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日本における原子力発電プラントに
関するデータリスト

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1977年版

日本原子力研究所東海研究所安全工学部

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先に公開したJAERI-M 5959(1975)および、JAERI-M 6732(1976)の両報告書を基礎に、1977年6月までの日本国内の原子力発電プラントの性能、機器装置についてのデータを整理、収録したものである。

先の報告書のデータを変更のあったものは修正し、また新たに建設されたプラントについては追加して、この1977年版を編集した。それらのデータは、電算機により処理して表形式にまとめられている。

JAERI-M 7261

Design and Safety Data of Commercial Nuclear Power Plants in Japan
----- 1977 edition -----

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(Received August 12, 1977)

Following on previous JAERI-M 5959(1975) and JAERI-M 6732(1976), which contained the data for design parameters, performance, components and equipments of Japanese nuclear power plants, the 1977 updated edition is compiled as of June 1977.

The data are arranged and tabulated by computer processing.

Keywords: Nuclear Power Plant, Design Data, Safety, Japan,
Specifications, Performance, Components, Tables.

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1. は じ め に

「原子力発電プラント(国内)のデータリスト」は、1975年度版、1976年度版と年を追って発行されている。この報告書のデータは、1977年6月までに入手した新しいデータを、旧版に増補、改訂を加え整理したものである。これを1977年度版として編集した。

この報告書の表-6、データリストは、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。収録した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ているためデータの不足を感じるかも知れない。データの誤りあるいは不備な点についてはご批判を得て改善していきたいと考えている。

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使用している。このデータ処理プログラムは、“FREP”と呼ばれるもので、データを効率的、経済的に処理するために独自に開発されたものである。FREPの概要については、旧版(JAERI-M 6732, 1976年版, 1976年10月)を参照されたい。

FREPは、FORTRAN-IVでプログラムされており、FACOM-230-75およびCDC-6600用の2種のVersionが存在する。

このデータ集をまとめるに当たり、森島淳好氏(安全工学部次長)から多くの教示をえた。処理プログラム、FREPの開発については、石橋明弘、大坪直昭両氏(センチュリー・リサーチ・センター株式会社)の助力をえ、リストの整理については、金田京子嬢を煩わした。記して謝意を表す。

2. 収 録 内 容

この報告書に収録した原子炉プラントデータは取扱上 6 種のリストに分類されている。

そのリスト群は、

- 1 原子炉プラントリスト
- 2 略語リスト
- 3 データ項目リスト
- 4 キーワードリスト
- 5 索引リスト
- 6 データリスト

である。リスト群の内容を次に説明する。

2.1 原子炉プラントリスト(表-1)解説

収録したプラントは、1977年6月までの日本国内で設計・建設・運転されている発電炉 27 基(うち試験炉 2 基)である。なお、比較対照のために外国の発電炉 9 基を加えている。

収録の対象とした原子炉の一覧表が表-1である。表の中で原子炉プラント名の前に付された番号は、FRE P プログラム処理上付されたプラントコード番号である。

2.2 略語リスト(表-2)解説

項目、索引などの冗長を省くために略語を使用した。使用した略語リストが表-2である。リスト中の左側が略語、右側に原意を示す。

2.3 データ項目リスト(表-3)解説

データ項目リストは、各々の原子炉プラントデータを項目によって分類した。その分類数は現在 711 からなっている。表-3はこのデータ項目リストを示す。

リストは、プログラム処理上コード番号が付されている。その記載方法はコード番号順であり、左から順に、コード番号、項目、データリスト頁の順に示してある。

2.4 キーワードリスト(表-4)解説

キーワード(以下見出し語)は、索引リストの検索に必要とする見出し語である。表-4の見出し語は、アルファベットの順に整理されている。表-4は左側に見出し語、右側に索引リストの頁が記載されている。

2.5 索引リスト(表-5)解説

索引リストは、原子炉プラントデータの検索を容易にするため、見出し語とデータ項目を一緒にしたリストである。リストは、アルファベット順に記載された見出し語の次の行左側から、データ項目、データ項目コード番号、データリストの頁から成っている。

2.6 データリスト(表-6)解説

すべての原子炉プラントデータは、表-6データリストの中に収録されている。このデータには、機器の箇数、寸法、材質等一般的なデータのほかに、項目の定義、事故の想定、安全対策なども含ませている。その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、簡単な記述とし、またそれらの論理式で表示した。さらに想定条件を例記するような方式も併用した。

データリストの配列は、項目をコード番号順に示し、次に注釈、原子炉プラントデータを並べる方式である。各プラントのデータは、左端から、プラント名、炉の型式、プラントコード番号、データ値の順に示され、最後に原子炉設置許可申請書等で報告された頁と、その日付が示される。

3. 利 用 法

3.1 使用上の注意

- データ検索に利用するのは、次の3つのリスト群である。
 - 1 キーワードリスト (表-4)
 - 2 索引リスト (表-5)
 - 3 データリスト (表-6)
- 索引リストの頁は、PAGE***S- ○○***と索引リスト頁の右上に標示する。
- データリストの頁は、PAGE***D- ○○***とデータリスト頁の右上に標示する。
- キーワードリスト(見出し語)、索引リスト及び、データ項目リストには略語が使用されている。略語については、略語リスト(表-2)を参照されたい。
- キーワードリスト(見出し語)及び、索引リストの単語の綴りが8文字を越える場合読みにくい点が生じている。

例: THERMAL CONDUCTIVITYは、THERMAL—CONDUCTI—VITY—
—となる。

この現象はプログラム処理上の問題である。

3.2 リストの使用順序

データ検索に使用する3つのリスト群の順序は、次の通りである。

- 1 キーワードリスト (表-4)
- 2 索引リスト (表-5)
- 3 データリスト (表-6)

以下、順をおって説明すると、

1 キーワードリスト(見出し語)から、必要とするデータの見出し語をさがす。見出し語はアルファベット順に記されている。その中から必要とするデータの見出し語を見つけたなら、見出し語の右側のSEE PAGE*S-○○*(索引リスト頁の標示)を読み取る。

2 見出し語、SEE PAGE*S-○○*から索引リスト(表-5)のPAGE***S- ○○***を開く。その頁中に、見出し語とその次に見出し語に関連したデータ項目がいくつか記載されている。その中から知りたいデータ項目を見付け出し、データ項目の右側のSEE PAGE***D- ○○*** (データリスト頁の標示)を読み取る。

3 見出し語、データ項目、SEE PAGE***D- ○○***から、データリスト(表-6)の右上に示されるPAGE***D- ○○***を開く。その頁の中から知りたいデータを見い出すことができる。

このように一定の順序と約束にしたがって、知りたいデータを見い出すことが出来る。

3.3 データ検索例

この原子炉プラントデータ集の使い方を実例をあげて説明する。検索例を参照しながら解されたい。

(例) 燃料棒表面熱流束を知りたい場合

1 表-4: キーワードリストで、見出し語のHEAT FLUXを引く。その索引リスト頁, SEE PAGE *S-8* を読みとる。

2 表-5: 索引リストの右上に示される, PAGE ***S-8*** を開く。

HEAT FLUXの個所には,

H. TRANS. HEAT FLUX MAX MEAN 843220 SEE DATA PAGE ***
D-180*** の記載がある。

3 表-6: データリストの右上のPAGE ***D-180*** を開くと頁の中に,
H. TRANS. HEAT FLUX MAX MEAN 843220 の燃料棒表面熱流束のデータを見いだすことが出来る。

表-6 データリストの頁D-180をみると、最初に注釈が記載されている。(1)で指されているデータは炉心の100%出力状態の熱流束であり、その中でMEANとあるものは炉心平均熱流束, MAX. は最高熱流束の値である。単位は注釈で示されているKCAL/SQM/H, すなわち, kcal/m²-hrである。なお, (2)は112%出力, (3)は125%出力状態下の値を示している。このように上部にデータの注釈が記され, その下に各プラントのデータ値が示される。

各プラントのデータは, 左端から, プラント名, 炉の型式, プラントコード番号, データ値の順に示され, 次に原子炉設置許可申請書等で報告された頁と, その日付を記載している。

検 索 例

HEAT FLUX

表 - 4

.....		
HEAT FLUX SEE PAGE*	S-8*	
.....		

表 - 5

.....	PAGE***S-8***
.....	
.....	
HEAT FLUX	HEAT FLUX
H. TRANS. HEAT FLUX MAX MEAN 843220	SEE PAGE***D-180***
.....	
.....	

表 - 6

PAGE***D-180***
表-6の PAGE D-180 参照

表一 1 原子炉プラントリスト

CODE NO. VS PLANT NAME

.....

NO.	PLANT NAME		NO.	PLANT NAME	
1	JPDR-1	BWR	51	HALDEN	HBWR
2	JPDR-2	BWR	52	VERMONT YANKEE	BWR
3	TSURUGA	BWR	53	BROWNS FERRY	BWR
4	ONAGAWA	BWR	54	MILLSTON	BWR
5	HAMAOKA-1	BWR	55	DRESDEN-1	BWR
6	FUKUSIMA-1	BWR	56	DRESDEN-2	BWR
7	FUKUSIMA-2,3	BWR	57	OYSTER CREEK	BWR
8	SHIMANE	BWR	58	DUANE ARNOLD	BWR
9	FUKUSIMA-5	BWR	59		
10	FUKUSIMA-4	BWR	60		
11	FUKUSIMA-6	BWR	61		
12	TOOKAI-2	BWR	62		
13	HAMAOKA-2	BWR	63		
14	TOMIOKA-1	BWR	64		
15	KASHIWAZAKI	BWR	65		
16	TOMIOKA-2	BWR	66		
17			67		
18			68		
19			69	YANKEE	PWR
20			70	SAXTON	PWR
21	MIHAMA-1	PWR	71	BURLINGTON	PWR
22	MIHAMA-2	PWR	72	TURKEY POINT-3,4	PWR
23	TAKAHAMA-2	PWR	73	H.B.ROBINSON-2	PWR
24	GENKAI-1	PWR	74	SURRY-1,-2	PWR
25	TAKAHAMA-1	PWR	75	BEAVER VALLEY	PWR
26	OOI-1,2	PWR	76	NORTH ANNA-12	PWR
27	MIHAMA-3	PWR	77	JOSEPH M.FARLEY	PWR
28	IKATA-1	PWR	78		
29	GENKAI-2	PWR	79		
30	IKATA-2	PWR	80	MUTSU	PWR
31	SENDAI	PWR	81	FUGEN	ATR
32	TAKAHAMA-3	PWR	82		
33	TAKAHAMA-4	PWR	83		
34			84		
35			85		
36			86		
37			87		
38			88		
39			89		
40			90		
41			91	JOYO	FAST
42			92	MONJU	FAST
43			93		
44			94		
45			95		
46			96		
47	B 80 STANDARD	BWR	97		
48	B110 STANDARD	BWR	98	PLANT NAME	
49	P 80 STANDARD	PWR	99		
50	P110 STANDARD	PWR	100	OTHERS	

表－ 2 略語リスト

--- A ---	
AA	ASEA ATOM
AB-TRA	ABNORMAL TRANIGENT
AC	ACCEPTANCE CRITERIA (PROMULGATED BY THE AEC FOR ECCS DESIGNS)
ACC.	ACCIDENT
ACHS	
ACSFC	AIR COMPRESSOR SYSTEM FOR CONTROL
ACSFF	AIR COMPRESSOR SYSTEM FOR FACILITY
ACT.RES.	ACTUAL RESULT
ADS	AUTOMATIC DEPRESSURIZATION SYSTEM
AEC	U.S. ATOMIC ENERGY COMISSION
AECB	ATOMIC ENERGY CONTROL BOARD (CANADA)
AFWS	AUXILIARY FEEDWATER SYSTEM
AIF	ATOMIC INDUSTRIAL FORUM
ALAP	AS LOW AS PRACTICABLE = ALARA
ALARA	AS LOW AS REASONABLY ACHIEVABLE = ALAP
AOO	ANTICIPATED OPERATIONAL OCCURENCE
ANA.	ANALYSIS
ANC	AEROJET NUCLEAR COMPANY
ANSI	AMERICAN NATIONAL STANDARD INSTITUTE
APDMS	
APED	ATOMIC POWER EQUIPMENT DEPARTMENT(GE)
APOC	ANTICIPATED PROBABILITY OCCURENCE
APRM	AVERAGE POWER RANGE MONITOR
APS	AMERICAN PHYSICAL SOCIETY
ASME	AMERICAN SOCIETY OF MECHANICAL ENGINEERS
ASSY	ASSEMBLY, OR ASSEMBLIES
ATP	AUGMENTED TEST PROGRAM
ATWS	ANTICIPATED TRANSIENTS WITHOUT SCRAM
(AT EOL)	AT THE END OF LIFE
AUX.	AUXILIARY COMPONENTS OR AUXILIARY SYSTEM
AUX.B	AUXILIARY BUILDING
AUX.BES	AUXILIARY BUILDING EXHAUSTING SYSTEM
AVS	AIR VENTILATION SYSTEM
AVT	ALL VOLATILE TREATMENT (FOR STEAM GENERATOR)
--- B ---	
BASIC	BEGINNERS ALL-PURPOSE SYMBOL INSTRUCTION CODE
BDHT	BLOW DOWN HEAT TRANSFER
BE	BEST ESTIMATE
BEIN	BUNDLE ENTHALPY IMBALANCE NUMBER
BOCREC	BOTTOM OF CORE RECOVERY
BOL	BEGINNIG OF LIFE
BOP	BALANCE OF PLANT
BRF	BINARY RELOCATABLE FORMAT
BWR	BOILING-WATER REACTOR
--- C ---	
CBTN	COMPANHIA BRASILEIRA DE TECNOLOGIA NUCLEAR
C/C	COOLING COIL
CCFL	COUNTER CURRENT FLOW LIMITING
CCRVS	CENTRAL CONTROL ROOM ETC. VENTILATION SYSTEM
CCS	GENSIRO HOKI REIKYAKU SETUBI
CCW	CLOSED COOLING WATER
CEGB	CENTRAL ELECTRICITY GENERATING BOARD
CHF	CRITICAL HEAT FLUX
CI	CONTAINMENT INTEGRITY
CDC	CAPSULE DRIVER CORE
CDTVTY	CONDUCTIVITY
CNA	CANADIAN NUCLEAR ASSOCIATION
COM	COMMON
COMPO.	COMPONENTS
COND.	CONDENCER
COND.W	CONDENSED WATER
CORR-P	CORROSION PRODUCTS
COSMIC	CORE SIMULATOR FOR METHOD INVESTIGATION OF CONTROL SYSTEMS,
CPR	CRITICAL POWER RATIO
CR	CORE
CRD	CONTROL ROD DRIVE
CREST	COMMITTEE ON REACTOR SAFETY TECHNOLOGY
(CREST)	COMMITTEE ON THE SAFETY OF NUCLEAR INSTALLATION
CRPPH	COMMITTEE ON RADIATION PROTECTION AND PUBLIC HEALTH
CRT	CATHODE RAY TUBE
CRVICS	CONTAINMENT AND REACTOR VESSEL ISOLATION CONTROL SYSTEM
CSE	CONTAINMENT SYSTEMS EXPERIMENT (BATTELE NORTHWEST LAB.)
CSI	CONTAINMENT RESEARCH INSTALLATION
CSNI	COMMITTEE ON THE SAFETY OF NUCLEAR INSTALLATIONS
CSS	CORE SPRAY SYSTEM
CUBM	CUBIC METER
CVCS	CHEMICAL AND VOLUME CONTROL SYSTEM
CWCUS	CONDENSED WATER CLEAN UP SYSTEM
C/W	COOLING COIL BY COOLED WATER
--- D ---	
(D)	DUMP CONDENSER SYSTEM (JPDR-2)
DBA	DESIGN BASIS ACCIDENT
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
DPA	DISPLACEMENT PER ATOM
(D.S)	DUMP CONDENSER SYSTEM (JPDR-2)

--- E ---	
EA	EVALUATION MODEL
ECA	ENGINEERING CHANGE AUTHORIZATION
ECC	EMERGENCY CORE COOLANT
ECCS	EMERGENCY CORE COOLING SYSTEMS
ECN	ENGINEERING CHANGE NOTICE
E.C.	EMERGENCY COOLING
E,CDIVTY	ELECTRO CONDUCTIVITY
ECOCs	EMERGENCY COMPONENTS COOLING SYSTEM
ECT	EDDY CURRENT TEST
EDGCS	EMERGENCY DIESEL GENERATOR COOLING SYSTEM
EEL	EDISON ELECTRIC INSTITUTE
EFCV	EXCESS FLOW CHECK VALVE
E,GENER.	ELECTRIC GENERATOR
EGRSIRC	EMERGENCY GAS RECIRCULATION SYSTEM IN REACTOR CONTAINER
EGVSIRC	EMERGENCY GAS VENTILATION SYSTEM IN REACTOR CONTAINER
EHC	ELECTRO HYDRAULIC CONTROL
EM	EVALUATION MODEL
EMA U/A	EUROPEAN MONETARY AGREEMENT UNIT ACCOUNT (1EMA=1\$)
EME.	EMERGENCY
EOB	END OF BYPASS
EOE	END OF EVENTS
EOL	END OF LIFE
EPA	U.S. ENVIRONMENTAL PROTECTION AGENCY
EPRI	ELECTRIC POWER RESEARCH INSTITUTE
ER	ENVIRONMENTAL REPORT
ERDA	U.S. ENERGY RESEARCH AND DEVELOPMENT ADMINISTRATION
ES	ENVIRONMENTAL STATEMENT
ESF	ENGINEERED SAFETY FEATURE
ESPRI	EMPIRE STATE POWER RESORCE INC.
ET	EDDY CURRENT TEST
EVAP.	EVAPOLATOR
EVAP,C.W	EVAPOLATED AND CONDENSATED WATER
--- F ---	
-F	---FLOW
FA	FUEL ARC (MODE OF TCV OPERATION)
FCS	FLAMABLE GAS CONTROL SYSTEM
FCV	FLOW CONTROL VALVE
FDA	FINAL DESIGN APPROVAL
FDDR	FIELD DEVIATION DISPOSITION REQUEST
FDI	FIELD DISPOSITION INSTRUCTION
FEA	FEDERAL ENERGY ADMINISTRATION
FEED.W	FEED WATER
FGCS	FLAMMABLE GAS CONTROL SYSTEM
(FLAT)	FLAT PELLET
FLECHT	FULL LENGTH EMERGENCY COOLING HEAT TRANSFER
FMEA	FAILURE MODES AND EFFECTS ANALYSIS
FP	FISSION PRODUCT
FPCC	FUEL POOL COOLING AND CLEANUP
FPCCUS	FUEL POOL COOLANT CLEAN UP SYSTEM
FP-REL-M	FISSION PRODUCT RELEASE MODEL
FRAP-S	FUEL ROD ANALYSIS PROGRAM-STEADY
FRAP-T	FUEL ROD ANALYSIS PROGRAM-TEMPERATURE
FRC	
FSAR	FINAL SAFETY ANALYSIS REPORT
F2N1	NENRYOO-TAI SEKKEI NINKA SINSEI GAIYOO(JNF) KOMONKAI FUKUSIMA-2
F2N2	CHUUI ZIKOO HOOKOKU (NENRYOO-TAI) KOMONKAI FUKUSIMA-2
FWPCA	FEDERAL WATER POLLUTION CONTROL ACT
FY	FISCAL YEAR
--- G ---	
GDC	GENERAL DESIGN CRITERIA
GE	GREATER OR EQUAL
GEK	GESELLSCHAFT FUR KERNFORSHUNY M.B.H. KARLSRUHE
GESMO	GENERIC ENVIRONMENTAL STATEMENT MIXED OXIDE FUEL
GETAB	GENERAL ELECTRIC BWR THERMAL ANALYSIS BASIS
GHB	GENSIRYOKU HATUDEN BINRAN 1974
GI TRACT	GASTRO-INTESTINAL TRACT
GT	GREATER THAN
GSK-19	GENSIRYOKU SANGYOO KAIGI GENSIRYOKU SIRYOO NO.19
GWDS	GAS WASTE DISPOSAL SYSTEM
--- H ---	
HA	HYPOTHETICAL ACCIDENT
H AND V	HEATING AND VENTILATING
H/C	STEAM HEATER COIL
HCU	HYDRAULIC CONTROL UNIT
HECLW	HIGH ELECTRO CONDUCTIVITY LIQUID WASTE
HEPA	HIGH EFFICIENCY PARTICULATE AIR/ABSOLUTE REFERRING TO FILTERS
H,EXCH.	HEAT EXCHANGER
HFP	HOT FULL POWER
HIGH-P	HIGH PRESSURE
HNL	HOLIFIELD NATIONAL LABORATORY = ORNL
HPCS	HIGH PRESSURE CORE SPRAY
HPCSDGCS	HPCS-DIESEL GENERATOR COOLING SYSTEM
HPIS	HIGH PRESSURE INJECT SYSTEM
HSST	HEAVY SECTION STEEL TEST
HVAC	HEATING, VENTILATING AND AIR CONDITIONING
H-WARE	HARD WARE
HX	HEAT EXCHANGER
--- I ---	
IAC	INTERIM ACCEPTANCE CRITERIA
ICE COND	ICE CONDENSER
ICRP	INTERNATIONAL COMMISSION ON RADIOLOGICAL PROTECTION
ID	INNER DIAMETER
IEA	INTERNATIONAL ENERGY AGENCY
IEP	INTERNATIONAL ENERGY PLAN
I/F	FILTER FOR IODINE

--- I ---	
IFCF	INTEGRATED FUEL CYCLE FACILITY
ILRT	INTEGRATED LEAK RATE TEST
INC.	INCLUDE
INEL	IDAHO NATIONAL ENGINEERING LABORATORY
INIS	INTERNATIONAL NUCLEAR INFORMATION SYSTEM
IPR	INITIAL PRESSURE REGULATOR
IRM	INTERMEDIATE RANGE MONITOR
IRS	INSTITUTE OF REACTOR SAFETY
ISA	INSTRUMENT SOCIETY OF AMERICA
ISI	IN-SERVICE INSPECTION
--- J ---	
JCAE	
--- K ---	
KON-S	KOOJIKAIKAKU NINKASHINSEI SANKOOSHO
KON-6	KOOJI NINKA SINSEISYO NO.6
--- L ---	
LAH	LABORATORY TEST, LOCATION AND SCOPE TO BE DEFINED
LCO	LIMITING CONDITION FOR OPERATION
LDS	LEAK DETECTION SYSTEM
LE	LESS OR EQUAL
LECLW	LOW ELECTRO CONDUCTIVITY LIQUID WASTE
LEIWAR	REACTOR SIMULATOR PROGRAMME FOR LWR,LEICHT WASSER REACTOR.
LHGR	LINEAR HEAT GENERATION RATE
LIT	LITERATURE SURVEY
LOC	LOSS OF COOLANT
LOCA	LOSS OF COOLANT ACCIDENT
LOFT	LOSS OF FLUID TEST
LOFT	LOSS-OF-FLUID TEST FACILITY
LOPC	LOSS OF PRIMARY COOLANT
LPCI	LOW PRESSURE COOLANT INJECTION
LPCS	LOW PRESSURE CORE SPRAY
LPIS	LOW PRESSURE INJECTION SYSTEM
LPHM	LOCAL POWER RANGE MONITOR
LPZ	LOW POPULATION ZONE
LSSS	LIMITING SAFETY SYSTEM SETTING
LT	LESS THAN
LUB.SYS.	LUBRICATION SYSTEM
LWA	LIMITED WORK AUTHORIZATION
LWDS	LIQUID WASTE DISPOSAL SYSTEM
LWR	LIGHT-WATER REACTOR
LWST	LIQUID WASTE STORAGE TANK
--- M ---	
MAC	ASSEMBLER FOR NORD COMPUTERS
MALFUNC.	MALFUNCTION
MAPLHGR	MAXIMUM AVERAGE PLANTER LINEAR HEAT GENERATION RATE
MCA	MAXIMUM CREDIBLE ACCIDENT
MCHFR	MINIMUM CRITICAL HEAT FLUX RATIO
MCPR	MINIMUM CRITICAL POWER RATIO
MGM	MOTOR-GENERATOR-MOTOR
MLD	MEAN LOW WATER DATUM
MOTOR.D	MOTOR DRIVE
MPC	MAXIMUM PERMISSIBLE CONCENTRATIONS
MSIV	MAIN STEAM ISOLATION VALVE
MSIV-LCS	MAIN STEAM ISOLATION VALVE-LEAK CONTROL SYSTEM
MSL	MEAN SEA LEVEL
MSTR	MAIN STEAM TUBE RUPTURE
M,STEAM	MAIN STEAM
MSTS	MAIN STEAM TURBINE SYSTEM
MT	MAGNETIC PARTICLE TEST
MTHF	MEANTIME BETWEEN FAILURES
MTTR	MEANTIME TO REPAIR
--- N ---	
NAS	NATIONAL ACADEMY OF SCIENCES
NB	NUCLEAR BOILER
NBR	NUCLEAR BOILER RATED (POWER)
NCC	
N.DATA	NUCLEAR DATA
N.DOSE	NEUTRON DOSE
NDT	NIL DUCTILITY TRANSITION TEMPERATURE
NEC	NUCLEAR ENERGY CENTER
NECSS	NUCLEAR ENERGY CENTER SITE SURVEY
NED	NUCLEAR ENERGY DIVISION (GE)
NEPA	NATIONAL ENVIRONMENTAL POLICY ACT
NI	NUCLEAR ISLAND
NII	NUCLEAR INSTALLATIONS INSPECTORATE
NMS	NEUTRON MONITORING SYSTEM
NOM	NOMINAL
NPSH	NET POSITIVE SUCTION HEAD
NRC	NUCLEAR REGULATORY COMMISSION
NSF	NATIONAL SCIENCE FOUNDATION
NSPP	NUCLEAR SAFETY PILOT PLANT (ORNL)
NSSS	NUCLEAR STEAM SUPPLY SYSTEM
NSSSS	NUCLEAR STEAM SUPPLY SHUTOFF SYSTEM
NTRALIZE	NEUTRALIZED OR NEUTRALIZER
NUSC	NORTHEAST UTILITIES SERVICE CORPORATION
--- O ---	
OBE	OPERATING BASIS EARTHQUAKE
O.D.	OUTER DIAMETER
OPCON SY	STEMOPERATOR-PROCESS COMMUNICATION SYSTEM
OPERAT-P	OPERATION PRESSURE
OPPD	OMAHA PUBLIC POWER DISTRICT
OVLDR	OVERLAY PROGRAMME LOADER
--- P ---	
-P	---PRESSURE
PA	PUBLIC ADDRESS (SYSTEM)
P AND ID	PROCESS AND INSTRUMENTATION DRAWING

--- P ---	
PAHR	POST ACCIDENT HEAT REMOVAL
PAHR	POST ACCIDENT RADIOACTIVITY REMOVAL
PBF	POWER BURST FACILITY
PC	PERCENT
PCLOMR	PRECONDITIONING INTERIM OPERATING MANAGEMENT RECOMMENDATION
PCM	POWER / COOLING MISMATCH (IN PBF)
PCS	PROCESS COMPUTER SYSTEM
PCT	PEAK CLADDING TEMPERATURE
PDA	PRELIMINARY DESIGN APPROVAL
P/F	FILTER FOR PARTICLE
PFE	PLENUM FILL EXPERIMENT
PIF	POST IRRADIATION EXPERIMENTS
PIOM	PRECONDITIONING INTERIM OPERATING MANAGEMENT
PMF	PROBABLE MAXIMUM FLOOD
PIF	PROJECT AND PROGRAM INFORMATION FILE
PRM	POWER RANGE MONITOR
PSAR	PRELIMINARY SAFETY ANALYSIS REPORT
PSSFPC	PURIFICATION SYSTEM FOR SPENT-FUEL-POOL-COOLANT
PT	PENETRANT TEST
PUHE W.S	PURE WATER SYSTEM
PV	PRESSURE VESSEL
PWR	PRESSURIZED-WATER REACTOR
--- Q ---	
QA	QUALITY ASSURANCE
QED	QUICK AND EASY EDITING
--- R ---	
RABVS	REACTOR AUXILIARY BUILDING VENTILATION SYSTEM
RAD.	RADIATION
RBM	ROD BLOCK MONITOR (CONTROL ROD HIKINUKI KANSI SOOTI)
RCAVARS	REACTOR CONTAINER AIR VENTILATION AND RECIRCULATION SYSTEM
RCC	ROD CLUSTER CONTROL
RCCUS	REACTOR COOLANT CLEAN UP SYSTEM
RCTAVS	REACTOR CONTAINER INTERNALS AIR VENTILATION SYSTEM
RCIC	REACTOR CORE ISOLATION COOLING
RCN	REACTOR CENTRUM NEDERLAND
R.COOL.	REACTOR COOLING
RCPB	REACTOR COOLANT PRESSURE BOUNDARY
RCPS	REACTOR COOLANT PURIFICATION SYSTEM
RCS	REACTOR COOLANT SYSTEM
RCWSVS	REACTOR CAVITY WATER SURFACE VENTILATION SYSTEM
RECIRC.	RECIRCULATION
REG	AEC DIRECTORATE OF REGULATION
REG	REGION
RESA	REFERENCE SAFETY ANALYSIS
REVAB	RELIEF VALVE AUGMENTED BYPASS
R/F	ROUGH FILTER
RG	REGULATORY GUIDE
RG AND E	ROCHESTER GAS AND ELECTRIC CORPORATION
RH/C	STEAM REHEAT COIL
RHR	RESIDUAL HEAT REMOVAL SYSTEM
RHRS-CCS	RHRS-COMPONENTS COOLING SYSTEM
RIA	REACTIVITY INITIATED ACCIDENT
RPS	REACTOR PROTECTION SYSTEM
RPV	REACTOR PRESSURE VESSEL
RRCR	RADIAL RAYS CONTROL ROOM
RS	RETROSPECTIVE SEARCH
RSAC	REACTOR SAFETY ADVISORY COMMITTEE
RSCS	ROD SEQUENCE CONTROL SYSTEM
RSO	REACTOR SYSTEM OUTLINE
RSR	AEC DIVISION OF REACTOR SAFETY RESEARCH
RT	RADIOGRAPHIC TEST
RT	REACTOR TRIP
RWCU	REACTOR WATER CLEAN UP
RWM	ROD WORTH MINIMIZER
RWPAF	RAW WATER PURIFICATION AND FILTRATION
RWPS	REACTOR WATER PURIFICATION SYSTEM
--- S ---	
SA	SAFETY ANALYSIS
SACR	SAFETY AUXILIARY COMPONENTS ROOM
SAG	SENIOR ADVISORY GROUP
SAR	SAFETY ANALYSIS REPORT
SCAT	STEADY STATE CAPSULE TEMPERATURE
S.CHAMB	SUPPRESSION CHAMBER
SCRAM	EMERGENCY SHUT-DOWN SYS. FOR TERMINATING THE REACTOR CHAIN REACTION
S.C.RATI O	SHORT CIRCUIT RATIO
SEPARAT.	SERARATOR
SER	SAFETY EVALUATION REPORT
SGTS	STANDRY GAS TREATMENT SYSTEM
SDI	SELECTIVE DISSEMINATION OF INFORMATION
SFPES	SPENT FUEL PIT EXHAUSTING SYSTEM
SFSP	SPENT FUEL STORAGE POOL
SGTR	STEAM GENERATOR THIN TUBE RUPTURE
SHK	GENSIRO SETTI HENKOO KYOKA SINSEI SYO TENPU SYORUI
SINTRAN	OPERATING SYSTEM FOR NORD-10
SIS	SAFETY INJECTION SYSTEM
SKS	GENSIRO SETTI KYOKA SINSEI SYO TENPU SYORUI
SLC	STANDBY LIQUID CONTROL
SN RATIO	SIGNAL VS NOISE RATIO
SRM	SOURCE RANGE MONITOR
SRP	STANDARD REVIEW PLAN
SQ	STEAM QUALITY OR SQUARE
SRV	SEFETY RELIEF VALVE
SS	SAFE SHUTDOWN
SSE	SAFE SHUTDOWN EARTHQUAKE
STEAM-P	STEAM PRESSURE
S.T.P.	STANDARD TEMPERATURE AND PRESSURE

--- S ---	
STRIP	SHORT-TERM REALISTIC IRRADIATION PROOF-TEST
SUS	STAINLESS STEEL
SW	SERVICE WATER
SWD	SOLID WASTE DISPOSAL
SWDS	SOLID WASTE DISPOSAL SYSTEM
S.W-PUMP	SEA WATER PUMP
SWSS	SERVICE WATER SUPPLY SYSTEM
--- T ---	
-T	---TEMPERATURE
(T)	TURBINE SYSTEM (JPDR-2)
TBOPF	TURBINE BUILDING OPERATION FLOOR
TBEOPF	TURBINE BUILDING EXCEPT OPERATION FLOOR
TC	TANDEM COMPOUND
TCV	TURBINE CONTROL VALVE
T.D.	THEORETICAL DENSITY
TEMP	TEMPERATURE
TG	TURBINE GENERATOR
THICK	THICKNESS
TIP	TRAVERSING INCORE PROBE
TK	TANK
TOF METO D	TIME OF FILGHT METHOD
TRC	TECHNICAL REVIEW COMMITTEE
(T.S)	TURBINE SYSTEM (JPDR-2)
TSS	TIME SHARING SYSTEM
TURB. D	TURBINE DRIVE
--- U ---	
UHI	UPPER HEAD INJECTION
UT	ULTRASONIC TEST
--- V ---	
VOL.PC.	VOLUME PERCENT
VR	VOID RATIO OR VOLUME RATIO
--- W ---	
WDACS	WASTE DISPOSAL AUXILIARY COOLING SYSTEM
WDBVS	WASTE DISPOSAL BUILDING VENTILATION SYSTEM
WDR.TANK	WASTE DISPOSAL RECEIVE TANK
WG	WORKING GROUP
WGST	WASTE GAS STORAGE TANK
WREM	WATER REACTOR EVALUATION MODEL
WT	WEIGHT
W-PUMP	WATER PUMP
--- X ---	
--- Y ---	
YAEC	YANKEE ATOMIC ELECTRIC COMPANY
--- Z ---	
ZR-W	ZIRCONIUM-WATER REACTION

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120	HISTORY	OF	CONSTRUC	TION	PERMIT	APPLICAT	DATA PAGE****- 1***
122	REVISE	OF	CONSTRUC	TION	PERMIT		DATA PAGE****- 2***
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10020	SA	DEFINITI	ON	OF	ACCIDENT		DATA PAGE****- 4***
10100	SAFETY	STANDARD	UNDER	AB-TRA			DATA PAGE****- 5***
10120	SAFETY	STANDARD	UNDER	ACCIDENT			DATA PAGE****- 5***
20000	AB-TRA	FROM	VARIOUS	SYSTEMS	CONDITIO	N LIST	DATA PAGE****- 5***
20020	AB-TRA	ANALYSIS	INITIAL	POWER	CONDITIO	N	DATA PAGE****- 5***
20030	AB-TRA	ANALYSIS	SAFETY	DEVICE	SETTING	POINT	DATA PAGE****- 6***
20040	AB-TRA	ANALYSIS		OTHER	CONDITIO	N	DATA PAGE****- 6***
20050	AB-TRA	RELIEF	SAFETY	VALVE	SETTING	POINT	DATA PAGE****- 6***
21000	AB-TRA	FROM	RECIRC.	SYSTEM		LIST	DATA PAGE****- 6***
21110	AB-TRA		RECIRC.	PUMP	TRIP		DATA PAGE****- 6***
21120	AB-TRA		RECIRC.	PUMP	SHAFT	STICK	DATA PAGE****- 7***
21200	AB-TRA	RECIRC.	FLOW	REGULATO	R	MALFUNC.	DATA PAGE****- 7***
21320	AB-TRA	MISS	START-UP	OF COLD	RECIRC.	LOOP (1)	DATA PAGE****- 8***
21340	AB-TRA	MISS	START-UP	OF COLD	RECIRC.	LOOP (2)	DATA PAGE****- 8***
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23000	AB-TRA	FROM	MAIN	STEAM	SYSTEM	LIST	DATA PAGE****- 9***
23100	AB-TRA	GENERATO	R TRIP				DATA PAGE****- 10***
23200	AB-TRA	TURBINE	TRIP	SUMMARY			DATA PAGE****- 10***
23210	AB-TRA	TURBINE	TRIP (1)	WITH	BY PASS	V. ACT	DATA PAGE****- 10***
23220	AB-TRA	TURBINE	TRIP (2)	WITHOUT	BY PASS	V. ACT	DATA PAGE****- 11***
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23400	AB-TRA	MALFUNC.	OF INITIAL	PRESSURE	ADJUST	ER	DATA PAGE****- 12***
23500	AB-TRA	PRESSURE	RELIEF	VALVE	OPEN		DATA PAGE****- 12***
24000	AB-TRA	FROM	CONTROL	SYSTEM		LIST	DATA PAGE****- 12***
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24200	AB-TRA	CONTROL	ROD	WITHDRAW	ON	POWER	DATA PAGE****- 13***
25100	AB-TRA	OTHERS	LOSS OF	AUX.	POWER	SUPPLY	DATA PAGE****- 13***
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32100	ACCIDENT	CAUSE	AND	RESULT	CONTROL	ROD DROP	DATA PAGE****- 14***
32200	ACCIDENT	COUNTERP	LAN TO	CONTROL	ROD DROP	OUT	DATA PAGE****- 14***
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32320	ACC.ANA.	CONTROL	ROD	DROPOUT	RESULT		DATA PAGE****- 15***
33100	ACCIDENT	CAUSE	RESULT	CONTROL	ROD	RUNAWAY	DATA PAGE****- 15***
33200	ACCIDENT	COUNTERP	LAN TO	CONTROL	ROD	RUNAWAY	DATA PAGE****- 15***
34100	ACCIDENT	CAUSE	COUNTERP	LAN	FUEL	HANDLING	DATA PAGE****- 16***
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35220	LOCA	MEDIUM	RUPTURE				DATA PAGE****- 16***
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621240	SITE	WATER	QUALITY	PH	E.CDTVTY	NIGORIDO		DATA PAGE***D- 30***
621260	SITE	WATER	QUALITY	HARDNESS	ALKALI			DATA PAGE***D- 30***
621280	SITE	WATER	QUALITY	SO-4 ION	CL ION	NH-4 ION		DATA PAGE***D- 30***
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621620	SITE	WATER	QUALITY					DATA PAGE***D- 31***
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** GAP

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MCA HA	PWR LOPC	FP	GAS	RELEASE	FROM	BUILDING	43150	SEE DATA PAGE***D-	21***
MCA HA	BWR MSTR	FP	GAS	RELEASE	FROM	BUILDING	43240	SEE DATA PAGE***D-	23***
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SWDS	WASTE SLUDGE	SEPARATE TANK	803450	SEE DATA PAGE***D-	151***
SWDS	FILTRATE D	SLUDGE STORAGE TANK	803460	SEE DATA PAGE***D-	151***
FUEL	POND SLUDGE	STORAGE TANK	803490	SEE DATA PAGE***D-	151***
SWDS	SINKING TANK OF	CONDENSE D WATER PURIFY	803510	SEE DATA PAGE***D-	151***
SWDS	SPENT RESIN	STORAGE TANK	803530	SEE DATA PAGE***D-	152***
SWDS	WASTE SLUDGE	STORAGE TANK	803540	SEE DATA PAGE***D-	152***
DRY-WELL	INERTGAS SYSTEM	LIQ.N2 STORAGE TANK	822278	SEE DATA PAGE***D-	155***
CONTAINER	IODINE REMOVE	CHEMICAL TANK	825490	SEE DATA PAGE***D-	159***
MAKE-UP	WATER CONDENSE D-W	STORAGE TANK	831280	SEE DATA PAGE***D-	161***
SWSS	DESALI.S FLASH	TANK	831430	SEE DATA PAGE***D-	162***
SWSS	DESALI.S H2SO4	TANK	831500	SEE DATA PAGE***D-	163***
SWSS	RAW WATER	TANK	831570	SEE DATA PAGE***D-	164***
SWSS	FILTRATE D	WATER TANK	831580	SEE DATA PAGE***D-	164***
SWSS	DEMINERA LIZED	WATER TANK	831590	SEE DATA PAGE***D-	165***
SWSS	SECONDAR Y SYST.	PURE WATER TANK	831600	SEE DATA PAGE***D-	165***
SWSS	PRIMARY SYST.	PURE WATER TANK	831610	SEE DATA PAGE***D-	165***
AVS BWR	AUX.B WDR.TANK	ROOM SUPPLY FAN	833150	SEE DATA PAGE***D-	172***
AVS BWR	AUX.B WDR.TANK	ROOM EXHAUST FAN	833152	SEE DATA PAGE***D-	172***
AUX.	STEAM SYSTEM	STEAM DRAIN TANK	835090	SEE DATA PAGE***D-	175***

** TEMP. COOLANT

FEED.W	COOLANT TEMP.	INLET	OUTLET	SUBCOOL	731180	SEE DATA PAGE***D-	36***
REACTOR	PWR CORE COOLANT	INLET	OUTLET	TEMP.	731190	SEE DATA PAGE***D-	36***

** THERMAL CONDUCTI VITY

THERMAL	CONDUCTI VITY	OF	UO-2	732300	SEE DATA PAGE***D-	45***
THERMAL	CONDUCTI VITY	OF	ZRY	732320	SEE DATA PAGE***D-	45***

** TRIP

AB-TRA	RECIRC. PUMP	TRIP	21110	SEE DATA PAGE***D-	6***
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** TRIP

AB-TRA	GENERATOR	TRIP				23100	SEE DATA PAGE****-	10***
AB-TRA	TURBINE	TRIP	SUMMARY			23200	SEE DATA PAGE****-	10***
AB-TRA	TURBINE	TRIP (1)	WITH	BY PASS	V. ACT	23210	SEE DATA PAGE****-	10***
AB-TRA	TURBINE	TRIP (2)	WITHOUT	BY PASS	V. ACT	23220	SEE DATA PAGE****-	11***
AB-TRA	TURBINE	TRIP (3)				23230	SEE DATA PAGE****-	11***

** TURBINE

AB-TRA	TURBINE	TRIP	SUMMARY			23200	SEE DATA PAGE****-	10***
AB-TRA	TURBINE	TRIP (1)	WITH	BY PASS	V. ACT	23210	SEE DATA PAGE****-	10***
AB-TRA	TURBINE	TRIP (2)	WITHOUT	BY PASS	V. ACT	23220	SEE DATA PAGE****-	11***
AB-TRA	TURBINE	TRIP (3)				23230	SEE DATA PAGE****-	11***
RCIC	TURBINE					763620	SEE DATA PAGE****-	99***
MSTS	TURBINE	TYPE				772220	SEE DATA PAGE****-	109***
MSTS	TURBINE	NUMBER	CAPACITY	SPEED		772240	SEE DATA PAGE****-	110***
MSTS	TURBINE	MIST	SEPARAT.	TYPE	NUMBER	772320	SEE DATA PAGE****-	110***
MSTS	TURBINE	MIST	SEPARAT.			772330	SEE DATA PAGE****-	110***
MSTS	TURBINE	MIST	SEPARAT.		SIZE	772340	SEE DATA PAGE****-	110***
MSTS	TURBINE	MIST	SEPARAT.		MATERIAL	772350	SEE DATA PAGE****-	111***
TURBINE	BYPASS	SYSTEM				775300	SEE DATA PAGE****-	117***
TURBINE	AUX.	COOL	PUMP	TYPE	NO.	779220	SEE DATA PAGE****-	122***
TURBINE	AUX.	COOL	H.EXCH.	TYPE AND	NUMBER	779240	SEE DATA PAGE****-	122***
TURBINE	BUILDING	SIZE	EARTHQUA	KE-PROOF	GRADE	856300	SEE DATA PAGE****-	185***

** TURBINE AUX. COOL

TURBINE	AUX.	COOL	PUMP	TYPE	NO.	779220	SEE DATA PAGE****-	122***
TURBINE	AUX.	COOL	H.EXCH.	TYPE AND	NUMBER	779240	SEE DATA PAGE****-	122***

** TURBINE TRIP

AB-TRA	TURBINE	TRIP	SUMMARY			23200	SEE DATA PAGE****-	10***
AB-TRA	TURBINE	TRIP (1)	WITH	BY PASS	V. ACT	23210	SEE DATA PAGE****-	10***
AB-TRA	TURBINE	TRIP (2)	WITHOUT	BY PASS	V. ACT	23220	SEE DATA PAGE****-	11***
AB-TRA	TURBINE	TRIP (3)				23230	SEE DATA PAGE****-	11***

** VALVE

AB-TRA	RELIEF	SAFETY	VALVE	SETTING	POINT	20050	SEE DATA PAGE****-	6***
AB-TRA	MAIN	STEAM	ISOLATE	VALVE	CLOSE	23300	SEE DATA PAGE****-	11***
AB-TRA	PRESSURE	RELIEF	VALVE	OPEN		23500	SEE DATA PAGE****-	12***
RECIRC.	SYSTEM	(PUMP)	VALVE	NUMBER	SIZE	752220	SEE DATA PAGE****-	75***
M.STEAM	ISOLATE	VALVE	NUMBER	DESIGN-P	DESIGN-T	753420	SEE DATA PAGE****-	78***
M.STEAM	ISOLATE	VALVE	P-LOSS	RATED	FLOW	753430	SEE DATA PAGE****-	78***
M.STEAM	ISOLATE	VALVE	SHUT-OFF	TIME SET	POINT	753440	SEE DATA PAGE****-	78***
M.STEAM	ISOLATE	VALVE	CONTROL	SOURCE		753450	SEE DATA PAGE****-	78***
M.STEAM	3RD	VALVE	TYPE NO.	LEAK	RATE	753500	SEE DATA PAGE****-	78***
SAFETY	VALVE	TYPE	NUMBER			753620	SEE DATA PAGE****-	79***
SAFETY	VALVE	SET	PRESSURE	CAPACITY		753640	SEE DATA PAGE****-	79***
SAFETY	VALVE	FOR	PRESSURE	ZER	PWR	753660	SEE DATA PAGE****-	79***
RELIEF	VALVE	TYPE	NUMBER			753820	SEE DATA PAGE****-	80***
RELIEF	VALVE	SET	PRESSURE			753840	SEE DATA PAGE****-	80***
RELIEF	VALVE	CAPACITY				753860	SEE DATA PAGE****-	80***
RELIEF	VALVE	FOR	PRESSURE	ZER	PWR	753880	SEE DATA PAGE****-	80***
SPRAY	VALVE	FOR	PRESSURE	ZER	PWR	753890	SEE DATA PAGE****-	80***
M.STEAM	SYSTEM	M.STEAM	ISOLATE	VALVE	PWR	755030	SEE DATA PAGE****-	81***
M.STEAM	SYSTEM	M.STEAM	CHECK	VALVE	PWR	755050	SEE DATA PAGE****-	81***
M.STEAM	SYSTEM	M.STEAM	DUMP	VALVE	PWR	755070	SEE DATA PAGE****-	81***
M.STEAM	SYSTEM	M.STEAM	RELIEF	VALVE	PWR	755090	SEE DATA PAGE****-	81***
M.STEAM	SYSTEM	M.STEAM	SAFETY	VALVE	PWR	755110	SEE DATA PAGE****-	82***
MSTS	M.STEAM	STOP	VALVE			772390	SEE DATA PAGE****-	111***
MSTS	REGULATI	ON	VALVE			772410	SEE DATA PAGE****-	111***
MSTS	REHEATED	STEAM	STOP	VALVE		772430	SEE DATA PAGE****-	111***
MSTS	INTERCEP	T	VALVE			772450	SEE DATA PAGE****-	111***
OFF GAS	DEAERATO	R	ISOLATE	VALVE	NUMBER	801440	SEE DATA PAGE****-	136***

** VOID

CORE	OUTLET	STEAM	QUALITY	AND VOID	RATIO	731200	SEE DATA PAGE****-	37***
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** WATER QUALITY

SITE	WATER	QUALITY	WATER	SOURCE		621220	SEE DATA PAGE****-	29***
SITE	WATER	QUALITY	PH	E.CDTVTY	NIGORIDO	621240	SEE DATA PAGE****-	30***
SITE	WATER	QUALITY	HARDNESS	ALKALI		621260	SEE DATA PAGE****-	30***
SITE	WATER	QUALITY	SO-4 ION	CL ION	NH-4 ION	621280	SEE DATA PAGE****-	30***
SITE	WATER	QUALITY	NO-3 ION	NO-2 ION		621420	SEE DATA PAGE****-	30***
SITE	WATER	QUALITY	SILICA			621440	SEE DATA PAGE****-	31***
SITE	WATER	QUALITY	CATION	ANION	TOTAL	621460	SEE DATA PAGE****-	31***
SITE	WATER	QUALITY	FE TOTAL			621480	SEE DATA PAGE****-	31***
SITE	WATER	QUALITY				621620	SEE DATA PAGE****-	31***
CVCS	PWR	REACTOR	WATER	QUALITY		762210	SEE DATA PAGE****-	88***
RWPS	BWR	REACTOR	WATER	QUALITY		762220	SEE DATA PAGE****-	88***

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** WATER QUALITY

MAKE-UP	WATER	DEMINE.	CAPACITY	WATER	QUALITY	831220	SEE DATA PAGE***D- 160***
SWSS	WATER	QUALITY	EXIT OF	DESALIS		831620	SEE DATA PAGE***D- 165***
SWSS	WATER	QUALITY	EXIT OF	2BEDS-	3TOWERS	831622	SEE DATA PAGE***D- 165***
SWSS	WATER	QUALITY	EXIT OF	POLISHER	(831540)	831624	SEE DATA PAGE***D- 165***

** WDACS

WDACS	WASTE	DISPOSAL	AUX.	COOLING	SYSTEM	779300	SEE DATA PAGE***D- 122***
WDACS	INTERMED	IATE	LOOP	CIRC.	PUMP	779320	SEE DATA PAGE***D- 122***
WDACS	S.W-PUMP					779340	SEE DATA PAGE***D- 122***
WDACS	H.EXCH.					779360	SEE DATA PAGE***D- 123***

** WEIGHT FUEL

FUEL	LOADING	WEIGHT	TON-UO2	TON-U	TON-U235	731260	SEE DATA PAGE***D- 40***
UO-2	WEIGHT	PER FUEL	ASSY	KGUO-2/	ASSY	732260	SEE DATA PAGE***D- 43***
FUEL	ASSY	TOTAL	WEIGHT	KG (INC	,H-WARE)	732280	SEE DATA PAGE***D- 44***
FUEL	ASSY	PARTS	WEIGHT	7*7	BWR	732290	SEE DATA PAGE***D- 44***
FUEL	ASSY	PARTS	WEIGHT	8*8	BWR	732291	SEE DATA PAGE***D- 0***
FUEL	ASSY	PARTS	WEIGHT	14*14	PWR	732294	SEE DATA PAGE***D- 44***
FUEL	ASSY	PARTS	WEIGHT	15*15	PWR	732295	SEE DATA PAGE***D- 0***
FUEL	ASSY	PARTS	WEIGHT	17*17	PWR	732297	SEE DATA PAGE***D- 0***
FUEL	ASSY	PARTS	WEIGHT	28RODS/A	ATR	732299	SEE DATA PAGE***D- 45***

** ZR-W

FUEL	CLADDING PERFORAT	AND ZR-W	REACTION RATE	35340	SEE DATA PAGE***D- 17***
HEAT	GENERAT. RATE OF	ZR-W	REACTION	35360	SEE DATA PAGE***D- 17***

表一 6 データリスト

** SOURCE DOCUMENT

100

JPDR-2	BWR	2	KON-6		/
TSURUGA	BWR	3	80-3-3(70/5),81-3-2(70/7/22),KONS		/
ONAGAWA	BWR	4	80-6-3(70/5)SKST,85-6(70/11), 68BUKAI		/
HAMAOKA-1	BWR	5	80-2-3(70/5)SKST,85-4(70/11),95-2(71/9)SHKS, 64BUKAI		/
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	NENRYOO TAI SEKKEI NINKA SINSEI GAIYOO(JNF) KOMMON KAI	F2N1	71/ 2
FUKUSIMA-2,3	BWR	7	CHUUI ZIKOO NI TUITE 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) 76BUKAI		/
FUKUSIMA-4	BWR	10	94-3-3(71/8) 81BUKAI		71/ 8
FUKUSIMA-6	BWR	11	98-3-3(71/12)		72/ 1
TOOKAI-2	BWR	12	98-2-3(71/12)		72/ 1
HAMAOKA-2	BWR	13	106-2-3(72/ 9) SHKS, 93BUKAI		/
TOMIOKA-1	BWR	14	105- - (72/ 9) 92BUKAI		/
TOMIOKA-1	BWR	14	151-2-2(76/8) SHK,		/
KASHIWAZAKI	BWR	15	137-3-5 SKS 120BUKAI		75/ 3
TOMIOKA-2	BWR	16	155- - (77/ 1) 129BUKAI		/
TAKAHAMA-2	PWR	23	SHK(70/10)		/
TAKAHAMA-2	PWR	23	80-4-3(70/5)SHKT,85-9(70/11), 66BUKAI		/
GENKAI-1	PWR	24	6783-5		/
GENKAI-1	PWR	24	80-5-3(70/5)SKST,85-5(70/11), 67BUKAI		/
OOI-1,2	PWR	26	88-2-2(71/1) 75BUKAI		/
MIHAMA-3	PWR	27	94-2-3(71/8) 80BUKAI		/
IKATA-1	PWR	28	101-2-2 SKS 86BUKAI		/
GENKAI-2	PWR	29	129-2-2 SHK 111BUKAI		/
IKATA-2	PWR	30	138-3-3 SHK 121BUKAI		75/ 5
SENDAI	PWR	31	148-2-2 SKS 123BUKAI		/
VERMONT YANKEE	BWR	52	A-2(70/7) 68BUKAI-SANKOO SIRYOO		/
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)		/
OYSTER CREEK	BWR	57	R-9(66/8)		/
DUANE ARNOLD	BWR	58	A-2(70/7) 68BUKAI-SANKOO SIRYOO		/
YANKEE	PWR	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

** HISTORY OF CONSTRUCTION PERMIT APPLICAT 120

ONAGAWA	BWR	4	70/5/30(REV.0),70/11/9(R.1),	/
HAMAOKA-1	BWR	5	70/5/22(REV.0),7	/
FUKUSIMA-2,3	BWR	7	72/ 8/28	/
SHIMANE	BWR	8	69/11/13(OK)	/
FUKUSIMA-6	BWR	11	71/12/21	/
TOOKAI-2	BWR	12	72/12/23	/
TOMIOKA-1	BWR	14	72/ 8/28	/
KASHIWAZAKI	BWR	15	75/ 3/20	/
TOMIOKA-2	BWR	16	76/12/21(REV.0)	/
GENKAI-1	PWR	24	70/5/30(REV.0),70/11/6(R.1),	/
OOI-1,2	PWR	26	71/1(REV.0),	/

** REVISE	OF	CONSTRUC TION	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
FUKUSIMA-2.3	BWR	7	44/ 2/10(44- 419)	SHK
FUKUSIMA-2.3	BWR	7	44/ 4/ 7(44-1121)	SHK
FUKUSIMA-2.3	BWR	7	45/ 1/ 7(44-6070)	SHK
FUKUSIMA-2.3	BWR	7	45/ 1/23(44-6670)	SHK
FUKUSIMA-2.3	BWR	7	45/ 3/13(45- 374)	SHK
FUKUSIMA-2.3	BWR	7	45/ 7/30(45-3499)	SHK
FUKUSIMA-2.3	BWR	7	45/ 9/14(45-6097)	SHK
FUKUSIMA-2.3	BWR	7	45/12/19(45-7663)	SKHK
FUKUSIMA-2.3	BWR	7	45/12/19(45-7665)	SKHK
SHIMANE	BWR	8	44/11/13(44-5540)	SK
SHIMANE	BWR	8	45/10/13(45-4965)	SHK
TOMIOKA-1	BWR	14	74/ 4/30(49-3989)	SK
TAKAHAMA-2	PWR	23	70/11/25(45-7024)	SHK
TAKAHAMA-2	PWR	23	72/ 3/13(47-2724)	MODIFICATION OF REACTOR AND REACTOR-COOLING SYSTEM
TAKAHAMA-2	PWR	23	73/ 3/31(48-2073)	INSTALLATION OF MORE DIESEL GENERATOR
TAKAHAMA-2	PWR	23	73/12/27(48-10542)	MODIFICATION OF BURNABLE POISON
TAKAHAMA-2	PWR	23	75/ 2/ 6(49-11119)	CHANGE OF SPENT-FUEL-DISPOSAL-METHOD
TAKAHAMA-2	PWR	23	75/ 6/ 6(50-3523)	EXTENSION OF SITE AREA
TAKAHAMA-2	PWR	23	76/ 8/10(51-23)	CHANGE OF ENRICHMENT ON RELOAD-FUEL
TAKAHAMA-1	PWR	25	69/12/12(44-6143)	SK
TAKAHAMA-1	PWR	25	70/12/19(45-7667)	POST ENTRY OF LEA RATE OF SAFETY-AND-
TAKAHAMA-1	PWR	25	72/ 3/13(47-2724)	RELIEF VALVES OF MAIN STEAM
TAKAHAMA-1	PWR	25	73/12/27(48-10542)	MODIFICATION OF REACTOR AND REACTOR-COOLING SYSTEM
TAKAHAMA-1	PWR	25	75/ 2/ 6(49-11119)	CHANGE OF SPENT-FUEL-DISPOSAL-METHOD
TAKAHAMA-1	PWR	25	75/ 6/ 6(50-3523)	EXTENSION OF SITE AREA
TAKAHAMA-1	PWR	25	76/ 3/ 4(50-10544)	INSTALLATION OF MORE SPENT-FUEL-RACK
TAKAHAMA-1	PWR	25	76/ 8/10(51-23)	PREPARATION OF BURNABLE POISON ON RELOADED-CORE
TAKAHAMA-1	PWR	25	76/ 8/10(51-23)	CHANGE OF ENRICHMENT ON RELOAD-FUEL
IKATA-1	PWR	28	72/11/29(47-10921)	SK
IKATA-1	PWR	28	73/ 5/26(48-5305)	ERECTION OF DESALINATION FACILITY
IKATA-1	PWR	28	75/ 4/25(50-2101)	MODIFICATION OF SAFETY-PROTECTION-LINE

** REVISE	OF	CONSTRUC TION	PERMIT	APPLICAT	130
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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
TOOKAI-2	BWR	12	71/12/21(REV.0)	72/ 1
TAKAHAMA-2	PWR	23	70/ 5/29(REV.0),70/10/13(R.1)	/
MIHAMA-3	PWR	27	71/ 7/12(REV.0)	/

** IMPORTED

COMPONENTS

200

TSURUGA	BWR	3	RECIRC.-PUMPS, INSTRUMENTS, CONTROL RODS AND DRIVE-MECH.	/
TSURUGA	BWR	3	FUEL ASSEMBLIES(INITIAL LOAD)	/
ONAGAWA	BWR	4	SAFETY VALVE, RELIEF VALVE, MAIN STEAM ISOLATION VALVE	70/ 6
ONAGAWA	BWR	4	HPCI TURBINE PUMP, RCIC TURBINE PUMP, RECIRC. PUMP,	70/ 6
ONAGAWA	BWR	4	MG-SET FLUID COUPLING, SOME OF NUCLEAR INSTRUMENTS,	70/ 6
ONAGAWA	BWR	4	**KOOJI KEIKAKU GAIYOO 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/
FUKUSIMA-1	BWR	6	VALVES(RECIRC.LOOP-STOP-V., MAIN-STEAM-ISOLATION-V.,	POCK.B P190 71/
FUKUSIMA-1	BWR	6	SAFETY-V., RELIEF-V.)	POCK.B P190 71/
FUKUSIMA-1	BWR	6	RECIRC.-PUMPS, INSTRUMENTS, CONTROL ROD AND DRIVE-MECH.	POCK.B P191 71/
FUKUSIMA-1	BWR	6	MAIN TURBINE AND GENERATOR	POCK.B P191 71/
FUKUSIMA-1	BWR	6	FILTER, RECOMBINER, COMPRESSOR (OFF GAS SYSTEM)	POCK.B P191 71/
FUKUSIMA-1	BWR	6	CENTRIFUGAL WATER SEPARATOR, DRUM PACKING MACHINE (SWDS)	POCK.B P191 71/
FUKUSIMA-2.3	BWR	7	(2-GOO) STEAM SEPARATOR, DRYER, CORE SUPPORT STRUCTURE	POCK.B P190 71/
FUKUSIMA-2.3	BWR	7	(2-GOO) SAFETY VALVES	POCK.B P190 71/
FUKUSIMA-2.3	BWR	7	(BOTH 2.3) MAIN-STEAM-ISOLATION-V., RELIEF-V	POCK.B P190 71/
FUKUSIMA-2.3	BWR	7	(BOTH 2.3) RECIRC.-PUMPS	POCK.B P191 71/
FUKUSIMA-2.3	BWR	7	(2-GOO) INSTRUMENTS (WHOLE)	POCK.B P191 71/
FUKUSIMA-2.3	BWR	7	(3-GOO) INSTRUMENTS (PARTS)	POCK.B P191 71/
FUKUSIMA-2.3	BWR	7	CONTROL ROD AND DRIVE MECHANISM	POCK.B P191 71/
FUKUSIMA-2.3	BWR	7	(2-GOO) MAIN TURBINE, AND GENERATOR	POCK.B P191 71/
FUKUSIMA-2.3	BWR	7	(2-GOO) FILTER, RECOMBINER, COMPRESSOR (OFF GAS SYSTEM)	POCK.B P191 71/
FUKUSIMA-2.3	BWR	7	(2-GOO) CENT.-WATER-SEPARATOR, DRUM-PACK.-M. (SWDS)	POCK.B P191 71/
SHIMANE	BWR	8	RECIRCULATION PUMPS	POCK.B P195 /
SHIMANE	BWR	8	INSTRUMENTS, CONTROL-ROD AND DRIVE MECHANISM	POCK.B P195 /
SHIMANE	BWR	8	FILTER ELEMENTS, COMPRESSOR (OFF GAS SYSTEM)	POCK.B P195 /
FUKUSIMA-5	BWR	9	RECIRC.-PUMPS, INSTRUMENTS, CONTROL RODS AND DRIVE-MECH.	/
FUKUSIMA-4	BWR	10	RECIRC.-PUMPS, INSTRUMENTS, CONTROL RODS AND DRIVE-MECH.	/
FUKUSIMA-6	BWR	11	RECIRC.-PUMPS, INSTRUMENTS, CONTROL RODS AND DRIVE-MECH.	/
TOOKAI-2	BWR	12	RECIRC.-PUMPS, CONTROL RODS AND DRIVE-MECH.	/
HAMAOKA-2	BWR	13	RECIRC.-PUMPS,	/
MIHAMA-1	PWR	21	INITIAL CHARGE FUEL ASSEMBLIES	POCK.B P192 71/
MIHAMA-1	PWR	21	PRESSURE VESSEL	POCK.B P192 71/
MIHAMA-1	PWR	21	CORE SUPPORT STRUCTURE, STEAM GENERATOR	POCK.B P192 71/
MIHAMA-1	PWR	21	PRIMARY PIPING AND ISOLATION VALVE	POCK.B P192 71/
MIHAMA-1	PWR	21	CHARGE PUMP, FILTER (CVCS)	POCK.B P193 71/
MIHAMA-1	PWR	21	PUMPS (PRIMARY COOLANT CIRCULATION)	POCK.B P193 71/
MIHAMA-1	PWR	21	HEATER AND SPRAY NOZZLE (PRESSURIZER)	POCK.B P193 71/
MIHAMA-1	PWR	21	INSTRUMENTS, CONTROL ROD AND DRIVE MECHANISM,	POCK.B P193 71/
MIHAMA-1	PWR	21	MONITOR AND OIL CLEANER (STEAM TURBINE)	POCK.B P193 /
MIHAMA-1	PWR	21	FLEXIBLE JOINT (ELECTRIC GENERATOR)	POCK.B P193 /
MIHAMA-1	PWR	21	COMPRESSOR,FILTER (OFF-GAS SYSTEM)	POCK.B P193 /
MIHAMA-1	PWR	21	TANK,PUMP,ION-EXCHANGER (LWDS)	POCK.B P193 /
MIHAMA-2	PWR	22	INITIAL CHARGE FUEL ASSEMBLIES	POCK.B P192 71/
MIHAMA-2	PWR	22	CORE SUPPORT STRUCTURE,	POCK.B P192 71/
MIHAMA-2	PWR	22	INCONEL TUBES AND STEAM SEPARATOR (PARTS OF STEAM GENE.)	POCK.B P192 71/
MIHAMA-2	PWR	22	CHARGE PUMP, FILTER (CVCS)	POCK.B P193 71/
MIHAMA-2	PWR	22	PUMPS (PRIMARY COOLANT CIRCULATION)	POCK.B P193 71/
MIHAMA-2	PWR	22	HEATER (PRESSURIZER),	POCK.B P193 71/
MIHAMA-2	PWR	22	INSTRUMENTS, CONTROL ROD AND DRIVE MECHANISM,	POCK.B P193 /
MIHAMA-2	PWR	22	COMPRESSOR,FILTER (OFF-GAS SYSTEM)	POCK.B P193 /
MIHAMA-2	PWR	22	EVAPOLATOR (LWDS)	POCK.B P193 /
TAKAHAMA-2	PWR	23	PUMPS (FOR PRIMARY COOLANT CIRCULATION)	/
GENKAI-1	PWR	24	RECIRCULATION PUMPS	POCK.B P195 /
GENKAI-1	PWR	24	HEATER (PRESSURIZER)	POCK.B P195 /
GENKAI-1	PWR	24	INSTRUMENT-PARTS , CONTROL-ROD AND DRIVE MECHANISM-PARTS	POCK.B P195 /
TAKAHAMA-1	PWR	25	INSTRUMENT, CONTROL ROD DRIVE MECHANISMS,	POCK.B P193 /
TAKAHAMA-1	PWR	25	INITIAL CHARGE FUEL ASSEMBLIES	POCK.B P192 71/
TAKAHAMA-1	PWR	25	CORE SUPPORT STRUCTURE,,STEAM GENERATOR	POCK.B P192 71/
TAKAHAMA-1	PWR	25	PRIMARY PIPING AND ISOLATION VALVE	POCK.B P192 71/
TAKAHAMA-1	PWR	25	PRIMARY COOLANT PURIFICATION SYSTEM	POCK.B P193 71/
TAKAHAMA-1	PWR	25	PRIMARY COOLANT CIRCULATION SYSTEM	POCK.B P193 71/
TAKAHAMA-1	PWR	25	HEATER (PRESSURIZER),	/
TAKAHAMA-1	PWR	25	FILTER (OFF-GAS SYSTEM)	POCK.B P193 /
TAKAHAMA-1	PWR	25	EVAPOLATOR,FILTER (LWDS)	POCK.B P193 /
OOI-1.2	PWR	26	CONTROL RODS AND DRIVE MECHANISMS	/
OOI-1.2	PWR	26	STEAM GENERATOR(FOR UNIT 1)	/
OOI-1.2	PWR	26	FUEL ASSEMBLIES(INITIAL LOAD)	/
MIHAMA-3	PWR	27	PUMPS (FOR PRIMARY COOLANT CIRCULATION)	/
IKATA-1	PWR	28	O-RING,PUMPS (PRIMARY COOLANT CIRCULATION),	75/12
IKATA-1	PWR	28	HEATER (PRESSURIZER), CONTROL ROD CLUSTER,	75/12
IKATA-1	PWR	28	CONTROL ROD DRIVE MECHANISM (FOR PART LENGTH),	75/12

** IMPORTED	COMPONENTS	200	
IKATA-1	PWR 28 IN-CORE INSTRUMENTS (FOR NUCLEAR MEASUREMENT),	75/12	
IKATA-1	PWR 28 OUT-CORE INSTRUMENTS (FOR NUCLEAR MEASUREMENT),	75/12	
IKATA-1	PWR 28 NEUTRON SOURCE, BURNABLE POISON, PLUGGING DEVICE,	75/12	
IKATA-1	PWR 28 CRANE AND TOOLS FOR FUEL HANDLING,	75/12	
IKATA-1	PWR 28 GAS-COMPRESSOR, FILTER ELEMENT FOR RADIOACTIVE MATERIAL,	75/12	
IKATA-1	PWR 28 AUXILIARY FEED WATER PUMP WITH TURBINE	75/12	
IKATA-1	PWR 28 AUTOMATIC CONTROL DEVICE FOR PROCESS CONTROL (DIFFEREN-	75/12	
IKATA-1	PWR 28 TIAL-PRESSURE-SWITCH, THIMBLE, FLOW ELEMENT ETC.)	75/12	
IKATA-1	PWR 28 RATIO OF (DOMESTIC/IMPORTED PRODUCT) = 95, PC	75/12	
FUGEN	ATR 81 PRESSURE TUBES	71/	POCK,B P197

** HISTORY OF	CONSTRUCTION AND OPERATION	300	
JPDR-1	BWR 1 63/10/26 FULL POWER OPERATION	/	
FUKUSIMA-1	BWR 6 66/12/ 8 CONSTRUCTION START (CONTRACT)	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 67/ 9/19 REACTOR-CONTAINER SETTING START	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 68/ 6/17-21 CONTAINER INITIAL PRESSURE-LEAK TEST	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 69/ 5/21 PRESSURE VESSEL SETTING	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 69/12/23 PRESSURE VESSEL, PRIMARY SYSTEM PRESSURE TEST	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 3/31 275 KV SOURCE RECEIVE	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 4/ 4 TURBINE AND GENERATOR SETTING START	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 6/25-29 CONTAINER FINAL PRESSURE-LEAK TEST	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 7/ 4 FUEL LOADING START	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 7/ 5 MINIMUM CRITICAL	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 7/22 FUEL LOADING FINISH	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 9/ 8 TURBINE-GENERATOR TURNING START	70/ 3	KOONIN MEMO
FUKUSIMA-1	BWR 6 70/ 9/26 HEATING-UP START	70/ 3	KOONIN MEMO
MIHAMA-1	PWR 21 72/ 6/14 STEAM GENERATOR THIN TUBE FAILURE	/	
MIHAMA-2	PWR 22 72/ 8/11 MAIN TRANS OIL LEAK	/	
TAKAHAMA-1	PWR 25 71/ 9/ 7 CONTAINER INITIAL PRESSURE-LEAK TEST	/	
DRESDEN-1	BWR 55 57/ 3/ START OF CONSTRUCTION	62/	DNR V4 P91
DRESDEN-1	BWR 55 59/10/ REACTOR CRITICAL	62/	DNR V4 P91
DRESDEN-1	BWR 55 60/ 6/ FULL POWER OPERATION	62/	DNR V4-P91
YANKEE	PWR 69 57/11/ START OF CONSTRUCTION	61/	DNR V4 P33
YANKEE	PWR 60/ 8/ REACTOR CRITICAL	61/	DNR V4 P33
YANKEE	PWR 69 61/ 1/ PRELIMINARY OPERATION AND TESTS (392 MW)	61/	DNR V4 P33
YANKEE	PWR 69 61/ 6/ FULL DESIGN POWER (485 MW)	61/	DNR V4 P33
SAXTON	PWR 70 60/ 2/ START OF CONSTRUCTION	61/	DNR V4 P47

** SA	DEFINITION	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	
FUKUSIMA-5	BWR 9	((A).OR.(B))	10-1-(1)	71/ 2	
FUKUSIMA-4	BWR 10	((A).OR.(B))	10-1-(1)	71/ 8	
FUKUSIMA-6	BWR 11	((A).OR.(B))	10-1-(1)	71/12	
TOOKAI-2	BWR 12	((A).OR.(B))	10-1-(1)	71/12	
HAMAOKA-2	BWR 13	((A).OR.(B))	10-1	73/ 5	
TOMIOKA-1	BWR 14	((A).OR.(B))	10-2-1	76/ 8	
KASHIWAZAKI	BWR 15	((A).OR.(B))	10-1-1	75/ 3	
TOMIOKA-2	BWR 16	((A).OR.(B))	10-2-2	76/12	

** 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)		
			(E)=ABNORMAL CONDITION THAT THE PROBABILITY OF OCCURENCE IS VERY FEW		
			(F)=DEFECT OF REACTOR-COOLANT-PRESSURE-BOUNDARY		
			(X)=PROBABILITY OF (RADIO ACTIVES LEAK OUT TO THE SURROUNDINGS).		
			ACCIDENT IS DEFINED AS ONE WHICH IS INDUCED BY (1),AND IS LEAD (2).		
			-----CAUSE-----	RESULT	
ONAGAWA	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
FUKUSIMA-6	BWR 11	(1)=((A).OR.(B).OR.(C).OR.(D)),	(2)=(X)	10-1-(1)	71/12
TOOKAI-2	BWR 12	(1)=((A).OR.(B).OR.(C).OR.(D)),	(2)=(X)	10-1-(1)	71/12
HAMAOKA-2	BWR 13	(1)=((A).OR.(B).OR.(C).OR.(D)),	(2)=(X)	10-1	73/ 5
TOMIOKA-1	BWR 14	(1)=((E).AND.(F))	(2)=(X)	10-1-1	76/ 8
KASHIWAZAKI	BWR 15	(1)=((E).AND.(F))	(2)=(X)	10-1-1	75/ 3
TOMIOKA-2	BWR 16	(1)=((E).AND.(F))	(2)=(X)	10-1-1	76/12

** 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).

ONAGAWA	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
FUKUSIMA-6	BWR	11	((A).AND.(B))	10-1-(1)	71/12
TOOKAI-2	BWR	12	((A).AND.(B))	10-1-(1)	71/12
HAMAOKA-2	BWR	13	((A).AND.(B))	10-1	73/ 5
TOMIOKA-1	BWR	14	((A).AND.(B)) B=LT 96.7KG/CM2G =1.1*(87.9KG/CM2G=DES.P)	10-1-1	76/ 8
KASHIWAZAKI	BWR	15	((A).AND.(B)) B=LT 96.7KG/CM2G =1.1*(87.9KG/CM2G=DES.P)	10-1-1	75/ 3
TOMIOKA-2	BWR	16	((A).AND.(B)) B=LT 96.7KG/CM2G =1.1*(87.9KG/CM2G=DES.P)	10-1-1	76/12

** 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.

(D)=REACTOR PLANT SHOULD BE MAINTAINED IN SAFETY.

