9
NORTH ANNA-12		76		20100								BK80-4 P8	71/ 9
JOSEPH W.FARLEY		77		20100								BK80-4 P8	71/ 9

PRIMARY COOLING SYSTEM DESIGN-T DESIGN-P 757430

- DESIGN-T C DESIGN-P INLET TEMP OUTLET TEMP
- ()=PRESSURIZER DESIGN TEMPERATURE

PLANT NAME		PWR	DESIGN-T C	DESIGN-P	INLET TEMP	OUTLET TEMP		
TAKAHAMA-2		23	343 C (360)	175 KG/SQCMG	287. C	322. C	8-49	70/ 5
GENKAI-1		24		175 KG/SQCMG	288.1 C	322.7 C	8-56	70/ 5
DUI -1,2		26	343 C (360)	175 KG/SQCMG	289. C	325. C	8-49	71/ 1
MIHAMA-3		27	343 C (360)	175 KG/SQCMG	287. C	322. C	8-49	71/ 8
IKATA		28	343 C (360)	175 KG/SQCMG	288. C	322. C	8-50	72/11

PRIMARY LOOP TUBE SIZE 757450

PRIMARY LOOP TUBE SIZE

757450

...PRESSURE VESSEL...(3)(4)...STEAM GENERATOR...

..(1) (2).....PUMP.....(5)(6).....

- (1) TUBE INNER DIA (FROM PUMP TO PRESSURE VESSEL)
- (2) TUBE THICKNESS (FROM PUMP TO PRESSURE VESSEL)
- (3) TUBE INNER DIA (FROM PRESSURE VESSEL TO STEAM GENERATOR)
- (4) TUBE THICKNESS (FROM PRESSURE VESSEL TO STEAM GENERATOR)
- (5) TUBE INNER DIA (FROM STEAM GENERATOR TO PUMP)
- (6) TUBE THICKNESS (FROM STEAM GENERATOR TO PUMP)

PLANT NAME			SIZE							
			(1)	(2)	(3)	(4)	(5)	(6)		
			ID	T	ID	T	ID	T		
			(MM)	(MM)	(MM)	(MM)	(MM)	(MM)		
MIHAMA-1	PWR 21	700	57.2	700	57.2	737	60.4		8-53	66/11
MIHAMA-2	PWR 22	700		740		790			HK80-2 P10	71/ 8
TAKAHAMA-2	PWR 23	700	60	740	64	790	67		8-51	70/ 5
GENKAI-1	PWR 24	700	65	737	68	787	73		8-56	70/ 5
TAKAHAMA-1	PWR 25	700		740		790			HK80-2 P10	71/ 8
OOI -1,2	PWR 26	700	65	740	69	790	73		8-51	71/ 1
MIHAMA-3	PWR 27	700	60	740	64	790	67		8-51	71/ 8
IKATA	PWR 28	700	65	737	68	787	73		8-56	72/11

PRESSURE VESSEL TYPE SIZE

757620

- (1)TYPE TP1 =TATE DK1 ENTOD ZYODGE HANKYUU KAGAMI YOOKI
- (2)NUMBER
- (6)DESIGN PRESSURE (KG/SQCMG)
- (8)MATERIAL

- MAT1 = MN.MD.STEEL WITH STAINLESS STEEL LINING
- MAT2 = LOW ALLOY STEEL WITH STAINLESS STEEL LINING

PLANT NAME				VOLUME				DES.P	DES.T	MAT.		
				(1)	(2)	(3)	(4)						(5)	(6)	(7)	(8)
			TYPE	NO.	DU	HEIGHT						
					(M**3)	(M)	(M)			(OEG-C)		
MIHAMA-1	PWR 21	TP1	1	22.6	2.01	10.97	175	360.	MAT2		8-51	66/11
MIHAMA-1	PWR 21	TP1	1		1.9	10.4					HK80-2 P10	71/ 8
MIHAMA-2	PWR 22	TP1	1		2.3	9.7					HK80-2 P10	71/ 8
MIHAMA-2	PWR 23	TP1	1	40.	2.3	12.8			MAT1		8-50	70/ 5
GENKAI-1	PWR 24	TP1	1	28.3	2.1	11.	175.	360.	MAT1		8-54	70/ 5
TAKAHAMA-1	PWR 25	TP1	1		2.3	13.					HK80-2 P10	71/ 8
OOI -1,2	PWR 26	TP1	1		51.	16.		360.	MAT1		8-50	71/ 1
MIHAMA-3	PWR 27	TP1	1		40.	13.		360.	MAT1		8-50	71/ 8
MIHAMA-3	PWR 27	BODY=(ASTM A533 GR.A CL.1 SODT00)>LINING=(SUS-27 SODT00)									8-50	71/ 8
IKATA	PWR 28	TP1	1	28.3	2.3	9.7	175.	360.	MAT1		8-54	72/11

PRESSURE VESSEL HEATER TYPE AND CAPACITY

757640

PRESSURE VESSEL HEATER TYPE AND CAPACITY

757650

- (1)TYPE TP1 =WATER DIP TYPE
- (2) =CAPACITY (KW)

- (1) (2) (3)
- TYPE CAP. NO.
- (KW)

PLANT NAME										
MIHAMA-1	PWR 21	TP1		800.					8-52	66/11
GENKAI-1	PWR 24	TP1		1000.	1				8-55	70/ 5
OOI -1,2	PWR 26	TP1							8-49	71/ 1
IKATA	PWR 28	TP1		1000.					8-55	72/11

PRESSURE VESSEL RELIEF TANK DESIGN-P CAPACITY

757650

- (1) NUMBER
- (2) DESIGN PRESSURE (INNER) KG/SQCMG
- (3) DESIGN PRESSURE (OUTER) KG/SQCMG
- (4) CAPACITY CUBM

- (1) (2) (3) (4)
- NO. DES.-P CAP. QUBM
- KG/SQCMG QUBM

PLANT NAME										
MIHAMA-1	PWR 21	1	7	1	17.7				8-52	66/11
GENKAI-1	PWR 24	1	7	1	23				8-55	70/ 5
IKATA	PWR 28	1	7.1	1	23				8-55	72/11

KIND OF REACTOR AUXILIARY SYSTEM PWR

761100

- *KIND
- (1)CVCS =CHEMICAL AND VOLUME CONTROL SYSTEM 762
- (2)SIS =SAFETY INJECTION SYSTEM 763
- (3)RHRS =RESIDUAL HEAT REMOVE SYSTEM 764
- (4)CCS =COMPONENT COOLING SYSTEM 768
- (5) =SAMPLING SYSTEM

- *FUNCTION(SUMMARY)
- (1)= ADJUSTMENT OF PRIMARY-COOLANT-VOLUME, QUALITY AND BORIC-CONCENTRATION.
- (2)= WATER INJECTION INTO CORE AND COOLING IN THE EVENT OF ACCIDENT (LOSS OF COOLANT).
- (3)= TO REMOVE RESIDUAL HEAT AFTER REACTOR SHUT DOWN.
- (4)= FOR COOLING REACTOR-AUXILIARY-COMPONENTS.
- (5)= TO PICK PRIMARY-COOLANT-SAMPLES.

PLANT NAME										
MIHAMA-1	PWR 21	FROM(1) TO(5)							8-58	66/11
TAKAHAMA-2	PWR 23	FROM(1) TO(5)							8-56	70/ 5
GENKAI-1	PWR 24	FROM(1) TO(5)							8-61	70/ 5
OOI -1,2	PWR 26	FROM(1) TO(5)							8-56	71/ 1
MIHAMA-3	PWR 27	FROM(1) TO(5)							8-56	71/ 7
IKATA	PWR 28	FROM(1) TO(5)							8-61	72/11

FUNCTION OF CVCS PWR

762100

FUNCTION OF CVCS PWR 762100

- FUNCTION
 (1) TO KEEP THE PRIMARY-COOLANT-VOLUME PROPERLY IN THIS SYSTEM.
 (2) TO ADJUST THE BORIC CONCENTRATION IN THIS SYSTEM FOR REACTIVITY CONTROL.
 (3) TO REMOVE IMPURITY SUCH AS FISSION PRODUCTS AND CORROSION PRODUCTS IN THE PRIMARY COOLANT.
 (4) IN ORDER TO PREVENT CORROSION, ADD CORROSION-INHIBITOR IN COOLANT AND KEEP ITS CONCENTRATION PROPERLY.
 (5) TO SUPPLY SHAFT-SEAL-WATER FOR RECIRCULATING-COOLANT-PUMPS.
 (6) TO FILL THE WATER TO PRIMARY SYSTEM AND TO MAKE WATER-PRESSURE-TEST FOR PRIMARY SYSTEM.

PLANT NAME

MIHAMA-1	PWR 21	FROM(1) TO(A)	8-58	66/11
TAKAHAMA-2	PWR 23	FROM(1) TO(A)	8-56	70/ 5
GENKAI-1	PWR 24	FROM(1) TO(A)	8-61	70/ 5
ODI -1,2	PWR 26	FROM(1) TO(A)	8-56	71/ 1
MIHAMA-3	PWR 27	FROM(1) TO(6)	8-56	71/ 7
IKATA	PWR 28	FROM(1) TO (6)	8-61	72/11

MAIN COMPONENTS OF CVCS PWR 762130

- **MAIN COMPONENTS OF CHEMICAL-AND-VOLUME-CONTROL-SYSTEM ARE AS FOLLOWS
 (1) REGENERATIVE HEAT EXCHANGER 762260
 (2) NON-REGENERATIVE HEAT EXCHANGER 762280
 (3) YUJOO CHUUSHUTSU HEAT EXCHANGER 762300
 (4) SHAFT SEAL WATER HEAT EXCHANGER 762320
 (5) ION EXCHANGER FOR PRIMARY COOLANT 762340
 (6) ION EXCHANGER FOR REMOVE BORIC ACID 762350
 (7) VOLUME CONTROL TANK 762360
 (8) CHARGE PUMP 762380
 (9) BORIC ACID PUMP 762500
 (10) BORIC ACID TANK 762520

RWPS REACTOR WATER PURIFIC. SYSTEM DESIGN-F 762200

- (1) NUMBER OF SYSTEM
 (2) DESIGN PRESSURE KG/SQCMG
 (3) DESIGN TEMPERATURE C
 (4) DESIGN FLOW RATE TON/H
 (1) (2) (3) (4)
 NO. DES.P DES.T D.FLOW
 KG/SQCMG C T/H

PLANT NAME

ONAGAWA	BWR 4	1 102	302	83	8-6-(3)	70/ 5
HAMAOKA-1	BWR 5	1		31.8	8-41	70/ 5
FUKUJIMA-5	BWR 9	1 102	302	45.4	8-6-(3)	71/ 2
FUKUJIMA-4	BWR 10	1 102	302	45.4	8-6-(3)	71/ 8
FUKUJIMA-6	BWR 11	1 91.4	302	120.7	8-6-(3)	72/ 1
TODOKAI-2	BWR 12	1 91.4	302	120.7	8-6-(3)	72/ 1
HAMAOKA-2	BWR 13	1		45.4	8-35	72/ 9

RWPS REACTOR WATER PURIFIC. SYSTEM DESIGN-F 762200

- (1) NUMBER OF SYSTEM
 (2) DESIGN PRESSURE KG/SQCMG
 (3) DESIGN TEMPERATURE C
 (4) DESIGN FLOW RATE TON/H
 (1) (2) (3) (4)
 NO. DES.P DES.T D.FLOW
 KG/SQCMG C T/H

PLANT NAME

FUGEN	ATR 81	70	296	60	105-8-6-(2)	73/11
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RWPS REACTOR WATER QUALITY 762220

- E.CODIVITY PH CL-IDN SOLID SILICA BORON
 MICRO MHO/CM (FROM-TO) LT.PPM LT.PPM LT.PPM LT.PPM
 (SIO-2) (BO-3)

PLANT NAME

ONAGAWA	BWR 4	LT. 1.0	5.6	8.6	0.1	1.	1.	1.	8-6-(2)	70/ 5
HAMAOKA-1	BWR 5	LT. 1.0	5.6	8.6	0.2	1.	1.	1.	8-40	70/ 5
FUKUJIMA-5	BWR 9	LT. 1.0	5.5	8.5	0.2	1.	1.	1.	8-6-(2)	71/ 2
FUKUJIMA-4	BWR 10	LT. 1.0	5.5	8.5	0.2	1.	1.	1.	8-6-(2)	71/ 8
FUKUJIMA-6	BWR 11	LT. 1.0	5.6	8.6	0.2	1.	1.	1.	8-6-(2)	72/ 1
TODOKAI-2	BWR 12	LT. 1.0	5.6	8.6	0.2	1.	1.	1.	8-6-(2)	72/ 1
HAMAOKA-2	BWR 13	LT. 1.0	5.6	8.6	0.2	1.	1.	1.	8-34	72/ 9
FUGEN	ATR 81	LT. 1.0	5.5	8.5	0.2	1.	2.	2.	105-8-6-(2)	73/11

RWPS DEMINE. PUMP TYPE NUMBER CAPACITY 762230

- (1) TYPE TP1= YOKU-OKI KATASUKI MI UZUMAKI
 (2) NUMBER
 (3) CAPACITY CUBM/H/1 OR TON/H
 (4) HEAD M
 (1) (2) (3) (4)
 NO. CAP. HEAD
 CURM/H/1 M

PLANT NAME

JPDR-2	BWR 2	TP1	1	3.4T/H	14.4	KON-6 P4	70/11
FUKUJIMA-5	BWR 9		2	30.7	153	8-6-(2)	71/ 2
FUKUJIMA-4	BWR 10		2	30.7	153	8-6-(2)	71/ 8
FUKUJIMA-6	BWR 11		2	81.7	153	8-6-(2)	72/ 1
TODOKAI-2	BWR 12		2	81.7	153	8-6-(2)	72/ 1

RWPS DEMINE. NUMBER AND CAPACITY 762240

JPDR-2	BWR 2	NO.=2	HISASEI KOSHOO ION EXCHANGER	CAP.=3.4 T/H	KON-6 P5	70/11
ONAGAWA	BWR 4	NO.=2		CAPACITY= 41.5 T/H/1	8-6-(2)	70/ 5
HAMAOKA-1	BWR 5	NO.=2		CAPACITY= 16 T/H/1	8-41	70/ 5
FUKUJIMA-5	BWR 9	NO.=2		CAPACITY= 23 T/H/1	8-6-(2)	71/ 2
FUKUJIMA-4	BWR 10	NO.=2		CAPACITY= 23. T/H/1	8-6-(2)	71/ 8
FUKUJIMA-6	BWR 11	NO.=2		CAPACITY= 60.3 T/H/1	8-6-(2)	72/ 1

RWPS	DESIGN. NUMBER AND	CAPACITY	762240
	TODKAI-2 BWR 12 NO.=2	CAPACITY= 60.3 T/H/1	8-6-(2) 72/ 1
	HAMAOKA-2 BWR 13 NO.=2	CAPACITY= 23. T/H/1	8-34 72/ 9
	FUGEN ATR 81 NO.=2	CAP.=34 T/H	105-8-6-(2) 73/11

RWPS	PIPING DESIGN-P DESIGN-T MATERIAL	762250
	PLANT NAME DESIGN-P DESIGN-T PIPE OD MATERIAL	
	JPDR-2 BWR 2 77.3 KG/SQCMG 293.5 DEG-C 48.6 MM SUS	KON-6 P5 70/11

RWPS	CVCS REGENE. H.EXCH. TYPE NO. CAPACITY	762260
	(1)TYPE	
	TP1 =YOKO DK) U-TUBE	
	TP2 =SHELL AND TUBE	
	TP3 =SHELL AND U-TUBE	
	(2)NUMBER	
	(3)CAPACITY (KCAL/H)	
	(4)DESIGN PRESSURE TUBE SIDE (KG/SQCMG)	
	(5)DESIGN PRESSURE SHELL SIDE (KG/SQCMG)	
	(6)DESIGN TEMPERATURE TUBE SIDE (C)	
	(7)DESIGN TEMPERATURE SHELL SIDE (C)	
	(1) (2) (3) (4) (5) (6) (7)	
	TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.)	
	(TUBE) (SHELL) (TUBE) (SHELL)	
	KCAL/H --KG/SQCMG-- ----DEG-C---	
	PLANT NAME	
	JPDR-2 BWR 2 TP1 1	KON-6 P4 70/11
	ONAGAWA BWR 4 TP2 1	8-6-(3) 70/ 5
	HAMAOKA-1 BWR 5 TP2 1	8-41 70/ 5
	FUKUSIMA-5 BWR 9 TP2 1	8-6-(2) 71/ 2
	FUKUSIMA-4 BWR 10 TP2 1	8-6-(2) 71/ 8
	FUKUSIMA-6 BWR 11 TP2 1	8-6-(2) 72/ 1
	TODKAI-2 BWR 12 TP2 1	8-6-(2) 72/ 1
	HAMAOKA-2 BWR 13 TP2 1	8-34 72/ 9
	MIHAMA-1 PWR 21 TP2 1 1.68E6 192.3 174.7 343. 343.	8-60 66/11
	TAKAHAMA-2 PWR 23 TP2 1 2.2 E6	8-57 70/ 5
	GENKAI-1 PWR 24 TP2 1 1.65E6 192. 175. 343.C 343.C	8-62 70/ 5
	DOI -1,2 PWR 26 TP2 1 2.6 E6	8-58 71/ 1
	MIHAMA-3 PWR 27 TP2 1 2.2 E6	8-57 71/ 8
	IKATA PWR 28 TP3 1 1.62E6 193. 175. 316.C 343.C	8-62 72/11
	FUGEN ATR 81 1	105-8-6-(2) 73/11

RWPS	CVCS NON-REG. H.EXCH. TYPE NO. CAPACITY	762280
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RWPS	CVCS NON-REG. H.EXCH. TYPE NO. CAPACITY	762280
	(1)TYPE	
	TP1 =YOKO DK) U-TUBE	
	TP2 =SHELL AND TUBE	
	TP3 =SHELL AND U-TUBE	
	(1) (2) (3) (4) (5) (6) (7)	
	TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.)	
	(TUBE) (SHELL) (TUBE) (SHELL)	
	KCAL/H --KG/SQCMG-- ----DEG-C---	
	PLANT NAME	
	JPDR-2 BWR 2 TP1 1	KON-6 P4 70/ 5
	ONAGAWA BWR 4 TP2 1	8-6-(2) 70/ 5
	HAMAOKA-1 BWR 5 TP2 1	8-41 70/ 5
	FUKUSIMA-5 BWR 9 TP2 1	8-6-(2) 71/ 2
	FUKUSIMA-4 BWR 10 TP2 1	8-6-(2) 71/ 8
	FUKUSIMA-6 BWR 11 TP2 1	8-6-(2) 72/ 1
	TODKAI-2 BWR 12 TP2 1	8-6-(2) 72/ 1
	HAMAOKA-2 BWR 13 TP2 1	8-35 72/ 9
	MIHAMA-1 PWR 21 TP2 1 2.9 E6 35.2 10.6 204 93.	8-60 66/11
	TAKAHAMA-2 PWR 23 TP2 1 3.3 E6	8-57 70/ 5
	GENKAI-1 PWR 24 TP2 1 2.89E6 42. 10. 200.C 107.C	8-63 70/ 5
	DOI -1,2 PWR 26 TP2 1 3.7 E6	8-58 71/ 1
	MIHAMA-3 PWR 27 TP2 1 3.6 E6	8-57 71/ 8
	IKATA PWR 28 TP3 1 2.89E6 42. 10. 200.C 95.C	8-63 72/11
	FUGEN ATR 81 1	105-8-6-(2) 73/11

SURPLUS	HEET EXT RACTION CVCS H.EXCH. TYPE	762300
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	(1)TYPE	
	TP2 =SHELL AND TUBE	
	TP3 =SHELL AND U-TUBE	
	(TUBE) (SHELL) (TUBE) (SHELL)	
	KCAL/H --KG/SQCMG-- ----DEG-C---	
	(1) (2) (3) (4) (5) (6) (7)	
	TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.)	
	(TUBE) (SHELL) (TUBE) (SHELL)	
	PLANT NAME	
	MIHAMA-1 PWR 21 TP2 1 4.88E5 174.7 10.6 343.3 121.1	8-60 66/11
	GENKAI-1 PWR 24 TP2 1 4.8 E5 175. 10. 343.C 120.C	8-63 70/ 5
	IKATA PWR 28 TP3 1 4.77E5 175. 10. 343.C 95.C	8-63 72/11

CVCS	SHAFT SEAL WATER H.EXCH.	762320
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	(1)TYPE	
	TP2 =SHELL AND TUBE	
	TP3 =SHELL AND U-TUBE	
	(TUBE) (SHELL) (TUBE) (SHELL)	
	KCAL/H --KG/SQCMG-- ----DEG-C---	
	(1) (2) (3) (4) (5) (6) (7)	
	TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.)	
	(TUBE) (SHELL) (TUBE) (SHELL)	
	PLANT NAME	
	MIHAMA-1 PWR 21 TP2 1 1.55E5 10.6 10.6 121.1 121.1	8-60 66/11

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CVCS	SHAFT SEAL WATER H.EXCH.	762320								
			(1)TYPE							
			TP2 =SHELL AND TUBE							
			TP3 =SHELL AND U-TUBE							
			(1) (2) (3) (4) (5) (6) (7)							
			TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.)							
			(TURE) (SHELL) (TURE) (SHELL)							
			PLANT NAME	KCAL/H	--KG/SQCMG--		----DEG-C---			
			GENKAI-1 PWR 24 TP2 1 2.89E5 10. 10. 120.C 120.C					8-64	70/ 5	
			IKATA PWR 28 TP3 1 2.89E5 10. 10. 95.C 95.C					8-63	72/11	

CVCS	PRIMARY COOLANT MIXED	BED	DEMINE.	762340						
			(1)NUMBER							
			(2)DESIGN FLOW RATE			CUBM/H/1				
			(3)DESIGN PRESSURE			KG/SQCMG				
			(4)DESIGN TEMPERATURE			C				
			(1) (2) (3) (4)							
			NO. DES.F DES.P DES.T							
			MIHAMA-1 PWR 21 2 20.4 10.6 121.1					8-61	66/11	
			TAKAHAMA-2 PWR 23 SEE 80239						/	
			GENKAI-1 PWR 24 2 20 14 120					8-64	70/ 5	
			IKATA PWR 28 2 20 14 65					8-64	72/11	

CVCS	RORJN REMOVE	DEMINE.	762350								
			(1)NUMBER								
			(2)DESIGN FLOW RATE			CUBM/H/1					
			(3)DESIGN PRESSURE			KG/SQCMG					
			(4)DESIGN TEMPERATURE			C					
			(1) (2) (3) (4)								
			NO. DES.F DES.P DES.T								
			MIHAMA-1 PWR 21 2 22.7 12.3 121.1					8-61	66/11		
			TAKAHAMA-2 PWR 23 SEE 80239						/		
			GENKAI-1 PWR 24 2 20. 14 120					8-64	70/ 5		
			IKATA PWR 28 2 20.4 14 65					8-64	72/11		

CVCS	VOLUME CONTROL TANK	NUMBER	CAPACITY	762360						
			OTHERS	-0						

CVCS	VOLUME CONTROL TANK	NUMBER	CAPACITY	762360						
			OTHERS	-0						

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CVCS	VOLUME CONTROL TANK	NUMBER	CAPACITY	762360								
			(1)NUMBER									
			(2)TANK VOLUME			CUBIC METER						
			(3)DESIGN PRESSURE (INNER)			KG/SQCMG						
			(4)DESIGN PRESSURE (OUTER)			KG/SQCMG						
			(5)DESIGN TEMPERATURE			C						
			(6)OPERATION PRESSURE			KG/SQCMG	(FROM - TO)					
			(7)OPERATION TEMPERATURE			C						
			(8)FLOW RATE OF SPRAY			CUBM/H						
			(1) (2) (3) (4) (5) (6) (7) (8)									
			PLANT NAME	NO. (CUBM)	--KG/SQCMG--	(C)	KG/SQCMG	(C)	CUBM/H			
			MIHAMA-1 PWR 21 1 4.2 5.3 1.1 121.1 4.2 52.8 20.4							8-60	66/11	
			TAKAHAMA-2 PWR 23 1 8.5							8-58	70/ 5	
			GENKAI-1 PWR 24 1 5.6 5.3 1.1 120. 0 - 4.2 53. 20.							8-64	70/ 5	
			OOI -1x2 PWR 26 1 11.3							8-58	71/ 1	
			MIHAMA-3 PWR 27 1 8.5							8-58	71/ 8	
			IKATA PWR 28 1 5.6 5.0 1.0 95. 0 - 4.2 53. 20.4							8-64	72/11	

CVCS	BDRIC ACID CHARGE PUMP	762380										
			(1)TYPE	UZU=UZUNAKI								
				TP2=TAISEKI-GATA KAHEN SOKUDO SIKI								
				TP3=ODHUKU KAHEN GATA								
			(2)NUMBER									
			(3)CAPACITY			CUBM/H/1						
			(4)DESIGN PRESSURE			KG/SQCMG						
			(5)DESIGN TEMPERATURE			C						
			(6)DERIVERY PRESSURE			KG/SQCMG	OR	WATER HEAD(M)				
			(7)OPERATION TEMPERATURE			C						
			(1) (2) (3) (4) (5) (6) (7)									
			PLANT NAME	TYPE NO.	CAP.	DES.P	DES.T	HEAD	OP.T			
			MIHAMA-1 PWR 21 TP2 2 12.5 192.3 121.1 172. 52.8							8-61	66/11	
			MIHAMA-1 PWR 21 3 14.							BK80-2 P13	71/ 8	
			MIHAMA-2 PWR 22 3 14.							BK80-2 P13	71/ 8	
			TAKAHAMA-2 PWR 23 UZU 3 34.				175.			8-58	70/ 5	
			GENKAI-1 PWR 24 TP2 3 14.3 212. 120. 172. 53.							8-65	70/ 5	
			TAKAHAMA-1 PWR 25 3 34.							REF23 P31	70/11	
			OOI -1x2 PWR 26 UZU 2 34.				177.			8-58	71/ 1	
			OOI -1x2 PWR 26 TP3 1 22.				176.			8-58	71/ 1	
			MIHAMA-3 PWR 27 UZU 3 34.				1770(M)			8-58	71/ 8	
			MIHAMA-3 PWR 27 (147.)				(732(M))			8-59	71/ 8	
			MIHAMA-3 PWR 27 THIS PUMPS ARE COMMONLY USED FOR 76314(HIGH-P INJECTION)							8-59	71/ 8	
			MIHAMA-3 PWR 27 () IS THE PERFORMANCE AS HIGH-P-INJECTION-USE.							8-59	71/ 8	
			IKATA PWR 28 TP2 3 14.3 193. 95. 175. 53.							8-64	72/11	

CVCS	BDRIC ACID PUMP	TYPE	NUMBER	762500								

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CVCS	BORIC ACID	PUMP	TYPE	NUMBER	762500				
			(1)TYPE	TP1=YOKO-OKI	CANNED	UZUMAKI			
				TP2=YOKO-OKI	UZUMAKI				
				TP3=UZUMAKI					
			(2)NUMBER						
			(3)CAPACITY			CURM/H/1			
			(4)DESIGN PRESSURE			KG/SQCMG			
			(5)DESIGN TEMPERATURE			C			
			(1)	(2)	(3)	(4)	(5)		
			TYPE	NO.	CAP.	DES.P	DES.T		
	PLANT NAME								
	MIHAMA-1	PWR 21	TP3	2	12.5	10.6	121.1	8-62	66/11
	GENKAI-1	PWR 24	TP1	2	10.	10.	120.	8-65	70/ 5
	IKATA	PWR 28	TP2	2	10.	10.	95.	8-65	72/11

CVCS	BORIC ACID	TANK	NUMBER	CAPACITY	762520				
			(1)NUMBER						
			(2)VOLUME						
			(3)DESIGN PRESSURE			KG/SQCMG			
			(4)DESIGN TEMPERATURE			C			
			(5)HEATER TYPE			TP1=EKISHIN GATA			
			(6)HEATER POWER			KW* /1			
			(7)CONCENTRATION OF BORIC ACID			PPM			
			(1)	(2)	(3)	(4)	(5)	(6)	(7)
			NO.	VOL	DES.P	DES.T			
	PLANT NAME			CUBM		(C)		KW* /1	PPM
	TAKAHAMA-2	PWR 23	2	28.					
	GENKAI-1	PWR 24	2	11.4	1.ATM	95.	TP1	4.5*2/1	21000.
	DDI -1*2	PWR 26	3	42.					
	MIHAMA-3	PWR 27	2	28					
	IKATA	PWR 28	2	11.4	1.ATM	95.	TP1	4.5*2/1	21000.