(E)IN CASE OF LOCA, IT DOES NOT LEAD ANY MORE OTHER DAMAGE.

ONAGAWA	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
FUKUSIMA-6	BWR	11	((A).AND.(B).AND.(C))	10-1-(1)	71/12
TOOKAI-2	BWR	12	((A).AND.(B).AND.(C))	10-1-(1)	71/12
HAMAOKA-2	BWR	13	((A).AND.(B).AND.(C))	10-1	73/ 5
TOMIOKA-1	BWR	14	((D).AND.(A))	10-2-2	76/ 8
KASHIWAZAKI	BWR	15	((D).AND.(A))	10-2-2	75/ 3
TOMIOKA-2	BWR	16	((D).AND.(A))	10-2-2	76/12

** AB-TRA FROM VARIOUS SYSTEMS LIST 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 CONTROL SYSTEM

(E)=OTHERS SUCH AS AUX. POWER SUPPLY SYSTEM

ONAGAWA	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
FUKUSIMA-6	BWR	11	(A),(B),(C),(D),(E)	10-2-(1,8)	71/12
TOOKAI-2	BWR	12	(A),(B),(C),(D),(E)	10-2-(1,8)	71/12
HAMAOKA-2	BWR	13	(A),(B),(C),(D),(E)	10-1	73/ 5
TOMIOKA-1	BWR	14	(A),(B),(C),(D),AND OTHERS	10-2-2	76/ 8
KASHIWAZAKI	BWR	15	(A),(B),(C),(D),AND OTHERS	10-2-1	75/ 3
TOMIOKA-2	BWR	16	(A),(B),(C),(D),AND OTHERS	10-2-1	76/12

** AB-TRA ANALYSIS INITIAL POWER CONDITIO N 20020

(1)REACTOR THERMAL OUTPUT MW/PERCENT OF RATED POWER

(2)MAX. HEAT FLUX KCAL/M2H /(KW/M)

(3)MCPR (3A)AT EARLY CYCLE ACRAM CURVE

(3B)AT END OF CYCLE OF EQUILIBRIUM CORE

(4)CORE INLET FLOW TON/H

(5)FEED WATER REACTOR INLET TEMPERATURE DEG C

(6)PRESSURE AT THE PRESSURE-VESSEL-DOME KG/CM2G

(7)TURBINE STEAM FLOW TON/H

(1) (2) (3A) (3B) (4) (5) (6) (7)

MW /PC KCAL/M2H --MCPR--- TON/H C P T/H

TOMIOKA-1	BWR	14	3440/105	9.6E5/44.	1.19	1.25	48.3E3	218.	71.7	6.75E3	10-2-4	76/ 8
KASHIWAZAKI	BWR	15	3440/105	9.6E5/44.	1.9(MCHFR)	48.3E3	218.	71.7	6.75E3	10-2-5,6	75/ 3	
TOMIOKA-2	BWR	16	3440/105	9.6E5/44.	1.19	1.26	48.3E3	218.	71.7	6.75E3	10-2-6	76/12

** AB-TRA ANALYSIS SAFETY DEVICE SETTING POINT 20030

**SCRAM SET POINT

(A) REACTOR PRESSURE HIGH KG/CM2G(SEC ... DELAY TIME)
 (B) REACTOR WATER LEVEL LOW CM(SEC) FROM SEPARATOR SKIRT BOTTOM
 (C) NEUTRON FLUX HIGH PC(SEC) OF INITIAL RATED POWER
 (D) MSSV CLOSE SCRAM PC OF FULL OPEN(SEC)
 (E) MSSV CLOSE SCRAM PC OF FULL OPEN(SEC)
 (F) REACTOR WATER LEVEL LOW (REACTOR ISOLATION COOLING SYSTEM... START UP
 RECIRC. PUMP TRIP) CM(SEC) FROM SEPARATOR SKIRT BOTTOM
 (A) (B) (C) (D) (E) (F)
 CM(SEC) PC(SEC) PC(SEC) PC(SEC) CM(SEC)

Device	Setting	Value	Unit	Delay	Time	Result
TOMIOKA-1	BWR 14	75.3(0.55)+66(1.05)	120(0.09)	90(0.05)	90(0.05)-63(1.05)	10-2-5 76/ 8
KASHIWAZAKI	BWR 15	75.3(0.55)+66(1.05)	120(0.09)	90(0.05)	90(0.05)-63(1.05)	10-2-6 75/ 5
TOMIOKA-2	BWR 16	75.3(0.55)+66(1.05)	120(0.09)	90(0.06)	90(0.05)-63(1.05)	10-2-6 76/12

** AB-TRA ANALYSIS OTHER CONDITION 20040

(A) MSSV CLOSING TIME SEC
 (C) MSSV CLOSING TIME SEC
 (D) TURBINE STEAM ADJUST VALVE CLOSING TIME SEC
 (E) TURBINE BY PASS VALVE CAPACITY PC OF RATED STEAM FLOW
 (H) SCRAM SPEED SEC/PC OF FULL ST OKE
 (K) REACTOR WATER LEVEL HIGH (TURBINE TROP) SETTING POINT
 FROM THE BOTTOM OF SEPARATOR SKIRT IN CM
 NT1=REVA CAPACITY PC OF RATED STEAM FLOW
 NT2=PRT ACTION-TIME SEC
 (A) (C) (D) (E) (H) (K)
 SEC SEC SEC PC SEC/PC CM CM NT1 NT2
 PC SEC

Device	Setting	Value	Unit	Delay	Time	Result
TOMIOKA-1	BWR 14	3	0.1	0.075	25	3.5/90 175
KASHIWAZAKI	BWR 15	3	0.1	0.2	25	3.5/90 176
TOMIOKA-2	BWR 16	3	0.1	0.025	25	3.5/90 +175

** AB-TRA RELIEF SAFETY VALVE SETTING POINT 20050

(1) 1ST STAGE KG/CM2G * NO.
 (2) 2ND STAGE KG/CM2G * NO.
 (3) 3RD STAGE KG/CM2G * NO.
 (4) 4TH STAGE KG/CM2G * NO.
 (5) 5TH STAGE KG/CM2G * NO.
 (1) (2) (3) (4) (5)

Device	Setting	Value	Unit	Delay	Time	Result
TOMIOKA-1	BWR 14	76.7*2	77.4*4	78.1*4	78.8*4	79.5*4
KASHIWAZAKI	BWR 15	76.0*2	76.7*4	77.4*4	78.1*4	78.8*4
TOMIOKA-2	BWR 16	76.7*2	77.4*4	78.1*4	78.8*4	79.5*4

** AB-TRA FROM RECIRC. SYSTEM LIST 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

Device	Setting	Value	Unit	Delay	Time	Result
ONAGAWA	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	
FUKUSIMA-6	BWR 11	(A),(B),(C)	(A)=21110,21120, (B)=21200, (C)=21320,21360	10-2-(1)	71/12	
TOOKAI-2	BWR 12	(A),(B),(C)	(A)=21110,21120, (B)=21200, (C)=21320,21360	10-2-(1)	71/12	
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
 (B)=ONE RECIRC PUMP TRIP
 (S1)=TURBINE-TRIP-SCRAM AFTER 4 SEC (REACTOR-WATER-LEVEL-HIGH)
 (X)=REACTOR POWER WILL SETTLE DOWN TO NAT. CIRC. CONDITION.
 CONDITION MIN. THERMAL MARGIN SCRAM RESULT

Device	Setting	Value	Unit	Delay	Time	Result
ONAGAWA	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
FUKUSIMA-4	BWR 10	(A)	MCHFR=1.5 AFTER 2.8 SEC	NONE	(X)	10-2-(1) 71/ 8
FUKUSIMA-6	BWR 11	(A)	MCHFR=1.4 AFTER 2.0 SEC	NONE	(X)	10-2-(1) 71/12
TOOKAI-2	BWR 12	(A)	MCHFR=1.4 AFTER 2.0 SEC	NONE	(X)	10-2-(1) 71/12
HAMAOKA-2	BWR 13	(A)	MCHFR=1.26 AFTER 2.5 SEC	NONE	(X)	10-2 73/ 5
KASHIWAZAKI	BWR 15	(A)	MCHFR=1.3 AFTER 2.0 SEC	YES	(S1)	10-2-11 75/ 3
KASHIWAZAKI	BWR 15	(B)	MCHFR=1.4 AFTER 2.0 SEC	NONE		10-2-12 75/ 3

** AB-TRA

RECIRC. PUMP SHAFT STICK 21120

ASSUMPTION=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

(1)DELTA MCPR (MAX)

(2)TURBINE-TRIP-SCRAM AFTER (2A)SEC (CAUSE OF REACTOR-WATER-LEV)L-HIGH

(3)REACTOR PRESSURE (RESULT)=KG/CM2G

(4)SCRAM YES OR NO YI=YES. BUT INDIRECTLY DUE TO TURBINE-TRIP

(5)MCPR IS KEPT GE (5A)

(1) (2A) (3) (4) (5)

DELTA

MCPR SEC P MCPR

ONAGAWA	BWR	4				NO	MCHFR=1.1 AFTER 1.2 SEC	(X)	10-2-(1)	70/ 5
HAMAOKA-1	BWR	5				NO	MCHFR=1.1 AFTER 1.2 SEC	(X)	10-3	70/ 5
FUKUSIMA-5	BWR	9				NO	MCHFR=1.1 AFTER 1.05SEC	(X)	10-2-(1)	71/ 2
FUKUSIMA-4	BWR	10				NO	MCHFR=1.1 AFTER 1.05SEC	(X)	10-2-(1)	71/ 8
FUKUSIMA-6	BWR	11				NO	MCHFR=1.06 AFTER 1.3 SEC	(X)	10-2-(1)	71/12
TOOKAI-2	BWR	12				NO	MCHFR=1.06 AFTER 1.3 SEC	(X)	10-2-(1)	71/12
HAMAOKA-2	BWR	13				NO	MCHFR=1.08 AFTER 1.7 SEC	(Y)	10-2	73/ 5
TOMIOKA-1	BWR	14	0.07	2.2	78.3	YI	1.07		10-2-8.9	76/ 8
KASHIWAZAKI	BWR	15		3.5		YI	MCHFR=1.1 AFTER 1.2 SEC		10-2-9	75/ 3
TOMIOKA-2	BWR	16	0.07	2.2	78.3	YI	1.07		10-2-10811	76/12

** 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 YOOKYUU GOSA SEIGENKI).

(2)=(A) IS RESTRICTED BY (SCOOP TUBE SOOSA SOKUDO SEIGENKI).

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)	70/ 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
FUKUSIMA-6	BWR	11	INITIAL CONDITION IS 68PC OF RATED POWER, THEN FLOW	10-2-(2)	71/12
FUKUSIMA-6	BWR	11	INCREASE.	10-2-(2)	71/12
FUKUSIMA-6	BWR	11	RESULT= N.FLUX-HIGH-SCRAM,(404PC OF RATED N.FLUX AFTER	10-2-(2)	71/12
FUKUSIMA-6	BWR	11	1.5SEC, LHGR=83.4PC OF RATED-LHGR, MCHFR=2.4	10-2-(2)	71/12
FUKUSIMA-6	BWR	11	FUEL-CENTER-TEMP. INCREASE = 95 DEG-C	10-2-(2)	71/12
TOOKAI-2	BWR	12	INITIAL CONDITION IS 68PC OF RATED POWER, THEN FLOW	10-2-(2)	71/12
TOOKAI-2	BWR	12	INCREASE.	10-2-(2)	71/12
TOOKAI-2	BWR	12	RESULT= N.FLUX-HIGH-SCRAM,(404PC OF RATED N.FLUX AFTER	10-2-(2)	71/12
TOOKAI-2	BWR	12	1.5SEC, LHGR=83.4PC OF RATED-LHGR, MCHFR=2.4	10-2-(2)	71/12
TOOKAI-2	BWR	12	FUEL-CENTER-TEMP. INCREASE = 95 DEG-C	10-2-(2)	71/12
HAMAOKA-2	BWR	13	CASE(1) AND (2) ARE BOTH SAFE SIDE THAN (TWO PUMPS TRIP)	10-3	73/ 5
KASHIWAZAKI	BWR	15	CASE(1)FLOW DECREASE 10.0 PC/SEC (ASSUMED)	10-2-13	75/ 3
KASHIWAZAKI	BWR	15	CASE(2)FLOW INCREASE 10.0 PC/SEC (AT 68 PC OF RATED	10-2-14	75/ 3
KASHIWAZAKI	BWR	15	POWER, 51.PC OF RATED FLOW. ASSUMED)	10-2-14	75/ 3
KASHIWAZAKI	BWR	15	RESULT OF CASE(1)	10-2-14	75/ 3
KASHIWAZAKI	BWR	15	MCHFR=1.3 AFTER 6 SEC. REACTOR-WATER-LEVEL-HIGH,	10-2-14	75/ 3
KASHIWAZAKI	BWR	15	TURBINE-TRIP, SCRAM.	10-2-14	75/ 3
KASHIWAZAKI	BWR	15	THIS PHENOMENA IS SIMILAR TO TWO-RECIRC.PUMP-TRIP.	10-2-14	75/ 3
KASHIWAZAKI	BWR	15	RESULT OF CASE(2)	10-2-14	75/ 3
KASHIWAZAKI	BWR	15	N.FLUX-HIGH-SCRAM,(180PC OF RATED N.FLUX AFTER 1.2	10-2-15	75/ 3
KASHIWAZAKI	BWR	15	SEC),LHGR=85.PC OF RATED,AFTER 3SEC, MCHFR IS MAIN-	10-2-15	75/ 3
KASHIWAZAKI	BWR	15	TAINED ABOVE 1.9	10-2-15	75/ 3

** 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 FLOW 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)

=RY 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) TEMP.	(B) IN CORE FLOW	(C) REACTOR POWER	(D) J.PUMP DIFFUS.F	(E)	(F) GENER. 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) /
FUKUSIMA-4	BWR 10	38 DEG C	40. PC	60. PC	96. PC	YES	50. PC	10-2-(2) 71/ 8
FUKUSIMA-6	BWR 11	38 DEG C	40. PC	60. PC	87. PC	YES		10-2-(2) 71/12
TOOKAI-2	BWR 12	38 DEG C	40. PC	60. PC	87. PC	YES		10-2-(2) 71/12
HAMAOKA-2	BWR 13	38 C	40. PC	60. PC	96. PC	YES	50PC	10-3 73/ 5
KASHIWAZAKI	BWR 15	38 DEG C	40. PC	50. PC	106. PC	YES		10-2-16 75/ 3

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

COLD RECIRC. LOOP MISS START UP

CASE(A) CONSEQUENCE

(A1)= AT 0 SEC. M-G TURN ON

(A2)=MOTOR(M-G) RUNS TO SYNCHRO SPEED IMMEDIATELY

AT (A22)SEC. GENERATOR REACHES (A2)PC SPEED/RATED POWER

(A3)=GENERATOR SUPPLIES POWER TO PUMP MOTOR,

AT (A32)SEC. PUMP SPEED REACHES (A31)PC/RATED,AND

AT (A34)SEC. PUMP SPEED DECREASE (A33)PC/RATED.

=SIMULTANEOUSLY WITH THE INTERLOCK FREE OF DRIVE MOTOR BREAKER, PUMP DELIVER VALVE BEGINS TO OPEN, AND REACHES FULL OPEN AT (A41)SEC.

CASE(B) CONSEQUENCE

(B1)= AT 0 SEC. PUMP MOTOR TURN ON

(B2)=MOTOR REACHES TO RATED-SPEED AFTER (B21)SEC.

GEN.SPD	P.SPD	P.SPD	VALVE	P.SPD
(A21)A22)	(A31/A32)	(A33/A34)	(A41)	(B21)
PC./SEC	PC./SEC	PC./SEC	SEC	SEC

ONAGAWA	BWR 4	65./6.	50./7.	20./50.	30.		10-2-(2) 70/ 5
HAMAOKA-1	BWR 5	100./6.	/7.	20./	30.		10-4 70/ 5
FUKUSIMA-5	BWR 9	80./5.	50./6.	20./40.	30.		10-2-(2,3) 71/ 2
FUKUSIMA-4	BWR 10	80./5.	50./6.	20./40.	30.		10-2-(2,3) 71/ 8
FUKUSIMA-6	BWR 11					7.0	10-2-(2) 71/12
TOOKAI-2	BWR 12					7.0	10-2-(2) 71/12
HAMAOKA-2	BWR 13	75./6.	/6.5	20./40.	30.		10-3,4 73/ 5
KASHIWAZAKI	BWR 15					2.5	10-2-16 75/ 3

** 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.

ONAGAWA	BWR 4	(A1)=100.PERCENT	MCHFR=2.0		10-2-(3) 70/ 5
HAMAOKA-1	BWR 5	(A1)=110.PERCENT	MCHFR=2.0		10-4 70/ 5
FUKUSIMA-5	BWR 9	(A1)= 91.PERCENT	MCHFR=2.0		10-2-(3) 71/ 2
FUKUSIMA-4	BWR 10	(A1)= 91.PERCENT	MCHFR=2.0		10-2-(3) 71/ 8
FUKUSIMA-6	BWR 11	(A1)=110.PERCENT	MCHFR=2.0		10-2-(2) 71/12
TOOKAI-2	BWR 12	(A1)=110.PERCENT	MCHFR=2.0		10-2-(2) 71/12
HAMAOKA-2	BWR 13	(A1)=108.PERCENT	MCHFR=1.1		10-4 73/ 5
KASHIWAZAKI	BWR 15	(A1)=125PC AFTER 3SEC,MCHFR=GT 1.9 AFTER 17SEC			10-2-17 75/ 3

** AB-TRA FROM FEED WATER SYSTEM LIST 22000

(A)=TROUBLE OF FEED WATER CONTROLLER

(B)=LOSS OF FEED WATER HEATER

(C)=LOSS OF FEED WATER

ONAGAWA	BWR 4	(A),(B),(C)	(A)=22100,(B)=22200,(C)=		10-2-(3) 70/ 5
HAMAOKA-1	BWR 5	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300.		10-4 70/ 5
FUKUSIMA-5	BWR 9	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300.		10-2-(3) 71/ 2
FUKUSIMA-4	BWR 10	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300		10-2-(3) 71/ 8
FUKUSIMA-6	BWR 11	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300		10-2-(3) 71/12
TOOKAI-2	BWR 12	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300		10-2-(3) 71/12
HAMAOKA-2	BWR 13	(A),(B),(C)	(A)=22100,(B)=22200,(C)=22300		10-4 73/ 5
KASHIWAZAKI	BWR 15	(A),(B),(C)	(B)=22100,(A)=22200,(C)=22300		10-2-3 75/ 3

** AB-TRA TROUBLE OF FEED WATER CONTROLL ER 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) (R) (C) (D) SCRAM MCHFR KG/SQCMG RV, SV.

ONAGAWA	BWR	4	65PC	45PC	110PC	7.5EC	YES	2.0	73.2	NA	NA	10-2-(3)	70/ 5
HAMAOKA-1	BWR	5	65PC	45PC	110PC	7.5EC	YES	2.0	73.2	NA	NA	10-5	70/ 5
FUKUSIMA-5	BWR	9	65PC	45PC	110PC	8.5EC	YES	2.0	76.5	NA	NA	10-2-(3)	71/ 2
FUKUSIMA-4	BWR	10	65PC	45PC	110PC	7.5EC	YES	2.0	73.	NA	NA	10-2-(3)	71/ 8
FUKUSIMA-6	BWR	11	68PC		115PC	5.5EC	YES	2.2	76.8	NA	NA	10-2-(3)	71/12
TOOKAI-2	BWR	12	68PC		115PC	5.5EC	YES	2.2	76.8	NA	NA	10-2-(3)	71/12
HAMAOKA-2	BWR	13	65PC	40PC	110PC	6.5EC	YES	1.6	74.4	NA	NA	10-4	73/ 5
KASHIWAZAKI	BWR	15	68PC		115PC	6.5EC	YES	GT1.9	76.8	ACT	ACT	10-2-18	75/ 3

** 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) DEC 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.
 (A) (B) (C) SCRAM MCHFR

ONAGAWA	BWR	4	45 DEG C	25.5EC	96 PC	NOT.	1.6					10-2-(4)	70/ 5
HAMAOKA-1	BWR	5	45 DEG C	25.5EC	95 PC	NOT.	1.6					10-7	70/ 5
FUKUSIMA-5	BWR	9	55 DEG C	25.5EC	86 PC	NOT.	1.4					10-2-(4)	71/ 2
FUKUSIMA-4	BWR	10	55 DEG C	25.5EC	86 PC	NOT.	1.4					10-2-(4)	71/ 8
FUKUSIMA-6	BWR	11	55 DEG C	25.5EC	85 PC	NOT	1.2					10-2-(3)	71/12
TOOKAI-2	BWR	12	55 DEG C	25.5EC	85 PC	NOT	1.2					10-2-(3)	71/12
HAMAOKA-2	BWR	13	55 DEG C		91 PC	NOT	1.25					10-5	73/ 5
KASHIWAZAKI	BWR	15	55 DEG C		80 PC	NOT	1.3					10-2-19	75/ 3

** 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)
 (A) SCRAM/(B) (C) (D) (E) MCHFR

ONAGAWA	BWR	4	4. SEC	YES/12.5EC	20.PC	20.PC		(1)				10-2-(4)	70/ 5
HAMAOKA-1	BWR	5	4-5SEC	YES/12.5EC	20.PC	20.PC		(1)				10-6	70/ 5
FUKUSIMA-5	BWR	9	4. SEC	YES/11.5EC	20.PC	20.PC		(1)				10-2-(4)	71/ 2
FUKUSIMA-4	BWR	10	4. SEC	YES/8.5SEC	20.PC	20.PC	15. SEC	GT 1.9				10-2-(4)	71/ 8
FUKUSIMA-6	BWR	11	5. SEC	YES/ 7.5EC		20.PC		(1)				10-2-(4)	71/12
TOOKAI-2	BWR	12	5. SEC	YES/ 7.5EC				(1)				10-2-(4)	71/12
HAMAOKA-2	BWR	13	4. SEC	YES/7.6SEC	20.PC	20.PC	15. SEC	(1)				10-5	73/ 5
KASHIWAZAKI	BWR	15	5. SEC	YES/ 6.5EC	REACTOR P.=76.6KG/CM2G			(1)				10-2-21	75/ 3

** AB-TRA FROM MAIN STEAM SYSTEM LIST 23000

(A)=GENERATOR TRIP (TURBINE REGULATE VALVE PROMPT CLOSE) 23100
 (B)=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

(1)CONDITION

(X)=ON THIS CONDITION, REACTOR TO BE SCRAMMED, BUT THIS SCRAM CONDITION IS Milder THAN TURBINE-TRIP-SCRAM.

(Y)=WHEN TURBINE-STEAM-REGULATE-VALVE IS PROMPTLY CLOSED, REVAB ACT DETECTING PRESSURE-INCREASE, SO REACTOR-PRESSURE WILL NOT INCREASE, NAD NOT SCRAM.

MCHFR IS Milder THAN THE CASE OF 2=RECIRC.-PUMP-TRIP.

(A)TURBINE-REGULATE-VALVE-PROMPT-CLOSE.(CLOSE TIME IS (A1)SEC.)

(BX)REACTOR-PROTECTION-SYSTEM DETECT (A), AND MAKE SCRAM

(BY)REACTOR-PROTECTION-SYSTEM DETECT (A), TURBINE-BYPASS-VALVE OPEN, REVAB ACTS, AND MAKE SPI(SELECTED ROD INSERTION).

(C)TURBINE-BY-PASS-VALVE IS BEING OPENED AS TURBINE-REGULATE-VALVE CLOSE.

(D)REACTOR PRESSURE INCREASE UP TO PRESET-PRESSURE OF RELIEF VALVE THEN RELIEF-VALVE ACTS AT ONE TIME.

(2)SCRAM

(3)REVAB

(4)SPI(SELECTED ROD INSERTION)

(5)MCHFR NC=NOT CHANGE

(6)PEAK-NEUTRON FLUX

(7)NEUTRON FLUX SETTLE DOWN (7)PC BY SPI.

(R1)IF WHEN TURBINE-BY-PASS-VALVE DOES NOT ACT, REACTOR SCRAM.

NC=NOT CHANGE

(1) (A1) (2) (3) (4) (5) (6) (7)
SEC. PC PC

ONAGAWA	BWR	4	X	0.2	(BX),(C),(D)	YES				10-2-(4)	70/ 5
HAMAOKA-1	BWR	5	X	0.2	(BX),(C),(D)	YES				10-7	70/ 5
FUKUSIMA-5	BWR	9	X	0.2	(BX),(C),(D)	YES				10-2-(5)	71/ 2
FUKUSIMA-4	BWR	10	X	0.2	(BX),(C),(D)	YES				10-2-(5)	71/ 8
FUKUSIMA-6	BWR	11	Y	0.2	(BY),	NO	ACT	YES	109. 15-25	(R1) 10-2-(4)	71/12
TOOKAI-2	BWR	12	Y	0.2	(BY),	NO	ACT	YES	NC 109. 15-25	(R1) 10-2-(5)	71/12
HAMAOKA-2	BWR	13	X	0.2	(BX),(C),(D)	YES				10-6	73/ 5
KASHIWAZAKI	BWR	15	Y	0.2	(BY),	NO	ACT	YES	110. 15-25	(R1) 10-2-23	75/ 3

** 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.

ONAGAWA	BWR	4	(A)=0.1 SEC.						10-2-(5)	70/ 5
HAMAOKA-1	BWR	5	(A)=0.1 SEC.						10-6	70/ 5
FUKUSIMA-5	BWR	9	(A)=0.1 SEC.						10-2-(5)	71/ 2
FUKUSIMA-4	BWR	10	(A)=0.1 SEC.						10-2-(5)	71/ 8
FUKUSIMA-6	BWR	11	(A)=0.1 SEC.						10-2-(5)	71/12
TOOKAI-2	BWR	12	(A)=0.1 SEC.						10-2-(5)	71/12
HAMAOKA-2	BWR	13	(A)=0.1 SEC.						10-6	73/ 5
KASHIWAZAKI	BWR	15	(A)=0.1 SEC.						10-2-24	75/ 3

** 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.

PRESSURE UP, VOID DECREASE, AND NEUTRON FLUX UP

(A)=AT (A1)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.

(A1) (A2) (B) (C)
(SEC) (PC) (PC) (KG/SQCMG)

ONAGAWA	BWR	4	0.4 SEC	133.PC	100.PC	77.4KG/SQCMG	10-2-(5)	70/ 5
HAMAOKA-1	BWR	5	0.4 SEC	130.PC	100.PC	77.1KG/SQCMG(F1G 2.3-1)	10-7	70/ 5
FUKUSIMA-5	BWR	9	0.4 SEC	120.PC	100.PC	78.0KG/SQCMG	10-2-(5)	71/ 2
FUKUSIMA-4	BWR	10	0.4 SEC	108.PC	100.PC	78.0KG/SQCMG	10-2-(5)	71/ 8
FUKUSIMA-6	BWR	11	0.4 SEC	133.PC	100.PC	79.8KG/SQCMG	10-2-(5)	71/12
TOOKAI-2	BWR	12	0.4 SEC	133.PC	100.PC	79.8KG/SQCMG	10-2-(5)	71/12
KASHIWAZAKI	BWR	15	0.6 SEC	150.PC	110.PC		10-2-24	75/ 3

** 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.
 THE CLOSE OF MAIN STEAM STOP VALVE IS DETECTED BY VALVE
 POSITION DETECTOR, AND MAKE SCRAM.
 (A)=AT (A1)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.
 (E)=FUEL TEMPERATURE INCREASE (DEG-C)
 (A1) (A2) (B) (C1) (C2) (C3) (D) (E)
 SEC PC PC DEC -----KG/CM2G----- C

ONAGAWA	BWR	4	0.4	143.	100.	0.8	75.9	78.6	(87.2)	10-2-(5)	70/ 5
HAMAOKA-1	BWR	5	0.4	143.	100.	0.8	75.9	78.6	(87.2)	10-8	70/ 5
FUKUSIMA-5	BWR	9	0.4	125.	100.	0.7	75.9	81.	NA	10-2-(6)	71/ 2
FUKUSIMA-4	BWR	10	0.4	109.	100.	1.6	78.0	80.	NA	10-2-(6)	71/ 8
FUKUSIMA-6	BWR	11	0.4	196.	107.		(78.0)	82.3	NA 39.	10-2-(5)	71/12
TOOKAI-2	BWR	12	0.4	196.	107.		(78.0)	82.3	NA 39.	10-2-(5)	71/12
HAMAOKA-2	BWR	13	0.9	337.	115.3	1.3	78.0	83.8	NA	10-7	73/ 5

** 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.
 (A) (A1) (A2) (B1) (C) (D) (E)
 PC PC PC SEC PC KG/CM2G

ONAGAWA	BWR	4	30.	30.	40.	1.3	42.	2.0	75.6	10-2-(6)	70/ 5
HAMAOKA-1	BWR	5	30.	30.	40.	1.3	42.	2.0	75.6	10-8	70/ 5
FUKUSIMA-5	BWR	9	30.	30.	40.	1.3	40.	2.0	81.	10-2-(6)	71/ 2
FUKUSIMA-4	BWR	10	30.	30.	40.	1.8	40.	2.0	79.0	10-2-(6)	71/ 8
FUKUSIMA-6	BWR	11	30.	30.	40.	1.2	44.	1.8	79.5	10-2-(6)	71/12
TOOKAI-2	BWR	12	30.	30.	40.	1.2	44.	1.8	79.5	10-2-(6)	71/12
HAMAOKA-2	BWR	13	30.	30.	40.		43.	2.0	79.7	10-7	73/ 5

** 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
 (B)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)

ONAGAWA	BWR	4	3.0/5.0	3.SEC	10.PC	4.4SEC	76.9	10-2-(6)	70/ 5
HAMAOKA-1	BWR	5	3.0/5.0	3.SEC	10.PC	4.4SEC	76.9	10-9	70/ 5
FUKUSIMA-5	BWR	9	3.0/4.5	3.SEC	10.PC	3.6SEC	77.3	10-2-(7)	71/ 2
FUKUSIMA-4	BWR	10	3.0/4.5	3.SEC	10.PC	3.0SEC	80.0	10-2-(7)	71/ 8
FUKUSIMA-6	BWR	11	3.0/4.5	3.SEC	10.PC	2.5SEC	80.2	10-2-(6)	71/12
TOOKAI-2	BWR	12	3.0/4.5	3.SEC	10.PC	2.5SEC	80.2	10-2-(6)	71/12
HAMAOKA-2	BWR	13	3.0/5.0	3.SEC	10.PC	2.5SEC	81.7	10-7	73/ 5

** AB-TRA MALFUNC. OF INITIAL PRESSURE ADJUSTER 23400

- (1)=OWING TO THE MALFUNCTION OF INITIAL PRESSURE ADJUSTER(=IPA), TURBINE CONTROL VALVE(=TCV) AND BY-PASS VALVE(=BPV) IS MISS OPERATED.
 (2)=BUT THE TRANSIENT WHICH IS DUE TO PROMPT CLOSE OF TCV AND BPV IS Milder 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
 (4)=MAX FLOW OF STEAM-REGULATE-VALVE PLUS BYPASS VALVE IS RESTRICTED TO (A4)PC BY TURBINE-FLOW CONTROLLER

ONAGAWA	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
FUKUSIMA-6	BWR	11	(1),(2),(4A)=110.PC	10-2-(7)	71/12
TOOKAI-2	BWR	12	(1),(2),(4A)=110.PC	10-2-(7)	71/12
HAMAOKA-2	BWR	13	(1),(2),(3)	10-8	73/ 5

** 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 MCHFR 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 OCCURES THROUGH THE REACTOR LIFE.
 (A) (D)

ONAGAWA	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
FUKUSIMA-6	BWR	11	10.PC		10-2-(7)	71/12
TOOKAI-2	BWR	12	10.PC		10-2-(7)	71/12
HAMAOKA-2	BWR	13	7.PC		10-8	73/ 5

** AB-TRA FROM CONTROL SYSTEM LIST 24000

- (A)=CONTROL ROD WITHDRAW FROM SUBCRITICAL STATE 24100
 (B)=CONTROL ROD WITHDRAW FROM ON POWER 24200

ONAGAWA	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
FUKUSIMA-6	BWR	11	(A),(B)	10-2-(7)	71/12
TOOKAI-2	BWR	12	(A),(B)	10-2-(7)	71/12

** AB-TRA CONTROL ROD WITHDRAW SUBCRI. 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.
 (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	71/ 2
FUKUSIMA-4	BWR	10	0.025	1.E-8	20.DEG-C	262.PC	1490.C	534.C	100.CAL/G	71/ 8
FUKUSIMA-6	BWR	11	0.025	1.E-8	20.DEG-C		1510.C	238.C	100.CAL/G	71/12
TOOKAI-2	BWR	12	0.025	1.E-8	20.DEG-C		1510.C	238.C	100.CAL/G	71/12
HAMAOKA-2	BWR	13	0.025	1.E-8	20.DEG-C		1510.C	238.C	10-9	73/ 5

** 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.
 (B) (C1) (C2)

ONAGAWA	BWR	4	110.PC	40.PC	1.2	10-2-(8)	70/ 5
HAMAOKA-1	BWR	5	110.PC	40.PC	1.2	10-11	70/ 5
FUKUSIMA-5	BWR	9	108.PC	38.PC	1.3	10-2-(8)	71/ 2
FUKUSIMA-4	BWR	10	108.PC	38.PC	1.3	10-2-(8)	71/ 8
FUKUSIMA-6	BWR	11	108.PC	58.PC	GT1.0	10-2-(8)	71/12
TOOKAI-2	BWR	12	108.PC	58.PC	GT1.0	10-2-(8)	71/12
HAMAOKA-2	BWR	13	108.PC	58.PC	1.0	10-9	73/ 5

** 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.

** ACCIDENT ON BER LIST 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
 (6)=TURBINE ACCIDENT
 (7)=ACCIDENT OF CHARCOAL-HOLDUP SYSTEM FOR RARE GAS
 (8)=OTHERS(SEISMIC,FIRE,TYPHOON,FLOOD,ETC)

TSURUGA	BWR	3	(1),(2),(3),(4),(5)	10-3-(1)	75/ 1
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
FUKUSIMA-6	BWR	11	(1),(2),(3),(4),(5)	10-3-(1)	71/12
TOOKAI-2	BWR	12	(1),(2),(3),(4),(5)	10-3-(1)	71/12
HAMAOKA-2	BWR	13	(1),(2),(3),(4),(5)	10-11	73/ 5
KASHIWAZAKI	BWR	15	(1),(2),(3),(4),(5),(6),(7),(8)	10-3-1	75/ 3

** ACCIDENT ON

PWR

LIST

31010

	T1	T2	T3	T4	T5
(1)START UP ACC.	1A	1A	1A	-	-
(2)ON POWER CRD-DRAW-OUT ACC.	1B	1B	1B	-	-
(3)COLD WATER ACC.	1C	1C	1C	-	-
(4)BORON DILUTION ACC.	1D	1D	1D	-	-
(5)CRD DROP ACC.	1E	1E	1E	-	-
(6)CRD JUMP OUT ACC.	1F	2A	1F	B	C
(7)FUEL RELOAD ACC.	1G	3A	1G	F	H
(8)LOSS OF FLOW ACC.	2A	1F	2A	A	A
(9)LOCA	2B	2B	2B	C	D
(10)SGTR	2C	2C	2C	D	E
(11)MSTR	2D	2D	2D	E	F
(12)FUEL HANDLING ACC.	2E	3A	2E	F	H
(13)DEFECTION OF RADIOACTIVE WASTE DISPOSAL FACILITY	2F	3B	2F	G	I
(14)FUEL MISS LOADING	--	--	--	H	G
(15)PRIMARY PUMP SHAFT STICK	--	--	--	-	B
(16)CRDM DEFECTION	3A	--	3A	-	-
(17)VALVE MALFUNCTION	3B	3D	3B	-	-
(18)2ND. FEED WATER FACILITY MALF.	3C	1G	3C	-	-
(19)CONDENSER VACUUM BROKEN	3D	--	--	-	-
(20)MALFUNC. OF COMP. FOR INST.	3E	3C	3E	-	-
(21)BLACK OUT	3F	1I	3F	-	-
(22)TURBINE TRIP DUE TO 2ND.SYSTEM MALFUNC.	--	1H	--	-	-
(23)LOSS OF LOAD DUE TO TURBINE TRIP	--	--	3D	-	-
(24)OTHERS(SEISM,FIRE,FLOOD, TYPHOON)	3G	3E	3G	I	J

NOTE

1=NUCLEAR OR REACTIVITY INITIATED ACCIDENT, 2=MECHANICAL ACCIDENT
3=OTHER ACCIDENT

MIHAMA-1	PWR	21	T1	10-1	66/11
TAKAHAMA-2	PWR	23	T2	10-2	70/ 5
GENKAI-1	PWR	24	T3	10-2,3	70/ 5
OOI-1,2	PWR	26	T2	10-2	72/ 2
MIHAMA-3	PWR	27	T2	10-2	72/ 7
IKATA-1	PWR	28	T2	10-2	72/ 5
GENKAI-2	PWR	29	T4	10-3-1	76/ 2
IKATA-2	PWR	30	T5	10-3-1	77/ 1
SENDAI	PWR	31	T5	10-3-1	77/ 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

** 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 NEED.
(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)

			(F)	(G)	(H)		
TSURUGA	BWR	3	0.012 DELTA-K	0.95 M/SEC	10-3-(2)	75/ 1	
ONAGAWA	BWR	4	0.025 DELTA-K	0.025 DELTA-K	10-3-(2)	70/ 5	
HAMAOKA-1	BWR	5	0.025 DELTA-K	0.025 DELTA-K	10-13	70/ 5	
FUKUSIMA-5	BWR	9	0.025 DELTA-K	0.025 DELTA-K	10-3-(2)	71/ 2	
FUKUSIMA-4	BWR	10	0.025 DELTA-K	0.025 DELTA-K	10-3-(2)	71/ 8	
FUKUSIMA-6	BWR	11	0.025 DELTA-K	0.025 DELTA-K	10-3-(2)	71/12	
TOOKAI-2	BWR	12	0.025 DELTA-K	0.025 DELTA-K	10-12	73/ 5	
HAMAOKA-2	BWR	13	0.025 DELTA-K	0.025 DELTA-K	10-3-3	75/ 3	
KASHIWAZAKI	BWR	15	0.015 DELTA-K	0.95 M/SEC			

** 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.

		(A1)	(A2)	(B1)	(B2)	(C1)	(C2)		
		DEG-C		DELTA-K	M/SEC	PC	SEC		
TSURUGA	BWR 3	1.E-8	20.	(UNDER COLD-CRITICAL)				10-3-(3)	75/ 1
TSURUGA	BWR 3	1.E-6	286.	0.012	0.95	120.	0.09	10-3-(3)	75/ 1
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
FUKUSIMA-6	BWR 11	1.E-6	296.	0.025	1.52	120.	0.2	10-3-(3)	71/12
TOOKAI-2	BWR 12	1.E-6	296.	0.025	1.52	120.	0.2	10-3-(2,3)	71/12
HAMAOKA-2	BWR 13	1.E-6	286.	0.025	1.52	120.	0.2	10-12	73/ 5
KASHIWAZAKI	BWR 15	1.E-8	20.	(UNDER COLD-CRITICAL)				10-3-4	75/ 3
KASHIWAZAKI	BWR 15	1.E-6	286.		0.95	120.	0.09	10-3-4	75/ 3

** ACC.ANA. CONTROL ROD

DROPOUT RESULT

32320

(A)=SHORTEST PERIOD IS (A)MILLI-SEC.
 (B)=GENERATED ENERGY IS (B1)MW*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.

		(A)	(B1)	(B2)	(D1)	(D2)	(E1)	(E2)/(E3)	F1	F2/F3	(F4)		
TSURUGA	BWR 3				850.	170.		/280				10-3-(4)	75/ 1
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
FUKUSIMA-6	BWR 11	3.2	4000.	1.16	330.	170.	220.	220/280	3.	8/9	25.	10-3-(3)	71/12
TOOKAI-2	BWR 12	3.2	4000.	1.16	330.	170.	220.	220/280	3.	8/9	25.	10-3-(3)	71/12
HAMAOKA-2	BWR 13	8.4	4000.	1.6	330.	170.	220.	220/280	3.	8/9	25.	10-13	73/ 5
KASHIWAZAKI	BWR 15				600.	170.		/280				10-3-8	75/ 3

** 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.

** 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.

KASHIWAZAKI	BWR 15	(3)MOVEMENT OF HOUSING IS RESTRICTED WITHIN 80.MM	10-3-12	75/ 3
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** 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.

CAUSE

COUNTER PLAN

ONAGAWA	BWR	4	FROM (A) TO (E)	FROM (A) TO (J)	10-3-(4,5)	70/ 5
HAMAOKA-1	BWR	5	FROM (A) TO (E)	FROM (A) TO (J)	10-16.18	/
FUKUSIMA-5	BWR	9	FROM (A) TO (E)	FROM (A) TO (J)	10-3-(4,6)	71/ 2
FUKUSIMA-4	BWR	10	FROM (A) TO (E)	FROM (A) TO (J)	10-3-(4,6)	71/ 8
HAMAOKA-2	BWR	13	FROM (A) TO (E)	FROM (A) TO (J)	10-15	73/ 5

** LOCA INITIAL CONDITION BWR LIST 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.

KIND

ONAGAWA	BWR	4	(1),(2),(3)	10-3-(6,8)	70/ 5
HAMAOKA-1	BWR <td>5 <td>(1),(2),(3) <td>10-19.21</td> <td>70/ 5</td> </td></td>	5 <td>(1),(2),(3) <td>10-19.21</td> <td>70/ 5</td> </td>	(1),(2),(3) <td>10-19.21</td> <td>70/ 5</td>	10-19.21	70/ 5
FUKUSIMA-5	BWR <td>9 <td>(1),(2),(3) <td>10-3-(7,8)</td> <td>71/ 2</td> </td></td>	9 <td>(1),(2),(3) <td>10-3-(7,8)</td> <td>71/ 2</td> </td>	(1),(2),(3) <td>10-3-(7,8)</td> <td>71/ 2</td>	10-3-(7,8)	71/ 2
FUKUSIMA-4	BWR <td>10 <td>(1),(2),(3) <td>10-3-(7,8)</td> <td>71/ 8</td> </td></td>	10 <td>(1),(2),(3) <td>10-3-(7,8)</td> <td>71/ 8</td> </td>	(1),(2),(3) <td>10-3-(7,8)</td> <td>71/ 8</td>	10-3-(7,8)	71/ 8

** LOCA MINOR RUPTURE 35210

REACTOR-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.

(A1)

(A2)

ONAGAWA	BWR	4	0.007 SQM	0.07 SQM	10-3-(7)	70/ 5
HAMAOKA-1	BWR <td>5 <td>0.006 SQM <td>0.07 SQM <td>10-20</td> <td>70/ 5</td> </td></td></td>	5 <td>0.006 SQM <td>0.07 SQM <td>10-20</td> <td>70/ 5</td> </td></td>	0.006 SQM <td>0.07 SQM <td>10-20</td> <td>70/ 5</td> </td>	0.07 SQM <td>10-20</td> <td>70/ 5</td>	10-20	70/ 5
FUKUSIMA-5	BWR <td>9 <td>0.008 SQM <td>0.14 SQM <td>10-3-(7)</td> <td>71/ 2</td> </td></td></td>	9 <td>0.008 SQM <td>0.14 SQM <td>10-3-(7)</td> <td>71/ 2</td> </td></td>	0.008 SQM <td>0.14 SQM <td>10-3-(7)</td> <td>71/ 2</td> </td>	0.14 SQM <td>10-3-(7)</td> <td>71/ 2</td>	10-3-(7)	71/ 2
FUKUSIMA-4	BWR <td>10 <td>0.008 SQM <td>0.14 SQM <td>10-3-(7)</td> <td>71/ 8</td> </td></td></td>	10 <td>0.008 SQM <td>0.14 SQM <td>10-3-(7)</td> <td>71/ 8</td> </td></td>	0.008 SQM <td>0.14 SQM <td>10-3-(7)</td> <td>71/ 8</td> </td>	0.14 SQM <td>10-3-(7)</td> <td>71/ 8</td>	10-3-(7)	71/ 8

** LOCA MEDIUM RUPTURE 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.

-----HPIS-CSS-LP----- HPIS-LPIS-LP

(A1)

(A2)

(A3)

ONAGAWA	BWR	4	0.008 SQM	0.008 SQM	0.009 SQM	10-3-(7)	70/ 5
HAMAOKA-1	BWR <td>5 <td>0.006 SQM <td>0.008 SQM <td>0.009 SQM <td>10-20</td> <td>70/ 5</td> </td></td></td></td>	5 <td>0.006 SQM <td>0.008 SQM <td>0.009 SQM <td>10-20</td> <td>70/ 5</td> </td></td></td>	0.006 SQM <td>0.008 SQM <td>0.009 SQM <td>10-20</td> <td>70/ 5</td> </td></td>	0.008 SQM <td>0.009 SQM <td>10-20</td> <td>70/ 5</td> </td>	0.009 SQM <td>10-20</td> <td>70/ 5</td>	10-20	70/ 5
FUKUSIMA-5	BWR <td>9 <td>0.008 SQM <td>0.011 SQM <td>0.015 SQM <td>10-3-(8)</td> <td>71/ 2</td> </td></td></td></td>	9 <td>0.008 SQM <td>0.011 SQM <td>0.015 SQM <td>10-3-(8)</td> <td>71/ 2</td> </td></td></td>	0.008 SQM <td>0.011 SQM <td>0.015 SQM <td>10-3-(8)</td> <td>71/ 2</td> </td></td>	0.011 SQM <td>0.015 SQM <td>10-3-(8)</td> <td>71/ 2</td> </td>	0.015 SQM <td>10-3-(8)</td> <td>71/ 2</td>	10-3-(8)	71/ 2
FUKUSIMA-4	BWR <td>10 <td>0.01 SQM <td>0.012 SQM <td>0.019 SQM <td>10-3-(8)</td> <td>71/ 8</td> </td></td></td></td>	10 <td>0.01 SQM <td>0.012 SQM <td>0.019 SQM <td>10-3-(8)</td> <td>71/ 8</td> </td></td></td>	0.01 SQM <td>0.012 SQM <td>0.019 SQM <td>10-3-(8)</td> <td>71/ 8</td> </td></td>	0.012 SQM <td>0.019 SQM <td>10-3-(8)</td> <td>71/ 8</td> </td>	0.019 SQM <td>10-3-(8)</td> <td>71/ 8</td>	10-3-(8)	71/ 8

** LOCA MAJOR RUPTURE 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

CSS-LP

LPIS-LP

CSS-SP

LPIS-SP

(A1)

(A2)

(A3)

(A4)

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

** LOCA ANALYSIS RECIRC. PIPE RUPTURE 35300

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

** LOCA ANALYSIS RECIRC. PIPE RUPTURE 35310

(A)=AT (A1)SEC, REACTOR WATER IS PERFECTLY LOST.
(B)=MCHFR IS GT(B1) FROM 0,SEC. TO (B2)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
(A1) (B1)/(B2) (C1) (D1) (E1) (E2) (E3)

ONAGAWA	BWR	4		1.0/15.S	30.S	43.S	145.S	527.S	151.S	10-3-(9)
HAMAOKA-1	BWR	5	30.S	1.0/15.S	30.S	43.S	145.S	530.S	150.S	10-22
FUKUSIMA-5	BWR	9	30.S	1.0/14.S	30.S	43.S	128.S	410.S	157.S	10-3-(9)
FUKUSIMA-4	BWR	10	30.S	1.0/14.S	30.S	43.S	128.S	410.S	157.S	10-3-(9)
HAMAOKA-2	BWR	13	30.S	1.01	30.S	43.S				10-18

** LOCA DRY-WELL P-CHANGE 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.
(A1) (A2) (B1) (B2) (C1)

ONAGAWA	BWR	4	10.S	2.4KG/SQCMG	30.S	1.8 KG/SQCMG	33.DAYS	10-3-(9)	70/ 5	
HAMAOKA-1	BWR	5	10.S	2.8KG/SQCMG	30.S	2.0 KG/SQCMG	37.DAYS	10-23	70/ 5	
FUKUSIMA-5	BWR	9	9.S	2.6KG/SQCMG	30.S	2.0 KG/SQCMG	33.DAYS	10-3-(10)	71/ 2	
FUKUSIMA-4	BWR	10	9.S	2.6KG/SQCMG	30.S	2.0 KG/SQCMG	33.DAYS	10-3-(10)	71/ 8	
HAMAOKA-2	BWR	13	10.S	3.65	30.S	2.0	44.	10-20	73/ 5	

** FUEL CLADDING PERFORAT 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 PERCENT(REACTION RATE PERCENT)
(A) (B) (C)=MCA (D)=HA

ONAGAWA	BWR	4	14. (0.55)	7.5(0.02C)	13.5(0.16)	100(27.)	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		

** HEAT GENERAT. RATE OF ZR-W REACTION 35360

(A)=HEAT GENERATION RATE OF ZR-W REACTION IS (A1)KCAL/KG-ZIRCONIUM
(B)=WEIGHT RATIO OF (ZR REACTED BY ZR-W REACTION)/(TOTAL ZR) IS
LESS THAN (B1)PC
(A1) (B1)
KCAL/ PC
KG-ZR

FUKUSIMA-6	BWR	11	1560.	0.1			10-3-(9)	71/12	
TOOKAI-2	BWR	12	1560.	0.1			10-3-(9)	71/12	

** LOCA ECCS PERFORMANCE EVALUATION FW 35600

PERFORMANCE EVALUATION OR 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=FW RATIO
 G=FITNESS FOR OTHER QUALIFICATIONS
 QUALIFICATION(1) = D IS LT 1260 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

			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
ONAGAWA	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	1185	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	1185	ST.0.12	94/92	(3),(4)	73/ 4
FUKUSIMA-4	BWR	10	30	30	151	1185	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
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
GENKAI-1	PWR	24	15	7/27	115	1194	ST.0.1	84.	(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-1	PWR	28	15.	7. /27	75	1146	ST.0.1	84/90	(3),(4)	73/ 4

** MSTR ANALYSIS 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)

ONAGAWA	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
FUKUSIMA-6	BWR	11	200.PC	10.PC	10-3-(10)	71/12
TOOKAI-2	BWR	12	200.PC	10.PC	10-3-(9)	71/12
HAMAOKA-2	BWR	13	200.PC	10.PC	10-21	73/ 5
KASHIWAZAKI	BWR	15	200.PC	10.PC	10-3-52,53	75/ 3

** MSTR ANALYSIS 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) KG/S.	(B1) KG/SQCM/S.	(C1) M/S	(C2) SEC.	(D1) SEC	(D2) 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
FUKUSIMA-6	BWR	11	3630.	4.2		2.0	5.0	0.5	10-3-(10)	71/12
TOOKAI-2	BWR	12	3630.	4.2	2.	2.0	5.0	0.5	10-3-(9)(10)	71/12
HAMAOKA-2	BWR	13	2640.	4.5	2.	2.7	5.5	0.5	10-22	73/ 5
KASHIWAZAKI	BWR	15	3560.			2.0	5.0	0.5	10-3-53	75/ 3

** MSTR ANALYSIS

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 SURMERGED STATE UNTIL ISOLATE-VALVE=PERFECT-
CLOSE.

(C)=MCHFR IS KEPT GT(C1) THROUGH THIS ACCIDENT.

			(A1) STEAM KG	(A2) WATER KG	(B) KG	(C) MCHFR		
ONAGAWA	BWR	4	5930.	7930.	46000.	1.0	10-3-(11)	70/ 5
HAMAOKA-1	BWR	5	5930.	7930.	46000.	1.0	10-25	70/ 5
FUKUSIMA-2,3	BWR	7	9250.	8210.	75400.	1.0	89-7-3 P5	71/ 3
SHIMANE	BWR	8	4500.	6800.	.	1.0	89-8-2 P5	71/ 3
FUKUSIMA-5	BWR	9	9250.	8210.	75400.	1.0	10-3-(12)	71/ 2
FUKUSIMA-4	BWR	10	9250.	8210.	75400.	1.0	10-3-(12)	71/ 8
FUKUSIMA-6	BWR	11	13170.	22250.	81200.	1.0	10-3-(10)	71/12
TOOKAI-2	BWR	12	13200.	22200.	81200.	1.0	10-3-(10)	71/12
HAMAOKA-2	BWR	13	8870.	9830.	76000.	1.0	10-22	73/ 5
KASHIWAZAKI	BWR	15	13200.	22200.	81200.	1.0	10-3-53	75/ 3

** MCA HA ITEMS

43000

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

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		
FUKUSIMA-6	BWR	11	MCA=(A),(B)	HA=(A),(B)	10-4-(1)	71/12		
TOOKAI-2	BWR	12	MCA=(A),(B)	HA=(A),(B)	10-4-(1)	71/12		
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/ 5		
GENKAI-2	PWR	29	(A),(D)	(A),(D)	10-4-2,33	76/ 2		
IKATA-2	PWR	30	(A),(D)	(A),(D)	10-4-1,30	77/ 1		
SENDAI	PWR	31	(A),(D)	(A),(D)	10-4-2,34	77/ 5		
FUGEN	ATR	81	MCA=(A),(B),(C)WITH EME. COOLING	HA=(A),(B)WITHOUT E.C.		70/11		

** MCA HA LOPC TOTAL CURIE IN CORE 43010

(A)TOTAL ACTIVITY OF IODINE IN CORE IN CURIE/IODINE
(B)TOTAL ACTIVITY OF RARE GAS IN CORE IN CURIE/RARE GAS
ASSUMING THAT THE REACTOR HAS BEEN IN OPERATION AT
(C)PC OF RATED POWER FOR
(D)PERIOD

THIS VALUES ARE USED FOR LOCA ANALYSIS

			(A) IODINE CI	(B) RARE G. CI	(C) PC	(D)		
GENKAI-2	PWR	29	7.91E7	4.93E8	102(1683MW)	22000H	10-4-45,46	76/ 2
IKATA-2	PWR	30	7.99E7	5.55E8	102	22000H	10-4-41,42	77/ 1
SENDAI	PWR	31	1.3 E8	8.9 E8	102	23000H	10-4-5,45,46	77/ 5

** MCA HA SGTR TOTAL CURIE IN COOLANT 43020

(A)IODINE CONCENTRATION IN COOLANT IN EQUILIBRIUM CI(MICRO CI/CC)
(B)IODINE CONCENTRATION IN COOLANT ADDED CI
(C)RARE GAS RADIO ACTIVITY IN COOLANT IN EQUILIBRIUM CI(MICRO CI/CC)
(D)RARE GAS RADIO ACTIVITY IN COOLANT ADDED CI
ASSUMING THAT THE REACTOR HAS BEEN IN OPERATION AT
(E)PC OF RATED POWER

THIS VALUES ARE USED FOR SGTR ANALYSIS. (BOTH MCA AND HA)

			-----IODINE-----		-----RARE GAS-----			
			EQUI. (A)	ADD. (B) CI	EQUI. (C)	ADD. (D) CI	(E) PC	
GENKAI-2	PWR	29	(11.4)	40000.	(181.)	250000	102	10-4-47,48 76/ 2
IKATA-2	PWR	30	(2.15)	8000.	(33.0)	120000.	102	10-4-43,44 77/ 1
SENDAI	PWR	31	690(2.68)	13000.	9100(35.2)	89000.	102(23000H)	10-4-26,27 77/ 5

** 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.

				(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
FUKUSIMA-6	BWR	11	100.PC	0.5PC/DAY *	33. DAYS	0.5PC/DAY *	INF.	10-4-(1)	71/12
TOOKAI-2	BWR	12	100.PC	0.5PC/DAY *	33. DAYS	0.5PC/DAY *	INF.	10-4-(1)	71/12
HAMAOKA-2	BWR	13	100.PC	0.5PC/DAY *	44. DAYS	0.5PC		10-24	73/ 5
KASHIWAZAKI	BWR	15	100.PC	0.5PC/DAY *	33. DAYS	0.5PC/DAY *	INF.	10-2-5,33	75/ 3

** MCA HA BWR LOC FP RELEASE FROM FUEL 43120

ASSUMPTION
 (A)=REACTOR HAS OPERATED CONTINUOUSLY (A1)YEAR AT RATED POWER
 (B)=FP RELEASE RATE FROM FUEL ROD TO COOLANT (IN PC/ACCUMULATE TOTAL)
 (C)=FP TRANSFER RATE FROM PV TO DRY-WELL (IN PC)
 (INORGANIC HALOGEN)/(RARE GAS AND ORGANIC HALOGEN)
 (D)=RARE GAS DOES NOT DISSOLVE, 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)		
					RARE GAS	HALOGEN				
					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
FUKUSIMA-6	BWR	11	1.YEAR	2. 100.	1. 50.	50/100	1.E2	10.PC	10-4-(2)	71/12
TOOKAI-2	BWR	12	1.YEAR	2. 100.	1. 50.	50/100	1.E2	10.PC	10-2-(2)	71/12
HAMAOKA-2	BWR	13	1.YEAR	2. 100.	1. 50.	50/100	1.E2	10.PC	10-24	73/ 5
KASHIWAZAKI	BWR	15	1000.DAY	2. 100.	1. 50.	50/100	1.E2	10.PC	10-4-4,33	75/ 3

** MCA HA PWR LOPC FP GAS RELEASE FROM FUEL 43130

ASSUMPTION
 REACTOR HAS BEEN IN CONTINUOUS OPERATION AT (A)PC OF RATED POWER
 (B)=OPERATION TIME (IN HOUR)
 FP RELEASE RATE FROM ROD TO COOLANT (IN PC/ACCUMULATED TOTAL)
 MCA (C)RARE GAS (PC)
 MCA (D)IODINE (PC)
 MCA (E)SOLID (PC)
 HA (F)RARE GAS (PC)
 HA (G)IODINE (PC)
 HA (H)SOLID (PC)

(I)=RATE OF (ORGANIC IODINE)/(TOTAL IODINE) IN PC
 (J)=PC OF NON-ORGANIC IODINE PLATE OUT ON CONTAINER-WALL
 -----MCA-----HA-----
 (A) (B) (C) (D) (E) (F) (G) (H) (I) (J)
 R.G I SOL. R.G I SOL
 HR. PERCENT

TAKAHAMA-2	PWR	23	100.	2. 1.	0.02	100.	50.	1.	10.	50.	10-25,27	70/ 5	
GENKAI-1	PWR	24	100.	2. 1.	0.02	100.	50.	1.	10.	50.	10-28,32	70/ 5	
OOI-1,2	PWR	26	100.	3. 1.5	0.03	100.	50.	1.	10.	50.	10-25,28	71/ 1	
MIHAMA-3	PWR	27	100.	2. 1.	0.02	100.	50.	1.	10.	50.	10-25,27	71/ 7	
IKATA-1	PWR	28	100.	2. 1.	0.02	100.	50.	1.	10.	50.	10-26,30	72/11	
GENKAI-2	PWR	29	102.	22000.	2. 1.	100.	50.		10.	50.	10-4-5	76/ 2	
IKATA-2	PWR	30	102.	22000.	2. 1.	100.	50.		10.	50.	10-4-3,4	77/ 1	
SENDAI	PWR	31	102.	23000.	2. 1.	0.02	100.	50.	1.	10.	50.	10-4-5	77/ 5

** MCA HA PWR LOPC FP-REL-M CONTAINER SPRAY 43132

ASSUMPTION ON NON-ORGANIC-IODINE-REMOVABILITY BY CONTAINER-SPRAY
 (A)EQUIVALENT-HALF-TIME OF NON-ORGANIC-IODINE BY CONTAINER-SPRAY
 (A)
 SEC.

GENKAI-2	PWR	29	100.						10-4-5	76/ 2
IKATA-2	PWR	30	100.						10-4-4	77/ 1
SENDAI	PWR	31	100.						10-4-5	77/ 5

** MCA HA PWR LOPC FP-REL-M LEAK RATE ANNULUS 43134

ASSUMPTION ON FP-GAS-LEAK-RATE FROM REACTOR-CONTAINER

(1)DESIGN-SPEC. OF LEAK RATE LE PERCENT/DAY
 (2)FROM (2A)DAY TO (2B)DAY (2C)PERCENT/DAY
 (3)FROM (2B)DAY TO (3A)DAY (3B)PERCENT/DAY
 (4)LEAKAGE-RATIO (FROM ANNULAR)/(FROM DOME) PC/PC
 (5)ANNULUS-NEGATIVE-PRESSURE ACCOMPLISHING TIME
 (5A)ACTUAL TIME (MINUTE)
 (5B)FOR SAFETY EVALUATION (MINUTE)

(1) (2A) (2B) (2C) (3A) (3B) (4) (5A) (5B)
 DAY DAY PC/D DAY PC/D PC/PC --MINUTE--

GENKAI-2	PWR	29	0.1	0	1	0.3	4	0.135	97/3	3.	10.	10-4-5.6	76/ 2
IKATA-2	PWR	30	0.1	0	1	0.3	4	0.135	97/3	3.	10.	10-4-4	77/ 1
SENDAI	PWR	31	0.1	0	1	0.3	4	0.135	97/3	8.	10.	10-4-5.6	77/ 5

** MCA HA PWR LOPC FP-REL-M FILTER EFFICIENCY 43136

FILTER-EFFICIENCY OF ANNULUS AIR RECIRC. SYSTEM

(1)FILTER-EFFICIENCY FOR IODINE (PC) ACTUAL
 (2)FILTER-EFFICIENCY FOR IODINE (PC) FOR SAFETY EVALUATION

(1) (2)
 PC PC

GENKAI-2	PWR	29	GE 95.	90.								10-4-6	76/ 2
IKATA-2	PWR	30	GE 95.	90.								10-4-5	77/ 1
SENDAI	PWR	31	GE 95.	90.								10-4-6	77/ 5

** 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

(C)=EMERGENCY-RECIRCULATION-GAS-FILTERING SYSTEM

(V)=EMERGENCY-GAS-VENTILATION SYSTEM

-----RARE GAS----- IODINE(I-131)--- (A1) (B1)
 MCA HA MCA HA

TSURUGA	BWR	3	1.01E3 CI	3.2 E5 CI	16. CI	8.5 E3 CI	90.	500.	R.KISHEIKA	75/ 7
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	B1.6 E4 CI	B8.8 E5 CI					B=BETA10-29	70/ 5
FUKUSIMA-1	BWR	6	3.5 E5 CI	4.9 E5 CI	58. CI	1.1 E4 CI	90.	100.	R.KESHEIKA	75/ 7
FUKUSIMA-2,3	BWR	7	1.63E4 CI	8.58E5 CI	315. CI	1.81E4 CI	90.	100.	R.KISHEIKA	75/ 7
SHIMANE	BWR	8	4.1 E3 CI	4.9 E5 CI	72. CI	1.1 E4 CI	90.	100.	R.KISHEIKA	75/ 7
FUKUSIMA-5	BWR	9	1.63E4 CI	8.58E5 CI	355. CI	1.81E4 CI	90.	100.	10-4-(3)	71/ 2
FUKUSIMA-5	BWR	9	1.63E4 CI	8.58E5 CI	315. CI	1.81E4 CI	90.	100.	R.KISHEIKA	75/ 7
FUKUSIMA-4	BWR	10	1.63E4 CI	8.58E5 CI	315. CI	1.81E4 CI	90.	100.	10-4-(3)	71/ 8
FUKUSIMA-6	BWR	11	1.63E4 CI	2.05E5 CI	502. CI	2.64E3 CI	90.	100.	R.KISHEIKA	75/ 7
TOOKAI-2	BWR	12	G1.30E4 CI	G6.76E4 CI	493. CI	2.62E4 CI	90.	100.	10-4-(3)	71/12
TOOKAI-2	BWR	12	B2.67E4 CI	B2.04E6 CI					10-4-(3)	71/12
TOOKAI-2	BWR	12	1.36E4 CI	7.04E5 CI	502. CI	2.64E3 CI	90.	100.	R.KISHEIKA	75/ 7
HAMAOKA-2	BWR	13			360. CI	1.8 E4 CI	90.	100.	10-25	73/ 5
KASHIWAZAKI	BWR	15	G1.38E4 CI	G7.04E5 CI	50. CI	2.62E3 CI	90(C)500.		10-4-11.35	75/ 3
KASHIWAZAKI	BWR	15	B3.05E4 CI	B2.13E6 CI			95(V)100.		10-4-11.35	75/ 3

** MCA HA PWR LOPC FP GAS RELEASE FROM BUILDING 43150

-----RARE GAS----- IODINE TOTAL(ORG/NON ORG)-- UNIT=CURIE
 MCA HA -----MCA-----HA-----

MIHAMA-1	PWR	21	1820	78000	1.1	50.	REF23 P47	71/ 9
MIHAMA-2	PWR	22	2560	128000	2.	97.	REF23 P47	71/ 9
TAKAHAMA-2	PWR	23	8600	432000	29.	1430.	10-26.28	70/ 5
TAKAHAMA-2	PWR	23	3440	172000	28.	1370.	-76.77-	76/ 4
GENKAI-1	PWR	24	2600	130000	13.3	666.	10-29.32	70/ 5
TAKAHAMA-1	PWR	25	8600	432000	29.	1430.	REF23 P47	71/ 9
OOI-1,2	PWR	26	25000	840000	31.	1030.	10-27.28	71/ 1
MIHAMA-3	PWR	27	3440	172000	28.	1370.	10-27.28	71/ 7
IKATA-1	PWR	28	3290	164000	20.	994.	10-27.30	72/11
GENKAI-2	PWR	29	3500	174000	21. (19/ 2)	1030.(942/ 88)	10-4-22.37	76/ 2
IKATA-2	PWR	30	3900	200000	21. (19/ 2)	1100.(1000/ 100)	10-4-20.33	77/ 1
SENDAI	PWR	31	5500	270000	34. (/)	1700.(/)	10-4-22.37	77/ 5

** MCA BWR LOC ESTIMATION OF IRRADIATION DOSE 43160

ACCIDENT=MAXIMUM CREDIBLE ACCIDENT WITH LOSS OF COOLANT
(A)=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.

(A1) (A2) (T) (G) (B)
METER CENTER ----- REM -----

TSURUGA	BWR	3	600.M		1. REM	0.003 REM		R.KISHEIKA	75/ 7
ONAGAWA	BWR	4	600.M	STACK	2.0 REM	0.007 REM	0.013 REM	10-4-(4)	70/ 5
HAMAOKA-1	BWR	5	450.M	REACTOR	2.1 REM	0.0076REM	0.0143REM	10-29	70/ 5
FUKUSIMA-1	BWR	6	1000.7		0.9 REM	0.0061REM		R.KISHEIKA	75/ 7
FUKUSIMA-2,3	BWR	7	1000.7		4.8 REM	0.020 REM		R.KISHEIKA	75/ 7
FUKUSIMA-2,3	BWR	7	800.7		2.3 REM	0.023 REM		R.KISHEIKA	75/ 7
SHIMANE	BWR	8	820.7		1.1 REM	1.3 REM		R.KISHEIKA	75/ 7
FUKUSIMA-5	BWR	9	650.M	REACTOR	6.0 REM	0.026 REM	0.042 REM	10-4-(4)	71/ 2
FUKUSIMA-4	BWR	10	800.M	REACTOR	5.5 REM	0.023 REM	0.038 REM	10-4-(4)	71/ 8
FUKUSIMA-4	BWR	10	800.M		2.3 REM	0.010 REM	0.011 REM	/	/
FUKUSIMA-6	BWR	11	650.M	STACK	4.0 REM	0.011 REM	0.024 REM		/
TOOKAI-2	BWR	12	570.M	REACTOR	3.7 REM	0.0053REM	0.020 REM	10-2-(3)	71/12
TOOKAI-2	BWR	12	540.M		4.1 REM	0.010 REM	0.024 REM	R.KISHEIKA	75/ 7
HAMAOKA-2	BWR	13	450	REACTOR	3.2	0.0071	0.019	10-26	73/ 5
KASHIWAZAKI	BWR	15	700.M	STACK	0.25REM	0.0042REM	0.013 REM	10-4-16	75/ 3

** 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 IRRADIATION DOSE IN REM

(C)=WHOLE BODY (BETA) IRRADIATION DOSE IN REM

-----MCA-----HA-----

KM (A1) (B) (C) KM (A2) (B) (C)

MIHAMA-1	PWR	21	0.75	0.08	0.55		0.75	1.0	2.8		R.KISHEIKA	75/ 7
MIHAMA-2	PWR	22	0.7	0.11	0.12		0.7	14.	5.8		R.KISHEIKA	75/ 7
TAKAHAMA-2	PWR	23	0.8	1.4	0.12	0.03	0.8	17.0	5.5	1.7	10-27,28	70/ 5
GENKAI-1	PWR	24	0.6	0.8	0.25	0.02	0.6	9.6	12.5	0.8	10-29,28	70/ 5
TAKAHAMA-1	PWR	25	0.8	1.3	0.09		0.8	16.	4.1		R.KISHEIKA	75/ 7
OOI-1,2	PWR	26	0.8	1.3	0.11	0.08	0.8	11.0	3.6	2.7	10-27,28	71/ 1
OOI-1,2	PWR	26	0.8	0.89	0.022	0.037	0.8	7.4	0.72	2.	R.KISHEIKA	75/ 7
MIHAMA-3	PWR	27	0.75	1.1	0.14	0.017	0.75	13.0	6.3	0.88	10-27,28	71/ 7
MIHAMA-3	PWR	27	0.55	0.59	0.14		0.55	7.4	6.7		R.KISHEIKA	75/ 7
IKATA-1	PWR	28	0.7	1.9	0.11	0.03	0.7	23.0	5.7	1.6	10-27,30,31	72/11
GENKAI-2	PWR	29	0.55	1.3	0.03	0.03	0.55	16.	1.4	1.2	10-4-22,38	76/ 2
IKATA-2	PWR	30	0.64	2.5	0.11	0.06	0.63	32.	4.9	3.	10-4-20,34	77/ 1
SENDAI	PWR	31	0.57	1.6	0.05	0.04	0.57	20.	2.5	1.6	10-4-22,38	77/ 5

** HA BWR LOC ESTIMATION OF IRRADIATION DOSE 43180

ACCIDENT=HYPOTHETICAL ACCIDENT WITH LOSS OF COOLANT

(1)RADIUS KILOMETER

(A)=ADULT THYROID IRRADIATION DOSE IN REM.