MAIN	COMPONENTS	OF	SIS	PWR	763100				
					(1) BORIC ACID TANK FOR REFUELING		763120		
					(2) HIGH PRESSURE INJECTION PUMP		763140		
					(3) LOW PRESSURE INJECTION PUMP		764220		
					(4) PRESSURIZED BORIC ACID TANK		763160		
					(5) BORIC ACID INJECTION TANK		763180		
	PLANT NAME								

SIS	BORIC ACID	TANK FOR REFUEL	NUMBER	CAPACITY	BURDN	CONCENTRATION	HEATER		
	TAKAHAMA-2	PWR 23	NO.=1	1500 CUBM				8-59	70/ 5
	GENKAI-1	PWR 24	NO.=1	1200 CUBM	2500 PPM		BY STEAM	8-68	70/ 5
	DDI -1*2	PWR 26	NO.=1	1300 CUBM				8-61	71/ 1
	MIHAMA-3	PWR 27	NO.=1	1500 CUBM				8-59	71/ 8
	IKATA	PWR 28	NO.=1	1200 CUBM	2000 PPM		BY STEAM	8-67	72/11

SIS	BORIC ACID	HIGH-P	INJECT	PUMP	763140				
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SIS	BORIC ACID	HIGH-P	INJECT	PUMP	763140				
	PLANT NAME		TYPE	NUMBER	CAPACITY	HEAD	DESIGN-PRESS.	-TEMP	
	GENKAI-1	PWR 24	UZUMAKI	NO.=2	160 CUBM/H/1	760 M	116 KG/SQCMG	150 C	8-68
	MIHAMA-3	PWR 27	SEE76238	NO.=3	125 CUBM/H/1	400 M	FOR HIGH-P INJECTION		8-59
	MIHAMA-3	PWR 27	SEE76422	NO.=2	850 CUBM/H/1	73 M	FOR LOW-P INJECTION		8-60
	IKATA	PWR 28	UZUMAKI	NO.=2	160 CUBM/H/1	760 M	116 KG/SQCMG	150 C	8-67

SIS	P-RIZED BORIC ACID	TANK	763160					
			(5) CONCENTRATION OF BORIC ACID (PPM)					
			(1)	(2)	(3)	(4)	(5)	
			NUMBER	CAPACITY	DESIGN-P	DESIGN-T		
	PLANT NAME							
	MIHAMA-1	PWR 21	NO.=2	38. CUBM/1			REF23 P32	70/11
	MIHAMA-2	PWR 22	NO.=2	57. CUBM/1			REF23 P32	70/11
	TAKAHAMA-2	PWR 23	NO.=3	41. CUBM/1			8-59	70/ 5
	GENKAI-1	PWR 24	NO.=2	56.5 CUBM/1	56 KG/SQCMG	150 C	8-68	70/ 5
	TAKAHAMA-1	PWR 25	NO.=3	41. CUBM/1			REF23 P32	70/11
	DDI -1*2	PWR 26	NO.=4	38. CUBM/1			8-61	71/ 1
	MIHAMA-3	PWR 27	NO.=3	41. CUBM/1			8-59	71/ 8
	IKATA	PWR 28	NO.=2	56.5 CUBM/1	56 KG/SQCMG	150 C	2000PPM	8-68

SIS	BORIC ACID	INJECT	TANK	763180				
	GENKAI-1	PWR 24	NUMBER=1		CAPACITY=2.5 CUBM		8-68	70/ 5

ISOLATED R.COOL. SYSTEM	TURBINE	TYPE AND NUMBER	763220				
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ONAGAWA	BWR 4	TYPE=HAIATU SIKI		NO.=1	8-6-(3),(4)	70/ 5
HAMAOKA-1	BWR 5	TYPE=HAIATU SIKI		NO.=1	8-42	70/ 5
FUKUSIMA-5	BWR 9	TYPE=HAIATU SIKI		NO.=1	8-6-(3)	71/ 2
FUKUSIMA-4	BWR 10	TYPE=HAIATU SIKI		NO.=1	8-6-(3)	71/ 8
FUKUSIMA-6	BWR 11	TYPE=HAIATU SIKI		NO.=1	8-6-(3)	72/ 1
TODOKAI-2	BWR 12	TYPE=HAIATU SIKI		NO.=1	8-6-(3)	72/ 1
HAMAOKA-2	BWR 13	TYPE=HAIATSU SIKI		NO.1	8-35	72/ 9

ISOLATED R.COOL. SYSTEM	TURBINE	CAPACITY	OTHERS	763240				
	PLANT NAME		INLET STEAM PRESS.	STEAM FLOW	OUTPUT	SPEED		
	ONAGAWA	BWR 4	77.7- 9.5 KG/SQCMG	8. -3. T/H	343-67 KW	4000-2000RPM	8-6-(4)	70/ 5
	HAMAOKA-1	BWR 5	77.7- 9.5 KG/SQCMG	9.1-3. T/H	343-67 KW	4000-2000RPM	8-42	70/ 5
	FUKUSIMA-5	BWR 9	77. -10.6 KG/SQCMG		460-90 HP	4500-2100RPM	8-6-(3)	71/ 2
	FUKUSIMA-4	BWR 10	79. -10.6 KG/SQCMG		485-90 HP	3600-1960RPM	8-6-(3)	71/ 8
	FUKUSIMA-6	BWR 11	79. -10.6 KG/SQCMG		725-130HP	4500-2100RPM	8-6-(3)	72/ 1
	TODOKAI-2	BWR 12	79. -10.6 KG/SQCMG		725-130HP	4500-2100RPM	8-6-(3)	72/ 1

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ISOLATED R.COOL. SYSTEM		TURBINE	CAPACITY	OTHERS	763240		
PLANT NAME		INLET STEAM PRESS.		STEAM FLOW	OUTPUT	SPEED	
HAMAOKA-2	BWR	13	77.7- 9.5	KG/SQCMG		4500-2100RPM	A-35 72/ 9
SIS		BORIC ACID	CHARGE	PUMP	763300		
TAKAHAMA-2	PWR	23	SEE (76238)			8-68	70/ 5
GENKAI-1	PWR	24	SEE (76238)			8-	70/ 5

ISOLATED R.COOL. SYSTEM		PUMP	TYPE AND NUMBER		763420		
		(1)TYPE	TP1= YOKO ZIKU TADAN TURBINEPUMP				
			TP2= TADAN SUIHEI ENSIN SIXI				
		(2)NUMBER					
		(3)REACTOR PRESSURE	FROM / TO	KG/SQCMG			
		(4)FLOW RATE		CUBM/H			
		(5)TOTAL HEAD	FROM / TO	M			
		(6)SPEED	FROM / TO	RPM			
		(V)=VARIABLE					
PLANT NAME		(1)	(2)	(3)	(4)	(5)	(6)
			NO.		F.R.	HEAD M / M	SPEED RPM
ONAGAWA	BWR	4	TP1	1	79/10.6	94.5	854/160 (V)
HAMAOKA-1	BWR	5	TP2	1		94.5	854/160 4500/2100
FUKUSIMA-5	BWR	9	TP2	1		91.0	854/160 (V)
FUKUSIMA-4	BWR	10	TP2	1		91.0	854/160 (V)
FUKUSIMA-6	BWR	11	TP2	1		142.0	870/186
TOKAI-2	BWR	12	TP2	1		142.0	870/186
HAMAOKA-2	BWR	13	TP2	1		96.5	854/160 4500/2100
VERMONT YANKEE	BWR	52				90.8	/
DUANE ARNOLD	BWR	58				94.5	A-2 P4 70/ 7

RESIDUAL HEAT REMOVE.S SYSTEM		NUMBER	764000		
ONAGAWA	BWR	4	2-SYSTEMS (RHR-PUMP=2*2, RHR-S.W.PUMP=2*2, RHR-HX=1*2)	8-6-(4)	70/ 5
HAMAOKA-1	BWR	5	2-SYSTEMS (RHR-PUMP=2*2, RHR-HX=1*2)	8-43	70/ 5
FUKUSIMA-1	BWR	6	NONE	/	/
FUKUSIMA-6	BWR	11	2-SYSTEMS (RHR-PUMP=2*2, RHR-S.W.PUMP=2*2, RHR-HX=1*2)	8-6-(4)	72/ 1
TOKAI-2	BWR	12	2-SYSTEMS (RHR-PUMP=3, RHR-S.W.PUMP=2, RHR-HX=1*2)	8-6-(5)	72/ 1
FUKUSIMA-5	BWR	9	2-SYSTEMS (RHR-PUMP=2*2, RHR-S.W.PUMP=2*2, RHR-HX=1*2)	8-6-(4)	71/ 2
FUKUSIMA-4	BWR	10	2-SYSTEMS (RHR-PUMP=2*2, RHR-S.W.PUMP=2*2, RHR-HX=1*2)	8-6-(3)	71/ 8
HAMAOKA-2	BWR	13	2-SYSTEMS (RHR-PUMP=2*2, RHR-HX=1*2)	8-36	72/ 9
TAKAHAMA-2	PWR	23	2	8-60	70/ 5
GENKAI-1	PWR	24	2-SYSTEMS (RHR-PUMP=1*2, RHR-HX=1*2)	8-69	70/ 5

MAIN COMPONENTS OF RHR'S		PWR	764100		
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MAIN COMPONENTS OF RHR'S		PWR	764100		
PLANT NAME		(1) RESIDUAL HEAT REMOVE HEAT EXCHANGER (RHR COOLER)	76462 ,4		
		(2) RESIDUAL HEAT REMOVE PUMP	76422 ,4		

RESIDUAL HEAT REMOVE.S S.W-PUMP		TYPE AND NUMBER	764220					
		(1)TYPE	TP1=YOKO-OKI KATASUJIKOMI UZUMAKI					
			TP2=UZUMAKI(TATE-GATA)					
			TP3=UZUMAKI					
		(7)MATERIAL	CASING	C1=CAST STEEL OR ALLOY STEEL				
				C2=CAST STEEL				
			BLADE	B1=BRONZE OR ALLOY STEEL				
				B2=BRONZE OR STAINLESS STEEL				
				B3=STAINLESS STEEL				
			SHAFT	S1=ALLOY STEEL				
				S2=STAINLESS STEEL				
PLANT NAME		(1)	(2)	(3)	(4)	(5)	(6)	(7)
		TYPE	NO.	CAP. CUB/H	HEAD M	DES.P KG/SQCMG	DES.T C	MATERIAL
JPOR-2	BWR	2	TP1	1	91*1	30		KOH-6 P5 70/11
ONAGAWA	BWR	4	TP2	2*2	1090*4	119		8-6-(4) 70/ 5
HAMAOKA-1	BWR	5	TP2	2*2	1090*4	119		8-43 70/ 5
FUKUSIMA-5	BWR	9	TP2	2*2	1750*4	120		8-6-(4) 71/ 2
FUKUSIMA-4	BWR	10	TP2	2*2	1750*4	142		8-6-(4) 71/ 8
FUKUSIMA-6	BWR	11	TP2	1*3	1690*3	85.3		8-6-(4) 72/ 1
TOKAI-2	BWR	12	TP2	1*3	1690*3	85.3		8-6-(4) 72/ 1
HAMAOKA-2	BWR	13	TP2	2*2	1750*4	128		8-36 72/ 9
TAKAHAMA-2	PWR	23	TP3	2	850*2	82		8-60 70/ 5
GENKAI-1	PWR	24	TP3	2	454*2	73	42 200	8-69 70/ 5
DDI -1*2	PWR	26	TP3	2	680*2	107		8-62 71/ 1
MIHAMA-3	PWR	27	TP3	2	680*2	82		8-60 71/ 8
IKATA	PWR	28	TP3	2	454*2	80	42 200	8069 72/11
VERMONT YANKEE	BWR	52		4	1590*4			A-2 70/ 5
DUANE ARNOLD	BWR	58		4	1090*4			A-2 P3 70/ 7

RESIDUAL HEAT REMOVE.S S.W-PUMP		TYPE AND NUMBER	764220				
		(1)TYPE	TP1=UZUMAKI(TATE-GATA)				
		(5)MATERIAL	CASING	C1=CAST STEEL OR CAST IRON			
			SHAFT	S1=HEAT TREATED HIGH CARBON STEEL OR ALLOY STEEL			
				S2=STAINLESS STEEL			
			BLADE	B1=BRONZE			
				B2=STAINLESS STEEL			
				B3=ALLOY STEEL			
PLANT NAME		(1)	(2)	(3)	(4)	(5)	
		TYPE	NO.	CAP. CUB/H	HEAD (M)	MATERIAL	
ONAGAWA	BWR	4	TP1	2*2	545/1	239	C1,B1,S1 8-6-(4) 70/ 5

RESIDUAL HEAT REMOVE+S S.W-PUMP TYPE AND NUMBER 764420

(1)TYPE [P1=UZUMAKI(TATE-GATA)
 (5)MATERIAL
 CASING C1=CAST STEEL OR CAST IRON
 S1=HEAT TREATED HIGH CARBON STEEL OR ALLUOY STEEL
 SHAFT S2=STAINLESS STEEL
 BLADE B1=BRONZE,
 B2=STAINLESS STEEL
 B3=ALLOY STEEL

PLANT NAME	(1) TYPE	(2) NO.	(3) CAP. CUBM/H	(4) HEAD (M)	(5) MATERIAL		
FUKUSIMA-5	BWR	9	TP1 2*2	978/1	232	C1+B2+S2	8-6-(4) 71/ 2
FUKUSIMA-4	BWR	10	TP1 2*2	978/1	244	C1+B3+S1	8-6-(4) 71/ 8
FUKUSIMA-6	BWR	11	TP1 1*2	1680/1		C1+B2+S2	8-6-(4) 72/ 1
TOOKAI-2	BWR	12	TP1 1*2	1680/1		C1+B2+S2	8-6-(4) 72/ 1
VERMONT YANKEE	BWR	52	TP1 4	613/1		A-2	70/ 5
DUANE ARNOLD	BWR	58	TP1 4	568/1		A-2 P4	70/ 7

RESIDUAL HEAT REMOVE+S H.EXCH. TYPE AND NUMBER 764620

(1)TYPE
 YU =YOKO OKI U-TUBE
 TU =TETE OKI U-TUBE
 ST =SHELL AND TUBE
 (8)MATERIAL
 TUBE MATERIAL T1=CU-NI-ALLOY
 TUBE MATERIAL T2=HAKUDDO(CUPRO NICKEL)
 TUBE MATERIAL T3=STAINLESS STEEL
 SHELL MATERIAL S1=CARBON STEEL
 KAN-ITA K =CARBON STEEL
 KAN-ITA K1=CARBON STEEL WITH MUNEL CLAD

PLANT NAME	(1) TYPE	(2) NO.	(3) CAP. KCAL/H	(4) (DESIGN PRES.) (TUBE) (SHELL)	(5) (DESIGN TEMP.) (TUBE) (SHELL)	(6) (MAT.)	(7)	(8)
JPCR-2	BWR	2	YU 1					KON-6 P5 70/11
ONAGAWA	BWR	4	TU 2	5.0E6*2		T1+S1+K1		8-6-(5) 70/ 5
HAMAOKA-1	BWR	5	TU 2	5. E6*2		T3+S1+K		8-43 70/ 5
FUKUSIMA-5	BWR	9	TU 2	7.76E6*2		T2+S1+K1		8-6-(4) 71/ 2
FUKUSIMA-4	BWR	10	TU 2	7.76E6*2		T2+S1+K1		8-6-(4) 71/ 8
FUKUSIMA-6	BWR	11	TU 2	10.6 E6*2		T2+S1+K		8-6-(4) 72/ 1
TOOKAI-2	BWR	12	TU 2	10.6 E6*2		T2+S1+K		8-6-(5) 72/ 1
HAMAOKA-2	BWR	13	TU 2	8.0 E6*2		T3+S1+K		8-36 72/ 9
MIHAMA-1	PWR	21	ST 2	3.5 E6*2	35.2	10.6	204. 93	8-65 66/11
MIHAMA-1	PWR	21	ST 2	4.0 E6*2				REF23 P32 70/11
MIHAMA-2	PWR	22	ST 2	5.9 E6*2				REF23 P32 70/11
TAKAHAMA-2	PWR	23	ST 2	8.6 E6*2				8-60 70/ 5
GENKAI-1	PWR	24	ST 2	6.5 E6*2	42.	10.	200. 90.	8-69 70/ 5

RESIDUAL HEAT REMOVE+S H.EXCH. TYPE AND NUMBER 764620

(1)TYPE
 YU =YOKO OKI U-TUBE
 TU =TETE OKI U-TUBE
 ST =SHELL AND TUBE
 (8)MATERIAL
 TUBE MATERIAL T1=CU-NI-ALLOY
 TUBE MATERIAL T2=HAKUDDO(CUPRO NICKEL)
 TUBE MATERIAL T3=STAINLESS STEEL
 SHELL MATERIAL S1=CARBON STEEL
 KAN-ITA K =CARBON STEEL
 KAN-ITA K1=CARBON STEEL WITH MUNEL CLAD

PLANT NAME	(1) TYPE	(2) NO.	(3) CAP. KCAL/H	(4) (DESIGN PRES.) (TUBE) (SHELL)	(5) (DESIGN TEMP.) (TUBE) (SHELL)	(6) (MAT.)	(7)	(8)
TAKAHAMA-1	PWR	25	2	8.6 E6*2				REF23 P32 70/11
OOI -1,2	PWR	26	ST 2	8.6 E6*2				8-62 71/ 1
MIHAMA-3	PWR	27	ST 2	6.7 E6*2				8-60 71/ 8
IKATA	PWR	28	ST 2	6.5 E6*2	42.	10.	200. 95.	8-68 72/11
VERMONT YANKEE	BWR	52	2	14.5 E6*2				A-2 70/ 7
DUANE ARNOLD	BWR	58	2	5.0 E6*2				A-2 P3 70/ 7

CORE SPRAY SYSTEM NUMBER FLOW AND OTHERS 765220

(1)NO. OF SYSTEM
 (2)FLOW RATE M3/H/1-SYSTEM OR T/H/1
 (3)DESIGN TEMPERATURE C
 (4)DESIGN PRESSURE KG/CM2G
 (1) (2) (3) (4)
 NO.FLOW-RATE..... DES.T DES.P
 M3/H/1 TON/H/1 C KG/CM2G

PLANT NAME	(1) NO. OF SYSTEM	(2) FLOW RATE M3/H/1	(3) DESIGN TEMPERATURE C	(4) DESIGN PRESSURE KG/CM2G	(5) DES.T C	(6) DES.P KG/CM2G	(7)	(8)
ONAGAWA	BWR	4	2	687		93.3	35.2	8-6-(6),(7) 70/ 5
HAMAOKA-1	BWR	5	2	686				8-46 70/ 5
FUKUSIMA-5	BWR	9	2		1050	92.5	33.4	8-6-(6) 71/ 2
FUKUSIMA-4	BWR	10	2		1050	92.5	33.4	8-6-(6) 71/ 8
FUKUSIMA-6	BWR	11	1		1441	100.	42.2	8-6-(7) 72/ 1
TOOKAI-2	BWR	12	1		1441	100.	42.2	8-6-(7) 72/ 1
HAMAOKA-2	BWR	13	2	1070				8-39 72/ 9
VERMONT YANKEE	BWR	52	2	681				A-2 70/ 5
DUANE ARNOLD	BWR	58	2	686				A-2 P3 70/ 7

CORE SPRAY SYSTEM PUMP TYPE AND NUMBER 765240

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CORE	SPRAY	SYSTEM	PUMP	TYPE AND NUMBER	765240				
				(1)TYPE	TP1=UZUMAKI				
				(2)NUMBER	() = YOB1				
				(3)FLOW RATE	A=M3/H/1 OR B=TON/H/1				
				(4)HEAD	M				
				(5)MATERIAL					
				CASING	C1=CAST STEEL C2=CAST STEEL OR DUCTILE CAST IRON				
				SHAFT	S1=STAINLESS STEEL S2=ALLOY STEEL				
				BLADE	B1=STAINLESS STEEL B2=BRONZE OR STAINLESS STEEL				
				(1) TYPE	(2) NO.	(3) FLOW RATE	(4) HEAD	(5) MATERIAL	
PLANT NAME									
JPCR-2	BWR	2	TP1	1+(1)	91	A	120		KDN-6 P16 70/11
JPCR-2	BWR	2	TP1	1+(1)	45.4	A	100		KDN-6 P16 70/11
ONAGAWA	BWR	4	TP1	2	744	A	201	C1>S1>B1	8-6-(7) 70/5
HAMAOKA-1	BWR	5	TP1	2	744	A	219	C1>S1>B2	8-46 70/5
HAMAOKA-1	BWR	5	TP1	2	744	A	201		85-4-2 70/11
FUKUSIMA-5	BWR	9	TP1	2	1050	H	204	C2>S2	8-6-(6) 71/2
FUKUSIMA-4	BWR	10	TP1	2	1050	H	204	C2>S2	8-6-(6) 71/8
FUKUSIMA-6	BWR	11	TP1	1	1441	A	205	C1>S1>B1	8-6-(7) 72/1
TOOKAI-2	BWR	12	TP1	1	1441	A	205	C1>S1>B1	8-6-(7) 72/1
HAMAOKA-2	BWR	13	TP1	2	1070	A	204	C1>S1>B1	8-39 72/9

SAMPLE	H.EXCH.	TYPE	NUMBER	CAPACITY	765620				
				(1)TYPE	TP1=SHELL AND COIL TUBE TP2=DOUBLE TUBE SIKI				
				(1) TYPE	(2) NO.	(3) CAP.	(4) (DESIGN PRES.) (TUBE) (SHELL)	(5) (DESIGN TEMP.) (TUBE) (SHELL)	(6) (7)
PLANT NAME						KCAL/H	--KG/SQCMG--	---DEG-C---	
MIHAMA-1	PWR	21	TP2	1	5.34E4/1	175.	10.6	360.	177.
GENKAI-1	PWR	24	TP1	3	5.35E4/1	175.	10.	360.	180.
IKATA	PWR	28	TP1	3	5.34E4/1	175.	10.	360.	95.

SAMPLE	BOX	CAPACITY DESIGN-P	DESIGN-T	NUMBER	765660				
				(1)NUMBER					
				(2)CAPACITY			MILLI LITRE		
				(3)DESIGN PRESSURE			KG/SQCMG		
				(4)DESIGN TEMPERATURE			C		
				(1) NO.	(2) CAP.	(3) DES.P	(4) DES.T		
PLANT NAME									
MIHAMA-1	PWR	21	4	10*2,75*2	175	360			8-66 66/11
GENKAI-1	PWR	24	8	75	175	360			8-70 70/5

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SAMPLE	BOX	CAPACITY DESIGN-P	DESIGN-T	NUMBER	765660				
				(1)NUMBER					
				(2)CAPACITY			MILLI LITRE		
				(3)DESIGN PRESSURE			KG/SQCMG		
				(4)DESIGN TEMPERATURE			C		
				(1) NO.	(2) CAP.	(3) DES.P	(4) DES.T		
PLANT NAME									
IKATA	PWR	28	8	75	175	360			8-72 72/11

HIGH-P.	INJECT.	SYSTEM	DRIVER	TYPE	766020				
				(1)DRIVER TYPE	TP1=DIESEL V-TYPE TP2=TURBINE HAIATU-SIKI TP3=SHOODOO RASEN-RYUU HAIATU-SIKI				
				(2)SYSTEM NUMBER					
				(3)INLET STEAM PRESSURE			FROM / TO KG/CM2G		
				(4)STEAM FLOW RATE			FROM / TO TON/H		
				(5)DRIVER POWER			FROM / TO HP OR KW		
				(6)DRIVER SPEED			FROM / TO RPM		
				(1) TYPE	(2) NO.	(3) KG/CM2G	(4) TON/H	(5) HP OR KW	(6) RPM
PLANT NAME									
ISURUGA	BWR	3	TP1	1				3050HP	900
ONAGAWA	BWR	4	TP2	1	77.7/9.5	59	/40.9	1986/441KW	4000/2000
HAMAOKA-1	BWR	5	TP2	1	77.7/9.5	59	/41.	2000/450KW	4000/2000
FUKUSIMA-1	BWR	6	TP3	1	78./10.0	50.8	/24.04	2675/560HP	3900/2125
FUKUSIMA-5	BWR	9	TP2	1	79./10.6			4100/750HP	4000/2000
FUKUSIMA-4	BWR	10	TP2	1	79./10.6			4100/750HP	4000/2160
HAMAOKA-2	BWR	13	TP2	1	77.7/9.5			4000/2000	
VERMONT YANKEE	BWR	52	1						
DUANE ARNDLD	BWR	58	1						

HIGH-P.	INJECT.	SYSTEM	DRIVER	PROPERTY	766030				
				PROPERTY OF TURBINE					
				A=TURBINE INLET STEAM TEMPERATURE			FROM(A1)/TO(A2)	UNIT DEG.C	
				B=BACK PRESSURE				(B) KG/SQCMG	
				C=START UP TIME (UP TO RATED-FEED-WATER-FLOW)				(C) SEC	
				D=START UP TIME (FOR SAFETY ANALYSIS)				(D) SEC	
				E=DANGEROUS SPEED (E1)=TURBINE ONLY,(E2)=WITH PUMP				RPM	
				F=MAX. SPEED SET POINT				(F) RPM	
				(A1)/(A2)	(B)	(C)/(D)	(E1)/(E2)	(F)	
PLANT NAME				DEG C	KG/SQCMG	SEC	RPM	RPM	
FUKUSIMA-1	BWR	6	292./179.	3.5	35./40.	8500/5070	5000.		MEMO P313 70/3

HIGH-P.	INJECT.	SYSTEM	DRIVER	PROPERTY	766040				
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HIGH-P.	INJECT. SYSTEM DRIVER	PROPERTY	766040							
PROPERTY OF TURBINE										
A=TURBINE HOUSING MAX. INNER DIA(C1)MM, AND THICKNESS(A2)MM.										
B=NOZZLE DIA (B)MM.										
C=TURBINE BLADE WIDTH (C)MM										
D1/D2=BLADE ADDENDUM/OEDENDUM DIA. MM										
E=SHAFT TOTAL LENGTH MM										
F=SHAFT MAX DIA MM										
G=BEARING SPAN MM										
PLANT NAME		(A1)/(A2)	(B)	(C)	(D1)/(D2)	(E)	(F)	(G)		
		ID / T	MM	MM	MM / MM	MM	MM	MM		
FUKUSIMA-1	BWR 5	1380/22.	24.	104.	916./860.	1830.	152.	1042.	MEMO P314	70/ 3

HIGH-P.	INJECT. SYSTEM DRIVER	MATERIAL	766050							
TURBINE HOUSING/NOZZLE/ BLADE / SHAFT										
FUKUSIMA-1	BWR 6	ASTM A216-WCB/AISI 410/ASTM A294-60TA-5/ASTM A434-60TBC							MEMO P314	70/ 3

HIGH-P.	INJECT. SYSTEM PUMP	PROPERTY	766440							
(1)TYPE TP1-UZUMAKI										
(2)NUMBER										
(3)REACTOR PRESSURE FROM / TO KG/SQCMG										
(4)FLOW RATE FROM / TO CUBM/H/1 DR * T/H/1										
(5)TOTAL HEAD FROM / TO M										
(6)SPEED RPM										
(7)MATERIAL										
CASING C1=CAST STEEL										
C2=ALLOY CAST STEEL										
SHAFT S1=STAINLESS STEEL										
S2=CARBON STEEL OR ALLOY STEEL										
BLADE B1=STAINLESS STEEL										
B2=ALLOY CAST STEEL										
PLANT NAME		(1)	(2)	(3)	(4)	(5)	(6)	(7)		
		NO.	KG/SQCMG	FLOW RATE	HEAD M	SPEED RPM	MATERIAL			
TSURUGA	BWR 3	1		636	914	3800	80-3-3	70/ 5		
ONAGAWA	BWR 4	TP1 1	78.8/10.6	681.4	854/160	4000/2000	8-6-(8)	70/ 5		
HAMAOKA-1	BWR 5	TP1 1	79 /10.5	681	854/160	4000/2000	C1S1B1	8-47	70/ 5	
FUKUSIMA-5	BWR 9	TP1 1	79 /10.6	965 *	854/160	4000/2000	C2S2B2	8-6-(7)	71/ 2	
FUKUSIMA-4	BWR 10	TP1 1	79 /10.6	965 *	854/160	4000/2000	C1S2B2	8-6-(7)	71/ 8	
FUKUSIMA-6	BWR 11	1		352/1441	849/257		C1S1B1	8-6-(8)	72/ 1	
TOOKAI-2	BWR 12	1		352/1441	849/257		C1S1B1	8-6-(8)	72/ 1	
HAMAOKA-2	BWR 13	TP1 1	79 /10.5	965	854/160	4000/2000	C1S1B1	8-39	72/ 9	
VERMONT YANKEE	BWR 52			965			A-2		70/ 5	
DUANE ARNOLD	BWR 58			681			A-2 P3		70/ 7	

BORDN	INJECT SYSTEM	NUMBER	CONTROL WORTH	767220
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BORDN	INJECT SYSTEM	NUMBER	CONTROL WORTH	767220						
(1)SYSTEM NUMBER										
OTHERS		-0	(2)TOTAL CONTROL WORTH		DELTA-K					
OTHERS		-0	(3)K EFFECTIVE		K EFFECTIVE	%				
OTHERS		-0	(4)CONTROL SPEED		DELTA-K/MINUT (MINIMUM					
JPR-2	BWR 2	0.18			13.5				KON-6 P18	70/11
ONAGAWA	BWR 4	1 0.17	0.001	MT1 P1	1 13	234	1.102		8-6-(8)	70/ 5
HAMAOKA-1	BWR 5	1 0.17	0.001	MT1 P1	1 13				8-49	70/ 5
FUKUSIMA-5	BWR 9	1 0.95	0.001	MT1 P1		15.3			8-6-(8)	71/ 2
FUKUSIMA-4	BWR 10	1 0.95	0.001	MT1 P1		15.3			8-6-(8)	71/ 8
FUKUSIMA-6	BWR 11	1 0.95	0.001	MT1 P1		19.5			8-6-(9)	72/ 1
TOOKAI-2	BWR 12	1 0.95	0.001	MT1 P1		19.5			8-6-(9)	72/ 1
HAMAOKA-2	BWR 13	1 0.17	0.001	MT1 P1	1 18.				8-41	72/ 9
DRESDEN-1	BWR 55			P1					DNR V4 P94	62/
DRESDEN-2	BWR 56			P1					DNR V7 P192	68/
HURLINGTON	PWR 71			P1					GSK-19	69/ 2

BORDN	INJECT SYSTEM	PUMP NO. TYPE	CAPACITY	767420
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(1)TYPE TP1=PLUNGER TYPE										
(2)NUMBER										
(3)CAPACITY A=M3/H DR B=TON/H										
(4)DESIGN PRESSURE KG/CM2G										
(5)HEAD M										
PLANT NAME		(1)	(2)	(3)	(4)	(5)				
		TYPE NO.	CAP.	DES.P	HEAD					
				KG/CM2G	M					
ONAGAWA	BWR 4	TP1 2	6.1 A	105.5	1055				8-6-(9)	70/ 5
HAMAOKA-1	BWR 5	TP1 2	6.1 A	105	980				8-49	70/ 5
FUKUSIMA-5	BWR 9	TP1 2	11.7 B	105	980				8-6-(9)	71/ 2
FUKUSIMA-4	BWR 10	TP1 2	11.7 B	105	980				8-6-(9)	71/ 8
FUKUSIMA-6	BWR 11	TP1	9.77B		858				8-6-(9)	72/ 1
TOOKAI-2	BWR 12	TP1	9.77H		858				8-6-(10)	72/ 1
HAMAOKA-2	BWR 13	TP1 2	8.7 A	105	980				8-41	72/ 9

REACTOR	AUX.COOL SYSTEM	DESIGN-P DESIGN-T DESIGN-F	768000
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PLANT NAME		DESIGN-P	DESIGN-T	DESIGN-F	HEAT LOAD	SEA-W.TEMP			
		KG/SQCMG	DEG.C	T/H	KCAL/H	DEG C			
ONAGAWA	BWR 4	9.0	70. C	1000.	12.8E6	26	8-6-(9)	70/ 5	
HAMAOKA-1	BWR 5	12.0	70. C	2300.	24. E6		8-50	70/ 5	
FUKUSIMA-5	BWR 9	8.8	65.6/43.3C			26	8-6-(9)	71/ 2	
FUKUSIMA-4	BWR 10	8.8	65.6/43.3C			26.	8-6-(9)	71/ 8	
FUKUSIMA-6	BWR 11	8.8	65.6/43.4C			26	8-6-(10)	72/ 1	
TOOKAI-2	BWR 12	8.8	65.6/43.4C			27	8-6-(10)	72/ 1	

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REACTOR AUX.COOL SYSTEM DESIGN-P DESIGN-T DESIGN-F 768000

PLANT NAME	DESIGN-P KG/SQCMG	DESIGN-T DEG C	DESIGN-F T/H	HEAT LOAD KCAL/H	SEA-W.TEMP DEG C
HAMAOKA-2	BWR 13	12.0	70. C	5310.	45. E6

MAIN COMPONENTS OF CCS PWR 768100

SUMMARY

*THIS SYSTEM IS USED AS INTERMEDIATE HEAT-TRANSFER(COOLING) MEDIA
HEAT IS REMOVED FROM AUXILIARY-COMPONENTS TO SEA-WATER
THROUGH THIS SYSTEM.
*AND THIS SYSTEM IS MADE UP OF CLOSED CIRCUIT WHICH CONSIST
(1)PUMP, (2)COOLER, (3)WATER-TANK, (4)REACTOR-AUX.-COMPONENTS
WHICH ARE COOLED BY THIS SYSTEM, AND (5)PIPING.