(G)=WHOLE BODY GAMMA IRRADIATION DOSE IN REM.

(B)=WHOLE BODY BETA IRRADIATION DOSE IN REM.

(1) (A) (G) (B) (1) (A) (G) (B) (1) (A) (G) (B)

KM REM REM REM KM REM REM REM KM REM REM REM

TSURUGA	BWR	3	0.6	100.	.6							R.KISHEIKA	75/ 7	
ONAGAWA	BWR	4	0.6	27.	.33	.73	2.	9.	.14	.25	5.	5.	.060	.10
HAMAOKA-1	BWR	5	0.45	27.	.38	.84								
FUKUSIMA-1	BWR	6	1.0	37.	.8									
FUKUSIMA-2,3	BWR	7	1.0	65.	.77									
FUKUSIMA-2,3	BWR	7	0.8	78.	1.2	2.6								
SHIMANE	BWR	8	0.82	30.	.2									
FUKUSIMA-5	BWR	9	0.65	85.	1.4	2.9	2.	33.	.73	1.1	5.	13.	.49	.44
FUKUSIMA-4	BWR	10	0.8	78.	1.2	2.6	2.	33.	.73	1.1	5.	13.	.49	.44
FUKUSIMA-4	BWR	10	0.8	32.	.53	1.1								
FUKUSIMA-6	BWR	11	0.65	52.	.55	1.6								
TOOKAI-2	BWR	12	0.54	54.	.5	1.7								
HAMAOKA-2	BWR	13	0.45	419	.4	1.1								

** NATIONAL HEREDITY IRRADIATION DOSE HA

43190

		MAN*REM/YEAR NUMBER		MAN*REM			
		MAN*REM		MAN*REM			
TSURUGA	BWR	3	8.3E4 (LOC)			R.KISHEIKA	75/ 7
ONAGAWA	BWR	4	8. E4 (LOC)			10-4-(4)	70/ 5
HAMAOKA-1	BWR	5	15. E4 (LOC)			10-30	70/ 5
FUKUSIMA-1	BWR	6	6.7E4 (LOC)			R.KISHEIKA	75/ 7
FUKUSIMA-2,3	BWR	7	12. E4 (LOC)			R.KISHEIKA	75/ 7
SHIMANE	BWR	8	4.1E4 (LOC)			R.KISHEIKA	75/ 7
FUKUSIMA-5	BWR	9	12. E4 (LOC)			10-4-(4)	71/ 2
FUKUSIMA-4	BWR	10	12. E4 (LOC)			10-4-(4)	71/ 8
FUKUSIMA-6	BWR	11	10. E4 (LOC)			R.KISHEIKA	75/ 7
TOOKAI-2	BWR	12	20. E4 (LOC)			R.KISHEIKA	75/ 7
KASHIWAZAKI	BWR	15	6.89E4/1970	10.3E4/2020 (LOCA)		10-4-37,38	75/ 3
MIHAMA-1	PWR	21	1.1E4	1.1E4		R.KISHEIKA	75/ 7
MIHAMA-2	PWR	22	1.6E4	1.7E4		R.KISHEIKA	75/ 7
TAKAHAMA-2	PWR	23	5.9E4 (LOPC)	1.3E4 (SGTR)		10-29	70/ 5
GENKAI-1	PWR	24	5.5E4 (LOPC)	3.1E4 (SGTR)		10-33,34	70/ 5
TAKAHAMA-1	PWR	25	2.5E4	1.3E4		R.KISHEIKA	75/ 7
OOI-1,2	PWR	26	14. E4 (LOPC)	1.4E4 (SGTR)		10-29	71/ 1
OOI-1,2	PWR	26	7.5E4	1.7E4		R.KISHEIKA	75/ 7
MIHAMA-3	PWR	27	2.7E4 (LOPC)	1.1E4 (SGTR)		10-29	71/ 7
MIHAMA-3	PWR	27	2.7E4	1.5E4		R.KISHEIKA	75/ 7
IKATA-1	PWR	28	6.7E4 (LOPC)	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 (A1) CURIE OF I-131.
 (B)=FOR ANALYSIS, LET US ASSUME THAT AMOUNT OF FP WHICH CORRESPOND TO (B1) CURIE OF I-131 LEAK OUT FROM FUEL PIN TO REACTOR WATER.
 (C)=THIS AMOUNT(=B1) 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.
 (A1) (B1) (C1) (C2) (C3)
 (I-131) (I-131) IODINE HALOGEN RARE GAS

ONAGAWA	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
FUKUSIMA-6	BWR	11	20000.	40000.	75000.	1.06E5	8.99E5	10-4-(5)		71/12
TOOKAI-2	BWR	12	20000.	40000.	75000.	1.22E5(G)	1.29E6(G)	10-4-(4)		71/12
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
KASHIWAZAKI	BWR	15	20000.	40000.				10-4-19		75/ 3

** MCA HA BWR MSTR FP GAS RELEASE FROM BUILDING 43240

		--RARE GAS--		--HALOGEN--		--IODINE--		--IODINE-- (UNIT CURIE)			
		(I-131)		(I-131)		(I-131)		(I-131)			
		MCA	HA	MCA	HA	MCA	HA	MCA	HA		
TSURUGA	BWR	3	11870.	17200.	2610.	5080.		183.	666.	R.KISHEIKA	75/ 7
ONAGAWA	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				/
HAMAOKA-1	BWR	5	1042.B	1633.B	508.B	895.B		66.	182.	R.KISHEIKA	75/ 7
HAMAOKA-1	BWR	5	1361.G	2186.G	1109.G	1824.G		66.	182.	R.KISHEIKA	75/ 7
FUKUSIMA-1	BWR	6	7110.	10290.	480.	948.		33.	138.	R.KISHEIKA	75/ 7
FUKUSIMA-2,3	BWR	7	3020.	5040.	2080.	2620.		121.	193.	R.KISHEIKA	75/ 7
SHIMANE	BWR	8	880.	1508.	92.	214.		33.9	151.	R.KISHEIKA	75/ 7
FUKUSIMA-5	BWR	9	3020.	5040.	2080.	2620.		121.	193.	10-4-(6)	71/ 2
FUKUSIMA-5	BWR	9	3420.	8471.	2200.	3390.		133.	288.	R.KISHEIKA	75/ 7
FUKUSIMA-4	BWR	10	3020.	5040.	2080.	2620.		121.	193.	10-4-(6)	71/ 8
FUKUSIMA-4	BWR	10	3420.	8471.	2200.	3390.		133.	288.	R.KISHEIKA	75/ 7
FUKUSIMA-6	BWR	11	3200.	11200.	3990.	5450.		233.	665.	R.KISHEIKA	75/ 7
TOOKAI-2	BWR	12	4210.G	7980.G	2230.G	3070.G		111.	218.	10-4-(6)	71/12
TOOKAI-2	BWR	12	3200.B	6640.B	960.B	1420.B				10-4-(6)	71/12
TOOKAI-2	BWR	12	3200.	11200.	4000.	5450.		233.	665.	R.KISHEIKA	75/ 7
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
KASHIWAZAKI	BWR	15	2080.G	4420.G	3780.G	3940.G		182.	218.	10-4-28	75/ 3
KASHIWAZAKI	BWR	15	1650.B	3490.B	1310.B	1420.B				10-4-28	75/ 3

** MCA HA PWR SGTR FP GAS RELEASE FROM BUILDING 43250

		-----RARE GAS-----		--IODINE TOTAL(ORG/NON ORG)--		UNIT=CURIE	
		MCA	HA	-----MCA-----	-----HA-----		
TAKAHAMA-2	PWR 23	25400	64600	56.	313.	10-27,28	70/ 5
TAKAHAMA-2	PWR 23	19100	53600	56.	313.	-76,77-	76/ 4
GENKAI-1	PWR 24	26800	74000	61.	359.	10-31,33	70/ 5
OOI-1,2	PWR 26	28400	68400	59.	323.	10-27,28	71/ 1
MIHAMA-3	PWR 27	19100	53600	56.	313.	10-27,28	71/ 7
IKATA-1	PWR 28	19380	58180	61.	359.	10-29,31	72/11
GENKAI-2	PWR 29	26000	84000	64. (33/31)	370. (126/ 244)	10-4-32,42	76/ 2
IKATA-2	PWR 30	14000	38000	18. (9.2/8.8)	78. (26/ 52)	10-4-29,37	77/ 1
SENDAI	PWR 31	8900	32000	21. (/)	130. (/)	10-4-33,42	77/ 5

** BWR MCA BWR MSTR ESTIMATION OF IRRADIATION DOSE 43260

ACCIDENT=MAXIMUM CREDIBLE ACCIDENT WITH MAIN STEAM TUBE RUPTURE.

(1) POSITION OF CENTER

R = REACTOR

TB = TURBINE BUILDING

(2) RADIUS METER

(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), PO(=POST ISOLATE, -V-CLOSE)

		(1)	(2)	(T)	(G)	(B)	(C)		
		M	REM	REM	REM	REM			
TSURUGA	BWR 3	R	600.	60.	0.090			R, KISHEIKA	75/ 7
ONAGAWA	BWR 4	R	600.	11.8	0.0061	0.0203	T	10-4-(6)	70/ 5
ONAGAWA	BWR 4		450.	22.0	0.011	0.035		R, KISHEIKA	75/ 7
HAMAOKA-1	BWR 5	R	450.	22.0	0.011	0.035	T	10-33	70/ 5
FUKUSIMA-1	BWR 6	R	1000.	12.	0.098	0.101		R, KISHEIKA	75/ 7
FUKUSIMA-2,3	BWR 7	R	1000.	35.	0.038	0.051	T	89-7-3 P8	71/ 3
SHIMANE	BWR 8			7.8	0.0049	0.011	TR	89-9-2 P6	71/ 3
SHIMANE	BWR 8	R	820.	3.4	0.0023	0.0069	PO	89-8-2 P7	71/ 3
SHIMANE	BWR 8		820.	11.2	0.0071	0.0179	T	89-8-2 P7	71/ 3
FUKUSIMA-5	BWR 9	R	650.	45.	0.046	0.0179	T	10-4-(6)	71/ 2
FUKUSIMA-5	BWR 9	R	650.	54.	0.055	0.091		R, KISHEIKA	75/ 7
FUKUSIMA-4	BWR 10	R	800.	39.	0.040	0.060	T	10-4-(6)	71/ 8
FUKUSIMA-4	BWR 10		800.	39.	0.037	0.057		R, KISHEIKA	75/ 7
FUKUSIMA-6	BWR 11		650.	66.	0.043	0.076		R, KISHEIKA	75/ 7
FUKUSIMA-6	BWR 11	R	650.	28.	0.033	0.048		10-4-(7)	71/12
TOOKAI-2	BWR 12	R	570.	21.	0.021	0.078		10-4-(6)	71/12
TOOKAI-2	BWR 12		650.	66.	0.043	0.076		R, KISHEIKA	75/ 7
HAMAOKA-2	BWR 13	R	450.	58.	0.019	0.049		10-29	73/-5
KASHIWAZAKI	BWR 15	TB	750.	23.5	0.0114	0.0185	PR	10-4-32	75/ 3
KASHIWAZAKI	BWR 15	TB	750.	2.5	0.0031	0.007	PO	10-4-32	75/ 3
KASHIWAZAKI	BWR 15	TB	750.	26.	0.015	0.026	T	10-4-32	75/ 3

** MCA HA PWR SGTR ESTIMATION OF IRRADIATION DOSE 43270

ACCIDENT(MCA AND HA) WITH STEAM GENERATOR THIN 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

		-----MCA-----			-----HA-----				
		(A1)	(B)	(C)	(A2)	(B)	(C)		
		KM	REM	REM	KM	REM	REM		
MIHAMA-1	PWR 21	0.75	12.	0.062				R, KISHEIKA	75/ 7
MIHAMA-2	PWR 22	0.7	21.	0.11				R, KISHEIKA	75/ 7
TAKAHAMA-2	PWR 23	0.8	31.	0.24	1.5	0.8	35.	0.6	3.9
TAKAHAMA-2	PWR 23	0.83	30.	0.16		0.83	34.	0.46	
GENKAI-1	PWR 24	0.6	29.	0.11	0.7	0.6	34.	0.3	1.6
TAKAHAMA-1	PWR 25	0.8	31.	0.24		0.8	35.	0.6	
OOI-1,2	PWR 26	0.8	33.	0.26	1.8	0.8	34.	0.62	4.3
OOI-1,2	PWR 26	0.8	16.	0.084	0.58	0.8	17.	0.24	1.3
MIHAMA-3	PWR 27	0.75	17.	0.1	0.13	0.75	21.	0.32	0.27
MIHAMA-3	PWR 27	0.55	30.	0.13		0.55	36.	0.35	
IKATA-1	PWR 28	0.7	33.	0.1	0.7	0.7	38.	0.3	1.5
GENKAI-2	PWR 29	0.55	36.	0.2	0.9	0.55	42.	0.4	2.3
IKATA-2	PWR 30	0.63	12.	0.08	0.7	0.63	9.8	0.3	1.
SENDAI	PWR 31	0.57	1.8	0.02	0.05	0.57	2.4	0.05	0.2

** BWR HA BWR MSTR ESTIMATI ON OF IRRADIAT ION DOSE 43280

ACCIDENT=HYPOTHETICAL ACCIDENT WITH MAIN STEAM TUBU RUPTURE
 (1)RADIUS KILOMETER
 (A)ADULT 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), PO(=POST ISOLATE.-V-CLOSE)
 (1) (A) (G) (B) (1) (A) (G) (B) (1) (A) (G) (B)(C)
 KM REM REM REM KM REM REM REM KM REM REM REM

TSURUGA	BWR	3	0.6	100.	.270											R.KISHEIKA	75/ 7
ONAGAWA	BWR	4	0.6	13.	.011	.042	2.	3.0	.006	.013	5.	6.8	.024	.032		10-4-(7)	70/ 5
HAMAOKA-1	BWR	5	0.45	20.	.016	.067										10-33	70/ 5
FUKUSIMA-1	BWR	6	1.	.097	.124	.067										R.KISHEIKA	75/ 7
FUKUSIMA-2,3	BWR	7	1.	11.	.053	.064	2.	7.8	.035	.040	5.	6.8	.024	.032		89-7-3 P8	71/ 3
SHIMANE	BWR	8														89-8-2 P7	71/ 3
SHIMANE	BWR	8														089-8-2 P8	71/ 3
SHIMANE	BWR	8														089-8-2 P8	71/ 3
SHIMANE	BWR	8	0.82	9.8	.0136	.0383										R.KISHEIKA	75/ 7
FUKUSIMA-5	BWR	9	0.65	15.	.067	.103	2.	7.8	.035	.040	5.	6.8	.024	.032		10-4-(6)	71/ 2
FUKUSIMA-5	BWR	9	0.65	24.	.118	.178										R.KISHEIKA	75/ 7
FUKUSIMA-4	BWR	10	0.8	12.	.058	.080	2.	7.8	.035	.040	5.	6.8	.024	.032		10-4-(6)	71/ 8
FUKUSIMA-4	BWR	10	0.8	11.	.047	.067										R.KISHEIKA	75/ 7
FUKUSIMA-6	BWR	11	0.65	24.	.069	.133										R.KISHEIKA	75/ 7
FUKUSIMA-6	BWR	11	0.65	7.9	.037	.052	2.	3.8	.020	.019	5.	3.2	.015	.015		10-4-(7)	71/12
TOOKAI-2	BWR	12														57. 8.7 .069 .011	10-4-(6)
TOOKAI-2	BWR	12	0.54	30.	.043	.180										R.KISHEIKA	75/ 7
KASHIWAZAKI	BWR	15														75. 5.89.0114 .019 PR	10-4-43
KASHIWAZAKI	BWR	15														75. 0.87.0066 .015 PO	10-4-43
KASHIWAZAKI	BWR	15														75. 6.8 .018 .034 T	10-4-43

** DISTANCE SITE BOUNDARY AND PLANT CENTER 43500

MINIMUM DISTANCE BETWEEN SITE BOUNDARY AND PLANT CENTER

ONAGAWA	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
KASHIWAZAKI	BWR	15	790. M													6-1-1	75/ 3
TOMIOKA-2	BWR	16	680M(S) FROM STACK, 650M(S) FROM TURBINE BUILDING													10-4-16,32	76/12
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-1	PWR	28	700. M													10-27	72/11
IKATA-2	PWR	30	640. M														75/ 5
SENDAI	PWR	31	560. M(SSE), 570. M(S)													10-4-22	76/ 4

** REACTOR	COUNTRY	SITE	OWNER	CRITICAL DATE	110100			
			APLC	ARKANSAS POWER AND LIGHT COMPANY				
			CPALC	CAROLINA POWER AND LIGHT COMPANY				
			CW.E.CO.	*COMMONWEALTH EDISON COMPANY				
			DPC	DAIRYLAND POWER COOPERATIVE				
			NSPC	NORTHERN STATES POWER COMPANY				
			N.V.PZ	N.V.PROVINCIALE ZEEUWSE ENERGIE-MAATSCHAPPIJ-NETHERLAND				
			OKAB	OSKARSHAMNSVERTS KRAFTGRUPP AB				
			PASNY	POWER AUTHORITY STATE OF N.Y.				
			PSEAG	PUBLIC SERVICE ELECTRIC AND GAS COMPANY				
			SMUD	SOCRAMENTO MUNICIPAL UTILITY DISTRICT				
			SSPB	SWEDISH STATE POWER BOARD				
			VEAP	VIRGINIA ELECTRIC AND POWER				
			WEPC	WISCONSIN ELECTRIC POWER COMPANY				
			WMPC	WISCONSIN MICHIGAN POWER COMPANY				
			WPSC	WISCONSIN PUBLIC SERVICE CO.				
			(1)					
			(2)OWNER					
			(3)CONSTRUCTION PERMIT					
			(4)DATE IN OPERATION					
			(1)	(2)	(3)	(4)		
JPDR-1	BWR	1	JA JAERI	/ /	/ /	63/ 8/22(CRITICAL)	/	/
JPDR-2	BWR	2	JA JAERI	/ /	/ /		/	/
TSURUGA	BWR	3	JA GENDEN	66/ 4/22	70/ 3/14	69/10/ 3(CRITICAL)	/	/
ONAGAWA	BWR	4	JA TOOHOKU	/ /	/ /		/	/
HAMAOKA-1	BWR	5	JA CHUUBU	70/12/10	76/ 3/17		BWR4	/
FUKUSIMA-1	BWR	6	JA TOODEN	66/12/ 1	71/ 3/26	70/ 7/15(CRITICAL)	BWR3	/
FUKUSIMA-2,3	BWR	7	JA TOODEN	68/ 3/29	74/ 7/18	(2GOO)	BWR4	/
FUKUSIMA-2,3	BWR	7	JA TOODEN	70/ 1/23	76/ 3/27	(3GOO)	BWR4	/
SHIMANE	BWR	8	JA CHUUGOKU	69/11/13	74/ 3/29		BWR3	/
FUKUSIMA-5	BWR	9	JA TOODEN	/ /	/ /		BWR4	/
FUKUSIMA-4	BWR	10	JA TOODEN	/ /	/ /		BWR4	/
FUKUSIMA-6	BWR	11	JA TOODEN	/ /	/ /		BWR5	/
TOOKAI-2	BWR	12	JA GENDEN	/ /	/ /		BWR5	/
HAMAOKA-2	BWR	13	JA CHUUBU	/ /	/ /		BWR4	/
TOMIOKA-1	BWR	14	JA TOODEN	/ /	/ /		BWR5	/
KASHIWAZAKI	BWR	15	JA TOODEN	/ /	/ /		BWR5	/
TOMIOKA-2	BWR	16	JA TOODEN	/ /	/ /		BWR5	/
MIHAMA-1	PWR	21	JA KANDEN	66/12/ 1	70/11/28		2-LOOPS	/
MIHAMA-2	PWR	22	JA KANDEN	68/ 5/10	72/ 7/25		2-LOOPS	/
TAKAHAMA-2	PWR	23	JA KANDEN	70/11/25	75/11/14		3-LOOPS	/
GENKAI-1	PWR	24	JA KYUUSHUU	70/12/10	75/10/15		2-LOOPS	/
TAKAHAMA-1	PWR	25	JA KANDEN	69/12/12	74/11/14		3-LOOPS	/
OOI-1,2	PWR	26	JA KANDEN	72/ 7/ 4	/ /		4-LOOPS	/
MIHAMA-3	PWR	27	JA KANDEN	72/ 3/13	76/12/ 1		3-LOOPS	/
IKATA-1	PWR	28	JA SHIKOKU	/ /	/ /		2-LOOPS	/
GENKAI-2	PWR	29	JA KYUUSHUU	76/ 1/23	/ /		2-LOOPS	/
IKATA-2	PWR	30	JA SHIKOKU	/ /	/ /		3-LOOPS	/
SENDAI	PWR	31	JA KYUUSHU	/ /	/ /		/	/
HALDEN	HBWR	51	HALDEN		HBWR	NORWAY	/	/
OYSTER CREEK	BWR	57	OYSTER CREEK		BWR	USA	/	/
YANKEE	PWR	69	YANKEE POWER ST.		PWR	USA	YANKEE A.ELEC.CO	DNR V4 P33 61/
SAXTON	PWR	70	SAXTON EXP.		PWR	USA	SAXTON N.EXP.COP	DNR V4 P47 61/
BURLINGTON	PWR	71	BURLINGTON		PWR	USA		/
FUGEN	ATR	81	JA PNC	/ /	/ /		/	/
JOYO	FAST	91	JOYO	FAST		JAPAN	/	/
MONJU	FAST	92	MONJU	FAST		JAPAN	/	/
OTHERS		0	SHIPPINGPORT CORE 1	57/12/23		DUQUESNE LIGHT	PWR WH	/
OTHERS		0	SHIPPINGPORT CORE 2	65/ /		DUQUESNE LIGHT	PWR WH	/
OTHERS		0	HUMBOLDT BAY	63/ 8/		PACIFIC GAS AND ELECTRIC	BWR-1 GE	/
OTHERS		0	SAN ONOFRE(SUS CLAD)	68/12/		SOUTHERN CALIF. EDISON	PWR WH	/
OTHERS		0	LA CROSSE (SUS CLAD)	67/ 7/		DPC	BWR AC	/
OTHERS		0	OBRIGHEIM	69/ 3/ 4		KERNKRAFTWERK OBRIGHEIM	PWR SIEMENS	/
OTHERS		0	DODEWAAD	68/ 1/12		N.V.GKN	BWR GE(DES)	/
DRESDEN-1	BWR	55	DRESDEN-1	60/ 8/		CW.E.CO.	BWR-1 GE	/
DRESDEN-2	BWR	56	DRESDEN-2	70/ 8/		CW.E.CO.	BWR-3 GE	/
OTHERS		0	DRESDEN-3	71/10/		CW.E.CO.	BWR-3 GE	/
OTHERS		0	QUAD CITIES-1	72/ 8/		CW.E.CO.	BWR-3 GE	/
OTHERS		0	QUAD CITIES-2	72/10/		CW.E.CO.	BWR-3 GE	/
OTHERS		0	ZION-1	73/ 6/		CW.E.CO.	PWR WH	/
OTHERS		0	ZION-2	73/12/		CW.E.CO.	PWR WH	/
OTHERS		0	SANTA MARIA DE GARONA	71/ 3/30		NUCLENOR S.A.	BWR-3 GE	/
OTHERS		0	CONNETICUT YANKEE	68/ 1/		NUSC	PWR WH	/
MILLSTON	BWR	54	MILLSTONE-1	71/ 3/		NUSC	BWR-3 GE	/
MILLSTON	BWR	54	MILLSTONE-2	75/10/		NUSC	PWR CE	/
OTHERS		0	OSKARSHAMN-1	8*8		OKAB	BWR AA	/
OTHERS		0	OSKARSHAMN-2	74/12/		OKAB	BWR AA	/
OTHERS		0	RINGHALS-1	74/10/		SSPB	BWR WH	/
OTHERS		0	RINGHALS-2	75/ 3/		SSPB	PWR WH	/
OTHERS		0	MONTICELLO	71/ 6/		NSPC	BWR-3 GE	/
OTHERS		0	PRAIRIE ISLAND-1	/ /		NSPC	PWR WH	/
OTHERS		0	PRAIRIE ISLAND-2	/ /		NSPC	PWR WH	/

** REACTOR	COUNTRY	SITE	OWNER	CRITICAL DATE	110100			
DUANE ARNOLD	BWR	58	DUANE ARNOLD	/ /	IOWA ELEC.L.P.CO.	BWR-4	GE	/
BROWNS FERRY	BWR	53	BROWNS FERRY-1	74/ 8/ 1	TVA	BWR-4	GE	/
BROWNS FERRY	BWR	53	BROWNS FERRY-2	75/ 3/ 1	TVA	BWR-4	GE	/
OTHERS		0	PEACH BOTTOM-2	74/ 7/ 5	PHILADELPHIA ELEC.	BWR-4	GE	/
OTHERS		0	PEACH BOTTOM-3	74/12/23	PHILADELPHIA ELEC.	BWR-4	GE	/
OTHERS		0	HATCH-1	75/ 9/20	GOERGIA POWER	BWR-4	GE	/
OTHERS		0	FITZPATRICK	/ /	PAS OF N.Y.	BWR-4	GE	/
OTHERS		0	PILGRIM-1	72/12/	BOSTON EDISON COM.	BWR-4	GE	/
OTHERS		0	YANKEE ROWE	61/ 7/	YAEC	PWR	WH	/
VERMONT YANKEE	BWR	52	VERMONT YANKEE	72/11/	YAEC	BWR-4	GE	/
OTHERS		0	MAINE YANKEE	72/12/	YAEC	PWR	CE	/
OTHERS		0	FORT CALHOUN-1	74/ 5/ 4	OPPD	PWR	CE	/
OTHERS		0	CALVERT CLIFFS	75/ 5/ 8	BALTIMORE GAS AND ELEC.	PWR	CE	/
OTHERS		0	OCONEE-1	73/ 2/ 6	DUKE POWER	PWR	BAW	/
OTHERS		0	OCONEE-2	73/10/ 6	DUKE POWER	PWR	BAW	/
OTHERS		0	OCONEE-3	74/ 7/19	DUKE POWER	PWR	BAW	/
OTHERS		0	ARKANSAS NUCLEAR ONE	74/12/19	APLC	PWR	BAW	/
OTHERS		0	RANCHO SECO	75/ 4/17	SMUD	PWR	BAW	/
OTHERS		0	THREE MILE ISLAND-1	74/ 8/	METROPOLITAN EDISON	PWR	BAW	/
OTHERS		0	GINNA	70/ 3/	ROCHESTER GAS AND ELEC.	PWR	WH	/
OTHERS		0	POINT BEACH-1	70/12/	WEPC	PWR	WH	/
OTHERS		0	POINT BEACH-2	73/ 3/	WMPC	PWR	WH	/
H.B.ROBINSON-2	PWR	73	H.B.ROBINSON-2	71/ 3/	CPALC	PWR	WH	/
OTHERS		0	BRUNSWICK-2	/ /	CPALC	BWR-4	GE	/
SURRY-1.-2	PWR	74	SURRY-1	72/12/22	VEAP	PWR	WH	/
SURRY-1.-2	PWR	74	SURRY-2	73/ 5/ 1	VEAP	PWR	WH	/
TURKEY POINT-3,4	PWR	72	TURKEY POINT-3	/ /	FLORIDA POWER AND LIGHT	PWR	WH	/
TURKEY POINT-3,4	PWR	72	TURKEY POINT-4	/ /	FLORIDA POWER AND LIGHT	PWR	WH	/
OTHERS		0	BORSSELE	73/10/	N.V.PZ	PWR	SIEMENS	/
OTHERS		0	INDIAN POINT-2	74/ 7/ 1	CONSOLIDATED EDISON	PWR	WH	/
OTHERS		0	KEWAUNEE	74/ 6/	WPSC	PWR	WH	/
OTHERS		0	SALEM-1	/ /	PSEAGC	PWR	WH	/
JPDR-1	BWR	1	IBARAGI -KEN	NAKA -GUN	TOOKAI -MURA SIRAKATA AZA S	IRANE		/
TSURUGA	BWR	3	FUKUI -KEN	TSURUGA-SHI	MYOOZIN -MACHI			/
ONAGAWA	BWR	4	MIYAGI -KEN	OZIKI -GUN	ONAGAWA-MACHI AND OZIKI-MACH	I)		/
HAMAOKA-1	BWR	5	SIZUOKA -KEN	OGASA -GUN	HAMAOKA-MACHI SAKURA			/
FUKUSIMA-1	BWR	6	FUKUSIMA-KEN	FUTABA -GUN	OOKUMA-MACHI AND FUTABA-MACH	I)		/
FUKUSIMA-2,3	BWR	7	FUKUSIMA-KEN	FUTABA -GUN	OOKUMA-MACHI AND FUTABA-MACH	I)		/
SHIMANE	BWR	8	SHIMANE -KEN	YATABA -GUN	KASIMA-MACHI OOAZA KATAKU			/
FUKUSIMA-5	BWR	9	FUKUSIMA-KEN	FUTABA -GUN	OOKUMA-MACHI AND FUTABA-MACH	I)		/
FUKUSIMA-4	BWR	10	FUKUSIMA-KEN	FUTABA -GUN	OOKUMA-MACHI AND FUTABA-MACH	I)		/
TOOKAI-2	BWR	12	IBARAGI -KEN	NAKA -GUN	TOOKAI -MURA OOAZA SIRAKATA	1-1		/
KASHIWAZAKI	BWR	15	NIIGATA -KEN	KARIWA -GUN	KARIWA -MURA			/
TOMIOKA-2	BWR	16	FUKUSIMA-KEN	FUTABA -GUN	NARAH AND TOMIOKA CHOO			/
MIHAMA-1	PWR	21	FUKUI -KEN	MIKATA -GUN	MIHAMA-MACHI NIU			/
TAKAHAMA-2	PWR	23	FUKUI -KEN	OIII -GUN	TAKAHAMA-MACHI TANOURA			/
GENKAI-1	PWR	24	SAGA -KEN	HIGASHI-MATSU-URA-GUN	GENKAI-MACHI OOAZA	IMAMURA		/
TAKAHAMA-1	PWR	25	FUKUI -KEN	OIII -GUN	TAKAHAMA-MACHI TANOURA			/
OII-1,2	PWR	26	FUKUI -KEN	OIII -GUN	OIII -MACHI OOSHIMA			/
MIHAMA-3	PWR	27	FUKUI -KEN	MIKATA -GUN	MIHAMA-MACHI NIU			/
IKATA-1	PWR	28	EHIME -KEN	NISHI-UWA-GUN	IKATA-MACHI			/
IKATA-2	PWR	30	EHIME -KEN	NISHI-URA-GUN	IKATA-MACHI			/
SENDAI	PWR	31	KAGOSIMA-KEN	SENDAI -SHI	GUMIZAKI-MACHI			/
MILLSTON	BWR	54	MILLSTONE POINT	BWR	USA			/
DRESDEN-1	BWR	55	GRUNDY COUNTRY, 3, .USA					/

** REACTOR TYPE BWR

110200

- (1) REACTOR THERMAL RATING
 (2) TYPE OF RECIRCULATION
 NC : NATURAL CIRCULATION
 FC : FORCED CIRCULATION
 (3) NUMBER OF JET PUMP
 (4) TYPE OF DRY-WELL
 SLSK : FLASK TYPE
 CONE : FRUSTUM CONE TYPE
 (5) NUMBER OF RECIRCULATION LOOPS
 (6) TYPE

MWT

		(1)	(2)	(3)	(4)	(5)	(6)		
		MWT							
JPDR-1	BWR	1	45.	NC				/	
JPDR-2	BWR	2	90.	FC				/	
TSURUGA	BWR	3	968.4	FC				R-9	66/ 8
TSURUGA	BWR	3	1070.	FC				80-3-3	70/ 5
ONAGAWA	BWR	4	1593.	FC	16	SLSK	BWR/2	8-14-(3)	70/ 5
HAMAOKA-1	BWR	5	1593.	FC	16	SLSK	BWR/4	2-1,8-27	70/ 5
FUKUSIMA-1	BWR	6	1380.	FC	20	SLSK		COM-M P124	70/ 5
FUKUSIMA-2,3	BWR	7	2381.	FC	20		BWR/4	70/6/20	70/ 5
SHIMANE	BWR	8	1380.	FC	20			70/6/20	70/ 5
FUKUSIMA-5	BWR	9	2381.	FC	20			2-1-(1)	71/ 2
FUKUSIMA-4	BWR	10	2381.	FC	20			2-1-(1)	71/ 8
FUKUSIMA-6	BWR	11	3293.	FC	20	CONE	BWR/5	8-1-(3)	74/ 9
TOOKAI-2	BWR	12		FC	20	CONE	BWR/5	8-3-(16)	72/ 1
HAMAOKA-2	BWR	13	2436.	FC	20	SLSK	BWR/4	2-1	72/ 9
TOMIOKA-1	BWR	14	3293.	FC	20	CONE	2	8-3-26	76/ 8
KASHIWAZAKI	BWR	15	3293.	FC	20	CONE	2	8-3-1	75/ 3
TOMIOKA-2	BWR	16	3293.	FC	20	CONE	2	8-3-	76/12
VERMONT YANKEE	BWR	52	1593.					A-2	70/ 5
BROWNS FERRY	BWR	53	3293.	FC				GSK-19	69/ 2
MILLSTON	BWR	54	1727.					R-9	66/ 8
DRESDEN-1	BWR	55	625.	NC,FC			BWR/1	DNR V4 P91	61/
DRESDEN-2	BWR	56	2255.	FC	20		BWR/3	DNR V4 P189	66/ 8
OYSTER CREEK	BWR	57	1600.				BWR/1	R-9	66/ 8
OYSTER CREEK	BWR	57	1950.				BWR/1		/
DUANE ARNOLD	BWR	58	1593.						/

** REACTOR TYPE PWR

110300

- (1) REACTOR THERMAL RATING
 (2) NUMBER OF REACTOR COOLANT LOOPS
 (3) FUEL ROD ARRANGEMENT IN A BUNDLE
 (4) NUMBER OF SPACER
 (5) ACTIVE FUEL LENGTH

MWT

MM

(3) ACTIVE FLEET (4) INACTIVE FLEET									
		(1)	(2)	(3)	(4)	(5)			
		MWT	NO.		NO.	MM			
MIHAMA-1	PWR	21	1031.	2	14*14	7	3048.	8-16	70/11
MIHAMA-2	PWR	22	1456.	2	14*14	7	3660.	6783-5	71/ 9
TAKAHAMA-2	PWR	23	2440.	3	15*15	7	3660.	8-17	70/ 5
TAKAHAMA-2	PWR	23	2432.	3	15*15	7		-24,25-	76/11
GENKAI-1	PWR	24	1650.	2	14*14	7	3660.	8-18	70/10
TAKAHAMA-1	PWR	25	2440.	3	15*15	7	3660.	6783-5	71/ 9
OOI-1,2	PWR	26	3423.	4	17*17	8	3900.	8-3,2-13	75/ 5
MIHAMA-3	PWR	27	2440.	3	15*15	7	3660.	8-15,8-17	71/ 8
IKATA-1	PWR	28	1650.	2	14*14	7	3660.	8-18,8-20	72/11
GENKAI-2	PWR	29	1650.	2	14*14	7		8-3-40	76/ 2
IKATA-2	PWR	30	1650.	2	14*14	7	3660.		75/ 5
SENDAI	PWR	31	2652.	3	17*17	9	3600.	8-3-44	76/ 5
P 80 STANDARD	PWR	49		3	17*17	9	3660.		77/ 5
BURLINGTON	PWR	71	3083.		15*15	9	3658.	GSK-19	69/ 2
TURKEY POINT-3,4	PWR	72	2200.	3	15*15	7		BK80-4 P1,3	71/ 9
H.B.ROBINSON-2	PWR	73	2200.	3	15*15	7		BK80-4 P1,3	71/ 9
SURRY-1,-2	PWR	74	2449.	3	15*15	7		BK80-4 P1,3	71/ 9
BEAVER VALLEY	PWR	75	2660.	3	15*15	7		BK80-4 P1,3	71/ 9
NORTH ANNA-12	PWR	76	2660.	3	15*15	7		BK80-4 P2,4	71/ 9
JOSEPH M.FARLEY	PWR	77	2660.	3	15*15	7		BK80-4 P2,4	71/ 9

** ENGINEER

520200

ELEC. MECH. ATOM. PHSY. CHEM. CIVIL ARCH. OTHER TOTAL

ONAGAWA	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
SHIMANE	BWR	8	97.	85.	6.	3.	16.	10.	12.	2.	231.	5-(5)	75/ 7
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
TOOKAI-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
HAMAOKA-2	BWR	13	21.	18.	7.		7.	4.	2.		59.	-14-(SITE)	76/11
TOMIOKA-1	BWR	14	308.	178.	150.	6.	31.	65.	44.	7.	789.	5-10	76/ 8
KASHIWAZAKI	BWR	15	267.	158.	84.	5.	22.	61.	38.	6.	641.	5-9	75/ 3
TOMIOKA-2	BWR	16	315.	181.	176.	6.	34.	67.	46.	7.	832.	5-10	76/12
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.	1.	69.	5-5	71/ 8
TAKAHAMA-2	PWR	23	(153)	(79)	(8)	(3)	(15)	(26)	(23)	(3)	(310)	ALL INC.SITE	70/ 5
TAKAHAMA-2	PWR	23	(126)	(95)	(30)	(3)	(21)	(14)	(20)	(6)	(315)ALL	AS OF 76/10	76/12
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-1	PWR	28	42	30	8		7	23	19	1	130	5-2	72/11
GENKAI-2	PWR	29	79.	96.	5.	6.	19.	21.	12.		238.	5-9(74/4)	76/ 2
IKATA-2	PWR	30	87.	51.	11.	1.	14.	20.	19.	3.	206.	5-5	75/ 5
SENDAI	PWR	31	93.	111.	7.	5.	25.	23.	13.		277.	5-9-(76/4)	76/ 4

** REACTOR SITE

SITUTAI O N

AREA

611000

			LATITUDE D/ M/ S	LONGITUDE D/ M/ S	AREA (M2)		
TSURUGA	BWR	3			2200000.	BINRAN P78	74/
ONAGAWA	BWR	4	N 38/24/	E 141/30/	1610000.	6-1-(1)	70/ 5
HAMAOKA-1	BWR	5	N 34/37/	E 138/09/	1600000.	6-1	70/ 5
SHIMANE	BWR	8			1700000.	BINRAN P79	74/
FUKUSIMA-5	BWR	9	N 37/25/	E 141/00/	3200000.	6-1-(1)	71/ 2
FUKUSIMA-4	BWR	10	N 37/25/	E 141/00/	3200000.	6-1-(1)	71/ 8
FUKUSIMA-6	BWR	11	N 37/25/	E 141/00/	3200000.	6-1-(1)	72/ 1
TOOKAI-2	BWR	12	N 36/27/45	E 140/36/36	240000.	6-1-(1)	72/ 1
HAMAOKA-2	BWR	13	N 34/37/			6-1-(1)	72/ 1
KASHIWAZAKI	BWR	15	N 37/25/17	E 138/35/51	4200000.	6-1-1	75/ 3
TOMIOKA-2	BWR	16	N 37/19/	E 141/02/	1500000.	6-1-1	76/12
MIHAMA-1	PWR	21			500000.	/	/
MIHAMA-2	PWR	22			500000.	/	/
TAKAHAMA-2	PWR	23	N 35/31/	E 135/31/		6-1	70/ 5
TAKAHAMA-2	PWR	23			2500000.	BINRAN P78	74/
GENKAI-1	PWR	24	N 33/31/	E 129/50/	800000.	6-64	70/ 5
OOI-1,2	PWR	26	35/32/	E 135/39/		6-1	71/ 1
MIHAMA-3	PWR	27	35/42/	E 135/58/	*560000.	6-1	71/ 9
MIHAMA-3	PWR	27	*AREA IS ADDED BY 600000SQM (INCLUDE WITH MIHAMA-1,2)				71/ 9
IKATA-1	PWR	28	N 33/29/	E 132/19/	*750000.	6-70	72/11
IKATA-1	PWR	28	*AREA INCLUDES (KAIMEN-UMETATE(ABOUT 90000M2))				6-70
IKATA-2	PWR	30			750000.		75/ 5
SENDAI	PWR	31	N 31/49/17	E 130/11/33	1350000.	6-1-1	76/ 5
BROWNS FERRY	BWR	53			3402000.	BINRAN P80	74/
DRESDEN-1	BWR	55			3850000.	BINRAN P80	74/
DRESDEN-2	BWR	56			3850000.	BINRAN P80	74/
OYSTER CREEK	BWR	57			3240000.	BINRAN P80	74/

** SITE

WATER

QUALITY WATER

SOURCE

621220

ONAGAWA	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
TOOKAI-2	BWR	12	(A)=MAX,(B)=MIN, (FROM 68/4 TO 71/8) AKOGIGAUARA	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)=HATTA 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)=OTIAI GAWA, (B)=MAJO GAWA, (C)=MAJO UNDER GROUND	6-11,12	71/ 8

PLANT PERFORMANCE DATA

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** SITE	WATER	QUALITY	PH	E.C.DTVTY NIGORIDO 621240							
				----PH---		ELECT.CONDUCTIVITY		NIGORIDO			
				(A)	(B)	(A)	(B)	(A)	(B)		
						MICRO MHO /CM					
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
TOOKAI-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
OOI-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						
			KOODO(TOTAL)		KOODO CALCIUM		ALKALI-TOTAL						
			PPM	CACO3	PPM	CACO3	PPM	CACO3	PPM	CACO3			
			(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		
TOOKAI-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		
OOI-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							
			SO-4 ION(PPM-SO-4)		CL ION(PPM-CL)		NH-4 ION(PPM NH-4)			
			(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
FUKUSIMA-6	BWR	11	4.8	TR	5.5	3.1	0.3	TR	6-5-(10)	72/ 1
TOOKAI-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
OOI-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 TR	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			
			NO-3 ION(PPM-NO-3)		N/-2 ION(PPM-NO-2(					
			(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
OOI-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	(A)	(B)	(SILICA TOTAL)	(SILICA COLLOID)	(SILICA ION)	PPM AS CaCO3		
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	
TOOKAI-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 /
OOI-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					
			CATION TOTAL	ANION TOTAL	PPM AS CaCO3						
			(A)	(B)	(A)	(B)					
HAMAOKA-1	BWR	5	134.1	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							
			FE-TOTAL	NA-METAL	K-METAL	NA+K METAL					
			PPM AS FE	PPM AS NA	PPM AS K	PPM AS CaCO3					
			(A)	(B)	(A)	(B)	(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 ION)	6-5-(10)	71/ 2	
FUKUSIMA-6	BWR	11	0.031	TR	(12.9	9.4	1.2	0.5 ION)	6-5-(10)	72/ 1	
TOOKAI-2	BWR	12	0.51	0.17					6-2-(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							
			CALCIUM ION	MG ION	SOLID	CONSUM. OXYGEN				
			PPM AS CaCO3	PPM AS CaCO3	PPM	PPM AS O				
			(A)	(B)	(A)	(B)	(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

PLANT PERFORMANCE DATA

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** POPULATI ON FROM 1KM RADIUS TO 10KM RADIUS 641200

(1) FROM CENTER TO 1KM RADIUS
 (2) FROM CENTER TO 2KM RADIUS
 (3) FROM CENTER TO 3KM RADIUS
 (5) FROM CENTER TO 5KM RADIUS
 (10) FROM CENTER TO 10KM RADIUS
 * FROM CENTER TO 12.5KM RADIUS
 (1) (2) (3) (5) (10)

JPDR-2	BWR	2	0.	973.	3271.	12931.	80212.		/
TSURUGA	BWR	3			294.	556.	AS OF 1969	GH8-P78	/
ONAGAWA	BWR	4			1850.	2991.	29877.	AS OF 1969	6-4-(1)69/7 70/ 5
HAMAOKA-1	BWR	5	40.	1900.		16949.	60499.	AS OF 1969	6-35 69/7 70/ 5
SHIMANE	BWR	8				10922.		AS OF 1967	GH8-P79 /
FUKUSIMA-5	BWR	9				10765.	35213.		6-4-(1) 71/ 2
FUKUSIMA-4	BWR	10				9579.	35314.		6-4-(1) 71/ 8
FUKUSIMA-6	BWR	11				9241.	35934.	AS OF 1970	6-4-(1) 72/ 1
TOOKAI-2	BWR	12	1239.			37411.	142099.	AS OF 1970	6-4-(1) 72/ 1
HAMAOKA-2	BWR	13				17388.	61617.	AS OF 1971	6-37 72/ 9
HAMAOKA-2	BWR	13				17558.	61738.	AS OF 1972	6-37 73/ 5
TOMIOKA-1	BWR	14				12444.	25747.	AS OF 1970	GH8-P78 /
KASHIWAZAKI	BWR	15				15000.	71000.		6-6-9 75/ 3
TOMIOKA-2	BWR	16				12000.	26000.	AS OF 1970	6-6-18 76/12
MIHAMA-1	PWR	21		595.	595.	700.	7603.		6-94 66/11
TAKAHAMA-2	PWR	23				4992.	19915.		6-121 70/ 5
GENKAI-1	PWR	24				7395.	36846.	AS OF 1969	6-87 70/ 5
OOI-1,2	PWR	26	0.	412.	670.	981.	* 25075.	AS OF 1970	6-100 71/ 1
MIHAMA-3	PWR	27	0.	784.	784.	873.	5183.	AS OF 1970	6-80 71/ 8
IKATA-1	PWR	28		1791.	3651.	7982.	22534.	AS OF 1970	6-92 72/11
GENKAI-2	PWR	29				9150.	35920.	1973/ 3	6-6-5 76/ 2
IKATA-2	PWR	30		1800.	3900.	7800.	22000.	AS OF 1974	6-6-5 75/ 5
SENDAI	PWR	31				3930.	25040.	1973/ 9	6-6-5 76/ 5

** POPULATI ON FROM 15KM RADIUS TO 100KM RADIUS 641400

(15) FROM CENTER TO 15KM RADIUS
 (20) FROM CENTER TO 20KM RADIUS
 (30) FROM CENTER TO 30KM RADIUS
 (50) FROM CENTER TO 50KM RADIUS
 (100) FROM CENTER TO 100KM RADIUS
 (15) (20) (30) (50) (100)

JPDR-2	BWR	2	233160.	377289.				AS OF 1969	GH8-P78 70/11
TSURUGA	BWR	3	58293.		231092.			AS OF 1969	/
ONAGAWA	BWR	4	66512.					AS OF 1969	6-4-(1)69/7 70/ 5
HAMAOKA-1	BWR	5	98917.	175836.				AS OF 1969	6-35 69/7 70/ 5
SHIMANE	BWR	8		197010.				AS OF 1967	GH8-P79 /
FUKUSIMA-5	BWR	9	53083.		134027.				6-4-(1) 71/ 2
FUKUSIMA-4	BWR	10	50225.		134747.				6-4-(1) 71/ 8
FUKUSIMA-6	BWR	11	52539.		130255.			AS OF 1970	4-4-(1) 72/ 1
TOOKAI-2	BWR	12	404005.	627879.				AS OF 1970	6-4-(1) 72/ 1
HAMAOKA-2	BWR	13	102629.	176499.				AS OF 1971	6-37 72/ 9
HAMAOKA-2	BWR	13	102913.	178441.				AS OF 1972	6-37 73/ 5
TOMIOKA-1	BWR	14	36851.		120119.			AS OF 1970	GH8-P78 /
KASHIWAZAKI	BWR	15			446000.	1141000.	3006000.		6-6-9 75/ 3
TOMIOKA-2	BWR	16			120000.	585000.	2512000.	AS OF 1970	6-6-18 76/12
MIHAMA-1	PWR	21	64946.	78148.					6-94 66/11
TAKAHAMA-2	PWR	23	77510.	113743.					6-121 70/ 5
GENKAI-1	PWR	24	91405.	137661.				AS OF 1969	6-87 70/ 5
OOI-1,2	PWR	26	38053.	47063.				AS OF 1970	6-100 71/ 1
MIHAMA-3	PWR	27	62088.	73215.				AS OF 1970	6-80 71/ 8
IKATA-1	PWR	28	70783.	99804.				AS OF 1971	6-92 72/11
GENKAI-2	PWR	29			284240.	1269560.	5785940.	1973/ 3	6-6-5 76/ 2
IKATA-2	PWR	30	71000.	98000.	176000.			AS OF 1974	6-6-5 75/ 5
SENDAI	PWR	31			228490.	979960.	2496450.	1974/ 3	6-6-5 76/ 5

** REACTOR OUTPUT POWER THERMAL ELECTRIC AL 731100

(D)=SELF-CONSUMPTION
(E)=NET EFFICIENCY

			(A) GROSS HEAT (MWT)	(B) GROSS ELECT. (MWE)	(C) NET ELECT. (MWE)	(D) SELF- CONSUMP (O/O)	(E) NET EFFI. (O/O)	
JPDR-1	BWR	1	45.	12.5				/
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
HAMAOKA-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
FUKUSIMA-6	BWR	11	3293					8-1-(3) 74/ 9
TOOKAI-2	BWR	12	3293.					/
HAMAOKA-2	BWR	13	2436.	840.				2-1 72/ 9
TOMIOKA-1	BWR	14	3293.	1100.				8-3-1 76/ 8
KASHIWAZAKI	BWR	15	3293.	1100.				8-3-1 75/ 3
TOMIOKA-2	BWR	16	3293.	1100.				8-3-1 76/12
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
TAKAHAMA-2	PWR	23	2432.					-24- 76/11
GENKAI-1	PWR	24	1650.	559.				80-9-1 70/ 5
TAKAHAMA-1	PWR	25	2440.	826.				6783-5 70/10
OOI-1,2	PWR	26	3423.	1175.				8-15 71/ 1
MIHAMA-3	PWR	27	2440.	826.				8-15 71/ 8
IKATA-1	PWR	28	1650.	566.				8-18 72/11
GENKAI-2	PWR	29	1650.	559.				76/10
GENKAI-2	PWR	29	1650.					8-3-40 76/ 2
IKATA-2	PWR	30	1650.	566.5				2-1 75/ 5
SENDAI	PWR	31	2652.	890.				8-3-55 76/ 5
P 80 STANDARD	PWR	49	2652.					77/ 5
HALDEN	HBWR	51	20.	----				/
VERMONT YANKEE	BWR	52	1593.	537.				A-2 70/ 5
BROWNS FERRY	BWR	53	3293.	1098.				GSK-19 69/ 2
MILLSTON	BWR	54	1727.					R-9 66/ 8
DRESDEN-1	BWR	55	626.	192.8				DNR V4 P91 61/
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.				(1) /
OYSTER CREEK	BWR	57	(1) POWER-UP					/
DUANE ARNOLD	BWR	58	1593.	574.				A-2 70/ 7
YANKEE	PWR	69	485.	150.				DNR V4 P33 61/
SAXTON	PWR	70	20.	4.				DNR V4 P47 61/
BURLINGTON	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 M.FARLEY	PWR	77	2660.	861.				BK80-4 P2 71/ 9
MUTSU	PWR	80	36.					/
FUGEN	ATR	81	557.	165.				/
OTHERS		0	231.	68.	SHIPPINGPORT CORE1	PWR	WH	/
OTHERS		0	505.	150.	SHIPPINGPORT CORE2	PWR	WH	/
OTHERS		0	240.	65.	HUMBOLDT BAY(NATURAL CIRC.)	BWR-1	GE	/
OTHERS		0	1347.	450.	SAN ONOFRE-1	PWR	WH	/
OTHERS		0	165.	55.	LA CROSSE (SUS CLADDING)	BWR	AC	/
OTHERS		0	1050.	345.	OBRIGHEIM	PWR	SI.	/
OTHERS		0	163.	54.	DODEWAARD	BWR	GE	/
DRESDEN-1	BWR	55	700.	210.	DRESDEN-1	BWR-1	GE	/
DRESDEN-2	BWR	56	2527.	840.	DRESDEN-2	BWR-3	GE	/
OTHERS		0	2527.	838.	DRESDEN-3	BWR-3	GE	/
OTHERS		0	2511.	832.	QUAD CITIES-1	BWR-3	GE	/
OTHERS		0	2511.	832.	QUAD CITIES-2	BWR-3	GE	/
OTHERS		0	2760.	1085.	ZION-1	PWR	WH	/
OTHERS		0	2760.	1085.	ZION-2	PWR	WH	/
OTHERS		0	1380.	460.	SANTA MARIA DE GARONA	BWR-3	GE	/
OTHERS		0	1825.	600.	CONNECTICUT YANKEE	PWR	WH	/
MILLSTON	BWR	54	2011.	682.	MILLSTONE-1	BWR-3	GE	/
MILLSTON	BWR	54	2560.	865.	MILLSTONE-2	PWR	CE	/
OTHERS		0	1375.	440.	OSKARSHAMN-1	BWR	AA	/
OTHERS		0	1700.	580.	OSKARSHAMN-2	BWR	AA	/

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** REACTOR	OUTPUT	POWER	THERMAL	ELECTRIC	AL	731100			
OTHERS		0	2270.	792.	RINGHALS-1		BWR	AA	/
OTHERS		0	2440.	820.	RINGHALS-2		PWR	WH	/
OTHERS		0	1670.	580.	MONTICELLO		BWR-3	GE	/
OTHERS		0	1650.	547.	PRAIRIE ISLAND-1		PWR	WH	/
OTHERS		0	1650.	547.	PRAIRIE ISLAND-2		PWR	WH	/
DUANE ARNOLD	BWR	58	1593.	565.	DUANE ARNOLD		BWR-4	GE	/
BROWNS FERRY	BWR	53	3293.	1098.	BROWNS FERRY-1		BWR-4	GE	/
BROWNS FERRY	BWR	53	3293.	1098.	BROWNS FERRY-2		BWR-4	GE	/
OTHERS		0	3293.	1098.	PEACH BOTTOM-2		BWR-4	GE	/
OTHERS		0	3293.	1098.	PEACH BOTTOM-3		BWR-4	GE	/
OTHERS		0	2436.	813.	HATCH-1		BWR-4	GE	/
OTHERS		0	2436.	821.	FITZPATRICK		BWR-4	GE	/
OTHERS		0	1998.	685.	PILGRIM-1		BWR-4	GE	/
OTHERS		0	600.	185.	YANKEE ROWE		PWR	WH	/
VERMONT	YANKEE	BWR	52	1593.	VERMONT YANKEE		BWR-4	GE	/
OTHERS		0	2440.	830.	MAINE YANKEE		PWR	CE	/
OTHERS		0	1420.	480.	FORT CALHOUN-1		PWR	CE	/
OTHERS		0	2560.	840.	CALVERT CLIFFS-1		PWR	CE	/
OTHERS		0	2568.	886.	OCONEE-1		PWR	BAW	/
OTHERS		0	2568.	886.	OCONEE-2		PWR	BAW	/
OTHERS		0	2568.	886.	OCONEE-3		PWR	BAW	/
OTHERS		0	2568.	880.	ARKANSAS NUCLEAR ONE		PWR	BAW	/
OTHERS		0	2772.	964.	RANCHO SECO		PWR	BAW	/
OTHERS		0	2535.	818.	THREE MILE ISLAND-1		PWR	BAW	/
OTHERS		0	1520.	490.	GINNA		PWR	WH	/
OTHERS		0	1518.	524.	POINT BEACH-1		PWR	WH	/
OTHERS		0	1518.	524.	POINT BEACH-2		PWR	WH	/
OTHERS		0	2200.	739.	H.B.ROBINSON-2		PWR	WH	/
OTHERS		0	2436.	849.	BRUNSWICK		BWR-4	GE	/
SURRY-1,-2	PWR	74	2441.	822.	SURRY-1		PWR	WH	/
SURRY-1,-2	PWR	74	2441.	822.	SURRY-2		PWR	WH	/
OTHERS		0	2200.	728.	TURKEY POINT-3		PWR	WH	/
OTHERS		0	2200.	728.	TURKEY POINT-4		PWR	WH	/
OTHERS		0	1765.	470.	BORSSELE		PWR	SI	/
OTHERS		0	2758.	906.	INDIAN POINT-2		PWR	WH	/
OTHERS		0	1650.	560.	KEWAUNEE		PWR	WH	/
OTHERS		0	3350.	1090.	SALEM-1		PWR	WH	/

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** CORE COOLANT WATER STEAM FLOW RATE 731140

(1) TOTAL FLOW

1A : T/H

1B : LB/H

(2) EFFECTIVE FLOW FOR HEAT TRANSFER

2A : T/H

2B : LB/H

(3) STEAM FLOW RATE

3A : T/H

----- (1) ----- (2) ----- (3)

1A

1B

2A

2B

3A

JPDR-1	BWR	1	1860.				69.	/
JPDR-2	BWR	2	3260.	(2934.T/H CHANNEL FLOW)			136. (135.2)	70/ 8
TSURUGA	BWR	3	17700.				1930.	80-3-3 P6 70/ 5
ONAGAWA	BWR	4	22500.				2910.	8-3-(2) 70/ 5
HAMAOKA-1	BWR	5	22900.				2920.	8-10,8114 70/ 5
FUKUSIMA-1	BWR	6	21800.					R-9 66/ 8
FUKUSIMA-2,3	BWR	7	33800.					70/6/20 70/ 6
SHIMANE	BWR	8	21800.			2470.		70/6/20 70/ 6
FUKUSIMA-5	BWR	9	33800.			4440.		8-3-(2) 71/ 2
FUKUSIMA-4	BWR	10	33800.			4440.		8-3-(2) 71/ 8
FUKUSIMA-6	BWR	11	48300.			6430.		8-3-(2) 72/ 1
TOOKAI-2	BWR	12	48300.			6430.		8-3-(2) 72/ 1
HAMAOKA-2	BWR	13	35600.			4750.		8-8 72/ 9
TOMIOKA-1	BWR	14	48300.			6430.		8-3-26 76/ 8
KASHIWAZAKI	BWR	15	48300.			6430.		8-3-63 75/ 3
TOMIOKA-2	BWR	16	48300.			6430.		8-3-78 76/12
MIHAMA-1	PWR	21	23500.					8-14 66/11
MIHAMA-1	PWR	21	23300.	51.3E6	21818.	48.1E6		BK80-4 P2 71/ 9
MIHAMA-2	PWR	22	30000.	66.0E6	27578.	60.8E6		BK80-4 P2 71/ 9
TAKAHAMA-2	PWR	23	45000.	(45400.)				8-49,8-130 70/ 5
TAKAHAMA-2	PWR	23	45000.	100.0E6	41276.	91.0E6		BK80-4 P2 71/ 9
GENKAI-1	PWR	24	30000.					8-50 70/ 5
TAKAHAMA-1	PWR	25	45000.	100.0E6	41276.	91.0E6		BK80-4 P2 71/ 9
OOI-1,2	PWR	26	60100.					8-133 71/ 1
MIHAMA-3	PWR	27	45000.	100.0E6	43318.	95.5E6		BK80-4 P2 71/ 9
IKATA-1	PWR	28	30000.					8-18 72/11
GENKAI-2	PWR	29	30000.					8-3-40 76/ 2
IKATA-2	PWR	30	30000.					8-3-37 75/ 5
SENDAI	PWR	31	45700.					8-3-44 76/ 5
P 80 STANDARD	PWR	49	45700.					77/ 5
VERMONT YANKEE	BWR	52	21800.				2920.	A-2 70/ 5
BROWNS FERRY	BWR	53	45178.				6069.	GSK 69/ 2
MILLSTON	BWR	54	31300.					R-9 66/ 8
DRESDEN-1	BWR	55	11600.					DNR V4 P94 62/
DRESDEN-2	BWR	56	44500.					R-9 66/ 8
OYSTER CREEK	BWR	57	27700.					R-9 66/ 8
DUANE ARNOLD	BWR	58	22900.				3100.	A-2 P1 70/ 7
YANKEE	PWR	69	19010.					DNR V4 P36 61/
SAXTON	PWR	70	1270.					DNR V4 P50 61/
BURLINGTON	PWR	71	55247.					GSK-19 69/ 2
TURKEY POINT-3,4	PWR	72	46039.	101.5E6	43998.	97.0E6		BK80-4 P1 71/ 9
H.B.ROBINSON-2	PWR	73	46039.	101.5E6	43998.	97.0E6		BK80-4 P1 71/ 9
SURRY-1,-2	PWR	74	45677.	100.7E6	43635.	96.2E6		BK80-4 P1 71/ 9
BEAVER VALLEY	PWR	75	45677.	100.7E6	43635.	96.2E6		BK80-4 P1 71/ 9
NORTH ANNA-12	PWR	76	45677.	100.7E6	43635.	96.2E6		BK80-4 P2 71/ 9
JOSEPH M.FARLEY	PWR	77	45677.	100.7E6	43635.	96.2E6		BK80-4 P2 71/ 9
MUTSU	PWR	80	1800.		1610.(FLOW INTO FUEL ASSY)			/
FUGEN	ATR	81	7600.					105-8-3-(2) 73/11
MONJU	FAST	92	70.2				910.	GAKKAIS143P 72/ 5

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** FEED.W COOLANT TEMP. INLET OUTLET SUBCOOL 731180

(1)FEED-WATER TEMPERATURE
 (2)CORE-INLET TEMPERATURE
 (3)CORE-OUTLET STEAM TEMPERATURE
 (4)SUBCOOLING
 (1) (2) (3) (4)
 (C) (C) (C) KCAL/KG

DEG-C
 DEG-C
 DEG-C
 KCAL/KG

JPDR-1	BWR	1	127.	272.	277.	3.06		70/ 8
JPDR-2	BWR	2	101.	271.	277.	7.8		70/ 8
TSURUGA	BWR	3	184.	277.5		11.1	R-9 (REV.0)	66/ 8
TSURUGA	BWR	3	189.		285.4	11.7	80-3-3 P20	70/ 5
ONAGAWA	BWR	4	188.8		286.	15.0	8-3-(3)	70/ 5
HAMAOKA-1	BWR	5	188.8		286.	15.8	8-10.8-114	70/ 5
FUKUSIMA-1	BWR	6	176.7	277.	285.4	12.9	R-9	66/ 8
SHIMANE	BWR	8	183.8		286.	13.3	8-3-(2)	75/ 7
FUKUSIMA-5	BWR	9			286.	13.2	8-3-(2)	71/ 2
FUKUSIMA-4	BWR	10			286.	13.2	8-3-(2)	71/ 8
FUKUSIMA-6	BWR	11	215.6		286.	11.2	8-3-(2)	72/ 1
TOOKAI-2	BWR	12	215.6		286.	11.2	8-3-(2)	72/ 1
HAMAOKA-2	BWR	13			286.	11.5	8-8	72/ 9
TOMIOKA-1	BWR	14			286.	11.4	8-3-26	76/ 8
KASHIWAZAKI	BWR	15	216.		286.	10.1	8-3-64	75/ 3
TOMIOKA-2	BWR	16			286.	11.4	8-3-78	76/12
VERMONT YANKEE	BWR	52	188.			15.1	A-2 P1	70/ 6
BROWNS FERRY	BWR	53	191.		285.7	14.1	GSK-19	69/ 2
MILLSTON	BWR	54				11.7	R-9	66/ 8
DRESDEN-1	BWR	55		262.2	285.9		DNR V4 P94	62/
DRESDEN-2	BWR	56		269.6		11.5	R-9	66/ 8
DRESDEN-2	BWR	56		277.2	286.1		DNR V7 P192	68/
OYSTER CREEK	BWR	57				11.7	R-9	66/ 8
DUANE ARNOLD	BWR	58	215.6			13.6	A-2 P1	70/ 7
BURLINGTON	PWR	71				82.1	GSK-19	69/ 2
FUGEN	ATR	81		277.	284.		105-8-3-(2)	73/11

** REACTOR PWR CORE COOLANT INLET OUTLET TEMP. 731190

(1)CORE INLET TEMPERATURE
 1N : NOMINAL TEMPERATURE
 1M : MAXIMUM TEMPERATURE
 (2)CORE OUTLET TEMPERATURE
 2A : MEAN NOMINAL TEMPERATURE
 2B : HOT CHANNEL NOMINAL TEMPERATURE

DEG.C
 DEG.C
 DEG.C
 DEG.C

		(1)-----		(2)-----			
		1N	1M	2A	2B		
MIHAMA-1	PWR	21	294.2	296.4	322.	344.8	BK80-4 P2.4 71/ 9
MIHAMA-2	PWR	22	289.0	291.2	324.	342.5	BK80-4 P2.4 71/ 9
TAKAHAMA-2	PWR	23	287.2	289.4	322.	343.	BK80-4 P2.4 71/ 9
GENKAI-1	PWR	24	288.		323.		8-16 70/ 5
TAKAHAMA-1	PWR	25	287.2	289.4	322.	343.	BK80-4 P2.4 71/ 9
OOI-1,2	PWR	26	289.		325.		8-15 71/ 1
MIHAMA-3	PWR	27	287.2	289.4	322.	343.	BK80-4 P2.4 71/ 9
IKATA-1	PWR	28	288.		323.		8-18 72/11
GENKAI-2	PWR	29	288.		323.		8-3-40 76/ 2
IKATA-2	PWR	30	288.		323.		8-3-37 75/ 5
SENDAI	PWR	31	284.		321.		8-3-44 76/ 5
P 80 STANDARD	PWR	49	283.6		321.1		77/ 5
YANKEE	PWR	69	258.		278.		DNR V4 P36 61/
SAXTON	PWR	70	271.1		282.2		DNR V4 P50 61/
BURLINGTON	PWR	71	285.		321.1		GSK-19 69/ 2
TURKEY POINT-3,4	PWR	72	285.7	287.9		338.9	BK80-4 P1.3 71/ 9
H.B.ROBINSON-2	PWR	73	285.7	287.9		338.9	BK80-4 P1.3 71/ 9
SURRY-1,-2	PWR	74	283.9	286.1		338.9	BK80-4 P1.3 71/ 9
BEAVER VALLEY	PWR	75	283.9	286.4		340.3	BK80-4 P1.3 71/ 9
NORTH ANNA-12	PWR	76	283.9	286.4		340.3	BK80-4 P2.4 71/ 9
JOSEPH M.FARLEY	PWR	77	283.9	286.4		340.3	BK80-4 P2.4 71/ 9
MUTSU	PWR	80	271.0		HOT CHANNEL OUTLET SUBCOOL=3.5 DEG C		/
MONJU	FAST	92			390.	540.	GAKKAIS143P 72/ 5

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** CORE OUTLET STEAM QUALITY AND VOID RATIO 731200

			(1)OUTLET STEAM QUALITY		WT.PC		
			(2)VOID RATIO				
			(1) WT.PC	(2) VOL.PC			
JPDR-1	BWR	1	4.7		27.	/	
JPDR-2	BWR	2	4.36(100),5.45(125)		16.1	/	
TSURUGA	BWR	3	10.0			R-9	66/ 8
TSURUGA	BWR	3	11.0		31.	80-3-3	70/ 5
ONAGAWA	BWR	4	12.9		36.5 (CORE MEAN)	8-14-(10)	70/ 5
HAMAOKA-1	BWR	5	13.0		37.	8-10	70/ 5
FUKUSIMA-1	BWR	6	10.0			R-9	66/ 8
FUKUSIMA-1	BWR	6	11.0			KUGE	71/ 1
SHIMANE	BWR	8	14.5		31.0	8-14-(20)	75/ 7
FUKUSIMA-5	BWR	9	13.3		36.8	8-3-(2)	71/ 2
FUKUSIMA-4	BWR	10	13.3		36.8	8-3-(2)	71/ 8
FUKUSIMA-6	BWR	11	13.5		38.0	8-3-(2)	72/ 1
TOOKAI-2	BWR	12	13.5		38.0	8-3-(2)	72/ 1
HAMAOKA-2	BWR	13	13.2			8-8	72/ 9
TOMIOKA-1	BWR	14	13.2			8-3-26	76/ 8
KASHIWAZAKI	BWR	15	13.5		42.0	8-3-64	75/ 3
TOMIOKA-2	BWR	16	13.2		42.0	8-3-78	76/12
VERMONT YANKEE	BWR	52	13.6			A-2 P1	70/ 7
BROWNS FERRY	BWR	53	13.6		37.3 (MEAN),75.4(CR,MAX)	GSK-19	69/ 2
MILLSTON	BWR	54	9.97			R-9	66/ 8
DRESDEN-2	BWR	56	9.9			R-9	66/ 8
OYSTER CREEK	BWR	57	9.8 (BEF.POW,UP)			R-9	66/ 8
OYSTER CREEK	BWR	57	12.1 (AFT.POW,UP)			/	/
DUANE ARNOLD	BWR	58	14.3			A-2 P1	70/ 7

** PLANT PRESSURE

731220

(1)PRESSURE DURING NORMAL OPERATION KG/CM2G
 (2)SCRAM SETTING PRESSURE (PRESSURE VESSEL) KG/CM2G
 (3)SCRAM SETTING PRESSURE (DRY-WELL INSIDE) KG/CM2G
 (1) (2) (3)