*MAIN CCS-COMPONENTS ARE AS FOLLOWS----

(1) HEAT EXCHANGER FOR CCS	768220
(2) WATER PUMP FOR CCS	768420
(3) SEA WATER PUMP FOR CCS	768620
(4) SURGE TANK FOR CCS	
(5) HEAT EXCHANGER FOR SPENT FUEL PIT	768720
(6) PUMP FOR SPENT FUEL PIT	768760
(7) DEMINERALIZER FOR SPENT FUEL PIT	768780

*COMPONENTS WHICH ARE COOLED BY CCS, ARE AS FOLLOWS----

(A) HEAT-EXCHANGER FOR RHRS	76462
(B) NON-REG.H.EXCH FOR CVCS	76228
(C) SAMPLE COOLER	76562
(D) PIT COOLER	76872
(E) SHAFT SEAL COOLER	76232
(F) YUZYOO CHUUSHUTU COOLER	76230
(G) PRIMARY COOLING PUMP	75740
(H) CONTAINER SPRAY HEAT EXCHANGER	82545 ,47
(I) CONTAINER SPRAY PUMP	82541 ,
(J) AUX. MOTOR DRIVE FEED WATER PUMP	77734
(K) AIR-CON FOR REACTOR CONTAINER	

PLANT NAME

MIHAMA-1	PWR 21	FROM(A) TO(G)	8-67	66/11
TAKAHAMA-2	PWR 23	FROM(A) TO(G) ETC	8-61	70/ 5
GENKAI-1	PWR 24	FROM(A) TO(J)	8-71	70/ 5
DOI -1,2	PWR 26	FROM(A) TO(G) ETC	8-62	71/ 1
MIHAMA-3	PWR 27	FROM(A) TO(G) ETC	8-60	71/ 7
IKATA	PWR 28	FROM(A) TO(X) ETC	8-70	72/11

REACTOR AUX.COOL SYSTEM H.EXCH. TYPE AND NUMBER 768220

PLANT PERFORMANCE DATA

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REACTOR AUX.COOL SYSTEM H.EXCH. TYPE AND NUMBER 768220

(1)TYPE TP1=YOKO-OKI HYODOMEN REIKYAKU
TP2=YOKO-OKI STRAIGHT TUBE
TP3= STRAIGHT TUBE
TP4=SHELL AND TUBE

(8)MATERIAL

TUBE MATERIAL	T1=AL-BRASS	S1=CARBON STEEL			
(1) TYPE	(2) NO.	(3) CAP.	(4) (DESIGN PRES.)	(5) (DESIGN TEMP.)	(6) (MAT.)
			(TUBE) (SHELL)	(TUBE) (SHELL)	(SHELL)
			KCAL/H	--KG/SQCMG--	----DEG-C----

PLANT NAME

JPDR-2	BWR 2	TP1 1				KON-6 P14	70/11
ONAGAWA	BWR 4	TP2 2	12.8 E6/1		T1,S1	8-6-(9)	70/ 5
HAMAOKA-1	BWR 5	TP2 2	12. E6*2		T1,S1	8-50	70/ 5
FUKUSIMA-5	BWR 9	TP2 3			T1,S1	8-6-(9)	71/ 2
FUKUSIMA-4	BWR 10	TP2 3			T1,S1	8-6-(9)	71/ 8
FUKUSIMA-6	BWR 11	TP2 3			T1,S1	8-6-(10)	72/ 1
DOUKAI-2	BWR 12	TP2 3			T1,S1	8-6-(10)	72/ 1
HAMAOKA-2	BWR 13	TP2 6	7.5 E6*6		T1,S1	8-42	72/ 9
MIHAMA-1	PWR 21	TP4 2	3.5 E6/1	93.	93.	8-67	66/11
TAKAHAMA-2	PWR 23	TP4 3	7. E6/1			8-61	70/ 5
GENKAI-1	PWR 24	TP3 3		90.	90.	8-72	70/11
DOI -1,2	PWR 26	TP4 3	11. E6/1			8-62	71/ 1
MIHAMA-3	PWR 27	TP4 3	8.6 E6/1			8-61	71/ 8
IKATA	PWR 28	TP3 3	10.5 E6/1	95.	95.	8-70	72/11

REACTOR AUX.COOL SYSTEM W-PUMP TYPE AND NUMBER 768420

(1)TYPE TP1=YOKO-OKI RYOO-SUIKOMI TANDAN UZUMAKI
TP2=YOKO-GATA RYOO-SUIKOMI ENSHIN SIKI
TP3=YOKO-GATA UZUMAKI
TP4=UZUMAKI
TP5=YOKO-OKI ENSHIN SIKI

(2)NUMBER (SPARE NO.)

(1) TYPE	(2) NO.	(3) CAP.	(4) HEAD
			M

PLANT NAME

JPDR-2	BWR 2	TP1 1+(1)	386	30.4	(SPARE NO.)	KON-6 P14	70/11
ONAGAWA	BWR 4	TP2 2+(1)	5U0T/H	46		8-6-(10)	70/ 5
HAMAOKA-1	BWR 5	TP3 2*2	720T/H	45		8-50	70/ 5
FUKUSIMA-5	BWR 9	TP3 3		52		8-6-(9)	71/ 2
FUKUSIMA-4	BWR 10	TP3 3		52		8-6-(9)	71/ 8
FUKUSIMA-6	BWR 11	TP3 3		52.		8-6-(10)	72/ 1
DOUKAI-2	BWR 12	TP3 3		52		8-6-(11)	72/ 1
MIHAMA-1	PWR 21	TP4 3	340	45.7		8-67	66/11
TAKAHAMA-2	PWR 23	TP4 3	690	60		8-61	70/ 5
GENKAI-1	PWR 24	TP5 3(RD)	650	48.8		8-72	70/ 5
GENKAI-1	PWR 24	TP5 4(R1)	650	48.8	(REVISE-1)		70/11

REACTOR	AUX.COOL SYSTEM	W-PUMP TYPE AND NUMBER		768420			
		(1)TYPE		TP1=YOKO-OKI RYOO-SUIKOMI TANDAN UZUMAKI TP2=YOKO-GATA RYOO-SUIKOMI ENSHIN SIKI TP3=YOKO-GATA UZUMAKI TP4=UZUMAKI TP5=YOKO-OKI ENSHIN SIKI			
		(2)NUMBER (SPARE NO.)		(1) (2) (3) (4)			
		TYPE NO.		CAP. HEAD			
PLANT NAME				CUBM/H		M	
DDI -1,2	PWR 26	TP4 5	1045	60	(COMMON 1,2)	8-63	71/ 1
MIHAMA-3	PWR 27	TP4 4	1100	60		8-91	71/ 8
IKATA	PWR 26	TP5 4	450	60		8-71	72/11
FUGEN	4TR 51	TP3 2	1400T/H	80			/

REACTOR	AUX.COOL SYSTEM	S.W-PUMP TYPE		NUMBER		768620	
		(1)TYPE		TP1=YOKO-OKI TADAN UZUMAKI TP2=TATE-GATA TURBINE-TYPE TP3=TATE-GATA UZUMAKI TP4=TATE-OKI SYARYUU TP5=TATE-OKI ENSHIN			
		(1) (2) (3) (4)					
		TYPE NO.		CAP. HEAD			
PLANT NAME				CUBM/H		(M)	
JPDR-2	BWR 2	TP1 1+(1)	456			KDN-6 P15	70/11
ONAGAWA	BWR 4	TP2 1+(1)	46			8-6-(10)	70/ 5
HAMAOKA-1	BWR 5	TP3 2*2				8-50	70/ 5
FUKUSIMA-5	BWR 9	TP3 3	55			8-6-(9)	71/ 2
FUKUSIMA-4	BWR 10	TP3 3	55			8-6-(9)	71/ 8
FUKUSIMA-6	BWR 11	TP3 3	55			8-6-(10)	72/ 1
TOKAI-2	BWR 12	TP3 3	55			8-6-(11)	72/ 1
HAMAOKA-2	BWR 13	TP3 2*2				8-43	72/ 9

CCS	SPENT FUEL	PIT	H.EXCH.		768720			
		(1)TYPE		TP1=SHELL AND TUBE TP2=SHELL AND U-TUBE				
		(1) (2) (3) (4) (5) (6) (7)						
		TYPE NO.		CAP. (DESIGN PRES.) (DESIGN TEMP.)		(TUBE) (SHELL) (TUBE) (SHELL)		
PLANT NAME				KCAL/H --KG/SQCMG--		---DEG-C---		
MIHAMA-1	PWR 21	TP1 1	0.95E6		93.	93.	8-68	66/11
TAKAHAMA-2	PWR 23	TP1 1	2.2 E6				8-61	70/ 5
GENKAI-1	PWR 24	TP1 1	1.55E6		90.	90.	7-72	70/ 5
DDI -1,2	PWR 26	TP1 2	2.3 E6/1				8-63	71/ 1
MIHAMA-3	PWR 27	TP1 1	2.5 E6				8-61	71/ 8
IKATA	PWR 28	TP2 1	1.7 E6		95.	95.	8-71	72/11

CCS	SPENT FUEL	PIT	PUMP TYPE		768760			
		(1)TYPE		TP1=YOKO-OKI-ENSHIN GATA TP2=UZUMAKI				
		(1) (2) (3)						
		TYPE NO.		CAP.				
PLANT NAME				CUBM/H				
MIHAMA-1	PWR 21	TP2 1	114			8-68	66/11	
GENKAI-1	PWR 24	TP1 1	175			8-72	70/ 5	
IKATA	PWR 28	TP1 1	220			8-71	72/11	

CCS	SPENT FUEL	PIT	DESINE.		768780			
		(1)TYPE		TP1=TATE-ENTOO-FLUSH GATA TP2=RESIN FLUSH KANOO SIKI				
		(3)DESIGN FLOW RATE		CUBM/H				
		(1) (2) (3)						
PLANT NAME				CUBM/H				
MIHAMA-1	PWR 21	TP2 1	20			8-68	66/11	
GENKAI-1	PWR 24	TP1 1	15.9			8-73	70/ 5	
IKATA	PWR 28	TP1 1	20			8-71	72/11	

SAMPLE	SAMPLING POINT	PWR	769100					
		(1)=FROM PRIMARY COOLANT LOOP						
		(2)=FROM PRESSURIZER						
		(3)=FROM VOLUME-CONTROL-TANK (CVCS)						
		(4)=FROM ION-EXCHANGER(FOR PRIMARY-COOLANT),FROM BOTH INLET AND OUTLET						
		(5)=FROM RHRS						
		(6)=FROM ION-EXCHANGER(CHUUSHUTSU-KEI),FROM BOTH INLET AND OUTLET						
PLANT NAME								
TAKAHAMA-2	PWR 23	FROM(1) TO(5)				8-62	70/ 5	
GENKAI-1	PWR 24	FROM(1) TO(5)				8-70	70/ 5	
DDI -1,2	PWR 26	FROM(1) TO(5)				8-63	71/ 1	
MIHAMA-3	PWR 27	FROM(1) TO(5)				8-62	71/ 7	
IKATA	PWR 28	FROM(1) TO(6) EXCEPT(5)				8-71	72/11	

MAIN	TURBINE TYPE	772220			
		(1)TYPE		TC456 =KUSIGATA 4-SHASITU 6-BUNNYUU HAIKI SAINETU SAISEI TC354 =KUSIGATA 3-SHASITU 4-BUNNYUU HAIKI SAINETU SAISEI	
PLANT NAME					
JPDR-1	BWR 1	TYPE=TANKITOU YOKO-OKI SHGODDD SIKI	CHOKKETSU FUKUSUI-T.		/
JPDR-2	BWR 2	TYPE= SAME AS JPDR-1			KDN.6-P31 70/11
ISURUGA	BWR 3	TYPE=KUSIGATA			/
ONAGAWA	BWR 4	TYPE=KUSIGATA 4-RYUU HAIKI SIKI	BLADE=35 INCH		8-7-(2) 70/ 5
HAMAOKA-1	BWR 5	TYPE=KUSIGATA 4-RYUU HAIKI FUKUSUI SIKI			8-53 70/ 5
FUKUSIMA-1	BWR 6	TYPE=KUSIGATA	BLADE=35 INCH		/
FUKUSIMA-2,3	BWR 7	TYPE=KUSIGATA	BLADE=35 INCH		/

MAIN TURBINE TYPE

772220

PLANT NAME	BWR	TYPE	(1)TYPE			
			TC456	=KUSIGATA 4-SHASITU 6-BUNRYUU HAIKI SAINETU SAISEI		
SHIWANE	8	TYPE=KUSIGATA	TC354	=KUSIGATA 3-SHASITU 4-BUNRYUU HAIKI SAINETU SAISEI		
FUKUSIMA-5	9	TYPE=KUSIGATA 6-RYUU HAIKI SIKI			8-7-(2)	71/ 2
FUKUSIMA-4	10	TYPE=KUSIGATA 6-RYUU HAIKI SIKI			8-7-(2)	71/ 8
FUKUSIMA-6	11	TYPE=KUSIGATA 6RYUU HAIKI SIKI			8-7-(2)	72/ 1
TOOKAI-2	12	TYPE=KUSIGATA 6RYUU HAIKI SIKI			8-7-(2)	72/ 1
HAMAOKA-2	13	TYPE=KUSIGATA 6-RYUU HAIKI FUKUSUI SIKI			8-46	72/ 9
MIHAMA-1	21	TYPE=KUSIGATA 2-SHASITU		SAINETU SAISEI	BK80-2 P11	71/ 8
MIHAMA-2	22	TYPE=KUSIGATA 3-SHASITU		SAINETU SAISEI	BK80-2 P11	71/ 8
TAKAHAMA-2	23	TC456			8-67	70/ 5
GENKAI-1	24	TC354			8-80	70/ 5
TAKAHAMA-1	25	TYPE=KUSIGATA 4-SHASITU		SAINETU SAISEI	BK80-2 P11	71/ 8
OOI -1,2	26	TC456			8-70	71/ 1
MIHAMA-3	27	TC456			8-67	71/ 8
IKATA	28	TC354			8-80	72/11
YANKEE	69	WESTINGHOUSE TANDEM COMPOUND, DOUBLE FLOW TURBINE			DNR V4 P38	61/
SAXTON	70	SINGLE-CASING WESTINGHOUSE TURBINE			DNR V4 P52	61/
FUGEN	81	TYPE=KUSIGATA SAISEI FUKUSUI SIKI			105-8-9-(2)	73/11

MAIN TURBINE NUMBER CAPASITY SPEED

772240

PLANT NAME	BWR	NUMBER	CAP. KW	SPEED RPM	PRES. TEMP. C	MET. PC	SFR T/H	CV MMHG		
JPCR-1	1	1	12500	3000	60.81	276	0.5		722	
JPCR-2	2	1	12500	3000	60.81	276			722	KON-6 P31
TSURUGA	3	TC2F43	357025	1800	66.8	282.4	0.28	1920	722	80-3-3 P26
ONAGAWA	4	TC 35	524000	1500	66.8	282.4	0.4	2910	722	8-7-(2)
HAMAOKA-1	5	TC	540000	1800	66.8	282	0.4	2900	722	8-53
FUKUSIMA-1	6	TC4F	461567	1500	66.8	282	0.28	2460	722	R-9
FUKUSIMA-2,3	7	35	784000	1500	66.8	282	0.4	4430	722	
SHIWANE	8	TC4F	465000	1800	66.8	282	0.4	2450	722	
FUKUSIMA-5	9	1	784000	1500	66.8	282	0.4	4430	722	8-7-(2)
FUKUSIMA-4	10	1	784000	1500	66.8	282	0.4	4430	722	8-7-(2)
FUKUSIMA-6	11	1	1100000	1500	66.8	282	0.3	6420	722	8-7-(2)

MAIN TURBINE NUMBER CAPASITY SPEED

772240

PLANT NAME	BWR	NUMBER	CAP. KW	SPEED RPM	PRES. TEMP. C	MET. PC	SFR T/H	CV MMHG		
TOOKAI-2	12	1	1100000	1500	66.8	282	0.3	6420	722	8-7-(2)
HAMAOKA-2	13	1	840000	1800	66.8	282	0.4	4740	722	8-46
MIHAMA-1	21	1	340790	1800	54.5	272.5			722	BK80-2 P11
MIHAMA-2	22	1	500000	1800	54.5	272.5			722	BK80-2 P11
TAKAHAMA-2	23	TC4F	826000	1800	52	266			722	8-67
GENKAI-1	24	TC	559260	1800	51.7	266			722	8-80
TAKAHAMA-1	25	1	826000	1800	51.5	265.8			722	BK80-2 P11
OOI -1,2	26	1	1175908	1800	56.	271			722	8-70
MIHAMA-3	27	1	826000	1800	52	266			722	8-67
IKATA	28	1	566000	1800	55	270			722	8-80
VERMONT YANKEE	52	1	537000		66.8		2913	703		A-2
MILLSTON	54	TC4F43	650200	1800	66.8	283	3057	722		R-9
DRESDEN-2	56	TC6F38	752000	1800	66.8	283	3910	722		R-9
OYSTER CREEK	57	TC6FRH38	540000	1800	66.8	283	2660	734.6		R-9
OYSTER CREEK	57	POWER-UP					3450			DNR V4 P38
DUANE ARNOLD	58	1			66.8		3094	722		A-2 P4
YANKEE	69	1	145000	1800						DNR V4 P38
SAXTON	70	1	10000	1800						DNR V4 P52
TURKEY POINT-3,4	72	1	726317	1800	51.38	265.6				BK80-4 P7
H.B.ROBINSON-2	73	1	769548	1800	51.38	265.6				BK80-4 P7
SURRY-1,-2	74	1	855408	1800	51.59	265.8				BK80-4 P7
BEAVER VALLEY	75	1	923000	1800	51.73	266.0				BK80-4 P7
NORTH ANNA-12	76	1	927070	1800	53.3	266.7				BK80-4 P8
JOSEPH W.FARLEY	77	1	898000	1800	53.51	269.3				BK80-4 P8
FUGEN	81	1	200000	3600	63.5	279	0.5	910	722	105-8-9-(2)

MAIN TURBINE MIST SEPARATO R TYPE NUMBER

772320

PLANT NAME	BWR	TYPE	NUMBER	CAPACITY	
FUKUSIMA-1	6	DIMPLE PLATE	ND-4	565. T/H	MEMO P177 70/ 3

MAIN TURBINE MIST SEPARATO R

772330

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MAIN	TURBINE	MIST SEPARATO R	772330	-----STEAM CONDITION-----			MOISTURE		
				OPERABLE MAX/ACTUAL IN/ACTUAL OUT	TEMPERATURE(DEG C)	IN / OUT	CONTENT		
	PLANT NAME			PRESSURE(KG/SQCMG)			(IN PERCENT)		
				MAX. / IN / OUT	MAX. / IN / OUT		IN / OUT		
	FUKUSIMA-1	BWR 6		17.6 / 12.2 / 11.6	204. / 187.8 / 185.5		13.1/ 2.1	MEMO P177 70/ 3	
	FUKUSIMA-1	BWR 6					(AT 461567.KM)	MEMO P177 70/ 3	
MAIN	TURBINE	MIST SEPARATO R	SIZE	772340					
					PLANT NAME	ID	HEIGHT	THICKNESS (MM)	
	FUKUSIMA-1	BWR 6			2896. / 6182.4 / 22.2			MEMO P178 70/ 3	
MAIN	TURBINE	MIST SEPARATO R	MATERIAL	772350	-----BODY-----				
					PLANT NAME	---BAFFLE---	---VANE---		
	FUKUSIMA-1	BWR 6			SA515-70-FHX	ASTM TP304 SS	ASTM TP430 SS	MEMO P178 70/ 3	
MAIN	COND.	TYPE	NUMBER	773220	(1)TYPE				
					PLANT NAME	(1)	(2)	NO.	
	JPCR-1	BWR 1			HYDOMEN SESSYOKU TANRYUU HAN-KUBUN SIKI	YUKO-OKI	NO=1	/	
	JPCR-2	BWR 2			HYDOMEN SESSYOKU TANRYUU HAN-KUBUN SIKI	YUKO-OKI	NO=1	KDN.6-P32 70/11	
	DNAGAWA	BWR 4			TP2 1			8-7-(2) 70/ 5	
	HAMAOKA-1	BWR 5			TP4 1			8-54 70/ 5	
	FUKUSIMA-1	BWR 6			TP2 1			70/ 5	
	FUKUSIMA-2+3	BWR 7			TP3 1			70/ 5	
	SHIWANE	BWR 8			HYDOMEN SESSYOKU TANRYUU FUKUDDO 4-KUBUN SIKI		NO=1	70/ 5	
	FUKUSIMA-5	BWR 9			TP3 1			8-7-(3) 71/ 2	
	FUKUSIMA-4	BWR 10			TP3 1			8-7-(3) 71/ 8	
	FUKUSIMA-6	BWR 11			TP3 1			8-7-(2) 72/ 1	
	TODAKAI-2	BWR 12			TP3 1			8-7-(2) 72/ 1	
	HAMAOKA-2	BWR 13			TP6 1			8-48 72/ 9	
	MIHAMA-1	PWR 21			TP2 1			8-73 66/11	
	TAKAHAMA-2	PWR 23			RF1 3			8-67 70/ 5	
	GENKAI-1	PWR 24			RADIAL FLOW HYDOMEN REIKYAKU 1-SETURYUU HANKUBUN KOORYUU			8-80 70/ 5	
	GENKAI-1	PWR 24					NO=2	8-81 70/ 5	
	OOI -1,2	PWR 26			RF1 3			8-70 71/ 1	

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MAIN	COND.	TYPE	NUMBER	773220	(1)TYPE						
					PLANT NAME	(1)	(2)	NO.			
	MIHAMA-3	PWR 27			RF1 3			NO=1	8-67 71/ 8		
	FUGEN	ATR 81			SOOSIGATA JYUOKI FUKURYU.HAN-KUBUN SIKI				105-8-9-(2) 73/11		
MAIN	COND.	H.TRANS	AREA AND EXHAUST FLOW	773240	(1)HEAT TRANSFER AREA						
					PLANT NAME	(1)	(2)	(3)	(4)	(5)	(6)
	JPCR-2	BWR 2								20	/
	DNAGAWA	BWR 4			1764	722	81000	15	12		8-7-(2) 70/ 5
	HAMAOKA-1	BWR 5			1800	722	120000	21			8-54 70/ 5
	FUKUSIMA-1	BWR 6			1530	722	85140	19			70/6/20 70/ 5
	FUKUSIMA-2+3	BWR 7			2550	722	151000	19			70/6/20 70/ 5
	SHIWANE	BWR 8			1500	722	96000	20			70/6/20 70/ 5
	FUKUSIMA-5	BWR 9			2550	722	150600	19			8-7-(3) 71/ 2
	FUKUSIMA-4	BWR 10			2500	722	153500	19			8-7-(3) 71/ 8
	FUKUSIMA-6	BWR 11			3480	722	202000	19			8-7-(2) 72/ 1
	TODAKAI-2	BWR 12			3480	722	202000	19			8-7-(3) 72/ 1
	HAMAOKA-2	BWR 13			2600	722	174000	21			8-47 72/ 9
	TAKAHAMA-2	PWR 23			74160/3		182000 /3	22			8-68 70/ 5
	GENKAI-1	PWR 24			52500/2		128000 /2	22			8-81 70/ 5
	OOI -1,2	PWR 26			105600/3		257700 /3	22			8-71 71/ 1
	MIHAMA-3	PWR 27			74160/3		182000 /3	22			8-68 71/ 8
	IKATA	PWR 28			45000/2						72/11
	FUGEN	ATR 81			565	722	35000	21			/
MAIN	COND.	TUBE	MATERIAL	773280	---MATERIAL---						
					PLANT NAME	NUMBER	OD / T(MM)	JOINT METHOD			
	DNAGAWA	BWR 4			BSTF					8-7-(2) 70/ 5	
	HAMAOKA-1	BWR 5			AL-BRASS					8-54 70/ 5	
	FUKUSIMA-1	BWR 6			AL-BRASS	NO.=29640.	25.4/1.245	EXPAND FLARE		MEMO P195 70/ 3	

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Table with columns: MAIN, COND., TUBE, MATERIAL, NUMBER, OD / T(MM), JOINT METHOD. Rows include FUKUSIMA-1, FUKUSIMA-5, FUKUSIMA-4, FUKUSIMA-6, TODKAI-2, HAMADKA-2.

Table with columns: DUMP, COND., TYPE, NUMBER. Rows include JPDR-2, JPDR-2.

Table with columns: COND., PUMP, TYPE, NO. Includes detailed notes on condenser pumps and capacity. Rows include JPDR-1, JPDR-2, DNAGAWA, HAMADKA-1, FUKUSIMA-5, FUKUSIMA-4, FUKUSIMA-6, TODKAI-2, HAMADKA-2, VERMONT YANKEE, DUANE ARNOLD.

Table with columns: COND., DEMINE., TYPE. Row includes 775220.

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Table with columns: COND., DEMINE., TYPE. Includes detailed notes on condenser pumps and capacity. Rows include JPDR-2, DNAGAWA, HAMADKA-1, FUKUSIMA-1, FUKUSIMA-5, FUKUSIMA-4, FUKUSIMA-6, TODKAI-2, HAMADKA-2.

Table with columns: COND., DEMINE., EXIT. Includes detailed notes on water quality and concentration. Rows include FUKUSIMA-5, FUKUSIMA-4, FUKUSIMA-6, TODKAI-2, HAMADKA-2.

Table with columns: COND., DEMINE., INLET, EXIT. Includes detailed notes on water quality and concentration. Rows include ONAGAWA, HAMADKA-1, FUKUSIMA-1, FUKUSIMA-5, FUKUSIMA-4, FUKUSIMA-6, TODKAI-2, HAMADKA-2.

Table with columns: COND., DEMINE., INLET, EXIT. Includes detailed notes on water quality and concentration. Rows include FUKUSIMA-1, FUKUSIMA-1.

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COND. DEMINE. INLET EXIT WATER QUANTITY 775270
 ---CU----- ---FE----- ---NI----- UNIT=PPR OXYGEN
 IN /OUT IN /OUT IN /OUT IN /OUT
 PLANT NAME
 FUKUSIMA-1 BWR 6 OXYGEN CONTENT IS APPLIED (GE 1/4 LOAD CONDITION) MEMO P202 70/ 3

COND. DEMINE. ALLOWABL E SEA WATER LEAK 775260
 (1)ALLOWABLE LIMIT OF SEA-WATER-LEAK RATE WHICH LEAKS THROUGH MAIN
 CONDENSER FROM POINT VIEW OF CAPACITY OF ION EXCHANGER
 UNIT = M³/H OR LITRE/MINUT
 (1)
 PLANT NAME M³/H L/M
 DNAGAWA BWR 4 0.2 8-7-(3) 70/ 5
 HAMAOKA-1 BWR 5 0.1 8-55 70/ 5
 FUKUSIMA-1 BWR 6 0.11 MEMO P203 70/ 3
 FUKUSIMA-5 BWR 9 (0.228) 3.8 8-7-(3) 71/ 2
 FUKUSIMA-4 BWR 10 (0.228) 3.8 8-7-(3) 71/ 8
 FUKUSIMA-6 BWR 11 (0.228) 3.8 8-7-(3) 72/ 1
 TOKKAI-2 BWR 12 (0.228) 3.8 8-7-(3) 72/ 1
 HAMAOKA-2 BWR 13 0.1 8-47 72/ 9

FEED.W. HEATER TYPE AND NUMBER 776220
 (1)TYPE TP1=TATE-OKI U-TUBE HYODMEN KANETU
 TP2=YOKOGATA U-TUBE
 TP3=SHELL AND TUBE
 (2)DAN*KEIRETU (LOW PRESSURE)
 (3)DAN*KEIRETU (HIGH PRESSURE)
 (4)CAPACITY (LOW PRESSURE) TON/H
 (5)CAPACITY (HIGH PRESSURE) TON/H
 (6)FEED WATER TEMPERATURE C
 (7)MATERIAL
 SHELL S1=CARBON STEEL
 TUBE T1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7)
 TYPE LO HI LO HI F.W.T MAT.
 NO. NO. T/H* T/H* C
 PLANT NAME
 JPD9-2 BWR 2 TP1 184 R-9 66/ 8
 TSURUGA BWR 3 188.8 8-7-(4) 70/ 5
 DNAGAWA BWR 4 TP2 302K 202K 1450*2 188.8 S1-T1 8-55 70/ 5
 HAMAOKA-1 BWR 5 TP2 302K 202K 1500*2 177. R-9 66/ 8
 FUKUSIMA-1 BWR 6
 FUKUSIMA-5 BWR 9 TP2 503K 1550*3 195.8 S1-T1 8-7-(4) 71/ 2
 FUKUSIMA-4 BWR 10 TP2 503K 1550*3 195.8 S1-T1 8-7-(4) 71/ 8
 FUKUSIMA-6 BWR 11 TP2 603K 2240*3 215.6 S1-T1 8-7-(4) 72/ 1
 TOKKAI-2 BWR 12 TP2 603K 2240*3 215.6 S1-T1 8-7-(4) 72/ 1
 HAMAOKA-2 BWR 13 TP2 403K 202K 1600*3 2400*2 215.6 S1-T1 8-48 72/ 9
 TAKAHAMA-2 PWR 23 TP3 403K 102K 221. 8-68 70/ 5

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FEED.W. HEATER TYPE AND NUMBER 776220
 (1)TYPE TP1=TATE-OKI U-TUBE HYODMEN KANETU
 TP2=YOKOGATA U-TUBE
 TP3=SHELL AND TUBE
 (2)DAN*KEIRETU (LOW PRESSURE)
 (3)DAN*KEIRETU (HIGH PRESSURE)
 (4)CAPACITY (LOW PRESSURE) TON/H
 (5)CAPACITY (HIGH PRESSURE) TON/H
 (6)FEED WATER TEMPERATURE C
 (7)MATERIAL
 SHELL S1=CARBON STEEL
 TUBE T1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7)
 TYPE LO HI LO HI F.W.T MAT.
 NO. NO. T/H* T/H* C
 PLANT NAME
 GENKAI-1 PWR 24 TP3 302K 102K 221.1 8-81 70/ 5
 OOI -1*2 PWR 26 TP3 503K 103K 222. 8-71 71/ 1
 MIHAMA-3 PWR 27 TP3 403K 102K 220. 8-68 71/ 8
 IKATA PWR 28 TP3 302K 102K 220. 8-81 72/11
 MILLSTON BWR 54 177. R-9 66/ 8
 DRESDEN-2 BWR 56 166. R-9 66/ 8
 OYSTER CREEK BWR 57 149. R-9 66/ 8
 FUGEN ATR 81 TP2 S1-T1 105-8-9-(4) 73/11

DEAERATO R TYPE NUMBER STORAGE TANK CAPACITY 776260
 ---TYPE--- NO. STORAGE TANK --OXYGEN CONTENT--
 CAPACITY
 PLANT NAME
 TAKAHAMA-2 PWR 23 SPRAY TRAY 1 350. CUBM LT 0.005 CC/LITRE 8-68 70/ 5
 GENKAI-1 PWR 24 SPRAY TRAY 1 300. CUBM LT 0.005 CC/LITRE 8-81 70/ 5
 MIHAMA-3 PWR 27 SPRAY TRAY 1 350. CUBM LT 0.005 CC/LITRE 8-68 71/ 8

FEED.W. PUMP TYPE AND NUMBER 777260

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FEED.W. P.IMP TYPE AND NUMBER

777260

(1)(7)TYPE TP1=YOKO-DKI TADAN UZUMAKI
 TP2=YOKOGATA UZUMAKI
 TP3=UZUMAKI
 TP4=DOUBLE HOLUTE ENSHIN SIKI
 TP5=YOKOGATA 1-DAN TURBINE PUMP
 (2)(8)NUMBER A= 1*(1 YOB1)
 B= 2*(1 YOB1)
 (3)(9)CAPACITY TON/H/1
 (4)(10)HEAD M
 (5)(11)DRIVER POWER HP OR KW
 (6)(12)RPM

FROM (1) TO (6).....TURBINE DRIVE
 FROM (7) TO (12).....MOTOR DRIVE
 ----- TURBINE DRIVE ----- MOTOR DRIVE -----
 NOTE1TURBINE SYSTEM
 NOTE2DUMP CONDENSER SYSTEM

PLANT NAME		NO.	HEAD			RPM	HEAD			RPM					
			(1)	(2)	(3)		(4)	(5)	(6)				(7)	(8)	(9)	(10)	(11)	(12)
JPR-2	BWR	2	TP1	A	85.3	808	(NOTE1)	TP1	A	89.0	810	(NOTE2)	KON-6 P6	70/11	
ONAGAWA	BWR	4						TP2	B	1670	950	5350KW	8-7-(4)	70/5	
HAMAOKA-1	BWR	5						TP2	B	1650			8-56	70/5	
FUKUSIMA-5	BWR	9	TP3	2	2450	762	8250HP	5100	TP3(2)	1225	762	4560HP	8-7-(4)	71/2	
FUKUSIMA-4	BWR	10	TP3	2		762	8200HP	5600	TP3(2)	1225	762	4300HP	8-7-(4)	71/8	
FUKUSIMA-6	BWR	11	TP3	2	3720	762	11800HP	5100	TP3(2)	1860	762	6700HP	8-7-(4)	72/1	
TOOKAI-2	BWR	12	TP3	2	3530	762	11800HP	5100	TP3(2)	1678	812	6700HP	8-7-(4)	72/1	
HAMAOKA-2	BWR	13	TP5	2	2600		6600KW	5600	TP2(2)	1300			8-48	72/9	
TAKAHAMA-2	PWR	23							TP4	3	2700	650	6200KW	8-68	70/5
GENKAI-1	PWR	24							TP4	3	1900	610	4400KW	8-81	70/5
DDI -1,2	PWR	26	TP4	2	4250	780	10000KW		TP4(1)	2130	930	6400KW	8-71	71/1	
MIHAMA-3	PWR	27							TP4	3	2800	770	3850KW	8-68	71/8
IKATA	PWR	28							TP4	3	1800	670	4250KW	8-81	72/11
VERMONT YANKEE	BWR	52											A-2 P4	70/7	
DUANE ARNOLD	BWR	58											A-2 P4	70/7	

AUX. FEED.W. PUMP

777320

(1)(11)TYPE TP1=YOKO-DKI TADAN TURBINE SIKI
 TP2=YOKO-DKI TADAN ENSHIN SIKI
 (3)(13)CAPACITY TURBINE DRIVEN
 MOTOR DRIVEN
 (1) (2) (3) (11) (12) (13)
 TYPE NO. CAP. TYPE NO. CAP.
 T/H T/H/1

PLANT NAME		NO.	TYPE	CAP. T/H	TYPE NO.	CAP. T/H/1				
TAKAHAMA-2	PWR	23	TP1	1	160	TP2	2	90	8-69	70/5
GENKAI-1	PWR	24	TP1	1	110	TP2	2	60	8-82	70/5
DDI -1,2	PWR	26	TP1	1	180	TP2	2	90	8-72	71/1
MIHAMA-3	PWR	27	TP1	1	130	TP2	2	65	8-69	71/8
IKATA	PWR	28	TP1	1	110	TP2	2	60	8-83	72/11

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SEA WATER CIRC. SYSTEM FOR MAIN COND.

778220

(1)TYPE TP1=TATEGATA SYARYUU
 (2)NUMBER
 (3)FLOW RATE M3/H/NO.
 (4)HEAD M
 (1) (2) (3) (4)
 NO. FLUM RATE HEAD
 M3/H/NO. M

PLANT NAME		NO.	FLUM RATE M3/H/NO.	HEAD M						
JPR-2	BWR	2	TP1	2	2964/1	15.7 (FOR TURBINE SYSTEM)	KON.6 P32	70/11		
JPR-2	BWR	2	TP1	2	2730/1	5.5 (FOR DUMP CONDENSER SYSTEM)	KON.6 P33	70/11		
ONAGAWA	BWR	4	TP1	2	81000/2		8-7-(4)	70/5		
HAMAOKA-1	BWR	5	TP1	2	120000/		8-56	70/5		
FUKUSIMA-5	BWR	9	TP1	3	150600/3		8-7-(4)	71/2		
FUKUSIMA-4	BWR	10	TP1	3	153500/3		8-7-(4)	71/8		
FUKUSIMA-6	BWR	11	TP1	3	202000/3		8-7-(4)	72/1		
TOOKAI-2	BWR	12	TP1	3	202000/3		8-7-(5)	72/1		
HAMAOKA-2	BWR	13	TP1		180000/		8-48	72/9		
TAKAHAMA-2	PWR	23			TATE-DKI SYARYUU	NO.=4	3750.CUBM/H /1	42. M	8-70	70/5
GENKAI-1	PWR	24			TATE-DKI SYARYUU	NO.=4	2200.CUBM/H /1	40. M	8-70	70/5
DDI -1,2	PWR	26			TATE-DKI CENTRIFUGAL	NO.=8	2540.CUBM/H /1	40. M	8-73	71/1
MIHAMA-3	PWR	27			TATE-DKI SYARYUU	NO.=4	3200.CUBM/H /1	45. M	8-70	71/8
FUGEN	ATR	81	TP1	4	1800/1	50.			105-8-9-(5)	73/11

TURBINE AUX. COOL PUMP

779220

(1)TYPE TP1=YOKO GATA UZUMAKI * LOOP IS CLOSED
 (2)NUMBER ()=YOB1
 (3)USED FOR U1=TURBINE OIL COOLER
 U2=SYONAI AIR COMPRESSOR
 U3=COMPRESSOR FOR CONTROL
 U4=HYDROGEN COOLER
 OT=OTHERS

PLANT NAME		(1) TYPE	(2) NO.	(3) USED FOR		
ONAGAWA	BWR	4	TP1	2*(1)	U1,U2,OT	8-7-(4) 70/5
HAMAOKA-1	BWR	5	TP1	2*(1)		8-56 70/5
FUKUSIMA-5	BWR	9	TP1	3	U1,U3,OT	8-7-(5) 71/2
FUKUSIMA-4	BWR	10	TP1	3	U1,U3,OT	8-7-(5) 71/8
FUKUSIMA-6	BWR	11	TP1	3	U1,OT	8-7-(5) 72/1
TOOKAI-2	BWR	12	TP1	3	U1,OT	8-7-(5) 72/1
HAMAOKA-2	BWR	13	TP1	2*(1)	U1,U4,OT	8-49 72/9

TURBINE AUX. COOL H.EXCH. TYPE AND NUMBER

779240

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TURBINE AUX. COOL H.EXCH. TYPE AND NUMBER 779240

(1)TYPE TP1=YOKO GATA STRAIGHT TUBE
(2)NUMBER ()=YORI
(1) (2)
TYPE NO.

PLANT NAME

DNAGAWA	BWR	4	TP1	1+(1)	8-7-(4)	70/ 5
HAMAOKA-1	BWR	5	TP1	1+(1)	8-56	70/ 5
FUKUSIMA-5	BWR	9	TP1	3	8-7-(5)	71/ 2
FUKUSIMA-4	BWR	10	TP1	3	8-7-(5)	71/ 8
FUKUSIMA-6	BWR	11	TP1	3	8-7-(5)	72/ 1
TOKAI-2	BWR	12	TP1	3	8-7-(5)	72/ 1
HAMAOKA-2	BWR	13	TP1	2	8-49	72/ 9

KIND OF IN-CORE MONITOR CHANNEL NUMBER 781100

(1)=SRM =SOURCE RANGE MONITOR
(2)=IRM =INTERMEDIATE RANGE MONITOR
(3)=PRM =POWER RANGE MONITOR
(3-1) LPHM=LOCAL POWER RANGE MONITOR
(3-2) APHM=AVERAGE POWER RANGE MONITOR
(3-3) RBM =ROD BLOCK MONITOR
(3-4) TIP =TRAVERSING IN-CORE PROBE

PLANT NAME	NUMBER	(1) SRM	(2) IRM	(3-1) LPHM	(3-2) APHM	(3-3) RBM	(3-4) TIP		
FUKUSIMA-1	BWR	6	4	8	88	6	2	3	MEMO P#2 70/ 3

IN-CORE MONITOR NEUTRON FLUX LEVEL NV 781200

PLANT NAME	NUMBER	SRM	IRM	LPHM	APHM	RBM	TIP		
FUKUSIMA-1	BWR	6	FRDM	1. E4	1. E8	1.4E12		1.0E12	MEMO P#2 70/ 3
FUKUSIMA-1	BWR	6	TU	1. E9	1.5E13	1.4E14		1.4E14	MEMO P#2 70/ 3

NEUTRON SOURCE NUMBER 783000

DNAGAWA	BWR	4	NO.=4	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-8-(10)	70/ 5
HAMAOKA-1	BWR	5	NO.=4	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-73	70/ 5
FUKUSIMA-5	BWR	9	NO.=5	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-8-(13)	71/ 2
FUKUSIMA-4	BWR	10	NO.=5	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-8-(13)	71/ 8
FUKUSIMA-6	BWR	11	NO.=7	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-8-(14)	72/ 1
TOKAI-2	BWR	12	NO.=7	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-8-(15)	72/ 1
HAMAOKA-2	BWR	13	NO.=5	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-63	72/ 9

KIND OF REACTOR SCRAM SIGNAL LIMIT BWR 783210

PLANT PERFORMANCE DATA

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KIND OF REACTOR SCRAM SIGNAL LIMIT BWR 783210

(1)=DRY-Well PRESSURE HIGH KG/SQCMG
(2)=REACTOR PRESSURE HIGH KG/SQCMG
(3)=REACTOR WATER LEVEL LOW (PC. PC.)
(4)=NEUTRON FLUX HIGH (POWER AND MEDIUM REGION)
(5)=NEUTRON FLUX INDICATION LOW (POWER REGION MONITOR)
(6)=NEUTRON INSTRUMENT MALFUNCTION (POWER AND MEDIUM REGION)
(7)=SCRAM DUMP TANK LEVEL HIGH RATIO/NORMAL
(8)=MAIN STEAM TUBE RADIATION LEVEL HIGH MM HG
(9)=CONDENSER VACUUM LOW PC/OPENIN G
(10)=MAIN STEAM ISOLATION VALVE CLOSE
(11)=POWER OUTAGE OF MG SET FOR REACTOR-PROTECTION
(12)=EARTHQUAKE
(13)=TURBINE MAIN STEAM STOP VALVE CLOSE
(14)=TURBINE REGULATE VALVE PROMPT CLOSE
(15)=MANUAL SCRAM
(16)=MODE SWITCH (STANDSTILL)
(17)=LOSS OF AIR PRESSURE TO SCRAM VALVE

PLANT NAME

DNAGAWA	BWR	4	FROM (1) TO (17) EXCEPT (9)	8-8-(7)	70/ 5
DNAGAWA	BWR	4	1=0.14/2=74.2/3=13M FROM PV-ZERO-LEVEL/4=120PC/RATE/95PC	8-8-(7)	70/ 5
DNAGAWA	BWR	4	/FULL SCALE/5=5PC/RATE/7=CORRESPOND TO 0.09 CUBM(HEADER)	8-8-(7)	70/ 5
DNAGAWA	BWR	4	/8=6TIMES/BACK GROUND/RATED/10=90PC/13=90PC/	8-8-(7)	70/ 5
HAMAOKA-1	BWR	5	FROM (1) TO (17) EXCEPT (9)	8-64	70/ 5
HAMAOKA-1	BWR	5	1=0.14/2=74.2/3=12.85M FROM PV-ZERO-LEVEL/4=120PC/RATE/	8-64	70/ 5
HAMAOKA-1	BWR	5	7=CORRESPOND TO 0.091 CUBM/8=6TIMES/BACK GROUND/RATED/	8-64	70/ 5
HAMAOKA-1	BWR	5	10=90PC/13=90PC/14=OIL PRESSURE LOW/	8-64	70/ 5
FUKUSIMA-5	BWR	9	FROM (1) TO (16)	8-8-(6)	71/ 2
FUKUSIMA-5	BWR	9	1=0.14/2=74.2/4=120PC/RATE/95PC/FULL SCALE/7=CORRESPOND	8-8-(6)	71/ 2
FUKUSIMA-5	BWR	9	TO 0.14 CUBM/8=100TIMES/NORMAL/9=588.2 MM HG/10=90PC/	8-8-(6)	71/ 2
FUKUSIMA-4	BWR	10	FROM (1) TO (16) SAME AS FUKUSIMA-5	8-8-(6)	71/ 8
HAMAOKA-2	BWR	13	FROM(1) TO (18) EXCEPT (9)	8-56	72/ 9
HAMAOKA-2	BWR	13	1=0.14/2=74.2/3=13.38 FROM PV-ZERO-LEVEL/4=120PC OF RATE	8-56	72/ 9
HAMAOKA-2	BWR	13	0 POWER, 95PC OF FULL SCALE/7=CORRESPOND TO 0.14CUBM/8=6	8-56	72/ 9
HAMAOKA-2	BWR	13	TIMES OF BACK GROUND OF RATED POWER/10=90PC/12=ADJUSTABL	8-56	72/ 9
HAMAOKA-2	BWR	13	E/13=90PC/14=ACT IF WHEN TURBINE BYPASS VALVE DOES NOT	8-56	72/ 9
HAMAOKA-2	BWR	13	OPEN WITHIN THE SET TIME/	8-56	72/ 9

KIND OF REACTOR SCRAM SIGNAL LIMIT PWR 783210

PLANT PERFORMANCE DATA

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KIND OF REACTOR SCRAM SIGNAL LIMIT PWR 783230

- (1)=NEUTRON FLUX HIGH (NEUTRON SOURCE AND MEDIUM REGION)
- (2)=NEUTRON FLUX HIGH (POWER REGION)
- (3)=SAFETY INJECTION SYSTEM ACT (BACK UP MORE SCRAM CONDITION)
- (4)=PRIMARY COOLANT DELTA T HIGH
- (5)=REACTOR PRESSURE HIGH
- (6)=REACTOR PRESSURE LOW (TO AVOID BOILING)
- (7)=PRESSURIZER WATER LEVEL HIGH (BACK UP OF REACTOR PRESSURE HIGH)
- (8)=LOSS OF PRIMARY-COOLANT-FLOW
- (9)=TURBINE TRIP (UNDER OPERATION GT 50PC POWER)
- (10)=STEAM GENERATOR WATER LEVEL LOW
- (11)=EARTHQUAKE
- (12)=MANUAL
- (13)=STEAM GENERATOR STEAM VS FEED-WATER DELTA FLOW HIGH
- (14)=STEAM GENERATOR WATER LEVEL ABNORMALLY HIGH

PLANT NAME

MIHAMA-1	PWR	21	FROM (1) TO (12)	HK80-2 P15	71/ 8
MIHAMA-2	PWR	22	FROM (1) TO (12)	HK80-2 P15	71/ 8
TAKAHAMA-2	PWR	23	FROM (1) TO (12)	8-87	70/ 5
GENKAI-1	PWR	24	FROM (1) TO (13)	8-99	70/ 5
TAKAHAMA-1	PWR	25	FROM (1) TO (12)	HK80-2 P15	71/ 8
DDI -1,2	PWR	26	FROM (1) TO (12)	8-90	71/ 1
MIHAMA-3	PWR	27	FROM (1) TO (14) EXCEPT (13)	8-87	71/ 8
MIHAMA-3	PWR	27	FROM (1) TO (12)	8-87(REV-1)	71/11
IKATA	PWR	28	FROM (1) TO (13)	8-99	72/11

E.GENER. TYPE AND NUMBER

793220

- (1)TYPE TP1=YOKO-OKI ENTDO KAITEN KAIJI 3-SDD DDDKI
- TP2=KOTEISI DODAI EKITAI REIKYAKU 3-SDD DDDKI
- TP3=YOKO-OKI KAITEN KAIJI 3-SDD DDDKI
- TP4=YOKO-OKI KAITEN KAIJI 3-SDD DDDKI (H2 COOLING)
- TP5=WESTINGHOUSE 3-PHASE GENERATOR

(2)NUMBER

- (3)CAPACITY KVA OR KW
- (4)RIKIRITU PERCENT
- (5)SHORT CIRCUIT RATIO
- (6)VOLTAGE KV
- (7)SPEED RPM
- (8)ARMATURE COOLING SYSTEM COOLANT A=AIR, H=HYDROGEN

- (9) COOLANT PRESSURE KG/CM2G
- (10)FIELD COOLING SYSTEM COOLANT W=WATER, H=HYDROGEN

PLANT NAME

JPDR-1	BWR	1	TYPE=YOKO OKI ENTDO KAITEN KAIJI 3-SDD DDDKI	NO=1	/
JPDR-1	BWR	1	TP1 1 14706 85 13.8 3000		/
JPDR-2	BWR	2	TP1 1 14706 85 13.8 3000 A	W	KDN.6 P34 70/11
ONAGAWA	BWR	4	TP2 1 585000 90 0.58 22 1500 H 3.0 W,H		70/11
HAMADKA-1	BWR	5	TP2 1 626000 90 0.58 22 1800 H 3.0 W		8-80 70/ 5
FUKUSIMA-1	BWR	6	525000 90 0.60 18 1500 H 3.6 W		70/ 5

PLANT PERFORMANCE DATA

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E.GENER. TYPE AND NUMBER

793220

- (1)TYPE TP1=YOKO-OKI ENTDO KAITEN KAIJI 3-SDD DDDKI
- TP2=KOTEISI DODAI EKITAI REIKYAKU 3-SDD DDDKI
- TP3=YOKO-OKI KAITEN KAIJI 3-SDD DDDKI
- TP4=YOKO-OKI KAITEN KAIJI 3-SDD DDDKI (H2 COOLING)
- TP5=WESTINGHOUSE 3-PHASE GENERATOR

(2)NUMBER

- (3)CAPACITY KVA OR KW
- (4)RIKIRITU PERCENT
- (5)SHORT CIRCUIT RATIO
- (6)VOLTAGE KV
- (7)SPEED RPM
- (8)ARMATURE COOLING SYSTEM COOLANT A=AIR, H=HYDROGEN

- (9) COOLANT PRESSURE KG/CM2G
- (10)FIELD COOLING SYSTEM COOLANT W=WATER, H=HYDROGEN

PLANT NAME

FUKUSIMA-2,3	BWR	7	911000 90 0.60 17 1500 H	W	70/ 5
SHIMANE	BWR	8	520000 90 0.58 18 1800 H 3.0 W		/
FUKUSIMA-5	BWR	9	TP2 1 911000 90 0.60 17 1500 H 4.2 W		8-9-(2) 71/ 2
FUKUSIMA-4	BWR	10	TP2 1 911000 90 0.60 17 1500 H 4.2 W		8-9-(2) 71/ 8
FUKUSIMA-6	BWR	11	1300000 90 0.60 19 1500 H 3.5 W		8-9-(2) 72/ 1
TOOKAI-2	BWR	12	1300000 90 0.60 19 1500 H 3.5 W		8-9-(2) 72/ 1
HAMADKA-2	BWR	13	TP2 1 943000 90 0.58 18 1800 H 4.2 W		8-70 72/ 9
MIHAMA-1	PWR	21	TP4 1 400000 85 0.64 17 1800 H 4.2		66/11
MIHAMA-2	PWR	22	TP4 1 560000 90 17 1800		HK80-4 P8 71/ 9
TAKAHAMA-2	PWR	23	TP3 1 920000 90 0.58 22 1800 H 4.0		8-95,96 70/ 5
GENKAI-1	PWR	24	TP3 1 625000 90 0.58 19 1800 H 4.0		8-107 70/ 5
TAKAHAMA-1	PWR	25	TP2 1 920000 90 22 1800		HK80-4 P8 71/ 9
ODI -1,2	PWR	26	TP3 1 1300000 90 0.58 24 1800 H 5.0 W		8-99 71/ 1
MIHAMA-3	PWR	27	TP3 1 920000 90 0.58 22 1800 H 4.0		8-95,96 71/ 8
IKATA	PWR	28			/
YANKEE	69	TP5 1	160000 95 18 1800		DNR V4 P38 61/
SAXTON	70	TP5 1	10000KW 80 13.2 1800		DNR V4 P52 61/
TURKEY POINT-3,4	PWR	72	894042 1800		HK80-4 P7 71/ 9
H.B.ROBINSON-2	PWR	73	854090 1800		HK80-4 P7 71/ 9
SURRY-1,-2	PWR	74	941700 1800		HK80-4 P7 71/ 9
BEAVER VALLEY	PWR	75	1026000 1800		HK80-4 P7 71/ 9
NORTH ANNA-12	PWR	76	1030100 1800		HK80-4 P8 71/ 9
JOSEPH W.FARLEY	PWR	77	1097500 1800		HK80-4 P8 71/ 9
FUGEN	ATR	81	TP3 1 200000 90 0.58 16 3600 H		/

EMERGENCY TRANS MAIN STATION-UP FACILITY

793280

- MAIN TRANS START-UP TR. SYDNAI TRANS YDBI T.(EMER.)
- CAP. V-RATIO CAP. V-RATIO CAP. V-RATIO CAP. V-RATIO
- MVA KV/KV MVA KV/KV MVA KV/KV MVA KV/KV

PLANT NAME

ONAGAWA	BWR	4	570. 21.5/275 20/26 275/6.9 30 21.5/6.9 6. 66/6.9	8-9-(3)	70/ 5
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PLANT PERFORMANCE DATA

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EMERGENCY TRANS MAIN STA RT-UP FACILITY 793280

PLANT NAME	MVA	KV/KV	MVA	KV/KV	MVA	KV/KV	MVA	KV/KV	MVA	KV/KV	MVA	KV/KV	SYDNEY TRANS		YUBI T.(EMER.)	
													START-UP TH.	CAP. V-RATIO	CAP. V-RATIO	CAP. V-RATIO
HAMAOKA-1	BWR	5	500.	21.5/275	25.	275/6.9	22*2	21.5/6.9	10.	77/6.9	8-80		70/ 5			
FUKUSIMA-3	BWR	9	870.	16.6/525	30*2	66/6.9	30*2	16.6/6.9			8-9-(3)		71/ 2			
FUKUSIMA-4	BWR	10	870.	16.575/275	30*2	275/6.9	30*2	16.575/6.9			8-9-(3)		71/ 8			
FUKUSIMA-4	BWR	10									8-9-(3)		71/ 8			
FUKUSIMA-6	BWR	11									8-9-(1)		72/ 1			
GENKAI-1	BWR	12									8-70		72/ 9			
MIHAMA-3	BWR	13	900.	17.5/275	25.	275/6.9	25*2	17.5/6.9	10.	77/6.9	8-70		72/ 9			
MIHAMA-2	BWR	23	860.	22.0/275	(60+30)	275/6.9	40+20	22. /6.9	(60.	77/6.9)	8-96		70/ 5			
GENKAI-1	BWR	24	590.	19.0/220	50.	220/6.9	40	19. /6.9	15.	66/6.9	8-107		70/ 5			
DDI -1+2	BWR	26	1240.	24./500	(45*2)	500/6.9	30*2	24. /6.9	(40.	77/6.9)	8-99		71/ 1			
MIHAMA-3	BWR	26									8-99		71/ 1			
FUGEN	ATR	81	178.	16. /275	22	275/6.9	40+18	22. /6.9	30	77/6.9	8-96		71/ 8			
											105-8-11-(3)		73/11			

D.G. ENGINE

794220

(1)TYPE TP1=V-TYPE
 (2)NUMBER EXAMPLE (1COM6) COMMON WITH 6-GOD REACTOR
 (3)CAPACITY A=KW/1 OR B=PS/1
 (4)SPEED
 (5)STARTER A=COMPRESSED AIR
 (6)STARTING TIME SEC (LT=LESS THAN)
 (7)FUEL F1=HEAVY OIL, F2=LIGHT OIL
 (1) (2) (3) (4) (5) (6) (7)

PLANT NAME	BWR	NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
JPCR-2	BWR	2	1		440A	750	A			KON-6 P40	70/11
ONAGAWA	BWR	4	TP1	2	4500A	429	A	Y		8-9-(3)	70/ 5
HAMAOKA-1	BWR	5	TP1	2	5000B	400	A	LT10		8-81	70/ 5
FUKUSIMA-5	BWR	9	TP1	1+(1COM6)	6500A	429	A	30		8-9-(3)	71/ 8
FUKUSIMA-4	BWR	10	TP1	1+(1COM3)	6500A	429	A	30		8-9-(3)	71/ 8
HAMAOKA-2	BWR	13	TP1	2	7900B	400	A	LT10		8-70	72/ 9
MIHAMA-1	BWR	21		2	1850B		A		F2	8-100	/
TAKAHAMA-2	BWR	23		1+(1COM)	3500A		A			8-96	70/ 5
GENKAI-1	BWR	24		2	3000A		A		F1	8-107	70/ 5
DDI -1+2	BWR	26		2+(1COM)	4500A		A			8-99	71/ 1
MIHAMA-3	BWR	27		2	3800H		A			8-96	71/ 8

D.G. GENERATOR

NUMBER TYPE CAPACITY 794240

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D.G. GENERATOR

NUMBER TYPE CAPACITY 794240

(1)TYPE TP1=3-SDD DOKKI GENERATOR (AIR COOLED)
 TP2=3-SDD DOKKI GENERATOR
 TP3=YDKO-OKI KAITEN KAIJI 3-SDD DOKKI
 (2)NUMBER EXAMPLE (1COM6) COMMON WITH 6-GOD REACTOR
 (3)CAPACITY KVA OR KW
 (4)RIKIRITU
 (5)VOLTAGE KV
 (6)FREQUENCY HZ
 (7)SPEED RPM
 (1) (2) (3) (4) (5) (6) (7)
 NO. KVA/1 KW/1

PLANT NAME	BWR	NO.	(1)	(2)	(3)	(4)	(5)	(6)	(7)		
JPCR-2	BWR	2	TP1		500.	0.8	3.3	50	750	KON-6 P40	70/11
ONAGAWA	BWR	4	TP2	2	5625	0.8	6.9	50	429	8-9-(4)	70/ 5
HAMAOKA-1	BWR	5	TP2	2	4375	3500	0.8	6.9	400	8-81	70/ 5
FUKUSIMA-5	BWR	9	TP2	1+(1COM6)	8125		0.8	6.9	429	8-9-(3)	71/ 8
FUKUSIMA-4	BWR	10	TP2	1+(1COM3)	8125		0.8	6.9	429	8-9-(3)	71/ 8
HAMAOKA-2	BWR	13	TP2	2	8125	6500	0.8	6.9	400	8-71	72/ 9
MIHAMA-1	BWR	21	TP3	2	1550		0.8	480V	60	8-100	66/11
TAKAHAMA-2	BWR	23	TP3	2	4400		0.8	6.9	60	8-96	70/ 5
GENKAI-1	BWR	24	TP3	2	3750		0.8	6.9	60	8-108	70/ 5
DDI -1+2	BWR	26	TP3	2	5600		0.8	6.9	60	8-99	71/ 1
MIHAMA-3	BWR	27	TP3	2	4750		0.8	6.9	60	8-96	71/ 8
IKATA	BWR	28	TP3	2	4000		0.8	6.9	60	8-108	72/11

D.G.LOAD (1)

794440

PLANT NAME	BWR	NO.	CORE SPRAY PUMP	RHR PUMP	RHR S.W.-PUMP	AUX.COOL W-PUMP	AUX.COOL S.W.-PUMP		
ONAGAWA	BWR	4	720*1 KW	720*2 KW	670*2 KW			8-9-(4)	70/ 5
HAMAOKA-1	BWR	5	750*1 KW	1440 KW		280. KW	290. KW	8-81	70/ 5
FUKUSIMA-5	BWR	9	1170*1 KW	2500. KW	1800. KW			8-9-(4)	71/ 2
FUKUSIMA-4	BWR	10	1170*1 KW	2500. KW	1800. KW			8-9-(4)	71/ 8
HAMAOKA-2	BWR	13	1000 KW	1900 KW		500. KW	700. KW	8-71	72/ 9

D.G.LOAD (2)

794460

PLANT NAME	BWR	NO.	EMER. AUX. S.W.-PUMP	CRD DRIVE PUMP	EMER.GAS DISP. FAN	POISON INJECT PUMP		
ONAGAWA	BWR	4	230*1 KW	200*1 KW	20*1 KW	5*1 KW	8-9-(4)	70/ 5
HAMAOKA-1	BWR	5			12 KW		8-81+82	70/ 5
FUKUSIMA-5	BWR	9			10 KW		8-9-(4)	71/ 2
FUKUSIMA-4	BWR	10			10 KW		8-9-(4)	71/ 8
HAMAOKA-2	BWR	13			20 KW		8-71	72/ 9

D.G.LOAD (3)

794480

PLANT PERFORMANCE DATA

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D.G.LOAD (3)

794480

PLANT NAME	BATTERY CHARGER	OTHERS	TOTAL		
ONAGAWA	BWR 4 60*1 KW			8-9-(4)	70/ 5
HAMAOKA-1	BWR 5	528. KW	3300. KW	8-82	70/ 5
FUKJSIMA-5	BWR 9	374. KW	5854. KW	8-9-(4)	71/ 2
FUKJSIMA-4	BWR 10	374. KW	5854. KW	8-9-(4)	71/ 8

BWR EMER GENCY AC POWER SUPPLY FOR AC GENER. 794620

PROPERTY OF DC-MOTOR/AC-GENERATOR/AC-MOTOR FOR VITAL AC SOURCE

(1)TYPE DM1=DC MOTOR
DM2=YOKO-NKI DC-MOTOR
AG1=TANSOO DOOKI GENERATOR
AM1=3-500 DOOKI MOTOR
(2)NUMBER
(3)CAPACITY DC-MOTOR(KW)/AC-GENERATOR(KVA)/AC-MOTOR(KW)
(4)SPEED
(5)OUTPUT VOLTAGE OF AC-GENERATOR VOLT +- PERCENT
(6)FREQUENCY OF AC-GENERATOR HZ +- PERCENT
... (1) ... (2) (3) (4) ... (5) (6) ...