JPDR-1	BWR	1	61.5	KG/SQCMG		/
JPDR-2	BWR	2	61.5	KG/SQCMG		70/ 8
TSURUGA	BWR	3	70.3	KG/SQCMG		80-3-3 70/ 5
ONAGAWA	BWR	4	70.7	74.2 0.14		8-3-(2) 70/ 5
HAMAOKA-1	BWR	5	70.7	74.2 0.14		8-23 70/ 5
HAMAOKA-1	BWR	5	70.7	KG/SQCMG		8-23 70/ 5
FUKUSIMA-1	BWR	6	70.7	KG/SQCMG		/
FUKUSIMA-2,3	BWR	7	70.7	KG/SQCMG		/
SHIMANE	BWR	8	70.7	KG/SQCMG		/
FUKUSIMA-5	BWR	9	70.7	74.2 0.14		8-3-(2) 71/ 2
FUKUSIMA-4	BWR	10	70.7	74.2 0.14		8-3-(2) 71/ 8
FUKUSIMA-6	BWR	11	70.7	74.2 0.14		8-3-(2) 72/ 1
TOOKAI-2	BWR	12	70.7	74.2 0.14		8-3-(2) 72/ 1
HAMAOKA-2	BWR	13	70.7	74.2 0.14 STEAM DOME		8-8 72/ 9
TOMIOKA-1	BWR	14	70.7			8-3-26 76/ 8
KASHIWAZAKI	BWR	15	70.7	73.6 0.14		8-3-63 75/ 3
TOMIOKA-2	BWR	16	70.7			8-3-78 76/12
MIHAMA-1	PWR	21	158.	KG/SQCMG		/
MIHAMA-2	PWR	22	157.	KG/SQCMG		6783-5 70/10
TAKAHAMA-2	PWR	23	157.	KG/SQCMG		80-9-1 70/ 5
GENKAI-1	PWR	24	157.	KG/SQCMG		80-9-1 70/ 5
TAKAHAMA-1	PWR	25	157.	KG/SQCMG		6783-5 70/10
OOI-1,2	PWR	26	157.	KG/SQCMG		8-15 71/ 1
MIHAMA-3	PWR	27	157.	KG/SQCMG		8-15 71/ 8
IKATA-1	PWR	28	157.	KG/SQCMG		8-18 72/11
GENKAI-2	PWR	29	157.	KG/SQCMG		8-3-40 76/ 2
IKATA-2	PWR	30	157.			8-3-37 75/ 5
SENDAI	PWR	31	157.			8-3-44 76/ 5
P 80 STANDARD	PWR	49	157.			77/ 5
VERMONT YANKEE	BWR	52	70.7	KG/SQCMG		A-2 /
BROWNS FERRY	BWR	53	70.3	KG/SQCMG		GSK-19 69/ 2
MILLSTON	BWR	54	70.3	KG/SQCMG		R-9 66/ 8
DRESDEN-1	BWR	55	70.505	KG/SQCMG	CORE TOP	DNR V4 P94 62/
DRESDEN-1	BWR	55	70.365	KG/SQCMG	VESSEL OUTLET	DNR V4 P94 62/
DRESDEN-1	BWR	55	68.610	KG/SQCMG	STEAM DRUM	DNR V4 P94 62/
DRESDEN-2	BWR	56	70.36	KG/SQCMG	CORE OUTLET	DNR V7 P192 68/
DRESDEN-2	BWR	56	70.3	KG/SQCMG		R-9 66/ 8
OYSTER CREEK	BWR	57	70.3	KG/SQCMG		R-9 66/ 8
DUANE ARNOLD	BWR	58	70.7	KG/SQCMG		A-2 P1 70/ 7
YANKEE	PWR	69	139.6	KG/SQCMG	CORE INLET	DNR V4 P36 61/
YANKEE	PWR	69	137.2	KG/SQCMG	CORE OUTLET	DNR V4 P36 61/
SAXTON	PWR	70	139.6	KG/SQCMG	APPROX.	DNR V4 P50 61/
SAXTON	PWR	70	0.457	KG/SQCM	CORE PRESSURE DROP	DNR V4 P50 61/
SAXTON	PWR	70	1.05	KG/SQCM	REACTOR PRESSURE DROP	DNR V4 P50 61/
BURLINGTON	PWR	71	157.3	KG/SQCMG		GSK-19 69/ 2
TURKEY POINT-3,4	PWR	72	157.	KG/SQCMG		BK80-4 P1 71/ 9
H.B.ROBINSON-2	PWR	73	157.	KG/SQCMG		BK80-4 P1 71/ 9
SURRY-1,-2	PWR	74	157.	KG/SQCMG		BK80-4 P1 71/ 9
BEAVER VALLEY	PWR	75	157.	KG/SQCMG		BK80-4 P1 71/ 9
NORTH ANNA-12	PWR	76	157.	KG/SQCMG		BK80-4 P2 71/ 9
JOSEPH M.FARLEY	PWR	77	157.	KG/SQCMG		BK80-4 P2 71/ 9
MUTSU	PWR	80	110.	KG/SQCMG		/
FUGEN	ATR	81	68.	KG/SQCMG		105-8-3-(2) 73/11

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** REACTOR CORE	SIZE	DIA *	HEIGHT	731240		
		(1) DIAMETER	(2) HEIGHT	CM	CM	
		NOTE 1= CIRCUMSCRIBED CORE DIAMETER				
		(1)	(2)			
JPDR-1	BWR	1	127.	147.		70/ 8
JPDR-2	BWR	2	127.	147.		70/ 8
TSURUGA	BWR	3	301.8	365.8		66/ 8
ONAGAWA	BWR	4	328.	366.	R-9	70/ 5
HAMAOKA-1	BWR	5	328.	366.	8-3-(2)	70/ 5
					8-10	70/ 5
HAMAOKA-1	BWR	5	330.	366.	85-4-2	70/11
FUKUSIMA-1	BWR	6	344.	366.		/
FUKUSIMA-2,3	BWR	7	403.	366.	82-2-3	70/ 8
SHIMANE	BWR	8	344.	366.		/
FUKUSIMA-5	BWR	9	403.	366.	8-3-(2)	71/ 2
FUKUSIMA-4	BWR	10	403.	366.	8-3-(2)	71/ 8
FUKUSIMA-6	BWR	11	475.	371.0	8-1-(3)	74/ 9
TOOKAI-2	BWR	12	475.	366.	8-3-(2)	72/ 1
HAMAOKA-2	BWR	13	407.	366.	8-8	72/ 9
TOMIOKA-1	BWR	14	475.	371.	8-14-18	76/ 8
KASHIWAZAKI	BWR	15	475.	371.	8-3-50	75/ 5
TOMIOKA-2	BWR	16	475.	371.	8-3-58	76/12
MIHAMA-1	PWR	21	247.	305.		/
MIHAMA-2	PWR	22	247.	365.8	BK80-4 P6	71/ 9
TAKAHAMA-2	PWR	23	304.	366.	8-121	70/ 5
GENKAI-1	PWR	24	246.	366.		70/ 5
TAKAHAMA-1	PWR	25	303.5	365.8	BK80-4 P6	71/ 9
OOI-1,2	PWR	26	337.	366.	8-15	71/ 1
MIHAMA-3	PWR	27	304.	366.	8-15	71/ 8
IKATA-1	PWR	28	246.	366.	8-18	72/11
GENKAI-2	PWR	29	246.	366.	8-3-40	76/ 2
IKATA-2	PWR	30	246.	366.	8-3-37	75/ 5
SENDAI	PWR	31	304.	366.	8-3-44	76/ 5
P 80 STANDARD	PWR	49	304.	366.		77/ 5
VERMONT YANKEE	BWR	52	330.	366.	A-2	70/ 5
BROWNS FERRY	BWR	53	475.	365.8	GSK-19	69/ 2
MILLSTON	BWR	54	449.8	365.8	R-9	66/ 8
DRESDEN-1	BWR	55	327.4 (NOTE 1)	269.2	DNR V4 P91	62/
DRESDEN-2	BWR	56	462.8	365.8	R-9	66/ 8
DRESDEN-2	BWR	56	481.8 (NOTE 1)	365.8	DNR V7 P192	68/
OYSTER CREEK	BWR	57	396.2	365.8	R-9	66/ 8
DUANE ARNOLD	BWR	58	330.	366.	A-2 P1	70/ 7
YANKEE	PWR	69	190.5	233.7	DNR V4 P33	61/
SAXTON	PWR	70	71.7	91.4	DNR V4 P47	61/
BURLINGTON	PWR	71	339.5	365.8	GSK-19	69/ 2
TURKEY POINT-3,4	PWR	72	303.5	365.8	BK80-4 P5	71/ 9
H.B.ROBINSON-2	PWR	73	303.5	365.8	BK80-4 P5	71/ 9
SURRY-1,-2	PWR	74	303.5	365.8	BK80-4 P5	71/ 9
BEAVER VALLEY	PWR	75	303.5	365.8	BK80-4 P5	71/ 9
NORTH ANNA-12	PWR	76	303.5	365.8	BK80-4 P6	71/ 9
JOSEPH M.FARLEY	PWR	77	303.5	365.8	BK80-4 P6	71/ 9
FUGEN	ATR	81	405.	370.	105-8-3-(3)	73/11
MONJU	FAST	92		90.	GAKKAISI43P	72/ 5

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** FUEL LOADING WEIGHT TON-UO2 TON-U TON-U235 731260

		(1)UO2	TON		TON		TON				
		(2)U	TON		TON		TON				
		(3)U235	A=1ST-CORE		B=HEIKO		(4)				
		(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
		UO2	U	U235	U235	A	B	A	B	PU	PU
JPDR-1	BWR	1	4.8	.	.	.	.	.	.	.	.
JPDR-2	BWR	2	4.8	.	0.111	.	.	.	.	.	.
TSURUGA	BWR	3	69.	.	.	.	.	.	.	.	.
ONAGAWA	BWR	4	81.3	71.7	1.6	2.0	.	.	.	.	.
HAMAOKA-1	BWR	5	81.3	.	.	.	.	.	.	.	.
FUKUSIMA-1	BWR	6	89.4	.	.	.	.	.	.	.	.
SHIMANE	BWR	8	.	78.2	1.6	.	.	.	.	.	.
SHIMANE	BWR	8	.	73.4	.	1.9	.	.	.	.	.
FUKUSIMA-5	BWR	9	.	106.8	.	.	.	.	.	.	.
FUKUSIMA-4	BWR	10	.	106.8	.	.	.	.	.	.	.
FUKUSIMA-6	BWR	11	.	142.	.	.	.	.	.	.	.
TOOKAI-2	BWR	12	.	148.3	.	.	.	.	.	.	.
HAMAOKA-2	BWR	13	.	105.0	.	.	.	.	.	.	.
TOMIOKA-1	BWR	14	.	142.	.	.	.	.	.	.	.
KASHIWAZAKI	BWR	15	.	142.	3.2	3.8	.	.	.	.	.
MIHAMA-1	PWR	21	45.3	40.	.	.	.	.	.	.	.
MIHAMA-2	PWR	22	54.12	.	.	.	.	.	.	.	.
TAKAHAMA-2	PWR	23	.	71.	.	.	.	.	.	.	.
TAKAHAMA-2	PWR	23	.	72.	.	.	.	.	.	.	.
GENKAI-1	PWR	24	55.0	48.	.	.	.	.	.	.	.
OOI-1,2	PWR	26	.	87.	.	.	.	.	.	.	.
MIHAMA-3	PWR	27	.	70.	.	.	.	.	.	.	.
IKATA-1	PWR	28	55.0	48.	.	.	.	.	.	.	.
GENKAI-2	PWR	29	55.0	48.	.	.	.	.	.	.	.
IKATA-2	PWR	30	55.0	48.	.	.	.	.	.	.	.
SENDAI	PWR	31	.	72.	.	.	.	.	.	.	.
VERMONT YANKEE	BWR	52	81.3	.	.	.	.	.	.	.	.
BROWNS FERRY	BWR	53	(170.2)	149.8	.	.	.	.	.	.	.
MILLSTON	BWR	54	129.7	.	.	.	.	.	.	.	.
DRESDEN-1	BWR	55	57.56	.	.	.	.	.	.	.	.
DRESDEN-2	BWR	56	161.9	.	.	.	.	.	.	.	.
DRESDEN-2	BWR	56	139.5	.	.	.	.	.	.	.	.
DUANE ARNOLD	BWR	58	81.3	.	.	.	.	.	.	.	.
YANKEE	PWR	69	.	20.88	.	.	.	.	.	.	.
SAXTON	PWR	70	1.0	.	.	.	.	.	.	.	.
BURLINGTON	PWR	71	(100.7)	88.6	.	.	.	.	.	.	.
FUGEN	ATR	81	.	.	0.4	0.3	0.1	0.3	.	.	.
KON-6 P2											70/ 8
R-9											66/ 8
8-3-(3)											70/ 5
8-10											70/ 5
R-9											66/ 8
8-3-(2)											75/ 7
8-3-(2)											75/ 7
8-3-(2)											71/ 2
8-3-(2)											71/ 8
8-1-(3)											74/ 9
8-3-(2)											72/ 1
8-8											72/ 9
8-3-26											76/ 8
											75/ 3
8-14											66/11
											76/10
80-9-1											70/ 5
-24-											76/11
80-9-1											70/ 5
8-15											71/ 1
8-15											71/ 8
8-18											72/11
8-3-40											76/ 2
8-3-37											75/ 5
8-3-44											76/ 5
A-2 P1											70/ 7
GSK-19											69/ 2
R-9											66/ 8
DNR V4 P91											62/
R-9											66/ 8
DNR V7 P192											68/
A-2 P1											70/ 7
DNR V4 P33											61/
DNR V4 P47											61/
GSK-19											69/ 2
105-8-3-(3)											73/11

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** CORE	FUEL	ASSY	NUMBER	732200		
JPDR-1	BWR	1	72			/
JPDR-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 ORIFICE IN LOWER TIEPLATE		95-2-3 P12	71/ 9
FUKUSIMA-1	BWR	6	400		R-9	66/ 8
FUKUSIMA-2,3	BWR	7	548 124+424		82-2-3	70//8
FUKUSIMA-2,3	BWR	7	548 124+424*		82-2-3	70//8
FUKUSIMA-2,3	BWR	7	548 116+432		85-7-2	70/12
FUKUSIMA-2,3	BWR	7	548 117(TYPE 1)+431(TYPE 2 WITH BURNABLE P)	REV-2	F2N1 P5	71/ 2
FUKUSIMA-2,3	BWR	7	TYPE 1 = 117TAI+(1 YOB1)	REV-2	F2N1 P1	71/ 2
FUKUSIMA-2,3	BWR	7	DUMMY FUEL ASSY----NO.=12HON		F2N1 P5	71/ 2
SHIMANE	BWR	8	400			/
FUKUSIMA-5	BWR	9	548 117(TYPE 1)+431(TYPE 2 WITH BURNABLE P(GD2-O3))		8-3-(3)	71/ 2
FUKUSIMA-4	BWR	10	548 117(TYPE 1)+431(TYPE 2)		8-3-(3)	71/ 8
FUKUSIMA-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
TOMIOKA-1	BWR	14	764(8*8)		2-1	76/ 8
KASHIWAZAKI	BWR	15	764(8*8)		8-3-1	75/ 3
TOMIOKA-2	BWR	16	764(8*8)		8-3-58	76/12
MIHAMA-1	PWR	21	121(+2) (+2)=MAPI SPARE			/
MIHAMA-2	PWR	22	121		BK80-2 P4	71/ 8
TAKAHAMA-2	PWR	23	157		80-9-1	70/ 6
GENKAI-1	PWR	24	121		80-9-1,8-16,	70/ 6
TAKAHAMA-1	PWR	25	157		BK80-2 P4	71/ 8
OOI-1,2	PWR	26	193		8-16	71/ 1
OOI-1,2	PWR	26	193		8-3,2-13	75/ 5
MIHAMA-3	PWR	27	157		8-16	71/ 8
IKATA-1	PWR	28	121		8-19	72/11
GENKAI-2	PWR	29	121		8-3-42	76/ 2
IKATA-2	PWR	30	121			75/ 5
SENDAI	PWR	31	157		8-3-46	76/ 5
P 80 STANDARD	PWR	49	157			77/ 5
VERMONT YANKEE	BWR	52	368		A-2	70/ 5
BROWNS FERRY	BWR	53	764(7*7)		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	PWR	69	76 38(TYPE A)+ 38(TYPE B)		DNR V4 P33	61/
SAXTON	PWR	70	32 POSSIBLE POSITION(6*6 ARRAY WITH CORNERS MISSING)		DNR V4 P47	61/
SAXTON	PWR	70	21 OCCUPIED BY STANDARD FUEL ELEMENTS		DNR V4 P47	61/
SAXTON	PWR	70	10 BY DUMMY ASSYS. AND ONE BY A SUPERHEATER TUBE		DNR V4 P47	61/
SAXTON	PWR	70	9 L-SHAPED FUEL ELEMENTS OCCUPY INTERSTITIAL POSITION		GSK-19	69/ 2
BURLINGTON	PWR	71	193		BK80-4 P5	71/ 9
TURKEY POINT-3,4	PWR	72	157			
H.B.ROBINSON-2	PWR	73	157		BK80-4 P5	71/ 9
SURRY-1,-2	PWR	74	157		BK80-4 P5	71/ 9
BEAVER VALLEY	PWR	75	157		BK80-4 P5	71/ 9
NORTH ANNA-12	PWR	76	157		BK80-4 P6	71/ 9
JOSEPH M.FARLEY	PWR	77	157		BK80-4 P6	71/ 9
FUGEN	ATR	81	224		105-8-3-(2)	73/11
MONJU	FAST	92	102(CORE INNER REGION), 90(CORE OUTER REGION)		GAKKAISI43P	72/ 5
OTHERS		0	72(10*10) BWR LA CROSSE SUS CLADDING (348H)		AC	/
OTHERS		0	484 BWR-3 MONTICELLO		GE	/
OTHERS		0	764(7*7) BWR-4 BROWNS FERRY-1		GE	/
OTHERS		0	217 PWR CALVERT CLIFFS-1		CE	/
OTHERS		0	121(14*14) PWR POINT BEACH-1		WH	/
OTHERS		0	121(15*15) PWR BORSSELE		SIEMENS	/

** FUEL SPACER NUMBER PER ASSY MATERIAL TYPE 732220

(1)NUMBER OF SPACER
 (2)TYPE TP1=PLATE TYPE
 TP2=ONE BODY
 TP3=GRID + SPRING
 (3)MATERIAL OF GRID
 (4)MATERIAL OF SPRING
 Z2 =ZRY-2
 Z4 =ZRY-4
 I =INCONEL
 I750=INCONEL 750
 IX750=INCONEL-X 750
 I718=INCONEL 718
 NI,CR,FE ALLOY

(1) (2) (3) (4)
 NO. TYPE -MATERIAL-

JPDR-1	BWR	1	1	TP1	Z2		70/ 8
JPDR-2	BWR	2	2	TP2	I750		70/ 8
TSURUGA	BWR	3	7				/
ONAGAWA	BWR	4	7		Z4	I750	8-3-(4) 70/ 5
HAMAOKA-1	BWR	5	7		Z4		8-12 70/ 5
FUKUSIMA-1	BWR	6	7	TP3	Z4	I750	BWR/6 74/11
FUKUSIMA-2,3	BWR	7	7	TP3	Z4		F2N1 P9 71/ 2
SHIMANE	BWR	8	7	TP3			8-3-(5) 75/ 7
FUKUSIMA-5	BWR	9	7	TP3	Z4		8-3-(4) 71/ 2
FUKUSIMA-4	BWR	10	7	TP3	Z4		8-3-(4) 71/ 8
FUKUSIMA-6	BWR	11	7	TP3	Z4		8-3-(4) 72/ 1
TOOKAI-2	BWR	12	7	TP3	Z4		8-3-(4) 72/ 1
HAMAOKA-2	BWR	13	7	TP3	Z4		8-10 72/ 9
TOMIOKA-1	BWR	14	7	TP3	Z4	IX750	8-3-7 76/ 8
KASHIWAZAKI	BWR	15	7	TP3	Z4	I750	8-3-6 75/ 3
TOMIOKA-2	BWR	16	7	TP3	Z4	IX750	8-3-7 76/12
MIHAMA-1	PWR	21	6	TP2	I718		8-16 66/11
MIHAMA-2	PWR	22	7	TP2			BK80-4 P4 71/ 9
TAKAHAMA-2	PWR	23	7	TP2	I		8-17 70/ 5
TAKAHAMA-2	PWR	23	7	TP2	NI,CR,FE,ALLOY		-26- 76/11
GENKAI-1	PWR	24	7	TP2	I		8-18 70/ 5
TAKAHAMA-1	PWR	25	7	TP2	I		BK80-4 P4 71/ 9
OOI-1,2	PWR	26	7	TP2	I		8-17 71/ 1
OOI-1,2	PWR	26	8	TP2	I718		8-3,2-14 75/ 5
MIHAMA-3	PWR	27	7	TP2	I		8-17 71/ 8
IKATA-1	PWR	28	7	TP2	I		8-20 72/11
GENKAI-2	PWR	29	7	TP2	NI,CR,FE ALLOY		8-3-42 76/ 2
IKATA-2	PWR	30	7	TP2			8-3-39 75/ 5
SENDAI	PWR	31	9	TP2	NI,CR,FE ALLOY		8-3-46 76/ 5
P 80 STANDARD	PWR	49	9	TP2			77/ 5
VERMONT YANKEE	BWR	52	7				A-2 70/ 5
BROWNS FERRY	BWR	53	7		Z4		GSK-19 69/ 2
BURLINGTON	PWR	71	9		I718		GSK-19 69/ 2
TURKEY POINT-3,4	PWR	72	7				BK80-4 P3 71/ 9
H.B.ROBINSON-2	PWR	73	7				BK80-4 P3 71/ 9
SURRY-1,-2	PWR	74	7				BK80-4 P3 71/ 9
BEAVER VALLEY	PWR	75	7				BK80-4 P3 71/ 9
NORTH ANNA-12	PWR	76	7				BK80-4 P4 71/ 9
JOSEPH M.FARLEY	PWR	77	7				BK80-4 P4 71/ 9
FUGEN	ATR	81	12		I		105-8-3-(6) 73/11

** FUEL	CHANNEL	BOX	MATERIAL	SIZE	THICK	732240		
			(1)MATERIAL OF CHANNEL BOX			Z4=ZRY-4 Z2=ZRY-2		
			(2)CROSS SECTION(INNER/OUTER)			MM		
			(3)THICKNESS			MM		
			(4)LENGTH			MM		
			(5)CORNER RADIUS			MM		
			(1) -----(2)-----	(3)	(4)	(5)		
			MAT. INNER / OUTER	T	L	R		
JPDR-1	BWR	1	Z4	119*119/	1.5	1750	9.5	70/ 8
JPDR-2	BWR	2	Z4	119*119/	1.5	1750	9.5	70/ 8
TSURUGA	BWR	3	Z4		2.0			/
ONAGAWA	BWR	4	Z4		2.0			8-3-(4) 70/ 5
HAMAOKA-1	BWR	5	Z4					8-12 70/ 5
FUKUSIMA-1	BWR	6	Z4	134*134/	2.0			BWR/6 74/11
FUKUSIMA-1	BWR	6	Z4		2.03			/
FUKUSIMA-2,3	BWR	7	Z4	134*134/	2.03			F2N1 P9 71/ 2
SHIMANE	BWR	8	Z4					/
FUKUSIMA-5	BWR	9	Z4					8-3-(4) 71/ 2
FUKUSIMA-4	BWR	10	Z4	/138*138				8-3-(4) 71/ 8
FUKUSIMA-6	BWR	11	Z4	134.06 /	2.54	4240	9.65	76/10
TOOKAI-2	BWR	12	Z4	134.06 /	2.54	4240	9.65	76/10
HAMAOKA-2	BWR	13	Z4	134.06 /	2.03	4240	9.65	76/10
TOMIOKA-1	BWR	14	Z4	/				/
KASHIWAZAKI	BWR	15	Z4	/140.16	3.048			75/ 3
TOMIOKA-2	BWR	16	Z4	/				76/12
VERMONT YANKEE	BWR	52	Z4	/	2.0			A-2 70/ 5
BROWNS FERRY	BWR	53	Z4	138.125/				GSK-19 69/ 2
DRESDEN-1	BWR	55	Z2	109. /				DNR V4 P91 62/
DRESDEN-2	BWR	56	Z4	138.125/				DNR V7 P192 68/
DUANE ARNOLD	BWR	58	Z4	/	2.0			A-2 P2 70/ 7
MONJU	FAST	92		104.6 /		(HEXAGONAL WRAPPER TUBE)		GAKKAISI 72/ 5

** FUEL	ASSY	SIZE	PWR	732250			
			(1)FUEL ASSEMBLY SIZE		CROSS SECTION	MM SQUARE	
			(2)TOTAL HEIGHT			MM	
			(1) (2)				
			MM MM				
MIHAMA-1	PWR	21	197.18			BK80-4 P4	71/ 9
MIHAMA-2	PWR	22	197.18			BK80-4 P4	71/ 9
TAKAHAMA-2	PWR	23	214. 4170.			8-17	70/ 5
GENKAI-1	PWR	24	200. 4170.			8-16	70/ 5
TAKAHAMA-1	PWR	25	214.02 4170.			-6-	75/11
OOI-1,2	PWR	26	214. 4070			8-17	71/ 1
OOI-1,2	PWR	26	4100.(EXCL. NOZZLE SPRING)			8-3,2-13	75/ 5
MIHAMA-3	PWR	27	214. 4170.			8-17	71/ 8
IKATA-1	PWR	28	200. 4170.			8-20	72/11
GENKAI-2	PWR	29	200.			8-3-42	76/ 2
IKATA-2	PWR	30	200. 4060.			8-3-39	75/ 5
SENDAI	PWR	31	214. 4100.			8-3-46	76/ 5
YANKEE	PWR	69	(191.668 + 2.896(TUBE TO TUBE))		ASSEMBLY PITCH	DNR V4 P34	61/
SAXTON	PWR	70	(137.668)		ASSEMBLY PITCH	DNR V4 P48	61/
BURLINGTON	PWR	71	214.02			GSK-19	69/ 2
TURKEY POINT-3,4	PWR	72	214.02			BK80-4 P3	71/ 9
H.B.ROBINSON-2	PWR	73	214.02			BK80-4 P3	71/ 9
SURRY-1,-2	PWR	74	214.02			BK80-4 P3	71/ 9
BEAVER VALLEY	PWR	75	214.02			BK80-4 P3	71/ 9
NORTH ANNA-12	PWR	76	214.02			BK80-4 P4	71/ 9
JOSEPH M.FARLEY	PWR	77	214.02			BK80-4 P4	71/ 9

** UO-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
OOI-1,2	PWR	26	520. KGUO2/ASSY(DISH)				76/10
MIHAMA-3	PWR	27	521. KGUO2/ASSY(DISH)				76/10
VERMONT YANKEE	BWR	52	222.4 KGUO2/ASSY(FLAT).	219.3 KGUO2/ASSY(DISH)		A-2	70/ 5
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
BURLINGTON	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			ABOUT	70/ 8
ONAGAWA	BWR	4	309.1	KG(FLAT)	100.0 KG(DISH)	70/ 5
FUKUSIMA-1	BWR	6	184.	KG	306.0 KG(DISH)	74/11
MIHAMA-1	PWR	21	(483.5 KG) * 121 =	58.51 TON	BK80-4 P4	71/ 9
MIHAMA-2	PWR	22	(573.2 KG) * 121 =	69.352 TON	BK80-4 P4	71/ 9
TAKAHAMA-2	PWR	23	(646.4 KG) * 157 =	101.48 TON	BK80-4 P4	71/ 9
TAKAHAMA-1	PWR	25	(646.4 KG) * 157 =	101.48 TON	BK80-4 P4	71/ 9
OOI-1,2	PWR	26	(670. KG) * 193 =	129.31 TON	BK80-4 P4	76/10
MIHAMA-3	PWR	27	(646.4 KG) * 157 =	101.48 TON	BK80-4 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	BK80-4 P3	71/ 9
H.B.ROBINSON-2	PWR	73	(653.5 KG) * 157 =	102.6 TON	BK80-4 P3	71/ 9
SURRY-1,-2	PWR	74	(653.5 KG) * 157 =	102.6 TON	BK80-4 P3	71/ 9
BEAVER VALLEY	PWR	75	(646.4 KG) * 157 =	101.48 TON	BK80-4 P3	71/ 9
NORTH ANNA-12	PWR	76	(646.4 KG) * 157 =	101.48 TON	BK80-4 P4	71/ 9
JOSEPH M.FARLEY	PWR	77	(646.4 KG) * 157 =	101.48 TON	BK80-4 P4	71/ 9

** FUEL ASSY PARTS WEIGHT 7*7 BWR 732290

A=UO-2 IN STANDARD ROD
 B=UO-2 IN CAPTURE ROD
 C=ZRY CLADDING FOR STANDARD ROD
 D=ZRY CLADDING FOR CAPTURE ROD
 E=END PLUG UPPER FOR CAPTURE ROD
 F=END PLUG LOWER FOR CAPTURE ROD
 G=END PLUG UPPER FOR TIE ROD
 H=CONNECTOR FOR CAPTURE ROD
 J=GETTER
 K=SPRING INNER

L=CONNECTOR SPRING
 M=COIL WAFER
 N=SPRING OUTER
 P=FINGER SPRING
 Q=LOCKING TAB WASHER
 R=NUT
 S=TIE PLATE UPPER
 T=TIE PLATE LOWER
 U=SPACER
 V=CHANNEL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	UNIT	NO.	UO2	ZRY	SUS	SUS	SUB
	WEIGHT	PER	KG	KG	CAST	WIRE	TOTAL
MATERIAL	GRAM	ASSY.	KG	KG	KG	KG	KG
A UO-2	4352	48	208.896				208.896
B UO-2	3935	1	3.935				3.935
C ZRY2	1055	48		50.640			50.640
D ZRY2	126.9	8		1.015			1.015
E ZRY2	12.7	49		0.62			0.62
F ZRY2	17	48		0.816			0.816
G ZRY2	17	1		0.017			0.017
H ZRY2	20.1	7		0.141			0.141
J ZRY2+SUS	7.	49					0.343
K SUS WIRE	33.5	49				1.642	1.642
L SUS WIRE	1.45	7				0.010	0.010
M SUS WIRE	1.91	56				0.107	0.107
N INC.WIRE	5.	49					0.245
P INC.PLATE	12.	4					0.048
Q SUS PLATE	4.	4			0.016		0.016
R SUS	6.4	8			0.051		0.051
S SUS	1915.	1			1.915		1.915
T SUS	4360.	1			4.360		4.360
U ZRY +INC.	290.	7		1.680			2.030
V ZRY4	29940.	1					29.940
TOTAL			212.831	54.929	6.342	1.759	306.787KG

** FUEL ASSY PARTS WEIGHT 14*14 PWR 732294

A=UO-2 PELLET
 B=END PLUG UPPER
 C=END PLUG LOWER
 D=CLADDING
 E=SPRING
 F=GRID

G=NOZZLE UPPER
 H=NOZZLE LOWER
 J=THIMBLE
 K=TUBE FOR INSTRUMENTS
 L=SLEEVE
 M=OTHERS

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
	UNIT	NO.	UO2	ZRY	SUS	SUS	SUB
	WEIGHT	PER	KG	KG	CAST	WIRE	TOTAL
MATERIAL	GRAM	ASSY.	KG	KG	KG	KG	KG
A UO-2	6.85	64959	444.970				444.970
B ZRY4	8.59	179		1.538			1.538
C ZRY4	7.70	179		1.378			1.378
D ZRY4	493.8	179		88.386			88.386
E SUS302	23.21	179				4.154	4.154
F INC.718	580.4	7					4.063
G SUS 304L	5798.	1			5.798		5.798
H SUS 304L	4931.	1			4.931		4.931
J ZRY4	469.	16		7.504			7.504
K ZRY4	504.	1		0.504			0.504
L SUS 304L	3.3	224			0.747		0.747
M SUS 304L					0.332		0.332
TOTAL			444.970	99.31	11.808	4.154	564.305KG

** FUEL ASSY PARTS WEIGHT 28RODS/A ATR 732299

A=UO-2 PELLET
 B=THERMAL INSULATOR (UO-2)
 C=THERMAL INSULATOR (AL2-O3)
 D=CLADDING
 E=SPRING UPPER
 F=SPRING LOWER
 G=HOLD DOWN PLATE
 H=END PLUG UPPER1
 J=END PLUG UPPER2
 K=END PLUG LOWER1
 *INCL. RING
 L=END PLUG LOWER2
 M=ROD SPRING
 N=SPRING COVER
 P=LOCKING NUT
 Q=SPACER
 R=TIE ROD
 S=TIE PLATE UPPER
 T=TIE PLATE LOWER
 U=CENTERING SPRING

	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
		UNIT	NO.	UO2	ZRY	SUS	SUS	SUB
		WEIGHT	PER			CAST	WIRE	TOTAL
	MATERIAL	GRAM	ASSY.	KG	KG	KG	KG	KG
A	UO-2	30.	5756	172.665				172.665
B	UO-2	10.3	28	0.288				0.288
C	AL2-O3	6.	56					0.366
D	ZRY2	1108.	28		31.024			31.024
E	SUS 304	84.	28				2.352	2.352
F	INCONEL	16.	28					0.448
G	SUS 304	0.8	56			0.045		0.045
H	ZRY2	42.	8		0.336			0.336
J	ZRY2	35.	8		0.280			0.280
K	ZRY2	39.	20		0.780			0.780
L	ZRY2	33.	20		0.660			0.660
M	INCONEL	6.	28					0.168
N	SUS 304	4.	28			0.112		0.112
P	SUS 304	5.	16			0.080		0.080
Q	INC.718	140.	12					1.680
R	ZRY2	990.	4		3.960			3.960
S	SUS 304	2300.	1*			2.300		2.300
T	SUS 304	3300.	1			3.300		3.300
U	INCONEL-X	18.	2					0.036
	TOTAL			172.953	37.04	5.837	2.352	220.880KG

** THERMAL CONDUCTIVITY OF UO-2 732300

(1) THERMAL CONDUCTIVITY EQUATION OF UO-2
 $EQ1 = (38.24 / (T(K) + 129.4)) + 6.13E-13 * (T(K))^{**3}$ W/CM/C
 $EQ2 = (1. / (11.8 + 0.0238 * T(C))) + 8.775E-13 * (T(C))^{**3}$ W/CM/C

JPDR-1	BWR	1	$K(W/CM.C) = (30.0 / (T(K) + 10.0)) * (R/RO) + 2.55E-12 * (T^{**3})$	BATES	/
JPDR-1	BWR	1	WHERE (R/RO) = PERCENT OF T.D		/
JPDR-2	BWR	2	$K(W/CM.C) = (38.2 / (T(K) + 129.0)) + 4.79E-13 * (T^{**3})$	LYONS	/
TSURUGA	BWR	3	EQ1	8-3-(6)	75/ 1
ONAGAWA	BWR	4	EQ1	8-3-(5)	70/ 5
HAMAOKA-1	BWR	5	EQ1		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
SHIMANE	BWR	8	EQ1		/
FUKUSIMA-5	BWR	9	EQ1	3-6-6	77/ 2
FUKUSIMA-4	BWR	10	EQ1	3-6-6	77/ 2
FUKUSIMA-6	BWR	11	EQ1	8-3-(5)	72/ 1
TOOKAI-2	BWR	12	EQ1	8-3-(5)	72/ 1
HAMAOKA-2	BWR	13	EQ1	8-11	72/ 9
TOMIOKA-1	BWR	14	EQ1	8-3-10	76/ 8
KASHIWAZAKI	BWR	15	EQ1	8-3-9	75/ 3
TOMIOKA-2	BWR	16	EQ1	8-3-11	76/12
MIHAMA-1	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		/
GENKAI-1	PWR	24	SEE MIHAMA-1		/
OOI-1,2	PWR	26	SEE MIHAMA-1		71/ 2
OOI-1,2	PWR	26	EQ2	8-14-56	75/ 5
IKATA-1	PWR	28	$4 * (PI) * INTEG. KDT(753C TO 2800C) = 717 W/CM$	8-21	72/11
IKATA-1	PWR	28	$4 * (PI) * INTEG. KDT(TO 2800C) = 691 W/CM (1120P)$	8-21	72/11
P 80 STANDARD	PWR	49	EQ2		77/ 5

** THERMAL CONDUCTIVITY OF ZRY 732320

JPDR-1	BWR	1	$K(KCAL/M.HR.C) = 11$		/
JPDR-2	BWR	2	$K(KCAL/M.HR.C) = 11$		/
ONAGAWA	BWR	4	$K(KCAL/M.HR.C) = 13.6$	68BUKAI A-5	70/ 7
FUKUSIMA-2,3	BWR	7	$K(KCAL/M.HR.C) = FROM 13.0 TO 14.4$	F2N1 P10	71/ 2
GENKAI-1	PWR	24	$K(KCAL/M.HR.C) = 12.009 + 0.00846T(C)$	6783-5	70/10
OOI-1,2	PWR	26	$(BTU/FT.HR.F) = 7.97 + 0.00316T(F)$	SAME AS GENKAI	71/ 2
OOI-1,2	PWR	26	$K(BTU/FT.HR.F) = 7.97 + 0.00316T(F)$	SAME AS GENKAI	71/ 2
FUGEN	ATR	81	$K(KCAL/M.HR.C) = 1.72 (CRUD)$	105-5 P9	73/12
FUGEN	ATR	81	$K(KCAL/M.HR.C) = 1.204 (OXIDE)$	105-5 P9	73/12
FUGEN	ATR	81	$K(W/CM.) = 0.016(7.23 + 2.41E-3 * T(C) + 1.3E-6(T(C))^{**2})$	105-5 P9	73/12

** FISSION PRODUCT GENERATE RATIO GAS FP PRESSURE 732340

			FP GAS GENERATE RATIO GRAM MOLES / MWD	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(GT 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(GT 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
SHIMANE	BWR	8	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	120.	8-3-(9) 7*7	75/ 7
SHIMANE	BWR	8	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	70.	8-3-(9) 8*8	75/ 7
SHIMANE	BWR	8		100. P.C AT(GT 1650.DEG C)	(AT EOL)	8-3-(9)	75/ 7
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(GT 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(GT 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(GT 1650.DEG C)	(AT EOL)	8-3-(5)	72/ 1
TOOKAI-2	BWR	12	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	118.	8-3-(5)	72/ 1
TOOKAI-2	BWR	12		100. P.C AT(GT 1650.DEG C)	(AT EOL)	8-3-(5)	72/ 1
HAMAOKA-2	BWR	13	1.35 E-3	SAME AS HAMAOKA-1	120.	8-11	72/ 9
TOMIOKA-1	BWR	14	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	56.	8-3-12	76/ 8
TOMIOKA-1	BWR	14		100. P.C AT(GT 1650.DEG C)	(AT EOL)	8-3-12	76/ 8
KASHIWAZAKI	BWR	15	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	56.	8-3-11	75/ 3
KASHIWAZAKI	BWR	15		100. P.C AT(GT 1650.DEG C)	(AT EOL)	8-3-12	75/ 3
TOMIOKA-2	BWR	16	1.35 E-3	LE 4. P.C AT(LE 1650.DEG C)	56.	8-3-13	76/12
TOMIOKA-2	BWR	16		100. P.C AT(GT 1650.DEG C)	(AT EOL)	8-3-13	76/12

** THERMAL EXPANSION OF UO-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
FUGEN	ATR	81	ALPHA(UO2)=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	71/ 2
FUGEN	ATR	81	ALPHA(CLAD)=5.675E-6*(1+1.7E-3*T(C)) (WAPD-ZH-9)	105-5 P9	73/12

** UO-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 UO-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 + GD2-O3
 *3=URANIA + GADOLINIA
 *4=1.5P.C.UO2 + NATURAL U + + NOM.0.8P.C.PUO2
 (BOTH SIDES DISHED PELLET)

			(1) MM.	(2) NOM. MIN. MAX.			(3)	(4) P.C.T.D		
JPDR-1	BWR	1	12.5				UO-2	95		/
JPDR-2	BWR	2	10.66				UO-2	95		70/ 8
TSURUGA	BWR	3	12.4	22.4	18.6	24.8	UO-2	92-97	80-3-3	70/ 5
ONAGAWA	BWR	4	12.4		18.6	24.8	UO-2	94	8-3-(5)	70/ 5
HAMAOKA-1	BWR	5	12.4				UO-2	94	8-13	70/ 5
HAMAOKA-1	BWR	5	12.4		18.6	24.8	UO-2	94 *2	95-2-3 P7	71/ 9
FUKUSIMA-1	BWR	6	12.4		18.6	24.8	UO-2		R-9	66/ 8
FUKUSIMA-1	BWR	6	10.6	11.0(About)			UO-2 *1	95	BWR/6	74/11
FUKUSIMA-2,3	BWR	7	12.4				UO-2	93	82-2-3 P8	70/ 8
FUKUSIMA-2,3	BWR	7	12.4		18.6	24.8	UO-2	93 *2	89-7-2 P5	/
FUKUSIMA-2,3	BWR	7	12.37				UO-2	91-97	F2N1 P8	71/ 2
FUKUSIMA-2,3	BWR	7	(+0.03)							/
SHIMANE	BWR	8	12.4	2.2 (7*7 INITIAL)			UO-2	94	8-3-(5)	75/ 7
SHIMANE	BWR	8	12.1	1.3 (7*7 TORIKAE)			UO-2	95 *2	8-3-(5)	75/ 7
SHIMANE	BWR	8	10.6	1.1 (8*8)			UO-2	95 *2	8-3-(5)	75/ 7
FUKUSIMA-5	BWR	9	12.4		18.6	24.8	UO-2	93 *3	8-3-(5)	71/ 2
FUKUSIMA-5	BWR	9	12.1	13. (7*7 INITIAL)			UO-2 *2	95	3-6-4	77/ 2
FUKUSIMA-5	BWR	9	10.6	11. (8*8 RELOAD)			UO-2 *2	95	3-6-4	77/ 2
FUKUSIMA-4	BWR	10	12.4		18.6	24.8	UO-2	93 *3	8-3-(5)	71/ 8
FUKUSIMA-4	BWR	10	12.1	13. (7*7 INITIAL)			UO-2 *2	95	3-6-4	77/ 2
FUKUSIMA-4	BWR	10	10.6	11. (8*8 RELOAD)			UO-2 *2	95	8-6-4	77/ 2
FUKUSIMA-6	BWR	11	10.6		10.	15.	UO-2	95	8-1-(6)	74/ 9
TOOKAI-2	BWR	12	12.4		18.6	24.8	UO-2	93 *2	8-3-(5)	72/ 1
HAMAOKA-2	BWR	13	12.1	13.0			UO-2	94	8-11	72/ 9
TOMIOKA-1	BWR	14	10.6		10.	15.	UO-2 *2	95	8-3-27	76/ 8
KASHIWAZAKI	BWR	15	10.6		10.	15.	UO-2 *2	95	8-3-77	75/ 3
TOMIOKA-2	BWR	16	10.6		10.	15.	UO-2 *2	95	8-3-93	76/12
TOMIOKA-2	BWR	16	10.57						129 BUKAI	77/ 6
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	10.8/2,3-REGION			UO-2 *1	91 /3RD		/
MIHAMA-1	PWR	21	9.319	15.24				94,92,91		76/10
MIHAMA-1	PWR	21	9.294	15.24						76/10
MIHAMA-1	PWR	21	9.294	15.24						76/10
MIHAMA-2	PWR	22	9.319	15.24			UO-2 *1	94,93	BK80-4 P4	71/ 9
MIHAMA-2	PWR	22	9.294	15.24				94,93,92		76/10
MIHAMA-2	PWR	22	9.294	15.24						76/10
MIHAMA-2	PWR	22	9.268	15.24						76/10
TAKAHAMA-2	PWR	23	9.32	15.2			UO-2 *1	94,93	8-16	70/ 5
TAKAHAMA-2	PWR	23	9.29	15.2 (TORIKAE A-GATA)			UO-2	95	-25-	76/11
TAKAHAMA-2	PWR	23	9.21	10. (TORIKAE B-GATA)			UO-2	95	-25-	76/11
GENKAI-1	PWR	24	9.319	15.24			UO-2	93	8-17	70/ 5
GENKAI-1	PWR	24	9.29	15.2						76/10
TAKAHAMA-1	PWR	25	9.319	15.24			UO-2 *1	94,93	BK80-4 P4	71/ 9
TAKAHAMA-1	PWR	25	9.294	15.2			UO-2 *1	95	-6-	75/11
TAKAHAMA-1	PWR	25	9.294	15.2				95		76/10
OOI-1,2	PWR	26	9.29	15.2			UO-2	93	8-16	71/ 1
OOI-1,2	PWR	26	8.2	13.5			UO-2	95	8-3,2-13	75/ 5
OOI-1,2	PWR	26	8.192	13.5(6.7 TO ADJUST)			UO-2	95		76/10
MIHAMA-3	PWR	27	9.32	15.2			UO-2	93	8-16	71/ 8
IKATA-1	PWR	28	9.32	15.2			UO-2	93	8-19	72/11
GENKAI-2	PWR	29	9.29	15.2			UO-2	95.	8-3-41	76/ 2
IKATA-2	PWR	30	9.29	15.2			UO-2 *1	95.	8-3-38	75/ 5
SENDAI	PWR	31	8.19	13.5			UO-2	95.	8-3-45	76/ 5
VERMONT YANKEE	BWR	52	12.4		12.7		UO-2	94	A-2	70/ 5
BROWNS 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		DNR V4 P94	62/
DRESDEN-2	BWR	56	12.4	19.05			UO-2		R-9	66/ 8
OYSTER 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	PWR	69	7.468	15.24/150 PELLET/ROD			UO-2 *1		DNR V4 P36	61/
SAXTON	PWR	70	9.068	18.59			UO-2 *1		DNR V4 P50	61/
BURLINGTON	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

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** FUEL	UO-2	PELLET	SIZE	DIA AND LENGTH		732400			
			(1) MM.	(2) ----- NOM. MIN. MAX.		(3)	(4) P.C.T.D		
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 M.FARLEY	PWR	77	9.319	15.24				BK80-4 P3	71/ 9

** FUEL ROD CLADDING MATERIAL THICK. O.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 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

S11)=STAINLESS STEEL(348H) ALLIS CHALMERS

S11)

LA CROSSE

(BWR)

		(1)	(2)	(3)	(4)	(5)		
		MAT	T	OD	GAP	TYPE		
			MM.	MM.	MM.			
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	14.5	0.28 (INITIAL)	8-3-(4)	75/ 1
TSURUGA	BWR	3	Z2	0.81	14.3	0.31 (1,2BATCH)	8-3-(4)	75/ 1
TSURUGA	BWR	3	Z2	0.94	14.3	0.31 (3,4,5)	8-3-(4)	75/ 1
TSURUGA	BWR	3	Z2	0.86	12.5	0.23 (8*8,6)	8-3-(4)	75/ 1
ONAGAWA	BWR	4	Z2	0.81	14.3	0.31	8-3-(5)	70/ 5
HAMAOKA-1	BWR	5	Z2	0.81	14.3	0.31	8-13	70/ 5
FUKUSIMA-1	BWR	6		(+-7.5PC)		(+-0.076)	(+-0.05)	MEMO P18
FUKUSIMA-1	BWR	6	Z2	0.902	14.5	0.28	ID=12.67	MEMO P17
FUKUSIMA-1	BWR	6	Z2	0.86	12.5	0.23		BWR/6
FUKUSIMA-2,3	BWR	7	Z2	0.81	14.3	0.28		82-2-3 P8
FUKUSIMA-2,3	BWR	7	Z2	(+-0.08)	14.3	0.31		F2N1 P8
SHIMANE	BWR	8	Z2	0.90	14.5	0.28	(7*7 INITIAL)	8-3-(5)
SHIMANE	BWR	8	Z2	0.94	14.3	0.30	(7*7 TORIKAE)	8-3-(5)
SHIMANE	BWR	8	Z2	0.86	12.5	0.23	(8*8 BWR/6)	8-3-(5)
FUKUSIMA-5	BWR	9	Z2	0.81	14.3	0.28		8-3-(6)
FUKUSIMA-5	BWR	9	Z2	0.94	14.3	0.31	(7*7 INITIAL)	3-6-4
FUKUSIMA-5	BWR	9	Z2	0.86	12.5	0.23	(8*8 RELOAD)	3-6-4
FUKUSIMA-4	BWR	10	Z2	0.81	14.3	0.28		8-3-(6)
FUKUSIMA-4	BWR	10	Z2	0.94	14.3	0.31	(7*7 INITIAL)	3-6-4
FUKUSIMA-4	BWR	10	Z2	0.86	12.5	0.23	(8*8 RELOAD)	3-6-4
FUKUSIMA-6	BWR	11	Z2	0.86	12.5	0.23		8-1-(6)
TOOKAI-2	BWR	12	Z2	0.81	14.3	0.31		8-3-(5)
HAMAOKA-2	BWR	13	Z2	0.94	14.3	0.31		8-12
TOMIOKA-1	BWR	14	Z2	0.86	12.5	0.23	(8*8 BWR/6)	8-3-27
KASHIWAZAKI	BWR	15	Z2	0.86	12.5	0.23		8-3-77
TOMIOKA-2	BWR	16	Z2	0.86	12.5	0.23		8-3-93
TOMIOKA-2	BWR	16	Z2	0.86	12.52	0.23	(8*8)	129 BUKAI
MIHAMA-1	PWR	21	Z4	0.617	10.718	0.165		8-15
MIHAMA-1	PWR	21	Z4	0.617	10.72	0.02032		/
MIHAMA-1	PWR	21	Z4	0.617	10.718	0.165,0.191,0.191		76/10
MIHAMA-2	PWR	22	Z4		10.72		6783-5	70/10
MIHAMA-2	PWR	22	Z4	0.617	10.718	0.191,0.191,0.216		76/10
TAKAHAMA-2	PWR	23	Z4	0.617	10.72	0.165	8-16	70/ 5
TAKAHAMA-2	PWR	23	Z4	0.62	10.72	0.19	A-GATA (15*15)TORIKAE	-25-
TAKAHAMA-2	PWR	23	Z4	0.66	10.72	0.19	B-GATA (15*15)TORIKAE	-25-
GENKAI-1	PWR	24	Z4	0.617	10.718	0.165		8-17
GENKAI-1	PWR	24	Z4	0.62	10.72	0.19		76/10
TAKAHAMA-1	PWR	25	Z4	0.617	10.72	0.191	(15*15)	-7-
OOI-1,2	PWR	26	Z4	0.617	10.72	0.196		8-16
OOI-1,2	PWR	26	Z4	0.57	9.5	0.17		8-3,2-13
MIHAMA-3	PWR	27	Z4	0.62	10.72	0.16		8-16
IKATA-1	PWR	28	Z4	0.62	10.72	0.16		8-19
GENKAI-2	PWR	29	Z4	0.62	10.72	0.19		8-3-42
IKATA-2	PWR	30	Z4	0.62	10.72	0.19	(14*14)	8-3-39
SENDAI	PWR	31	Z4	0.6	9.5	0.17	(17*17)	8-3-45
VERMONT YANKEE	BWR	52	Z2	0.81	14.3	0.31		A-2
BROWNS FERRY	BWR	53	Z2	0.81	10.718			GSK-19 P4
MILLSTON	BWR	54	Z2	0.902	14.49	0.28		R-9
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	TP3B	*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 P94
DRESDEN-2	BWR	56	Z2	0.902	14.49	0.28		R-9
DRESDEN-2	BWR	56	Z2	0.914				DNR V7 P192
OYSTER CREEK	BWR	57	Z2	0.902	14.49	0.28		R-9

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** FUEL ROD CLADDING MATERIAL THICK, O.D. DIA.GAP 732440

		(1) MAT	(2) T MM.	(3) OD MM.	(4) GAP MM.	(5) TYPE		
DUANE ARNOLD	BWR	58	Z2	0.81	14.3		A-2 P2	70/ 7
BURLINGTON	PWR	71	Z4	0.617	14.27		GSK-19 P4	69/ 2
TURKEY POINT-3,4	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	*3	REF.1 /
OTHERS		0	Z	0.94	15.062	0.279	*3	REF.1 /
OTHERS		0	Z	0.838	14.453	0.127		REF.1 /
OTHERS		0	Z	0.838	12.344	0.254	TP2	REF.1 /
OTHERS		0	Z	0.813	14.300	0.279	TP3	REF.1 /
OTHERS		0	Z	0.889	14.333	0.254	KRB	REF.1 /
OTHERS		0	Z	0.864	11.405 *1	0.203	BRP-B	REF.1 /
OTHERS		0	Z	1.016	14.333	0.279	BRP-E	REF.1 /
OTHERS		0	Z	1.016	14.333	0.279	BRP-EG	REF.1 /
OTHERS		0	Z	0.889	14.333	0.267	TARAPUR	REF.1 /
OTHERS		0	Z	0.813	14.300	0.279		REF.1 /
OTHERS		0	S8	0.533	8.636	0.102	YANKEE	(PWR) REF.2 /
OTHERS		0	S41	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	S42	0.305	8.674	0.114	IND.P.	(PWR) REF.2 /
OTHERS		0	S42	0.381	9.931	0.102	SAXTON	(PWR) REF.2 /
OTHERS		0	S42	0.381	9.779	0.102	SELNI 3)	(PWR) REF.2 /
OTHERS		0	S81	0.533	8.738	0.102	BR-3 4)	(PWR) REF.2 /
OTHERS		0	Z2	0.635	25.4	0.152	NPD 5)	HWPWR REF.2 /
OTHERS		0	Z2	0.381 6)	15.240	0.076	NPD	HWPWR 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)	HWPWR 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

(1) FUEL ROD EFFECTIVE LENGTH
 (2) ROD LENGTH (INCLUDE END PLUGS)
 (3) ASSEMBLY TOTAL LENGTH
 (4) TYPE

*1=REACTOR TECHNOLOGY 1971

*2=FUKUSIMA-1 S1RYOO

(1) (2) (3) (4)
 MM. MM. MM.

JPDR-1	BWR	1	1467.	1954.			/
JPDR-2	BWR	2	1467.	1954.			70/11
TSURUGA	BWR	3	3658.		R-9		66/ 8
ONAGAWA	BWR	4	3660.	4466.	8-3-(5)		70/ 5
HAMAOKA-1	BWR	5	3660.	4460.	8-11		70/ 5
FUKUSIMA-1	BWR	6	3660.	4350.	BWR/6		74/11
FUKUSIMA-1	BWR	6	3660.		BWR/6		74/11
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.	4350.	8-3-(5)		75/ 7
FUKUSIMA-5	BWR	9	3660.	4460.	8-3-(6)		71/ 2
FUKUSIMA-5	BWR	9	3658.	4467.	FIG 3.2-2		71/ 2
FUKUSIMA-5	BWR	9	3660.	4470.	3-6-4		77/ 2
FUKUSIMA-4	BWR	10	3660.	4460.	8-3-(6)		71/ 8
FUKUSIMA-4	BWR	10	3660.	4470.	3-6-4		77/ 2
FUKUSIMA-6	BWR	11	3710.	4460.	8-1-(6)		74/ 9
TOOKAI-2	BWR	12	3660.	4466.	8-3-(6)		72/ 1
TOOKAI-2	BWR	12	3708.	4467.			75/ 7
HAMAOKA-2	BWR	13	3660.	4460.	8-12		72/ 9
TOMIOKA-1	BWR	14	3710.	4460.	8-3-27		76/ 8
KASHIWAZAKI	BWR	15	3710.	4460.	8-3-77		75/ 3
TOMIOKA-2	BWR	16	3710.	4460.	8-3-93		76/12
TOMIOKA-2	BWR	16	3708.		129 BUKAI		77/ 6
MIHAMA-1	PWR	21	3048.	3214.	RFF23 P121		70/11
MIHAMA-2	PWR	22	3660.	3482.	6783-5		70/10
TAKAHAMA-2	PWR	23	3660.	3880.	8-17		70/ 5
TAKAHAMA-2	PWR	23		3860.	-26-		76/11
GENKAI-1	PWR	24	3660.	3810.	8-18		70/10
TAKAHAMA-1	PWR	25	3660.	3860.	-7-		75/11
OOI-1,2	PWR	26	3660.	3860.	8-17		71/ 1
OOI-1,2	PWR	26	3900.	4100.(EXCL. NOZZLE SPRING)	8-3.2-13		75/ 5
OOI-1,2	PWR	26	3658.	3852.			76/10
MIHAMA-3	PWR	27	3660.	3800.	8-17		71/ 8
MIHAMA-3	PWR	27	3658.	3856.			76/10
IKATA-1	PWR	28	3660.	3800.	8-20		72/11
GENKAI-2	PWR	29		3860.	8-3-42		76/ 2
IKATA-2	PWR	30	3660.	3860.	8-3-39		75/ 5
SENDAI	PWR	31	3660.	3900.	8-3-46		76/ 5
VERMONT YANKEE	BWR	52		4466.	A-2		70/ 5
BROWNS FERRY	BWR	53	3658.		GSK-19		69/ 2
MILLSTON	BWR	54	3658.		R-9		66/ 8
DRESDEN-1	BWR	55	2769.		VOL.14-1 P82		/
DRESDEN-1	BWR	55	2705.		DRESDEN TP3B*1		/
DRESDEN-1	BWR	55	2750.		DRESDEN TP1 *1		/
DRESDEN-1	BWR	55	2750.		DRESDEN TP3F*1		/
DRESDEN-1	BWR	55	2750.		DRESDEN TP5 *1		/
DRESDEN-1	BWR	55	2692.4	2971.8	DNR V4 P94		62/
DRESDEN-1	BWR	55	(4SEG./ROD)	3403.6			/
DRESDEN-2	BWR	56	3658.		R-9		66/ 8
OYSTER CREEK	BWR	57	3658.		R-9		66/ 8
YANKEE	PWR	69		2336.8	DNR V4 P36		61/
SAXTON	PWR	70	914.4		DNR V4 P50		61/
BURLINGTON	PWR	71	3658.		GSK-19		69/ 2
FUGEN	ATR	81	3700.	4100.	105-8-(3)		73/11
OTHERS		0	2685.		VOL.14-1 P82		/
OTHERS		0	2718.		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 TPB *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
 (1) (2) (3) (4)
 MM.

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				/
TSURUGA	BWR	3	8*8	63		16.3	(6TH-BATCH)	8-3-(12) 75/ 1
ONAGAWA	BWR	4	7*7	49		18.8		8-14-(5) 70/ 5
HAMAOKA-1	BWR	5	7*7	49				70/ 5
FUKUSIMA-1	BWR	6	7*7	49				/
FUKUSIMA-1	BWR	6	8*8	49		16.3	25200	BWR/6 74/11
FUKUSIMA-2.3	BWR	7	7*7	49		18.75		F2N1 P9 71/ 2
SHIMANE	BWR	8	7*7	49				/
SHIMANE	BWR	8	8*8	63		16.3	25200	8-3-(5),(13) 75/ 7
FUKUSIMA-5	BWR	9	7*7	49				8-3-(6) 71/ 2
FUKUSIMA-5	BWR	9	8*8	63				3-6-1 77/ 2
FUKUSIMA-4	BWR	10	7*7	49				8-3-(6) 71/ 8
FUKUSIMA-4	BWR	10	8*8	63				3-6-1 77/ 2
FUKUSIMA-6	BWR	11	8*8	63			48132	8-1-(4) 74/ 9
TOOKAI-2	BWR	12	7*7	49				8-3-(4) 72/ 1
TOOKAI-2	BWR	12	8*8	63			48132	75/ 7
HAMAOKA-2	BWR	13	7*7	49				8-10 72/ 9
TOMIOKA-1	BWR	14	8*8	63				8-3-5 76/ 8
KASHIWAZAKI	BWR	15	8*8	63		16.256	48132	8-3-16 75/ 3
TOMIOKA-2	BWR	16	8*8	63				8-3-93 76/12
MIHAMA-1	PWR	21	14*14	179		14.1	21659	8K80-4 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
TAKAHAMA-2	PWR	23	15*15	204		14.3	32028	-26- 76/11
GENKAI-1	PWR	24	14*14	179		14.1	21659	8-18 70/ 5
TAKAHAMA-1	PWR	25	15*15	204		14.3	32028	75/11
OOI-1.2	PWR	26	15*15	204		14.3	39372	8-17 71/ 1
OOI-1.2	PWR	26	17*17	264		12.6	50952	8-3.2-13 75/ 5
MIHAMA-3	PWR	27	15*15	204		14.3	32028	8-17 71/ 8
IKATA-1	PWR	28	14*14	179		14.1	21659	8-20 72/11
GENKAI-2	PWR	29	14*14	179		14.1	21659	8-3-42 76/ 2
IKATA-2	PWR	30	14*14	179		14.1	21659	8-3-41 75/ 5
SENDAI	PWR	31	17*17	264		12.6	41448	8-3-46 76/ 5
P 80 STANDARD	PWR	49	17*17	264				77/ 5
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				/
DUANE ARNOLD	BWR	58	7*7	49				A-2 P2 70/ 7
YANKEE	PWR	69	18*18	305	*2)	11.53	23142	DNR V4 P36 61/
YANKEE	PWR	69	18*18	304	*3)			DNR V4 P36 61/
SAXTON	PWR	70				14.732	1953	DNR V4 P48 61/
SAXTON	PWR	70	9*9-9	72	*4)			DNR V4 P50 61/
SAXTON	PWR	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 M.FARLEY	PWR	77	15*15	204		14.3	32028	BK80-4 P4 71/ 9
MUTSU	ATR	80	11*11	112		15.	3584	/
FUGEN	ATR	81	28	224			(128/UO2)(96/PUO2)	105-8-(3) 73/11
MONJU	FAST	92		169	*6)	7.9		GAKKASIP43 72/ 5

** FUEL ASSY VERTICAL ITY CHECK METHOD 732490

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

71/ 9

** SPACER ALIGNMEN T 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 SIRYOO
 (1) (2) (3) (4)
 VOLUME PLENUM PLENUM TYPE
 RATIO LENGTH VOLUME
 MM CC

JPDR-1	BWR	1		13.				/
JPDR-2	BWR	2		13.				70/ 8
TSURUGA	BWR	3	0.078	32.8			80-3-3 P14	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	/
SHIMANE	BWR	8	0.08				8-3-(13)	75/ 7
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	0.10				8-1-(6)	74/ 9
FUKUSIMA-6	BWR	11	0.096	356.		8*8	5006.031P10	75/ 8
TOOKAI-2	BWR	12	0.11	406.			8-3-(6)	72/ 1
TOOKAI-2	BWR	12	0.096	356.		8*8	5006.041P8	75/ 8
HAMAOKA-2	BWR	13	0.11				8-12	72/ 9
TOMIOKA-1	BWR	14	0.10			8*8	8-3-27	76/ 8
KASHIWAZAKI	BWR	15	0.10				8-3-16	75/ 3
TOMIOKA-2	BWR	16	0.10					76/12
MIHAMA-1	PWR	21		131.	13.		REF23.P122	70/11
OOI-1,2	PWR	26		159.				76/10
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)	VOL.14.1 P82	/
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)	VOL.14.1 P82	/
OTHERS		0	0.060			GARIGLIANO-2(B)	MEMO P6	70/ 3
OTHERS		0	0.017			KARL (A)	VOL.14.1 P82	/
OTHERS		0	0.043			HUMBOLDT (A)	VOL.14.1 P82	/
OTHERS		0	0.062			HUMBOLDT (A)	VOL.14.1 P82	/
OTHERS		0	0.058			KRB (A)	VOL.14.1 P82	/
OTHERS		0	0.048			BIG ROCK P-B(A)	VOL.14.1 P82	/
OTHERS		0	0.048			BIG ROCK P-F(A)	VOL.14.1 P82	/
OTHERS		0	0.080			BIG ROCK P-F(A)	MEMO P6	70/ 3
OTHERS		0	0.048			BIG ROCK P-EG(B)	VOL.14-1 P82	/
OTHERS		0	0.059			TARAPUR (A)	VOL.14-1 P82	/
OTHERS		0	0.11			CURRENT BWR (A)	VOL.14-1 P82	/

** PLENUM SPRING

732610

(1) NUMBER
 (2),(12) MATERIAL
 (3),(13) DIA. OF WIRE
 (4),(14) DIA. OF COIL (MEAN)
 (5),(15) FREE LENGTH
 (6),(16) NO. OF TURN (EFFECTIVE)
 -----UPPER SPRING----- LOWER SPRING-----
 (1) (2) (3) (4) (5) (6) (12) (13) (14) (15) (16)
 NO. MAT MM MM MM T MAT MM MM MM T

JPDR-1	BWR	1	1	MT3	1.36	10.55	87	12						TA-1	64/ 7
JPDR-2	BWR	2	2	MT3	1.15	8.7	96	19.5	MT3	1.8	8.6	70.8	26.5		71/ 2
MIHAMA-1	PWR	21	1	MT1	1.7	7.5	164								77/ 1

** FUEL UO-2 PELLET ENRICH BWR 732620

(1) INITIAL CORE AVERAGE WT PC
 (2) RELOADED CORE WT PC
 (3) TYPE 1 ASSEMBLY MEAN ENRICHMENT WT PC
 (4) TYPE 2 ASSEMBLY MEAN ENRICHMENT WT PC
 (11)=7*7 (ENRICHMENT)/(NO. OF RODS)
 (12)=8*8 (ENRICHMENT)/(NO. OF RODS)
 (1) (2) (3) (4) (5)
 TP-1 TP-2
 AVG AVG

JPDR-1	BWR	1	2.6						/
JPDR-2	BWR	2	2.6						/
TSURUGA	BWR	3	2.04	2.54					71/ 1
ONAGAWA	BWR	4	2.25	2.7				8-14-(5)	70/ 5
HAMAOKA-1	BWR	5	2.3	2.7				8-14,8113	70/ 5
HAMAOKA-1	BWR	5	2.4	2.8				85-4-2	70/11
HAMAOKA-1	BWR	5	2.2	2.8	1.1	2.5		95-2-3 P7	/
FUKUSIMA-1	BWR	6	2.09	2.31				7*7	/
FUKUSIMA-1	BWR	6	(11)=2.79/28,2.09/10,1.80/6,1.40/1,2.79+GD203/4					7*7	/
FUKUSIMA-1	BWR	6	2.62					BWR/6	74/11
FUKUSIMA-1	BWR	6	(12)=2.87/40,2.14/14,1.87/4,1.45/1,2.87+GD203/4,W-ROD/1					BWR/6	74/11
FUKUSIMA-1	BWR	6	2.2	2.5 (7*7)				5001.011	75/ 4
FUKUSIMA-1	BWR	6		2.6 (8*8)				5001.011	75/ 4
FUKUSIMA-2,3	BWR	7	2.2	2.69				82-2-3P8	70/ 8
FUKUSIMA-2,3	BWR	7	2.2		1.1	2.5		85-7-2(R-1)	70/12
FUKUSIMA-2,3	BWR	7	(TYPE 1=0.711/1.33),(TYPE 2=(1.33/1.69),(1.94/2.93))WTPC					F2N1 P8	71/ 2
FUKUSIMA-2,3	BWR	7	(3-GOORO) SAME AS 5-GOO					89-7-2	71/ 3
SHIMANE	BWR	8	2.09	2.31					70/ 5
SHIMANE	BWR	8	2.09	2.50(7*7 REFUEL.AVG),2.62(8*8 AVG)				8-3-(5)	75/ 7
FUKUSIMA-5	BWR	9	2.2	2.70	1.1	2.5		8-3-(6)	71/ 2
FUKUSIMA-5	BWR	9	2.20	2.74				3-6-4	77/ 2
FUKUSIMA-4	BWR	10	2.2	2.70	1.1	2.5		8-3-(6)	71/ 8
FUKUSIMA-4	BWR	10	2.20	2.74				3-6-4	77/ 2
FUKUSIMA-6	BWR	11	2.2	2.70	1.1	2.5		8-3-(6)	72/ 1
TOOKAI-2	BWR	12	2.2	2.70	1.1	2.5		8-3-(6)	72/ 1
HAMAOKA-2	BWR	13	2.2	2.70	1.1	2.5		8-12	72/ 9
TOMIOKA-1	BWR	14	2.2	2.70				8-3-27	76/ 8
KASHIWAZAKI	BWR	15	2.2	2.70				8-3-50	75/ 3
TOMIOKA-2	BWR	16	2.2	2.70				8-3-93	76/12
VERMONT YANKEE	BWR	52	2.5					A-2 P2	70/ 7
MILLSTON	BWR	54	2.07					R-9	66/ 8
DRESDEN-1	BWR	55	1.5					DNR V4 P94	62/
DRESDEN-2	BWR	56	2.00	2.36				R-9	66/ 8
OYSTER CREEK	BWR	57	2.10					R-9	66/ 8
FUGEN	ATK	81	1.5 WTPC + NAT,UO2 + AVG 0.8 WTPC PUO2					105-8-(3)	73/11

** FUEL UO-2 PELLET ENRICH PWR 732630

(1) 1ST REGION FOR INITIAL CORE WT PC
 (2) 2ND REGION FOR INITIAL CORE WT PC
 (3) 3RD REGION(OUTER) FOR INITIAL CORE WT PC
 (4) 4TH REGION FOR INITIAL CORE WT PC
 (7) MEAN ENRICHMENT FOR INITIAL CORE WT PC
 (8) FOR RELOAD OR EQUILIBRIUM WT PC

-----INITIAL-----
 (1) (2) (3) (4) (5) (6) (7) (8)
 1ST 2ND 3RD 4TH 5TH 6TH MEAN. EQUI.

MIHAMA-1	PWR	21	2.36	2.51	2.81					8-15	66/11
MIHAMA-1	PWR	21	2.3	3.0	3.4					REF23 P10	70/11
MIHAMA-2	PWR	22	2.3	3.0	3.4			2.89	3.1	REF23 P7	70/11
TAKAHAMA-2	PWR	23	2.26	2.80	3.42			2.9	3.4	8-16	70/ 5
TAKAHAMA-2	PWR	23	2.00	2.70	3.35				3.33		76/10
TAKAHAMA-2	PWR	23	2.00	2.70	3.35	3.25	3.25	3.25	2.80	-50-	76/11
GENKAI-1	PWR	24	2.27	3.03	3.40	3.40			3.10	8-17	70/ 5
TAKAHAMA-1	PWR	25	2.00	2.70	3.35				3.25	-6-	75/11
TAKAHAMA-1	PWR	25	2.00	2.70	3.35	3.25	3.25	3.25	2.80	-21-	76/ 4
OOI-1,2	PWR	26	2.04	2.58	3.20				3.21	8-16	71/ 1
OOI-1,2	PWR	26	2.1	2.6	3.1						76/10
MIHAMA-3	PWR	27	2.00	2.70	3.35				3.33	8-16	71/ 8
MIHAMA-3	PWR	27	2.0	2.75	3.35						76/10
IKATA-1	PWR	28	2.27	3.03	3.40				3.40	8-19	72/11
GENKAI-2	PWR	29	2.27	3.03	3.40				3.40	8-3-41	76/ 2
IKATA-2	PWR	30	2.27	3.03	3.40				3.28	8-19	75/ 5
SENDAI	PWR	31	2.10	2.60	3.10				3.15	8-3-45	76/ 5
P 80 STANDARD	PWR	49	2.10	2.60	3.10						77/ 5
YANKEE	PWR	69							3.4	DNR V4 P36	61/
SAXTON	PWR	70							5.7	DNR V4 P50	61/

PLANT PERFORMANCE DATA

DATE=77-08-12

PAGE***D- 55***

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

1) = MINIMUM
 2) = RATED AVERAGE
 3) = RATED MAXIMUM
 4) = AVERAGE
 5) = MAXIMUM ALLOWABLE
 6) = FUEL ELEMENT MAXIMUM

	1ST CORE AVE MWD/TU	FINAL CORE AVE MWD/TU	1ST ASSY MAX MWD/TU	1ST PELLET MAX MWD/TU
--	---------------------------	-----------------------------	---------------------------	-----------------------------

JPDR-1	BWR	1	8800.	.	.	.	/
JPDR-2	BWR	2	12000.	.	.	.	70/11
TSURUGA	BWR	3	16500.	25000.	28000.	.	80-3-2 70/ 6
ONAGAWA	BWR	4	19500.	27500.	32000.	.	70/ 5
HAMAOKA-1	BWR	5	20000.*	27500.	35000.	.	8-14 70/ 5
HAMAOKA-1	BWR	5	21000.	27500.	35000.	.	85-4-2 70/11
FUKUSIMA-1	BWR	6	16500.	22000.	26000.	.	R-9 70/ 5
FUKUSIMA-1	BWR	6	.	.	34200.	.	BWR/6 74/11
FUKUSIMA-2,3	BWR	7	21000.	27500.	35000.	.	82-2-3 P8 70/ 5
SHIMANE	BWR	8	16500.	22000.	26000.	.	70/ 5
SHIMANE	BWR	8	16500.	25000.	.	(TORIKAE)	8-14-(12) 75/ 7
SHIMANE	BWR	8	.	.	26000.	.	(7*7INITIAL) 8-3-(5) 75/ 7
SHIMANE	BWR	8	.	.	29000.	.	(7*7TORIKAE) 8-3-(5) 75/ 7
SHIMANE	BWR	8	.	.	34200.	.	(8*8 BWR/6) 8-3-(5) 75/ 7
FUKUSIMA-5	BWR	9	21000.	27500.	35000.	.	8-3-(6) 71/ 2
FUKUSIMA-5	BWR	9	.	.	35000.	(7*7 DESIGN AND TARGET)	3-6-4 77/ 2
FUKUSIMA-4	BWR	10	21000.	27500.	35000.	.	8-3-(6) 71/ 8
FUKUSIMA-4	BWR	10	.	.	33000.	(8*8 TARGET), 40000.(DESIGN)	3-6-4 77/ 2
FUKUSIMA-6	BWR	11	21000.	27500.	35000.	.	8-3-(6) 72/ 1
TOOKAI-2	BWR	12	21000.	27500.	35000.	.	8-3-(6) 72/ 1
HAMAOKA-2	BWR	13	21000.	27500.	35000.	.	8-12 72/ 9
TOMIOKA-1	BWR	14	21000.	27500.	35000.	.	8-3-27 76/ 8
KASHIWAZAKI	BWR	15	21000.	27500.	35000.	.	8-3-50 75/ 3
TOMIOKA-2	BWR	16	21000.	27000.	35000.	.	8-3-93 76/12
MIHAMA-1	PWR	21	21800.	27000.	.	.	8-16 66/11
MIHAMA-1	PWR	21	23900.	.	39000.	.	REF23 P120 70/11
TAKAHAMA-2	PWR	23	23900.	31500.	48000.	.	80-9-1 70/ 5
TAKAHAMA-2	PWR	23	23900.	26000.	39000.	48000.	(TORIKAE) -25- 76/11
GENKAI-1	PWR	24	23900.	31500.	48000.	.	80-9-1 70/ 5
GENKAI-1	PWR	24	23900.	28200.	.	.	-15- 76/ 8
TAKAHAMA-1	PWR	25	23900.	31500.	.	.	-8- 75/11
OOI-1,2	PWR	26	24100.	33000.	.	.	8-17 71/ 1
MIHAMA-3	PWR	27	23900.	31500.	.	.	8-17 71/ 8
IKATA-1	PWR	28	23900.	31500.	.	.	8-20 72/11
GENKAI-2	PWR	29	23900.	31500.	39000.	50000.	8-3-41 76/ 2
IKATA-2	PWR	30	23900.	31500.	39000.	.	8-3-38 75/ 5
SENDAI	PWR	31	23900.	30000.	39000.	50000.	8-3-45 76/ 5
P 80 STANDARD	PWR	49	23900.	.	.	.	77/ 5
VERMONT YANKEE	BWR	52	20900.	.	.	.	A-2 P2 70/ 7
BROWNS FERRY	BWR	53	20900.	27500.	.	.	GSK-19 69/ 2
MILLSTON	BWR	54	16500.	22000.	.	.	R-9 66/ 8
DRESDEN-1	BWR	55	1) 6700.	12000.	.	.	DNR V4 P91 62/
DRESDEN-2	BWR	56	16500.	22000.	.	.	R-9 66/ 8
DRESDEN-2	BWR	56	15000.	.	.	.	DNR V7 P192 68/
OYSTER CREEK	BWR	57	16500.	22500.	.	.	R-9 66/ 8
YANKEE	PWR	69	2) 7830.	3) 15000.	.	.	DNR V4 P33 61/
SAXTON	PWR	70	4) 7300.	5) 30000.	.	.	DNR V4 P47 61/
BURLINGTON	PWR	71	21800.	33000.	.	.	GSK-19 69/ 2
MUTSU	PWR	80	5500.	.	10000.	ROD MAX=7000.	/
FUGEN	ATR	81	12000.	.	20000.	29000. 6) 23000.	105-5 P10 73/12

** EXPOSURE ACTUAL RESULT MWD/TON BURN-UP

732650

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82
 REF.2=GENSIRYOKU SIRYOO NO.19(1969.2)(GENSIRYOKU SANGYOO 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(THO2,UO2)
 3) CVTR (FOR EXPERIMENT)
 11) AN=ANNEALED
 12) CW=COLD WORKED

			(MWD/TON)/(MWD/TON)	IN CORE	NO. *1	
			PEAK PELLETT/AVERAGE PER ASSEMBLY	YEARS		
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 TP3B 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	GAR. TP1	24700/12700(69/12/31)	6.40	11502	REF.1 /
OTHERS	0	GAR. TP2	8800/ 5400(69/12/31)	1.20	3456	REF.1 /
OTHERS	0	KAHL	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	5060/ 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-R	29500/19500(69/12/31)	3.70	1694	REF.1 /
OTHERS	0	BRP-E	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 /

** SPENT FUEL BURN-UP RADIO ACTIVITY

732652

(1)TOTAL-U/235-U/ASSY (PRE IRRAD.) KG/KG /ASSY
 (2)TOTAL-U/235-U/ASSY (POST IRRAD.) KG/KG /ASSY
 (3)PU PRODUCED AVG./MAX/ASSY GRAM/GRAM/ASSY
 (4)RADIO ACTIVITY CURIE /ASSY
 (5)COOLING TIME YEAR
 (6)BURN/UP MAX/AVG MWD/MTU
 (1) (2) (3) (4) (5) (6)
 PRE. POST PU BURN-UP
 T.U/235-U T.U/235-U AVG/MAX
 KG/KG KG/KG G/G CI Y

JPDR-1	BWR	1	58.5/1.5	57.7/1.2	100/143	3600.	7	5600/ 4400	77/ 5
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PLANT PERFORMANCE DATA

DATE=77-08-12

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** FUEL LINEAR HEAT RATING W/CM 732660

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82

FUK.1=FUKUSIMA-1 SIRYOO

(1)100 PERCENT (W/CM)

(2)112 PERCENT OVER POWER (W/CM)

(3)MEAN (W/CM)

(4)TRANSIENT (W/CM)

(1) (2) (3) (4)

JPDR-1	BWR	1			120		70/ 8
JPDR-2	BWR	2			170		70/ 8
TSURUGA	BWR	3	570			81-3-2	70/ 6
TSURUGA	BWR	3	440(8*8,BWR/6)			8-3-(4)	75/ 1
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(7*7)			70/6/20	70/ 5
FUKUSIMA-1	BWR	6	440(DESIG.MAX.)	144		BWR/6	74/11
FUKUSIMA-2,3	BWR	7	607			70/6/20	70/ 5
SHIMANE	BWR	8	574			70/6/20	70/ 5
SHIMANE	BWR	8	440(8*8,BWR/6)			8-3-(5)	75/ 7
FUKUSIMA-5	BWR	9	610			8-3-(6)	71/ 2
FUKUSIMA-5	BWR	9	440(8*8,BWR/6)			3-6-4	77/ 2
FUKUSIMA-4	BWR	10	610			8-3-(6)	71/ 8
FUKUSIMA-4	BWR	10	440(8*8,BWR/6)			3-6-4	77/ 2
FUKUSIMA-6	BWR	11	440.			8-1-(6)	74/ 9
FUKUSIMA-6	BWR	11	440.		830	5006.031 P3	75/ 8
TOOKAI-2	BWR	12	610			8-3-(6)	72/ 1
TOOKAI-2	BWR	12	440.		830	5006.041 P1	75/ 8
HAMAOKA-2	BWR	13	610			8-12	72/ 9
TOMIOKA-1	BWR	14	440.			8-3-27	76/ 8
KASHIWAZAKI	BWR	15	440			8-3-10	75/ 3
TOMIOKA-2	BWR	16	440.			8-3-93	76/12
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
TAKAHAMA-2	PWR	23	469		202	-50-	76/11
GENKAI-1	PWR	24	568	636		8-18	70/ 5
GENKAI-1	PWR	24	542	607	203.		76/
TAKAHAMA-1	PWR	25	568	636		6783-5	70/10
OOI-1,2	PWR	26	617	689		8-17 8-18	71/ 1
OOI-1,2	PWR	26	414.		178.		76/10
MIHAMA-3	PWR	27	568	637	203	BK80-4 P4	71/ 9
IKATA-1	PWR	28	542	607	203.	8-20	72/11
GENKAI-2	PWR	29	491		204.	8-3-50	76/ 2
IKATA-2	PWR	30	491.		204.	8-3-46	76/12
SENDAI	PWR	31	411.		171.	8-3-52	76/ 5
P 80 STANDARD	PWR	49	396.		171.		77/ 5
VERMONT YANKEE	BWR	52	607			A-2	70/ 5
BROWNS FERRY	BWR	53			231	GSK-19	69/ 2
DRESDEN-1	BWR	55	499			REF.1	/
DRESDEN-1	BWR	55	505			DRESDEN-1 TYPE-3B	/
DRESDEN-1	BWR	55	509			DRESDEN-1 TYPE-3F	/
DRESDEN-1	BWR	55	509			DRESDEN-1 TYPE-5	/
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	REF.1 /
OTHERS		0	479			GARIGLIANO TYPE-2	REF.1 /
OTHERS		0	427			KAHL	REF.1 /
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

** FUEL	ROD	PELLET	CENTER	TEMP.	MAX C	732680		
JPDR-1	BWR	1	1899.(AT 125 OP) DEG C	1610.(AT 100 NORMAL P) DEG C			/	
JPDR-2	BWR	2	2540.(AT 125 OP)*DEG C	1970.(AT 100 NORMAL P)*DEG C			70/ 8	
JPDR-2	BWR	2	2550.(AT 100 NORMAL P) DEG C			NA1T00	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	
SHIMANE	BWR	8	(UO-2)	1830.(AT 440 W/CM) DEG C		8-3-(7)	75/ 7	
SHIMANE	BWR	8	(UO-2)+(GD2-03)	1900.(AT 430 W/CM) DEG C		8-3-(7)	75/ 7	
FUKUSIMA-5	BWR	9		2440.(AT 100 NORMAL P) DEG C		8-3-(6)	71/ 2	
FUKUSIMA-5	BWR	9		2470.(AT 610 W/CM) 7*7		3-6-7	77/ 2	
FUKUSIMA-5	BWR	9		1830.(AT 440 W/CM) 8*8		3-6-7	77/ 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)+(GD2-03)	= 2185.(AT 100 NORMAL P) DEG C		8-3-(6)	71/ 8	
FUKUSIMA-4	BWR	10		2470.(AT 610 W/CM) 7*7		3-6-7	77/ 2	
FUKUSIMA-4	BWR	10		1830.(AT 440 W/CM) 8*8		3-6-7	77/ 2	
FUKUSIMA-6	BWR	11	(UO-2)	2420.(AT 100 NORMAL P) DEG C		8-3-(6)	72/ 1	
FUKUSIMA-6	BWR	11	(UO-2)+(GD2-03)	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)+(GD2-03)	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	
TOMIOKA-1	BWR	14	(UO-2)	1830.(AT 440 W/CM) DEG C		8-3-27	76/ 8	
TOMIOKA-1	BWR	14	(UO-2)+(GD2-03)	1820.(AT W/CM) DEG C		8-3-27	76/ 8	
KASHIWAZAKI	BWR	15	(UO-2)	1830.(AT 440 W/CM) DEG C		8-3-10	75/ 3	
KASHIWAZAKI	BWR	15	(UO-2)+(GD2-03)	1820.(AT W/CM) DEG C		8-3-10	75/ 3	
TOMIOKA-2	BWR	16	(UO-2)	1830.(AT 440 W/CM) DEG C		8-3-93	76/12	
TOMIOKA-2	BWR	16	(UO-2)+(GD2-03)	1820.(AT W/CM) DEG C		8-3-93	76/12	
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	2185.(AT 100 NORMAL P) DEG C		6783-5	70/10	
TAKAHAMA-2	PWR	23	2370.(AT 112 OP) DEG C	2360.(AT 100 NORMAL P) DEG C		8-16	70/ 5	
TAKAHAMA-2	PWR	23	2300.(AT 59.1KW/M)	2100.(AT 100 NORMAL P) DEG C		-25-	76/11	
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	
GENKAI-1	PWR	24	2640.(AT 112 OP) DEG C	2440.(AT 100 NORMAL P) DEG C		-6-	75/11	
TAKAHAMA-1	PWR	25	2570.(AT 112 OP) DEG C	2360.(AT 100 NORMAL P) DEG C		6783-5	70/10	
OOI-1,2	PWR	26	2480.(AT 112 OP) DEG C	2350.(AT 100 NORMAL P) DEG C		8-16	71/ 1	
OOI-1,2	PWR	26	2400.(AT AB-TRA)	1840.			76/10	
OOI-1,2	PWR	26	2400.(1200MWD/MTU,591W/CM)			6-4	76/11	
MIHAMA-3	PWR	27	2570.(AT 112 OP) DEG C	2360.(AT 100 NORMAL P) DEG C		8-16	71/ 8	
IKATA-1	PWR	28	2640.(AT 112 OP) DEG C	2440.(AT 100 NORMAL P) DEG C		8-19	72/11	
GENKAI-2	PWR	29	2350.(AT 64. KW/M)	2000.(AT 100 NORMAL P) DEG C		8-3-41,50	76/ 2	
IKATA-2	PWR	30	2350.(AT AB-TRA)	2090.(AT 100 NORMAL P) DEG C		8-3-46	75/ 5	
IKATA-2	PWR	30	2350.(AT 64. KW/M)	2000.(AT 100 NORMAL P) DEG C			76/12	
SENDAI	PWR	31	2280.(AT 59.1KW/M)	1790.(AT 100 NORMAL P) DEG C		8-3-45	76/ 5	
P 80 STANDARD	PWR	49	2280.(AT 59.1KW/M)	1750.(AT 100 NORMAL P) DEG C			77/ 5	
VERMONT YANKEE	BWR	52		2420.(AT 100 NORMAL P) DEG C		A-2 P1	70/ 7	
BROWNS FERRY	BWR	53		2415.(AT 100 NORMAL P) DEG C		GSK-19	69/ 2	
DUANE ARNOLD	BWR	58		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	PWR	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	
MUTSU	PWR	80	2200.(AT 130 OP) DEG.C				/	
FUGEN	ATR	81	.LE.2790			105-8-3-(5)	73/11	
MONJU	FAST	92	2600.(AT TRANGIENT) DEG C			GAKKAISI43P	72/ 5	

** GAP CONDUCTANCE PELLET AND CLADDING 732700

EQ1(NONE CONTACT) HGAP=KGAS/(DELTA/2+14.4E-6) D-1117
 HGAP=1500*KGAS + 4.0/(0.006+12*DELTA) D-1117
 EQ2(AT CONTACT) HGAP=0.6*P + KGAS/14.4E-6
 WHERE HGAP =GAP CONDUCTANCE (BTU/H.FT2.F)
 KGAS =THERMAL CONDUCTIVITY (BTU/H.FT.F)
 DELTA =DIAMETRAL GAP (FT)
 P =CONTACT PRESSURE (PSI)
 BTU/H.SQFT.F

JPDR-1	BWR	1	1000.				/
JPDR-2	BWR	2	1400.				70/
TSURUGA	BWR	3	1000.			KON-5 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
SHIMANE	BWR	8	1000.			8-3-(6)	75/ 7
FUKUSIMA-5	BWR	9	1000.			3-6-5	77/ 2
FUKUSIMA-4	BWR	10	1000.			3-6-5	77/ 2
TOMIOKA-1	BWR	14	1000.			8-3-9	76/ 8
KASHIWAZAKI	BWR	15	1000.			8-3-8	75/ 3
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
OOI-1,2	PWR	26	5400. (AT 112 PC POWER)			8-133	71/ 1
OOI-1,2	PWR	26	H(GAP)=0.6P+ K(GAS)/(14.4E-6) AT CONTACT			8-14-56	71/ 2
OOI-1,2	PWR	26	H(GAP)= K(GAS)/(GAP +14.4E-6) NONE CONTACT			8-14-56	71/ 2
OOI-1,2	PWR	26	WHERE UNIT P=PSI, K=BTU/HR.FT.F, GAP=INCH(RADIAL)			8-14-56	71/ 2
P 80 STANDARD	PWR	49	EQ1, EQ2				77/ 5
FUGEN	ATR	81	1000.			105-5 P9	73/12

** FUEL CLADDING MECHANICAL PROPERTY 732720

			UTS KG/SQMM	YS KG/SQMM	ELONG PERCENT	BURST KG/SQMM	F2N1 P8	71 2
FUKUSIMA-2,3	BWR	7	GE 49.2 (AT RT)	42.2 (AT RT)	16.PC(AT RT)	5.4	F2N1 P8	71/ 2
FUKUSIMA-2,3	BWR	7	GE 28.8 (344 C)	22.4 (344 C)				/

** 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

DB=DITTUS-BOELTER EQUATION
 $H=0.023*(K/D)*((RE**0.8)*((PR**0.4)))$
 H =HEAT TRANSFER COEFFICIENT KCAL/M2/H/C
 K =THERMAL CONDUCTIVITY OF COOLANT(WATER) KCAL/M/H/C
 D =EQUIVALENT HYDRAULIC DIAMETER M
 RE=REYNOLDS NUMBER DIMENSIONLESS
 PR=PRANDTLE NUMBER DIMENSIONLESS
 JL=JENS-LOTTE EQUATION
 $H=Q**((3/4))/(0.82*EXP(-P/63.3))$
 H =HEAT TRANSFER COEFFICIENT KCAL/M2/H/C
 Q =HEAT FLUX KCAL/M2/H
 P =COOLANT PRESSURE KG/CM2
 TH=THOM EQUATION
 $DELTA T(SAT)=(0.072*EXP(-P/1260))*Q**0.5$
 DELTA T(SAT)=T(WALL) - T(SAT) DEG F
 P=COOLANT PRESSURE PSIA
 Q=LOCAL HEAT FLUX BTU/H.FT2
 T(WALL)=CLADDING OUTER SURFACE TEMP. F
 T(SAT) =SATURATION TEMPERATURE AT P F
 (1)HEAT TRANSFER COEFFICIENT OF SUBCOOL REGION KCAL/M2/H/C
 (2)HEAT TRANSFER COEFFICIENT OF BOILING REGION KCAL/M2/H/C
 (3)TEMPERATURE DIFFERENCE BETWEEN CLADDING SURFACE AND SATURATION TEMP. (NUCLEATE BOILING REGION)
 (1) (2) (3)

TSURUGA	BWR	3	DB	JL		8-3-(6)	75/ 1
FUKUSIMA-2,3	BWR	7	DB	JL		F2N1 P10	71/ 2
SHIMANE	BWR	8	DB	JL		8-3-(7)	75/ 7
FUKUSIMA-5	BWR	9	DB	JL		3-6-6	77/ 2
FUKUSIMA-4	BWR	10	DB	JL		3-6-6	77/ 2
FUKUSIMA-6	BWR	11	DB	JL		8-1-(8)	75/ 7
TOOKAI-2	BWR	12	DB	JL		8-1-(8)	75/ 7
KASHIWAZAKI	BWR	15	DB	JL		8-3-9	75/ 3
TOMIOKA-2	BWR	16	DB	JL		8-3-11	76/12
P 80 STANDARD	PWR	49	DB	TH			77/ 5

** 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)	NAITOO	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		MT=400 C (MAX)	89-7-2 P15	71/ 3
SHIMANE	BWR	8		ST=300 C (440W/CM)	(8*8 BWR/6)	8-3-(7) 75/ 7
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
TOOKAI-2	BWR	12		MT=400 C (MAX)	8-3-(6)	72/ 1
HAMAOKA-2	BWR	13		ST=300 C (100)	8-12	72/ 9
TOMIOKA-1	BWR	14		380 C (MAX)	8-3-27	76/ 8
KASHIWAZAKI	BWR	15		380 C (MAX)	8-3-77	75/ 3
TOMIOKA-2	BWR	16		380 C (MAX)	8-3-93	76/12
MIHAMA-1	PWR	21	ST=348 C (112 O.P)	ST=344 C (100)	BK80-2 P5	77/ 1
MIHAMA-2	PWR	22	ST=348 C (112 O.P)	ST=347 C (100)	6783-5	70/10
TAKAHAMA-2	PWR	23	ST=348 C (112 O.P)	ST=347 C (100)	80-9-1	70/ 6
TAKAHAMA-2	PWR	23	ST=350 C (59.1KW/M)	ST=350 C (100)	-25,26-	76/11
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)	6783-5	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-1	PWR	28	ST=347 C (112 O.P)	ST=347 C (100)	8-19	72/11
GENKAI-2	PWR	29	ST=350 C (64. KW/M)	ST=350 C (100)	8-3-42	76/ 2
IKATA-2	PWR	30	ST=350 C (64. KW/M)	ST=350 C (100)	8-3-39	76/12
SENDAI	PWR	31	ST=350 C (59.1KW/M)	ST=349 C (100)	8-3-46	76/ 5
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/
YANKEE	PWR	69		ST=345 C (100)	DNR V4 P36	61/
SAXTON	PWR	70		ST=338.9 (100)	DNR V4 P50	61/
BURLINGTON	PWR	71		ST=347 C (100)	GSK-19 P4	69/ 2
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
NCRTH 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		MT=700 C (RATED P,)	GAKKAIS143P	72/ 5

** PELLET CLADDING TEMP. FROM BOL 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	BOL= 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	BOL= 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

** GUIDE THIMBLE FOR CONTROL ROD CLUSTER 732820

(1)GUIDE THIMBLE MATERIAL (FOR CONTROL ROD CLUSTER)

Z4=ZRY-4

(2)NUMBER PER FUEL ASSEMBLY

(3)DIAMETER AND THICKNESS (UPPER PART)

(4)DIAMETER AND THICKNESS (LOWER PART)

(1)	(2)	(3)UPPER			(4)LOWER		
NO.		OD	ID	T	OD	ID	T
		MM	MM	MM	MM	MM	MM

MIHAMA-1	PWR	21	Z4	16.	13.69	/	/	12.20	/	/	77/ 1
TAKAHAMA-2	PWR	23	Z4	20.	13.61	/12.95	/0.33	11.94	/11.32	/0.31	70/ 5
TAKAHAMA-2	PWR	23	Z4	20.	13.87	/	/0.43	12.42	/	/0.43	-26- 76/11
GENKAI-1	PWR	24	Z4	16.	13.69	/12.83	/0.43	12.20	/11.34	/0.43	8-18 70/ 5
TAKAHAMA-1	PWR	25	Z4	20.	13.9	/12.04	/0.43	12.4	/11.54	/0.43	-7- 75/11
OOI-1,2	PWR	26	Z4	20.	13.87	/	/	12.42	/	/	8-17 71/ 1
OOI-1,2	PWR	26	Z4	24.	12.2	/11.38	/0.41	10.9	/10.08	/0.41	8-3,2-14 75/ 5
MIHAMA-3	PWR	27	Z4	20.	13.61	/12.95	/0.33	11.94	/11.32	/0.31	8-17 71/ 8
IKATA-1	PWR	28	Z4	16.	13.69	/12.83	/0.43	12.20	/11.34	/0.43	8-20 72/11
GENKAI-2	PWR	29	Z4	16.	13.69	/	/0.43	12.20	/	/0.43	8-3-42 76/ 2
IKATA-2	PWR	30	Z4	16.	13.69	/12.83	/0.43	12.20	/11.34	/0.43	8-3-39 75/ 5
SENDAI	PWR	31	Z4	24.	12.2	/11.38	/0.41	10.9	/10.08	/0.41	8-3-46 76/ 5
OTHERS		0	Z4	24.	12.243	/11.43	/0.4064	10.897	/10.084	/0.4064	TYP.17*17 /

** GUIDE THIMBLE FOR INSTRUMENTATION 732830

(1)GUIDE THIMBLE MATERIAL (FOR INSTRUMENTATION IN FUEL ASSEMBLY)

Z4=ZRY-4

(2)NUMBER PER FUEL ASSEMBLY

(3)DIAMETER AND THICKNESS

(1)	(2)	(3)		
NO.		OD	ID	T
		MM	MM	MM

MIHAMA-1	PWR	21	Z4	1.	10.72	/	/				77/ 1
TAKAHAMA-2	PWR	23		1.	13.87	/	/0.43				-26- 76/11
OOI-1,2	PWR	26	Z4	1.	12.2	/11.38	/0.41				8-3,2-14 75/ 5
MIHAMA-3	PWR	27	Z4	1.	13.87	/	/				76/10

** CONTROL ROD EFFECT. LENGTH AND STROKE 733220

(1)CONTROLL ROD NUMBER

(2)FORM

CRU.=CRUCIFORM

CR.1= CRUCIFORM REGULATIONS RODS WITH ZRY-2 FOLLOWERS

CR.2= FIXED CRUCIFORM SHIM ELEMENTS

CR.3= OFFSET CRUCIFORM CONTROL RODS WITH FUEL FLOWER

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)

		(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.	363.		B4C	1.75G/CC	113.	8-3-(23)	75/ 7
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
FUKUSIMA-6	BWR	11						83.	5006.031 P5	75/ 8
TOOKAI-2	BWR	12	185 CRU.	363.2		B4C	70.	110.	8-3-(7)	72/ 1
TOOKAI-2	BWR	12						83.	5006.041 P3	75/ 8
HAMAOKA-2	BWR	13				B4C			/	/
TOMIOKA-1	BWR	14	185 CRU.	363.		B4C	70.	83.	8-3-22	76/ 8
KASHIWAZAKI	BWR	15	185 CRU.	363.2		B4C	70.	83.	8-3-26	75/ 3
TOMIOKA-2	BWR	16	185 CRU.	363.		B4C	70.	83.	8-3-31	76/12
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.						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.						R-9	66/ 8
DUANE ARNOLD	BWR	58	89 CRU.			B4C			A-2 P2	70/ 7
YANKEE	PWR	69	24 CR.1			*2)			DNR V4 P36	61/
YANKEE	PWR	69	8 CR.2			*2)			DNR V4 P36	61/
SAXTON	PWR	70	6 CR.3	251.5TL		*2)			DNR V4 P50	61/

** 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)

		(1) NO.	(2) MM	(3) MM	(4) MM	(5) MM	(6) MM	(7) 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		/
ONAGAWA	BWR	4	SUS 84	4.8	3.5	7.9	248.	1.4	8-3-(6),(7)	70/ 5
SHIMANE	BWR	8	SUS 84	4.8	3.5	8.	248.	1.4	8-3-(23)	75/ 7
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 76	4.78	3.51	6.60	247.6	0.76	8-1-(22)	74/ 9
TOOKAI-2	BWR	12	SUS 84	4.78	3.51	7.92	247.6	1.42	8-3-(7)	72/ 1
TOOKAI-2	BWR	12	76			6.60		0.76	5006.041 P3	75/ 8
TOMIOKA-1	BWR	14	SUS 76	4.8	3.5	7.	248.	0.8	8-3-22	76/ 8
KASHIWAZAKI	BWR	15	SUS 76	4.78	3.51	6.6	247.6	0.76	8-3-26	75/ 3
TOMIOKA-2	BWR	16	SUS 76	4.8	3.5	7.	250.	0.8	8-3-31	76/12
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	PWR	69				6.731	199.8		DNR V4 P34	61/

** CONTROL ROD

FOLLOWER MATERIAL SIZE

733250

(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
 (1) (2) (3) (4)
 MM MM MM

JPDR-1 BWR 1 Z2 114.3 6.35 1283
 JPDR-2 BWR 2 Z2 114.3 6.35 1283
 YANKEE PWR 69 Z2
 SAXTON PWR 70 *1)

70/ 8
 70/ 8
 61/
 61/

DNR V4 P36
 DNR V4 P50

** CONTROL ROD

DRIVE MECHANIS M DRIVE SPEED

733260

(1) DRIVE MECHANISM UNDER NORMAL OPERATION
 E.M=ELECTRICAL DRIVE MOTOR
 HYD=HYDRAULIC DRIVE
 (2) DRIVE MECHANISM AT SCRAM
 (3) DRIVE SPEED (NORMAL CONDITION) CM/SEC
 (4) DRIVE SPEED (SCRAM) SEC/PC OF FULL-INSERT)
 (5) NO. OF NOTCHES/FULL STROKE
 (1) (2) (3) (4) (5)
 CM/S S/PC

JPDR-1 BWR 1 E.M AIR 1.26
 JPDR-2 BWR 2 E.M AIR 1.26
 TSURUGA BWR 3 7.6
 ONAGAWA BWR 4 HYD HYD 0.9/20 2/50 3.5/90
 HAMAOKA-1 BWR 5 HYD HYD 0.9/20 2/50 3.5/90
 FUKUSIMA-2,3 BWR 7 HYD HYD 0.9/20 2/50 3.5/90
 SHIMANE BWR 8 5/90
 FUKUSIMA-6 BWR 11 HYD HYD 0.9/20 2/50 5/90
 TOOKAI-2 BWR 12 HYD HYD 0.9/20 2/50 5/90
 HAMAOKA-2 BWR 13 HYD HYD 5/90
 TOMIOKA-1 BWR 14 1.0/20 2/50 3.5/90
 KASHIWAZAKI BWR 15 HYD HYD 3.5/90 24
 TOMIOKA-2 BWR 16 HYD HYD 3.5/90 24
 VERMONT YANKEE BWR 52 HYD HYD
 DRESDEN-1 BWR 55 HYD 15.24 259.1 CM/SEC
 DRESDEN-2 BWR 56 HYD 7.5 1.6-2.6

70/ 8
 70/ 8
 /
 77/ 2
 77/ 2
 3-5-1 77/ 2
 /
 8-3-(10) 72/ 1
 8-3-(10) 72/ 1
 8-16 72/ 9
 8-3-25 76/ 8
 8-3-32 75/ 3
 8-3-37 76/12
 A-2 70/ 5
 DNR V4 P94 62/
 DNR V7 P193 68/

** CONTROL ROD

PITCH MM

733280

JPDR-1 BWR 1 P=273.2 MM
 JPDR-2 BWR 2 P=273.2 MM
 TSURUGA BWR 3 P=305. MM
 ONAGAWA BWR 4 P=304.8 MM
 HAMAOKA-1 BWR 5 P=304.8 MM
 FUKUSIMA-2,3 BWR 7 P=304.8 MM
 FUKUSIMA-5 BWR 9 P=304.8 MM
 FUKUSIMA-4 BWR 10 P=304.8 MM
 FUKUSIMA-6 BWR 11 P=304.8 MM
 TOOKAI-2 BWR 12 P=304.8 MM
 HAMAOKA-2 BWR 13 P=304.8 MM
 TOMIOKA-1 BWR 14 P=305. MM
 KASHIWAZAKI BWR 15 P=304.8 MM
 VERMONT YANKEE BWR 52 P=304.8 MM
 BROWNS FERRY BWR 53 P=304.8 MM
 MILLSTON BWR 54 P=304.8 MM
 DRESDEN-2 BWR 56 P=304.8 MM
 OYSTER CREEK BWR 57 P=304.8 MM
 DUANE ARNOLD BWR 58 P=304.8 MM
 FUGEN ATR 81 P=480. MM

70/ 8
 70/ 8
 R-9,80-3-3 66/ 8
 8-3-(6) 70/ 5
 8-113 70/ 5
 82-2-3 P13 70/ 8
 8-3-(7) 71/ 2
 8-3-(7) 71/ 8
 8-3-(7) 72/ 1
 8-3-(7) 72/ 1
 8-96 72/ 9
 8-3-22 76/ 8
 8-3-26 75/ 3
 A-2 /
 GSK-19 69/ 2
 R-9 66/ 8
 R-9 66/ 8
 R-9 66/ 8
 A-2 P2 70/ 7
 105 /

** CONTROL CLUSTER NUMBER PER CORE PWR 733310

(1)NUMBER OF CONTROL ROD CLUSTER PER CORE
 (2)NUMBER OF PART LENGTH CONTROL ROD CLUSTER PER CORE
 NUMBER OF CLUSTERS OF EACH BANK
 (A) BANK A OF CONTROL-GROUP
 (B) BANK B OF CONTROL-GROUP
 (C) BANK C OF CONTROL-GROUP
 (D) BANK D OF CONTROL-GROUP
 (SA) BANK SA OF SHUT-DOWN-GROUP
 (SB) BANK SB OF SHUT-DOWN-GROUP
 (PL) PART LENGTH FOR POWER-DISTRIBUTION-ADJUSTMENT
 (1) (2) (A) (B) (C) (D) () (SA) (SB) () (PL)

MIHAMA-1	PWR	21	32												8-20	66/11
MIHAMA-1	PWR	21	29	4											BK80-4 P6	71/ 9
MIHAMA-2	PWR	22	29	4											BK80-4 P6	71/ 9
TAKAHAMA-2	PWR	23	45	8											8-20	70/ 5
GENKAI-1	PWR	24	29	4											8-20,8-144	70/ 5
TAKAHAMA-1	PWR	25	48	(5)											-14-	75/11
OOI-1,2	PWR	26	53	8											8-20	71/ 1
MIHAMA-3	PWR	27	48	5											8-20	71/ 8
IKATA-1	PWR	28	29	4											8-24	72/11
GENKAI-2	PWR	29	29	4	8	4	5	4		4	4		4		8-3-68	76/ 2
IKATA-2	PWR	30	29	4	8	4	5	4		4	4		4		8-3-65	76/ 5
SENDAI	PWR	31	48	5	8	8	8	8		8	8		5		8-3-77	76/ 4
BURLINGTON	PWR	71	53	CLUSTERS											GSK-19 P4	69/ 2
TURKEY POINT-3,4	PWR	72	45	8											BK80-4 P5	71/ 9
H.B.ROBINSON-2	PWR	73	45	8											BK80-4 P5	71/ 9
SURRY-1,-2	PWR	74	48	5											BK80-4 P5	71/ 9
BEAVER VALLEY	PWR	75	45	8											BK80-4 P5	71/ 9
NORTH ANNA-12	PWR	76	45	8											BK80-4 P 6	71/ 9
JOSEPH M.FARLEY	PWR	77	45	8											BK80-4 P 6	71/ 9

** CONTROL CLUSTER IN-CORE PATTERN

733312

1 2 3 4 5 6 7 8 9 10 11 12 13 *****PATTERN A
 A * * * * *
 B * * * * *
 C * * * * *
 D * * * * *
 E * * * * *
 F * * * * *
 G * * * * *
 H * * * * *
 I * * * * *
 J * * * * *
 K * * * * *
 L * * * * *
 M * * * * *

A = 8
 B = 4
 C = 5
 D = 4
 SA = 4
 SB = 4
 PL = 4
 TOTAL=33

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 *****PATTERN B
 A * * * * *
 B * * * * *
 C * * * * *
 D * * * * *
 E * * * * *
 F * * * * *
 G * * * * *
 H * * * * *
 I * * * * *
 J * * * * *
 K * * * * *
 L * * * * *
 M * * * * *
 N * * * * *
 P * * * * *
 R * * * * *

A = 8
 B = 8
 C = 8
 D = 8
 SA = 8
 SB = 8
 PL = 5
 TOTAL=53

GENKAI-2	PWR	29	PATTERN A
IKATA-2	PWR	30	PATTERN A
SENDAI	PWR	31	PATTERN B

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/

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** CONTROL CLUSTER CLADDING MATERIAL NUMBER SIZE 733320

CONTROL CLUSTER CLADDING
 (1) MATERIAL
 34S=304SS
 *1)=COLD 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)

			(1)	(2) NO.	(3) OD, MM.	(4) THICK MM.	(5) CM.	(6) CM	(7) CM		
MIHAMA-1	PWR	21	34S*1)16			0.482				BK80-4 P6	71/ 9
MIHAMA-2	PWR	22	34S*1)16			0.483				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)16 *2)	9.3	0.61 *3)	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-1	PWR	28	SUS*1)16 *2)	10.	0.5	360.		90.		8-23	72/11
GENKAI-2	PWR	29	34S*1)16	10.	0.5	360.		90.		8-3-43	76/ 2
IKATA-2	PWR	30	SUS*1)16 *2)	10.	0.5	360.		90.		8-3-40	75/ 5
SENDAI	PWR	31	SUS 24		0.5	360.		90.		8-3-47	76/ 5
BURLINGTON	PWR	71	34S 20 *2)	11.176	0.483	366.4	365.8			GSK-19 P4	69/ 2
TURKEY POINT-3,4	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-1	PWR	28	AG-IN-CD							8-24	72/11
GENKAI-2	PWR	29	AG-IN-CD 80-15-5							8-3-43	76/ 2
IKATA-2	PWR	30	AG-IN-CD 80-15-5							8-3-40	76/12
SENDAI	PWR	31	AG-IN-CD 80-15-5							8-3-47	76/ 5
BURLINGTON	PWR	71	CD-IN-AG 5-15-80							GSK-19	69/ 2
TURKEY POINT-3,4	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
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 / PERCENT OF FULL INSERTION)

(6)ONE STEP DISTANCE.(MM)

(7)POWER SOURCE.(VOLT)

(1)	(2)	(3)	(4)	(5)	(6)	(7)
NO.	TP.	TP.	CM/M	SEC	MM.	VOLT

MIHAMA-1	PWR	21	NO.=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	8-23
GENKAI-1	PWR	24	29	M.J	GR.	114.	ABOUT 1.7	8-24
							ABOUT 15.9	DC 125
TAKAHAMA-1	PWR	25	45	M.J	GR.	114.	BK80-2 P20	71/ 8
OOI-1,2	PWR	26	53	M.J	GR.	114.	ABOUT 2.0	8-23
MIHAMA-3	PWR	27	48	M.J	GR.	114.	ABOUT 2.0	8-23
IKATA-1	PWR	28	29	M.J	GR.	114.	ABOUT 2.0	8-26
GENKAI-2	PWR	29	29	M.J	GR.	114.	ABOUT 1.7	8-3-45
							ABOUT 16.	AC 260
IKATA-2	PWR	30	29	M.J	GR.	114.	1.7/85 PC	8-3-43
SENDAI	PWR	31	48	M.J	GR	114.	2.2(85P.C)	8-3-49
YANKEE	PWR	69	24	*1)		LT 2.0	AC 260	DNR V4 P36
SAXTON	PWR	70	6	*2)		LT 1.5		DNR V4 P50

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

(1)NUMBER

(2)DRIVE MECHANISM AT NORMAL OPERATION

DM1=ROLLER NUT

DM2=MAGNETIC JACK

DM3=RATCH TYPE MAGNETIC JACK

(3)HOLD UP DEVICE AT POWER LOSS

HD1=BRAKE(HOLD)

HD2=LOCKING DEVICE

(4)NORMAL DRIVE SPEED

CM/MINUTE

(5)POWER SOURCE FOR DRIVE

PS1=AC 440 VOLT 3-P

PS2=AC 260 VOLT

(1)	(2)	(3)	(4)	(5)
			CM/M	

MIHAMA-1	PWR	21	4	DM1	HD1	38		BK80-2 P20	71/ 8
MIHAMA-2	PWR	22	4	DM1	HD1	38		BK80-2 P20	71/ 8
TAKAHAMA-2	PWR	23	8	DM1	HD1	38	PS1	8-23	70/ 5
GENKAI-1	PWR	24	4	DM1	HD1	38	PS1	8-24	70/ 5
TAKAHAMA-1	PWR	25	8	DM1	HD1	38		BK80-2 P20	71/ 8
OOI-1,2	PWR	26	8	DM1	HD1	38	PS1	8-25	71/ 1
MIHAMA-3	PWR	27	5	DM1	HD1	38	PS1	8-25	71/ 8
IKATA-1	PWR	28	4	DM1	HD1	38	PS1	8-28	72/11
GENKAI-2	PWR	29	4	DM1	HD1	38	PS1	8-3-46	76/ 2
IKATA-2	PWR	30	4	DM1	HD1	38	PS1	8-3-43	75/ 5
SENDAI	PWR	31	5	DM3	HD2	38	PS2	8-3-50	76/ 5

** BURNABLE POISON MATERIAL CONTROL WORTH 733730

(1)CLADDING MATERIAL FOR BURNABLE POISON

CL1=STAINLESS STEEL

(2)NUMBER OF BURNABLE POISON

INITIAL/TORIKAE

(3)EFFECTIVE LENGTH OF BURNABLE POISON

M

(4)OUTER DIAMETER OF ABSORBER

MM

(5)OUTER DIAMETER OF CLADDING

MM

(6)POISON MATERIAL

BP1=HOOKEISAN GLASS

(7)CONTROL WORTH AT BOL

DELTA K

(8)CONTROL WORTH AT BEGINNING OR RELOAD CORE

(9)CONTROL WORTH AT EOL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
	NO.	M	MM	MM				

TAKAHAMA-2	PWR	23	CL1	816/	3.66	10	BP1	0.07 /	8-25,127	70/ 5	
TAKAHAMA-2	PWR	23	CL1	816/ 592	3.66	10	BP1	0.08 /L.08/.	-23-	76/ 4	
GENKAI-1	PWR	24	CL1	688/	3.6	10	BP1	/.	8-27,144	70/ 5	
GENKAI-1	PWR	24	CL1	704/ 584	3.6	10	BP1	0.07 /.	-16-	76/ 8	
TAKAHAMA-1	PWR	25	CL1	896/ 592	3.66	10	BP1	0.08 /L.08/.	-23-	76/ 4	
OOI-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-1	PWR	28	CL1	704/	3.6	10	BP1	0.07 /.	8-29,142	72/11	
GENKAI-2	PWR	29	CL1	704/	3.6	10.	11	BP1	0.07 /.	8-3-43,49	
IKATA-2	PWR	30	CL1	704/LT 704	3.6	10.	11	BP1	0.07 /.	76/ 2	
									8-3-4	76/12	
SENDAI	PWR	31	CL1	1072/LT1072	3.6	8.5	9.8	BP1	/.	8-3-48	76/ 5
YANKEE	PWR	69	NONE						DNR V4 P36	/	
SAXTON	PWR	70	NONE						DNR V4 P50	/	

** POISON CURTAIN MATERIAL NUMBER LENGTH WIDTH 734200

POISON CURTAIN

(1) MATERIAL

B.S=BORON SUS

*1)=NO POISON CURTAIN

*2)=3-REGION

*3)=SEE REV-1

(2) NUMBER

(3) LENGTH (MM)

(4) WIDTH (MM)

(5) THICK (MM)

(1)

PPM

(2)

NO.

(3)

MM.

(4)

MM.

(5)

MM

JPDR-1	BWR	1	930-1130	B.S	24	1667.	248	3.2		70/ 8
JPDR-2	BWR	2	930-1130	B.S	24	1667.	248	3.2		70/ 8
TSURUGA	BWR	3	*2)	B.S	124	3454.	216		R-9	66/ 8
TSURUGA	BWR	3		B.S	140				80-3-3 P28	70/ 5
ONAGAWA	BWR	4	5400	B.S	156	3590.			8-3-(11)	70/ 5
HAMAOKA-1	BWR	5		B.S	156	3590.			8-20	70/ 5
HAMAOKA-1	BWR	5	*1)						95-2-3	71/ 9
FUKUSIMA-1	BWR	6		B.S	196	3630.			82-3-3 P3	71/ 8
FUKUSIMA-1	BWR	6		B.S	172			(1970/9/21 OK)	70/ 9	
FUKUSIMA-2,3	BWR	7	*3)	B.S	248				REV-0	/
FUKUSIMA-2,3	BWR	7			0				82-2-3(RV-1)	70/
SHIMANE	BWR	8		B.S	172				89-8-2(R-1)	71/ 3
SHIMANE	BWR	8			50	(AT 1ST REFUEL)			8-14-(2)	75/ 7
SHIMANE	BWR	8			0	(ON AND AFTER 2ND REFUEL)			8-14-(2)	75/ 7
HAMAOKA-2	BWR	13	*1)							72/ 9
TOMIOKA-1	BWR	14	*1)							/
KASHIWAZAKI	BWR	15	*1)							/
TOMIOKA-2	BWR	16	*1)							76/12
VERMONT YANKEE	BWR	52		B.S	156				A-2	70/ 5
BROWNS FERRY	BWR	53	5700	B.S	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	4200,6500,4200	B.S	264	3632.	191.		R-9	66/ 8
DRESDEN-2	BWR	56	4200,6500,4200	B.S		3454.	216.		R-9	66/ 8
OYSTER CREEK	BWR	57	3000	B.S					R-9	66/ 8
DUANE ARNOLD	BWR	58		B.S	156				A-2 P3	70/ 7

** PRESSURE VESSEL

PRESSURE TEST

736000

(1) NORMAL WORKING PRESSURE

(2) HYDRAULIC TEST PRESSURE (ISI)

(2)=(JEAC 4205-1974) 5.2.2.2. SUIATSU SIKEN AT SURYOKU

(3) DESIGN PRESSURE (MAX. WORKING PRESSURE)

(4) MAX. ALLOWABLE PRESSURE

(5) TEST PRESSURE

(1)

(2)

(3)

(4)

(5)

PO

PO*1.1

PD

PD*1.1

PD*1.25

PO

PO*1.1

PD

PD*1.1

PD*1.25

KG/CM2G

KG/CM2G

KG/CM2G

KG/CM2G

KG/CM2G

SENDAI	PWR	31	157.	172.7	175.	192.5	218.8			76/11
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** PRESSURE VESSEL DESIGN-P OPERAT-P DESIGN-T OPERAT-T 736100

		---PRESSURE(KG/50CMG)-----			---TEMPERATURE(DEG C)---		
		WORKING	DESIGN	TEST	WORKING	DESIGN	TEST
JPDR-1	BWR	1	61.5	77.3		345.	JM-1654 P23 /
JPDR-2	BWR	2	61.5	77.3		343.	KON-6 P3 70/11
TSURUGA	BWR	3	70.3	88.		302.	80-3-2 70/ 6
ONAGAWA	BWR	4	70.7	87.9	286.	302.	8-3-(13) 70/ 5
HAMAOKA-1	BWR	5	70.7	87.9		302.	8-23 70/ 5
FUKUSIMA-1	BWR	6	70.7	87.9		302.	/
FUKUSIMA-2,3	BWR	7	70.7	87.9		302.	/
SHIMANE	BWR	8	70.7	87.9		302.	/
FUKUSIMA-5	BWR	9	70.7	87.9	286.	302.	8-3-(13) 71/ 2
FUKUSIMA-4	BWR	10	70.7	87.9	286.	302.	8-3-(13) 71/ 8
FUKUSIMA-6	BWR	11	71.7		216.		8-2-(23) 74/ 9
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
KASHIWAZAKI	BWR	15	70.7	87.9	286.	302.	8-4-12 75/ 3
TOMIOKA-2	BWR	16	70.7	87.9	286.	302.	8-8-14 76/12
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.		/
TAKAHAMA-1	PWR	25	.	175.			/
OOI-1,2	PWR	26	157.	175.	343.		8-28 71/ 1
MIHAMA-3	PWR	27	157.	175.	343.		8-28 71/ 8
IKATA-1	PWR	28		175.	343.		8-32 72/11
GENKAI-2	PWR	29	157.	175.	343.		8-4-22 76/ 2
IKATA-2	PWR	30	157.	175.	343.		8-4-19 75/ 5
SENDAI	PWR	31	157.	175.	343.		8-4-22 76/ 5
P 80 STANDARD	PWR	49	157.	175.	343.		77/ 5
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	BWR	55	71.4	87.9			DNR V4 P94 62/
DRESDEN-2	BWR	56	71.4	87.9	286.	302.	DNR V7 P194 68/
OYSTER CREEK	BWR	57		87.9	302.		R-9 66/ 8
DUANE ARNOLD	BWR	58		87.9	302.		A-2 P3 70/ 7
YANKEE	PWR	69	139.6	262.7			DNR V4 P36 61/
SAXTON	PWR	70	138.6	263.7			DNR V4 P50 61/
TURKEY POINT-3,4	PWR	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

MAIN NOZZLE

736120

(1A)NUMBER OF RECIRC. OUTLET NOZZLE
 (1B)POSITION OF RECIRC. OUTLET NOZZLE
 (2A)NUMBER OF RECIRC. INLET NOZZLE
 (2B)POSITION OF RECIRC. INLET NOZZLE
 (3A)NUMBER OF STEAM LINE NOZZLE
 (3B)POSITION OF STEAM LINE NOZZLE
 (4A)NUMBER OF FEED WATER INLET NOZZLE
 (4B)POSITION OF FEED WATER INLET NOZZLE
 LP=LOWER OF PV BODY
 MP=MIDDLE OF PV BODY
 UP=UPPER OF PV BODY
 (1A)(1B) (2A)(2B) (3A)(3B) (4A)(4B)

KASHIWAZAKI	BWR	15	2 LP	10 LP	4 UP	6 MP	9	75/ 3
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** PRESSURE VESSEL SIZE

736200

		(1)OVERALL HEIGHT.(M) (2)INNER DIAMETER.(M) (3)THICKNESS.(MM) SIDE WALL (4) TOP (5) BOTTOM						
		(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		KON.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
FUKUSIMA-1	BWR	6	19.0	4.8	160+5.56		R-9	70/ 5
FUKUSIMA-1	BWR	6	18.847	4.775				/
FUKUSIMA-2,3	BWR	7	22.0	5.57				70/ 5
SHIMANE	BWR	8	19.0	4.8	120			70/ 5
SHIMANE	BWR	8	19.514	4.793	117		GAKKAISI P38	77/ 4
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
TOOKAI-2	BWR	12	23.0	6.375			8-3-(13)	72/ 1
HAMAOKA-2	BWR	13	22.0	5.6			8-19	72/ 9
KASHIWAZAKI	BWR	15	22.0	6.4	160		8-4-12	75/ 3
TOMIOKA-2	BWR	16	22.0	6.4	160		8-4-14	76/12
MIHAMA-2	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
OOI-1,2	PWR	26	13.	4.4			8-28	71/ 1
MIHAMA-3	PWR	27	13.	4.			8-28	71/ 8
IKATA-1	PWR	28	11.5	3.3			8-32	72/11
GENKAI-2	PWR	29	11.2	3.3			8-4-22	76/ 2
IKATA-2	PWR	30	11.2(1)	3.35			8-4-19	75/ 5
SENDAI	PWR	31	12.1(1)	4.0			8-4-22	76/ 5
P. 80 STANDARD	PWR	49	12.1(1)	4.0				77/ 5
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/
OYSTER 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	PWR	69	9.60	2.7686	200		DNR V4 P36	61/
YANKEE	PWR	69	25.15 DIA	19.05 HIGH(WITH BIOLOGICAL SHILD)			DNR V4 P36	61/
SAXTON	PWR	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

(1) INITIAL NDT DEG C FLANGE PART
 (2) OTHER PARTS
 (3) FINAL NDT LT DEG C
 (4) H.AND.C. RATE C/H
 *1)=DESIGN VALUE

		(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
ONAGAWA	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
TOOKAI-2	BWR	12	- 12.	+ 4	32.	55	8-3-(13) 72/ 1
HAMAOKA-2	BWR	13	- 12.	+ 4	60.	55	8-19 72/ 9
KASHIWAZAKI	BWR	15	- 12.	+ 4.	32.	55.	8-4-12 75/ 3
TOMIOKA-2	BWR	16	- 12.	+ 4.	32.	55.	8-4-14 76/12
TAKAHAMA-2	PWR	23	- 6.7	*1)			8-29 72/ 1
GENKAI-1	PWR	24				55	8-30 70/ 5
OOI-1,2	PWR	26	- 6.7	*1)			8-29 71/ 1
MIHAMA-3	PWR	27	- 6.7	*1)			8-29 71/ 8
IKATA-1	PWR	28				55	8-32 72/11
GENKAI-2	PWR	29	- 12.			55.	8-4-22 76/ 2
IKATA-2	PWR	30	- 12.	*1)		55.	8-4-19 75/ 5
SENDAI	PWR	31	- 12.	*1)		55.	8-4-22 76/ 5

** PRESSURE VESSEL BASE OVERLAY MATERIAL 736400

(1)BASE 1 MATERIAL
 (2)BASE 2 MATERIAL
 (3)OVERLAY MATERIAL
 (4)STUD MATERIAL
 (5)SKIRT MATERIAL
 BS1=GENSIRYOKU HATUDEN-YOO MN.MO.NI.-KOOHAN 2-SHU SOOTOOHIN
 BS2=GENSIRYOKU HATUDEN-YOO TANKOOHIN 2-SHU SOOTOOHIN
 BS3=LOW ALLOY STEEL
 BS4=MN.MO.STEEL (ASTM A533 GR.B CL.1 SOOTOO
 BS5=GENSIRYOKU HATUDEN-YOO TANKOOHIN 3-SHU B SOOTOOHIN
 OV1=STAINLESS ST. ASTM-371-ER309 KAIRYOOGATA SOOTOO
 OV2=STAINLESS ST. AND HIGH NI ALLOY
 OV3=304SS(COBALT LT 0.2 PERCENT)
 OV4=SUS-27 SOOTOO
 MT1=GENSIRYOKU HATUDEN-YOO MN.MO.-KOOHAN 1-SHU
 MT2=N1.CR.MO. STEEL(ASTM A540 B23 SOUTOO)
 MT3=ALLOY STEEL
 MT4=LOW ALLOY HIGH TENSION STEEL
 MT5=LOW ALLOY HIGH TENSION STEEL (ASTM A540 B24 SOOTOO)
 (1) (2) (3) (4) (5)

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
ONAGAWA	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	BS1,BS2		OV1 MT1	8-3-(14) 71/ 2
FUKUSIMA-4	BWR	10	BS1,BS2		OV1 MT1	8-3-(14) 71/ 8
FUKUSIMA-6	BWR	11	BS1,BS2		OV1 MT1	8-3-(13) 72/ 1
TOOKAI-2	BWR	12	BS1,BS2		OV1 MT1	8-3-(13) 72/ 1
HAMAOKA-2	BWR	13	BS1,BS2		OV1	8-19 72/ 9
KASHIWAZAKI	BWR	15	BS1,BS2		OV2	8-4-12 75/ 3
TOMIOKA-2	BWR	16	BS1,BS2		OV2	8-4-14 76/12
MIHAMA-1	PWR	21	SA-302B			R-9 70/ 5
TAKAHAMA-2	PWR	23	MN.MO,ST	SUS		8-29 70/ 5
GENKAI-1	PWR	24	MN.MO,ST	SUS		8-30 70/ 5
OOI-1,2	PWR	26	BS3	OV3		8-29 71/ 1
MIHAMA-3	PWR	27	BS4(BODY AND LID)	OV4	MT2	8-29 71/ 8
IKATA-1	PWR	28	BS4(BOLT AND LID)	SUS	MT3	8-32 72/11
GENKAI-2	PWR	29	BS1,BS5	304SS	MT5	8-4-20 76/ 2
IKATA-2	PWR	30	BS1,BS5	SUS	MT4	8-4-19 75/ 5
SENDAI	PWR	31	BS1,BS5	304SS	MT5	8-4-20 76/ 5
MILLSTON	BWR	54	SA-302B	304SS	304SS	R-9 66/ 8
DRESDEN-1	BWR	55	CARBON ST WITH MO	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	PWR	69	CARBON STEEL	304SS		DNR V4 P36 61/
SAXTON	PWR	70	MULTILAYER DESIGN USING---			DNR V4 P50 61/
SAXTON	PWR	70	18PLATES 1/4 IN. THICK	ASTM A-212B MODIFIED CARBON STEEL		DNR V4 P50 61/
SAXTON	PWR	70	1PLATE 1/2 IN. THICK	ASTM A-246GR3 CLAD WITH		DNR V4 P50 61/
SAXTON	PWR	70		ASTM A-212B-FBØ BACKING MATERIAL		DNR V4 P50 61/
SAXTON	PWR	70		1/8 IN. THICK TYPE 304 STAINLESS STEEL		DNR V4 P50 61/

** PRESSURE VESSEL MATERIAL 736410

(1)KAGAMI(U,L),SIDE WALL(M,L)
 (1A)=JIS G3120 SQV2A OR JIS G3212 SFVV3
 (2)FLANGE(U,L),SIDE WALL(U)
 (2A)=JIS G3212 SFVV3
 (3)FILLER FOR WELDING
 (3A)=AUSTENITIC STAINLESS STEEL
 (4)HOUSING-TUBE-SUPPORT FOR CRDM
 (4A)=JIS G4903 NCF1TP
 (5)CRDM-HOUSING=FLANGE
 (5A)=JIS G3214 SUSF304
 (6)STUD BOLT AND NUT
 (6A)=JIS G4108 SNB24-3
 (7)TUBE-SUPPORT FOR INSTRUMENT
 (7A)=JIS G4901 FCF1B
 *NOTE (U)=UPPER, (M)=MIDDLE, (L)=LOWER

P 80 STANDARD PWR 49 (1A) TO (7A)

** 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)ESTMATE 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)
 (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		/	/
ONAGAWA	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
SHIMANE	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
KASHIWAZAKI	BWR	15		40	0.0362		750.	*1)	8-4-12	75/ 3
TOMIOKA-2	BWR	16		40	0.0362		750.	*1)	8-4-14	76/12
MIHAMA-1	PWR	21		40(30)					8-30	70/ 5
TAKAHAMA-2	PWR	23					700	*2)	8-19	72/ 9
OOI-1,2	PWR	26					900	*2)	8-140	70/ 5
MIHAMA-3	PWR	27					700	*2)	8-142	71/ 1
MIHAMA-3	PWR	27					*3			/
MIHAMA-3	PWR	27					*4		BK80-7 P3	71/ 5
IKATA-2	PWR	30		30	3.				8-4-19	75/ 5
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

- (1)TYPE TP1=TATE-GATA ZIKU-RYUU ENSHIN-GATA
 TP2=ZIKU-RYUU
 (2)NUMBER OF UNITS
 (3)MATERIAL MT1=STAINLESS STEEL
 MT2=SUS27TP
 (4)FLOW RATE STEAM T/H/UNIT
 (5)FLOW RATE WATER T/H/UNIT
 (6)FLOW RATE TOTAL T/H/UNIT
 (7)INLET QUALITY WEIGHT PERCENT (MEAN)
 (8)CARRY UNDER WEIGHT PERCENT OF RECIRC. FLOW
 -FLOW RATE T/H/UNIT-

(1) (2) (3) (4) (5) (6) (7) (8)
 NO. STEAM WATER TOTAL PC.

JPDR-2	BWR	2	TP1							KON-6 P2	70/11
ONAGAWA	BWR	4	TP2	106	MT1	27.8	184.2	212.		8-3-(15)	70/ 5
HAMAOKA-1	BWR	5	TP2	108	MT1	27.	184.	211.	13.	8-25,26	70/ 5
FUKUSIMA-1	BWR	6	TP1	109	MT2	23.1	177.0	200.1		MEMO P113	70/ 3
FUKUSIMA-5	BWR	9	TP2	151	MT1	30.	194.	224.	13.3	8-3-(16)	71/ 2
FUKUSIMA-4	BWR	10	TP2	151	MT1	30.	194.	224.	13.3	8-3-(16)	71/ 8
FUKUSIMA-6	BWR	11	TP1	225	MT1	30.	194.	224.	13.5	8-3-(15)	72/ 1
TOOKAI-2	BWR	12	TP1	225	MT1	30.	194.	224.	13.5	8-3-(15)	72/ 1
HAMAOKA-2	BWR	13	TP2	163	MT1	29.	189.	218.	13.2	8-21	72/ 9
KASHIWAZAKI	BWR	15	TP1	225	MT1	30.	190.	220.	.	8-3-84	75/ 3
TOMIOKA-2	BWR	16	TP1	225	MT1	30.	190.	220.	.	8-3-99	76/12

** STEAM DRYER NUMBER CAPACITY OPERATABLE TEMP 737410

---NUMBER--- CAPACITY MAX. OPERATABLE TEMP.

FUKUSIMA-1	BWR	6	14. ELEMENTS	2520,T/H	302. C	MEMO P113	70/ 3
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** STEAM DRYER TYPE INLET OUTLET WETNESS 737420

(1)TYPE TP1=WIRE MESH BAFFLE
 TP2=DIMPLE PLATE
 (2)MATERIAL MT1=STAINLESS STEEL
 MT2=SUS27TP
 (3)WETNESS(INLET) LE WEIGHT PERCENT
 (4)WETNESS(OUTLET) LE WEIGHT PERCENT / MAIN STEAM FLOW
 --WETNESS--
 (1) (2) (3) (4)

JPDR-2	BWR	2	TP1				KON-6 P2	70/11
ONAGAWA	BWR	4	TP2	MT1	0.1		8-3-(16)	70/ 5
HAMAOKA-1	BWR	5	TP2	MT1	10.	0.1	8-26	70/ 5
FUKUSIMA-1	BWR	6	TP2	MT2	11.6	0.1	MEMO P113	70/ 3
FUKUSIMA-5	BWR	9	TP2	MT1	10.	0.1	8-3-(16)	71/ 2
FUKUSIMA-4	BWR	10	TP2	MT1	10.	0.1	8-3-(16)	71/ 8
FUKUSIMA-6	BWR	11	TP2	MT1	10.	0.1	8-3-(15)	72/ 1
TOOKAI-2	BWR	12	TP2	MT1	10.	0.1	8-3-(15)	72/ 1
HAMAOKA-2	BWR	13	TP2	MT1	10.	0.1	8-22	72/ 9
KASHIWAZAKI	BWR	15	TP2	MT1		0.1	8-3-84	75/ 3
TOMIOKA-2	BWR	16	TP2	MT1		0.1	8-3-99	76/12

** JET PUMP NUMBER CAPACITY 738200

(1)NUMBER
 (2)CAPACITY TON/H/1
 (3)TOTAL HEAD M
 (4)DRIVE FLOW TON/H/1
 (5)DRIVE HEAD M
 (6)FLOW RATIO (6)=((2)-(4))/(4)=(TOT FLOW-DRIV.F)/(DRIV.F)
 (7)EFFICIENCY (7)=((2)*(3))/((4)*(5))=(TOT.F*TOT.H)/(DRIV.F*DRIV.H)
 (8)PRESSURE RATIO (8)=(3)/((5)-(3))=(TOT.H)/(DRIV.H-TOT.H)
 (9)JET PUMP EFFICIENCY(9)=(6)*(8)=FLOW VS DRIVE ENERGY RATIO
 (1) (2) (3) (4) (5) (6) (7) (8) (9)
 NO. T/H M T/H M FLOW.R PRES.R

TSURUGA	BWR	3	NONE									
ONAGAWA	BWR	4	16 1410	24.3	570.	131.	1.48	0.46	0.228	0.337	8-3-(17)	70/ 5
HAMAOKA-1	BWR	5	16 1430	24.2	603.	121.	1.37	0.473	0.249	0.342	8-27	70/ 5
FUKUSIMA-1	BWR	6	20 1090	19.9	545.	72.3	1.00		0.348	0.348	COM-M P124	70/ 3
FUKUSIMA-2,3	BWR	7	20									
SHIMANE	BWR	8	20									
FUKUSIMA-5	BWR	9	20 1690	25.1	756.	114.3	1.23	0.491	0.281	0.345	8-3-(17)	71/ 2
FUKUSIMA-4	BWR	10	20 1690	25.1	756.	114.3	1.23	0.491	0.281	0.345	8-3-(17)	71/ 8
FUKUSIMA-6	BWR	11	20 2420	24.1	805.	135.					8-3-(16)	72/ 1
FUKUSIMA-6	BWR	11	20 2415	28.2	735.	178.3	2.28	0.519	0.188	0.428	5105.085P1	76/ 9
TOOKAI-2	BWR	12	20 2420	24.1	805	135						
TOOKAI-2	BWR	12	20 2415	28.2	735.	178.3	2.28	0.519	0.188	0.428	5012.023P40	76/ 2
HAMAOKA-2	BWR	13	20 1780	24.8	785	115.	1.27	0.463	0.256	0.325	8-23	72/ 9
KASHIWAZAKI	BWR	15	20 2458	25.3	809	166.	2.04	0.463	0.176	0.359	8-3-84	75/ 3
TOMIOKA-2	BWR	16	20 2458	25.3	809.	166.	2.04	0.463	0.176	0.359	8-3-99	76/12
DRESDEN-2	BWR	56	20								DNR V7 P193	68/
OYSTER CREEK	BWR	57	NONE								R-9	66/ 8

** JET PUMP SIZE AND VELOCITY AT NOZZLE 738600

(1)NO. OF NOZZLES PER ONE JET PUMP
 (2)NOZZLE DIAMETER MM
 (3)FLOW VELOCITY AT NOZZLE M/SEC
 (4)THROAT DIAMETER MM
 (5)DIFFUSER LENGTH MM
 (6)DIAMETER OF MIXING CHAMBER MM
 (7)DIFFUSER OF MIXING CHAMBER MM
 (1) (2) (3) (4) (5) (6) (7)
 MM M/S MM MM MM DEG.