PLANT NAME	BWR	NO.	CAPACITY	RPM	VOLT +-PC	HZ+-PC		
ONAGAWA	BWR 4	DM1/AG1/AM1 1/1/1	52/45 /52	1500	120/240	2 50 1	8-9-(5)	70/ 5
HAMAOKA-1	BWR 5	DM2/AG1/AM1 1/1/1	33/30 /33	1800	120/240	60	8-82	70/ 5
FUKJSIMA-5	BWR 9	DM1/AG1/AM1 1/1/1	30/27.5/33	1500	120/240	2 50 1	8-9-(4)	71/ 2
FUKJSIMA-4	BWR 10	DM1/AG1/AM1 1/1/1	30/27.5/30	1500	120/240	2 50 1	8-9-(4)	71/ 8
HAMAOKA-2	BWR 13	DM2/AG1/AM1 1/1/1	60/50 /60	1800	120/240	60	8-71	72/ 9

PWR EMER GENCY AC POWER SUPPLY 794650

PROPERTY OF DC-AC INVERTER

(1)TYPE TP1=SEISI-GATA INVERTER
(2)NUMBER
(3)CAPACITY KVA/1
(4)INPUT DC-VOLTAGE VOLT+-PERCENT
(5)OUTPUT AC VOLTAGE VOLT+-PERCENT
(6)PHASE OF OUTPUT SP=SINGLE PHASE
(1) (2) (3) (4) (5) (6)
NO. CAP. DC(IN) AC(OUT)
KVA/1 VOLT+-PC VOLT+-PC

PLANT NAME	PWR	NO.	CAP.	DC(IN)	AC(OUT)		
MIHAMA-1	PWR 21	TP1 2	7.5	125 +-10	120 +-2	SP	8-101 66/11
TAKAHAMA-2	PWR 23	TP1 4	10	125 +-10	115 +-5	SP	8-97 70/ 5
GENKAI-1	PWR 24	TP1 4	10	125 +-10	115 +-5	SP	8-108 70/ 5
DDI -1*2	PWR 26	TP1 4	10	125 +-10	115 +-5	SP	8-100 71/ 1
MIHAMA-1	PWR 27	TP1 4	10	125 +-10	115 +-5	SP	8-97 71/ 8
IKATA	PWR 28	TP1 4	10	125 +-10	115 +-5	SP	8-108 72/11

BWR POWER SUPPLY FOR PROTECTION SYSTEM 794720

PLANT PERFORMANCE DATA

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BWR POWER SUPPLY FOR PROTECTION SYSTEM 794720

PROPERTY OF AC-MOTOR/AC-GENERATOR FOR HOGOKEI AC-SOURCE

(1)TYPE AM1=3-500 DOOKI MOTOR
AG1=TANSOO DOOKI GENERATOR
(2)NUMBER
(3)CAPACITY AC-MOTOR(KW) / AC-GENERATOR(KVA)
(4)VOLTAGE AC-MOTOR INPUT VOLT(V)/AC-GENERATOR OUTPUT VOLT(V)
(5)FREQUENCY OF AC-GENERATOR HZ
(1) (2) (3) (4) (5)
TYPE NO. CAPACITY VOLTAGE
KW / KVA V / V HZ

PLANT NAME	BWR	NO.	CAPACITY	VOLTAGE	HZ		
ONAGAWA	BWR 4	AM1/AG1 2/2	15 /12.5	460/120	50	8-9-(5)	70/ 5
HAMAOKA-1	BWR 5	AM1/AG1 2/2	18 /15.0	440/120	60	8-83	70/ 5
FUKJSIMA-5	BWR 9	/AG1 /2	/12.5	/120	50	8-9-(5)	71/ 2
FUKJSIMA-4	BWR 10	AM1/AG1 2/2	18.7/12.5	440/120	50	8-9-(5)	71/ 8
HAMAOKA-2	BWR 13	AM1/AG1 2/2	22 /18.0	440/120	60	8-72	72/ 9

AC POWER SUPPLY FOR INST. AND CONTROL 794750

PLANT NAME	BWR	CAPACITY	NUMBER	VOLT		
ONAGAWA	BWR 4	45.KVA	NO.=2	460/120-240 V	8-9-(5)	70/ 5
HAMAOKA-1	BWR 5	45.KVA	NO.=2	460/120 V	8-83	70/ 5
HAMAOKA-2	BWR 13	75.KVA	NO.=2	460/120 V	8-72	72/ 9

POWER SUPPLY FOR CONTROL CLUSTER DRIVE 794780

ELECTRIC SOURCE FOR CONTROL-CLUSTER-DRIVE
(1)SOURCE S1=MOTOR-GENERATOR-RECTIFIER SET
S2=MOTOR-GENERATOR
(2)NUMBER
(3)TYPE OF DRIVE MOTOR DM1=INDUCTION MOTOR
(4)CAPACITY DRIVE MOTOR(KW/1) / GENERATOR(KW/1)
(5)VOLTAGE INPUT VOLT FOR DRIVE MOTOR(V) / OUTPUT VOLT OF AC.(V)
(6)PHASE OF DRIVE MOTOR

PLANT NAME	PWR	NO.	CAPACITY	VOLTAGE	PHASE		
MIHAMA-1	PWR 21	S1 2	DM1 125HP/ 85HP	440/125	3-P/	8-102	66/11
TAKAHAMA-2	PWR 23	S1 2	DM1 150 / 100	440/125	3-P/	8-97	70/ 5
DDI -1*2	PWR 26	S2 2	DM1 150 / 100	440/260	3-P/	8-100	71/ 1
MIHAMA-3	PWR 27	S2 2	DM1 150 / 100	440/260	3-P/	8-97	71/ 8

FACILITY BATTERY TYPE NUMBER 794820

FACILITY BATTERY TYPE NUMBER 794820

(1)TYPE TP1=SEAL
TP2=ERUNITE SEAL
TP3=PLASTIC SEAL
(2)NUMBER
(3)NUMBER OF CELL
(4)VOLTAGE VOLT
(5)CAPACITY AMPERE*H/ H/1

PLANT NAME	(1) NO.	(2)	(3)	(4) V	(5) AH	(6)	(7)	(8)	(9)	(10)
ONAGAWA	BWR 4	TP2	2	60	125	2200/10 *2				8-9-(5) 70/ 5
HAMAOKA-1	BWR 5	TP1	2	60	125	2000/10 *2				8-83 70/ 5
FUKJISIMA-2,3	BWR 7	(TP3	2	60	125	700 *2)+(TP3 1 120 250 1000)				82-2-3 P19 70/ 8
FUKJISIMA-5	BWR 9	(TP3	2	60	125	800+1200)+(TP3 1 120 250 2000)				8-9-(5) 71/ 2
FUKJISIMA-4	BWR 10	(TP3	2	60	125	800+1200)+(TP3 1 120 250 2000)				8-9-(5) 71/ 8
HAMAOKA-2	BWR 13	(TP1	2	60	125	1000 *2)+(TP1 2 120 250 1000*2)				8-72 72/ 9
MIHAMA-1	PWR 21		2		125	800/10 *2				8-101 66/11
TAKAHAMA-2	PWR 23		2		125	1600/10 *2				8-97 70/ 5
GENKAI-1	PWR 24		2		125	1600/10 *2				8-108 70/ 5
OOI -1,2	PWR 26		2		125	2200/10 *2				8-100 71/ 1
MIHAMA-3	PWR 27		2		125	2000/10 *2				8-97 71/ 8
IKATA	PWR 28		2		125	1600/10 *2				8-108 72/11

KIND OF SWD DRUM QUANTITY 954100

***** ERROR ***** KB(1,L) , KA(1,J) = 794840 954100

HAMAOKA-1	BWR 5	TP2	3	35*3	NF					8-83 70/ 5
FUKJISIMA-2,3	BWR 7	(TP1	2+(1)	10*3	NF	)+(TP1 1+(1) 20*2	NF	)		82-2-3 P19 70/ 8
FUKJISIMA-5	BWR 9	(TP1	3	24*3	NF	)+(TP1 2	60*2	NF	)	8-9-(5) 71/ 2
FUKJISIMA-4	BWR 10	(TP1	3	24*3	NF	)+(TP1 2	60*2	NF	)	8-9-(5) 71/ 8
HAMAOKA-2	BWR 13	(TP2	3	20*3	NF	)+(TP2 3	25*3	NF	)	8-73 72/ 9

***** ERROR ***** KB(1,L) , KA(1,J) = 794840 954100

MIHAMA-1	PWR 21	TP2	2	10KVA*2	NF					8-101 66/11
TAKAHAMA-2	PWR 23	TP2	2	80KVA*2	NF					8-97 70/ 5
GENKAI-1	PWR 24	TP2	2	50KVA*2	NF					8-108 70/ 5
OOI -1,2	PWR 26	TP2	2	600AMP*2	NF					8-100 71/ 1
MIHAMA-3	PWR 27	TP2	2	600AMP*2	NF					8-97 71/ 8

***** ERROR ***** KB(1,L) , KA(1,J) = 794840 954100

IKATA	PWR 28	TP2	2	50KVA*2	NF					8-108 72/11
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N.MONIT. BATTERY NUMBER AND VOLTAGE 794860

N.MONIT. BATTERY NUMBER AND VOLTAGE 794860

(1)NUMBER OF BATTERY
(2)VOLTAGE OF BATTERY VOLT
(3)TYPE OF CHARGER CH1=STATIC TYPE(SILICON RECTIFIER)
(4)NUMBER OF CHARGER

PLANT NAME	(1) NO.	(2) VOLT	(3) TYPE	(4) NO.	(5)	(6)
ONAGAWA	BWR 4	2 +- 24		2		8-9-(6) 70/ 5
HAMAOKA-1	BWR 5	2 +- 24	CH1	4		8-84 70/ 5
FUKJISIMA-2,3	BWR 7	2 +- 48		2		82-2-3 P20 70/ 8
FUKJISIMA-5	BWR 9	2 +- 24		2		8-9-(5) 71/ 2
FUKJISIMA-4	BWR 10	2 +- 24		2		8-9-(5) 71/ 8
HAMAOKA-2	BWR 13	2 +- 24	CH1	4		8-73 72/ 9

OFF GAS PRE HEATER NUMBER AND TYPE 801220

(1)TYPE TP1=YOKO-OKI U-TUBE ELECTRIC HEATER
TP2=GAIBU KANETSU ELECTRIC HEATER
TP3=STEAM HEATER

PLANT NAME	(1)	(2)	(3)	(4)	(5)	(6)
JPDR-2	BWR 2	TP1 1+(1)	FOR TURBINE SYSTEM			KON-6 P26 70/11
JPDR-2	BWR 2	TP2 1+(1)	FOR DUMP CONDENSER SYSTEM			KON-6 P27 70/11
ONAGAWA	BWR 4	TP3 1+(1)				8-10-(1) 70/ 5
HAMAOKA-1	BWR 5	TP3 1+(1)				8-86 70/ 5
FUKJISIMA-5	BWR 9	TP3 1+(1)				8-10-(1) 71/ 2
FUKJISIMA-4	BWR 10	TP3 1+(1)				8-10-(1) 71/ 8
FUKJISIMA-6	BWR 11	TP3 1+(1)				8-10-(1) 71/12
TOKAI-2	BWR 12	TP3 1+(1)				8-10-(1) 71/12
HAMAOKA-2	BWR 13	TP3 1+(1)				8-75 72/ 9

OFF GAS RECOMBIN ER NUMBER AND TYPE 801240

(1)TYPE TP1=TATE-OKI-ENTOD (CATALYZER IS USED)
TP2=CATALYZER IS USED
()=YOBII

PLANT NAME	(1)	(2)	(3)	(4)	(5)	(6)
JPDR-2	BWR 2	TP1 1+(1)				KON-6 P26 70/11
JPDR-2	BWR 2	TP1 1+(1)				KON-6 P27 70/11
ONAGAWA	BWR 4	TP2 1+(1)				8-10-(1) 70/ 5
HAMAOKA-1	BWR 5	TP2 1+(1)				8-87 70/ 5
FUKJISIMA-5	BWR 9	TP2 1+(1)				8-10-(1) 71/ 2
FUKJISIMA-4	BWR 10	TP2 1+(1)				8-10-(1) 71/ 8
FUKJISIMA-6	BWR 11	TP2 1+(1)				8-10-(1) 71/12
TOKAI-2	BWR 12	TP2 1+(1)				8-10-(1) 71/12
HAMAOKA-2	BWR 13	TP2 1+(1)				8-75 72/ 9

PLANT PERFORMANCE DATA

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OFF GAS COND. NO.

801260

PLANT NAME	BWR	NO.	TYPE	NO.	TYPE	NO.	DATE	TIME
JPDR-2	BWR	2	NO.=1	TYPE=YOKO-DKI-HYOMEN-REIKYAKU	(0.5)	KON-6 P27	70/11	
JPDR-2	BWR	2	NO.=1	TYPE=YOKO-DKI-HYOMEN-REIKYAKU (DUREN-DAME)(T.S)		KON-6 P26	70/11	
ONAGAWA	BWR	4	NO.=1			8-10-(2)	70/ 5	
HAMAOKA-1	BWR	5	NO.=1			8-87	70/ 5	
FUKUSIMA-5	BWR	9	NO.=1			8-10-(1)	71/ 2	
FUKUSIMA-4	BWR	10	NO.=1			8-10-(1)	71/ 8	
FUKUSIMA-6	BWR	11	1			8-10-(1)	71/12	
TOKAI-2	BWR	12	1			8-10-(1)	71/12	
HAMAOKA-2	BWR	13	NO.=1			8-75	72/ 9	

OFF GAS COMPRESS UR

NUMBER TYPE AND PRESSURE 801260

(1)TYPE TP1=DIAPHRAGM
TP2=CENTRIFUGAL
(2)NUMBER ()=YORI
(3)CAPACITY M3/H
(4)DERIVERY PRESSURE KG/CM2G
TP3=KAITEN ENSIN WATER SEAL TYPE
(1) (2) (3) (4)
TYPE NO.

PLANT NAME	BWR	NO.	TYPE	NO.	M3/H	KG/CM2G	DATE	TIME
JPDR-2	BWR	2	TP1	2	17=(0.28M3/MIN)		KON-6 P26,27	70/11
ONAGAWA	BWR	4	TP1	1+(1)	16.		8-10-(2)	70/ 5
HAMAOKA-1	BWR	5	TP1	1+(1)	16.		8-87	70/ 5
MIHAMA-1	PWR	21	TP2	2	6.4		8-107	66/11
TAKAHAMA-2	PWR	23	TP2	2	7.7		8-102	70/ 5
GENKAI-1	PWR	24	TP2	2	8.0		8-114	70/ 5
ODI -1,2	PWR	26	TP2	2(COM1,2)	7.0		8-105	71/ 1
MIHAMA-3	PWR	27	TP2	2	7.7		8-102	71/ 8
IKATA	PWR	28	TP3	2	7.7		8-113	72/11

OFF GAS CHARCOAL HOLD UP

801320

(1)NUMBER
(2)HOLD UP TIME FOR XENON DAY
(3)HOLD UP TIME FOR KRYPTON HOUR
(1) (2) (3)
NO. DAY H

PLANT NAME	BWR	NO.	DAY	H	DATE	TIME
FUKUSIMA-5	BWR	9	1	27	40	8-10-(2) 71/ 2
FUKUSIMA-4	BWR	10	1	27	40	8-10-(2) 71/ 8
FUKUSIMA-6	BWR	11	1	27	40	8-10-(1) 71/12
TOKAI-2	BWR	12	1	27	40	8-10-(1) 71/12
HAMAOKA-2	BWR	13	1	30	40	8-75 72/ 9

OFF GAS VACUUM PUMP

801340

PLANT PERFORMANCE DATA

DATE 12/16/74

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OFF GAS VACUUM PUMP

801340

(1)NUMBER
(2)TYPE TP1=MECHANICA PUMP
(1) (2)
NO. TYPE

PLANT NAME	BWR	NO.	TYPE	DATE	TIME
FUKUSIMA-5	BWR	9	1+(1) TP1	8-10-(2)	71/ 2
FUKUSIMA-6	BWR	11	1+(1) TP1	8-10-(2)	71/12
TOKAI-2	BWR	12	1 TP1	8-10-(2)	71/12

OFF GAS AIR EJECTOR

801350

PLANT NAME	BWR	NO.	TYPE	DATE	TIME
FUKUSIMA-4	BWR	10	NO.=1+(1 YORI) AIR DRIVE	8-10-(2)	71/ 8
HAMAOKA-2	BWR	13	NO.=1+(1 YORI)	8-76	72/ 9

OFF GAS DECAY TANK

801400

(4)DESIGN PRESSURE KG/CM2G
(1)NUMBER
(2)CAPACITY M3/1
(3)HOLD-UP CAPACITY DAY/AT FULL POWER
(1) (2) (3) (4)
NO. CAPACITY
M3/1 DAY KG/CM2G

PLANT NAME	BWR	NO.	CAPACITY	DATE	TIME
ONAGAWA	BWR	4	2	8-10-(2)	70/ 5
HAMAOKA-1	BWR	5	2	8-87	70/ 5
FUKUSIMA-5	BWR	9	NONE	8-10-(2)	71/ 2
FUKUSIMA-4	BWR	10	NONE	8-10-(2)	71/ 8
MIHAMA-1	PWR	21	4	8-107	66/11
TAKAHAMA-2	PWR	23	4	8-102	70/ 5
GENKAI-1	PWR	24	4	8-114	70/ 5
ODI -1,2	PWR	26	10(COM 1,2)	8-105	71/ 1
MIHAMA-3	PWR	27	4	8-102	71/ 8
IKATA	PWR	28	6	8-113	72/11
FUKUSIMA-6	BWR	11	NONE	/	/
TOKAI-2	BWR	12	NONE	/	/
HAMAOKA-2	BWR	13	NONE	/	/

OFF GAS FILTER FROM

801420

(1)NUMBER
(2)FILTER EFFICIENCY GT (2)PERCENT FOR (3)MICRON-DIA(PARTICLE)
(1) (2) (3)
NO. PC. MICRON

PLANT NAME	BWR	NO.	PC.	MICRON	DATE	TIME
JPDR-2	BWR	2	1	(ABSOLUTE FILTER)	KON-6 P26	70/11
ONAGAWA	BWR	4	1+(1)	99.9 0.3	8-10-(2)	70/ 5

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OFF GAS FILTER FROM	AIR EXTRACTOR	801420		
			(1)NUMBER	
			(2)FILTER EFFICIENCY GT (2)PERCENT FOR (3)MICRON-DIA(PARTICLE)	
			(1) (2) (3)	
			NO. PC. MICRON	
HAMAOKA-1	BWR 5	1+(1)	99.97	0.3
FUKUSIMA-5	BWR 9	1+(1)	99.97	0.3
FUKUSIMA-6	BWR 11	1+(1)	99.97	0.3
TODKAI-2	BWR 12	1+(1)	99.97	0.3
HAMAOKA-2	BWR 13	1+(1)	99.97	0.3
			8-87	70/ 5
			8-10-(2)	71/ 2
			8-10-(2)	71/12
			8-10-(2)	71/12
			8-76	72/ 9

OFF GAS FILTER FROM	GRAND STEAM	801430		
ONAGAWA	BWR 4 NO.=1		EFF.=GT 99.9	PC(0.3 MICRON DIA)
			8-10-(2)	70/ 5

DEAERATOR OFF GAS	ISOLATE VALVE NUMBER	801440		
ONAGAWA	BWR 4 NO.=1		8-10-(2)	70/ 5
HAMAOKA-1	BWR 5 NO.=1		8-87	70/ 5

STACK HEIGHT		801460		
			TOTAL HEIGHT(M)=(GROUND LEVEL) + (STACK LENGTH)	
JPDR-2	BWR 2	=	55. M	KDN.6 70/11
ONAGAWA	BWR 4	175. M =	50. M + 125. M	8-10-(2) 70/ 5
HAMAOKA-1	BWR 5	106. M =	6. M + 100. M	8-87 70/ 5
FUKUSIMA-5	BWR 9	133. M =	13. M + 120. M	8-10-(2) 71/ 2
FUKUSIMA-4	BWR 10	130. M =	10. M + 120. M	8-10-(2) 71/ 8
FUKUSIMA-6	BWR 11	133 =	13 + 120	8-10-(2) 71/12
TODKAI-2	BWR 12	148 =	8 + 140	8-10-(2) 71/12
HAMAOKA-2	BWR 13	106 =	6 + 100 (COMMON WITH 1-GDD)	8-76 72/ 9
MIHAMA-1	PWR 21	=	+ 55. M	BK80-2 P22 71/ 8
MIHAMA-2	PWR 22	=	+ 55. M	BK80-2 P22 71/ 8
TAKAHAMA-2	PWR 23	89. M =	85. M	9-11 70/ 5
GENKAI-1	PWR 24	54. M =	+ 25. M	6-7 70/11
TAKAHAMA-1	PWR 25	=	+ 85. M	BK80-2 P22 71/ 8
ODI -1,2	PWR 26	65. M =		9-12 71/ 1
MIHAMA-3	PWR 27	89. M =	+ 85. M	BK80-2 P22 71/ 8

OFF GAS DECAY TUBE	SIZE AND HOLD UP TIME	801480		
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DATE 12/16/74

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OFF GAS DECAY TUBE	SIZE AND HOLD UP TIME	801480		
			(1)TUBE DIAMETER CM	
			(2)TUBE LENGTH M	
			(3)HOLD-UP TIME (FROM AIR EXTRACTOR)	TM1=MINUTES
			(4)HOLD-UP TIME (FROM GRAND STEAM)	TM2=MINUTES
			(5)HOLD-UP TIME	TM3 MINUTES
			(1) (2) (3) (4) (5)	
			CM M MIN. MIN. MIN.	
ONAGAWA	BWR 4	43 250	2	8-10-(1,2) 70/ 5
HAMAOKA-1	BWR 5	75 100	2	8-86 70/ 5
FUKUSIMA-5	BWR 9		30 2	8-10-(2) 71/ 2
FUKUSIMA-4	BWR 10		30 2	8-10-(1,2) 71/ 8
FUKUSIMA-6	BWR 11			30 8-10-(1) 71/12
TODKAI-2	BWR 12			30 8-10-(1) 71/12
HAMAOKA-2	BWR 13			30 8-75 72/ 9

LMDS TANK LIST	PWR	802100		
			(1)BORD N GOSHUKU EKI CHORYU TANK	80211
			(2)HAIEKI CHORYU TANK	80212
			(3)HAIEKI HOLDUP TANK	80213
			(4)HAIEKI JYOHATU SOOTI FUKUSUI TANK	80214
			(5)HAIEKI SUMP TANK	80215
			(6)HJJYD TATEYA SUMP TANK	80216
			(7)HOLDUP TANK	80217
			(8)JUSHI SAISEI HAIEKI CHORYU TANK	80218
			(9)KAGAKU HAIEKI TANK	80219
			(10)KANSHI TANK	80220
			(11)MONITOR TANK	80221
			(12)SENTAKU HAISUI TANK	80222
			(13)SHORIEKI CHOZOD TANK	80223
			(14)YAKUEKI DRAIN TANK	80224
			(15)YUKA DRAIN TANK	80225
			(16)JI HEIKIYAKU ZAI CHOZOD TANK	80226
			(17)JI HEIKIYAKU ZAI DRAIN TANK	80227
			1 2 3 4 5 6 7 8 9 11 13 15 17	
			10 12 14 16	
MIHAMA-1	PWR 21	1 3 1 1 1 2		1 8-108 66/11
TAKAHAMA-2	PWR 23	1 3		8-103 70/ 5
GENKAI-1	PWR 24	2 1 2 2 2 1 1 3 1		8-116 70/11
ODI -1,2	PWR 26	1 2		1 8-106 71/ 1
MIHAMA-3	PWR 27	2 3		8-103 71/ 7
IKATA	PWR 28	2		3 8-114 72/ 5

LMDS CONDENSE D	BORD N STORAG E TANK	802110		
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		PLANT PERFORMANCE DATA				DATE	12/16/74		PAGE***D-139***
LWDS	CONDENSE D	BOMB N STORAG E	TANK	802110					
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	MIHAMA-1	PWR 21	1	2.7	MT1			8-109 66/11	
LWDS	LIQJID	WASTE	STORAGE	TANK	802120				
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	MIHAMA-1	PWR 21	3	99	MT1			8-109 66/11	
	KATA	PWR 28	2	30+70	MT1			8-115 72/11	
	GENKAI-1	PWR 24	1	93	MT1			8-115 70/ 5	
LWDS	LIQUID	WASTE	HOLD UP	TANK	802130				
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	TAKAHAMA-2	PWR 23	1	92				8-103 70/ 5	
	DDI -1+2	PWR 26	1	38				8-106 71/ 1	
	MIHAMA-3	PWR 27	2	94				8-103 71/ 7	
								(COMMON WITH 1,2GDD)	
LWDS	LIQJID	WASTE	EVAPULAT OR CONDE	NSE TANK	802140				
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	GENKAI-1	PWR 24	2	3.78	MT1			8-117 70/ 5	
LWDS	LIQUID	WASTE	SUMP	TANK	802150				
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	MIHAMA-1	PWR 21	1	1.4	MT1			8-108 66/11	
LWDS	AUX. BUI LDING	SUMP	TANK	802160					

		PLANT PERFORMANCE DATA				DATE	12/16/74		PAGE***D-140***
LWDS	AUX. BUI LDING	SUMP	TANK	802160					
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	GENKAI-1	PWR 24	1	3.5	MT1			8-116 70/ 5	
LWDS	HOLDUP		TANK	802170					
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	TAKAHAMA-2	PWR 23	3	190				8-103 70/ 5	
	DDI -1+2	PWR 26	2	425				8-106 71/ 1	
	MIHAMA-3	PWR 27	3	190				8-103 71/ 7	
								(COMMON WITH 1,2GDD)	
LWDS	RESIN	RECLAIM LIQUID	WASTE	HOLDUP	802180				
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=CARBON STEEL				
				(4)LINING	LG1=HOGO UCHIBARI TSUKI				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	MIHAMA-1	PWR 21	1	37	MT1	LG1		8-108 66/11	
LWDS	CHEMICAL S	DRAIN	TANK	802190					
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=STAINLESS STEEL				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	MIHAMA-1	PWR 21	1	1.4	MT1			8-108 66/11	
LWDS	WATCH	TANK	802200						
				(1)NUMBER					
				(2)CAPACITY	M3/1				
				(3)MATERIAL	MT1=CARBON STEEL				
				(4)LINING	LG1=INNER SURFACE LINING				
	PLANT NAME			(1)	(2)	(3)	(4)	(5)	
	GENKAI-1	PWR 24	2	28.3	MT1	LG1		8-116 70/ 5	
LWDS	MONITOR		TANK	802210					

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LWDS	MONITOR			TANK	802210							
					(1)NUMBER							
					(2)CAPACITY	M3/1						
					(3)MATERIAL	MT1=CARBON STEEL						
					(4)LINING	LG1=INNER SURFACE LINING						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	MIHAMA-1	PWR 21	2	14	MT1	LG1				8-109		66/11
LWDS	WASHING WATER	TANK			802220							
					(1)NUMBER							
					(2)CAPACITY	M3/1						
					(3)MATERIAL	MT1=STAINLESS STEEL						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	GENKAI-1	PWR 24	2	2.3	MT1					8-116		70/ 5
	DDI -1+2	PWR 26	1	38					(COMMON WITH 1,2G00)	8-106		71/ 1
LWDS	PROCESS WATER	HOLDUP		TANK	802230							
					(1)NUMBER							
					(2)CAPACITY	M3/1						
					(3)MATERIAL	MT1=STAINLESS STEEL						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	GENKAI-1	PWR 24	1	3.4	MT1					8-116		70/ 5
LWDS	CHEMICAL FLUID	DRAIN		TANK	802240							
					(1)NUMBER							
					(2)CAPACITY	M3/1						
					(3)MATERIAL	MT1=STAINLESS STEEL						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	GENKAI-1	PWR 24	1	1.4	MT1					8-115		70/ 5
LWDS	FLOOR	DRAIN		TANK	802250							
					(1)NUMBER							
					(2)CAPACITY	M3/1						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	DDI -1+2	PWR 26	1	38					(COMMON WITH 1,2G00)	8-106		71/ 1
LWDS	PRIMARY COOLANT	STORAGE		TANK	802260							

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LWDS	PRIMARY COOLANT	STORAGE		TANK	802260							
					(1)NUMBER							
					(2)CAPACITY	M3/1						
					(3)MATERIAL	MT1=STAINLESS STEEL						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	GENKAI-1	PWR 24	3	119	MT1					8-116		70/ 5
	IKATA	PWR 28	3	125	MT1					8-114		72/11
LWDS	PRIMARY COOLANT	STORAGE		TANK	802270							
					(1)NUMBER							
					(2)CAPACITY	M3/1						
					(3)MATERIAL	MT1=STAINLESS STEEL						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	MIHAMA-1	PWR 21	1	0.8	MT1					8-108		66/11
	GENKAI-1	PWR 24	1	1.3	MT1					8-116		70/ 5
LWDS	LIQJID WASTE	EVAPULAT DR			802290							
	TAKAHAMA-2	PWR 23	NO.=1	CAPACITY= 0.45 CUBM/H						8-103		70/ 5
	GENKAI-1	PWR 24	NO.=1	CAPACITY= 0.45 CUBM/H					MATERIAL=SUS	8-117		70/ 5
	GENKAI-1	PWR 24	FROM(80211) 80229	TO(80237(LIQUID),OR SWUS)						8-119		70/ 5
	DDI -1+2	PWR 26	NO.=1	CAPACITY= 0.19 CUBM/H					COMMON 1+2	8-106		71/ 1
	MIHAMA-3	PWR 27	NO.=1	CAPACITY= 0.45 CUBM/H						8-103		71/ 8
LWDS	BORIC ACID	RECOVERY		SYSTEM	802300							
					(1)NUMBER							
					(2)CAPACITY	M3/H/1						
					(3)MATERIAL	MT1=STAINLESS STEEL						
					(5)REMARKS	RM1=INCLUDE(DATSU-GAS TOO)						
	PLANT NAME		(1)	(2)	(3)	(4)	(5)					
	MIHAMA-1	PWR 21	1	1.14	MT1					8-109		66/11
	TAKAHAMA-2	PWR 23	1	2.3					RM1	8-103		70/ 5
	GENKAI-1	PWR 24	1	2.84	MT1					8-116		70/ 5
	DDI -1+2	PWR 26	1	0.19					RM1 (COMMON WITH 1,2G00)	8-106		71/ 1
	MIHAMA-3	PWR 27	1	3.4						8-103		71/ 7
	IKATA	PWR 28	1	3.4	MT1					8-115		72/11
LWDS	BORIC ACID	PURIFY		DEMINE.	802310							
	PLANT NAME		NUMBER	RESIN VOLUME	CAPACITY				MATERIAL			
	TAKAHAMA-2	PWR 23	SEE 80239									
	GENKAI-1	PWR 24	NO.=3	0.34 CUBM/1	2.84 CUBM/H				SUS	8-117		70/ 5
	GENKAI-1	PWR 24	FROM(80219) 80231	TO(80233)						8-119		70/ 5

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LWDS	8DRIC ACID	PURIFY	DEMINE.	FILTER	802330		
	GENKAI-1	PWR 24	NO.=1	CAPACITY= 2.84 CUBM/H	MATERIAL(VESSEL)=SUS	8-117	70/ 5
	GENKAI-1	PWR 24	FROM(80231) 80233	TO(80227)		8-119	70/ 5
LWDS	8DRIC ACID	EVAP.	C.W	DEMINE	LIZER	802350	
	TAKAHAMA-2	PWR 23	SEE 80239				/
	GENKAI-1	PWR 24	NO.=2	0.34 CUBM/H	2.84 CUBM/H	SUS	8-117
	GENKAI-1	PWR 24	FROM(80227) 80235	TO(80221)		8-119	70/ 5
LWDS	LIQUID WASTE	EVAP.	COND.W	TANK	802370		
	GENKAI-1	PWR 24	NO.=2	CAPACITY= 3.78 CUBM/H	MATERIAL=SUS	8-117	70/ 5
	GENKAI-1	PWR 24	FROM(80229) 80237	TO(REDISPOSE OR HOUSUIRO AFTER CHECK)		8-119	70/ 5
LWDS	ION EXCH.				802390		
	TAKAHAMA-2	PWR 23	NO.=5	CAP.=2.3 CUBM/H*5		8-103 -105	70/ 5
	TAKAHAMA-2	PWR 23	SEE(76234	76235	80231 80235)	8-103 -105	70/ 5
	TAKAHAMA-2	PWR 23	NO.=5	CAP.=2.3 CUBM/H/1	*5	8-103 8-105	70/ 5
	OJI -1*2	PWR 26	NO.=5	CAP.=8 CUBM/H/1	*5 COMMON	8-106	71/ 1
	MIYAMA-3	PWR 27	NO.=5	CAP.=6.8 CUBM/H/1	*5	8-103	71/ 8
LWDS	TANK LIST				802400		
	OTHERS		-0				/
LWDS	TANK LIST				802400		
	OTHERS		-0				/
	ONAGAWA	BWR 4	2	2 1 1	2	2 1	8-10-(3)
	HAMAOKA-1	BWR 5	2	1	2	2 1	8-89
	FUKUSIMA-5	BWR 9	2	2 1 1	2 2 1	2 1	8-10-(3)
	FUKUSIMA-4	BWR 10	2	2 1 1	2 1 1	2 1	8-10-(3)
	FUKUSIMA-6	BWR 11	2	2 1 2 2 1	1 1 1	2 1 1	8-10-(3)
	TOKAI-2	BWR 12	2	1 1 2 2 2 1	2 1	2 1	8-10-(3)
	HAMAOKA-2	BWR 13			2 1 1 2	2 3 1 1	8-77
LWDS	NEUTRALIZER	ANNEXING TANK			802410		

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LWDS	NEUTRALIZER	ANNEXING TANK			802410		
		(1)NUMBER					
		(3)MATERIAL		MT1=CARBON STEEL OR ALUMINUM			
		(4)LINING		LG1=RUBBER LINING			
		(5)REMARKS		KAK=KAKUHANKI TSUKI			
	PLANT NAME	(1)	(2)	(3)	(4)	(5)	
		NO.					
	FUKUSIMA-5	BWR 9	2		LG1 KAK		8-10-(3)
	FUKUSIMA-4	BWR 10	2		LG1 KAK		8-10-(3)
	FUKUSIMA-6	BWR 11	2		MT1 KAK		8-10-(3)
	TOKAI-2	BWR 12	2				8-10-(3)
LWDS	LIQUID WASTE	NEUTRALIZATION TANK			802440		
		(1)NUMBER					
		(2)CAPACITY		M3/1			
		(3)MATERIAL		MT1=STAINLESS STEEL			
		(5)REMARKS		NOZ=KONGOO NOZZLE TSUKI			
	PLANT NAME	(1)	(2)	(3)	(4)	(5)	
		NO.					
	ONAGAWA	BWR 4	2	65	MT1	NOZ	8-10-(3)
	HAMAOKA-1	BWR 5	2	65			8-89
	FUKUSIMA-5	BWR 9	2				8-10-(3)
	FUKUSIMA-4	BWR 10	2			NOZ	8-10-(3)
	TOKAI-2	BWR 12	2				8-10-(3)
LWDS	LIQUID WASTE	SAMPLING TANK			802450		
		(1)NUMBER					
		(2)CAPACITY		M3/1			
		(3)MATERIAL		MT1=ALUMINUM			
		(5)REMARKS		NOZ=KONGOO NOZZLE TSUKI			
	PLANT NAME	(1)	(2)	(3)	(4)	(5)	
		NO.					
	ONAGAWA	BWR 4	2	65	MT1	NOZ	8-10-(3)
	FUKUSIMA-5	BWR 9	2			NOZ	8-10-(3)
	FUKUSIMA-4	BWR 10	2			NOZ	8-10-(3)
	FUKUSIMA-6	BWR 11	2		MT1	NOZ	8-10-(3)
	TOKAI-2	BWR 12	2			NOZ	8-10-(3)
LWDS	LIQUID WASTE	SURGE TANK			802460		
		(1)NUMBER					
		(2)CAPACITY		M3/1			
		(3)MATERIAL		MT1=ALUMINUM , MT2=ALUMINUM OR CARBON STEEL			
		(5)REMARKS		NOZ=KONGOO NOZZLE TSUKI			
	PLANT NAME	(1)	(2)	(3)	(4)	(5)	
		NO.					
	ONAGAWA	BWR 4	1	150	MT1	NOZ	8-10-(3)

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LWDS	LIQUID WASTE	SURGE	TANK	802460
(1)NUMBER (2)CAPACITY M3/1 (3)MATERIAL MT1=ALUMINUM , MT2=ALUMINUM OR CARBON STEEL (5)REMARKS NOZ=KONGOO NOZZLE TSUKI (1) (2) (3) (4) (5)				
PLANT NAME NO.				
HAMADKA-1	BWR	5	1	150
FUKJSIMA-5	BWR	9	1	
FUKJSIMA-4	BWR	10	1	
FUKJSIMA-6	BWR	11	1	MT2
TODKAI-2	BWR	12	2	
				NOZ (WITH HEATER)
				NOZ (WITH HEATER)
				NOZ
				NOZ
				8-89
				8-10-(3)
				70/ 5
				71/ 2
				8-10-(3)
				71/ 8
				8-10-(3)
				71/12
				8-10-(3)
				71/12

LWDS	LIQUID WASTE	COLLECT	TANK	802470
(1)NUMBER (2)CAPACITY M3/1 (3)MATERIAL MT1=CARBON STEEL (4)LINING LG1=RUBBER LINING (5)REMARKS (1) (2) (3) (4) (5)				
PLANT NAME NO.				
ONAGAWA	BWR	4	1	110
FUKJSIMA-5	BWR	9	1	
FUKJSIMA-4	BWR	10	1	
TODKAI-2	BWR	12	1	
				MT1
				LG1
				LG1
				8-10-(3)
				70/ 5
				8-10-(3)
				71/ 2
				8-10-(3)
				71/ 8
				8-10-(3)
				71/12

LWDS	EVAPORATOR	SURGE	TANK	802480
(1)NUMBER (3)MATERIAL MT1=STAINLESS STEEL (5)REMARKS NOZ=KONGOO NOZZLE SSUKI (1) (2) (3) (4) (5)				
PLANT NAME				
FUKJSIMA-6	BWR	11	2	
				MT1
				NOZ
				8-10-(3)
				71/12

LWDS	DISTILLED WATER	SURGE	TANK	802490
(1)NUMBER (3)MATERIAL MT1=CARBON STEEL (5)REMARKS NOZ=KONGOO NOZZLE TSUKI (1) (2) (3) (4) (5)				
PLANT NAME				
FUKJSIMA-6	BWR	11	2	
				MT1
				NOZ
				8-10-(3)
				71/12

LWDS	SYSTEM DRAIN	FILTRATE	TANK	802500
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LWDS	SYSTEM DRAIN	FILTRATE	TANK	802500
(1)NUMBER (3)MATERIAL MT1=CARBON STEEL (5)REMARKS NOZ=KONGOO NOZZLE TSUKI (1) (2) (3) (4) (5)				
PLANT NAME				
FUKJSIMA-6	BWR	11	1	
				MT1
				NOZ
				8-10-(3)
				71/12

LWDS	SYSTEM DRAIN	SAMPLING	TANK	802510
(1)NUMBER (2)CAPACITY M3/1 (5)REMARKS NOZ=KONGOO NOZZLE TSUKI (1) (2) (3) (4) (5)				
PLANT NAME NO.				
HAMADKA-1	BWR	5	2	65
HAMADKA-2	BWR	13	2	
				NOZ
				8-89
				8-77
				70/ 5
				72/ 9

LWDS	SYSTEM DRAIN	COLLECT	TANK	802530
(1)NUMBER (2)CAPACITY M3/1 (3)MATERIAL MT1=CARBON STEEL (5)REMARKS NOZ=KONGOO NOZZLE TSUKI (1) (2) (3) (4) (5)				
PLANT NAME NO.				
HAMADKA-1	BWR	5	1	115
FUKJSIMA-6	BWR	11	1	
				MT1
				NOZ
				8-89
				8-10-(3)
				70/ 5
				71/12

LWDS	LAUNDRY DRAIN	TANK	802540
(1)NUMBER (2)CAPACITY M3/1 (3)MATERIAL MT1=CARBON STEEL (5)REMARKS NOZ=KONGOO NOZZLE TSUKI (1) (2) (3) (4) (5)			
PLANT NAME NO.			
ONAGAWA	BWR	4	2
HAMADKA-1	BWR	5	2
FUKJSIMA-5	BWR	9	2
FUKJSIMA-4	BWR	10	2
TODKAI-2	BWR	12	2
			MT1
			NOZ
			8-10-(3)
			70/ 5
			8-89
			70/ 5
			8-10-(3)
			71/ 2
			8-10-(3)
			71/ 8
			8-10-(3)
			71/12
			8-10-(3)
			71/12
			8-77
			72/ 9

LWDS	PRECDAT	TANK	802550
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LWDS	PRECOAT	TANK		802550								
	PLANT NAME			(1)NUMBER	(3)MATERIAL	(4)LINING	(5)REMARKS	(1)	(2)	(3)	(4)	(5)
	FUKUSIMA-5	BWR	9	2	MT1=CARBON STEEL	LG1	KAK					
	FUKUSIMA-5	BWR	9	2	MT1=CARBON STEEL	LG1	KAK					
	FUKUSIMA-4	BWR	10	1	MT1=CARBON STEEL	LG1	KAK					
	FUKUSIMA-6	BWR	11	1	MT1		KAK					
	TOKAI-2	BWR	12	1			KAK					

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LWDS	FILTRATI ON AUX. AGENT	TANK		802560								
	PLANT NAME			(1)NUMBER	(3)MATERIAL	(4)LINING	(5)REMARKS	(1)	(2)	(3)	(4)	(5)
	FUKUSIMA-5	BWR	9	1	MT1=CARBON STEEL		KAK					
	FUKUSIMA-4	BWR	10	1	MT1=CARBON STEEL		KAK					
	FUKUSIMA-6	BWR	11	1	MT1		KAK					

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LWDS	WASHING WASTE	COLLECT	TANK		802580							
	PLANT NAME			(1)NUMBER	(3)MATERIAL	(4)LINING	(5)REMARKS	(1)	(2)	(3)	(4)	(5)
	FUKUSIMA-6	BWR	11	2	MT1		NOZ					

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LWDS	FRODR DRAIN	FILTRATE	TANK		802590							
	PLANT NAME			(1)NUMBER	(3)MATERIAL	(4)LINING	(5)REMARKS	(1)	(2)	(3)	(4)	(5)
	FUKUSIMA-6	BWR	11	1	MT1		NOZ					

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LWDS	FRODR DRAIN	SAMPLING	TANK		802600							

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LWDS	FRODR DRAIN	SAMPLING	TANK		802600							
	PLANT NAME			(1)NUMBER	(3)MATERIAL	(4)LINING	(5)REMARKS	(1)	(2)	(3)	(4)	(5)
	DNAGAWA	BWR	4	2	65	MT1	NOZ					
	HAMAOKA-1	BWR	5	2	65							
	FUKUSIMA-5	BWR	9	2			NOZ					
	FUKUSIMA-4	BWR	10	2			NOZ					
	TOKAI-2	BWR	12	2			NOZ					
	HAMAOKA-2	BWR	13	3			NOZ					

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LWDS	FRODR DRAIN	COLLECT	TANK		802610							
	PLANT NAME			(1)NUMBER	(3)MATERIAL	(4)LINING	(5)REMARKS	(1)	(2)	(3)	(4)	(5)
	DNAGAWA	BWR	4	1	40	MT1						
	HAMAOKA-1	BWR	5	1	40							
	FUKUSIMA-5	BWR	9	1								
	FUKUSIMA-4	BWR	10	1								
	FUKUSIMA-6	BWR	11	1		MT1	NOZ					
	TOKAI-2	BWR	12	1								
	HAMAOKA-2	BWR	13	1								

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LWDS	FILTER	TYPE AND NUMBER		802630								
	DNAGAWA	BWR	4	TYPE=PRESSURE PRECOAT	TYPE(CELLULOSE BASE FILTER)	NO=3						
	HAMAOKA-1	BWR	5	TYPE=PRESSURE PRECOAT	TYPE(CELLULOSE BASE FILTER)	NO=2						
	FUKUSIMA-5	BWR	9	TYPE=PRESSURE PRECOAT	TYPE(CELLULOSE BASE FILTER)	NO=2						
	FUKUSIMA-4	BWR	10	TYPE=PRESSURE PRECOAT	TYPE(CELLULOSE BASE FILTER)	NO=2						
	HAMAOKA-2	BWR	13	TYPE=PRESSURE PRECOAT	TYPE(FILTER ZYOZAI SHIYOD)	NO=2						

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LWDS	DECNTAM I. FACTOR OF FILTER			802640								
	PLANT NAME			COMPONENTS	FLOOR	ZYDSEN						
	DNAGAWA	BWR	4	40. CUBM/H	40. CUBM/H	(YOBI(1)COMMON)	5.					
	HAMAOKA-1	BWR	5	40. CUBM/H	40. CUBM/H		5.					
	FUKUSIMA-5	BWR	9	45. CUBM/H	/1		5.					
	FUKUSIMA-4	BWR	10	45. CUBM/H	/1		5.					
	HAMAOKA-2	BWR	13	60. CUBM/H	15. CUBM/H		5.					

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LWDS	DEMINE. TYPE AND NUMBER	802660
	DNAGAWA BWR 4 TYPE=MIXED RED NO.=2 8-10-(4) 70/ 5	
	HAMAOKA-1 BWR 5 TYPE=MIXED RED NO.=2 8-90 70/ 5	
	FUKJISIMA-5 BWR 9 TYPE=MIXED RED NO.=1 8-10-(3) 71/ 2	
	FUKJISIMA-4 BWR 10 TYPE=MIXED RED NO.=1 8-10-(3) 71/ 8	
	HAMAOKA-2 BWR 13 TYPE=MIXED RED NO.=2 8-78 72/ 9	

LWDS	DECONTAM I. FACTOR OF DEMINE.	802680
	PLANT NAME COMPONENTS FLOOR ZYOSEN KEISUU	
	DNAGAWA BWR 4 40. CUBM/H 40. CUBM/H 100. 8-10-(4) 70/ 5	
	HAMAOKA-1 BWR 5 40. CUBM/H 40. CUBM/H 100. 8-90 70/ 5	
	FUKJISIMA-5 BWR 9 45. CUBM/H 100. 8-10-(3) 71/ 2	
	FUKJISIMA-4 BWR 10 45. CUBM/H 100. 8-10-(4) 71/ 8	
	HAMAOKA-2 BWR 13 60. CUBM/H 15. CUBM/H 100. 8-78 72/ 9	

LWDS	LIQID WASTE CONCENTR ATUR NO. TYPE	802820
	PLANT NAME TYPE NUMBER CAPACITY	
	DNAGAWA BWR 4 STEAM HEATED NAT. CIRC. NO.=2 3.0 CUBM/H /1 8-10-(4) 70/ 5	
	HAMAOKA-1 BWR 5 STEAM HEATED NAT. CIRC. NO.=2 2.4 CUBM/H /1 8-90 70/ 5	
	FUKJISIMA-5 BWR 9 STEAM HEATED NAT. CIRC. NO.=2 4.5 CUBM/H /1 8-10-(4) 71/ 2	
	FUKJISIMA-4 BWR 10 STEAM HEATED NAT. CIRC. NO.=2 2.3 CUBM/H /1 8-10-(4) 71/ 8	
	HAMAOKA-2 BWR 13 STEAM HEATED NO.=2 3.0 CUBM/H /1 8-78 72/ 9	
	TAKAHAMA-2 PWR 23 NO.=1 0.45CUBM/H /1 8-103 70/ 5	

LWDS	LIQID WASTE CONCENTR ATOR	802840
	DNAGAWA BWR 4 CONCENTRATE UP TO 25 PERCENT (SOLID) 8-10-(4) 70/ 5	
	FUKJISIMA-5 BWR 9 CONCENTRATE UP TO 25 PERCENT (SOLID) 8-10-(4) 71/ 2	
	FUKJISIMA-4 BWR 10 CONCENTRATE UP TO 25 PERCENT (SOLID) 8-10-(4) 71/ 8	

SWDS TANK LIST BWR 803400

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SWDS	TANK LIST BWR	803400
	(1)NOOSHUKU HAIKI CHOZOO TANK 80341	
	(2)SHIYODZUMI JUSHI CHOZOO TANK 80342	
	(3)PHASE SEPARATOR 80343 A	
	(3)SHIYODZUMI FUNMATU JUSHI CHOZOO TANK 80343 B	
	(3)GENSHIRO-REIKYAKUZAI ZYODKA-KEI FUNMATU JUSHI CHOZOO TANK 80343 C	
	(3)GENSHIRO-JYODKA-KEI CHINKOO BUNRI SOO 80343 D	
	(4)HAI SLUDGE CHOZOO TANK 80344	
	(5)HAI SLUDGE CHINKOO BUNRI SOO 80345	
	(6)FILTER SLUDGE CHOZOO SOO 80346	
	(7)FUKUSUI-KEI FUNMATU JUSHI CHOZOO TANK 80347	
	(8)GENSHIRO-JYODKA-KEI FILTER SLUDGE CHOZOO TANK 80348	
	(9)NENRYO POOL FILTER SLUDGE CHOZOO TANK 80349	
	(10)KIKI-DRAIN FILTER SLUDGE CHOZOO TANK 80350	
	(11)FUKUSUI JYOKA-KEI CHINKOO BUNRI SOO 80351	
	(12)NOOSHUKU HAIKI KEIRYO TANK 80352	
	(13)TIKA SHIYODZUMI JUSHI CHOZOO TANK 80353	
	(14)TIKA HAI SLUDGE CHOZOO TANK 80354	
	PLANT NAME 1 2 3 4 5 6 7 8 9 10 11 12 13 14	
	DNAGAWA BWR 4 2 2 2(D) 4 2 8-10-(5) 70/ 5	
	HAMAOKA-1 BWR 5 3 2 2(C) 4 3 8-91 70/ 5	
	FUKUSIMA-2,3 BWR 7 3 1 1(A) 1 22 70/ 8	
	FUKUSIMA-5 BWR 9 3 1 2(A) 1 1 1 8-10-(5) 71/ 2	
	FUKUSIMA-4 BWR 10 3 1 2(A) 1 1 1 8-10-(5) 71/ 8	
	FUKUSIMA-6 BWR 11 1 1 2(D) 1 1 1 2 1 8-10-(5) 71/12	
	TOOKAI-2 BWR 12 3 1 2(B) 3 8-10-(5) 71/12	
	HAMAOKA-2 BWR 13 3 2 2(C) 4 2 8-79 72/ 9	
	MIHAMA-1 PWR 21 1 8-110 66/11	
	GENKAI-1 PWR 24 1 8-118 70/ 5	
	IKATA PWR 28 6 8-116 72/ 5	

SWDS CONCENTR ATED WAS TE STOR AGE TANK 803410

SWDS	CONCENTR ATED WAS TE STOR AGE TANK	803410
	(1)NUMBER (2)CAPACITY (3)MATERIAL (5)REMARKS	
	(1) (2) (3) (4) (5)	
	DNAGAWA BWR 4 2 55 MT1 0.5 YEAR/1 TOTAL WASTE 8-10-(5) 70/ 5	
	HAMAOKA-1 BWR 5 3 40 MT1 0.5 MONTH/1 TOTAL WASTE 8-91 70/ 5	
	FUKUSIMA-2,3 BWR 7 3 MT1 0.5 MONTH/1 TOTAL WASTE 22 70/ 8	
	FUKUSIMA-5 BWR 9 3 MT1 0.5 MONTH/1 (COMMON WITH 6600) 8-10-(5) 71/ 2	
	FUKUSIMA-4 BWR 10 3 MT1 0.5 MONTH/1 TOTAL WASTE 8-10-(5) 71/ 8	
	FUKUSIMA-6 BWR 11 1 MT1 0.5 MONTH TOTAL WASTE 8-10-(5) 71/12	
	TOOKAI-2 BWR 12 3 MT1 4 MONTH TOTAL WASTE 8-10-(5) 71/12	
	HAMAOKA-2 BWR 13 3 2 MONTH 8-79 72/ 9	

SWDS SPENT RESIN STORAGE TANK 803420

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SWDS	SPEIT	RESIN	STORAGE	TANK	803420					
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS		
					(1)	(2)	(3)	(4)	(5)	
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL		
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)					
PLANT NAME					(1)	(2)	(3)	(4)	(5)	
ONAGAWA	BWR	4	2	10	MT2	1	YEAR/1	TOTAL WASTE	8-10-(5)	70/ 5
HAMAOKA-1	BWR	5	2	50					8-91	70/ 5
FUKUSIMA-2,3	BWR	7	1		MT2	0.5	MONTH/1	TOTAL WASTE	22	70/ 8
FUKUSIMA-5	BWR	9	1		MT2	0.5	MONTH	(COMMON WITE 5,6G00)	8-10-(5)	71/ 2
FUKUSIMA-4	BWR	10	1		MT2	0.5	MONTH	TOTAL WASTE	8-10-(5)	71/ 8
FUKUSIMA-6	BWR	11	1		MT1	0.5	MONTH	TOTAL WASTE	8-10-(5)	71/12
TOOKAI-2	BWR	12	1		MT2	5	YEAR	TOTAL WASTE	8-10-(5)	71/12
HAMAOKA-2	BWR	13	2			2	YEAR/1		8-79	72/ 9
MIHAMA-1	PWR	21	1	8.5	MT2				8-110	66/11
GENKAI-1	PWR	24	1	8.5	MT2				8-118	70/ 5
IKATA	PWR	28	6	9	MT2				8-116	72/ 5

SWDS	PHASE	SEPARATO R	TANK	803430							
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS			
					(1)	(2)	(3)	(4)	(5)		
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL			
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)						
PLANT NAME					(1)	(2)	(3)	(4)	(5)		
					NA1=PHASE SEPARATOR			NA2=SHIYOOZUMU FUNMATU JUSHI CHOZOO TANK			
					NA3=GENSHIRO-REJKYAKUZAI ZYODKA-KEI FUNMATU JUSHI CHOZOO TANK			NA4=GENSHIRO-JYODKA-KEI CHINKOO HUNRI S00			
ONAGAWA	BWR	4	2	60	MT2	NA4	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	70/ 5
HAMAOKA-1	BWR	5	2	30		NA3				8-91	70/ 5
FUKUSIMA-2,3	BWR	7	2			NA1	2.5	YEAR/1	TOTAL WASTE	22	70/ 8
FUKUSIMA-5	BWR	9	2		MT1	NA1	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/ 2
FUKUSIMA-4	BWR	10	2		MT1	NA1	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/ 8
FUKUSIMA-6	BWR	11	2		MT2	NA4	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/12
TOOKAI-2	BWR	12	2		MT1	NA2	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/12
HAMAOKA-2	BWR	13	2			NA3	2.5	YEAR/1		8-79	72/ 9

SWDS	WASTE	SLUDGE	STORAGE	TANK	803440					
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS		
					(1)	(2)	(3)	(4)	(5)	
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL		
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)					
PLANT NAME					(1)	(2)	(3)	(4)	(5)	
FUKUSIMA-2,3	BWR	7	1		MT1	1	DAY/1	TOTAL WASTE	22	70/ 8
FUKUSIMA-5	BWR	9	1		MT1	1	DAY	(COMMON WITH 6G00)	8-10-(5)	71/ 2

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SWDS	WASTE	SLUDGE	STORAGE	TANK	803440					
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS		
					(1)	(2)	(3)	(4)	(5)	
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL		
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)					
PLANT NAME					(1)	(2)	(3)	(4)	(5)	
FUKUSIMA-4	BWR	10	1		MT1	1	DAY	TOTAL WASTE	8-10-(5)	71/ 8
FUKUSIMA-6	BWR	11	1		MT1	2	WEEK	TOTAL WASTE	8-10 (5)	71/12
TOOKAI-2	BWR	12	3		MT1	5	YEAR/3	TOTAL WASTE	8-10-(5)	71/12

SWDS	WASTE	SLUDGE	SEPARATE	TANK	803450					
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS		
					(1)	(2)	(3)	(4)	(5)	
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL		
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)					
PLANT NAME					(1)	(2)	(3)	(4)	(5)	
ONAGAWA	BWR	4	4	100	MT1	10	MONTH/1	TOTAL WASTE	8-10-(5)	70/ 5

SWDS	FILTRATE D	SLUDGE	STORAGE	TANK	803460					
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS		
					(1)	(2)	(3)	(4)	(5)	
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL		
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)					
PLANT NAME					(1)	(2)	(3)	(4)	(5)	
HAMAOKA-1	BWR	5	4	90					8-91	70/ 5
HAMAOKA-2	BWR	13	4				8	MONTH/1	8-79	72/ 9

SWDS	CONDENSE	SYSTEM	RESIN POWDER	STORAGE	803470					
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS		
					(1)	(2)	(3)	(4)	(5)	
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL		
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)					
PLANT NAME					(1)	(2)	(3)	(4)	(5)	
HAMAOKA-1	BWR	5	3	95					8-91	70/ 5

SWDS	PURIFY	SYSTEM	FILT. SLUDGE	STORAGE	803480					
					(1)NUMBER	(2)CAPACITY	(3)MATERIAL	(5)REMARKS		
					(1)	(2)	(3)	(4)	(5)	
					M3/1			MT1=CARBON STEEL MT2=STAINLESS STEEL		
					HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)					
PLANT NAME					(1)	(2)	(3)	(4)	(5)	
FUKUSIMA-6	BWR	11	1		MT2	10	YEAR/1	TOTAL WASTE	8-10-(5)	71/12

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SWDS	FUEL PDN D	SLUDGE STORAGE TANK	STORAGE TANK	STORAGE	803490				
						(1)NUMBER			
						(2)CAPACITY	M3/1		
						(3)MATERIAL	MT1=CARBON STEEL MT2=STAINLESS STEEL		
						(5)REMARKS	HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)		
PLANT NAME						(1) (2) (3) (4) (5)			
FUKJSIMA-6	BWR	11	1	MT1	2	WEEK	TOTAL WASTE	8-10-(5)	71/12
HAMADKA-2	BWR	13	2		2	YEAR/1		8-79	72/ 9
SWDS	SYSTEM DRAIN	FILTER	SLUDGE STORAGE	STORAGE	803500				
						(1)NUMBER			
						(2)CAPACITY	M3/1		
						(3)MATERIAL	MT1=CARBON STEEL MT2=STAINLESS STEEL		
						(5)REMARKS	HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)		
PLANT NAME						(1) (2) (3) (4) (5)			
FUKJSIMA-6	BWR	11	2	MT1	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/12
SWDS	SINKING TANK OF	CONDENSE D WATER	PURIFY	STORAGE	803510				
						(1)NUMBER			
						(2)CAPACITY	M3/1		
						(3)MATERIAL	MT1=CARBON STEEL MT2=STAINLESS STEEL		
						(5)REMARKS	HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)		
PLANT NAME						(1) (2) (3) (4) (5)			
ONAGAWA	BWR	4	2	50	MT1	45	DAY/1	TOTAL WASTE	8-10-(5) 70/ 5
SWDS	CONCENTRATED	LIQUID WASTE	WEIGHING	STORAGE	803520				
						(1)NUMBER			
						(2)CAPACITY	M3/1		
						(3)MATERIAL	MT1=CARBON STEEL MT2=STAINLESS STEEL		
						(5)REMARKS	HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)		
PLANT NAME						(1) (2) (3) (4) (5)			
FUKJSIMA-6	BWR	11	1	200	MT1			8-10-(5)	71/12
SWDS	SPELT RESIN	STORAGE TANK	STORAGE	TANK	803530				
						(1)NUMBER			
						(2)CAPACITY	M3/1		
						(3)MATERIAL	MT1=CARBON STEEL MT2=STAINLESS STEEL		
						(5)REMARKS	HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)		
PLANT NAME						(1) (2) (3) (4) (5)			
FUKJSIMA-2*3	BWR	7	1	MT2	5	YEAR	(COMMON WETH 1,2G00)	22	70/ 8
SWDS	WASTE SLUDGE	STORAGE TANK	UNDERGRO	STORAGE	803540				

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SWDS	WASTE SLUDGE	STORAGE TANK	UNDERGRO	STORAGE	803540					
						(1)NUMBER				
						(2)CAPACITY	M3/1			
						(3)MATERIAL	MT1=CARBON STEEL MT2=STAINLESS STEEL			
						(5)REMARKS	HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)			
PLANT NAME						(1) (2) (3) (4) (5)				
FUKJSIMA-2*3	BWR	7	1	MT2	5	YEAR	(COMMON WETH 1,2G00)	22	70/ 8	
						(1)NUMBER				
						(2)CAPACITY	M3/1			
						(3)MATERIAL	MT1=CARBON STEEL MT2=STAINLESS STEEL			
						(5)REMARKS	HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)			
PLANT NAME						(1) (2) (3) (4) (5)				
DRY-WELL TYPE						SIZE				
						822220				
PLANT NAME						TYPE	SPHERE	CYLINDER	HEADER	TOTAL
							DIA ID M	DIA ID M	DIA M	HEIGHT M
JPDR-1	BWR	1	NONE							/
JPDR-2	BWR	2	NONE							/
TSURUGA	BWR	3	FLASK	18.28 M	8.5 M				32.84 M	R-9 66/ 8
ONAGAWA	BWR	4	FLASK	19.2 M	9.8 M	1.13 M			33.1 M	8-12-(2) 70/ 5
HAMADKA-1	BWR	5	FLASK	19.2 M	9.8 M	1.03(ID)			33.1 M	8-98 70/ 5
FUKJSIMA-1	BWR	6	FLASK	17.7 M	9.6 M				32. M	R-9 66/ 8
FUKJSIMA-2*3	BWR	7	FLASK	20.0 M	10.9 M				34.1 M	70/ 5
SHIWANE	BWR	8	FLASK	17.7 M	9.6 M				32. M	70/ 5
FUKJSIMA-5	BWR	9	FLASK	20.0 M	10.9 M	1.46 M			34.1 M	8-12-(2) 71/ 2
FUKJSIMA-4	BWR	10	FLASK	20.0 M	10.9 M	1.46 M			34.1 M	8-12-(2) 71/ 8
VERMONT YANKEE	BWR	52	FLASK							70/ 5
HILLSTON	BWR	54	FLASK	19.5 M	10.4 M				33.5 M	R-9 66/ 8
DRESDEN-2	BWR	56	FLASK	19.5 M	10.7 M					R-9 66/ 8
OYSTER CREEK	BWR	57	FLASK	36.6 M	9.8 M				32. M	R-9 66/ 8
DUANE ARNOLD	BWR	58	FLASK							A-2 Pa 70/ 7
DRY-WELL FREE						VOLUME				
						822240				
PLANT NAME						(DRY-WELL)	(DRY-WELL)+(VENT TUBE)			
TSURUGA	BWR	3				4030. CUBM				R-9 66/ 8
ONAGAWA	BWR	4	3490. CUBM			3770. CUBM				8-12-(2) 70/ 5
HAMADKA-1	BWR	5				3740. CUBM				8-98 70/ 5
FUKJSIMA-1	BWR	6	3000. CUBM							70/ 5
FUKJSIMA-2*3	BWR	7	3770. CUBM							70/ 5
SHIWANE	BWR	8	3000. CUBM							70/ 5
FUKJSIMA-5	BWR	9	3770. CUBM			4240. CUBM				8-12-(2) 71/ 2
FUKJSIMA-4	BWR	10	3770. CUBM			4240. CUBM				8-12-(2) 71/ 8
VERMONT YANKEE	BWR	52				3800. CUBM				A-2 Pa 70/ 5
DRESDEN-2	BWR	56				5100. CUBM				R-9 66/ 8
DUANE ARNOLD	BWR	58				3740. CUBM				A-2 Pa 70/ 5

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DRY-WELL DESIGN-P DESIGN-T DESIGN LEAK RATE 822260

PLANT NAME	BWR	DESIGN-PRESSURE INNER / OUTER KG/SQCMG	DESIGN-TEMP C	DESIGN LEAK RATE P.C/DAY		
TSURUGA	3	4.36	138. C		R-9	66/ 8
DNAGAWA	4	3.92 / 0.14	138. C	0.5 AIR.RT.DES.P	8-12-(3)	70/ 5
HAMAOKA-1	5	3.92 / 0.14	138. C	0.5 AIR.RT.DES.P	8-99	70/ 5
FUKUSIMA-1	6	4.35	138. C	0.5 AIR.RT.DES.P		70/ 5
FUKUSIMA-2,3	7	3.92	138. C	0.5 AIR.RT.DES.P		70/ 5
SHIMANE	8	3.94	138. C	0.5 AIR.RT.DES.P		70/ 5
FUKUSIMA-5	9	3.92 / 0.14	138. C	0.5 AIR.RT.DES.P	8-12-(3)	71/ 2
FUKUSIMA-4	10	3.92 / 0.14	138. C	0.5 AIR.RT.DES.P	8-12-(3)	71/ 8
VERMONT YANKEE	52	3.92 / 0.14	138. C			70/ 5
MILLSTON	54	4.36	138. C		R-9	66/ 8
DRESDEN-2	56	4.36	138. C			/
OYSTER CREEK	57	4.36	138. C		R-9	66/ 8
DUANE ARNOLD	58	3.92 / 0.14	138. C		A-2 P4	70/ 7

DRY-WELL S.CHAMB. MATERIAL NDT 822280

PLANT NAME	BWR	MATERIAL	NDT		
DNAGAWA	4	ASME SA-516 GRADE 60 DR 70	-17. DEG C	8-12-(3)	70/ 5
HAMAOKA-1	5	ASME A-516		8-99	70/ 5
FUKUSIMA-5	9	ASME SA-516 GRADE 70	-17. DEG C	8-12-(3)	71/ 2
FUKUSIMA-4	10	ASME SA-516 GRADE 70	-17. DEG C	8-12-(3)	71/ 8

PWR REACTOR CONTAIN R TYPE 822310

PLANT NAME	PWR	TYPE			
MIHAMA-1	21	ZY00BU-HANKYUU-GATA KABU-SARA-GATA KAGAMI ENT00-GATA		BK80-2 P26	71/ 8
MIHAMA-2	22	ZY00BU-HANKYUU-GATA KABU-SARA-GATA KAGAMI ENT00-GATA		BK80-2 P26	71/ 8
TAKAHAMA-2	23	ZY00BU HANKYUUGATA KABUSARAGATA KAGAMI ENT00GATA		8-111	70/ 5
GENKAI-1	24	ZY00BU HANKYUUGATA KABUHANDAEN KAGAMI ENT00KEI		8-126	70/ 5
TAKAHAMA-1	25	ZY00BU-HANKYUU-GATA KABU-SARA-GATA KAGAMI ENT00-GATA		BK80-2 P26	71/ 8
OOI -1,2	26	HYBRID		/	/
MIHAMA-3	27	ZY00BU HANKYUUGATA KABUSARAGATA KAGAMI ENT00GATA		8-111	71/ 8