ONAGAWA	BWR	4	1	71.1	52.5	154.2	2362.				8-3-(17)	70/ 5
HAMAOKA-1	BWR	5	1	71.1	55.	155.2					8-27	70/ 5
FUKUSIMA-1	BWR	6	1	78.4	42.7	143.0	1490.				COM-M P124	70/ 3
FUKUSIMA-5	BWR	9	1	86.4	47.5	172.7	2300.				8-3-(17)	71/ 2
FUKUSIMA-4	BWR	10	1	86.4	47.5	172.7	2300.				8-3-(17)	71/ 8
FUKUSIMA-6	BWR	11	1	79.8	59.2	207.8					8-3-(16)	72/ 1
FUKUSIMA-6	BWR	11	5	33.	63.1	163.01(ID)		163.	5.		5105.085P2	76/ 9
TOOKAI-2	BWR	12	1	79.8	59.2	207.8					8-3-(17)	72/ 1
TOOKAI-2	BWR	12	5	33.	63.1			162.6	5.		5012.023P41	76/ 2
HAMAOKA-2	BWR	13	1	86.4	46.5	174.2(ID)					8-23	72/ 9
KASHIWAZAKI	BWR	15	5	33.	69.8			162.6			8-3-85	75/ 3
TOMIOKA-2	BWR	16	5	33.	69.8			162.6			8-3-100	76/12

** CRD-HPS		HYDRO		PRESSURE SYSTEM		PUMP		740000		
				(1)TYPE		TP1=YOKO-GATA UZUMAKI (MULTI STAGE)				
				(2)NUMBER						
				(3)CAPACITY		(3A)NORMAL OPERATION		LITRE/MIN		
						(3B)ACCUMULATOR CHARGE		LITRE/MIN		
						(4B)ACCUMULATOR CHARGE		M		
				(4)TOTAL HEAD		(4A)NORMAL OPERATION		M		
				(1)	(2)	(3A)	(3B)	(4A)	(4B)	
				TYPE	NO.	L/M	L/M	M	M	
KASHIWAZAKI	BWR	15	TP1	2	400.	750.	980.	820.	8-3-86	75/ 3
TOMIOKA-2	BWR	16	TP1	1+(1)	400.	750.	980.	820.	8-3-101	76/12

** CRD-HPS	HYDRO	PRESSURE SYSTEM				FILTER	740010	
				(1)NUMBER				
				(2)MESH SIZE	MICRON			
				(1) (2)				
				NO.				
KASHIWAZAKI	BWR	15	2	50.			8-3-86	75/ 3
TOMIOKA-2	BWR	16	2	50.			8-3-101	76/12

** CRD-HPS		PUMP		SUCTION FILTER		740020	
		(1)NUMBER					
		(2)MESH SIZE		MICRON			
		(1)	(2)				
		NO.					
KASHIWAZAKI	BWR	15	2	25.		8-3-86	75/ 3
TOMIOKA-2	BWR	16	2	25.		8-3-101	76/12

** RECIRC. SYSTEM		MAIN		PROPERTY		751120	
				P-VESSEL IN/OUT	RECIRC. FLOW	H.AND C.	COOLANT
				TEMPERATURE C		RATE	TOT.WEIGHT
JPDR-2	BWR	2			3.26E6 KG/H		
TSURUGA	BWR	3	276.4 C/277. C				152. CUBM
ONAGAWA	BWR	4	275.7 C/275.2 C	22.5 E6 KG/H	55. C/H		163. TON
HAMAOKA-1	BWR	5	276.1 C/275. C	22.9 E6 KG/H	55. C/H		196. CUBM
FUKUSIMA-1	BWR	6	276.1 C/276.7 C				
FUKUSIMA-5	BWR	9	278.3 C/277.8 C	33.8 E6 KG/H	55. C/H	286. CUBM	8-5-(1) 71/ 2
FUKUSIMA-4	BWR	10	276.3 C/275.9 C	33.8 E6 KG/H	55. C/H	286. CUBM	8-5-(1) 71/ 8
FUKUSIMA-6	BWR	11	278.9 C/278.3 C	48.3 E6 KG/H	55. C/H	402. CUBM	8-5-(2) 72/ 1
TOOKAI-2	BWR	12	278.9 C/278.3 C	48.3 E6 KG/H	55. C/H	402. CUBM	8-5-(2) 72/ 1
HAMAOKA-2	BWR	13	278. C/278. C	35.6 E6 KG/H	55. C/H	286. CUBM	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	
						STEAM-P	STEAM-T	STEAM-HUM.	FEED.W. TEMP		
						KG/S@CMG	DEG C	P.C.	DEG C		
ONAGAWA	BWR	4	70.7	286. C	.LT. 0.1			188.8 C	8-5-(1) 70/ 5		
HAMAOKA-1	BWR	5	70.7	286. C	.LT. 0.1			188.8 C	8-33 70/ 5		
FUKUSIMA-5	BWR	9	70.7	286. C	.LT. 0.1			195.8 C	8-5-(2) 71/ 2		
FUKUSIMA-4	BWR	10	70.7	286. C	.LT. 0.1			196.0 C	8-5-(2) 71/ 8		
FUKUSIMA-6	BWR	11	70.7	286. C	.LT. 0.1			215.6 C	8-5-(2) 72/ 1		
TOOKAI-2	BWR	12	70.7	286. C	.LT. 0.1			215.6 C	8-5-(2) 72/ 1		
HAMAOKA-2	BWR	13	70.7	286. C	.LT. 0.1			215.6 C	8-28 72/ 9		
FUGEN	ATR	81	68.	284. C				182. C	105-8-5-(1) 73/11		

** RECIRC. SYSTEM		PUMP AND LOOP		DESIGN-P DESIGN-T		751160	
				NOTE		DESIGN VALUE (OPERATION VALUE)	
				---PUMP---		-----PIPING-----	
						SUCTION	
						DES /DES	
						DES /DES	
						DES /DES	
						DES /DES	
						(PUMP-VALVE) (VALVE-P.VESSEL)	
JPDR-2	BWR	2			77.3/293.5		
ONAGAWA	BWR	4	105.5	302 C	87.9	302 C	98.5 302 C
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	8-5-(1) 70/ 5
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	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.	8-5-(2) 72/ 1
TOOKAI-2	BWR	12	116. /302	87.9/302		116.0/302.	8-5-(2) 72/ 1

PLANT PERFORMANCE DATA

DATE=77-08-12

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** RECIRC. SYSTEM	PUMP AND LOOP	TUBE	SIZE	751180					
			LOOP-PIPING NO. OD	PV-INLET-PIPE NO. OD		HEADER OD			
JPDR-1	BWR	1	NONE						70/ 8
JPDR-2	BWR	2	2	406.4/323.85 (SUCTION/DERIVER)					70/11
TSURUGA	BWR	3	3	660. MM			R-9		66/ 8
ONAGAWA	BWR	4	2	560. MM	8. 270. MM	410. MM	8-5-(2)		70/ 5
HAMAOKA-1	BWR	5	2	560. MM	8. 250. MM	406. MM	8-33		70/ 5
FUKUSIMA-1	BWR	6	2	610. MM					70/ 5
FUKUSIMA-2,3	BWR	7	2	712. MM					70/ 5
SHIMANE	BWR	8	2	610. MM					70/ 5
FUKUSIMA-5	BWR	9	2	712. MM	10. 320. MM		8-5-(2)		71/ 2
FUKUSIMA-4	BWR	10	2	712. MM	10. 320. MM		8-5-(2)		71/ 8
FUKUSIMA-6	BWR	11	2	610. MM	10. 320. MM		8-5-(2)		72/ 1
TOOKAI-2	BWR	12	2	610. MM	10. 320. MM		8-5-(2)		72/ 1
HAMAOKA-2	BWR	13	2	710. MM	10. 320. MM	560. MM	8-28		72/ 9
KASHIWAZAKI	BWR	15	0.56M(ID)*23MM(T),	0.28M(ID)*17MM(T)	SUS		8-4-13		75/ 3
TOMIOKA-2	BWR	16	0.56M(ID)*23MM(T),	0.28M(ID)*17MM(T)	SUS		8-4-15		76/12
VERMONT YANKEE	BWR	52	2	711. MM			A-2 P3		70/ 5
MILLSTON	BWR	54	2	711. MM			R-9		66/ 8
DRESDEN-2	BWR	56	2	711. MM			R-9		66/ 8
OYSTER CREEK	BWR	57	2	711. MM			R-9		66/ 8
DUANE ARNOLD	BWR	58	2	559. MM			A-2 P3		70/ 5
FUGEN	ATR	81	2				105-8-3-(2)		73/11

** RECIRC. SYSTEM	(PUMP)	VALVE	NUMBER	SIZE	752220					
		(1)TYPE			TP1=SIKIRI BEN TP2=MOTOR OPERATED VALVE TP3=MOTOR OPERATED VALVE(SIKIRI) TP4=BALL VALVE					
		(2)NUMBER								
		(3)SIZE		MM						
		(4)MATERIAL OF BODY			SUS=STAINLESS STEEL					
		(5)MATERIAL OF SHEET			MS1=STERITE					
		(6)DESIGN PRESSURE OF INLET-VALVE						KG/CM2G		
		(7)DESIGN PRESSURE OF LUTLET-VALVE						KG/CM2G		
		(7)DESIGN PRESSURE OF OUTLET-VALVE						KG/CM2G		
		(8)DESIGN TEMPERATURE INLET AND OUTLET VALVE						DEG C		
		(1) (2) (3) (4) (5) (6) (7) (8)								
		TYPE NO. SIZE BODY								
			MM			--(KG/CM2G)--		C		
JPDR-2	BWR	2	TP1	2*2						70/11
ONAGAWA	BWR	4	TP2	2*2	560. SUS MS1	84.4	96.0	302.	8-5-(3)	70/ 5
ONAGAWA	BWR	4				87.9	98.5	302.		70/ 8
HAMAOKA-1	BWR	5	TP3	2*2	560. SUS MS1				8-34	70/ 5
FUKUSIMA-5	BWR	9	TP2	2*2	712. SUS MS1	96.0	96.0	302.	8-5-(3)	71/ 2
FUKUSIMA-4	BWR	10	TP2	2*2	712. SUS MS1	96.0	96.0	302.	8-5-(3)	71/ 8
FUKUSIMA-6	BWR	11	TP2	2*2	610. SUS MS1	87.9	116.	302.	8-5-(3)	72/ 1
TOOKAI-2	BWR	12	TP2	2*2	610. SUS MS1	87.9	116.	302.	8-5-(3)	72/ 1
HAMAOKA-2	BWR	13	TP2	2*2	710. SUS MS1				8-29	72/ 9
KASHIWAZAKI	BWR	15	TP4	2	610. SUS	116.		302.	8-4-13	75/ 3
TOMIOKA-2	BWR	16	TP4	2	610. SUS	116.		302.	8-4-15	76/12

752410

TYPE	NO.	CAPACITY TON/H	-(KG/CM2G)-	C	C
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752430

JPRD-2	BWR	2	36.						335*2		KON-6 P4,18	70/11	
ONAGAWA	BWR	4	164.	71.5	107.	2380.*2	SUS	SUS	SUS	2380*2	1410.	8-5-(4)	70/ 5
HAMAOKA-1	BWR	5	168.	71.6	107.	2440.*2	SUS	SUS	SUS	2440*2	1680.	8-36	70/ 5
FUKUSIMA-5	BWR	9	152.	72.6		4100.*2	SUS	SUS	SUS	4100*2	1410.	8-5-(5)	71/ 2
FUKUSIMA-4	BWR	10	152.	72.6			SUS	SUS	SUS	4100*2	1410.	8-5-(5)	71/ 8
FUKUSIMA-6	BWR	11	245.4	70.7			SUS	SUS	SUS	(9000*2)	1485.	8-5-(4)	72/ 1
TOOKAI-2	BWR	12	245.4	70.7			SUS	SUS	SUS	(9000*2)	1485.	8-5-(4)	72/ 1
HAMAOKA-2	BWR	13	162.	71.5			SUS	SUS	SUS	4220*2	1680.	8-30	72/ 9
KASHIWAZAKI	BWR	15	240.				SUS	SUS	SUS	(9000*2)	1485.	8-4-13	75/ 3
TOMIOKA-2	BWR	16	240.				SUS	SUS	MT2	6700*2	1485.	8-4-15	76/12
DRESDEN-2	BWR	56	TYPE OF MOTOR=VERTICAL,SOLID,SHAFT DROP PROOF INDUCTION								DNR V7 P193	68/	
DRESDEN-2	BWR	56	MOTORS DESIGNED FOR VARIABLE FREQUENCY								DNR V7 P193	68/	
DRESDEN-2	BWR	56	POWER SUPPLY								DNR V7 P193	68/	

** M.STEAM TUBE NUMBER SIZE AND DESIGN=P 753220

(1)NUMBER OF MAIN STEAM TUBES
 (2)OUTER DIA. OF TUBE MM
 (3)DESIGN PRESSURE KG/CM2G
 (TS)=TURBINE SYSTEM
 (DS)=DUMP CONDENSER SYSTEM
 (4)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4)
 NO. OD DES.P
 MM KG/CM2G

JPDR-2	BWR	2	219.1	77.3(TS)		KON-6 P6	70/11
JPDR-2	BWR	2	216.3	77.3(DS)		KON-6 P6	70/11
ONAGAWA	BWR	4	4 510.	87.9(REV.1)		8-5-(4)	70/ 5
HAMAOKA-1	BWR	5	4 510.	84.4		8-36	70/ 5
FUKUSIMA-1	BWR	6	4 406.				/
FUKUSIMA-2,3	BWR	7	4 610.				/
SHIMANE	BWR	8	4 406.				/
FUKUSIMA-5	BWR	9	4 610.	84.4		8-5-(5)	71/ 2
FUKUSIMA-4	BWR	10	4 610.	84.4		8-5-(5)	71/ 8
FUKUSIMA-6	BWR	11	4 660.	87.9		8-5-(5)	72/ 1
TOOKAI-2	BWR	12	4 660.	87.9		8-5-(5)	72/ 1
HAMAOKA-2	BWR	13	4 610.	87.9		8-30	72/ 9
KASHIWAZAKI	BWR	15	4 590(ID)*33(T)		MT1	8-4-15	75/ 3
TOMIOKA-2	BWR	16	4 590(ID)*33(T)		MT1	8-4-17	76/12
VERMONT YANKEE	BWR	52	4 457.			A-2	70/ 5
DUANE ARNOLD	BWR	58	4 508.			A-2 P3	70/ 7
FUGEN	ATR	81	2 410.	82.		105-8-5-(3)	73/11

** M.STEAM FLOW LIMITER TYPE NUMBER 753310

--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
FUKUSIMA-5	BWR	9	VENTURI			MEMO P145	70/ 3
FUKUSIMA-4	BWR	10	VENTURI			8-5-(5)	71/ 2
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
KASHIWAZAKI	BWR	15			*200PC	8-4-15	75/ 3
TOMIOKA-2	BWR	16			*200PC	8-4-17	76/12

** M.STEAM FLOW LIMITER P-LOSS SIZE 753320

FLOW-METER PRESSURE LOSS -----SIZE (IN MM)-----
 ACCURACY AT RATED FLOW 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
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** M.STEAM FLOW LIMITER MATERIAL 753330

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
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** M.STEAM ISOLATE VALVE NUMBER DESIGN=P DESIGN-T 753420

(1)TYPE TP1=BALL VALVE
 (2)NUMBER
 (3)DESIGN PRESSURE KG/CM2G
 (4)DESIGN TEMPERATURE C
 (5)DRIVE MECHANISM DV1=AIR
 DV2=AIR AND SPRING
 DV3=AIR(OUTER), NYTROGEN(INNER)
 DV4=N2GAS, OR (AIR AND SPRING)
 (6)SHUT OFF SPEED FROM/TO SEC
 (7)LEAK RATE LT PERCENT/DAY
 A= THIS RATE IS DEFINED AS VOLUME RATIO (LEAKED-STEAM-VOLUME)
 VS. (STEAM-PHASE-VOLUME IN PRESSURE VESSEL) PER UNIT TIME
 AT THE MINIMUM SETTING PRESSURE OF LELEAFE VALVE.
 LEAKED-STEAM-VOLUME IS AS TO BE SATURATED STEAM.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
		P	C		SEC	

JPDR-2	BWR	2		NO.=2(TS)+1(DS)			KON-6 P6	70/11
ONAGAWA	BWR	4	2*4	87.9 302	DV1		8-5-(5)	70/ 5
HAMAOKA-1	BWR	5	2*4	87.9 302	DV1		8-37	70/ 5
FUKUSIMA-1	BWR	6	TP1 2*4	87.9 302	DV2	3.0/10.	MEMO P151	70/ 3
FUKUSIMA-2,3	BWR	7	2*4					70/ 5
SHIMANE	BWR	8	2*4					70/ 5
FUKUSIMA-5	BWR	9	2*4	87.9 302	DV1		8-5-(6)	71/ 2
FUKUSIMA-4	BWR	10	2*4	87.9 302	DV1		8-5-(6)	71/ 8
FUKUSIMA-6	BWR	11	2*4	87.9 302	DV1		8-5-(6)	72/ 1
TOOKAI-2	BWR	12	2*4	87.9 302	DV1		8-5-(6)	72/ 1
HAMAOKA-2	BWR	13	2*4	87.9 302	DV3		8-31	72/ 9
KASHIWAZAKI	BWR	15	TP1 2*4	87.9 302	DV4	3.0/4.5 10(A)	8-4-14	75/ 3
TOMIOKA-2	BWR	16	TP1 2*4	87.9 302	DV4	3.0/4.5 10(A)	8-4-16	76/12
FUGEN	ATR	81	4	82. 296	DV1		105-8-5(6)	73/11

** M.STEAM ISOLATE VALVE P-LOSS RATED FLOW 753430

--PRESSURE LOSS-- -----RATED FLOW-----

FUKUSIMA-1	BWR	6	LE 0.42 KG/SQCM	608.	T/H(AT 70.4 KG/SQCMG)	MEMO P151	70/ 3
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** M.STEAM ISOLATE VALVE SHUT-OFF TIME SET POINT 753440

SHUT-OFF TIME SHUT-OFF-SET-POINT DRIVER-AIR-
ADJUSTABLE=WIDTH PRESSURE

FUKUSIMA-1	BWR	6	FROM 3. TO 10.SEC	120.PC/RATED-CURRENT	6.3 KG/SQCMG	MEMO P151	70/ 3
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** M.STEAM ISOLATE VALVE CONTROL SOURCE 753450

FUKUSIMA-1	BWR	6	AC AND DC			MEMO P151	70/ 3
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** M.STEAM 3RD VALVE TYPE NO. LEAK RATE 753500

(1)TYPE
 (2)NUMBER
 (3)DESIGN PRESSURE
 (4)DESIGN TEMPERATURE
 (5)DRIVE MECHANISM
 (6)SHUT OFF TIME
 (7)LEAK RATE (PERCENT/DAY)
 A=THIS RATE IS DEFINED AS THE VOLUME RATIO,(LEAKED-STEAM-VOLUME)
 VS.(STEAM-PHASE-VOLUME IN PRESSURE VESSEL) PER UNIT TIME.
 LEAK-STEAM-VOLUME IS TO BE SATURATED-STEAM.

(1)	(2)	(3)	(4)	(5)	(6)	(7)
NO.		KG/SQCMG	C		MIN.	PC/D

TOMIOKA-1	BWR	14	4	87.9 302.	MOTOR	2 10.(A)	8-5-4 76/ 8
KASHIWAZAKI	BWR	15	4	87.9 302.	MOTOR	2 10.(A)	8-4-16 75/ 3
TOMIOKA-2	BWR	16	4	87.9 302.	MOTOR	2 10.(A)	8-4-18 76/12

** SAFETY VALVE TYPE NUMBER 753620

(1)TYPE

TP1=SPRING
 TP2=SPRING(IF ACT AS SAFETY VALVE)
 TP3=PISTON(IF ACT AS RELIEF VALVE)
 TP4=PISTON(IF ACT AS REVAB)
 TP5=PISTON(IF ACT AS PRT)
 TP6=SPRING(WITH ACTUATOR)

(2)NUMBER

(1) (2)
 NO.

JPDR-2	BWR	2	TP1	2	KON-6 P506	/
ONAGAWA	BWR	4	TP1	2	8-5-(5)	70/ 5
HAMAOKA-1	BWR	5	TP1	2	8-38	70/ 5
FUKUSIMA-5	BWR	9	TP1	3	8-5-(7)	71/ 2
FUKUSIMA-4	BWR	10	TP1	3	8-5-(7)	71/ 8
FUKUSIMA-6	BWR	11	TP2	18	8-5-(6)	72/ 1
TOOKAI-2	BWR	12	TP2	18	8-5-(7)	72/ 1
HAMAOKA-2	BWR	13	TP2	13	8-32	72/ 9
TOMIOKA-1	BWR	14	TP6	18	8-5-2	76/ 8
KASHIWAZAKI	BWR	15	TP2	18	8-4-14	75/ 3
KASHIWAZAKI	BWR	15	TP3	(18)	8-4-14	75/ 3
KASHIWAZAKI	BWR	15	TP4	(16 OF 18) 80.PC	8-4-14	75/ 3
KASHIWAZAKI	BWR	15	TP5	(12 OF 18) 60.PC	8-4-14	75/ 3

** SAFETY VALVE SET PRESSURE CAPACITY 753640

SET PRESSURE CAPACITY

JPDR-2	BWR	2	93.442 T/H	/
JPDR-2	BWR	2	91.773 T/H	/
ONAGAWA	BWR	4	87.2 KG/SQCMG	GE 15 PC 440 T/H/2
HAMAOKA-1	BWR	5	87.2 KG/SQCMG	GE 15 PC
FUKUSIMA-5	BWR	9	87.2 KG/SQCMG	19.9 PC/TOTAL STEAM FLOW
FUKUSIMA-4	BWR	10	87.2 KG/SQCMG	19.9 PC/TOTAL STEAM FLOW
FUKUSIMA-6	BWR	11	85.1(4),85.8(4),86.5(4),87.2(4),87.9(2)	KG/SQCMG(NO.)
TOOKAI-2	BWR	12	85.1(4),85.8(4),86.5(4),87.2(4),87.9(2)	KG/SQCMG(NO.)
HAMAOKA-2	BWR	13	CAPACITY=80.PC/TOTAL STEAM/(13)	
TOMIOKA-1	BWR	14	79.4(2),82.6(4),83.3(4),84.0(4),84.7(4)	KG/SQCMG(NO.)
TOMIOKA-1	BWR	14	387 / 402 / 405 / 409 / 412	T/H
KASHIWAZAKI	BWR	15	79.4(2),82.6(4),83.3(4),84.0(4),84.7(4)	KG/SQCMG(NO.)
KASHIWAZAKI	BWR	15	387 / 402 / 405 / 409 / 412	T/H
TOMIOKA-2	BWR	16	79.4(2),82.6(4),83.3(4),84.0(4),84.7(4)	KG/SQCMG(NO.)
TOMIOKA-2	BWR	16	387 / 402 / 405 / 409 / 412	T/H

** SAFETY VALVE FOR PRESSURE PWR 753660

(1)TYPE

TP1=SPRING
 TP2=KANZEN MIPPEI POP TYPE

(2)NUMBER

(3)SET PRESSURE

KG/CM2G

(4)CAPACITY

TON/H/1

(5)MATERIAL

MT1=STAINLESS STEEL

(6)MAX. WORKING TEMP.

DEG C

(1) (2) (3) (4) (5) (6)
 TYPE NO. S.P T/H MAT C

TAKAHAMA-2	PWR	23	TP2		8-49	70/ 5
GENKAI-1	PWR	24	TP1	2 175.	8-55	70/ 5
OOI-1,2	PWR	26	TP2		8-49	71/ 1
MIHAMA-3	PWR	27	TP2		8-49	71/ 8
IKATA-1	PWR	28	TP1	2 175.	8-55	72/11
GENKAI-2	PWR	29	TP1	2 175. 142. MT1	8-4-27	76/ 2
IKATA-2	PWR	30	TP1	2 175. 142. MT1	8-4-24	76/12
SENDAI	PWR	31	TP1	3 175. 157.	8-4-27	76/ 5
P 80 STANDARD	PWR	49	TP1	3 175. 156.5 MT1 360		77/ 5

** RELIEF VALVE	TYPE	NUMBER	753820		
	(1)TYPE		TP1=SENKUBEN SIKI		
			TP2=SPRING TYPE(WITH ACTUATOR)		
	(2)NUMBER		NT1=ALL SAFETY VALVES ARE USED AS RELIEF VALVE BY ACTUATOR		
	(3)ACTUATOR		A1=BY COMPRESSED AIR		
			A2=BY COMPRESSED NYTROGEN		
	(1) TYPE	(2) NO.	(3)		
ONAGAWA	BWR	4	6	8-5-(6)	70/ 5
HAMAOKA-1	BWR	5	6	8-38	70/ 5
FUKUSIMA-5	BWR	9	TP1 8	8-5-(7)	71/ 2
FUKUSIMA-4	BWR	10	TP1 8	8-5-(7)	71/ 8
FUKUSIMA-6	BWR	11	12 A1	8-5-(7)	72/ 1
TOOKAI-2	BWR	12	12 A1	8-5-(7)	72/ 1
HAMAOKA-2	BWR	13	9 A2	8-32	72/ 9
KASHIWAZAKI	BWR	15	TP2 18(NT1)	8-4-14	75/ 3
TOMIOKA-2	BWR	16	TP2 18(NT1) A2	8-4-16	76/12

** RELIEF VALVE	SET	PRESSURE	753840		
		LOW-PRESSURE	HIGH-PRESSURE	MED.-PRESSURE	
ONAGAWA	BWR	4	75.9 KG/SQCMG	77.3 KG/SQCMG	76.6 KG/SQCMG
HAMAOKA-1	BWR	5	75.9 KG/SQCMG	77.3 KG/SQCMG	76.6 KG/SQCMG
FUKUSIMA-5	BWR	9	75.9 KG/SQCMG	76.6 KG/SQCMG	77.4 KG/SQCMG
FUKUSIMA-4	BWR	10	78.0 KG/SQCMG	78.7 KG/SQCMG	79.5 KG/SQCMG
FUKUSIMA-6	BWR	11	78.0(4),	78.8(4),	79.4(3)
TOOKAI-2	BWR	12	78.0(4),	78.8(4),	79.4(3)
HAMAOKA-2	BWR	13	78.0(3)	78.7(3)	79.4(3)
TOMIOKA-1	BWR	14	75.2(2),75.9(4),76.6(4),77.3(4)/78.0(4)	KG/SQCMG(NO.)	
KASHIWAZAKI	BWR	15	75.2(2),75.9(4),76.6(4),77.3(4),78.0(4)	KG/SQCMG(NO.)	
KASHIWAZAKI	BWR	15	356 / 359 / 362 / 366 / 369	T/H	
TOMIOKA-2	BWR	16	75.2(2),75.9(4),76.6(4),77.3(4),78.0(4)	KG/SQCMG(NO.)	
TOMIOKA-2	BWR	16	356 / 359 / 362 / 366 / 369	T/H	

** RELIEF VALVE	CAPACITY	753860		
ONAGAWA	BWR	4	CAP.= GE 60PC 1740.T/H	70/ 5
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)
FUKUSIMA-4	BWR	10	CAP.= 65.2 PC (85.1 PC WITH SAFETY VALVE)	8-5-(6)
FUKUSIMA-6	BWR	11	(80. PC WITH SAFETY VALVE)	8-5-(6)
TOOKAI-2	BWR	12	(80. PC WITH SAFETY VALVE)	8-5-(7)
KASHIWAZAKI	BWR	15	CAP.= GE 80PC (ACT AS REVAB) 16 VALVES AMONG 18	75/ 3
KASHIWAZAKI	BWR	15	CAP.= GE 60PC (ACT AS PRT) 12 VALVES AMONG 12	8-4-9

** RELIEF VALVE	FOR	PRESSURE	753880		
		(1)TYPE	TP1=AIR OPERATED VALVE		
		(2)NUMBER			
		(3)SET PRESSURE	KG/CM2G		
		(4)MATERIAL	MT1=STAINLESS STEEL		
		(5)MAX. WORKING PRESSURE	KG/CM2G		
		(6)MAX. WORKING TEMP.	DEG C		
		(1) (2) (3) (4) (5) (6)			
		TYPE NO. S.P MAT W.P C			
GENKAI-1	PWR	24	TP1 2 164.	8-55	70/ 5
IKATA-1	PWR	28	TP1 2 164.	8-55	72/11
GENKAI-2	PWR	29	TP1 2 MT1	8-4-27	76/ 2
IKATA-2	PWR	30	TP1 2 MT1	8-4-24	76/12
SENDAI	PWR	31	TP1 2	8-4-27	76/ 5
P 80 STANDARD	PWR	49	TP1 2(3) MT1 175 360	()=OPT.B	77/ 5

** SPRAY VALVE	FOR	PRESSURE	753890		
		(1)TYPE	TP1=AIR OPERATED VALVE		
		(2)NUMBER			
		(3)DESIGN PRESSURE	KG/CM2G		
		(4)DESIGN TEMPERATURE	DEG-C		
		(5)MATERIAL	MT1=STAINLESS STEEL		
		(1) (2) (3) (4) (5)			
		NO, KG/CM2G C			
GENKAI-2	PWR	29	TP1 2 MT1	8-4-27	76/ 2
IKATA-2	PWR	30	TP1 2 MT1	8-4-24	76/12
SENDAI	PWR	31	TP1 2 175, 343, MT1	8-4-27	76/ 5
P 80 STANDARD	PWR	49	TP1 2 175, 343, MT1		77/ 5

** M.STEAM SYSTEM

COMPONENTS

PWR

755000

(1)MAIN STEAM TUBE 755010
 (2)MAIN STEAM ISOLATION VALVE 755030
 (3)MAIN STEAM CHECK VALVE 755050
 (4)MAIN STEAM DUMP VALVE 755070
 (5)MAIN STEAM RELIEF VALVE 755090
 (6)MAIN STEAM SAFETY VALVE 755110

** M.STEAM SYSTEM MAIN

STEAM TUBE

PWR

755010

(1)ID OF TUBE MM
 (2)THICKNESS OF TUBE MM
 (3)MATERIAL MT1=CARBON STEEL
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (1) (2) (3) (4) (5)
 MM MM MAT. KG/CM2G C

	PWR	29	650.	30.	MT1	76.3	291.	8-9-17	76/ 2
GENKAI-2	PWR	30	650.	30.	MT1	76.3	291.	8-9-17	75/ 5
IKATA-2	PWR	31	740.	35.	MT1	76.3	291.	8-9-18	76/ 5
SENDAI									

** M.STEAM SYSTEM

M.STEAM ISOLATE VALVE

PWR

755030

(1)TYPE TP1=SWING DISK TYPE
 (2)NUMBER
 (3)DESIGN PRESSURE KG/CM2G
 (4)DESIGN TEMPERATURE DEG-C
 (5)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5)
 NO. KG/CM2G C

	PWR	29	TP1	2	76.3	291.	MT1	8-9-17	76/ 2
GENKAI-2	PWR	30	TP1	2	76.3	291.	MT1	8-9-17	76/12
IKATA-2	PWR	31	TP1	3	76.3	291.	MT1	8-9-18	76/ 5
SENDAI									

** M.STEAM SYSTEM

M.STEAM CHECK VALVE

PWR

755050

(1)TYPE TP1=SWING CHECK TYPE
 (2)NUMBER
 (3)DESIGN PRESSURE KG/CM2G
 (4)DESIGN TEMPERATURE DEG-C
 (5)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5)
 NO. KG/CM2G C

	PWR	29	TP1	2	76.3	291.	MT1	8-9-17	76/ 2
GENKAI-2	PWR	30	TP1	2 <td>76.3</td> <td>291.</td> <td>MT1</td> <td>8-9-17</td> <td>76/12</td>	76.3	291.	MT1	8-9-17	76/12
IKATA-2	PWR	31	TP1	3 <td>76.3</td> <td>291.</td> <td>MT1</td> <td>8-9-18</td> <td>76/ 5</td>	76.3	291.	MT1	8-9-18	76/ 5
SENDAI									

** M.STEAM SYSTEM

M.STEAM DUMP VALVE

PWR

755070

(1)TYPE TP1=AIR OPERATED BALL VALVE
 (2)NUMBER
 (3)DIAMETER
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)MATERIAL MT1=LOW CARBON STEEL
 MT2=CARBON STEEL
 (1) (2) (3) (4) (5) (6)
 NO. KG/CM2G C

	PWR	29	TP1	8	68	76.3	291	MT1	8-9-17,18	76/ 2
GENKAI-2	PWR	30	TP1	8 <td>68 <td>76.3</td> <td>291 <td>MT2 <td>8-9-17</td> <td>76/12</td> </td></td></td>	68 <td>76.3</td> <td>291 <td>MT2 <td>8-9-17</td> <td>76/12</td> </td></td>	76.3	291 <td>MT2 <td>8-9-17</td> <td>76/12</td> </td>	MT2 <td>8-9-17</td> <td>76/12</td>	8-9-17	76/12
IKATA-2	PWR	31	TP1	8 <td>88 <td></td> <td></td> <td></td> <td>8-9-18,19</td> <td>76/ 5</td> </td>	88 <td></td> <td></td> <td></td> <td>8-9-18,19</td> <td>76/ 5</td>				8-9-18,19	76/ 5
SENDAI										

** M.STEAM SYSTEM

M.STEAM RELIEF VALVE

PWR

755090

(1)TYPE TP1=AIR OPERATED BALL VALVE
 (2)NUMBER
 (3)DIAMETER
 (4)CAPACITY TON/H/1
 (5)DESIGN PRESSURE KG/CM2G
 (6)DESIGN TEMPERATURE DEG-C
 (7)MATERIAL MT1=LOW CARBON STEEL
 MT2=CARBON STEEL
 (1) (2) (3) (4) (5) (6) (7)
 NO. T/H/1 KG/CM2G C

	PWR	29	TP1	2	68	170	76.3	291	MT1	8-9-18	76/ 2
GENKAI-2	PWR	30	TP1	2 <td>68 <td>170 <td>76.3</td> <td>291 <td>MT2 <td>8-9-18</td> <td>76/12</td> </td></td></td></td>	68 <td>170 <td>76.3</td> <td>291 <td>MT2 <td>8-9-18</td> <td>76/12</td> </td></td></td>	170 <td>76.3</td> <td>291 <td>MT2 <td>8-9-18</td> <td>76/12</td> </td></td>	76.3	291 <td>MT2 <td>8-9-18</td> <td>76/12</td> </td>	MT2 <td>8-9-18</td> <td>76/12</td>	8-9-18	76/12
IKATA-2	PWR	31	TP1	3 <td>68 <td>183 <td>76.3</td> <td>291 <td>MT1 <td>8-9-19</td> <td>76/ 5</td> </td></td></td></td>	68 <td>183 <td>76.3</td> <td>291 <td>MT1 <td>8-9-19</td> <td>76/ 5</td> </td></td></td>	183 <td>76.3</td> <td>291 <td>MT1 <td>8-9-19</td> <td>76/ 5</td> </td></td>	76.3	291 <td>MT1 <td>8-9-19</td> <td>76/ 5</td> </td>	MT1 <td>8-9-19</td> <td>76/ 5</td>	8-9-19	76/ 5
SENDAI											

** M.STEAM SYSTEM M.STEAM SAFETY VALVE PWR 755110

(1)TYPE TP1=SPRING
 (2)NUMBER
 (3)DIAMETER
 (4)CAPACITY TON/H/1
 (5)LEAK RATE M3/DAY
 (SATURATED STEAM CONDITION AT SET.PRESSURE PER ONE STEAM GENERATOR)
 (6)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6)
 NO. T/H/1 M3/D

GENKAI-1	PWR	24	12		5		8-81	70/11
IKATA-1	PWR	28	12		5		8-81	72/11
GENKAI-2	PWR	29	TP1 14	5B	240	MT1	8-9-18	76/ 2
IKATA-2	PWR	30	TP1 14	5B	240	MT1	8-9-18	76/12
SENDAI	PWR	31	TP1 21	5B	260	MT1	8-9-19	76/ 5

** STEAM-G. DESIGN-P OPERAT-P 757220

(1)TYPE TP1=TATE OKI U-TUBE
 TP2=INVERTED U-TUBE
 TP3=YOKOOKI 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)
 NO. IN OUT
 ---- 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	8-50	70/ 5
GENKAI-1	PWR	24	TP1 2	76.3(54.5)	175	269(W=LT0.25WPC)	15000	8-51	70/ 5
TAKAHAMA-1	PWR	25	TP1 3	76.3(54.)	175		1600	BK80-2 P9	71/ 8
OOI-1,2	PWR	26	TP1 4	76.	175(157)		15000	8-50	71/ 1
MIHAMA-3	PWR	27	TP1 3	76	175		15000	8-50	71/ 8
IKATA-1	PWR	28	TP1 2	76.3(58.)	175	273(W=LT0.25WPC)	15000	8-51	72/11
GENKAI-2	PWR	29	TP1 2	76.3(58.)	175	273	15000	8-4-23	76/ 2
IKATA-2	PWR	30	TP1 2	76.3(58.)	175	273(W=LT0.25WPC)	15000	8-4-20	75/ 5
SENDAI	PWR	31	TP1 3	76.3(54.5)	175	269(W=LT0.25WPC)	15200	8-4-23	76/ 5
P 80 STANDARD	PWR	49	TP1 3	76.3(54.5)	175	269(W=LT0.25WPC)	15200		77/ 5
YANKEE	PWR	69	TP2 4	(34.2)		278.3	257.8	DNR V4 P36	61/
SAXTON	PWR	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

(1)TOTAL HEIGHT OF SHELL M
 (2)DIAMETER OF SHELL UPPER (OD) M
 (3) LOWER (OD) M
 (4)DIAMETER OF TUBE (OD) MM
 (5)THICKNESS OF TUBE (T) MM
 (6)SURFACE AREA OF TUBE SQM
 (7)MATERIAL BODY B1=MN-MO-STEEL
 B2=ASTM A533 GRADE A CL1 SOOTOO
 B3=LOW ALLOY STEEL, LOW ALLOY FORGED STEEL AND
 CAST STEEL
 TUBE T1=INCONEL
 T2=ASTM B163 SOOTOO
 T3=NI-CR-FE ALLOY
 KAN-ITA OVERLAY K1=INCONEL
 K2=ASTM B163 SOOTOO
 K3=NI-CR-FE ALLOY
 CHAMBER OVERLAY C1=STAINLESS STEEL
 C2=SUS27 SOOTOO

(8)TOTAL NO. OF TUBE NO./1
 (1) (2) (3) (4) (5) (6) (7) (8)
 HEIGHT OD OD OD T SQM MATERIAL
 M M M MM MM

MIHAMA-1	PWR	21	18.	3.6	3.1				4426	BK80-2 P10	71/ 8
MIHAMA-2	PWR	22	20.	4.3	3.3				3260	BK80-2 P10	71/ 8
TAKAHAMA-2	PWR	23	20.3	4.4	3.4				3388	8-50	70/ 5
GENKAI-1	PWR	24	21.	4.4	3.4	22.2		B1,T1,K1,C1	3388	8-51	70/ 5
TAKAHAMA-1	PWR	25	20.	4.4	3.4			B1,T1,K1,C1	3388	BK80-2 P10	71/ 8
OOI-1,2	PWR	26	20.6					B1,T1,K1,C1	3388	8-50	71/ 1
MIHAMA-3	PWR	27	20.3	4.4	3.4			B1,T1,K1,C1	3388	8-50	71/ 8
MIHAMA-3	PWR	27						(B2,T2,K2,C2)	3388	8-50	71/ 8
IKATA-1	PWR	28	21.	4.4	3.4	22.2		B1,T1,K1,C1	3388	8-51	72/11
GENKAI-2	PWR	29	21.	4.5	3.4	22.2	1.3	4780., B3,T3,K3,C1	3380.	8-4-23	76/ 2
IKATA-2	PWR	30	21.	4.5	3.4	22.2		4780., B3,T1,K1,C1	3380.	8-4-20	75/ 5
SENDAI	PWR	31	21.	4.5	3.4	22.2	1.3	4780., B3,K2,K2,C1	3380.	8-4-23	76/ 5
P 80 STANDARD	PWR	49	20.6	4.5	3.4	22.2	1.27	4780., B3,T3,K3,C1	3382.		77/ 5
YANKEE	PWR	69						1247.6		DNR V4 P36	61/
SAXTON	PWR	70						213.7		DNR V4 P50	61/

** STEAM-G. MATERIAL

757260

(1)SIDE WALL(U,L),KAGAMI(SECONDARY SIDE)
 (1A)=JIS G3120 SQV1A
 (2)TUBE PLATE
 (2A)=JIS G3212 SFVV3
 (3)TUBE
 (3A)=JIS G4904 NCF1TB
 (4)OVERLAY FOR TUBE PLATE
 (4A)=NI-CR-FE ALLOY
 (5)KAGAMI FOR WATER CHAMBER
 (5A)=GENSIRYOKU HATSUDEN-YOO TANSOKOO CHUUKOO-HIN 3SHU SOOTOO
 (ASME SA216 GR.WCC)
 *NOTE (U)=UPPER, (L)=LOWER

P 80 STANDARD PWR 49 (1A) TO (5A)

** PRIMARY SYSTEM COOLANT INVENTOR Y

757380

(1)COOLANT INVENTORY IN PRIMARY SYSTEM M3
 (1)
 M3

TOMIOKA-2	BWR	16	289TON	9-4-8	76/12
GENKAI-2	PWR	29	169	10-4-28	76/ 2
IKATA-2	PWR	30	169	10-4-26	77/ 1
SENDAI	PWR	31	259	10-4-29	76/ 4

** PRIMARY COOLING PUMP

TYPE AND MATERIAL

757400

(1)TYPE TP1=ROOEI SEIGYO ZIKU-HUU SIKI TATE-OKI UZUMAKI
TP2=ROOEI SEIGYO ZIKU-HUU SIKI TATE-OKI SYARYUU

(2)NUMBER

(3)CAPACITY

CUBM/H

(4)HEAD

M

(5)DESIGN PRESSURE

KG/SQCMG

(6)DESIGN TEMPERATURE

C

(7)SIZE HEIGHT

M

(8)SIZE CASING OD

M

(9)MATERIAL

M1= STAINLESS STEEL

(10)

RPM

(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
CAP. HEAD

NO. CUBM/H M C M M RPM

MIHAMA-1	PWR	21	TP1	2	15900	59.4	175	343.3	7.77	2.59	M1	1150	8-50	66/11
MIHAMA-2	PWR	22	TP2	2	20100								BK80-2 P10	71/ 8
TAKAHAMA-2	PWR	23	TP2	3	20100	80	175		8.5		M1	1150	8-50	70/ 5
GENKAI-1	PWR	24	TP2	2	20200	80	175		8.5		M1	1150	8-53	70/ 5
TAKAHAMA-1	PWR	25	TP2	3	20100								BK80-2 P10	71/ 8
OOI-1,2	PWR	26	TP2	4	20100	80	175		7.8		M1	1189	8-50	71/ 1
MIHAMA-3	PWR	27	TP2	3	20100	80	175		8.5		M1	1150	8-50	71/ 8
IKATA-1	PWR	28	TP2	2	20200	80	175	343	8.5	1.8	M1	1150	8-53	72/11
GENKAI-2	PWR	29	TP2	2	20200	80	175	343	8.5	1.8	M1		8-4-24	76/ 2
IKATA-2	PWR	30	TP2	2	20200	80	175	343	8.5	1.8	M1	1190	8-4-21	75/ 5
SENDAI	PWR	31	TP2	3	20100	80	175	343	8.5	1.8	M1	1190	8-4-24	76/ 5
P 80 STANDARD	PWR	49	TP2	3	20100	80.5	175	343	8.3	1.8	M1	1190		77/ 5
TURKEY POINT-3,4	PWR	72			20100								BK80-4 P7	71/ 9
H.B.ROBINSON-2	PWR	73			20100								BK80-4 P7	71/ 9
SURRY-1,2	PWR	74			20100								BK80-4 P7	71/ 9
BEAVER VALLEY	PWR	75			20100								BK80-4 P7	71/ 9
NORTH ANNA-12	PWR	76			20100								BK80-4 P8	71/ 9
JOSEPH M.FARLEY	PWR	77			20100								BK80-4 P8	71/ 9

** PRIMARY COOLING PUMP

MOTOR TYPE

PWR

757410

(1)TYPE

TP1=3P INDUCTION MOTOR

(2)NUMBER

(3)VOLTAGE

VOLT

(4)OUTPUT

KW/1

(5)SPEED

RPM

(1) (2) (3) (4) (5)
NO. VOLT KW/1 RPM

GENKAI-1	PWR	24	TP1	2	6600.		1150						8-53	70/ 5
IKATA-1	PWR	28	TP1	2	6600.		1150						8-53	72/11
GENKAI-2	PWR	29	TP1		6600.	4300.	1190.						8-4-24	76/ 2
IKATA-2	PWR	30	TP1	2	6600.	4300.	1190.						8-4-21	75/ 5
SENDAI	PWR	31	TP1	3	6600.	4500.	1190.						8-4-24	76/ 5
P 80 STANDARD	PWR	49	TP1	3	6600.	4480.	1190.							77/ 5

** PRIMARY COOLING SYSTEM

DESIGN-T DESIGN-P

757430

(1)NUMBER OF LOOPS

(2)PRIMARY COOLANT TOTAL FLOW

T/H

(3)OPERATION TEMPERATURE MAX.

DEG.C

(4)OPERATION TEMPERATURE(PRESSURIZER AND SURGE TUBE)

DEG.C

(5)DESIGN PRESSURE MAX

KG/CM2G

(6)PRESSURE OF NORMAL OPERATION

KG/CM2G

(7)PRESSURE VESSEL INLET TEMPERATURE (RATED)

(8)PRESSURE VESSEL OUTLET TEMPERATURE (RATED)

(1) (2) (3) (4) (5) (6) (7) (8)
NO. T/H C C --KG/CM2G- C C

TAKAHAMA-2	PWR	23	3	45000.	343.	360.	175.		287.	322.			8-49	70/ 5
GENKAI-1	PWR	24	2	30000.			175.		288.1	322.7			8-56	70/ 5
OOI-1,2	PWR	26	4	60100.	343.	360.	175.		289.	325.			8-49	71/ 1
MIHAMA-3	PWR	27	3	45000.	343.	360.	175.		287.	322.			8-49	71/ 8
IKATA-1	PWR	28	2	30000.	343.	360.	175.		288.	322.			8-50	72/11
GENKAI-2	PWR	29	2	30000.	343.	360.	175.	157.	288.	323.			8-4-19	76/ 2
IKATA-2	PWR	30	2	30000.	343.	360.	175.	157.	288.	323.			8-4-16	75/ 5
SENDAI	PWR	31	3	45700.	343.	360.	175.	157.	284.	321.			8-4-19,-3-44	76/ 5
P 80 STANDARD	PWR	49	3	45700.	343.	360.	175.	157.	283.6	321.1				77/ 5

** 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)
 (7) MATERIAL MT1=STAINLESS STEEL

			(1)	(2)	(3)	(4)	(5)	(6)	(7)		
			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			BK80-2 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			BK80-2 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-1	PWR	28	700	65	737	68	787	73		8-56	72/11
GENKAI-2	PWR	29	700	70	740	70	790	80	MT1	8-4-26	76/ 2
IKATA-2	PWR	30	700	69	740	73	790	78		8-4-23	75/ 5
SENDAI	PWR	31	700	69	740	73	790	78		8-4-26	76/ 5
P 80 STANDARD	PWR	49	699	69	737	73	787	78	MT1		77/ 5

** PRESSURI ZER

TYPE

SIZE

757620

(1)TYPE

TP1 =TATE OKI ENT00 ZY00GE HANKYUU KAGAMI YOOKI

(2)NUMBER

(6)DESIGN PRESSURE (KG/SQCMG)

(8)MATERIAL

MAT1 = MN.MO.STEEL WITH STAINLESS STEEL LINING

MAT2 = LOW ALLOY STEEL WITH STAINLESS STEEL LINING

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TYPE	NO.	VOLUME	OD	HEIGHT	DES.P	DES.T	MAT.
		(M**3)	(M)	(M)		(DEG-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				BK80-2 P10	71/ 8
MIHAMA-2	PWR	22	TP1	1		2.3	9.7				BK80-2 P10	71/ 8
TAKAHAMA-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.				BK80-2 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 SOOT00), LINING=(SUS-27 SOOT00)								8-50	71/ 8
IKATA-1	PWR	28	TP1	1	28.3	2.3	9.7	175.	360.	MAT1	8-54	72/11
GENKAI-2	PWR	29	TP1	1	28.	2.3	9.7	175.	360.	MAT2	8-4-25	76/ 2
IKATA-2	PWR	30	TP1	1	28.	2.3	9.7	175.	360.	MAT2	8-4-22	75/ 5
SENDAI	PWR	31	TP1	1	40.	2.3	12.9	175.	360.	MAT2	8-4-25	76/ 5
P 80 STANDARD	PWR	49	TP1	1	39.6	2.4	12.9	175.	360.	MAT2		77/ 5

** PRESSURI ZER

HEATER

TYPE AND CAPACITY

757640

(1)TYPE

TP1 =WATER DIP TYPE

TP2 =WATER DIP TYPE (YOKO-OKI ENT00-GATA)

(2)=CAPACITY (KW)

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

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-1	PWR	28	TP1	1000.						8-55	72/11
GENKAI-2	PWR	29	TP1	1000.						8-4-25	76/ 2
IKATA-2	PWR	30	TP2	1000.						8-4-22	75/ 5
SENDAI	PWR	31	TP1	1400.						8-4-25	76/ 5
P 80 STANDARD	PWR	49	TP1	1400.							77/ 5

** PRESSURIZER RELIEF TANK DESIGN=P CAPACITY 757650

(1) NUMBER
 (2) DESIGN PRESSURE (INNER) KG/SQCMG
 (3) DESIGN PRESSURE (OUTER) KG/SQCMG
 (4) CAPACITY CUBM
 (5) OUTER DIAMETER M
 (6) TOTAL LENGTH M
 (7) DESIGN TEMPERATURE DEG-C
 (8) MATERIAL MT1=CARBON STEEL (PAINTED INSIDE)
 MT2=STAINLESS STEEL
 TP1=YOKO-OKI ENTDOO GATA

(9) TYPE
 (1) (2) (3) (4) (5) (6) (7) (8) (9)
 NO. DES.-P CAP. OD. T.L D.T
 KG/SQCMG QUBM M M C

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-1	PWR	28	1	7.1	1	23					8-55	72/11	
GENKAI-2	PWR	29	1	7.	1	23.	2.4	5.7	170.	MT2	TP1	8-4-25	76/ 2
IKATA-2	PWR	30	1	7.	1	23.	2.4	5.7	170.	MT2		8-4-22	76/12
SENDAI	PWR	31	1	7.		37.	2.8	6.5	170.	MT2	TP1	8-4-25	76/ 5
P 80 STANDARD	PWR	49	1	7.		36.8	2.8	6.5	170.	MT2	TP1		77/ 5

** SURGE TUBE FOR PRES SURIZER PWR 757660

(1) DESIGN PRESSUR KG/SQCMG
 (2) DESIGN TEMPERATURE DEG-C
 (3) TUBE INNER DIA MM
 (4) TUBE THICKNESS MM
 (5) MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5)
 KG/CM2G C MM MM

GENKAI-2	PWR	29	175.	360.	220.	25.	MT1				8-4-26	76/ 2
SENDAI	PWR	31	175.	360.	280.	36.	MT1				8-4-26	76/ 5
P 80 STANDARD	PWR	49	175.	360.	284.	36.	MT1					77/ 5

** SPRAY PIPE LAYING FOR PRES SURIZER PWR 757670

(1) DESIGN PRESSUR KG/SQCMG
 (2) DESIGN TEMPERATURE DEG-C
 (3) TUBE INNER DIA MM
 (4) TUBE THICKNESS MM
 (5) MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5)
 KG/CM2G C MM MM

GENKAI-2	PWR	29	175.	343.	90.	11.	MT1				8-4-26	76/ 2
SENDAI	PWR	31	175.	343.	90.	11.	MT1				8-4-26	76/ 5
P 80 STANDARD	PWR	49	175.	343.	92.	11.	MT1					77/ 5

** KIND OF REACTOR AUXILIARY SYSTEM BWR 761000

*KIND
 (1) FUEL HANDLING AND STORAGE
 (2) PURIFICATION SYSTEM FOR SPENT-FUEL-POOL-COOLANT (PSSFPC) 762150
 (3) REACTOR WATER PURIFICATION SYSTEM (RWPS) 762200, 762280
 (4) RESIDUAL HEAT REMOVAL SYSTEM (RHRS) 764000, 764220, 764420, 764620
 (5) ISOLATED REACTOR COOLING SYSTEM 763220, 763240, 763420

KASHIWAZAKI BWR 15 FROM(1) TO(5) 8-6-1,-17 75/ 3

** 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.
 (6) =COMPONENT COOLING SEA WATER SYSTEM
 (7) =SPENT FUEL PIT WATER PURIFICATION SYSTEM
 (8) =FUEL HANDLING AND STORAGE SYSTEM

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-1	PWR	28	FROM(1) TO(5)				8-61	72/11
IKATA-2	PWR	30	FROM(1) TO(8) EXCEPT(2)				8-6-1	75/ 5

** NEW FUEL STORAGE

762142

(1)CAPACITY OF NEW FUEL STORAGE PC(OR FRACTION) OF ALL CORE
 (2)EFFECTIVE MULTIPLICATION FACTOR AT NORMAL CONDITION
 (3)EFFECTIVE MULTIPLICATION FACTOR (FILL OF WATER)
 (4)CAPACITY OF FUEL RACK NO. OF ASSEMBLY
 (5)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5)

ONAGAWA	BWR	4	30.			8-4-(1)	70/ 5
HAMAOKA-1	BWR	5	30.			8-29	70/ 5
FUKUSIMA-5	BWR	9	30.			8-4-(1)	71/ 2
FUKUSIMA-4	BWR	10	30.			8-4-(1)	71/ 8
FUKUSIMA-6	BWR	11	30.			8-4-(1)	71/12
TOOKAI-2	BWR	12	30.			8-4-(1)	71/12
HAMAOKA-2	BWR	13	30.			8-24	72/ 9
KASHIWAZAKI	BWR	15	30.	0.90	0.95	8-6-2	75/ 3
TOMIOKA-2	BWR	16	30.	0.90	0.95	8-6-2.3	76/12
TAKAHAMA-2	PWR	23	1/3			8-43	70/ 5
GENKAI-1	PWR	24	1/3			8-46	70/ 5
OOI-1,2	PWR	26	2/3 (COMMON WITH UNIT NO.1 AND 2)			8-43	71/ 1
MIHAMA-3	PWR	27	1/3			8-43	71/ 7
IKATA-1	PWR	28	1/3			8-46	72/ 5
GENKAI-2	PWR	29	1/3		50	8-6-42	76/ 2
IKATA-2	PWR	30			56	8-6-39	76/12
SENDAI	PWR	31	2/3		110 MT1	8-6-42	76/ 5

** SPENT FUEL STORAGE POOL

762144

(1)CAPACITY OF SPENT FUEL STORAGE PC(OR FRACTION)
 (2)WATER-DEPTH M
 (3)EFFECTIVE MULTIPLICATION FACTOR AT NORMAL CONDITION
 (4)EFFECTIVE MULTIPLICATION FACTOR AT ABNORMAL CONDITION
 (5)MAX. WATER TEMPERATURE (DESIGN MAX.) DEG C
 (6)MATERIAL OF LINING MT1=SUS
 (7)CAPACITY OF FUEL RACK NO. OF ASSEMBLY
 (8)WATER TEMPERATURE AT ABNORMAL CONDITION DEG C
 (R1)THIS PIT IS ALSO USED AS STORAGE FOR 2/3 OF INITIAL-CORE FUEL.
 (R2)THIS PIT IS ALSO USED AS STORAGE FOR INITIAL-CORE FUEL(AT DRY).
 (1) (2) (3) (4) (5) (6) (7) (8)
 C. C.

ONAGAWA	BWR	4	150.			50.		8-4-(2)	70/ 5
HAMAOKA-1	BWR	5	150.			50.		8-31	70/ 5
HAMAOKA-1	BWR	5	201.(740ASSY)	0.90	0.95	65.	100.	-30.31-	77/ 3
FUKUSIMA-1	BWR	6	156.	0.90	0.95	52.	MT1	152.5.2P5	76/10
FUKUSIMA-5	BWR	9	150.			52.		8-4-(2)	71/12
FUKUSIMA-4	BWR	10	150.			52.		8-4-(2)	71/ 8
FUKUSIMA-6	BWR	11	130.			52.		8-4-(2)	71/12
FUKUSIMA-6	BWR	11	140.					5006.041 P8	75/ 8
TOOKAI-2	BWR	12	130.			52.		8-4-(2)	71/12
HAMAOKA-2	BWR	13	150.			52.		8-25	72/ 9
HAMAOKA-2	BWR	13	218.(1220ASSY)	0.90	0.95	65.	100.	-29.30-	77/ 3
TOMIOKA-1	BWR	14	140.	0.90	0.95	52.	MT1	8-4-1	76/ 8
KASHIWAZAKI	BWR	15	140.	11.5	0.90	0.95		8-6-3	75/ 3
TOMIOKA-2	BWR	16	140.	11.5	0.90	0.95	MT1	8-6-3	76/12
TAKAHAMA-2	PWR	23	4/3					R2	70/ 5
GENKAI-1	PWR	24	4/3					R1	70/ 5
OOI-1,2	PWR	26	5/3 (COMMON WITH UNIT NO.1 AND 2)					R2	71/ 1
MIHAMA-3	PWR	27	4/3					R2	71/ 7
IKATA-1	PWR	28	4/3					R1	72/ 5
GENKAI-2	PWR	29	6/3				MT1 240	8-6-42	76/ 2
IKATA-2	PWR	30	11/3				MT1 440	8-6-39	76/12
SENDAI	PWR	31	17/3				MT1 900	8-6-42	76/ 5

** SPENT FUEL RACK

762145

(1)CAPACITY NO. OF ASSEMBLIES (TOTAL / PER ONE RACK)
 (2)RACK PITCH MM*MM
 (3)RACK ASSEMBLY SIZE MM*MM*MM(HEIGHT)
 (4)NO. OF RACKS
 (1) (2) (3) (4)
 RACK RACK ASSEMBLY NO.
 PITCH SIZE
 MM*MM MM * MM * MM

HAMAOKA-1	BWR	5	740/20			37	-30-	77/ 3
HAMAOKA-2	BWR	13	1220/20			61	-29-	77/ 3
TAKAHAMA-1	PWR	25	424/42	400*400	2376*2800*4290	11	5009	75/11
TAKAHAMA-1	PWR	25	424*42*6+36*2+35*2+30				5009	75/11

** PSSFPC DEMINE.

762150

DEMINE. FOR PURIFICATION SYSTEM FOR SPENT-FUEL-POOL-COOLANT

(1)TYPE TP1=PRESSURE PRECOAT TYPE

(2)NUMBER

(3)CAPACITY CUBM/HOUR

(1) (2) (3)
TYPE NO. M3/H

KASHIWAZAKI	BWR	15	TP1	2	125.	8-6-14	75/ 3
TOMIOKA-2	BWR	16	TP1	2	125.	8-6-15	76/12

** PSSFPC H.EXCH.

762160

H.EXCH. FOR PURIFICATION SYSTEM FOR SPENT-FUEL-POOL-COOLANT

(1)TYPE TP1=YOKO-OKI U-TUBE

(2)NUMBER

(1) (2)

KASHIWAZAKI	BWR	15	TP1	2	8-6-14	75/ 3
TOMIOKA-2	BWR	16	TP1	2	8-6-15	76/12

** PSSFPC PUMP

762170

PUMP FOR PURIFICATION SYSTEM FOR SPENT-FUEL-POOL-COOLANT

(1)TYPE TP1=YOKO-GATA UZUMAKI

(2)NUMBER

(3)CAPACITY CUBM/H

(4)HEAD

(1) (2) (3) (4)
TYPE NO. M3/H/1 M

KASHIWAZAKI	BWR	15	TP1	2	125.	90.	8-6-14	75/ 3
TOMIOKA-2	BWR	16	TP1	2	125.	90.	8-6-15	76/12

** 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

ONAGAWA	BWR	4	1	102	302	83	8-6-(3)	70/ 5
HAMAOKA-1	BWR	5	1			31.8	8-41	70/ 5
FUKUSIMA-5	BWR	9	1	102	302	45.4	8-6-(3)	71/ 2
FUKUSIMA-4	BWR	10	1	102	302	45.4	8-6-(3)	71/ 8
FUKUSIMA-6	BWR	11	1	91.4	302	120.7	8-6-(3)	72/ 1
TOOKAI-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
FUGEN	ATR	81		70	296	60	105-8-6-(2)	73/11

** CVCS PWR REACTOR WATER QUALITY 762210

(1)PH

(2)ELECTRO CONDUCTIVITY

MICRO MHO/CM

(3)DISSOLVED OXYGEN

PPM

(4)CHLORINE

PPM

(5)HYDROGEN

CM3/KG-H2O

(1) (2) (3) (4) (5)
PH E.C O CL H

P 80 STANDARD	PWR	49	4-11	1-40	LE0.1	LE0.15	25-35	77/ 5
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** RWPS BWR REACTOR WATER QUALITY 762220

*AT 25 DEG C

E.CDTVTY PH

CL-ION

SOLID

SILICA

BORON

MICRO MHO/CM (FROM-TO)

LT.PPM

LT.PPM

LT.PPM

LT.PPM

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
FUKUSIMA-5	BWR	9	LT. 1.0	5.5	8.5	0.2	1.	1.	1.	8-6-(2)	71/ 2
FUKUSIMA-4	BWR	10	LT. 1.0	5.5	8.5	0.2	1.	1.	1.	8-6-(2)	71/ 8
FUKUSIMA-6	BWR	11	LT. 1.0	5.6	8.6	0.2	1.	1.	1.	8-6-(2)	72/ 1
TOOKAI-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
KASHIWAZAKI	BWR	15	LT. 1.0*	5.6*	8.6*	0.1				8-6-7	75/ 3
TOMIOKA-2	BWR	16	LT. 1.0*	5.6*	8.6*	0.1				8-6-8	76/12
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= YOKO-OKI KATASUIKOMI UZUMAKI
TP2= YOKO-GATA UZUMAKI
(2)NUMBER
(3)CAPACITY CUBM/H/1 OR TON/H
(4)HEAD M
(1) (2) (3) (4)
NO. CAP. HEAD
CUBM/H/1 M

JPDR-2	BWR	2	TP1	1	3.4T/H	14.4	KON-6 P4	70/11
FUKUSIMA-5	BWR	9		2	30.7	153	8-6-(2)	71/ 2
FUKUSIMA-4	BWR	10		2	30.7	153	8-6-(2)	71/ 8
FUKUSIMA-6	BWR	11		2	81.7	153	8-6-(2)	72/ 1
TOOKAI-2	BWR	12		2	81.7	153	8-6-(2)	72/ 1
KASHIWAZAKI	BWR	15	TP2	2	60.	160	8-6-15	75/ 3
TOMIOKA-2	BWR	16	TP2	2	80.	160	8-6-16	76/12

** RWPS REGENE. NON-REG. H.EXCH. BWR 762232

REGENERATIVE HEAT EXCHANGER
(1)TYPE TP1=YOKO-OKI U-TUBE
TP2=SHELL AND TUBE
(2)NUMBER
NON REGENERATIVE HEAT EXCHANGER
(11)TYPE
(12)NUMBER
(1) (2) (11)(12)
TYPE NO. TYPE NO.

JPDR-2	BWR	2	TP1	1	TP1	1	KON-6 P4	70/ 5
ONAGAWA	BWR	4	TP2	1	TP2	1	8-6-(2)	70/ 5
HAMAOKA-1	BWR	5	TP2	1	TP2	1	8-41	70/ 5
FUKUSIMA-5	BWR	9	TP2	1	TP2	1	8-6-(2)	71/ 2
FUKUSIMA-4	BWR	10	TP2	1	TP2	1	8-6-(2)	71/ 8
FUKUSIMA-6	BWR	11	TP2	1	TP2	1	8-6-(2)	72/ 1
TOOKAI-2	BWR	12	TP2	1	TP2	1	8-6-(2)	72/ 1
HAMAOKA-2	BWR	13	TP2	1	TP2	1	8-35	72/ 9
KASHIWAZAKI	BWR	15	TP1	1	TP1	1	8-6-15	75/ 3
TOMIOKA-2	BWR	16	TP1	1	TP1	1	8-6-16	76/12

** RWPS DEMINE. NUMBER AND CAPACITY 762240

RWPS DEMINERALIZER NUMBER AND CAPACITY
(1)TYPE TP1=HISAISEI KOSHOO ION EXCHANGER
TP2=PRESSURE PRECOAT
(2)NUMBER
(3)CAPACITY T/H/1 OR M=M3/H/1
(1) (2) (3)
TYPE NO. CAP.
T/H/1

JPDR-2	BWR	2	TP1	2	3.4	KON-6 P5	70/11
ONAGAWA	BWR	4		2	41.5	8-6-(2)	70/ 5
HAMAOKA-1	BWR	5		2	16.	8-41	70/ 5
FUKUSIMA-5	BWR	9		2	23.	8-6-(2)	71/ 2
FUKUSIMA-4	BWR	10		2	23.	8-6-(2)	71/ 8
FUKUSIMA-6	BWR	11		2	60.3	8-6-(2)	72/ 1
TOOKAI-2	BWR	12		2	60.3	8-6-(2)	72/ 1
HAMAOKA-2	BWR	13		2	23.	8-34	72/ 9
KASHIWAZAKI	BWR	15	TP2	2	60.M	8-6-15	75/ 3
TOMIOKA-2	BWR	16	TP2	2	60.M	8-6-16	76/12
FUGEN	ATR	81		2	34.	105-8-6-(2)	73/11

** RWPS PIPING DESIGN-P DESIGN-T MATERIAL 762250

DESIGN-P DESIGN-T PIPE OD MATERIAL

JPDR-2	BWR	2	77.3 KG/SQCMG	293.5 DEG-C	49.6 MM	SUS	KON-6 P5	70/11
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** CVCS

762282

FUNCTION

- (1) TO KEEP THE PRIMARY-COOLANT-VOLUME PROPERLY IN THIS SYSTEM.
- (2) TO SUPPLY COOLANT INTO PRIMARY SYSTEM WHEN RATHER MINOR COOLANT-LEAK HAS OCCURED THAN LOCA.
- (3) TO ADJUST THE BORIC CONCENTRATION IN THIS SYSTEM FOR REACTIVITY CONTROL.
- (4) TO REMOVE IMPURITY SUCH AS FISSION PRODUCTS AND CORROSION PRODUCTS IN THE PRIMARY COOLANT.
- (5) IN ORDER TO PREVENT CORROSION, ADD CORROSION-INHIBITOR IN COOLANT AND KEEP ITS CONCENTRATION PROPERLY.
- (6) TO SUPPLY SHAFT-SEAL-WATER FOR RECIRCULATING-COOLANT-PUMPS.
- (7) TO INJECT THE BORIC-ACID-WATER INTO CORE USING SOME PARTS OF THIS FACILITIES AS ECCS BY THE SAFETY INJECTION SIGNAL.
- (8) TO FILL THE WATER TO PRIMARY SYSTEM AND TO MAKE WATER-PRESSURE-TEST FOR PRIMARY SYSTEM.
- (9) PRIMARY-COOLANT QUALITY CONTROL (SEE 762210)

MIHAMA-1	PWR	21	(1) TO (8) EXCEPT (2) AND (7)	8-58	66/11
TAKAHAMA-2	PWR	23	(1) TO (8) EXCEPT (2) AND (7)	8-56	70/ 5
GENKAI-1	PWR	24	(1) TO (8) EXCEPT (2) AND (7)	8-61	70/ 5
OOI-1,2	PWR	26	(1) TO (8) EXCEPT (2) AND (7)	8-56	71/ 1
MIHAMA-3	PWR	27	(1) TO (8) EXCEPT (2) AND (7)	8-56	71/ 7
IKATA-2	PWR	30	(1) TO (9) EXCEPT (2) AND (7)	8-6-4	75/ 5
P 80 STANDARD	PWR	49	(1) TO (9)		77/ 5

** CVCS

SPEC. OF FACILITY

762284

- (1) SUPPLY FLOW OF SHAFT-SEAL-WATER M3/H
 - (2) RETURN FLOW OF SHAFT-SEAL-WATER M3/H
 - (3) EXTRACT FLOW (NORMAL) M3/H
 - (4) EXTRACT FLOW (MAX.) M3/H
 - (5) CHARGE FLOW WXCEPT SHAFT-SEAL-WATER (NORMAL) M3/H
 - (6) CHARGE FLOW WXCEPT SHAFT-SEAL-WATER (MAX.) M3/H
 - (7) PRIMARY COOLANT EXTRACT TEMPERATURE DEG C
 - (8) PRIMARY COOLANT CHARGE TEMPERATURE DEG C
 - (9) EXTRACT WATER TEMPERATURE INTO BORIC-ACID-COLLECTION-SYSTEM (DEG C)
 - (10) MINIMUM FLOW OF CHARGE/HPI PUMP M3/H/1
- | | | | | | | | | | |
|-------|-------|-------|-------|-------|-------|-------|-----|-----|--------|
| (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| ----- | ----- | ----- | ----- | ----- | ----- | ----- | C | C | C M3/H |

P 80 STANDARD	PWR	49	5.5	2.0	13.6	27.2	10.2	23.8	283.6	252.8	46.1	13.6	OPT.A.B.	77/ 5
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** CVCS

MAIN

COMPONENTS

762300

**MAIN COMPONENTS OF CHEMICAL-AND-VOLUME-CONTROL-SYSTEM ARE AS FOLLOWS
 OPTION(A)=BORON REGENERATIVE SYSTEM (4 WEIGHT PC BORIC ACID)
 OPTION(B)=BORON NON-REGENERATIVE SYSTEM (12 WEIGHT PC BORIC ACID)

- | | (A) | (B) |
|---|-----|-----|
| (1) REGENERATIVE HEAT EXCHANGER | * | * |
| (2) NON-REGENERATIVE HEAT EXCHANGER | * | * |
| (3) SURPLUS HEAT EXTRACTION COOLER | * | * |
| (4) SHAFT SEAL WATER H.EXCH. | * | * |
| (5) BORON REGENERATIVE PRE-H.EXCH. | * | - |
| (6A) BORON REGENERATIVE EXTRACT WATER COOLER | * | - |
| (6B) BORON REMOVE DEMINERALIZER | - | * |
| (7) BORON REGENERATIVE REHEATER | * | - |
| (8) COOLANT MIXED BED DEMINERALIZER | * | * |
| (9) COOLANT POSITIVE ION DEMINERALIZER | * | * |
| (10) HEAT REGENERATIVE ION EXCHANGER | * | - |
| (11) VOLUME CONTROL TANK | * | * |
| (12) BORIC ACID CHARGE/HIGH PRESSURE INJECTION PUMP | * | * |
| (13) BORIC ACID PUMP | * | * |
| (14) BORIC ACID TANK | * | * |
| (15) BORIC ACID SUPPLY TANK | * | * |
| (16) PRIMARY SYSTEM CHEMICALS TANK | * | * |
| (17) BORON REGENERATIVE CHILLED WATER TANK | * | - |
| (18) BORON REGENERATIVE CHILLED WATER PUMP | * | - |
| (19) BORON REGENERATIVE CHILLER | * | - |
| (20) COOLANT FILTER | * | * |
| (21) SHAFT SEAL WATER FILTER | * | * |
| (22) SHAFT SEAL WATER INJECTION FILTER | * | * |
| (23) BORIC ACID FILTER | * | * |

** CVCS

REGENE. H.EXCH.

762320

(1)TYPE
 TP1 =YOKO OKI U-TUBE
 TP2 =SHELL AND TUBE
 TP3 =SHELL AND U-TUBE
 TP4 =TADOO YOKO-OKI U-TUBE
 TP5 =MULTI 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)
 (8)MATERIAL
 1) TUBE MT1=STAINLESS STEEL
 2) SHELL MS1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.)
 (TUBE) (SHELL) (TUBE) (SHELL) 1) 2)
 KCAL/H --KG/SQCMG-- ----DEG-C----

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
OOI-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-1	PWR	28	TP3	1	1.62E6	193.	175.	316.C	343.C	8-62	72/11
GENKAI-2	PWR	29	TP5	1	1.6 E6	193.	175.	316.	343.	MT1 MS1	8-6-30
IKATA-2	PWR	30	TP3	1	1.6 E6	193.	175.	316.C	343.C	MT1 MS1	8-6-28
SENDAI	PWR	31	TP4	1	2.1 E6	192.	175.	343.	343.	MT1 MS1	8-6-31
P 80 STANDARD	PWR	49		1	2.07E6	192.	175.	343.C	343.C	MT1 MS1	OPT,A.B.
FUGEN	ATR	81		1						105-8-6-(2)	73/11

** CVCS

NON-REG. H.EXCH.

762340

(1)TYPE
 TP1 =YOKO OKI U-TUBE
 TP2 =SHELL AND TUBE
 TP3 =SHELL AND U-TUBE
 (8)MATERIAL
 1) TUBE MT1=STAINLESS STEEL
 2) SHEEL MS1=CARBON STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.)
 (TUBE) (SHELL) (TUBE) (SHELL) 1) 2)
 KCAL/H --KG/SQCMG-- ----DEG-C----

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
OOI-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-1	PWR	28	TP3	1	2.89E6	42.	10.	200.C	95.C	8-63	72/11
GENKAI-2	PWR	29	TP3	1	2.89E6	42.	10.	200.C	95.C	MT1 MS1	8-6-30,31
IKATA-2	PWR	30	TP3	1	2.89E6	42.	10.	200.C	95.C	MT1 MS1	8-6-28
SENDAI	PWR	31	TP1	1	4.1 E6	42.	10.	200.C	95.C	MT1 MS1	8-6-31
P 80 STANDARD	PWR	49		1	4.06E6	42.	10.	200.C	95.C	MT1 MS1	OPT,A.B.
FUGEN	ATR	81		1						105-8-6-(2)	73/11

** CVCS

SURPLUS HEAT

EXTRACT H.EXCH.

762360

(1)TYPE
 TP2 =SHELL AND TUBE
 TP3 =SHELL AND U-TUBE
 TP4 =TATE-OKI U-TUBE
 (8)MATERIAL
 1) TUBE MT1=STAINLESS STEEL
 2) SHEEL MS1=CARBON STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.) MATERIAL
 (TUBE) (SHELL) (TUBE) (SHELL) 1) 2)
 KCAL/H --KG/SQCMG-- ----DEG-C----

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-1	PWR	28	TP3	1	4.77E5	175.	10.	343.C	95.C	8-63	72/11
GENKAI-2	PWR	29	TP3	1	4.8 E5	175.	10.	343.C	95.C	MT1 MS1	8-6-31
IKATA-2	PWR	30	TP3	1	4.8 E5	175.	10.	343.C	95.C	MT1 MS1	8-6-28,29
SENDAI	PWR	31	TP4	1	8.3 E5	175.	10.	343.C	95.C	MT1 MS1	8-6-32
P 80 STANDARD	PWR	49		1	8.3 E5	175.	10.	343.C	95.C	MT1 MS1	OPT,A.B.

** CVCS SHAFT SEAL WATER H.EXCH. 762380

(1)TYPE

TP2 =SHELL AND TUBE
 TP3 =SHELL AND U-TUBE
 TP4 =YOKO-OKI U-TUBE

(8)MATERIAL

1) TUBE MT1=STAINLESS STEEL
 2) SHEEL MS1=CARBON STEEL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TYPE	NO.	CAP.	(DESIGN PRES.)	(DESIGN TEMP.)	(TUBE)	(SHELL)	MATERIAL
			KCAL/H	--KG/SQCMG--	----	DEG-C----	1) 2)

MIHAMA-1	PWR	21	TP2	1	1.55E5	10.6	10.6	121.1	121.1			8-60	66/11
GENKAI-1	PWR	24	TP2	1	2.89E5	10.	10.	120.C	120.C			8-64	70/ 5
IKATA-1	PWR	28	TP3	1	2.89E5	10.	10.	95.C	95.C			8-63	72/11
GENKAI-2	PWR	29	TP3	1	2.9 E5	10.	10.	95.C	95.C	MT1	MS1	8-6-31.32	76/ 2
IKATA-2	PWR	30	TP3	1	2.9 E5	10.	10.	95.C	95.C	MT1	MS1	8-6-29	76/12
SENDAI	PWR	31	TP4	1	2.5 E5	10.	10.	95.C	95.C	MT1	MS1	8-6-32.33	76/ 5
P 80 STANDARD	PWR	49		1	2.55E5	10.	10.	95.C	95.C	MT1	MS1	OPT.A.B.	77/ 5

** CVCS BORON REGENE. PRE- H.EXCH. 762400

(1)TYPE

(2)NUMBER

(3)CAPACITY

(4)MAX. WORKING PRESSURE TUBE SIDE KCAL/H/1

(5)MAX. WORKING PRESSURE SHELL SIDE KG/CM2G

(6)MAX. WORKING TEMPERATURE TUBE SIDE DEG C

(7)MAX. WORKING TEMPERATURE SHELL SIDE DEG C

(8)MATERIAL 1) TUBE MT1=STAINLESS STEEL

2) SHEEL MS1=STAINLESS STEEL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TYPE	NO.	CAP.	--KG/CM2G--				1) 2)

P 80 STANDARD	PWR	49		1	6.38E5	21.	21.	65.C	65.C	MT1	MS1	OPT.A.	77/ 5
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** CVCS BORON REGENE. EXTRACT WATER COOLER 762420

(1)TYPE

(2)NUMBER

(3)CAPACITY

(4)MAX. WORKING PRESSURE TUBE SIDE KCAL/H/1

(5)MAX. WORKING PRESSURE SHELL SIDE KG/CM2G

(6)MAX. WORKING TEMPERATURE TUBE SIDE DEG C

(7)MAX. WORKING TEMPERATURE SHELL SIDE DEG C

(8)MATERIAL 1) TUBE MT1=STAINLESS STEEL

2) SHEEL MS2=CARBON STEEL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TYPE	NO.	CAP.	--KG/CM2G--				1) 2)

P 80 STANDARD	PWR	49		1	4.03E5	21.	10.	65.C	65.C	MT1	MS2	OPT.A.	77/ 5
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** CVCS BORON REMOVE DEMINE. 762440

(1)NUMBER

(2)DESIGN FLOW RATE

CUBM/H/1

(3)DESIGN PRESSURE

KG/SQCMG

(4)DESIGN TEMPERATURE

C

(5)MATERIAL

MT1=STAINLESS STEEL

(6)RESIN

R1=STRONGLY BASIC ANION EXCHANGE RESIN

(7)VOLUME OF RESIN

LITER/1

(1)	(2)	(3)	(4)	(5)	(6)	(7)
NO.	DES.F	DES.P	DES.T			
			C			

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-1	PWR	28	2	20.4	14	65						8-64	72/11
GENKAI-2	PWR	29	2	20.4	14	65	MT1					8-6-32	76/ 2
IKATA-2	PWR	30	2	20.4	14	65	MT1	R1	340			8-6-30	76/12
SENDAI	PWR	31	2	27.2	14	65	MT1					8-6-33	76/ 5
P 80 STANDARD	PWR	49	2	27.2	14	65	MT1					OPT.B.	77/ 5

** CVCS BORON REGENE. REHEATER

762460

(1)TYPE
 (2)NUMBER
 (3)CAPACITY
 (4)MAX. WORKING PRESSURE TUBE SIDE
 (5)MAX. WORKING PRESSURE SHELL SIDE
 (6)MAX. WORKING TEMPERATURE TUBE SIDE
 (7)MAX. WORKING TEMPERATURE SHELL SIDE
 (8)MATERIAL 1) TUBE MT1=STAINLESS STEEL
 2) SHELL MS1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 TYPE NO. CAP. --KG/CM2G-- 1) 2)

P 80 STANDARD PWR 49 1 3.75E5 42. 21. 200.C 65.C MT1 MS1 OPT.A. 77/ 5

** CVCS COOLANT MIXED BED DEMINE, 762480

(1)NUMBER
 (2)DESIGN FLOW RATE CUBM/H
 (3)DESIGN PRESSURE KG/SQCMG
 (4)DESIGN TEMPERATURE C
 (5)MATERIAL MT1=STAINLESS STEEL
 (6)RESIN R1=STRONGLY BASIC ANION EXCHANGE RESIN
 R2=STRONGLY ACIBIC CATION EXCHANGE RESIN
 (7)VOLUME OF RESIN LITER/1
 (1) (2) (3) (4) (5) (6) (7)
 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-1	PWR 28	2	20	14	65			8-64	72/11
GENKAI-2	PWR 29	2	20.4	14	65	MT1		8-6-32	76/ 2
IKATA-2	PWR 30	2	20.4	14	65	MT1	R1,R2 850.	8-6-29	76/12
SENDAI	PWR 31	2	27.2	14	65	MT1		8-6-33	76/ 5
P 80 STANDARD	PWR 49	2	27.2	21	65	MT1		OPT.A.	77/ 5
P 80 STANDARD	PWR 49	2	27.2	14	65	MT1		OPT.B.	77/ 5

** CVCS COOLANT POSITIVE ION DEMINE, 762500

(1)NUMBER
 (2)DESIGN FLOW RATE M3/H
 (3)DESIGN PRESSURE(VESSEL) MG/CM2G
 (4)DESIGN TEMPERATURE(VESSEL) DEG-C
 (5)MATERIAL MT1=STAINLESS STEEL
 (6)RESIN R2=STRONGLY ACIBIC CATION EXCHANGE RESIN
 (7)VOLUME OF RESIN LITRE/1
 (1) (2) (3) (4) (5) (6) (7)
 NO. M3/H KG/CM2G C

GENKAI-2	PWR 29	1	10.2	14.	65.	MT1		8-6-32	76/ 2
IKATA-2	PWR 30	1	10.2	14.	65.	MT1	R2 340	8-6-33	76/12
SENDAI	PWR 31	1	13.6	14	65.	MT1		8-6-33	76/ 5
P 80 STANDARD	PWR 49	1	13.6	21	65.	MT1		OPT.A.	75/ 5
P 80 STANDARD	PWR 49	1	13.6	14	65.	MT1		OPT.B.	75/ 5

** CVCS HEAT REGENE. ION EXCH. 762520

(1)TYPE
 (2)NUMBER
 (3)DESIGN FLOW RATE M3/H/NO.
 (4)MAX. WORKING PRESSURE (VESSEL) KG/CM2G
 (5)MAX. WORKING TEMPERATURE (VESSEL) DEG C
 (6)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6)
 TYPE NO. M3/H/NO. P C

P 80 STANDARD PWR 49 4 27.2/4 21. 65. MT1 OPT.A. 77/ 5

** CVCS VOLUME CONTROL TANK

762540

(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
 (9)MATERIAL MT1=STAINLESS STEEL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
NO.	VOL. (CUBM)	DESIGN.P (KG/SQCMG)	DES.T (C)	OP.P (KG/SQCMG)	OP.T (C)	SPRAY (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-1+2	PWR	26	1	11.3							8-58	71/ 1
MIHAMA-3	PWR	27	1	8.5							8-58	71/ 8
IKATA-1	PWR	28	1	5.6	5.0	1.0	95.	0 - 4.2	53.	20.4	8-64	72/11
GENKAI-2	PWR	29	1	5.6	5.0	1.0	95.	0 - 4.2	53.	10.	MT1	8-6-33
IKATA-2	PWR	30	1	5.6	5.0		95.	0 - 4.2	53.	10.	MT1	8-6-30,31
SENDAI	PWR	31	1	8.5	5.0		95.	0 - 4.2	46.	27.	MT1	8-6-33,34
P 80 STANDARD	PWR	49	1	8.5	5.0		95.	1.1	46.	27.	MT1	OPT,A.B.

** CVCS BORIC ACID CHARGE / HPI PUMP

762560

(1)TYPE UZU=UZUMAKI
 TP2=TAISEKI-GATA KAHEN SOKUDO SIKI
 TP3=OOHUKU KAHEN GATA
 TP4=YOKO-OKI UZUMAKI
 TP4=YOKO-OKI UZUMAKI

(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
 (8)MATERIAL MT1=STAINLESS STEEL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
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-1+2	PWR	26	UZU	2	34.			177.		8-58	71/ 1
OOI-1+2	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-1	PWR	28	TP2	3	14.3	193.	95.	175.	53.	8-64	72/11
GENKAI-2	PWR	29	TP2	3	14.	193.	95.	172.	53.	MT1	8-6-33
IKATA-2	PWR	30	TP2	3	14.	193.	95.	172.	53.	MT1	8-6-30,31
SENDAI	PWR	31	TP4	3	34.	192.	150.	1770(M)	53.	MT1	8-6-34
SENDAI	PWR	31			(147.)			(732(M))		8-6-34	76/ 5
P 80 STANDARD	PWR	49	TP4	3	34.	192.	150.	1770(M)	53.	MT1	OPT,A.B.
P 80 STANDARD	PWR	49			(147.)			(732(M))		OPT,A.B.	77/ 5

** CVCS BORIC ACID PUMP

762580

(1)TYPE TP1=YOKO-OKI CANNED UZUMAKI
 TP2=YOKO-OKI UZUMAKI
 TP3=UZUMAKI

(2)NUMBER
 (3)CAPACITY CUBM/H/1
 (4)DESIGN PRESSURE KG/SQCMG
 (5)DESIGN TEMPERATURE C
 (6)MATERIAL MT1=STAINLESS STEEL

(1)	(2)	(3)	(4)	(5)	(6)
TYPE	NO.	CAP.	DES.P	DES.T	

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-1	PWR	28	TP2	2	10.	10.	95.	8-65	72/11
GENKAI-2	PWR	29	TP2	2	10.	10.	95.	MT1	8-6-33,34
IKATA-2	PWR	30	TP2	2	10.	10.	95.	MT1	8-6-31
SENDAI	PWR	31	TP2	2	17.	10.	95.	MT1	8-6-34
P 80 STANDARD	PWR	49	TP2	2	17.	10.	95.	MT1	OPT,A.B.

** CVCS BORIC ACID TANK 762600

(1)NUMBER
 (2)VOLUME
 (3)DESIGN PRESSURE KG/SQCMG
 (4)DESIGN TEMPERATURE C
 (5)HEATER TYPE TP1=EKISHIN GATA
 TP2=STRIP TYPE
 (6)HEATER POWER KW* /1
 (7)CONCENTRATION OF BORIC ACID PPM
 (8)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. VOL DES.P DES.T
 CUBM (C) KW* /1 PPM

TAKAHAMA-2	PWR	23	2	28.						8-58	70/ 5
GENKAI-1	PWR	24	2	11.4	1.ATM	95.	TP1	4.5*2/1	21000.	8-64	70/ 5
OOI-1.2	PWR	26	3	42.						8-58	71/ 1
MIHAMA-3	PWR	27	2	28						8-58	71/ 8
IKATA-1	PWR	28	2	11.4	1.ATM	95.	TP1	4.5*2/1	21000.	8-64	72/11

GENKAI-2	PWR	29	2	11.	1.ATM	95.	TP2	6.0*2/1	21000.	MT1	8-6-34	76/ 2
IKATA-2	PWR	30	2	11.	1.ATM	95.	TP2	6.0*2/1	21000.	MT1	8-6-31	76/12
SENDAI	PWR	31	2	30.	1.ATM	95.	TP2	8.1*2/1	21000.	MT1	8-6-35	76/ 5
P 80 STANDARD	PWR	49	2	80.	1.ATM	95.	---	---	7000.	MT1	OPT.A.	77/ 5
P 80 STANDARD	PWR	49	2	30.	1.ATM	95.	TP2	8.1*2/1	21000.	MT1	OPT.B.	77/ 5

** CVCS BORIC ACID SUPPLY TANK 762620

(1)NUMBER
 (2)CAPACITY M3
 (3)DESIGN PRESSURE
 (4)DESIGN TEMPERATURE DEG-C
 (5)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5)
 NO. M3 C

GENKAI-2	PWR	29	1	1.5	1.ATM	95.	MT1			8-6-34	76/ 2
IKATA-2	PWR	30	1	1.5	1.ATM	95.	MT1			8-6-31	76/12
SENDAI	PWR	31	1	1.5	1.ATM	95.	MT1			8-6-35	76/ 5
P 80 STANDARD	PWR	49	1	1.5	1.ATM	95.	MT1			OPT.A.B.	77/ 5

** CVCS PRIMARY SYSTEM CHEMICAL S TANK 762640

(1)NUMBER
 (2)CAPACITY M3
 (3)DESIGN PRESSURE KG/CM2G
 (4)DESIGN TEMPERATURE DEG-C
 (5)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5)
 NO. M C

IKATA-2	PWR	30	1	0.01	10.	65.				8-6-31	75/ 5
GENKAI-2	PWR	29	1	0.01	10.	65.	MT1			8-6-34	76/ 2
IKATA-2	PWR	30	1	0.01	10.	65.	MT1			8-6-31	76/12
SENDAI	PWR	31	1	0.019	10.	65.	MT1			8-6-35	76/ 5
P 80 STANDARD	PWR	49	1	0.019	10.	65.	MT1			OPT.A.B.	77/ 5

** CVCS BORON REGENE. CHILLED WATER TANK 762660

(1)TYPE
 (2)NUMBER
 (3)CAPACITY M3
 (4)MAX. WORKING PRESSURE
 (5)MAX. WORKING TEMPERATURE DEG C
 (6)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6)
 TYPE NO. M3 P C

P 80 STANDARD	PWR	49	1	1.9	1.ATM	65.	MT1			OPT.A.	77/ 5
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** CVCS BORON REGENE. CHILLED WATER PUMP 762680

(1)TYPE TP1=YOKO-OKI UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)MAX. WORKING PRESSURE KG/CM2G
 (5)MAX. WORKING TEMPERATURE DEG C
 (6)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6)
 TYPE NO. CAP P T

P 80 STANDARD	PWR	49	TP1	2	91.	10.	65.C	MT1		OPT.A.	77/ 5
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** CVCS BORON REGEN. CHILLER 762700

(1)TYPE
 (2)NUMBER
 (3)CAPACITY KCAL/H
 (4)MAX. WORKING PRESSURE KG/CM2G
 (5)MAX. WORKING TEMPERATURE DEG C
 (6)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6)
 NO. KCAL/H P C

P 80 STANDARD PWR 49 2 4.18E5 10. 65. MT1

** CVCS COOLANT FILTER 762720

(1)TYPE TP1=CARTRIDGE
 (2)NUMBER
 (3)DESIGN FLOW M3/H
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)PRESSURE LOSS(INITIAL) KG/CM2G
 (7)PARTICLE FILTER EFFICIENCY(25 MICRON PARTICLE) PC
 (8)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. M3/H P C P PC

GENKAI-2	PWR	29	TP1	1	20.4	14.	95.	0.35	98.	MT1	8-6-34.35	76/ 2
IKATA-2	PWR	30	TP1	1	20.4	14.	95.	0.35	98.	MT1	8-6-32	76/12
SENDAI	PWR	31	TP1	1	34.	14.	95.	0.35	98.	MT1	8-6-35	76/ 5
P 80 STANDARD	PWR	49	TP1	1	34.	21.	95.	0.35	98.	MT1	OPT.A.	77/ 5
P 80 STANDARD	PWR	49	TP1	1	34.	14.	95.	0.35	98.	MT1	OPT.B.	77/ 5

** CVCS SHAFT SEAL WATER HEATER 762740

(1)TYPE TP1=CARTRIDGE
 (2)NUMBER
 (3)DESIGN FLOW M3/H
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)PRESSURE LOSS(INITIAL) KG/CM2
 (7)PARTICLE FILTER EFFICIENCY(25 MICRON PARYICLE) PC
 (8)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. M3/H P C P PC

GENKAI-2	PWR	29	TP1	1	36.3	10.	95.	0.35	98.	MT1	8-6-35	76/ 2
IKATA-2	PWR	30	TP1	1	36.3	10.	95.	0.35	98.	MT1	8-6-32	76/12
SENDAI	PWR	31	TP1	1	34.1	10.	95.	0.35	98.	MT1	8-6-36	76/ 5
P 80 STANDARD	PWR	49	TP1	1	34.	10.	95.	0.35	98.	MT1	OPT.A.B.	77/ 5

** CVCS SHAFT SEAL WATER INJECT. FILTER 762760

(1)TYPE TP1=CARTRIDGE
 (2)NUMBER
 (3)DESIGN FLOW M3/H/1
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)PRESSURE LOSS(INITIAL) KG/CM2
 (7)PARTICLE FILTER EFFICIENCY PC/(D MICRON PARTICLE)
 (8)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. M3/H/1 P C P PC/D

GENKAI-2	PWR	29	TP1	2	18.2	193.	95.	0.5	98/25	MT1	8-6-35	76/ 2
IKATA-2	PWR	30	TP1	2	18.2	193.	95.	0.5	98/ 5	MT1	8-6-32.33	76/12
SENDAI	PWR	31	TP1	2	18.2	192.	95.	0.5	98/25	MT1	8-6-36	76/ 5
P 80 STANDARD	PWR	49	TP1	2	18.	192.	95.	0.5	98/ 5	MT1	OPT.A.B.	77/ 5

** CVCS BORIC ACID FILTER 762780

(1)TYPE TP1=CARTRIDGE
 (2)NUMBER
 (3)DESIGN FLOW M3/H
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)PRESSURE LOSS(INITIAL) KG/CM2
 (7)PARTICLE FILTER EFFICIENCY(25 MICRON PARTICLE) PC
 (8)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. M3/H P C P PC

GENKAI-2	PWR	29	TP1	1	20.4	10.	95.	0.35	98.	MT1	8-6-36	76/ 2
IKATA-2	PWR	30	TP1	1	20.4	10.	95.	0.35	98.	MT1	8-6-33	76/12
SENDAI	PWR	31	TP1	1	34.1	10.	95.	0.35	98.	MT1	8-6-36	76/ 5
P 80 STANDARD	PWR	49	TP1	1	34.	10.	95.	0.35	98.	MT1	OPT.A.B.	77/ 5

** SIS MAIN COMPONENTS LIST PWR 763100

(1)PRESSURIZED BORIC ACID TANK 763160
 (2)BORIC ACID INJECTION TANK 763180
 (3)BORIC ACID INJECTION RECIRC. TANK (OPT.A) 763130 (4PC BORON ONLY)
 (4)CHARGE/HIGH PRESSURE INJECTION PUMP 763140
 (5)LOW PRESSURE INJECTION PUMP(RHR PUMP) 763150 (764220=RHR)
 (6)BORIC ACID INJECTION RECIRC. PUMP (OPT.A) 763170 (4PC BORON ONLY)
 (7)RHR HEAT EXCHANGER 764620
 (8)BORIC ACID TANK FOR REFUELING 763120

P 80 STANDARD PWR 49 OPTION A =(1) TO (8) 4 PC BORON 77/ 5
 P 80 STANDARD PWR 49 OPTION B =(1) TO (8) EXCEPT (3) AND (6) 12 PC BORON 77/ 5

** SIS BORIC ACID TANK FOR REFUEL 763120

(1)TYPE TP1=TATE-OKI ENT00-GATA
 (2)NUMBER
 (3)CAPACITY M3
 (4)WATER VOLUME M3
 (5)DESIGN PRESSURE ATM
 (6)DESIGN TEMPERATURE DEG-C
 (7)BORON CONCENTRATION PPM
 (8)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. M3 M3 ATM C PPM

TAKAHAMA-2	PWR 23	1	1500						8-59	70/ 5	
GENKAI-1	PWR 24	1	1200				2500		8-68	70/ 5	
OOI-1+2	PWR 26	1	1300						8-61	71/ 1	
MIHAMA-3	PWR 27	1	1500						8-59	71/ 8	
IKATA-1	PWR 28	1	1200				2000		8-67	72/11	
GENKAI-2	PWR 29	TP1	1	1200	1150	1	95.	2000	MT1	8-5-24	76/ 2
IKATA-2	PWR 30	TP1	1	1200	1150	1	95.	2000	MT1	8-5-23	75/ 5
SENDAI	PWR 31	TP1	1	1720		1	95.	2000	MT1	8-5-23	76/ 5
P 80 STANDARD	PWR 49	TP1	1	1900		1	95.	2000	MT1		77/ 5

** SIS BORIC ACID INJECT. RECIRC. TANK 763130

THIS TANK IS USED FOR OPTION A ONLY (4WT PERCENT OF BORON)
 (1)TYPE TP1=TATE-OKI ENT00-GATA
 (2)NUMBER
 (3)CAPACITY M3
 (4)MAX. WORKING PRESSURE ATM
 (5)MAX. WORKING TEMP. DEG C
 (6)BORON CONCENTRATION PPM
 (7)MATERIAL MT1=CARBON STEEL(SUS LINING)
 (8)NO. OF HEATER
 (9)TYPE OF HEATER ST=STRIP TYPE
 (10)CAPACITY OF HEATER KW
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
 NO. M3 ATM C PPM NO. KW

P 80 STANDARD PWR 49 TP1 1 0.284 1 95. 2100 MT1 1 ST 6. OPT.A 77/ 5

** SIS BORIC ACID HIGH-P INJECT PUMP 763140

(1)TYPE TP1=UZUMAKI
 TP2=YOKO-OKI UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)DESIGN HEAD M
 (5)DESIGN PRESSURE KG/CM2G
 (6)DESIGN TEMPERATURE DEG-C
 (7)MAX. FLOW RATE M3/H/1
 (8)MATERIAL MT1=STAINLESS STEEL
 * SAFETY INJECTION USE
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. CAP M D.P C

GENKAI-1	PWR 24	TP1	2	160	760	116	150			8-68	70/ 5
MIHAMA-3	PWR 27		3	125	400				SEE762380	8-59	71/ 8
IKATA-1	PWR 28	TP1	2	160	760	116	150			8-67	72/11
GENKAI-2	PWR 29	TP2	2	160	760	116	150	250	MT1	8-5-23	76/ 2
IKATA-2	PWR 30	TP2	2	160	760	116	150	250	MT1	8-5-22	75/ 5
SENDAI	PWR 31	TP2	3	147	732	192	150		MT1	8-5-23	76/ 5
P 80 STANDARD	PWR 49	TP2	3	*147	*732	192	150		MT1		77/ 5

** SIS BORIC ACID LOW-P INJECT PUMP PWR 763150

(1)TYPE TP1=YOKO-OKI UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)DESIGN HEAD M
 (5)DESIGN PRESSURE KG/CM2G
 (6)DESIGN TEMPERATURE DEG-C
 (7)MATERIAL MT1=STAINLESS STEEL
 *1=COMMON WITH PHR PUMP SEE 764220
 **SAFETY INJECTION USE

(1) (2) (3) (4) (5) (6) (7)
 TYPE NO. CAP. D.H D.P C MAT.

MIHAMA-3	PWR	27	2	850	73					*1	8-60	71/ 8
IKATA-2	PWR	30	TP1	2	454	86	42	200	MT1	*1	8-5-22	75/ 5
P 80 STANDARD	PWR	49	TP1	2	**681	**82	42	200	MT1	*1		77/ 5

** SIS P-RIZED BORIC ACID TANK 763160

(1)TYPE TP1=TATE-OKI ENT00-GATA
 (2)NUMBER
 (3)CAPACITY M3/1
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)WORKING PRESSURE KG/CM2G
 (7)WORKING TEMPERATURE DEG-C
 (8)BORON CONCENTRATION PPM
 (9)MATERIAL MT1=CARBON STEEL(SUS LINING)
 (1) (2) (3) (4) (5) (6) (7) (8) (9)
 NO. M3/1 D.P C W.P C PPM

MIHAMA-1	PWR	21	2	38							REF23 P32	70/11
MIHAMA-2	PWR	22	2	57							REF23 P32	70/11
TAKAHAMA-2	PWR	23	3	41							8-59	70/ 5
GENKAI-1	PWR	24	2	56.5	56	150					8-68	70/ 5
TAKAHAMA-1	PWR	25	3	41.							REF23 P32	70/11
OOI-1,2	PWR	26	4	38.							8-61	71/ 1
MIHAMA-3	PWR	27	3	41.							8-59	71/ 8
IKATA-1	PWR	28	2	56.5	56	150		2000			8-68	72/11
GENKAI-2	PWR	29	TP1	2	57.	56	150	50	49	2000	MT1	8-5-23
IKATA-2	PWR	30	TP1	2	57.	56	150	50	49	2000	MT1	8-5-21
SENDAI	PWR	31	TP1	3	41.	50	150	45	49	2000	MT1	8-5-23
P 80 STANDARD	PWR	49	TP1	3	41.	50	150	45	49	2000	MT1	77/ 5

** SIS BORIC ACID INJECT. RECIRC. PUMP 763170

THIS PUMP IS USED FOR OPTION A ONLY (4WT PERCENT OF BORON)
 (1)TYPE TP1=YOKO-OKI UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)MAX. WORKING PRESSURE KG/CM2G
 (5)MAX. WORKING TEMP. DEG C
 (6)HEAD M
 (7)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7)
 NO. W.P C M

P 80 STANDARD	PWR	49	TP1	2	4.5	10.	121	30.5	MT1		OPT.A	77/ 5
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** SIS BORIC ACID INJECT TANK 763180

(1)TYPE TP1=TATE-OKU ENT00-GATA
 (2)NUMBER
 (3)CAPACITY M3/1
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)BORON CONCENTRATION PPM
 (7)MATERIAL MT1=CARBON STEEL(SUS LINING)
 (8)NUMBER OF HEATER
 (9)TYPE OF HEATER TH1=ELECTRICAL(OUTSIDE)
 (10)CAPACITY OF HEATER KW/1
 (1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
 NO. M3 P C PPM MAT. NO. KW/1

GENKAI-1	PWR	24	1	2.5							8-68	70/ 5
GENKAI-2	PWR	29	TP1	1	2.5	116	150	21000	MT1	2	TH1	3.35
IKATA-2	PWR	30	TP1	1	2.5	116	150	21000	MT1	1	TH1	3.35
SENDAI	PWR	31	TP1	1	3.4	192	150	21000	MT1	2	TH1	5.0
P 80 STANDARD	PWR	49	TP1	1	3.4	192	150	21000	MT1	2	TH1	5.

** 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

** RCIC TURBINE

763620

(1)TYPE TP1=HAIATSU SHIKI
 (2)NUMBER
 (3)INLET STEAM PRESSURE FROM / TO KG/CM2G
 (4)STEAM FLOW RATE FROM / TO T/H
 (5)OUTPUT FROM / TO K=KW, P=PS
 (6)SPEED FROM / TO RPM
 (1) (2) --- (3) --- -- (4) -- -- (5) --- --- (6) ---
 TYPE NO. PRESSURE FLOW.R OUTPUT SPEED
 KG/CM2G T/H KW OR PS RPM

ONAGAWA	BWR	4	TP1	1	77.7/ 9.5	8. /3.	343/67K	4000/2000	8-6-(4)	70/ 5
HAMAOKA-1	BWR	5	TP1	1	77.7/ 9.5	9.1/3.	343/67K	4000/2000	8-42	70/ 5
FUKUSIMA-5	BWR	9	TP1	1	77. /10.6		460/90P	4500/2100	8-6-(3)	71/ 2
FUKUSIMA-4	BWR	10	TP1	1	79. /10.6		485/90P	3600/1960	8-6-(3)	71/ 8
FUKUSIMA-6	BWR	11	TP1	1	79. /10.6		725/130P	4500/2100	8-6-(3)	72/ 1
TOOKAI-2	BWR	12	TP1	1	79. /10.6		725/130P	4500/2100	8-6-(3)	72/ 1
HAMAOKA-2	BWR	13	TP1	1	77.7/ 9.5			4500/2100	8-35	72/ 9
KASHIWAZAKI	BWR	15	TP1	1	79. /10.6		725/130P	4500/2100	8-6-17	75/ 3
TOMIOKA-2	BWR	16	TP1	1			725/130P	4500/2100	8-6-18	76/12

** RCIC PUMP

763640

(1)TYPE TP1= YOKO ZIKU TADAN TURBINEPUMP
 TP2= TADAN SUIHEI ENSIN SIKI
 (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

(1)	(2)	(3)	(4)	(5)	(6)				
NO.			F.H.	HEAD M / M	SPEED RPM				
ONAGAWA	BWR	4	TP1	1	79/10.6	94.5	854/160 (V)	8-6-(4)	70/ 5
HAMAOKA-1	BWR	5	TP2	1		94.5	854/160 4500/2100	8-42	70/ 5
FUKUSIMA-5	BWR	9	TP2	1		91.0	854/160 (V)	8-6-(3)	71/ 2
FUKUSIMA-4	BWR	10	TP2	1		91.0	854/160 (V)	8-6-(3)	71/ 8
FUKUSIMA-6	BWR	11	TP2	1		142.0	870/186 (V)	8-6-(3)	72/ 1
TOOKAI-2	BWR	12	TP2	1		142.0	870/186	8-6-(4)	72/ 1
HAMAOKA-2	BWR	13	TP2	1		96.5	854/160 4500/2100	8-36	72/ 9
KASHIWAZAKI	BWR	15	TP2	1		140. T/H	880/180	8-6-17	75/ 3
TOMIOKA-2	BWR	16	TP2	1		140.0	880/180	8-6-18	76/12
VERMONT YANKEE	BWR	52				90.8		/	
DUANE ARNOLD	BWR	58				94.5		A-2 P4	70/ 7

** RHRS RESIDUAL HEAT REMOVE.S 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-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
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
TOOKAI-2	BWR	12	2-SYSTEMS (RHR-PUMP=3, RHR-S.W.PUMP=2, RHR-HX=1*2)	8-6-(5)	72/ 1
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

** RHRS MAIN COMPONENTS FOR PWR 764100

(1) RESIDUAL HEAT REMOVE HEAT EXCHANGER (RHR COOLER) 76462
 (2) RESIDUAL HEAT REMOVE PUMP 76422

** RHRS W=PUMP TYPE NUMBER CAPACITY MATERIAL 764220

(1)TYPE TP1=YOKO-OKI KATASUIKOMI UZUMAKI
 TP2=UZUMAKI(TATE-GATA)
 TP3=UZUMAKI
 TP4=YOKO-OKI UZUMAKI
 TP5=TATE-GATA DENDOO 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

NOTE.1 ACT AS SAFETY-INJECTION OR RECIRCULATION

NOTE.2 THESE PUMPS ARE ALSO USED AS ECCS-LOW P. INJECTION PUMPS AND AS CONTAINER SPRAY COOLING PUMPS.

(1) (2) (3) (4) (5) (6) (7)
 TYPE NO. CAP. HEAD DES.P DES.T MATERIAL
 CUB/H M KG/SQCMG C

JDDR-2	BWR	2	TP1	1	91*1	30				KON-6 P5	70/11
ONAGAWA	BWR	4	TP2	2*2	1090*4	119			C1,S1,B1	8-6-(4)	70/ 5
HAMAOKA-1	BWR	5	TP2	2*2	1090*4	119			C2,S2,B2	8-43	70/ 5
FUKUSIMA-5	BWR	9	TP2	2*2	1750*4	120			C1,S1,B1	8-6-(4)	71/ 2
FUKUSIMA-4	BWR	10	TP2	2*2	1750*4	142			C1,S1,B1	8-6-(4)	71/ 8
FUKUSIMA-6	BWR	11	TP2	1*3	1690*3	85.3			C2,S2,B3	8-6-(4)	72/ 1
TOOKAI-2	BWR	12	TP2	1*3	1690*3	85.3			C2,S2,B3	8-6-(4)	72/ 1
HAMAOKA-2	BWR	13	TP2	2*2	1750*4	128			C2,S2,B2	8-36	72/ 9
TOMIOKA-1	BWR	14	TP2	3	1690*3	86			C2,S2,B3	8-6-1	76/ 8
KASHIWAZAKI	BWR	15	TP2	3	1690*3	85				8-6-16	75/ 3
TOMIOKA-2	BWR	16	TP5	3	1690*3	85				NOTE.2	8-6-17,-5-29 76/12
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
OOI-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-1	PWR	28	TP3	2	454*2	80	42	200		8069	72/11
GENKAI-2	PWR	29	TP4	2	454	86	42	200		8-5-24	76/ 2
IKATA-2	PWR	30	TP4	2	454*2	86	42	200		8-6-34	75/ 5
SENDAI	PWR	31	TP4	2	681	82	42	200		8-5-24	76/ 5
P 80 STANDARD	PWR	49	TP4	2	852/1	73	42	200	SUS		77/ 5
P 80 STANDARD	PWR	49			681/1	82				NOTE.1	77/ 5
VERMONT YANKEE	BWR	52		4	1590*4					A-2	70/ 5
DUANE ARNOLD	BWR	58		4	1090*4					A-2 P3	70/ 7

** RHRS S.W-PUMP TYPE NUMBER CAPACITY MATERIAL 764420

(1)TYPE TP1=UZUMAKI(TATE-GATA)

(5)MATERIAL CASING C1=CAST STEEL OR CAST IRON
 S1=HEAT TREATED HIGH CARBON STEEL OR ALLOY STEEL
 SHAFT S2=STAINLESS STEEL
 BLADE B1=BRONZE,
 B2=STAINLESS STEEL
 B3=ALLOY STEEL

(1) (2) (3) (4) (5)
 TYPE NO. CAP. HEAD MATERIAL
 CUBM/H (M)

ONAGAWA	BWR	4	TP1	2*2	545/1	239			C1,B1,S1	8-6-(4)	70/ 5
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

** RHRS H.EXCH. TYPE NUMBER CAPACITY MATERIAL 764620

(1)TYPE

TP1 =U-TUBE
 YU =YOKO OK1 U-TUBE
 TU =TETE OK1 U-TUBE
 ST =SHELL AND TUBE

(8)MATERIAL

TURE MATERIAL T1=CU-NI-ALLOY
 TUBE MATERIAL T2=HAKUDOO(CUPRO NICKEL)
 TUBE MATERIAL T3=STAINLESS STEEL
 SHELL MATERIAL S1=CARBON STEEL
 KAN-ITA K =CARBON STEEL
 KAN-ITA K1=CARBON STEEL WITH MONEL CLAD

MODE1=SHUT DOWN COOLING MODE

MODE2=CONTAINER SPRAY COOLING MODE AT(SUPPRESSION-POOL-WATER=52 DEG C)

(1) (2) (3) (4) (5) (6) (7) (8)
 TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.) (MAT.)
 (TUBE) (SHELL) (TUBE) (SHELL)
 KCAL/H --KG/S@CMG-- ----DEG-C----

JPDR-2	BWR	2	YU	1						KON-6 P5	70/11
ONAGAWA	BWR	4	TU	2	5.06E6*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
TOMIOKA-1	BWR	14	TU	2	16.6 E6*2					8-6-1	76/ 8
KASHIWAZAKI	BWR	15	TU	2	1.66E7*2 (MODE1)					8-6-16	75/ 3
TOMIOKA-2	BWR	16	TU	2	1.46E7*2 (MODE2)					8-6-17	76/12
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
TAKAHAMA-1	PWR	25	ST	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-1	PWR	28	ST	2	6.5 E6*2	42.	10.	200.	95.	8-68	72/11
GENKAI-2	PWR	29	ST	2	6.5 E6	42.	10.	200.	95.	T3,S1	8-5-24
IKATA-2	PWR	30	TP1	2	6.5 E6*2	42.	10.	200.	95.	T3,S1	8-6-34
SENDAI	PWR	31	YU	2	7.5 E6*2	42.	10.	200.	95.	T3,K	8-5-24
P 80 STANDARD	PWR	49	YU	2	7.5 E6*2	42.	10.	200.	95.	T3,S1	77/ 5
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

(3)DESIGN TEMPERATURE

(4)DESIGN PRESSURE

(1) (2)
 NO. FLOW-RATE....
 M3/H/1 TON/H/1

M3/H/1-SYSTEM

OR

T/H/1

C

KG/CM2G

(3)

DES.T

C

(4)

DES.P

KG/CM2G

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

(1)TYPE TP1=UZUMAKI
TP2=TATE-GATA DENDOO 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 M	(5) MATERIAL		
JPDR-2	BWR	2	TP1	1+(1)	91 A	120		KON-6 P16	70/11
JPDR-2	BWR	2	TP1	1+(1)	45.4 A	100		KON-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 B	204	C2.S2	8-6-(6)	71/ 2
FUKUSIMA-4	BWR	10	TP1	2	1050 B	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
KASHIWAZAKI	BWR	15	TP1	1	1440. B	210		8-5-27	75/ 3
TOMIOKA-2	BWR	16	TP2	1	1440. B	210		8-5-29	76/12

** SAMPLE H.EXCH. TYPE NUMBER CAPACITY 765620

(1)TYPE TP1=SHELL AND COILED TUBE
TP2=DOUBLE TUBE SIKI
(8)MATERIAL
1) TUBE MT1=STAINLESS STEEL
2) SHEEL MS1=STAINLESS STEEL
(1) (2) (3) (4) (5) (6) (7) (8)
TYPE NO. CAP. (DESIGN PRES.) (DESIGN TEMP.) MATERIAL
(TUBE) (SHEEL) (TUBE) (SHEEL) 1) 2)
KCAL/H --KG/SQCMG-- ---DEG-C---

MIHAMA-1	PWR	21	TP2	1	5.34E4/1	175.	10.6	360.	177.	8-66	66/11
GENKAI-1	PWR	24	TP1	3	5.35E4/1	175.	10.	360.	180.	8-70	70/ 5
IKATA-1	PWR	28	TP1	3	5.34E4/1	175.	10.	360.	95.	8-72	72/11
GENKAI-2	PWR	29	TP1	3	5.3 E4/1	175.	10.	360.	95.	MT1 MS1	8-6-43
IKATA-2	PWR	30	TP1	3	5.3 E4/1	175.	10.	360.	95.	MT1 MS1	8-6-40
SENDAI	PWR	31	TP1	3	5.3 E4/1	175.	10.	360.	95.	MT1 MS1	8-6-43

** SAMPLE BOX CAPACITY DESIGN-P DESIGN-T NUMBER 765660

(1)NUMBER
(2)CAPACITY MILLI LITRE
(3)DESIGN PRESSURE KG/SQCMG
(4)DESIGN TEMPERATURE C
(5)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3) (4) (5)
NO. CAP. DES.P DES.T C

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	
IKATA-1	PWR	28	8	75	175	360		8-72	72/11	
GENKAI-2	PWR	29	8	75	175	360	MT1	8-6-43	76/ 2	
IKATA-2	PWR	30	8	75/1	175	360	MT1	8-6-40	76/12	
SENDAI	PWR	31	3	75	175	360	MT1	8-6-43	76/ 5	

** 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) (2) (3) (4) (5) (6)

TYPE NO.

KG/CM2G

TON/H

HP OR KW

RPM

TSURUGA	BWR	3	TP1	1			3050HP	900	80-3-3	70/ 5
ONAGAWA	BWR	4	TP2	1	77.7/9.5	59 /40.9	1986/441Kw	4000/2000	8-6-(7)	70/ 5
HAMAOKA-1	BWR	5	TP2	1	77.7/ 9.5	59 /41.	2000/450Kw	4000/2000	8-47	70/ 5
FUKUSIMA-1	BWR	6	TP3	1	78. /10.0	50.8/24.04	2675/560HP	3900/2125	MEMO P313	70/ 3
FUKUSIMA-5	BWR	9	TP2	1	79. /10.6		4100/750HP	4000/2000	8-6-(7)	71/ 2
FUKUSIMA-4	BWR	10	TP2	1	79. /10.6		4100/750HP	4000/2160	8-6-(7)	71/ 8
HAMAOKA-2	BWR	13	TP2	1	77.7/ 9.5			4000/2000	8-40	72/ 9
VERMONT YANKEE	BWR	52							A-2	70/ 5
DUANE ARNOLD	BWR	58							A-2 P3	70/ 7

** HIGH-P. INJECT. SYSTEM DRIVER PROPERTY 766030

PROPERTY OF TURBINE

A=TURBINE INLET STEAM TEMPERATURE FROM(A1)/TO(A2) 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)

DEG C KG/SQCMG SEC RPM RPM

FUKUSIMA-1	BWR	6	292./179.	3.5	35./40.	8500/5070	5000.	MEMO P313	70/ 3
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** HIGH-P. INJECT. SYSTEM DRIVER PROPERTY 766040

PROPERTY OF TURBINE

A=TURBINE HOUSING MAX. INNER DIA(A1)MM. AND THICKNESS(A2)MM.

B=NOZZLE DIA (B)MM.

C=TURBINE BLADE WIDTH (C)MM

D1/D2=BLADE ADDENDUM/DEDDENDUM DIA. MM

E=SHAFT TOTAL LENGTH MM

F=SHAFT MAX DIA MM

G=BEARING SPAN MM

(A1)/(A2) (B) (C) (D1)/(D2) (E) (F) (G)

ID / T MM MM MM / MM MM MM MM

FUKUSIMA-1	BWR	6	1380/22.	24.	104.	916./860.	1830.	152.	1042.	MEMO P314	70/ 3
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** 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
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** HIGH-P, INJECT. SYSTEM PUMP PROPERTY 766440

(1)TYPE TP1=UZUMAKI
TP2=MULTI STAGE DENDOO UZUMAKI
(2)NUMBER
(3)REACTOR PRESSURE FROM / TO KG/SQCMG
(4)FLOW RATE FROM / TO CUBM/H/1 OR * 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

(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	4000/2000		8-6-(8)	70/ 5
HAMAOKA-1	BWR 5	TP1 1	79 /10.5	681	4000/2000	C1S1B1	8-47	70/ 5
FUKUSIMA-5	BWR 9	TP1 1	79 /10.6	965 *	4000/2000	C2S2B2	8-6-(7)	71/ 2
FUKUSIMA-4	BWR 10	TP1 1	79 /10.6	965 *	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	4000/2000	C1S1B1	8-39	72/ 9
KASHIWAZAKI	BWR 15	TP1 1	350/1440	860/270			8-5-27	75/ 3
TOMIOKA-2	BWR 16	TP2 1	350/1440*	860/270			8-5-29	76/12
VERMONT YANKEE	BWR 52		965				A-2	70/ 5
DUANE ARNOLD	BWR 58		681				A-2 P3	70/ 7

** BORON INJECT SYSTEM NUMBER CONTROL WORTH 767220

(1)SYSTEM NUMBER
(2)TOTAL CONTROL WORTH DELTA-K
(3)K EFFECTIVE K EFFECTIVE .LE.
(4)CONTROL SPEED DELTA-K/MINUTE (MINIMUM)
(5)SYSTEM MATERIAL MT1=STAINLESS STEEL
(6)LIQUID POISON MATERIAL P1 =SODIUM PENTABORATE SOLUTION
(7)BORON CONCENTRATION WEIGHT PERCENT

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)		
						WT.PC	M3	KG				
JPDR-2	BWR 2	0.18			P1	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
KASHIWAZAKI	BWR 15		0.95	0.001	MT1 P1			20.			8-3-87	75/ 3
TOMIOKA-2	BWR 16	1	0.95	0.001	MT1 P1		1	20.			8-3-102	76/12
DRESDEN-1	BWR 55				P1						DNR V4 P94	62/
DRESDEN-2	BWR 56				P1						DNR V7 P192	68/
BURLINGTON	PWR 71				P1						GSK-19	69/ 2

** BORON INJECT SYSTEM PUMP NO. TYPE CAPACITY 767420

(1)TYPE TP1=PLUNGER TYPE
(2)NUMBER
(3)CAPACITY A=M3/H OR B=TON/H
(4)DESIGN PRESSURE KG/CM2G
(5)HEAD M

(1)	(2)	(3)	(4)	(5)			
TYPE NO.		CAP.	DES.P KG/CM2G	HEAD M			
ONAGAWA	BWR 4	TP1 2	6.1 A	105.5	1055		8-6-(9)
HAMAOKA-1	BWR 5	TP1 2	6.1 A	105	980		8-49
FUKUSIMA-5	BWR 9	TP1 2	11.7 B	105	980		8-6-(9)
FUKUSIMA-4	BWR 10	TP1 2	11.7 B	105	980		8-6-(9)
FUKUSIMA-6	BWR 11	TP1	9.77B		858		8-6-(9)
TOOKAI-2	BWR 12	TP1	9.77B		858		8-6-(10)
HAMAOKA-2	BWR 13	TP1 2	8.7 A	105	980		8-41
KASHIWAZAKI	BWR 15	TP1 2	9.8 A		860		8-3-87
TOMIOKA-2	BWR 16	TP1 1+(1)	9.8 A		860		8-3-102

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** MAIN      COMPONENTS OF CCS      PWR      768100

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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
OOI-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-1	PWR	28	FROM(A) TO(K) ETC	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
 TP6=YOKO-ZIKU TANDAN UZUMAKI
 (2)NUMBER (SPARE NO.)
 (5)MATERIAL MT1=CARBON STEEL
 ---INTERMEDIATE-1 LOOP---
 (1) (2) (3) (4) (5) (11) (12) (13) (14) (15)
 TYPE NO. CAP. HEAD MAT. TYPE NO. CAP. HEAD MAT.
 M3/H/1 M M3/H/1 M

JPDR-2	BWR	2	TP1 1+(1)	386	30.4				KON-6 P14	70/11	
ONAGAWA	BWR	4	TP2 2+(1)	500T/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	
TOOKAI-2	BWR	12	TP3 3		52				8-6-(11)	72/ 1	
HAMAOKA-2	BWR	13	TP6 6*3*2	880.	45				5001.032	75/ 4	
TOMIOKA-1	BWR	14	TP3 1+(1)	650.	40		TP3 2+(1)	800.	50	8-13-13	76/ 8
KASHIWAZAKI	BWR	15	TP3	300.	45		TP3	960.	35	8-12-25	75/ 3
TOMIOKA-2	BWR	16	TP3 1+(1)	650.	40		TP3 2+(1)	800.	50	8-12-22	76/12
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 4	650.	48.8						70/11
OOI-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-1	PWR	28	TP5 4	850	60					8-71	72/11
GENKAI-2	PWR	29	TP3 4	900	50	MT1				8-6-38	76/ 2
IKATA-2	PWR	30	TP3 4	900	60	MT1				8-6-35	76/12
SENDAI	PWR	31	TP3 4	1100	55	MT1				8-6-38	76/ 5
FUGEN	ATR	81	TP3 2	1400T/H	80						/

** REACTOR AUX.COOL SYSTEM C.WATER SURGE TANK 768440

(1)TYPE TP1=YOKO ENTDOO GATA(WITH SEPARATION PLATE INSIDE)
 (2)NUMBER
 (3)CAPACITY M3
 (4)WATER VOLUME(NORMAL) M3
 (5)DESIGN PRESSURE(INTERNAL) KG/CM2G
 (6)DESIGN TEMPERATURE DEG-C
 (7)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6) (7)
 M3 M3 P

GENKAI-2	PWR	29	TP1 1	8	4	3.5	95.	MT1	8-6-38	76/ 2
IKATA-2	PWR	30	TP1 1	8	4	3.5	95.	MT1	8-6-35	76/12
SENDAI	PWR	31	TP1 1	8	4	3.5	95.	MT1	8-6-38	76/ 5

** 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
 (5)MATERIAL MT1=LOW ALLOY CASTING IRON
 (1) (2) (3) (4) (5)
 TYPE NO. CAP. HEAD
 CUBM/H (M)

JPDR-2	BWR	2	TP1 1+(1)	456					KON-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
TOOKAI-2	BWR	12	TP3 3		55				8-6-(11)	72/ 1
HAMAOKA-2	BWR	13	TP3 2*2						8-43	72/ 9
HAMAOKA-2	BWR	13	TP3 3*2	1100.	45				5001.032	75/ 4
TOMIOKA-1	BWR	14	TP3 2+(1)	3200.	25				8-13-13	76/ 8
KASHIWAZAKI	BWR	15	TP3 3	1200.	35				8-12-25	75/ 3
TOMIOKA-2	BWR	16	TP3 2+(1)	2700.	25				8-12-22	76/12
TAKAHAMA-2	PWR	23	TP4 4	3750.	42				8-7-	70/ 5
GENKAI-1	PWR	24	TP4 4	2200.	40				8-71	70/11
OOI-1,2	PWR	26	TP5 8	2540.	40				8-73	71/ 1
MIHAMA-3	PWR	27	TP4 4	3200.	45				8-70	72/ 1
IKATA-1	PWR	28	TP4 4	2400.	40				8-70	72/11
GENKAI-2	PWR	29	TP4 4	2400.	40	MT1			8-6-39	76/ 2
IKATA-2	PWR	30	TP4 4	2500.	39	MT1			8-6-36	76/12
SENDAI	PWR	31	TP4 4	2200.	40	MT1			8-6-39	76/ 5

** SFP SPENT FUEL PIT SIZE 768700

(1)SIZE OF SPENT-FUEL-PIT M*M*M(DEPTH)
 (2)SIZE OF TRANSFER-CASK-PIT M*M*M(DEPTH)
 (3)TYPE TP1=STAINLESS STEEL LINING

------(1)------(2)------(3)
 DEPTH DEPTH
 M * M * M M * M * M

GENKAI-2 PWR 29 11.4 7.5 12.25 3.6 4.0 12.25 TP1 5101.011P3 76/ 4

** SFP SPENT FUEL PIT H.EXCH. 768720

(1)TYPE TP1=SHELL AND TUBE
 TP2=SHELL AND U-TUBE
 TP3=YOKO-OKI U-TUBE
 (8)DESIGN HEAT LOAD KCAL/H/1
 (9)MATERIAL

1) TUBE MT1=STAINLESS STEEL
 2) SHELL MS1=CARBON STEEL

(1)(2) (3) (4) (5) (6) (7) (8) (9)
 NO. CAP. (DESIGN PRES.) (DESIGN TEMP.) MATERIAL
 (TUBE) (SHELL) (TUBE) (SHELL) 1) 2)
 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. 8-72 70/ 5
 OOI-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-1 PWR 28 TP2 1 1.7 E6 95. 95. 8-71 72/11
 GENKAI-2 PWR 29 TP2 2 0.87E6 95. 95. MT1 MS1 8-6-40 76/ 2
 IKATA-2 PWR 30 TP3 2 1.01E6/1 95. 95. 0.86E6 MT1 MS1 8-6-37 76/12
 SENDAI PWR 31 TP3 2 95. 95. 1.76E6 MT1 MS1 8-6-40 76/ 5

** SFP SPENT FUEL PIT PUMP 768760

(1)TYPE TP1=YOKO-OKI-ENSHIN GATA
 TP2=UZUMAKI
 TP3=YOKO-OKI UZUMAKI
 (4)MATERIAL MT1=STAINLESS STEEL

(1) (2) (3) (4)
 TYPE NO. CAP. CUBM/H/1

MIHAMA-1 PWR 21 TP2 1 114 8-68 66/11
 GENKAI-1 PWR 24 TP1 1 175 8-72 70/ 5
 IKATA-1 PWR 28 TP1 1 220 8-71 72/11
 GENKAI-2 PWR 29 TP3 2 120 MT1 8-6-40 76/ 2
 IKATA-2 PWR 30 TP3 2 220 MT1 8-6-37 76/12

SENDAI PWR 31 TP3 2 300 MT1 8-6-40 76/ 5

** SFP SPENT FUEL PIT DEMINE. 768780

(1)TYPE TP1=TATE-ENTOO-FLUSH GATA
 TP2=RESIN FLUSH KANOO SIKI
 (2)NUMBER
 (3)DESIGN FLOW RATE CUBM/H
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)RESIN VOLUME M3
 (7)MATERIAL MT1=STAINLESS STEEL

(1) (2) (3) (4) (5) (6) (7)
 TYPE NO. CUBM/H KG/CM2G C CUBM

MIHAMA-1 PWR 21 TP2 1 20 8-68 66/11
 GENKAI-1 PWR 24 TP1 1 15.9 8-73 70/ 5
 IKATA-1 PWR 28 TP1 1 20 8-71 72/11
 GENKAI-2 PWR 29 TP1 1 27. 10. 95. 0.85 MT1 8-6-40 76/ 2
 IKATA-2 PWR 30 TP1 1 20. 10. 95. 0.85 MT1 8-6-37 76/12

SENDAI PWR 31 TP1 1 24. 10. 95. 0.85 MT1 8-6-40 76/ 5

** SFP SPENT FUEL PIT FILTER 768800

(1)TYPE TP1=CARTRIGE TYPE
 (2)NUMBER
 (3)DESIGN FLOW RATE CUBM/H
 (4)DESIGN PRESSURE KG/CM2G
 (5)DESIGN TEMPERATURE DEG-C
 (6)PRESSURE LOSS KG/CM2
 (7)FILTER EFFICIENCY (5 MICRON PARTICLE) PC
 (8)MATERIAL MT1=STAINLESS STEEL

(1) (2) (3) (4) (5) (6) (7) (8)
 TYPE NO. CUBM/H KG/CM2G C KG/CM2 PC

GENKAI-2 PWR 29 TP1 1 46. 10. 95. 0.35 98. MT1 8-6-40.41 76/ 2
 IKATA-2 PWR 30 TP1 1 46. 10. 95. 0.35 98. MT1 8-6-37 76/12
 SENDAI PWR 31 TP1 2 34. 10. 95. 0.35 98. MT1 8-6-41 76/ 5

** SFP SPENT FUEL PIT SKIMMER PUMP 768820

(1)TYPE
(2)NUMBER
(3)CAPACITY
(4)MATERIAL
(1) (2) (3) (4)
TYPE NO. M3/H

TP1=YOKO-OKI UZUMAKI
NO.
M3/H
MT1=STAINLESS STEEL

	PWR	29	TP1	1	23.	MT1	8-6-41	76/ 2
GENKAI-2	PWR	29	TP1	1	23.	MT1	8-6-38	76/12
IKATA-2	PWR	31	TP1	1	34.	MT1	8-6-41	76/ 5

** SFP SPENT FUEL PIT SKIMMER FILTER 768840

(1)TYPE TP1=CARTRIDGE TYPE
(2)NUMBER
(3)DESIGN FLOW RATE
(4)DESIGN PRESSURE
(5)DESIGN TEMPERATURE
(6)PRESSURE LOSS (INITIAL)
(8)MATERIAL
(1) (2) (3) (4) (5) (6) (7) (8)

NO.
M3/H
KG/CM2G
DEG C
KG/CM2G
MT1=STAINLESS STEEL

	PWR	29	TP1	1	23.	10.	95.	0.35	98.	MT1	8-6-41	76/ 2
GENKAI-2	PWR	30	TP1	1	23.	10.	95.	0.35	98.	MT1	8-6-38	76/12
IKATA-2	PWR	31	TP1	1	34.	10.	95.	0.35	98.	MT1	8-6-41	76/ 5

** SFP SPENT FUEL PIT SKIMMER STRAINER 768860

(1)NUMBER
(2)DESIGN FLOW RATE
(3)MATERIAL
(1) (2) (3)
NO. M3/H

NO.
M3/H
MT1=STAINLESS STEEL

	PWR	29	1	23.	MT1	8-6-41	76/ 2
GENKAI-2	PWR	30	1	23.	MT1	8-6-38	76/12

** 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
(7)=FROM P-RIZED BORIC ACID TANK

	PWR	23	FROM(1) TO(5)	8-62	70/ 5
TAKAHAMA-2	PWR	24	FROM(1) TO(5)	8-70	70/ 5
GENKAI-1	PWR	26	FROM(1) TO(5)	8-63	71/ 1
OOI-1,2	PWR	27	FROM(1) TO(5)	8-62	71/ 7
MIHAMA-3	PWR	28	FROM(1) TO(6) EXCEPT(5)	8-71	72/11
IKATA-1	PWR	30	FROM(1) TO(7) EXCEPT(6)	8-6-26	75/ 5

** MSTs COMPONENTS LIST PWR 770000

(1)MAIN STEAM TURBINE 772220,772240
(2)MAIN STEAM VALVE
MAIN STEAM STOP VALVE 772390
REGULATION VALVE 772410
REHEATED STEAM STOP VALVE 772430
INTERCEPT VALVE 772450
(3)TURNING DEVICE 772470
(4)MOISTURE SEPARATOR HEATER 772490
(5)LUBRICATION SYSTEM
MAIN OIL PUMP 772530
AUX. OIL PUMP 772550
TURNING-OIL PUMP 772570
EMERGENCY OIL PUMP 772590
OIL COOLER 772610
MAIN OIL TANK 772630

** MST5 TURBINE TYPE

772220

(1)TYPE

TC4S6 =KUSIGATA 4-SHASITU 6-BUNRYUU HAIKI SAINETU SAISEI
 TC3S4 =KUSIGATA 3-SHASITU 4-BUNRYUU HAIKI SAINETU SAISEI

JPDR-1	BWR	1	TYPE=TANKITOO YOKO-OKI SHOODOO SIKI CHOKKETSU FUKUSUI-T.		/
JPDR-2	BWR	2	TYPE= SAME AS JPDR-1	KON.6-P31	70/11
TSURUGA	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		BLADE=35 INCH	/
SHIMANE	BWR	8	TYPE=KUSIGATA		/
FUKUSIMA-5	BWR	9	TYPE=KUSIGATA 6-RYUU HAIKI SIKI	8-7-(2)	71/ 2
FUKUSIMA-4	BWR	10	TYPE=KUSIGATA 6-RYUU HAIKI SIKI	8-7-(2)	71/ 8
FUKUSIMA-6	BWR	11	TYPE=KUSIGATA 6RYUU HAIKI SIKI	8-7-(2)	72/ 1
TOOKAI-2	BWR	12	TYPE=KUSIGATA 6RYUU HAIKI SIKI	8-7-(2)	72/ 1
HAMAOKA-2	BWR	13	TYPE=KUSIGATA 6-RYUU HAIKI FUKUSUI SIKI	8-46	72/ 9
KASHIWAZAKI	BWR	15	TYPE=KUSIGATA 6-RYUU HAIKI SIKI	8-7-7	75/ 3
MIHAMA-1	PWR	21	TYPE=KUSIGATA 2-SHASITU	SAINETU SAISEI	BK80-2 P11 71/ 8
MIHAMA-2	PWR	22	TYPE=KUSIGATA 3-SHASITU	SAINETU SAISEI	BK80-2 P11 71/ 8
TAKAHAMA-2	PWR	23	TC4S6	8-67	70/ 5
GENKAI-1	PWR	24	TC3S4	8-80	70/ 5
TAKAHAMA-1	PWR	25	TYPE=KUSIGATA 4-SHASITU	SAINETU SAISEI	BK80-2 P11 71/ 8
OOI-1,2	PWR	26	TC4S6	8-70	71/ 1
MIHAMA-3	PWR	27	TC4S6	8-67	71/ 8
IKATA-1	PWR	28	TC3S4	8-80	72/11
GENKAI-2	PWR	29	TC3S4	8-9-19	76/ 2
IKATA-2	PWR	30	TC3S4	8-9-19	75/ 5
SENDAI	PWR	31	TC4S6	8-9-20	76/ 5
YANKEE	PWR	69	WESTINGHOUSE TANDEM COMPOUND, DOUBLE FLOW TURBINE	DNR V4 P38	61/
SAXTON	PWR	70	SINGLE-CASING WESTINGHOUSE TURBINE	DNR V4 P52	61/
FUGEN	ATR	81	TYPE=KUSIGATA SAISEI FUKUSUI SIKI	105-8-9-(2)	73/11

** MSTs TURBINE NUMBER CAPACITY SPEED

772240

(1)TYPE
(2)NUMBER
(3)CAPACITY (GENERATOR OUTPUT) KW
(4)SPEED RPM
(5)STEAM PRESSURE AT MAIN-STEAM-STOP-VALVE KG/SQCMG
(6)STEAM TEMPERATURE AT MAIN-STEAM-STOP-VALVE C
(7)WETNESS PERCENT
(8)STEAM FLOW RATE SFR (ZENKAI) TON/H
(9)CONDENSER VACUUM CV MMHG

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
TYPE	NO.	CAP. KW	RPM	PRES. KG/SQCMG	TEMP. C	WET. PC	SFR T/H	CV MMHG

JPDR-1	BWR	1	1	12500	3000	60.81	276	0.5	722	/	
JPDR-2	BWR	2	1	12500	3000	60.81	276		722	KON.6 P31 70/11	
TSURUGA	BWR	3	TC2F43	1	357025	1800	66.8	282.4	0.28	1920	80-3-3 P26 66/ 8
ONAGAWA	BWR	4	TC 35	1	524000	1500	66.8	282.4	0.4	2910	8-7-(2) 70/ 5
HAMAOKA-1	BWR	5	TC	1	540000	1800	66.8	282	0.4	2900	8-53 70/ 5
FUKUSIMA-1	BWR	6	TC4F	1	461567	1500	66.8	282	0.28	2460	722 R-9 66/ 8
FUKUSIMA-2,3	BWR	7	35	1	784000	1500	66.8	282	0.4	4430	722 70/ 8
SHIMANE	BWR	8	TC4F	1	465000	1800	66.8	282	0.4	2450	722 70/ 8
FUKUSIMA-5	BWR	9		1	784000	1500	66.8	282	0.4	4430	722 8-7-(2) 71/ 2
FUKUSIMA-4	BWR	10		1	784000	1500	66.8	282	0.4	4430	722 8-7-(2) 71/ 8
FUKUSIMA-6	BWR	11		1	1100000	1500	66.8	282	0.3	6420	722 8-7-(2) 72/ 1
TOOKAI-2	BWR	12		1	1100000	1500	66.8	282	0.3	6420	722 8-7-(2) 72/ 1
HAMAOKA-2	BWR	13		1	840000	1800	66.8	282	0.4	4740	722 8-46 72/ 9
KASHIWAZAKI	BWR	15		1	1100000	1500	66.8	282	0.4	6420	722 8-7-7 75/ 3
TOMIOKA-2	BWR	16		1	1100000	1500	66.8	282	0.4	6400	722 8-7-8 76/12
MIHAMA-1	PWR	21		1	340790	1800	54.5	272.5			BK80-2 P11 71/ 8
MIHAMA-2	PWR	22		1	500000	1800	54.5	272.5			BK80-2 P11 71/ 8
TAKAHAMA-2	PWR	23	TC6F40	1	826000	1800	52	266			8-67 70/ 5
GENKAI-1	PWR	24	TC	1	559260	1800	51.7	266		722	8-80 70/ 5
TAKAHAMA-1	PWR	25	TC6F40	1	826000	1800	51.5	265.8			BK80-2 P11 71/ 8
OOI-1,2	PWR	26	TC6F44	1	1175908	1800	569	271		722	8-70 71/ 1
MIHAMA-3	PWR	27	TC6F40	1	826000	1800	52	266		722	8-6-7 71/ 8
IKATA-1	PWR	28		1	566000	1800	55	270		722	8-80 72/11
GENKAI-2	PWR	29		1	559260	1800	55.2	270.1	0.4	3423.	722 8-9-19 76/ 2
IKATA-2	PWR	30		1	566500	1800	55.2	270.1	0.4	3201.01	722 8-9-19 75/ 5
SENDAI	PWR	31		1	890000	1800	51.7	266	0.4	5196.78	722 8-9-20 76/ 5
VERMONT YANKEE	PWR	31							(5465.0)		8-9-20 76/ 5
MILLSTON	BWR	52		1	537000		66.8		2913	703	A-2 70/ 5
DRESDEN-2	BWR	54	TC4F43	1	650200	1800	66.8	283	3057	722	R-9 66/ 8
	BWR	56	TC6F38	1	752000	1800	66.8	283	3910	722	R-9 66/ 8
OYSTER CREEK	BWR	57	TC6FRH38	1	540000	1800	66.8	283		2660	734.6 R-9 66/ 8
OYSTER CREEK	BWR	57	POWER-UP						3450		DNR V4 P38 61/
DUANE ARNOLD	BWR	58		1			66.8		3094	722	A-2 P4 70/ 7
YANKEE	PWR	69		1	145000	1800					DNR V4 P38 61/
SAXTON	PWR	70		1	10000	1800					DNR V4 P52 61/
TURKEY POINT-3,4	PWR	72		1	728317	1800	51.38	265.6			BK80-4 P7 71/ 9
H.B.ROBINSON-2	PWR	73		1	769548	1800	51.38	265.6			BK80-4 P7 71/ 9
SURRY-1,-2	PWR	74	TC4F44	1	855408	1800	51.59	265.8			BK80-4 P7 71/ 9
BEAVER VALLEY	PWR	75	TC4F44	1	923000	1800	51.73	266.0			BK80-4 P7 71/ 9
NORTH ANNA-12	PWR	76	TC4F44	1	927070	1800	53.3	266.7			BK80-4 P8 71/ 9
JOSEPH M.FARLEY	PWR	77		1	898000	1800	53.51	269.3			BK80-4 P8 71/ 9
FUGEN	ATR	81		1	200000	3600	63.5	279	0.5	910	722 105-8-9-(2) 73/11

** MSTs TURBINE MIST SEPARAT. TYPE NUMBER 772320

		TYPE	NUMBER	CAPACITY		
FUKUSIMA-1	BWR	6	DIMPLE PLATE	NO.=4	565.	T/H MEMO P177 70/ 3
KASHIWAZAKI	BWR	15	DIMPLE PLATE	NO.=2		8-7-7 75/ 3
TOMIOKA-2	BWR	16	DIMPLE PLATE	NO.=2		8-7-8 76/12

** MSTs TURBINE MIST SEPARAT. 772330

-----STEAM CONDITION-----
OPERATABLE MAX/ACTUAL IN/ACTUAL OUT
PRESSURE(KG/SQCMG) TEMPERATURE(DEG C) MOISTURE
MAX. / IN / OUT MAX. / IN / OUT CONTENT
(IN PERCENT)
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.KW)	MEMO P177 70/ 3

** MSTs TURBINE MIST SEPARAT. SIZE 772340

		ID /HEIGHT /THICKNESS (MM)	
FUKUSIMA-1	BWR	6	2896. / 6182.4/ 22.2 MEMO P178 70/ 3

** MSTs TURBINE MIST SEPARAT. MATERIAL 772350

----BODY---- ---BAFFLE---- ---VANE----

FUKUSIMA-1 BWR 6 SA515-70-FBX ASTM TP304 SS ASTM TP430 SS MEMO P178 70/ 3

** MSTs M.STEAM STOP VALVE 772390

(1)TYPE TP1=SWING DISK TYPE
TP2=DOUBLE PLUG TYPE

(2)NUMBER

(3)DESIGN PRESSURE KG/CM2G

(4)DESIGN TEMPERATURE DEG-C

(5)MATERIAL MT1=LOW CARBON STEEL
MT2=CARBON STEEL

			(1)	(2)	(3)	(4)	(5)		
			NO.	KG/CM2G	C				
GENKAI-2	PWR	29	TP1	2	76.3	291	MT1	8-9-19	76/ 2
IKATA-2	PWR	30	TP1	2	76.3	291	MT2	8-9-19	76/12
SENDAI	PWR	31	TP2	4	76.3	291	MT1	8-9-20	76/ 5

** MSTs REGULATI ON VALVE 772410

(1)TYPE TP1=HALANCED TYPE

(2)NUMBER

(3)DESIGN PRESSURE KG/CM2G

(4)DESIGN TEMPERATURE DEG-C

(5)MATERIAL MT1=CARBON STEEL

			(1)	(2)	(3)	(4)	(5)		
			NO.	KG/CM2G	C				
GENKAI-2	PWR	29	TP1	4	76.3	291	MT1	8-9-20	76/ 2
IKATA-2	PWR	30	TP1	4	76.3	291	MT1	8-9-20	76/12
SENDAI	PWR	31	TP1	4	76.3	291	MT1	8-9-21	76/ 5

** MSTs REHEATED STEAM STOP VALVE 772430

(1)TYPE TP1=BUTTERFLY VALVE

(2)NUMBER

(3)DESIGN PRESSURE KG/CM2G

(5)MATERIAL MT1=CARBON STEEL

			(1)	(2)	(3)	(4)	(5)		
			NO.	KG/CM2G	C				
GENKAI-2	PWR	29	TP1	4	12.5	270.	MT1	8-9-20	76/ 2
IKATA-2	PWR	30	TP1	4	12.6	270.	MT1	8-9-20	76/12
SENDAI	PWR	31	TP1	6	14.5	270.	MT1	8-9-21	76/ 5

** MSTs INTERCEP T VALVE 772450

(1)TYPE TP1=BUTTERFLY VALVE

(2)NUMBER

(3)DESIGN PRESSURE KG/CM2G

(4)DESIGN TEMPERATURE DEG-C

(5)MATERIAL MT1=CARBON STEEL

			(1)	(2)	(3)	(4)	(5)		
			NO.	KG/CM2G	C				
GENKAI-2	PWR	29	TP1	4	12.5	270	MT1	8-9-20	76/ 2
IKATA-2	PWR	30	TP1	4	12.6	270	MT1	8-9-20	76/12
SENDAI	PWR	31	TP1	6	14.5	270	MT1	8-9-21	76/ 5

** MSTs TURNING DEVICE 772470

(1)TYPE TP1=SIDE MOUNT JIDOO-RIDATU, MOTOR STOP

(2)NUMBER

(3)SPEED RPM

(4)MOTOR CAPACITY KW

(5)MATERIAL(GEAR) MT1=ALLOY STEEL

			(1)	(2)	(3)	(4)	(5)		
			NO.	RPM	KW				
GENKAI-2	PWR	29	TP1	1	1.5	37	MT1	8-9-20,21	76/ 2
IKATA-2	PWR	30	TP1	1	1.5	37	MT1	8-9-20	76/12
SENDAI	PWR	31	TP1	1	1.5		MT1	8-9-21	76/ 5

** MSTs MOISTURE SEPARAT. HEATER

772490

(1)TYPE TP1=YOKO-OKI WIRE MESH FINNED U-TUBE
TP2=YOKO-OKI SHEVRON-SHIKI FINNED U-TUBE
(2)NUMBER
(3)INLET STEAM PRESSURE KG/CM2G
(4)INLET STEAM TEMPERATURE DEG-C
(5)INLET STEAM WETNESS PERCENT
(6)INLET STEAM FLOW RATE TON/H
(7)OUTLET STEAM PRESSURE KG/CM2G
(8)OUTLET STEAM TEMPERATURE DEG-C
(9)OUTLET STEAM FLOW RATE TON/H
(1) (2) (3) (4) (5) (6) (7) (8) (9)
NO. P C PC T/H P C TON/H

GENKAI-2	PWR	29	TP1	4	10.	180.	11.	2460.	9.5	250.	2190.	8-9-21	76/ 2	
GENKAI-2	PWR	29	MATERIAL(DRUM=CARBON STEEL,HEAT TUBE=90-10 CUPRO-NICKEL,										8-9-21	76/ 2
GENKAI-2	PWR	29	WIRE MESH=STAINLESS STEEL)										8-9-21	76/ 2
IKATA-2	PWR	30	TP1	4	10.4	184.6	11.1	2398.	9.7	254.6	2132.22	8-9-20,21	75/ 5	
IKATA-2	PWR	30	MATERIAL(DRUM=CARBON STEEL,HEAT TUBE= CUPRO-NICKEL,											/
IKATA-2	PWR	30	WIRE MESH=ALLOY STEEL)										8-9-22	76/12
SENDAI	PWR	31	TP2	2	12.	180.	11.	4095.	11.	250.	3657.	8-9-22	76/ 5	
SENDAI	PWR	31	MATERIAL(DRUM=CARBON STEEL,HEAT TUBE=90-10 CUPRO-NICKEL)										8-9-22	76/ 5

** MSTs LUB.SYS. MAIN OIL PUMP

772530

(1)TYPE TP1=TURBINE MAIN SHAFT DRIVEN UZUMAKI
(2)NUMBER
(3)DELIVERY PRESSURE KG/CM2G
(4)DELIVERY FLOW M3/H
(5)MATERIAL MT1=CARBON STEEL
(1) (2) (3) (4) (5)
NO. KG/CM2G M3/H

GENKAI-2	PWR	29	TP1	1	21.	340.	MT1	8-9-21	76/ 2
IKATA-2	PWR	30	TP1	1	24.6	450.	MT1	8-9-21	76/12
SENDAI	PWR	31	TP1	1	19.3	454.	MT1	8-9-22	76/ 5

** MSTs LUB.SYS. AUX. OIL PUMP

772550

(1)TYPE TP1=TATE-OKI KUSIGATA UZUMAKI
(2)NUMBER
(3)DELIVERY P.(HIGH) KG/CM2G
(4)DELIVERY P.(LOW) KG/CM2G
(5)DELIVERY FLOW(HIGH) M3/H
(6)DELIVERY FLOW(LOW) M3/H
(7)MATERIAL MT1=CASTING IRON
(1) (2) (3) (4) (5) (6) (7)
NO. --KG/CM2G-- ---M3/H---

GENKAI-2	PWR	29	TP1	1	21.	3.	75.	280.	MT1	8-9-22	76/ 2
IKATA-2	PWR	30	TP1	1	21.1	3.	75.	280.	MT1	8-9-21	76/12
SENDAI	PWR	31	TP1	1	11.		45.		MT1	8-9-22,23	76/ 5

** MSTs LUB.SYS. TURNING OIL PUMP

772570

(1)TYPE TP1=TATE-OKI UZUMAKI
(2)NUMBER
(3)DELIVERY PRESSURE KG/CM2G
(4)DELIVERY FLOW M3/H
(5)MATERIAL MT1=CASTING IRON
(1) (2) (3) (4) (5)
NO. KG/CM2G M3/H

GENKAI-2	PWR	29	TP1	1	3.	280.	MT1	8-9-22	76/ 2
IKATA-2	PWR	30	TP1	1	2.8	255.	MT1	8-9-21	76/12
SENDAI	PWR	31	TP1	1	2.8	340.	MT1	8-9-23	76/ 5

** MSTs LUB.SYS. EMERGENC Y OIL PUMP

772590

(1)TYPE TP1=TATE-OKI UZUMAKI
(2)NUMBER
(3)DELIVERY PRESSURE KG/CM2G
(4)DELIVERY FLOW M3/H
(5)MATERIAL MT1=CASTING IRON
(1) (2) (3) (4) (5)
NO. KG/CM2G M3/H

IKATA-2	PWR	30	TP1	1	3.0	280.	MT1	8-9-22	76/12
SENDAI	PWR	31	TP1	1	2.8	340.	MT1	8-9-23	76/ 5

** MST5 LUB.SYS.

JACKING OIL PUMP

772592

(1)TYPE TP1=VANE TYPE
 (2)NUMBER
 (3)DERIVERY P. KG/CM2G
 (4)DERIVERY F. M3/H/1
 (5)MATERIAL MT1=CARBON CASTING STEEL
 (1) (2) (3) (4) (5)
 TYPE NO. P M3/H

GENKA1-2 PWR 29 TP1 1 140. 3.3 MT1
 SENDAI PWR 31 TP1 2 140. 3.3 MT1

8-9-23 76/ 2
 8-9-23 76/ 5

** MST5 LUB.SYS.

EH GOVERNOR OIL PUMP

772594

(1)TYPE TP1=VANE PUMP
 (2)NUMBER
 (3)DERIVERY P. KG/CM2G
 (4)DERIVERY F. M3/H/1
 (1) (2) (3) (4) (5)
 TYPE NO. P M3/H

SENDAI PWR 31 TP1 2 148 3.3

8-9-23 76/ 5

** MST5 LUB.SYS. OIL

COOLER

772610

(1)TYPE TP1=YOKO-OKI HYOOMEN REIKYAKU SIKI
 (2)NUMBER
 (3)COOLING WATER FLOW RATE M3/H
 (4)MATERIAL
 1) DRUM MD1=LOW CARBON STEEL
 MD2=CARBON STEEL
 2) WATER CHAMBER MW1=CASTING IRON
 3) TUBE MT1=ALIMINUM-BRASS
 (1) (2) (3) (4)
 M3/H 1) 2) 3)

GENKA1-2 PWR 29 TP1 2 400. MD1 MW1 MT1
 IKATA-2 PWR 30 TP1 2 635. MD2 MW1 MT1
 SENDAI PWR 31 TP1 2 600. MD1 MW1 MT1

8-9-23 76/ 2
 8-9-22 76/12
 8-9-24 76/ 5

** MST5 LUB.SYS. MAIN

OIL TANK

772630

(1)TYPE TP1=YOKO-OKI ENT00-GATA
 (2)NUMBER
 (3)CAPACITY M3
 (4)MATERIAL MT1=LOW CARBON STEEL
 (1) (2) (3) (4)
 NO. M3

GENKA1-2 PWR 29 TP1 1 40. MT1
 IKATA-2 PWR 30 TP1 1 38. MT2
 SENDAI PWR 31 TP1 1 38. MT1

8-9-23 76/ 2
 8-9-22 76/12
 8-9-24 76/ 5

** MAIN COND. SYSTEM

COMPONEN TS

LIST

773200

(1)MAIN CONDENSER 773240,773280
 (2)CONDENSER PUMP 774220
 (3)SEA WATER CIRCULATION PUMP 778220
 (4)AIR EXTRACTOR 775230
 (5)CONDENSER VACUUM PUMP FOR SHUT DOWN 775240

** MAIN COND. TYPE NUMBER 773220

(1)TYPE

TP2=HYOOMEN SESSYOKU TANRYUU 2-KUBUN SIKI
 TP3=HYOOMEN SESSYOKU TANRYUU 3-KUBUN SIKI
 TP4=HYOOMEN SESSYOKU TANRYUU 4-KUBUN SIKI
 TP6=HYOOMEN SESSYOKU TANRYUU 6-KUBUN SIKI
 RF1=RADIAL FLOW TANRYUU SIKI
 RF2=RADIAL FLOW HYOOMEN REIKYAKU 1-SETURYUU HANKUBUN KOORYUU
 RF3=RADIAL FLOW HYOOMEN REIKYAKU 1-SETURYUU HANKUBUN HEIRYUU

(1) (2)
NO.