REACTOR CONTAIN R PWR DESIGN-P DESIGN-T LEAKRATE 822330

PLANT NAME	PWR	DESIGN-P CONDITION(A)=AT ROOM TEMP,DESIGN-P,AIR CONDITION(B)=AT DESIGN PRESSURE CONDITION(C)=AT TEST PRESSURE	DESIGN-T	LEAK RATE		
MIHAMA-1	21	2.4 KG/SQCMG	133. DEG.C	LE 0.1 P.C/DAY CONDITION(B)	BK80-2 P26	71/ 8
MIHAMA-2	22	2.5 KG/SQCMG	137. DEG.C	LE 0.1 P.C/DAY CONDITION(B)	BK80-2 P26	71/ 8
TAKAHAMA-2	23	2.4 KG/SQCMG	122. DEG.C	LE 0.1 P.C/DAY CONDITION(A)	8-111	70/ 5
GENKAI-1	24	2.45KG/SQCMG	141. DEG.C	LE 0.1 P.C/DAY CONDITION(A)	8-126	70/ 5

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REACTOR CONTAIN R PWR DESIGN-P DESIGN-T LEAKRATE 822330

PLANT NAME	PWR	DESIGN-P CONDITION(A)=AT ROOM TEMP,DESIGN-P,AIR CONDITION(B)=AT DESIGN PRESSURE CONDITION(C)=AT TEST PRESSURE	DESIGN-T	LEAK RATE		
TAKAHAMA-1	25	2.4 KG/SQCMG	130. DEG.C	LE 0.1 P.C/DAY CONDITION(C)	BK80-2 P26	71/ 8
OOI -1,2	26	0.84KG/SQCMG	116. DEG.C	LE 0.5 P.C/DAY CONDITION(A)	8-113	71/ 1
MIHAMA-3	27	2.4 KG/SQCMG	122. DEG.C	LE 0.1 P.C/DAY CONDITION(A)	8-111	71/ 8

PWR REACTOR CONTAIN R MATERIAL 822350

PLANT NAME	PWR	CONTAINER MATERIAL			
MIHAMA-1	21	CARBON STEEL		BK80-2 P26	71/ 8
MIHAMA-2	22	CARBON STEEL		BK80-2 P26	71/ 8
TAKAHAMA-2	23	CARBON STEEL		BK80-2 P26	71/ 8
TAKAHAMA-1	25	CARBON STEEL		BK80-2 P26	71/ 8
MIHAMA-3	27	CARBON STEEL (ASTM A516 GR70A 300 SOOT00)		BK80-2 P26	71/ 8
OOI -1,2	26	UPPER=CARBON STEEL		8-113	71/ 1
OOI -1,2	26	LOWER=CONCRETE WITH CARBON STEEL LINING		8-113	71/ 1

PWR REACTOR CONTAIN R SIZE 822370

PLANT NAME	PWR	INNER DIA	HEIGHT	SIDE WALL THICKNESS		
TAKAHAMA-2	23	38. M	81. M	38 MM	8-111	70/ 5
GENKAI-1	24	33.4 M	66.5 M	35 MM	8-126	70/ 5
OOI -1,2	26	37. M	52. M	FROM 12 TO 38 MM	8-113	71/ 1
MIHAMA-3	27	38. M	81. M	38 MM	8-111	71/ 8

PWR REACTOR CONTAIN R SHIELD BUILDING 822390

PLANT NAME	PWR	TYPE	MATERIAL	INNER DIA	HEIGHT		
MIHAMA-1	21	TATE OKI ENT00	CONCRETE	36. M	50. M(CCHI000)	BK80-2 P26	71/ 8
MIHAMA-2	22	TATE OKI ENT00	CONCRETE	37. M	52. M(CCHI000)	BK80-2 P26	71/ 8
TAKAHAMA-2	23	TATE OKI ENT00	CONCRETE	42. M	81. M(CCHI000)	BK80-2 P26	71/ 8
GENKAI-1	24	CYLINDER	CONCRETE	36.4 M	43. M(CCHI000)	8-126	70/ 5
TAKAHAMA-1	25	TATE OKI ENT00	CONCRETE	42. M	80. M(CCHI000)	BK80-2 P26	71/ 8
OOI -1,2	26	CYLINDER DOME	CONCRETE	40. M	54. M	8-113	71/ 1
MIHAMA-3	27	TATE OKI ENT00	CONCRETE	42. M	81. M(CCHI000)	BK80-2 P26	71/ 8

S.CHAMB. TYPE SIZE AND VOLUME 822420

PLANT NAME	BWR	TYPE	ANN-CIRCLE MEAN-DIA M	ANN-SEC. DIA M	FREE VOLUME CUBM	POOL WATER VOL. CUBM		
TSURUGA	3	ANNULAR	26.8 M	8.24 M	4490.(TDT)	1620. CUBM	R-9	66/ 8

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S.CHAMB. TYPE	SIZE AND VOLUME	822420					
PLANT NAME	TYPE	ANN-CIRCLE MEAN-DIA M	ANN-SEC. DIA M	FREE VOLUME CUBM	POOL WATER VOL. CUBM		
ONAGAWA	BWR 4 ANNULAR	31.4 M	8.1 M	2820. CUBM	1850. CUBM	8-12-(2)	70/ 5
HAMAOKA-1	BWR 5 ANNULAR	31.7 M*	7.6 M*	2690. CUBM*	1670. CUBM*	8-98	70/ 5
HAMAOKA-1	BWR 5 ANNULAR	31.4 M	8.1 M	2798. CUBM	1880. CUBM	85-4-2	70/11
FUKUSIMA-1	BWR 6 ANNULAR	29.6 M	8.08 M	2620. CUBM	1800. CUBM	R-9	66/ 8
FUKUSIMA-2+3	BWR 7 ANNULAR	33.5 M					/
SHIMANE	BWR 8 ANNULAR	29.6 M			1800. CUBM		/
FUKUSIMA-5	BWR 9 ANNULAR	33.5 M	8.9 M	3160. CUBM	2980. CUBM	8-12-(3)	71/ 2
FUKUSIMA-4	BWR 10 ANNULAR	33.5 M	8.9 M	3160. CUBM	2980. CUBM	8-12-(3)	71/ 8
VERMONT YANKEE	RWR 52 ANNULAR			3066. CUBM	2208. CUBM	A-2	70/ 5
MILLSTON	BWR 54 ANNULAR	31.7 M	8.84 M	3110. CUBM	2660. CUBM	R-9	66/ 8
DRESDEN-2	BWR 56 ANNULAR	29.6 M		3110. CUBM	3350. CUBM	R-9	66/ 8
OYSTER CREEK	BWR 57 ANNULAR	30.78 M	8.84 M			R-9	66/ 8
DUANE ARNOLD	BWR 58 ANNULAR			2690. CUBM	1670. CUBM	A-2 P5	70/ 7

S.CHAMB. DESIGN-P DESIGN-T	822440			
PLANT NAME	DESIGN-PRESSURE INNER/OUTER KG/SQCMG	DESIGN-TEMP DEG C		
TSURUGA	BWR 3 4.36 / KG/SQCMG		R-9	66/ 8
ONAGAWA	BWR 4 3.92 / 0.14 KG/SQCMG	138. DEG C	8-12-(3)	70/ 5
HAMAOKA-1	BWR 5 3.92 / 0.14 KG/SQCMG	138. DEG C	8-99	70/ 5
FUKUSIMA-1	BWR 6 4.36 / KG/SQCMG		R-9	66/ 8
FUKUSIMA-5	BWR 9 3.92 / 0.14 KG/SQCMG	138. DEG C	8-12-(3)	71/ 2
FUKUSIMA-4	BWR 10 3.92 / 0.14 KG/SQCMG	138. DEG C	8-12-(3)	71/ 8
VERMONT YANKEE	BWR 52 3.92 / 0.14 KG/SQCMG	138. DEG C	A-2	70/ 5
MILLSTON	RWR 54 4.36 / KG/SQCMG		R-9	66/ 8
DRESDEN-2	BWR 56 4.36 / KG/SQCMG		R-9	66/ 8
DUANE ARNOLD	BWR 58 3.92 / 0.14 KG/SQCMG	138. DEG C	A-2 P4	70/ 7

S.CHAMB. VENT TUBE	NUMBER AND SIZE	822460	
ONAGAWA	BWR 4 NO.=8 DIA=1.6 M	8-12-(3)	70/ 5
HAMAOKA-1	BWR 5 NO.=8 ID =1.45 M	8-98,99	70/ 5
FUKUSIMA-1	BWR 6 NO.=8 ID =1.75 M		70/ 5
FUKUSIMA-2+3	BWR 7 NO.=8 ID =2.06 M		70/ 5
SHIMANE	BWR 8 NO.=8 ID =1.75 M		70/ 5
FUKUSIMA-5	BWR 9 NO.=8 ID =2.06 M	8-12-(3)	71/ 2
FUKUSIMA-4	BWR 10 NO.=8 ID =2.06 M	8-12-(3)	71/ 8

S.CHAMB. DOWN-C. TUBE	NUMBER HEADER DIA	822480	
ONAGAWA	BWR 4 DOWN-C. TUBE NO.=64 HEADER DIA=1.13 M	8-12-(2),(3)	70/ 5

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S.CHAMB. DOWN-C. TUBE	NUMBER HEADER DIA	822480	
HAMAOKA-1	BWR 5 DOWN-C. TUBE NO.=48		8-99 70/ 5
FUKUSIMA-5	BWR 9 DOWN-C. TUBE NO.=96	HEADER DIA=1.46 M	8-12-(2,3) 71/ 2
FUKUSIMA-4	BWR 10 DOWN-C. TUBE NO.=96	HEADER DIA=1.46 M	8-12-(2,3) 71/ 8

ICE COND. SIZE	825000			
PLANT NAME	INNER DIA	OUTER DIA	ICE BED HEIGHT	
DDI -1+2	PWR 26 28.7 M	36.6 M	14.6 M	8-115 71/ 1

ICE COND. CAPACITY COMPARTM ENT	DOOR OPERAT-P	825200	
PLANT NAME	CAPACITY	DOOR OPERAT-P	
DDI -1+2	PWR 26 1250. TON	0.0005 KG/SQCM-G	8-115 71/ 1

CONTAINER SPRAY PUMP	825410		
PLANT NAME	TYPE	NUMBER CAPACITY HEAD	
TAKAHAMA-2	PWR 23 YOKOKU ENSHIN MOTOR DRIVE	NO=4 396 CUBM/H/1 155. M	8-112 70/ 5
GENKAI-1	PWR 24 YOKOKU ENSHIN MOTOR DRIVE	NO=2 600 CUBM/H/1 135. M	8-131 70/ 5
DDI -1+2	PWR 26 ENSHIN MOTOR DRIVE	NO=2 1000 CUBM/H/1 124. M	8-115 71/ 1
MIHAMA-3	PWR 27 YOKOKU ENSHIN MOTOR DRIVE	NO=4 423 CUBM/H/1 124. M	8-112 71/ 8

CONTAINER ANNULUS AIR RECIRC. FAN	825430	
PLANT NAME	NUMBER CAPACITY	
TAKAHAMA-2	PWR 23 NO.=2 20400 CUBM/H/1	8-113 70/ 5
GENKAI-1	PWR 24 NO.=2 6000 CUBM/H/1	8-130 70/ 5
DDI -1+2	PWR 26 NO.=2 36600 CUBM/H/1	8-115 71/ 1
MIHAMA-3	PWR 27 NO.=2 6800 CUBM/H/1	8-113 71/ 8

CONTAINER SPRAY H.EXCH.	825450	
PLANT NAME	(1)TYPE (2) NO. (3) CAP. (4) (DESIGN PRES.) (5) (DESIGN TEMP.) (6) (TUBE) (7) (SHELL) (8) (SHELL)	
GENKAI-1	PWR 24 TP1 2 1.54E7/1 28. 10. 150. 95.	8-131 70/ 5
IKATA	PWR 28 TP1 2 1.57E7/1 28. 10. 150. 95.	8-127 72/11

CONTAINER IODINE REMOVE CHEMICAL TANK	825490	
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CONTAINER	IODINE	REMOVE	CHEMICAL TANK	825490		
PLANT NAME	NUMBER	CAPACITY	CHEMICAL			
GENKAI-1	PWR 24 NO.=1	26. CUBM	NACL		8-131	70/ 5
REACTOR BUILDING SIZE				827200		
PLANT NAME	R.BUILD.SIZE M	BASE SIZE	HEIGHT			
DNAGAWA	BWR 4 43*43*65(H) M		65=48.3+16.7		8-12-(6)	70/ 5
HAMAOKA-1	BWR 5 42*42*61(H) M	65*65 M	61=46. +15.		8-102,125	70/ 5
FUKUSIMA-5	BWR 9 46*46*62.5(H)M		62.5=46. +16.5		8-12-(7)	71/ 2
FUKUSIMA-4	BWR 10 46*46*62.5(H)M		62.5=46. +16.5		8-12-(7)	71/ 8
REACTOR BUILDING DESIGN LEAK RATE				827400		
DNAGAWA	BWR 4	LT 100.PC/DAY (AT 6.4 MM NEGATIVE WATER HEAD)			8-12-(6)	70/ 5
HAMAOKA-1	BWR 5	LT 100.PC/DAY (AT 6. MM NEGATIVE WATER HEAD)			8-102	70/ 5
FUKUSIMA-5	BWR 9	LT 100.PC/DAY (AT 6.4 MM NEGATIVE WATER HEAD)			8-12-(7)	71/ 2
FUKUSIMA-4	BWR 10	LT 100.PC/DAY (AT 6.4 MM NEGATIVE WATER HEAD)			8-12-(7)	71/ 8
MAKE-UP WATER DEMINE. CAPACITY				831220		
DNAGAWA	BWR 4	35. T/H *2			8-13-(1)	70/ 5
HAMAOKA-1	BWR 5	35. T/H *2=(1200. T/DAY)			8-105	70/ 5
FUKUSIMA-5	BWR 9	= 500. T/DAY *2			8-13-(1)	71/ 2
FUKUSIMA-4	BWR 10	= 500. T/DAY *2			8-13-(1)	71/ 8
TAKAHAMA-2	PWR 23	COMMON WITH TAKAHAMA NO.1			8-117	70/ 5
MAKE-UP WATER DEMINE. WATER QUALITY				831240		
MIXED BED OUTLET WATER QUALITY						
PLANT NAME	SOLID	SILICA(SIO2)	E.CONDTVITY MICRO MM/CM	-CL ION		
DNAGAWA	BWR 4	LE 0.1 PPM	LE 0.01 PPM	LE 1.0 (AT 25C)	LE 0.05PPM	8-13-(1) 70/ 5
HAMAOKA-1	BWR 5	LE 0.1 PPM	LE 0.01 PPM	LE 1.0 (AT 25C)		8-105 70/ 5
FUKUSIMA-5	BWR 9	LE 0.1 PPM	LE 0.01 PPM	LE 1.0 (AT 25C)	LE 0.01PPM	8-13-(1) 71/ 2
FUKUSIMA-4	BWR 10	LE 0.1 PPM	LE 0.01 PPM	LE 1.0 (AT 25C)	LE 0.01PPM	8-13-(1) 71/ 8
AIR COMPRES. SYSTEM AIR-COMP FOR CONTROL						834220
JPDR-2	BWR 2	(T) TATE-GATA WATER COOL OIL FREE	NO.=1*(1 YORI)		KDN-6 P19	/
JPDR-2	BWR 2	(D) TATE-GATA CARBON RING OIL FREE	NO.=1		KDN-6 P20	/
DNAGAWA	BWR 4	TYPE=RECIPRO OIL FREE	NO.=1*(1 YORI)		8-13-(3)	70/ 5
HAMAOKA-1	BWR 5		NO.=1*(1 YORI)		8-106	70/ 5
TAKAHAMA-2	PWR 23		NO.=2		8-118	70/ 5

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AIR COMPRES. SYSTEM AIR-COMP FOR CONTROL	834220					
GENKAI-1	PWR 24		NO.=2 8-134 70/ 5			
AIR COMPRES. SYSTEM AIR-COMP FOR CONTROL			834240			
JPDR-2	BWR 2	(T) CAP.= 1.59 NORM CUBM/MIN	DELIV.P = 7.0 KG/SQCMG KDN-6 P20 70/11			
JPDR-2	BWR 2	(D) CAP.= 2.31 NORM CUBM/MIN	DELIV.P = 7.0 KG/SQCMG KDN-6 P20 70/11			
DNAGAWA	BWR 4	CAPACITY= 5.6 NORM CUBM/MIN	DELIV.P = 7.0 KG/SQCMG 8-13-(3) 70/ 5			
AIR COMPRESS. SY STEM AIR-COMP . FOR FACILITY			834260			
JPDR-2	BWR 2	TATE GATA WATER COOL OIL FEED DOUBLE CONTROL NO.=1	KDN-6 P40 70/11			
DNAGAWA	BWR 4	TYPE=RECIPROCAL NO.=1	8-13-(3) 70/ 5			
HAMAOKA-1	BWR 5	THIS COMPRESSOR IS TO BE USED AS BACK UP FOR CONTROL	8-106 70/ 5			
TAKAHAMA-2	PWR 23	NO.=2 (COMMON WITH NO.1 PLANT)	8-118 70/ 5			
GENKAI-1	PWR 24	NO.=2	8-134 70/ 5			
AIR COMPRESS. SY STEM AIR-COMP . FOR FACILITY			834280			
JPDR-2	BWR 2	CAPACITY= 2.84 CUBM/MIN	KDN-6 P40 70/11			
DNAGAWA	BWR 4	CAPACITY=12.8 NORM CUBM/MIN	DELIV.P = 7.0 KG/SQCMG 8-13-(3) 70/ 5			
BOILER FOR FACILITY			835000			
DNAGAWA	BWR 4	NO.=4 CAPACITY= 10. TON/HR (ABOUT)	8-13-(3) 70/ 5			
FUKUSIMA-5	BWR 9	NO.=2 CAPACITY= 12. TON/HR (ABOUT)	8-13-(3) 71/ 2			
FUKUSIMA-4	BWR 10	NO.=2 CAPACITY= 10. TON/HR (ABOUT)	8-13-(2) 71/ 8			
N.DATA K-EFF SHUTDOWN MARGINE CONTROL WURTH			842220			
	(A)	(B)	(C)	(D)	(E)	(F)
	(B)=(C-A)		(C)=(D+E)			
PLANT NAME	K-EFF(TOTAL)	SHUT.D.M SM=T-K	C-TOT-W T=R+C	C-RDD-W	CURTAIN PC/DK/K	
JPDR-1	BWR 1	K=27. SM=4. T=31. R=20. C=11.				70/ 8
JPDR-2	BWR 2	K=21.* SM=8.2 T=29.2 R=21.9 C=7.3				70/ 8
JPDR-2	BWR 2	K=29.2 SM=8.2 T=29.2 R=21.9 C=7.3				71/ 1
TSURUGA	BWR 3	K=24. SM=4. T=28. R=18. C=10				66/ 8
DNAGAWA	BWR 4	K=25.(I) 13.(F) SM=5. T=30. R=18. C=12				8-14-(2,4) 70/ 5
HAMAOKA-1	BWR 5	K=25.(I) 13.(F) SM=4. T=29.* R=17.* C=12				8-112 70/ 5
HAMAOKA-1	BWR 5	K=25.(I) 13.(F) SM=4. T=30. R=18. C=12				85-4-2 70/11
HAMAOKA-1	BWR 5	K=12. SM=5. T=17. R=17. C=0				95-2-3 P9 71/ 9
N.DATA NEUTRON FLUX FAST EPI-TH THERMAL						842420

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N.DATA NEUTRON FLUX FAST EPI-TH THERMAL 842420

HAMAOKA-1 BWR 5 F=15. Y=4.7 E13 N/SQCM/S

95-2-3 P11 71/ 9

N.DATA K-EFF SHUTDOWN MARGINE CONTROL WORTH 842220

FUKUSIMA-1 BWR 6 K=24. SM=4. T=28. R=18. C=10
 FUKUSIMA-2+3 BWR 7 K=25.* SM=4.* T=29.* R=17.* C=12.*
 FUKUSIMA-2+3 BWR 7 K=12. SM=5. T=17 R=17. C=0
 SHIMANE BWR 8 K=24. SM=4. T=28 R=18. C=10
 TAKAHAMA-2 PWR 23 K=20.7 HP=7
 GENKAI-1 PWR 24 K=24. HP=9
 OOI -1,2 PWR 26 K=19.9 HP=7
 MIHAMA-3 PWR 27 K=19.4
 BROWNS FERRY BWR 53 K=25.
 MILLSTON BWR 54 K=26.
 DRESDEN-1 PWR 55 K=12.(1) R=15.
 DRESDEN-2 BWR 56 K=26.(1) R=18.
 OYSTER CREEK BWR 57 K=27.
 BURLINGTON PWR 71 K=29.3

70/ 5
/ 5
82-2-3 P12 70/ 8
70/ 5
8-127 70/ 5
80-9-1 70/ 5
8-129 71/ 1
8-126 71/ 8
GSK-19 69/ 2
R-9 66/ 8
DNR V4 P91 62/ 8
DNR V7 68/ 8
R-9 66/ 8
GSK-19 69/ 2

N.DATA K-EFF SHUTDOWN MARGINE CONTROL WORTH 842230

(A)=EXCESS REACTIVITY (COLD CLEAN) ***UNIT=PERCENT***
 (R)=SHUT-DOWN MARGINE
 (C)=TOTAL CONTROL WORTH
 (F)=BURNABLE POISON (SEE 73372,73373)
 --- (A) --- -- (B) --- -- (C) --- -- (D) --- -- (E) --- -- (F) ---
 K-EFF CONTROL BDRUM BURNABLE
 (TOTAL) C=(D+E) CLUSTER NODD POISON
 CHOOSE I (BOL)(EOL)

TAKAHAMA-2 PWR 23 K=20.7 C=22.0 D= 6.0 GE 16.0 F=7 8-127 70/ 5
 GENKAI-1 PWR 24 K=24.0 C=25.0 D= 5.0 GE 20.0 F=7 0.6 80-9-1 70/ 5
 OOI -1,2 PWR 26 K=19.9 C=21.0 D= 6.0 GE 15.0 F=9 8-129 71/ 1
 MIHAMA-3 PWR 27 K=19.4 C=21.0 D= 6.0 GE 15.0 F=7 8-127 71/ 8
 YANKEE 69 K=15.7 R=5.0 D=15.4 DNR V4 P36 61/ 8
 SAXTON 70 K=25.0 D=24.0 DNR V4 P50 61/ 8
 BURLINGTON PWR 71 K=29.3 GSK-19 69/ 2

CORE COOLANT VS FUEL VOLUME RATIO N.DATA 842240

JPDR-1 BWR 1 2.7
 JPDR-2 BWR 2 2.68
 TSURUGA BWR 3 2.38
 ONAGAWA BWR 4 2.41
 HAMAOKA-1 BWR 5 2.41

/ 8
70/ 8
R-9,80-3-3 70/ 5
8-14-(5) 70/ 5
8-108,8-113 70/ 5

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CORE COOLANT VS FUEL VOLUME RATIO N.DATA 842240

FUKUSIMA-1 BWR 6 2.38
 FUKUSIMA-2+3 BWR 7 2.41
 FUKUSIMA-5 BWR 9 2.41
 FUKUSIMA-4 BWR 10 2.41
 TAKAHAMA-2 PWR 23 3.48
 GENKAI-1 PWR 24 3.32
 OOI -1,2 PWR 26 3.59
 MIHAMA-3 PWR 27 3.48
 VERMONT YANKEE BWR 52 2.41
 BROWNS FERRY BWR 53 2.41
 MILLSTON BWR 54 2.38
 DRESDEN-2 PWR 56 2.38
 OYSTER CREEK BWR 57 2.38
 DUANE ARNOLD BWR 58 2.41
 BURLINGTON PWR 71 1.66

R-9 66/ 8
 82-2-3 P13 70/ 8
 8-14-(5) 71/ 2
 8-14-(5) 71/ 8
 8-126 70/ 5
 8-143 70/ 5
 8-129 71/ 1
 8-126 71/ 8
 A-2 /
 GSK-19 69/ 2
 R-9 66/ 8
 R-9 66/ 8
 R-9 66/ 8
 A-2 P1 70/ 7
 GSK-19 69/ 2

REFLECT. THICK. RADIAL AXIAL 842260

-----RADIAL----- --AXIAL-----
 UPPER LOWER
 PLANT NAME NOTE W+S=WATER+STEEL
 ONAGAWA BWR 4 RADIAL= GT 0.6 M AXIAL= GT 1.8 M 8-14-(5) 70/ 5
 HAMAOKA-1 BWR 5 RADIAL= GT 0.6 M AXIAL= GT 1.8 M 8-113 70/ 5
 MIHAMA-1 PWR 21 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P6 71/ 9
 MIHAMA-2 PWR 22 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P6 71/ 9
 TAKAHAMA-2 PWR 23 RADIAL= GT 0.38 M AXIAL= GT 0.25 M 8-126 70/ 5
 GENKAI-1 PWR 24 RADIAL= GT 0.38 M AXIAL= GT 0.25 M 8-143 70/ 5
 TAKAHAMA-1 PWR 25 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P6 71/ 9
 OOI -1,2 PWR 26 RADIAL= 0.38 M(ABOUT) AXIAL= 0.25 M(ABOUT) 8-129 71/ 1
 MIHAMA-3 PWR 27 RADIAL=ABOUT 0.38 M AXIAL=ABOUT 0.25 M 8-126 71/ 8
 YANKEE 69 0.203(M) DNR V4 P38 61/ 8
 SAXTON 70 0.254(M) DNR V4 P52 61/ 8
 TURKEY POINT-3,4 PWR 72 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P5 71/ 9
 H.B.ROBINSON-2 PWR 73 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P5 71/ 9
 SURRY-1,-2 PWR 74 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P5 71/ 9
 BEAVER VALLEY PWR 75 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P5 71/ 9
 NORTH ANNA-12 PWR 76 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P6 71/ 9
 JOSEPH M.FARLEY PWR 77 0.381M(W+S) 0.254M(W+S) 0.254M(W+S) BK80-4 P6 71/ 9

N.DATA EFFECT. MULTIPLICATION CONST.OF INITIAL 842280

COLD HIGH TEMP HIGH TEMP HIGH TEMP
 CLEN ZERO POWER FUEL POWER FUEL POWER
 PLANT NAME (NON POISON) (XS,SM HEIKOO)
 MIHAMA-1 PWR 21 1.211 1.167 1.114 BK80-4 P6 71/ 9

N.DATA EFFECT. MULTIPLICATION		CONST. OF INITIAL		842280			
PLANT NAME		COLD CLEN	HIGH TEMP ZERO POWER	HIGH TEMP FUEL POWER (NON POISON)	HIGH TEMP FUEL POWER (KE, SM HEIKOD)		
MIHAMA-2	PWR 22	1.22	1.17		1.10	BK80-4 P6	71/ 9
TAKAHAMA-2	PWR 23	1.207	1.163	1.137	1.094	8-126	70/ 5
GENKAI-1	PWR 24	1.23	1.17	1.14	1.10	8-143	70/ 5
TAKAHAMA-1	PWR 25	*1.207	*1.163		*1.094	BK80-4 P6	71/ 9
DDI -1,2	PWR 26	1.199	1.158	1.132	1.091	8-129	71/ 1
MIHAMA-3	PWR 27	1.194	1.150	1.124	1.082	8-126	71/ 8
TURKEY POINT-3,4	PWR 72	1.180	1.138		1.077	BK80-4 P5	71/ 9
H.B. ROBINSON-2	PWR 73	1.180	1.138		1.077	BK80-4 P5	71/ 9
SURRY-1,-2	PWR 74	1.176	1.145		1.090	BK80-4 P5	71/ 9
BEAVER VALLEY	PWR 75	1.207	1.163		1.094	BK80-4 P5	71/ 9
NORTH ANNA-12	PWR 76	1.190	1.148		1.085	BK80-4 P5	71/ 9
JOSEPH W. FARLEY	PWR 77	1.207	1.163		1.094	BK80-4 P5	71/ 9

N.DATA RODDN CONCENTRATION		INITIAL CORE		842300			
PLANT NAME		CONDITION (A) HIGH TEMP. FULL POWER NON CONTROL CLUSTERS	CONDITION (B) LOW TEMP. ZERO POWER	CONDITION (C) HEIKOD ROSHIN SYOKI			
TAKAHAMA-2	PWR 23	1300. PPM (ABOUT)	2000. PPM (KEFF=0.9)		8-127	70/ 5	
GENKAI-1	PWR 24	1300. PPM (ABOUT)	2000. PPM (KEFF=0.9)	1100. PPM	8-144	70/ 5	
DDI -1,2	PWR 26	1200. PPM (ABOUT)	1725. PPM (KEFF=0.9)		8-130	71/ 1	
MIHAMA-3	PWR 27	1200. PPM (ABOUT)	2000. PPM (KEFF=0.9)		8-127	71/ 8	

N.DATA OF REACTIVITY TEMP.		DOPPLER VOID		842320			
PLANT NAME		MODERATOR TEMP DK/K/DEG.C	DOPPLER DK/K/DEG.C	VOID DK/K/VOID(PC)	PRESSURE DK/K/(KG/SQCM)		
TAKAHAMA-2	PWR 23	FROM 0.5E-4	-1.8E-5	+0.5E-3	-0.4E-6*	8-127(R-0)	70/ 5
TAKAHAMA-2	PWR 23	TO -6.3E-4	-2.3E-5*	-2.5E-3	+5.0E-6*	8-127(R-0)	70/ 5
TAKAHAMA-2	PWR 23	FROM 0.5E-4	-1.8E-5	+0.5E-3	-0.4E-5	8-127(R-1)	70/10
TAKAHAMA-2	PWR 23	TO -6.3E-4	-2.9E-5	-2.5E-3	+5.0E-5	8-127(R-1)	70/10
GENKAI-1	PWR 24	FROM 0.5E-4	-1.8E-5	+0.5E-3	-0.5E-5	8-144	70/ 5
GENKAI-1	PWR 24	TO -6.5E-4	-2.9E-5	-2.5E-3	+5.0E-5	8-144	70/ 5
DDI -1,2	PWR 26	FROM 0E-4	-2.2E-5	+0.5E-3	+1.6E-6	8-130	71/ 1
DDI -1,2	PWR 26	TO -5.4E-4	-2.9E-5	-2.5E-3	+6.9E-6	8-130	71/ 1

N.DATA NEUTRON FLUX		FAST		EPI-TH THERMAL		842420	
PLANT NAME		FAST	EPI-TH	THERMAL	E13	N/SQCM/S	
JPR-1	BWR 1			T=1.42	E13	N/SQCM/S	70/ 8

N.DATA NEUTRON FLUX		FAST		EPI-TH THERMAL		842420	
PLANT NAME		FAST	EPI-TH	THERMAL	E13	N/SQCM/S	
JPR-2	BWR 2	F= 8.6	E=4.1	T=3.8	E13	N/SQCM/S	70/ 8
TSURUGA	BWR 3	F= 3.7*		T=2.8*	E13	N/SQCM/S	66/ 8
TSURUGA	BWR 3	F= 3.73		T=3.57	E13	N/SQCM/S	80-3-3 P32
DNAGAWA	BWR 4	F=15.		T=4.3	E13	N/SQCM/S	8-14-(6)
HAMAOKA-1	BWR 5	F=15.		T=4.0	E13	N/SQCM/S	8-113
FUKUSIMA-1	BWR 6			T=2.8*	E13	N/SQCM/S	R-9
FUKUSIMA-1	BWR 6			T=3.5	E13	N/SQCM/S	KUGE
FUKUSIMA-2,3	BWR 7	F=13.		T=4.3	E13	N/SQCM/S	82-2-3 P13
FUKUSIMA-5	BWR 9	F=13.		T=4.3	E13	N/SQCM/S	8-14-(5)
FUKUSIMA-4	BWR 10	F=13.		T=4.3	E13	N/SQCM/S	8-14-(5)
YANKEE	69	F=28.8		T=2.5(11.9)	E13	N/SQCM/S	DNR V4 P33
SAXTON	70	F=10.		T=1.5(4.9)	E13	N/SQCM/S	DNR V4 P47

H.TRANS. HEAT FLUX		MAX		MEAN		843220	
PLANT NAME		REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82	REF.2=REFER 73244				
JPR-1	BWR 1	1030200=125,MAX		226100	,MEAN	KCAL/SQCM/H	70/ 8
JPR-2	BWR 2	1350000=125,MAX	*1080000=100,MAX	381000	,MEAN	KCAL/SQCM/H	70/ 8
JPR-2	BWR 2	1349000=125,MAX	1080000=100,MAX	381000	,MEAN	KCAL/SQCM/H	KUGE
TSURUGA	BWR 3		1053000=100,MAX	318000*	,MEAN	KCAL/SQCM/H	80-3-3
TSURUGA	BWR 3			351000	,MEAN	KCAL/SQCM/H	80-3-3 P38
DNAGAWA	BWR 4		1162000=100,MAX	445000	,MEAN	KCAL/SQCM/H	8-14-(9)
HAMAOKA-1	BWR 5		1160000=100,MAX	445000	,MEAN	KCAL/SQCM/H	8-118
FUKUSIMA-1	BWR 6		1107000=100,MAX	*307000*	,MEAN	KCAL/SQCM/H	R-9
FUKUSIMA-1	BWR 6		1085000=100,MAX	352000	,MEAN	KCAL/SQCM/H	KUGE
FUKUSIMA-1	BWR 6		960402=100,MAX.			KCAL/SQCM/H	BWR/6
FUKUSIMA-5	BWR 9		1160000=100,MAX	446000	,MEAN	KCAL/SQCM/H	8-14-(10)
FUKUSIMA-4	BWR 10		1160000=100,MAX	446000	,MEAN	KCAL/SQCM/H	8-14-(10)
MIHAMA-1	PWR 21	=	1264000=100,MAX	388000	,MEAN	KCAL/SQCM/H	BK80-4 P4
MIHAMA-2	PWR 22	=	1288000=100,MAX	457000	,MEAN	KCAL/SQCM/H	BK80-4 P4
TAKAHAMA-2	PWR 23	1625000=112,MAX		518000	,MEAN	KCAL/SQCM/H	8-16
TAKAHAMA-2	PWR 23	1625000=112,MAX	1450000=100,MAX	518000	,MEAN	KCAL/SQCM/H	8-16
GENKAI-1	PWR 24	1624000=112,MAX	1450000=100,MAX	518000	,MEAN	KCAL/SQCM/H	8-17
TAKAHAMA-1	PWR 25	=	1451500=100,MAX	518183	,MEAN	KCAL/SQCM/H	BK80-4 P4
DDI -1,2	PWR 26	1762000=112,MAX	1573000=100,MAX	589000	,MEAN	KCAL/SQCM/H	8-16
MIHAMA-3	PWR 27	1625000=112,MAX	1450000=100,MAX	518000	,MEAN	KCAL/SQCM/H	8-16
VERMONT YANKEE	BWR 52		1160000=100,MAX	445000	,MEAN	KCAL/SQCM/H	A-2
BROWNS FERRY	BWR 53		1153000=100,MAX	442800	,MEAN	KCAL/SQCM/H	GSK-19
MILLSTON	BWR 54		905000=100,MAX	302000	,MEAN	KCAL/SQCM/H	R-9
DRESDEN-1	BWR 55	938500=125,MAX		255500	,MEAN	KCAL/SQCM/H	DNR V4 P94
DRESDEN-2	BWR 56		947000=100,MAX	314000	,MEAN	KCAL/SQCM/H	R-9
DYSTEM CREEK	BWR 57	1080000 (BEFORE POWER UP),MAX		293000	,MEAN	KCAL/SQCM/H	R-9

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H. TRANS.	HEAT FLUX	MAX	MEAN	943220			
REF. 1=REACTION TECHNOLOGY VOL.14-1 1971 P82							
REACTOR NAME ---REFER 73240							
PLANT NAME							
OYSTER CREEK	BWR	57	1315000 (AFTER	POWER UP) ,MAX	355000	,MEAN KCAL/SQM/H	R-9 66/ 8
DUANE ARNOLD	BWR	58		1160000=100,MAX	445000	,MEAN	A-2 P1 70/ 7
YANKEE		69		1210000=100,MAX	289750	,MEAN KCAL/SQM/H	DNR V4 P36 61/
SAXTON		70		1204572=100,MAX	371881	,MEAN KCAL/SQM/H	DNR V4 P50 61/
HURLINGTON	PWR	71		1502000=100,MAX	532600	,MEAN KCAL/SQM/H	GSK-19 69/ 2
TURKEY POINT-3,4PWR		72	=	1503500=100,MAX	465600	,MEAN KCAL/SQM/H	BK80-4 P3 71/ 9
H.B.ROBINSON-2	PWR	73	=	1503500=100,MAX	465600	,MEAN KCAL/SQM/H	BK80-4 P3 71/ 9
SURRY-1--2	PWR	74	=	1449000=100,MAX	518500	,MEAN KCAL/SQM/H	BK80-4 P3 71/ 9
BEAVER VALLEY	PWR	75	=	1503800=100,MAX	563200	,MEAN KCAL/SQM/H	BK80-4 P3 71/ 9
NORTH ANNA-12	PWR	76	=	1503800=100,MAX	563200	,MEAN KCAL/SQM/H	BK80-4 P4 71/ 9
JOSEPH M.FARLEY	PWR	77	=	1572400=100,MAX	563200	,MEAN KCAL/SQM/H	BK80-4 P4 71/ 9
OTHERS	-0	DNP1	TP1	950000=100,MAX			REF.1 /
OTHERS	-0	DNP1	TP3H	976500=100,MAX			REF.1 /
OTHERS	-0	DNP1	TP3F	976500=100,MAX			REF.1 /
OTHERS	-0	DNP1	TP5	976500=100,MAX			REF.1 /
OTHERS	-0	GAR.	TP1	684000=100,MAX			REF.1 /
OTHERS	-0	GAR.	TP2	868000=100,MAX			REF.1 /
OTHERS	-0	GAR.	TP2	950000=100,MAX	FUKUSIMA-1 S1RYDD		MEMO P6 70/ 3
OTHERS	-0	KAHL		800000=100,MAX			REF.1 /
OTHERS	-0	HUMB.	TP2	880000=100,MAX			/
OTHERS	-0	HUMB.	TP2	750000=100,MAX	FUKUSIMA-1 S1RYDD		MEMO P6 70/ 3
OTHERS	-0	HUMB.	TP3	1050000=100,MAX			/
OTHERS	-0	HUMB.	TP3	870000=100,MAX	FUKUSIMA-1 S1RYDD		MEMO P6 70/ 3
OTHERS	-0	KRB		1000000=100,MAX			REF.1 /
OTHERS	-0	HRP-B		1140000=100,MAX			REF.1 /
OTHERS	-0	BRP-E		1110000=100,MAX			REF.1 /
OTHERS	-0	BRP-EG		1110000=100,MAX			REF.1 /
OTHERS	-0	TARAPUN		1000000=100,MAX			REF.1 /
OTHERS	-0	CURRENT	BWR	1160000=100,MAX			REF.1 /

FUEL	HEAT TRANS.	AREA AND	FLOW AREA	843240			
EFFECTIVE FLOW SECTION AREA FOR HEAT TRANSFER							
PLANT NAME							
JPDR-1	BWR	1	166. SQM				/
JPDR-2	BWR	2	196. SQM				70/ 8
TSURUGA	BWR	3	2510. SQM			80-3-3	70/ 5
ONAGAWA	BWR	4	2958. SQM			8-14-(9)	70/ 5
HAMAOKA-1	BWR	5	2958. SQM			8-114	70/ 5
FUKUSIMA-1	BWR	6	9065. SQM			BWR/6 7	47/11
FUKUSIMA-5	BWR	9	4404. SQM			8-14-(10)	71/ 2
FUKUSIMA-4	BWR	10	4404. SQM			8-14-(10)	71/ 8
MIHAMA-1	PWR	21	2223. SQM (=23929. SQFT)	2.3411 SQM (= 25.2 SQFT)		BK80-4 P2,4	71/ 9
MIHAMA-2	PWR	22	2668. SQM (=28714. SQFT)	2.3597 SQM (= 25.4 SQFT)		BK80-4 P2,4	71/ 9

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FUEL	HEAT TRANS.	AREA AND	FLOW AREA	843240			
EFFECTIVE FLOW SECTION AREA FOR HEAT TRANSFER							
PLANT NAME							
TAKAHAMA-2	PWR	23	3945. SQM (=42460. SQFT)	3.6232 SQM (=39. SQFT)		BK80-4 P2,4	71/ 9
GENKAI-1	PWR	24	2668. SQM				70/ 5
TAKAHAMA-1	PWR	25	3945. SQM (=42460. SQFT)	3.6232 SQM (=39. SQFT)		BK80-4 P2,4	71/ 9
MIHAMA-3	PWR	27	3945. SQM (=42460. SQFT)	3.8833 SQM (= 41.8 SQFT)		BK80-4 P2,4	71/ 9
BROWNS FERRY	BWR	53	6040. SQM			GSK-19	69/ 2
DRESDEN-1	BWR	55	2002. SQM (=21550. SQFT)	2.7161 SQM (=9.314*452 SQFT)		DNR V4 P94	62/
DRESDEN-2	BWR	56	. SQM (=63527. SQFT)			DNR V7 P192	68/
YANKEE		69	1440. SQM (=15500. SQFT)	1.4310 SQM (= 15.4 SQFT)		DNR V4 P36	61/
SAXTON		70	66.3 SQM (= 698. SQFT)	0.2555 SQM (= 2.75 SQFT)		DNR V4 P50	61/
HURLINGTON	PWR	71	4849. SQM			GSK-19	69/ 2
TURKEY POINT-3,4PWR		72	3944.7 SQM (=42460. SQFT)	3.8833 SQM (= 41.8 SQFT)		BK80-4 P1,3	71/ 9
H.B.ROBINSON-2	PWR	73	3944.7 SQM (=42460. SQFT)	3.8833 SQM (= 41.8 SQFT)		BK80-4 P1,3	71/ 9
SURRY-1--2	PWR	74	3944.7 SQM (=42460. SQFT)	3.8833 SQM (= 41.8 SQFT)		BK80-4 P1,3	71/ 9
BEAVER VALLEY	PWR	75	3944.7 SQM (=42460. SQFT)	3.8833 SQM (= 41.8 SQFT)		BK80-4 P1,3	71/ 9
NORTH ANNA-12	PWR	76	3944.7 SQM (=42460. SQFT)	3.8833 SQM (= 41.8 SQFT)		BK80-4 P2,4	71/ 9
JOSEPH M.FARLEY	PWR	77	3944.7 SQM (=42460. SQFT)	3.8833 SQM (= 41.8 SQFT)		BK80-4 P2,4	71/ 9

CORE	POWER DENSITY	MEAN	KW/L	843420			
JPDR-1	BWR	1	22.5 KW/L				/
JPDR-2	BWR	2	46.5 KW/L				70/ 8
TSURUGA	BWR	3	37.07 KW/L			80-3-3	70/ 5
TSURUGA	BWR	3	40.6 KW/L			KUGE	71/ 1
ONAGAWA	BWR	4	50.9 KW/L			8-14-(9)	70/ 5
HAMAOKA-1	BWR	5	51. KW/L			2-2	70/ 5
FUKUSIMA-1	BWR	6	40.6 KW/L				/
FUKUSIMA-2,3	BWR	7	51.2 KW/L				/
SHIMANE	BWR	8	40.6 KW/L			8-14-(10)	71/ 2
FUKUSIMA-5	BWR	9	51.2 KW/L				/
FUKUSIMA-4	BWR	10	51.2 KW/L			8-14-(10)	71/ 8
TAKAHAMA-2	PWR	23	92. KW/L			80-9-1	70/ 5
GENKAI-1	PWR	24	95. KW/L			80-9-1	70/ 5
VERMONT YANKEE	BWR	52	50.9 KW/L			A-2	/
BROWNS FERRY	BWR	53	50.8 KW/L			GSK-19	69/ 2
MILLSTON	BWR	54	35.03 KW/L			R-9	/
DRESDEN-1	BWR	55	31.2 KW/L			DNR V4 P91	62/
DRESDEN-2	BWR	56	36.7 KW/L			R-9	66/ 8
OYSTER CREEK	BWR	57	35.4 KW/L			R-9	66/ 8
DUANE ARNOLD	BWR	58	50.9 KW/L			A-2 P1	70/ 7
YANKEE		69	72. KW/L			DNR V4 P33	61/
SAXTON		70	54. KW/L			DNR V4 P47	61/
HURLINGTON	PWR	71	93.1 KW/L			GSK-19	69/ 2
MUNJU	FAST	92	292. KW/L			GAKKAISI43P	72/ 5

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Table with columns: CORE, FUEL, POWER, DENSITY, KW/KGU02, KW/KGU, 843440. Rows include JPDR-1, JPDR-2, TSURUGA, FUKUSIMA-1, FUKUSIMA-1, BROWNS FERRY, MILLSTON, DRESDEN-1, DRESDEN-2, DRESDEN-2, YANKEE, SEXTON, BURLINGTON.

Table with columns: PEAKING, FACTOR, TOTAL, CHANNEL, AXIAL, LOCAL, 843620. Includes sub-headers: PLANT NAME, TOTAL, CHANNEL, AXIAL, LOCAL, GROSS, RADIAL, AZIMUTH, OVER.P. Rows include JPDR-1, JPDR-2, TSURUGA, TSURUGA, DNAGAWA, HAMADKA-1, HAMADKA-1, HAMADKA-1, FUKUSIMA-1, FUKUSIMA-1, FUKUSIMA-2,3, FUKUSIMA-2,3, SHIMANE, VERMONT YANKEE, BROWNS FERRY, MILLSTON, DRESDEN-1, DRESDEN-2, OYSTER CREEK, DUANE ARNOLD, BURLINGTON.

HDT CHANNEL FACTOR N.DATA THERMAL DATA 843640

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Table with columns: HDT, CHANNEL, FACTOR, N.DATA, THERMAL DATA, 843640. Includes sub-headers: HEAT FLUX, ENTHALPY, KAKU (NETU), KAKU (NETU). Rows include MIHAMA-1, MIHAMA-2, TAKAHAMA-2, GENKAI-1, YANKEE, YANKEE, SEXTON, TURKEY POINT-3,4, H.B.ROBINSON-2, SURRY-1,-2.

MCHFR DR DNBR 843820

Table with columns: MCHFR, DR, DNBR, 843840. Rows include JPDR-1, JPDR-2, TSURUGA, DNAGAWA, HAMADKA-1, FUKUSIMA-1, FUKUSIMA-2,3, SHIMANE, FUKUSIMA-5, FUKUSIMA-4, MIHAMA-1, MIHAMA-2, TAKAHAMA-2, GENKAI-1, TAKAHAMA-1, OOI -1,2, MIHAMA-3, VERMONT YANKEE, BROWNS FERRY, DUANE ARNOLD, BURLINGTON, TURKEY POINT-3,4, H.B.ROBINSON-2, SURRY-1,-2, BEAVER VALLEY, NORTH ANNA-12, JOSEPH W.FARLEY.

HEAT GENERATE RATIO FUEL VS TOTAL 843840

HEAT GENERATE RATIO FUEL VS TOTAL 843840

Table with columns for plant name, power (PWR), heat ratio, and fuel vs total. Lists plants like JPCR-2, MIHAMA-2, etc.

EARTHQUAKE KE-PROOF DESIGN GAL 853400

Table with columns for plant name, weight, and design curve. Includes note: (NOTE)EC=EL CENTRA, GG=GOLDEN GATE, TF=TAFT, ST=SITE, DC=DESIGN CURVE.

REACTION OF BED-ROCK FOR REACTOR BUILDING WEIGHT 854200

Table with columns for plant name, weight, ziban-hanryoku, and design leak rate. Lists plants like ONAGAWA, HAMADKA-1, etc.

REACTOR BUILDING DESIGN-P (INNER) 854400

Table with columns for plant name, weight, and design-P (inner). Lists plants like ONAGAWA, HAMADKA-1, etc.

REACTOR BUILDING DESIGN-P (INNER) 854400

Table with columns for plant name, weight, and design-P (inner). Lists plants like HAMADKA-1.

TURBINE BUILDING SIZE EARTHQUAKE KE-PROOF GRADE 856300

Table with columns for plant name, height, and grade. Lists plants like ONAGAWA, HAMADKA-1, etc.

RAD. SHIELD REGION STANDARD 920000

Table with columns for plant name, region, and standard. Lists plants like ONAGAWA, HAMADKA-1, etc.

RAD. LEVEL NORMAL WASTE GAS DISPOSAL 942000

Table with columns for plant name, level, normal waste, gas disposal, and turbine cond. Lists plants like ONAGAWA, HAMADKA-1, etc.

PLANT PERFORMANCE DATA						DATE 12/16/74		PAGE***D-171***			
RAD.	LEVEL	NORMAL	WASTE	GAS	DISPOSAL	942000					
						FROM DEAERATOR	TURBINE COND.	-----TOTAL----- MICRO CI/SEC			
						30-MINUT	2-MINUT DECAY	(A+C)	(B+C)		
						(A)	(B)	(A+C)	(B+C)		
PLANT NAME						(N-13+AR-41)	(N-16+U-19+N-13)				
FUKJSIMA-1	BWR	6				TOTAL=181.	1.	184.	5.	MEMO-P291	70/ 5
FUKJSIMA-5	BWR	9					CHARCOAL			9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9					HOLD UP			9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				N-17 = 1	0	2	1	9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				N-16 = 1	0	2	1	9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				U-19 = 1	0	2	1	9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				N-13 = 250	0	252	2	9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				AR-41 = 6	4	6	4	9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				AR-37 = 0	0	0	0	9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				H-3 = 1	1	1	1	9-4-(2)	71/ 2
FUKJSIMA-5	BWR	9				TOTAL= 260	5	265	10	9-4-(2)	71/ 2
FUKJSIMA-4	BWR	10				SAME AS FUKJSIMA-5				9-4-(2)	71/ 8

MAX RAD.	LEVEL	FP TOTAL	IN	REACTOR	WATER	943220			
ONAGAWA	BWR	4				I+BR+TC+MD = 33.8	CORR.PRODUCT TOT=7*E-2 MICRO CI/CC	9-4-(6)	70/ 5
HAMADKA-1	BWR	5				I+BR+TC+MD = 40.0	CORR.PRODUCT TOT=7*E-2 MICRO CI/CC	9-10(REV-0)	70/ 5
HAMADKA-1	BWR	5				I+BR+TC+MD = 45.0	CORR.PRODUCT TOT=7*E-2 MICRO CI/CC	9-10(REV-1)	70/11
FUKJSIMA-2,3	BWR	7				FUKJSIMA-2 REVISE	SAME AS FUKJSIMA-5 (9-4-(7) 71/2)	SHK(89-7-2)	71/ 3
FUKJSIMA-5	BWR	9				I+BR+TC+MD = 64.0	CORR.PRODUCT TOT=7*E-2 MICRO CI/CC	9-4-(7)	71/ 2
FUKJSIMA-4	BWR	10				I+BR+TC+MD = 64.0	CORR.PRODUCT TOT=7*E-2 MICRO CI/CC	9-4-(7)	71/ 8

MAX RAD.	LEVEL	IODINE	IN	REACTOR	WATER	943240									
ONAGAWA	BWR	4				0.5	4.6	3.3	8.9	4.9	1.0	0.8	0.3	9-4-(6)	70/ 5
HAMADKA-1	BWR	5				0.94	5.16	5.72	7.76	7.20	0.75	0.58	0.22	9-10(REV-0)	70/ 5
HAMADKA-1	BWR	5				1.0	6.0	6.0	9.2	7.8	0.8	0.6	0.2	9-10(REV-1)	70/11
FUKJSIMA-2,3	BWR	7				FUKJSIMA-2 REVISE			SAME AS FUKJSIMA-5 (9-4-(7) 71/2)					SHK(89-7-2)	71/ 3
FUKJSIMA-5	BWR	9				1.4	8.4	8.8	12.9	11.3	1.1	0.5	0.2	9-4-(7)	71/ 2
FUKJSIMA-4	BWR	10				1.4	8.4	8.8	12.9	11.3	1.1	0.5	0.2	9-4-(7)	71/ 8
HAMADKA-2	BWR	13				1.1	6.6	6.4	9.8	8.2	0.8	0.7	0.2	9-10	73/ 5

MAX RAD.	LEVEL	BR,TC,MD	IN	REACTOR	WATER	943260								
ONAGAWA	BWR	4				BR-83	BR-84	BR-85	BR-87	BR-88	TC-99M	MD-99	MICRO CI/CC	
HAMADKA-1	BWR	5				0.5	1.0	0.6	0.7	0.4	4.5	1.8	9-4-(6)	70/ 5
HAMADKA-1	BWR	5				0.65	0.79	0.39	0.49	0.31	6.42	2.63	9-10(REV-0)	70/ 5
HAMADKA-1	BWR	5				0.7	1.0	0.5	0.5	0.3	7.0	3.4	9-10(REV-1)	70/11

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MAX RAD.	LEVEL	BR,TC,MD	IN	REACTOR	WATER	943260								
FUKJSIMA-2,3	BWR	7				FUKJSIMA-2 REVISE	SAME AS FUKJSIMA-5 (9-4-(7) 71/2)	SHK(89-7-2)	71/ 3					
FUKJSIMA-5	BWR	9				1.0	1.3	0.7	0.6	0.4	10.1	5.0	9-4-(7)	71/ 2
FUKJSIMA-4	BWR	10				1.0	1.3	0.7	0.6	0.4	10.1	5.0	9-4-(7)	71/ 8
HAMADKA-2	BWR	13				0.7	1.2	0.6	0.6	0.3	0.8	3.7	9-10	73/ 5

MAX RAD.	LEVEL	CORR-P. (1)	IN	REACTOR	WATER	943280									
ONAGAWA	BWR	4				4*E-3	4*E-5	5*E-2	3*E-4	2*E-6	3*E-5	2*E-3	3*E-3	9-4-(6)	70/ 5
HAMADKA-1	BWR	5				4*E-3	4*E-5	5*E-2	3*E-4	2*E-6	3*E-5	2*E-3	3*E-3	9-10	70/ 5
FUKJSIMA-2,3	BWR	7				FUKJSIMA-2 REVISE			SAME AS FUKJSIMA-5 (9-4-(7) 71/2)					SHK(89-7-2)	71/ 3
FUKJSIMA-5	BWR	9				4*E-3	4*E-5	5*E-2	3*E-4	2*E-6	3*E-5	2*E-3	2*E-4	9-4-(7)	71/ 2
FUKJSIMA-4	BWR	10				4*E-3	4*E-5	5*E-2	3*E-4	2*E-6	3*E-5	2*E-3	2*E-4	9-4-(7)	71/ 8

MAX RAD.	LEVEL	CORR-P. (2)	IN	REACTOR	WATER	943400								
ONAGAWA	BWR	4				CO-58	CO-60	FE-59	P-32	CR-51	AG-110M	MICRO CI/CC		
HAMADKA-1	BWR	5				5*E-3	5*E-4	8*E-5	2*E-5	5*E-4	6*E-5	9-4-(6)	70/ 5	
FUKJSIMA-2,3	BWR	7				5*E-3	5*E-4	8*E-5	2*E-5	5*E-4	6*E-5	9-10	70/ 5	
FUKJSIMA-5	BWR	9				FUKJSIMA-2 REVISE			SAME AS FUKJSIMA-5 (9-4-(7) 71/2)				SHK(89-7-2)	71/ 3
FUKJSIMA-4	BWR	10				5*E-3	5*E-4	8*E-5	2*E-5	5*E-4	6*E-5	9-4-(7)	71/ 2	

SWD USED RESIN						PRODUCTI ON RATE		944220				
PLANT NAME						(A)-(A1) T/YEAR FROM REACTOR COOLANT PURIFICATION FILTER DEMINERALIZER		(B)-(B1) T/YEAR FROM CONDENSER FILTER DEMINERALIZER				
						(C)-(C1) T/YEAR FROM CONDENSER DEMINERALIZER		(D)-(D1) T/YEAR FROM FUEL POOL FILTER DEMINERALIZER				
						(E)-(E1) T/YEAR FROM WASTE DISPOSAL SYSTEM DEMINERALIZER		* SPECIFIC WEIGHT=0.34 GR/CC (ASSUMPTION)				
						UNIT---MC/CC=MICRO CURIE/CC, MC/G =MICRO CURIE/GRAM		UNIT---MC/CC=MICRO CURIE/CC, MC/G =MICRO CURIE/GRAM				
ONAGAWA	BWR	4				2.3 T/Y	8.3 T/Y	1.1 T/Y	0.7 T/Y	1.2 T/Y	9-4-(7)	70/ 5
ONAGAWA	BWR	4				100. MC/G	20. MC/G	140. MC/G	140. MC/G	140. MC/G	9-4-(7)	70/ 5
HAMADKA-1	BWR	5						6.0 CUBM/Y	6.0 CUBM/Y	6.0 CUBM/Y	9-11	70/ 5
HAMADKA-1	BWR	5						0.02 MC/CC	0.01 MC/CC	0.01 MC/CC	9-11	70/ 5
FUKJSIMA-5	BWR	9				*4. CUBM/Y		15.0 CUBM/Y	*16. CUBM/Y	3.0 CUBM/Y	9-4-(8)	71/ 2
FUKJSIMA-5	BWR	9				2000. MC/CC		2. MC/CC		500. MC/CC	9-4-(8)	71/ 2
FUKJSIMA-4	BWR	10				*4. CUBM/Y		15.0 CUBM/Y	*16. CUBM/Y	3.0 CUBM/Y	9-4-(8)	71/ 8
FUKJSIMA-4	BWR	10				2000. MC/CC		2. MC/CC		500. MC/CC	9-4-(8)	71/ 8

SWD USED POWDER	RESIN	PRODUCTI ON RATE	ACTIVITY	944240
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PLANT PERFORMANCE DATA

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SWD USED POWDER RESIN PRODUCTI ON RATE ACTIVITY 944240

(A)=(A1) CURM/YEAR FROM REACTOR COOLANT PURIFICATION PRE-COAT DEMINE.
 (B)=(B1) CURM/YEAR FROM CONDENSER PRE-COAT DEMINE.
 (C)=(C1) CURM/YEAR FROM FUEL POOL PRE-COAT DEMINE.
 UNIT---MC/CC=MICRO CURIE/CC ; MC/G =MICRO CURIE/GRAM
 (A1) (B1) (C1)

PLANT NAME

HAMAOKA-1	BWR	5	2.5 CURM/Y	21. CURM/Y	2. CUBM/Y	9-12	70/ 5
HAMAOKA-1	BWR	5	45. MC/CC	0.5 MC/CC		9-12	70/ 5

SWD FILTER SLUDGE PRODUCTI ON RATE ACTIVITY 944260

(A)=(A1) CURM/YEAR FROM WASTE DISPOSAL SYSTEM FILTER
 (B)=MAXIMUM RADIATION LEVEL IN MICRO CURIE/CC ,OR MICRO CURIE/GRAM
 (A1) (B)

PLANT NAME

ONAGAWA	BWR	4	5.8 T/Y	0.9 MC/G		9-4-(B)	70/ 5
HAMAOKA-1	BWR	5	40. CUBM/Y	0.06 MC/CC		9-12	70/ 5
FUKJISIMA-5	BWR	9	45. CUBM/Y	5000. MC/CC		9-4-(B)	71/ 2
FUKJISIMA-4	BWR	10	45. CUBM/Y	5000. MC/CC		9-4-(B)	71/ 8

SWD FROM CONCENTR ATOR PRODUCTI ON RATE ACTIVITY 944280

(A)=(A1) CURM/YEAR FROM EVAPOLATE CONCENTRATED WASTE DISPOSAL
 (B)=MAXIMUM RADIATION LEVEL IN MICRO CURIE/CC ,OR MICRO CURIE/GRAM
 (A1) (B)

PLANT NAME

ONAGAWA	BWR	4	0.2*365 T/Y	LT 1.0 MC/G		9-4-(B)	70/ 5
HAMAOKA-1	BWR	5	120. CUBM/Y	0.07 MC/CC		9-12	70/ 5
FUKJISIMA-5	BWR	9	720. CUBM/Y	0.002MC/CC		9-4-(9)	71/ 2
FUKJISIMA-4	BWR	10	720. CUBM/Y	0.002MC/CC		9-4-(9)	71/ 8

SWD CONTROL ROD CHANNEL BOX CURTAIN 944320

PLANT NAME POSITION CONTROL ROD CHANNEL BOX
 CURTAIN AFTER () YEARS AFTER () YEARS

ONAGAWA	BWR	4	156.HON	9. HON/YEAR(5)	90. /YEAR(5)	9-4-(B)	70/ 5
HAMAOKA-1	BWR	5	156.HON	9. HON/YEAR(5)	90. /YEAR(5)	9-12	70/ 5
FUKJISIMA-5	BWR	9	-----	14. HON/YEAR(5)	140. /YEAR(5)	9-4-(9)	71/ 2
FUKJISIMA-4	BWR	10	-----	14. HON/YEAR(5)	140. /YEAR(5)	9-4-(9)	71/ 8
HAMAOKA-2	BWR	13	-----	14. HON/YEAR(5)	140. /YEAR(5)	9-12	73/ 5

LWD (LIQJID WASTE DISPOSAL) QUANTITY 953100

PLANT PERFORMANCE DATA

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LWD (LIQUID WASTE DISPOSAL) QUANTITY 953100

(1)EXTRACTED WATER FROM BORIC ACID CUBM/YEAR
 (2)DRAIN FROM PRIMARY SYSTEM CUBM/YEAR, A=LITRE/DAY
 (3)FROM CONTAINER SUMP CUBM/YEAR
 (4)FLOOR DRAIN CUBM/YEAR
 (5)FROM CLEAN-UP CUBM/YEAR
 (6)LAUNDRY DRAIN CUBM/YEAR
 (7)DISPOSAL FROM SAMPLING CUBM/YEAR, A=LITRE/DAY
 (8)FROM RESIN CUBM/YEAR

PLANT NAME

TAKAHAMA-2	PWR	23	2300	300A				40A	9-12	70/ 5		
GENKAI-1	PWR	24	1300	700A				10A	9-9	70/ 5		
DDI -1,2	PWR	26	2300	1300	400	400	200	2700	300	9-13	71/ 1	
MIHAMA-3	PWR	27	4300R	300	300		100	1500	150	300	9-13	71/11
IKATA	PWR	28	1300	300	300		100	2000	150	200	9-9	72/11

KIND OF SWD DRUM QUANTITY 954100

(1)=USED RESIN ***UNIT*** = DRUM(HON)/YEAR
 (2)=USED POWDER RESIN
 (3)=FILTER SLUDGE
 (4)=CONC. LIQUID WASTE DISPOSAL
 (5)=MISCELLANEOUS SOLID WASTE DISPOSAL
 (6)=SOLID WASTE DISPOSAL FROM CONCENTRATED LIQUID WASTE DISPOSAL
 (7)=SAMPLING WASTE DISPOSAL

PLANT NAME

ONAGAWA	BWR	4	60.	130.	240.	500.	600.			1530.	9-4-(9)	70/ 5
HAMAOKA-1	BWR	5	170.	220.	290.	1000.	250.			1930.	9-13	70/ 5
FUKJISIMA-5	BWR	9	500.		450.	5200.	600.			6750.	9-4-(9)	71/ 2
TAKAHAMA-2	PWR	23	310.				190.	140.		640.	9-13	70/ 5
GENKAI-1	PWR	24	130.				140.	70.		340.	9-9	70/ 5
DDI -1,2	PWR	26	540.				500.	180.	190.	1410.	9-14	71/ 1
MIHAMA-3	PWR	27	310.				190.	140.			9-14	71/ 8
IKATA	PWR	28	5CUBM/YEAR				200.	500.			9-11	72/11