JPDR-1	BWR	1	HYOOMEN SESSYOKU TANRYUU HAN-KUBUN SIKI YOKO-OKI	NO=1		/
JPDR-2	BWR	2	HYOOMEN SESSYOKU TANRYUU HAN-KUBUN SIKI YOKO-OKI	NO=1	KON.6-P32	70/11
ONAGAWA	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
SHIMANE	BWR	8	HYOOMEN SESSYOKU TANRYUU FUKUDOO 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
TOOKAI-2	BWR	12	TP3 1		8-7-(2)	72/ 1
HAMAOKA-2	BWR	13	TP6 1		8-48	72/ 9
TOMIOKA-1	BWR	14	TP3 1		8-7-1	76/ 8
KASHIWAZAKI	BWR	15	TP3 1		8-7-8	75/ 3
TOMIOKA-2	BWR	16	TP3 1		8-7-9	76/12
MIHAMA-1	PWR	21	TP2 1		8-73	66/11
TAKAHAMA-2	PWR	23	RF1 3		8-67	70/ 5
GENKAI-1	PWR	24	RF2 2		8-80,81	70/ 5
GENKAI-1	PWR	24		NO=2	8-81	70/ 5
OOI-1,2	PWR	26	RF1 3		8-70	71/ 1
MIHAMA-3	PWR	27	RF1 3		8-67	71/ 8
IKATA-1	PWR	28	RF1 2		8-80,81	72/11
IKATA-2	PWR	30	RF3 2		8-9-23	75/ 5
FUGEN	ATR	81	SOOSIGATA JYOOKI FUKURYU,HAN-KUBUN SIKI	NO=1	105-8-9-(2)	73/11

** MAIN COND. H.TRANS AREA AND EXHAUST FLOW 773240

(1)HEAT TRANSFER AREA SQM/NO.
 (2)HAIKI RYUURYOO TON/H
 (3)BACK PRESSURE MMHG
 (4)COOLING WATER(SEA SWTER) FLOW RATE CUBM/H/NO.
 (5)DESIGN TEMPERATURE C
 (6)TEMPERATURE DIFFERENC BETWEEN INLET AND OUTLET OF SEA WATER

(1)	(2)	(3)	(4)	(5)	(6)
H.T.AREA SQM/NO.	E.FL. T/H	B.P MMHG	C.WATER.F CUBM/H/NO.	DES.T C	DELTA-T DEG-C

JPDR-2	BWR	2		20	/
ONAGAWA	BWR	4	1764	722	15 12 8-7-(2) 70/ 5
HAMAOKA-1	BWR	5	1800	722	21 8-54 70/ 5
FUKUSIMA-1	BWR	6	1530	722	19 70/6/20 70/ 5
FUKUSIMA-2,3	BWR	7	2550	722	19 70/6/20 70/ 5
SHIMANE	BWR	8	1500	722	20 70/6/20 70/ 5
FUKUSIMA-5	BWR	9	2550	722	19 8-7-(3) 71/ 2
FUKUSIMA-4	BWR	10	2500	722	19 8-7-(3) 71/ 8
FUKUSIMA-6	BWR	11	3480	722	19 8-7-(2) 72/ 1
TOOKAI-2	BWR	12	3480	722	19 8-7-(3) 72/ 1
HAMAOKA-2	BWR	13	2600	722	21 8-47 72/ 9
TOMIOKA-1	BWR	14	3480	722	19 8-7-1 76/ 8
KASHIWAZAKI	BWR	15	3480	722	19 8-7-8 75/ 3
TOMIOKA-2	BWR	16	3480	722	19 8-7-9 76/12
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-1	PWR	28	45000/2	110000/2	20 8-80,81 72/11
GENKAI-2	PWR	29	53000/2	128000/2	22 8-9-24 76/ 2
IKATA-2	PWR	30	45000/2	109800/2	20 8-9-23 75/ 5
SENDAI	PWR	31	83000/3	224000/3	22 8-9-25 76/ 5
FUGEN	ATR	81	565	722	21 /

** MAIN COND. TUBE MATERIAL 773280

(1) MATERIAL

MT1=AL-BRASS

MT2=AL-BRASS + NI PLATE(AIR COOLED AND STEAM INLET PARTS)

AL-BRASS(PART OF STEAM CONDENSATION)

MT3=TITANIUM(AIR COOLED), AL-BRASS+NI PLATE (STEAM INLET PARTS), AL-BRASS (PART OF STEAM CONDENSATION)

(2) NUMBER OF TUBES

---MATERIAL----

NUMBER

OD / T(MM)

JOINT METHOD

(1) (2)
NO.

ONAGAWA	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
FUKUSIMA-1	BWR	6	(JIS H3632 BSTF2)		(BWG.NO.18)	(BOTH ENDS)	MEMO P195	70/ 3
FUKUSIMA-5	BWR	9	MT1				8-7-(3)	71/ 2
FUKUSIMA-4	BWR	10	MT1				8-7-(3)	71/ 8
FUKUSIMA-6	BWR	11	MT1				8-7-(3)	72/ 1
TOOKAI-2	BWR	12	MT1				8-7-(3)	72/ 1
HAMAOKA-2	BWR	13	MT1				8-47	72/ 9
TOMIOKA-1	BWR	14	MT1				8-7-1	76/ 8
KASHIWAZAKI	BWR	15	MT1				8-7-8	75/ 3
TOMIOKA-2	BWR	16	MT1				8-7-9	76/12
GENKAI-2	PWR	29	MT3	43000./2			8-9-24	76/ 2
IKATA-2	PWR	30	MT2	37000.			8-9-23	75/ 5
SENDAI	PWR	31	MT3	75000.			8-9-25	76/ 5

** DUMP COND. TYPE NUMBER 773600

JPDR-2	BWR	2	TYPE=SAISEI DAKKI SIKI, HYOMEN REIKYAKU SUISITU HANKUBUN	KON-6 P8	70/11
JPDR-2	BWR	2	NO. =1. COOLING WATER TEMP.=27 DEG-C	KON-6 P8	70/11

** COND. PUMP TYPE. NO. 774220

(1) TYPE

TP1=TATE GATA TADAN UZUMAKI

TP2=TATE GATA DENDOO UZUMAKI

TP3=TATE GATA DENDOO ENSHIN SIKI

TP4=TATEZIKU BARREL GATA TADAN SYARYUU

TP5=TATE GATA UZUMAKI

(2) NUMBER OF CONDENSER PUMP

*() YOB I , (T)=FOR TURBINE SYSTEM (JPDR-2)

(D)=FOR DUMP CONDENSER SYSTEM (JPDR-2)

(3)(7) CAPACITY A=T/H/1 OR B=M3/H/1

(5) TYPE

TP11=YOKO GATA DENDOO UZUMAKI

TP12=YOKO GATA DENDOO ENSIN SIKI

TP13=YOKO ZIKU RYOO-SUIKOMI UZUMAKI

TP14=YOKO GATA UZUMAKI

(6) NUMBER OF CONDENSER-BOOSTER PUMP

....CONDENSER PUMP..... ..CONDENSER BOOSTER PUMP..

			(1) TYPE	(2) NO.	(3) CAPACITY	(5) TYPE	(6) NO.	(7) CAPACITY	
JPDR-1	BWR	1	TP1	1+(1)	85.3 A				/
JPDR-2	BWR	2	TP1	1+(1)(T)	85.3 A				KON.6-P32 70/11
JPDR-2	BWR	2		1+(1)(D)	89.01B				KON.6-P8 70/11
ONAGAWA	BWR	4	TP2	2+(1)	1700 A				8-7-(3) 70/ 5
HAMAOKA-1	BWR	5	TP2	2+(1)	1650 A	TP11	2+(1)	1650 A	8-55 70/ 5
FUKUSIMA-5	BWR	9	TP2	2+(1)(LP)	2450 A	TP11	2+(1)(HP)	2450 A	8-7-(3) 71/ 2
FUKUSIMA-4	BWR	10	TP2	2+(1)	2450 A	TP11	2+(1)		8-7-(3) 71/ 8
FUKUSIMA-6	BWR	11	TP2	2+(1)	3720 A	TP11	2+(1)	3720 A	8-7-(3) 72/ 1
TOOKAI-2	BWR	12	TP3	2+(1)	3790 A	TP12	2+(1)	3790 A	8-7-(3) 72/ 1
HAMAOKA-2	BWR	13	TP4	2+(1)	2600 A	TP13	2+(1)	2600 A	8-47 72/ 9
KASHIWAZAKI	BWR	15	TP2	2+(1)	3720 A	TP11	2+(1)	3720 A	8-7-8 75/ 3
TOMIOKA-2	BWR	16	TP5	2+(1)	3720 A	TP14	2+(1)	3720 A	8-7-9 76/12
VERMONT YANKEE	BWR	52		3					A-2 P4 70/ 5
DUANE ARNOLD	BWR	58		2					A-2 P4 70/ 5

** COND. PUMP TYPE NO. FOR PWR 774260

(1) TYPE

TP1=TATE-OKI TADAN PIT TYPE

(2) NUMBER

(3) CAPACITY

TON/H/1

(4) HEAD

M

(5) PUMP MOTOR

KW

(6) MATERIAL

MT1=CARBON STEEL

MT2=CASTING IRON

(1) (2) (3) (4) (5) (6)
NO. T/H/1 M KW

GENKAI-2	PWR	29	TP1	3	1000.	220.	840	MT1	8-9-24	76/ 2
IKATA-2	PWR	30	TP1	3	1000.	90.	350	MT2	8-9-23	76/12
SENDAI	PWR	31	TP1	3	1700.	75.	460	MT1	8-9-25	76/ 5

** COND. DEMINE. TYPE

775220

(1)TYPE TP1=KONSHOO SIKI SAISEI SOOTI BETU OKI GATA
 TP2=MIPPEI ENTOO TATEGATA KONSHOO ION KOOKAN ZYUSI TOO
 TP3=KOORI KONSHOO DATUENKI TUKI ROKA DATUENKI
 TP4=FUNMATU ZYUSI DATUENKI + KONSHOO DATUENKI
 TP5=GAIBU SAISEI SIKI, KONSHOO ION KOOKAN ZYUSI
 TP6=KONSHOO DATUEN SOOTI

(2)NUMBER ()=YOB1
 (3)CAPACITY A=T/H/NO. B=M3/H/NO.

			(1)	(2)	(3)		
JPDR-2	BWR	2	TP1/T	1+(1)	79.6 B	KON,6 P13	70/11
JPDR-2	BWR	2	TP2/D	1+(1)	84.99A	KON,6 P13	70/11
ONAGAWA	BWR	4	TP3	5+(1)	3100/5 A	8-7-(3)	70/ 5
HAMAOKA-1	BWR	5	TP4	6+(1)	3000 A	8-55	70/ 5
FUKUSIMA-1	BWR	6	TP5	5+(1)	2500/5 A	MEMO P202	70/ 3
FUKUSIMA-5	BWR	9	TP5	7+(1)	4900/7 A	8-7-(3)	71/ 2
FUKUSIMA-4	BWR	10	TP5	7+(1)	4900/7 A	8-7-(3)	71/ 8
FUKUSIMA-6	BWR	11	TP5	8+(2)	7430/8 A	8-7-(3)	72/ 1
TOOKAI-2	BWR	12	TP5	8+(2)	7430/8 A	8-7-(3)	72/ 1
HAMAOKA-2	BWR	13	TP6	7+(1)	4800/7 A	8-47	72/ 9
TOMIOKA-1	BWR	14	TP5	9+(1)	820*10A	8-7-2	76/ 8
KASHIWAZAKI	BWR	15	TP5	9+(1)	820*10A	8-7-8	75/ 3
TOMIOKA-2	BWR	16	TP5	9+(1)	820*10A	8-7-9	76/12

** COND. WATER FILTER

775224

(1)TYPE TP1=PRESSURE PRECOAT
 (2)NUMBER KEITOO ()=YOB1
 (3)CAPACITY T/H/KEITOO
 (1) (2) (3)
 TYPE NO. T/H/K

TOMIOKA-2	BWR	16	TP1	11+(1)	670/1	8-7-9	76/12

** COND. SYSTEM AIR

EXTRACTO R

775230

(1)TYPE TP1=2*2STAGE STEAM JET TYPE WITH INTERMEDIATE COOLER
 (2)NUMBER
 (3)CAPACITY KG/H(DRIED AIR AT 735MM-HG)
 (4)MATERIAL
 1) SHELL MS1=CARBON STEEL
 2) WATER CHAMBER MW1=CARBON STEEL
 3) TURE MT1=ALLOY STEEL
 (1) (2) (3) (4)
 NO. KG/H 1) 2) 3)

IKATA-2	PWR	30	TP1	2	30. MS1 MW1 MT1	8-9-24	76/12

** COND. SYSTEM VACUUM

PUMP FOR

SHUTDOWN

775240

(1)TYPE TP1=NASH TYPE
 TP2=SEAL PUMP TYPE
 (2)NUMBER
 (3)CAPACITY M3/H(DRIED AIR AT 500MM-HG)
 (4)CAPACITY M3/H(DRIED AIR AT 735MM-HG)
 (5)MATERIAL MT1=CASTING IRON
 MT2=COPPER ALLOY
 (1) (2) (3) (4) (5)

GENKAI-2	PWR	29	TP1	2	25.5 MT1	8-9-25	76/ 2
IKATA-2	PWR	30	TP1	1	240. MT2	8-9-24	76/12
SENDAI	PWR	31	TP2	3	40. MT1	8-9-26	76/ 4

** COND. DEMINE. EXIT

WATER QUANTITY

775260

(1)CONCENTRATION OF -CL ION LESS OR EQUAL=LE PPM,
 (2)CONCENTRATION OF SIO-2 LE PPM,
 (3)ELECTRO CONDUCTIVITY LE MICRO MHO/CM
 NOTE ... () IS INLET WATER QUALITY

(1) (2) (3)
 -CL ION SIO-2 E.CONDTVITY
 PPM PPM MICRO MHO/CM

			(1)	(2)	(3)		
ONAGAWA	BWR	4	LE 0.01	LE 0.01	LE 0.1	8-7-(3)	70/ 5
HAMAOKA-1	BWR	5	LE 0.01	LE 0.01	LE 0.1	8-55	70/ 5
FUKUSIMA-1	BWR	6	LE 0.01	LE 0.01	LE 0.1	MEMO P202	70/ 3
FUKUSIMA-1	BWR	6	(0.03)	(0.03)	(0.3)	MEMO P202	70/ 3
FUKUSIMA-5	BWR	9	LE 0.01	LE 0.01	LE 0.1	8-7-(3)	71/ 2
FUKUSIMA-4	BWR	10	LE 0.01	LE 0.01	LE 0.1	8-7-(3)	71/ 8
FUKUSIMA-6	BWR	11	LE 0.01	LE 0.01	LE 0.1 25C	8-7-(3)	72/ 1
TOOKAI-2	BWR	12	LE 0.01	LE 0.01	LE 0.1 25C	8-7-(3)	72/ 1
HAMAOKA-2	BWR	13	LE 0.01	LE 0.01	LE 0.1 25C	8-47	72/ 9
TOMIOKA-1	BWR	14	LE 0.01	LE 0.01	LE 0.1 25C	8-7-2	76/ 8
KASHIWAZAKI	BWR	15	LE 0.01	LE 0.01	LE 0.1 25C	8-7-8	75/ 3

** COND. DEMINE. INLET EXIT WATER QUANTITY 775270

			---CU---	---FE---	---NI---	UNIT=PPB	OXYGEN	
			IN /OUT	IN /OUT	IN /OUT		IN /OUT	
FUKUSIMA-1	BWR	6	10- 50/LE5	5- 50/LE5	5- 30/LE5 (DISSOLVED)	LE7/LE7	MEMO P202	70/ 3
FUKUSIMA-1	BWR	6	100-500/LE5	50-1000/LE5	5-100/LE5 (NO DISS.)		MEMO P202	70/ 3
FUKUSIMA-1	BWR	6	OXYGEN CONTENT IS APPLIED (GE 1/4 LOAD CONDITION)				MEMO P202	70/ 3

** COND. DEMINE. ALLOWABLE SEA WATER LEAK 775280

(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)
M3/H L/M

ONAGAWA	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
TOOKAI-2	BWR	12	(0.228)	3.8		8-7-(3)	72/ 1
HAMAOKA-2	BWR	13	0.1			8-47	72/ 9
KASHIWAZAKI	BWR	15		3.8		8-7-6	75/ 3

** TURBINE BYPASS SYSTEM

775300

(1)NUMBER OF TURBINE BYPASS SYSTEM
(2)MATERIAL OF BYPASS TURE

MT1=CARBON STEEL
MT2=STPT 42S
T/H

(3)CAPACITY OF BYPASS VALVE

(1) (2) (3)
NO. T/H

ONAGAWA	BWR	4	1	MT2 SOOTOO	730.	7	70/ 5
HAMAOKA-1	BWR	5	1	MT1	730.	9	70/ 5
FUKUSIMA-2,3	BWR	7	1	MT1	1100.	9	69/ 7
FUKUSIMA-5	BWR	9	1	MT2 SOOTOO	1100.	9	71/ 2
FUKUSIMA-4	BWR	10	1	MT2 SOOTOO	1100.	9	71/ 8
FUKUSIMA-6	BWR	11	1	MT1	1600.	9	71/12
TOOKAI-2	BWR	12	1	MT1	1600.	8	71/12
HAMAOKA-2	BWR	13	1	MT1	1200.	9	72/ 9
KASHIWAZAKI	BWR	15	1		1600.	13	75/ 3

** FEED.W. SYSTEM COMPONENTS

776200

(1)GROUND STEAM CONDENSER 776210
(2)FEED WATER HEATER 776220
(3)DEAERATOR 776260
(4)DEMINE 776270
(5)ROOSTER PUMP 776280
(6)FEED WATER PUMP 777260
(7)FEED WATER BOOSTER PUMP 777280
(8)AUX. FEED WATER PUMP 777320
(9)CHEMICALS INJECTION TANK 777340
(10)CHEMICALS INJECTION PUMP 777350

** FEED.W. SYSTEM

GROUND STEAM CONDENS. 776210

(1)TYPE TP1=YOKO-OKI HYOOMEN REIKYAKU SIKI

(2)NUMBER

(3)STEAM VOLUME CONDENSED KG/H

(4)VENT FAN M3/MIN * NO.

(5)MATERIAL

1) DRUM MD1=LOW CARBON STEEL

MD2=CARBON STEEL

MT1=AL-BRASS

2) COOLING TUBE

(1) (2) (3) (4) (5)
NO. KG/H M3/M 1) 2)

GENKAI-2	PWR	29	TP1	1	4000.	40.*2	MD1 MT1	8-9-26	76/ 2
IKATA-2	PWR	30	TP1	1	4000.	40.*2	MD2 MT1	8-9-25	76/12
SENDAI	PWR	31	TP1	1	3500.	55.*2	MD1 MT1	8-9-27	76/ 5

** FEED.W. HEATER TYPE AND NUMBER 776220

(1)TYPE TP1=TATE-OKI U-TUBE HYOOMEN 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 TUBE S1=CARRON STEEL
 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

JPCR-2	BWR	2	TP1										
TSURUGA	BWR	3											
ONAGAWA	BWR	4	TP2	3D2K	2D2K	1450*2		188.8	S1,T1		8-7-(4)	70/ 5	
HAMAOKA-1	BWR	5	TP2	3D2K	2D2K	1500*2		188.8	S1,T1		8-55	70/ 5	
FUKUSIMA-1	BWR	6						177.			R-9	66/ 8	
FUKUSIMA-5	BWR	9	TP2	5D3K		1550*3		195.8	S1,T1		8-7-(4)	71/ 2	
FUKUSIMA-4	BWR	10	TP2	5D3K		1550*3		195.8	S1,T1		8-7-(4)	71/ 8	
FUKUSIMA-6	BWR	11	TP2	6D3K		2240*3		215.6	S1,T1		8-7-(4)	72/ 1	
TOOKAI-2	BWR	12	TP2	6D3K		2240*3		215.6	S1,T1		8-7-(4)	72/ 1	
HAMAOKA-2	BWR	13	TP2	4D3K	2D2K	1600*3	2400*2	215.6	S1,T1		8-48	72/ 9	
KASHIWAZAKI	BWR	15	TP2	6D3K		2240*3		276.	S1,T1		8-7-8,8-7-6	75/ 3	
TOMICKA-2	BWR	16	TP2	6D3K		2240*3			S1,T1		8-7-10	76/12	
TAKAHAMA-2	PWR	23	TP3	4D3K	1D2K			221.			8-68	70/ 5	
GENKAI-1	PWR	24	TP3	3D2K	1D2K			221.1			8-81	70/ 5	
OOI-1,2	PWR	26	TP3	5D3K	1D3K			222.			8-71	71/ 1	
MIHAMA-3	PWR	27	TP3	4D3K	1D2K			220.			8-68	71/ 8	
IKATA-1	PWR	28	TP3	3D2K	1D2K			220.			8-81	72/11	
GENKAI-2	PWR	29	TP2	3D2K	1D2K			220.			8-9-26	76/ 2	
IKATA-2	PWR	30	TP2	3D2K	1D2K			220.6			8-9-25	75/ 5	
SENDAI	PWR	31	TP2	4D3K	1D2K			220.			8-9-27	76/ 5	
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	

** FEED.W. HEATER HEAT TRANSFER AREA 776230

(L1),(L2).....LOW PRESSURE 1ST,2ND....
 (H1),(H2).....HIGH PRESSURE 1ST,2ND...

UNIT M2
 (L1) (L2) (L3) (L4) (NO) (H1) (H2) (NO)
 M2 M2 M2 M2 M2 M2 M2

HAMAOKA-1	BWR	5	2700, 1900, 1760, -----	*3	1000, 1080,	*2	76/11
HAMAOKA-2	BWR	13	2285, 1705, 1180, 1065.	*3	1730, 1610.	*2	76/11

** DEARATOR TYPE NUMBER STORAGE TANK CAPACITY 776260

(1)TYPE TP1=SPRAY TRAY
 TP2=YOKO-OKI SPRAY TRAY
 (2)NUMBER
 (3)STORAGE TANK CAPACITY M3
 (4)OXYGEN CONTENT CC/LITRE
 (5)MATERIAL
 1) DRUM MD1=CARBON STEEL
 2) TRAY MT1=STAINLESS STEEL
 MT2=ALLOY STEEL

(1) (2) (3) (4) (5)
 NO. M3 CC/L 1) 2)

TAKAHAMA-2	PWR	23	TP1	1	350	LT0.005				8-68	70/ 5
GENKAI-1	PWR	24	TP1	1	300	LT0.005				8-81	70/ 5
MIHAMA-3	PWR	27	TP1	1	350	LT0.005				8-68	71/ 8
IKATA-1	PWR	28	TP1	1	300	LT0.005				8-81	72/11
GENKAI-2	PWR	29	TP2	1	300	LT0.005	MD1	MT1		8-9-26	76/ 2
IKATA-2	PWR	30	TP2	1	300	LT0.005	MD1	MT2		8-9-25	76/12
SENDAI	PWR	31	TP2	1	350	LT0.005	MD1	MT1		8-9-27	76/ 5

** COND.W. DEMINE.

776270

(1)TYPE TP1=MIXED BED EXTERNALLY REGENERATIVE
 (2)NUMBER
 (3)CAPACITY T/H/1
 (4)MATERIAL MT1=CARBON STEEL

(1) (2) (3) (4)
 NO. T/H/1

IKATA-2	PWR	30	TP1	4	500.	MT1				8-9-26	76/12
SENDAI	PWR	31		5	3000./5					8-9-27	76/ 5

** COND.W. ROOSTER PUMP

776280

(1)TYPE TP1=YOKO-OKI SINGLE STAGE UZUMAKI-SIKI
 TP2=YOKO-OKI CENTRI FUGAL
 (2)NUMBER
 (3)CAPACITY T/H/1
 (4)HEAD M
 (5)DRIVE MOTOR KW/1
 (6)MATERIAL MB1=ALLOY STEEL
 1) BODY
 (1) (2) (3) (4) (5) (6)
 NO. T/H/1 M KW/1

LOCATION	PWR	NO.	TYPE	NO.	T/H/1	M	KW/1	MB1	DATE	TIME
IKATA-2	30	TP1	3	1000	160	600	MB1	8-9-25	76/12	
SENDAI	31	TP2	3	1700	190	1250		8-9-27	76/ 5	

** FEED.W. PUMP

TYPE AND NUMBER

777260

(1)(7)TYPE TP1=YOKO-OKI TADAN UZUMAKI
 TP2=YOKOGATA UZUMAKI
 TP3=UZUMAKI
 TP4=DOUBLE BOLUTE ENSHIN SIKI
 TP5=YOKOGATA 1-DAN TURBINE PUMP
 TP6=YOKO-OKI TANSHASITU DOUBLE VOLUTE UZUMAKI SIKI
 (2)(8)NUMBER A= 1+(1 YOBI)
 B= 2+(1 YOBI)
 (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 -----

NOTE1 TURBINE SYSTEM

NOTE2 DUMP CONDENSER SYSTEM

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
NO.	T/H	M	RPM	NO.	T/H	M	RPM	HEAD	HEAD	RPM	

JPDR-2	BWR	2	TP1 A	85.3	808	(NOTE1)	TP1 A	89.0	810	(NOTE2)	KON-6 P6	70/11
ONAGAWA	BWR	4					TP2 A	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		3600	8-48	72/ 9
KASHIWAZAKI	BWR	15	TP3 2	3720	686	5200	TP3 2	1860	762	7600	8-7-9	75/ 3
TOMIOKA-2	BWR	16	TP3 2	3720	686	11000HP 5200	TP3 2	1860	762	5500KW	8-7-10	76/12
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
OOI-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-1	PWR	28					TP4 3	1800	670	4250KW	8-81	72/11
GENKAI-2	PWR	29	TP6 3	1900	620	4100KW					8-9-24	76/ 2
IKATA-2	PWR	30					TP6 3	1800	680	4300KW	8-9-25	75/ 5
SENDAI	PWR	31	TP6 2	3300	625		TP6 1	3300	625	6800KW	8-9-28	76/ 5
VERMONT YANKEE	BWR	52					3				A-2 P4	70/ 7
DUANE ARNOLD	BWR	58					2				A-2 P4	70/ 7

** FEED.W. BOOSTER PUMP

777280

(1)TYPE TP1=TATE-OKI PIT TYPE
 (2)NUMBER
 (3)CAPACITY T/H/1
 (4)HEAD M
 (5)PUMP MOTOR KW
 (6)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6)
 NO. T/H/1 M KW

LOCATION	PWR	NO.	TYPE	NO.	T/H/1	M	KW	MT1	DATE	TIME
GENKAI-2	29	TP1	3	1900.	90.	600	MT1	8-9-24	76/ 2	
IKATA-2	30	TP1	3	1800.	50.	340	MT1	8-9-26	76/12	
SENDAI	31	TP1	3	1100.		2200	MT1	8-9-28	76/ 5	

** AUX. FEED.W. PUMP

777320

		(1)(11)TYPE		TP1=YOKO-OKI TADAN TURBINE SIKI											
				TP2=YOKO-OKI TADAN ENSHIN SIKI											
				TP3=YOKO-OKI TADAN UZUMAKI SIKI											
		(3)(13)CAPACITY		TON/H											
		(4)(14)HEAD		M											
		(15)PUMP MOTOR		KW											
		(6)(16)MATERIAL		MT1=CASING=CARBON STEEL, INPELLER SHAFT=ALLOY STEEL											
				MT2=CASING=ALLOY STEEL											
		TURBINE DRIVEN				MOTOR DRIVEN									
		(1)	(2)	(3)	(4)	(6)	(11)	(12)	(13)	(14)	(15)	(16)			
		TYPE NO.		CAP.		TYPE NO.		CAP.							
		TYPE NO.		T/H		M		TYPE NO.		T/H/1		M KW			
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	
OOI-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-1	PWR	28	TP1	1	110		TP2	2	60				8-83	72/11	
GENKAI-2	PWR	29	TP1	1	100	930		TP3	2	60	930		8-9-27,28	76/ 2	
IKATA-2	PWR	30	TP1	1	110	930	MT1	TP3	2	60	930	300	MT2	8-9-26	76/12
SENDAI	PWR	31	TP1	1	160	900		TP3	2	80	900	390		8-9-28,29	76/ 5

** FEED.W.S PH AND OXYGEN CONTROL EQUIPMT. TANK 777340

----YAKU-CHUU-TANK----

(1)NUMBER
 (2)CAPACITY LITRE/1
 (3)MATERIAL MT1=ALLOY STEEL
 (1) (2) (3)
 NO. CAPACITY

IKATA-2	PWR	30	3	800L/1*1, 1800L/1*2	MT1		8-9-26	76/12
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** FEED.W.S PH AND OXYGEN CONTROL EQUIPMT. PUMP 777350

----YAKU-CHUU-PUMP----

(1)TYPE TP1=PLUNGER TYPE
 (2)NUMBER
 (3)CAPACITY LITRE/MIN
 (4)MATERIAL MT1=ALLOY STEEL
 (1) (2) (3) (4)
 TYPE NO. CAPACITY

IKATA-2	PWR	30	TP1	4	4L/M*1, 0.36L/M*1, 1.25L/M*2	MT1		8-9-26	76/12
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** 2NDARY.S MAKEUP.W SYSTEM MAKEUP WATER PUMP 777490

(1)TYPE TP1=YOKO OKI UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)MATERIAL MT1=CAST STEEL
 (1) (2) (3) (4)
 TYPE NO.

SENDAI	PWR	31	TP1	3	100/1	MT1		8-9-30	76/ 4
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** 2NDARY.S MAKEUP.W SYSTEM CONDENSE D. W. TANK 777500

(1)TYPE TP1=TATE-OKI ENTOO GATA
 (2)NUMBER
 (3)CAPACITY M3
 (4)MATERIAL MT1=CARBON STEEL
 MT2=LOW CARBON STEEL
 (1) (2) (3) (4)
 NO. M3

GENKAI-2	PWR	29	TP1	1	380	MT2		8-9-29	76/ 2
IKATA-2	PWR	30	TP1	1	390	MT1		8-9-27	76/12
SENDAI	PWR	31	TP1	1	800	MT1		8-9-30	76/ 5

** 2NDARY.S MAKEUP.W SYSTEM PURE W. TANK 777510

(1)TYPE TP1=TATE-OKI ENTOO GATA
 (2)NUMBER
 (3)CAPACITY M3
 (4)MATERIAL MT1=LOW CARBON STEEL
 MT2=CARBON STEEL
 (1) (2) (3) (4)
 NO. M3

GENKAI-2	PWR	29	TP1	1	1000	MT1		8-9-29	76/ 2
IKATA-2	PWR	30	TP1	1	1500	MT2		8-9-27	76/12
SENDAI	PWR	31	TP1	2	1000	MT1		8-9-30	76/ 5

** 2NDARY.S AUX.CCS

BEARING COOLANT H.EXCH. 777600

(1)TYPE TP1=YOKO-OKI HYOOMEN REIKYAKU SIKI
 (2)NUMBER
 (3)HEAT TRANSFER AREA M2
 (4)PURE WATER FLOW RATE(SHELL-SIDE) M3/H
 (5)SEA WATER FLOW RATE(TUBE-SIDE) M3/H
 (6)MATERIAL
 1) DRUM MD1=LOW CARBON STEEL
 MD2=CARBON STEEL
 2) WATER ROOM COVER MW1=CAST IRON
 MW2=CARBON STEEL
 3) COOLING TUBE MT1=AL-BRASS

			(1)	(2)	(3)	(4)	(5)	(6)			
			NO.	M2	M3/H	M3/H	1)	2)	3)		
GENKAI-2	PWR	29	TP1	2	1000	1600	2500	MD1	MW1	MT1	8-9-30 76/ 2
IKATA-2	PWR	30	TP1	2	1000	1900	2700	MD2	MW2	MT1	8-9-28 76/12
SENDAI	PWR	31	TP1	3	850	1550	2500	MD1	MW1	MT1	8-9-31 76/ 5

** 2NDARY.S AUX.CCS

BEARING COOLANT PUMP 777620

(1)TYPE TP1=YOKO-OKI UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)HEAD M
 (5)PUMP MOTOR KW
 (6)MATERIAL MT1=CAST IRON
 (1) (2) (3) (4) (5) (6)
 NO. M3/H/1 M KW

			(1)	(2)	(3)	(4)	(5)	(6)		
			NO.	M3/H/1	M	KW				
GENKAI-2	PWR	29	TP1	3	850	40	130	MT1	8-9-30 76/ 2	
IKATA-2	PWR	30	TP1	3	950	39	150	MT1	8-9-28 76/12	
SENDAI	PWR	31	TP1	3	1550		325	MT1	8-9-31 76/ 5	

** 2NDARY.S AUX.CCS

S.W-PUMP 777640

(1)TYPE TP1=TATE-OKI TANDAN SHARYUU GATA
 TP2=TATE-OKI SHARYUU GATA
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)HEAD M
 (5)PUMP MOTOR KW
 (6)MATERIAL MT1=LOW ALLOY CAST IRON
 MT2=ALLOY STEEL
 (1) (2) (3) (4) (5) (6)
 NO. M3/H/1 M KW

			(1)	(2)	(3)	(4)	(5)	(6)		
			NO.	M3/H/1	M	KW				
GENKAI-2	PWR	29	TP2	4	2400	40	360	MT1	8-9-30 76/ 2	
IKATA-2	PWR	30	TP1	4	2500	39	380	MT2	8-9-28 76/12	
SENDAI	PWR	31	TP1	3	2500			MT1	8-9-31 76/ 5	

** SEA WATER CIRC. SYSTEM FOR MAIN COND. 778220

(1)TYPE TP1=TATEGATA SYARYUU
 TP2=FIXED VANE TATE-OKI OTOSIKOMI GATA
 (2)NUMBER
 (3)FLOW RATE M3/H/NO.
 (4)HEAD M
 (5)PUMP MOTOR KW
 (6)MATERIAL MT1=CAST IRON
 MT2=ALLOY STEEL
 (1) (2) (3) (4) (5) (6)
 NO. FLOW RATE HEAD
 M3/H/NO. M KW

			(1)	(2)	(3)	(4)	(5)	(6)		
			NO.	FLOW RATE	HEAD					
				M3/H/NO.	M	KW				
JPDR-2	BWR	2	TP1	2	2964/1	15.7	(FOR TURBINE SYSTEM)	KON.6 P32	70/11	
JPDR-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		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	
TOMIOKA-1	BWR	14	TP1	3	272000/3			8-7-3	76/ 8	
KASHIWAZAKI	BWR	15	TP1	3	91000/1			8-7-9	75/ 3	
TOMIOKA-2	BWR	16	TP1	3	91000/1			8-7-11	76/12	
GENKAI-2	PWR	29	TP2	2	46000	10.		MT1	8-9-24,25 76/ 2	
IKATA-2	PWR	30	TP2	2	64000/1	10.5	2400	MT2	8-9-23 76/12	
SENDAI	PWR	31	TP2	2	114500/1	13	5250	MT1	8-9-25 76/ 5	

** TURBINE AUX. COOL PUMP TYPE NO. 779220

(1)TYPE TP1=YOKO GATA UZUMAKI , LOOP IS CLOSED
TP2=TATE GATA UZUMAKI , SEA WATER PUMP
(2)NUMBER ()=YOB1
(3)USED FOR U1= TURBINE OIL COOLER
U2=SYONAI AIR COMPRESSOR
U3=COMPRESSOR FOR CONTROL
U4=HYDROGEN COOLER
U5=CIRCULATION FOR INTERMEDIATE LOOP
OT=OTHERS

(4)CAPACITY M3/H
(5)HEAD M
(1) (2) (3) (4) (5)
TYPE NO. USED FOR M3/H/1 M

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
TOMIOKA-1	BWR	14	TP1	2+(1)	U5,	2800.	50.	8-13-14
KASHIWAZAKI	BWR	15	TP1	3		1700.	45.	8-12-26
KASHIWAZAKI	BWR	15	TP2	3		1400.	35.	(SEA WATER PUMP) 8-12-26
TOMIOKA-2	BWR	16	TP1	2+(1)		1700.	50.	8-12-23 76/12

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

(1)TYPE TP1=YOKO GATA STRAIGHT TUBE
(2)NUMBER ()=YOB1
(3)CAPACITY KCAL/H/1
(1) (2) (3)
TYPE NO. KCAL/H

ONAGAWA	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
TOOKAI-2	BWR	12	TP1	3			8-7-(5)	72/ 1
HAMAOKA-2	BWR	13	TP1	2			8-49	72/ 9
TOMIOKA-1	BWR	14	TP1	4+(1)	7.3E6		8-13-14	76/ 8
KASHIWAZAKI	BWR	15	TP1	3	9.8E6		8-12-26	75/ 3
TOMIOKA-2	BWR	16	TP1	2+(1)	10.0E6		8-12-23	76/12

** WDACS WASTE DISPOSAL AUX. COOLING SYSTEM 779300

KIND OF AUX. COOLING SYSTEM FOR WASTE DISPOSAL
WDACS INTERMEDIATE LOOP CIRCULATION PUMP
WDACS SEA WATER PUMP
WDACS HEAT EXCHANGER

779320
779340
779360

** WDACS INTERMEDIATE LOOP CIRC. PUMP 779320

WDACS INTERMEDIATE LOOP CIRCULATION PUMP
(1)TYPE TP1=YOKO-GATA UZUMAKI
(2)NUMBER
(3)CAPACITY M3/H/1
(4)TOTAL HEAD M
(1) (2) (3) (4)
TYPE NO. M3/H M

TOMIOKA-1	BWR	14	TP1	2.	900.	50.	8-13-14	76/ 8
KASHIWAZAKI	BWR	15	TP1	2.	1560.	45.	8-12-26	75/ 3
TOMIOKA-2	BWR	16	TP1	2+(1)*	900.	50.	8-12-23	76/12

*COMMON WITH UNIT1

** WDACS S.W-PUMP 779340

WDACS SEA-WATER PUMP
(1)TYPE TP1=TATE-GATA UZUMAKI
(2)NUMBER
(3)CAPACITY M3/H/1
(4)TOTAL HEAD M
(1) (2) (3) (4)
TYPE NO. M3/H M

TOMIOKA-1	BWR	14	TP1	2.	1000.	25.	8-13-14	76/ ,
KASHIWAZAKI	BWR	15	TP1	2.	1560.	40.	8-12-27	75/ 3
TOMIOKA-2	BWR	16	TP1	2+(1)*	1000.	25.	8-12-23	76/12

*COMMON WITH UNIT1

** WDACS H.EXCH.

779360

WDACS HEAT EXCHANGER

(1)TYPE TP1=YOKO-GATA STRAIGHT TUBE
 (2)NUMBER
 (3)CAPACITY KCAL/H/1
 (1) (2) (3)
 TYPE NO. KCAL/H

UNIT	BWR	NO.	TP1	NO.	0.8E7	8-13-14	76/ 8
TOMIOKA-1	BWR	14	TP1	3	0.8E7	8-12-7	75/ 3
KASHIWAZAKI	BWR	15	TP1	2	1.5E7	8-12-24	76/12
TOMIOKA-2	BWR	16	TP1	4+(1)*	0.8E7	*COMMON WITH UNIT1	

** ECOCS EMER. COMPONENTS COOLING SYSTEM 779400

KIND OF ECOCS

(1)EMERGENCY-DIESEL GENERATOR COOLING SYSTEM
 A INTERMEDIATE LOOP CIRCULATION PUMP
 B SEA WATER PUMP
 C HEAT EXCHANGER
 (2)RHRS-COMPONENTS COOLING SYSTEM
 A INTERMEDIATE LOOP CIRCULATION PUMP
 B SEA WATER PUMP
 C HEAT EXCHANGER
 (3)HPCS-DIESEL GENERATOR COOLING SYSTEM
 A INTERMEDIATE LOOP CIRCULATION PUMP
 B SEA WATER PUMP
 C HEAT EXCHANGER

EDGCS

779420
 779440
 779460

RHRS-CCS

779520
 779540
 779560

HPCSDGCS

779620
 779640
 779660

** ECOCS EDGCS I.LOOP CIRC. PUMP 779420

(1)TYPE TP1=YOKO-GATA UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)TOTAL-HEAD M
 (1) (2) (3) (4)
 TYPE NO. M3/H M

UNIT	BWR	NO.	TP1	NO.	440.	50.	8-13-15	76/ 8
TOMIOKA-1	BWR	14	TP1	2	440.	50.	8-12-28	75/ 3
KASHIWAZAKI	BWR	15	TP1	2	440.	40.	8-12-25	76/12
TOMIOKA-2	BWR	16	TP1	2	440.	50.		

** ECOCS EDGCS S.W-PUMP 779440

(1)TYPE TP1=TATE-GATA UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)TOTAL HEAD M
 (1) (2) (3) (4)
 TYPE NO. M3/H M

UNIT	BWR	NO.	TP1	NO.	440.	35.	8-12-28	75/ 3
KASHIWAZAKI	BWR	15	TP1	2.	440.	35.		

** ECOCS EDGCS H.EXCH. 779460

(1)TYPE TP1=YOKO-GATA STRAIGHT TUBE
 (2)NUMBER
 (3)CAPACITY KCAL/H/1
 (1) (2) (3)
 TYPE NO. KCAL/H

UNIT	BWR	NO.	TP1	NO.	4.5E6	8-13-15	76/ 8
TOMIOKA-1	BWR	14	TP1	2.	4.5E6	8-12-28	75/ 3
KASHIWAZAKI	BWR	15	TP1	2.	3.8E6	8-12-25	76/12
TOMIOKA-2	BWR	16	TP1	2	4.5E6		

** ECOCS RHRS-CCS I.LOOP CIRC. PUMP 779520

(1)TYPE TP1=YOKO-GATA UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)TOTAL HEAD M
 (1) (2) (3) (4)
 TYPE NO. M3/H M

UNIT	BWR	NO.	TP1	NO.	1460.	50.	8-13-15	76/ 8
TOMIOKA-1	BWR	14	TP1	4	1460.	50.	8-12-28	75/ 3
KASHIWAZAKI	BWR	15	TP1	2	2200.	50.	8-12-25	76/12
TOMIOKA-2	BWR	16	TP1	4	1460.	50.		

** ECOCS RHRS-CCS S.W-PUMP 779540

(1)TYPE TP1=TATE-GATA UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)TOTAL HEAD M
 (1) (2) (3) (4)
 TYPE NO. M3/H M

UNIT	BWR	NO.	TP1	NO.	2450.	25.	8-13-15	76/ 8
TOMIOKA-1	BWR	14	TP1	4	2450.	25.	8-12-29	75/ 3
KASHIWAZAKI	BWR	15	TP1	2	2200.	50.	8-12-25	76/12
TOMIOKA-2	BWR	16	TP1	4	2450.	25.		

** ECOCS RHRS-CCS H.EXCH.

779560

(1)TYPE TP1=YOKO-GATA STRAIGHT TUBE
 (2)NUMBER
 (3)CAPACITY KCAL/H/1
 (1) (2) (3)
 TYPE NO. KCAL/H

TOMIOKA-1	BWR	14	TP1	4.	7.9E6		8-13-16	76/ 8	
KASHIWAZAKI	BWR	15	TP1	2.	2.0E7		8-12-29	75/ 3	
TOMIOKA-2	BWR	16	TP1	4	7.9E6		8-12-26	76/12	

** ECOCS HPCSDGCS I.LOOP CIRC. PUMP

779620

(1)TYPE TP1=YOKO-GAYA UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)TOTAL HEAD M
 (1) (2) (3) (4)
 TYPE NO. M3/H M

TOMIOKA-1	BWR	14	TP1	1.	250.	50.	8-13-16	76/ 8	
KASHIWAZAKI	BWR	15	TP1	1.	300.	40.	8-12-29	75/ 3	
TOMIOKA-2	BWR	16	TP1	1.	250.	50.	8-12-26	76/12	

** ECOCS HPCSDGCS S.W-PUMP

779640

(1)TYPE TP1=TATE-GATA UZUMAKI
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)TOTAL HEAD M
 (1) (2) (3) (4)
 TYPE NO. M3/H M

TOMIOKA-1	BWR	14	TP1	1.	320.	25.	8-13-16	76/ 8	
KASHIWAZAKI	BWR	15	TP1	1.	300.	35.	8-12-29	75/ 3	
TOMIOKA-2	BWR	16	TP1	1.	320.	25.	8-12-26	76/12	

** ECOCS HPCSDGCS H.EXCH.

779660

(1)TYPE TP1=YOKO-GATA STRAIGHT TUBE
 (2)NUMBER
 (3)CAPACITY KCAL/H/1
 (1) (2) (3)
 TYPE NO. KCAL/H

TOMIOKA-1	BWR	14	TP1	1	2.5E6		8-13-16	76/ 8	
KASHIWAZAKI	BWR	15	TP1	1	2.7E6		8-12-29	75/ 3	
TOMIOKA-2	BWR	16	TP1	1.	2.5E6		8-12-26	76/12	

** IN-CORE MONITOR CHANNEL NUMBER

LIST 781100

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

FUKUSIMA-1	BWR	6		4	8	88	6	2	3

MEMO P42 70/ 3

** IN-CORE MONITOR NEUTRON FLUX

LEVEL NV 781200

SRM IRM LPRM APRM RBM TIP

FUKUSIMA-1	BWR	6	FROM	1. E4	1. E8	1.4E12		1.0E12	MEMO P42 70/ 3
FUKUSIMA-1	BWR	6	TO	1. E9	1.5E13	1.4E14		1.4E14	MEMO P42 70/ 3

** NEUTRON SOURCE NUMBER

783000

ONAGAWA	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		
TOOKAI-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		
KASHIWAZAKI	BWR	15	NO.=7	GT.(3CPS OR 3/1(SN-RATIO))	WITH ALL CRD INSERT	8-8-26	75/ 3		

** NEUTRON SOURCE

783020

(1)STAGE PRI.=PRIMARY, 2ND.=SECONDARY
 (2)SOURCE MATERIAL MT1=PU,8E
 MT2=CF(CALIFORNIUM)
 MT3=SB,8E

(3)SOURCE INTENSITY CI/1
 (4)NUMBER
 (5)SOURCE OUTER DIAMETER MM
 (6)LENGTH MM
 (7)CLADDING MATERIAL MT11=STAINLESS STEEL
 (8)CLADDING OUTER DIAMETER MM
 (1) (2) (3) (4) (5) (6) (7) (8)
 CI/1 NO. MM MM MM

GENKAI-2	PWR	29	PRI.	MT2	0.1	2	10.	38.	MT11	11.	8-3-47	76/ 2
GENKAI-2	PWR	29	2ND.	MT3		6	10.	1724.	MT11	11.	8-3-47	76/ 2
IKATA-2	PWR	30	PRI.	MT2	0.1	2	10.	38.	MT11	11.	8-3-42	75/ 5
IKATA-2	PWR	30	2ND.	MT3		6	10.	1730.	MT11	11.	8-3-42	75/ 5
SENDAI	PWR	31	PRI.	MT2	0.1	2	8.4	38.	MT11	9.8	8-3-51	76/ 5
SENDAI	PWR	31	2ND.	MT3		8	8.4	1724.	MT11	9.8	8-3-51	76/ 5

** 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
 (4)=NEUTRON FLUX HIGH (POWER AND MEDIUM REGION) (PC, PC.)
 (5)=NEUTRON FLUX INDICATION LOW (POWER REGION MONITOR)
 (6)=NEUTRON INSTRUMENT MALFUNCTION (POWER AND MEDIUM REGION)
 (7)=SCRAM DUMP TANK LEVEL HIGH
 (8)=MAIN STEAM TUBE RADIATION LEVEL HIGH RATIO/NORMAL
 (9)=CONDENSER VACUUM LOW MM HG
 (10)=MAIN STEAM ISOLATION VALVE CLOSE PC/OPENING
 (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
 (18)=EHC OIL PRESSURE LOW
 (19)=SCRAM-DISCHARGE-HEADER WATER-LEVEL-HIGH LITER
 (20)=TURBINE-BYPASS-VALVE MALFUNCTION DURING SHUT-OFF OF LOAD

ONAGAWA	BWR	4	FROM (1) TO (17) EXCEPT (9)	8-8-(7)	70/ 5
ONAGAWA	BWR	4	1=0.14/2=74.2/3=13M FROM PV-ZERO-LEVEL/4=120PC/RATE.95PC	8-8-(7)	70/ 5
ONAGAWA	BWR	4	/FULL SCALE/5=5PC/RATE/7=CORRESPOND TO 0.09 CUBM(HEADER)	8-8-(7)	70/ 5
ONAGAWA	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
SHIMANE	BWR	8	FROM (1) TO (20) EXCEPT (7),(14),AND (18)	8-8-(2)	75/ 7
SHIMANE	BWR	8	1=0.14/2=74.3/3=18 CM ABOVE FROM BOTTOM END OF STEAM-	8-8-(2)	75/ 7
SHIMANE	BWR	8	WATER-SEPARATOR/4=120PC OF RATED POWER, 95PC/FULL SCALE	8-8-(2)	75/ 7
SHIMANE	BWR	8	/5=5PC WITH THE SIGNAL-1 /8=6TIMES/9=584 MM HG/	8-8-(2)	75/ 7
SHIMANE	BWR	8	10=90PC OF FULL OPEN/11=POWER OUTAGE OF REACTOR PROTECT.	8-8-(2)	75/ 7
SHIMANE	BWR	8	SYSTEM/12=140 GAL/13=90PC OF FULL OPEN WITH THE SIGNAL-2	8-8-(2)	75/ 7
SHIMANE	BWR	8	19=98.5 LITER/20=23PC/SEC OF LOAD CHANGE RATE, LE. 10PC	8-8-(2)	75/ 7
SHIMANE	BWR	8	OF T.BYPASS.V. FULL OPEN, AND WITH THE SIGNAL-2 /	8-8-(2)	75/ 7
SHIMANE	BWR	8	SIGNAL-1=95PC OF FULL SCALE OF NEUTRON FLUX INDICATOR	8-8-(2)	75/ 7
SHIMANE	BWR	8	(MEDIUM REGION)	8-8-(2)	75/ 7
SHIMANE	BWR	8	SIGNAL-2=GT.45PC OF PRESSURE AT 1ST-STAGE OF H.P.TURBINE	8-8-(2)	75/ 7
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=584.2 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	D 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 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

MIHAMA-1	PWR	21	FROM (1) TO (12)	BK80-2 P15	71/ 8
MIHAMA-2	PWR	22	FROM (1) TO (12)	BK80-2 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)	BK80-2 P15	71/ 8
OOI-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-1	PWR	28	FROM (1) TO (13)	8-99	72/11

** POWER TRANSMISSION LINE 793110

(1)RATED VOLTAGE KV
 (2)NUMBER OF LINES
 (3)WIRE SIZE MM2
 (4)TRANSMISSION CAPACITY MW/LINE
 (5)DISTANCE KM

-----LINE A-----
 (1) (2) (3) (4) (5) (11) (12) (13) (14) (15)
 KV MM2 MW KM KV MM2 MW KM

GENKAI-2	PWR	29	220	2	ACSR 410	1200	21	66	1	ACSR160	50	13	8-8-14	76/ 2
IKATA-2	PWR	30	187	4	TACSR680	560	28	66	1	ACSR160	50	16	8-8-12	76/11
SENDAI	PWR	31	500	2	ACSR 410	2840	60	220	1	ACSR410	320	3	8-8-14	76/ 4

793220

(9) COOLANT PRESSURE KG/CM2G
(10) FIELD COOLING SYSTEM COOLANT W=WATER, H=HYDROGEN
(1) (2) (3) (4) (5) (6) (7) (8) (9) (10)
NO. KVA KV RPM

** E.GENER. SIZE WEIGHT CONNECTION 793230

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(1)TOTAL LENGTH (INCL. EXCITER)      M
(2)WEIGHT        (INCL. EXCITER)      TON
(3)CONNECTION    S=STAR
(1)  (2)  (3)
M    T

```

TOMIOKA-2 BWR 16 20 800 S 8-9-15 76/12

** E.GENER. MAIN EXCITER 793240

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(1)TYPE          TP1=BRUSHLESS
(2)CAPACITY      KVA
(3)VOLTAGE        VOLT
(4)SPEED          RPM
(5)DRIVING        DV1=DIRECTLY COUPLED WITH MAIN TURBINE
(6)NUMBER
(1)  (2)  (3)  (4)  (5)  (6)
TYPE KVA  V    RPM  NO.

```

GENKAI-2	PWR	29	TP1	2600	360	1800	DV1	1	8-8-16	76/ 2
IKATA-2	PWR	30	TP1	2600	360	1800	DV1	1	8-8-14	76/12
SENDAI	PWR	31	TP1	3300KW	400DC	1800	DV1	1	8-8-16	76/ 4

** E.GENER, SUB

EXCITER

793250

(1)TYPE TP1=
 (2)CAPACITY KVA
 (3)VOLTAGE VOLT
 (4)SPEED RPM
 (5)DRIVING DV1=DIRECTLY COUPLED WITH MAIN TURBINE
 (6)NUMBER
 (1) (2) (3) (4) (5) (6)
 TYPE KVA V RPM NO.

GENKAI-2	PWR	29	TP1	20	125	1800	DV1	1	8-8-16	76/ 2
IKATA-2	PWR	30	TP1	20	125	1800	DV1	1	8-8-14	76/12
SENDAI	PWR	31	TP1	40	125	1800	DV1	1	8-8-16	76/ 4

** E.TRANS. MAIN

EMERGENC Y

START-UP FACILITY 793280

MAIN TRANS START-UP TR. SYONAI TRANS YOBI 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

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
HAMAOKA-1	BWR	5	600.	21.5/275	25.	275/6.9	22*2	21.5/6.9	10.	77/6.9	8-80	70/ 5
FUKUSIMA-5	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	START-UP TRANS ARE USED COMMON WITH FUKUSIMA-3								8-9-(3)	71/ 8
FUKUSIMA-6	BWR	11		19.0/525		66/6.9		19.0/6.9			8-9-(1)	72/ 1
TOOKAI-2	BWR	12		19.0/275		275/6.9		19.0/6.9			8-9-(1)	72/ 1
HAMAOKA-2	BWR	13	900.	17.5/275	25.	275/6.9	25*2	17.5/6.9	10.	77/6.9	8-70	72/ 9
KASHIWAZAKI	BWR	15		19.0/525		66/6.9		19.0/6.9			8-9-5	75/ 3
TAKAHAMA-2	PWR	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	PWR	24	590.	19.0/220	50.	220/6.9	40	19. /6.9	15.	66/6.9	8-107	70/ 5
OOI-1,2	PWR	26	1240.	24./500	(45*2	500/6.9)	30*2	24. /6.9	(40.	77/6.9)	8-99	71/ 1
OOI-1,2	PWR	26		(COMMON 1,2)					(COMMON 1,2)		8-99	71/ 1
MIHAMA-3	PWR	27	860.	22.0/275	50.	275/6.9	40+18	22. /6.9	30	77/6.9	8-96	71/ 8
FUGEN	ATR	81	178.	16. /275	22	275/6.9	22	16. /6.9	4.	77/6.9	105-8-11-(3)	73/11

** D.G. ENGINE

794220

(1)TYPE TP1=V-TYPE
 (2)NUMBER EXAMPLE (1COM6) COMMON WITH 6-GOO REACTOR
 (3)CAPACITY A=KW/1 OR B=PS/1
 (4)SPEED RPM
 (5)STARTER A=COMPRESSED AIR
 (6)STARTING TIME SEC (LT=LESS THAN)
 (7)FUEL F1=HEAVY OIL, F2=LIGHT OIL
 (8)CAPACITY OF TANK KL
 (1) (2) (3) (4) (5) (6) (7) (8)
 TYPE NO. CAP. SPEED FUEL KL

JPDR-2	BWR	2	1	440A	750	A					KON-6 P40	70/11
ONAGAWA	BWR	4	TP1	2	4500A	429	A	9			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
FUKUSIMA-6	BWR	11	TP1	1+(1COM5)	4000A	429	A	LT30	F2		8-9-(3)	71/12
TOOKAI-2	BWR	12	TP1	2	4000A	429	A	LT30	F2		8-9-(3)	71/12
HAMAOKA-2	BWR	13	TP1	2	7900B	400	A	LT10			8-70	72/ 9
TOMIOKA-1	BWR	14	TP1	1+(1)	5000A	429	A	10	F2		8-9-4	76/ 8
KASHIWAZAKI	BWR	15	2	5000A			A	10	F2		8-9-17	75/ 3
TOMIOKA-2	BWR	16	2	5000A			A	10	F2		8-9-17	76/12
MIHAMA-1	PWR	21	2	1650B			A		F2		8-100	/
TAKAHAMA-2	PWR	23	1+(1COM)	3500A			A				8-96	70/ 5
GENKAI-1	PWR	24	2	3000A			A		F1		8-107	70/ 5
OOI-1,2	PWR	26	2+(1COM)	4500A			A				8-99	71/ 1
MIHAMA-3	PWR	27	2	3800B			A				8-96	71/ 8
IKATA-1	PWR	28	2	3200A			A		F1		8-108	72/11
GENKAI-2	PWR	29	2	3600A			A		F1	82*2	8-8-21	76/ 2
IKATA-2	PWR	30	2	3600A			A		F1	80*2	8-8-19	75/ 5
SENDAI	PWR	31	2	4650A			A		F1		8-8-21	76/ 5
P 80 STANDARD	PWR	49	2	4650A			A		F1			77/ 5

** D.G. GENERATOR

NUMBER TYPE CAPACITY 794240

(1)TYPE TP1=3-SOO DOOKI GENERATOR (AIR COOLED)
 TP2=3-SOO DOOKI GENERATOR
 TP3=YOKO-OKI KAITEN KAIJI 3-SOO DOOKI
 (2)NUMBER EXAMPLE (1COM6) COMMON WITH 6-GOO 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 KV HZ RPM

JPDR-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	0.8	6.9	60	400	8-81	70/ 5
FUKUSIMA-5	BWR	9	TP2 1+(1COM6)	8125	0.8	6.9	50	429	8-9-(3)	71/ 8
FUKUSIMA-4	BWR	10	TP2 1+(1COM3)	8125	0.8	6.9	50	429	8-9-(3)	71/ 8
FUKUSIMA-6	BWR	11	TP2 1+(1COM5)	5000.	0.8	6.9	50	429	8-9-(3)	71/12
TOOKAI-2	BWR	12	TP2 2	5000.	0.8	6.9	50	429	8-9-(3)	71/12
HAMAOKA-2	BWR	13	TP2 2	8125	0.8	6.9	60	400	8-71	72/ 9
HAMAOKA-2	BWR	13	TP2 2	6875.	0.8	6.9	60	400	5011.021	76/ 1
TOMIOKA-1	BWR	14	TP2 1+(1)	6250.	0.8	6.9	50	429	8-9-4	76/ 8
KASHIWAZAKI	BWR	15	TP3 2	6250.	0.8	6.9	50		8-9-17	75/ 3
TOMIOKA-2	BWR	16	TP3 2	6250.	0.8	6.9	50		8-9-17	76/12
MIHAMA-1	PWR	21	TP3 2	1550	0.8	480V	60		8-100	66/11
TAKAHAMA-2	PWR	23	TP3	4400	0.8	6.9	60		8-96	70/ 5
GENKAI-1	PWR	24	TP3 2	3750	0.8	6.9	60		8-108	70/ 5
OOI-1,2	PWR	26	TP3	5600	0.8	6.9	60		8-99	71/ 1
MIHAMA-3	PWR	27	TP3 2	4750	0.8	6.9	60		8-96	71/ 8
IKATA-1	PWR	28	TP3 2	4000	0.8	6.9	60		8-108	72/11
GENKAI-2	PWR	29	TP3 2	4500	0.8	6.9	60		8-8-21	76/ 2
IKATA-2	PWR	30	TP3 2	4500	0.8	6.9	60		8-8-19	75/ 5
SENDAI	PWR	31	TP3 2	5813	0.8	6.9	60		8-8-21	76/ 5
P 80 STANDARD	PWR	49	TP3 2	5813	0.8	6.9	60			77/ 5

** HPCS DIESEL GENERATOR ENGINE 794260

(1)TYPE TP1=V-TYPE
 (2)NUMBER
 (3)CAPACITY A=KW/1 OR B=PS/1
 (4)SPEED RPM
 (5)STARTER A=COMPRESSED AIR
 (6)STARTING TIME SEC (LT=LESS THAN)
 FUEL F1=HEAVY OIL , F2=LIGHT OIL
 (1) (2) (3) (4) (5) (6) (7)
 TYPE NO. CAP. SPEED FUEL

FUKUSIMA-6	BWR	11	TP1 1.	2500A	429	A	LT30	F2	8-9-(4)	71/12
TOOKAI-2	BWR	12	TP1 1.	2400A	429	A	LT30	F2	8-9-(4)	71/12
KASHIWAZAKI	BWR	15	1.	2850A		A	10	F2	8-9-17	75/ 3
TOMIOKA-2	BWR	16	1	2850A		A	10	F2	8-9-17	76/12

** HPCS DIESEL GENERATOR GENERATOR 794280

(1)TYPE TP1=3-PHASE SYNCHRONOUS GENERATOR
 TP2=YOKO-OKI KAITEN KAIJI 3-SOO DOOKI
 (2)NUMBER
 (3)CAPACITY A=KVA/1 OR B=KW/1
 (4)RIKIRITU
 (5)VOLTAGE KV
 (6)FREQUENCY HZ
 (7)SPEED RPM
 (1) (2) (3) (4) (5) (6) (7)
 NO. CAP. KV HZ RPM

FUKUSIMA-6	BWR	11	TP1 1.	3000A	0.8	6.9	50	429	8-9-(4)	71/12
TOOKAI-2	BWR	12	TP1 1	3000A	0.8	6.9	50	429	8-9-(4)	71/12
KASHIWAZAKI	BWR	15	TP2 1	3560A	0.8	6.9	50		8-9-17	75/ 3
TOMIOKA-2	BWR	16	TP2 1	3560A	0.8	6.9	50		8-9-17	76/12

** D.G.LOAD (1)

794440

			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

			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

			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
FUKUSIMA-5	BWR	9			374. KW	5854. KW	8-9-(4)	71/ 2
FUKUSIMA-4	BWR	10			374. KW	5854. KW	8-9-(4)	71/ 8

** VITAL AC

SOURCE FOR INSTRUMENTATION 794620

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

(1)TYPE DM1=DC MOTOR
DM2=YOKO-OKI DC-MOTOR
AG1=TANSOO DOOKI GENERATOR
AM1=3-SOO DOOKI MOTOR
TP1=SEISHI-GATA MUTEIDEN SOOCHI

(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)...

TYPE NO. CAPACITY KW/ KVA/KW 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
FUKUSIMA-5	BWR	9	DM1/AG1/AM1	1/1/1	30/27.5/33	1500	120/240	2	50	1	8-9-(4)	71/ 2
FUKUSIMA-4	BWR	10	DM1/AG1/AM1	1/1/1	30/27.5/30	1500	120/240	2	50	1	8-9-(4)	71/ 8
FUKUSIMA-6	BWR	11	DM1/AG1/AM1	1/1/1	30/27.5/30	1500	120/240	2	50	1	8-9-(4)	71/12
TOKAI-2	BWR	12	DM1/AG1/AM1	1/1/1	30/27.5/30	1500	120/240	2	50	1	8-9-(4)	71/12
HAMAOKA-2	BWR	13	DM2/AG1/AM1	1/1/1	60/50 /60	1800	120/240		60		8-71	72/ 9
HAMAOKA-2	BWR	13	DM1/AG1/AM1	1/1/1	35/30 /35	1500	120/240	2	50	1	5011.021P1	76/ 1
TOMIOKA-1	BWR	14	TP1	2	25.		120	2	50	0.5	8-9-4	76/ 8
KASHIWAZAKI	BWR	15	TP1	1	50.		120/240				8-9-20	75/ 3
TOMIOKA-2	BWR	16	TP1	2	25.		120				8-9-20	76/12

** EMERGENCY

AC POWER SUPPLY PWR 794650

PROPERTY OF DC-AC INVERTER

(1)TYPE TP1=SEISHI-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

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
OOI-1,2	PWR	26	TP1	4	10	125 +-10	115 +-5	SP	8-100	71/ 1
MIHAMA-3	PWR	27	TP1	4	10	125 +-10	115 +-5	SP	8-97	71/ 8
IKATA-1	PWR	28	TP1	4	10	125 +-10	115 +-5	SP	8-108	72/11
GENKAI-2	PWR	29	TP1	4	10		115		8-8-23	76/ 2
IKATA-2	PWR	30	TP1	4	10		115		8-8-21	75/ 5
SENDAI	PWR	31	TP1	4	7.5		115		8-8-23	76/ 5

** POWER SUPPLY FOR PROTECTI ON SYSTEM 794720

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

(1)TYPE AM1=3-PHASE SYNCHRONOUS MOTOR
 AM2=3-PHASE INDUCTION 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 KW / KVA	VOLTAGE V / V	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
FUKUSIMA-5	BWR	9	/AG1	/2	/12.5	/120	50	8-9-(5)	71/ 2
FUKUSIMA-4	BWR	10	AM1/AG1	2/2	18.7/12.5	440/120	50	8-9-(5)	71/ 8
FUKUSIMA-6	BWR	11	AM2/AG1	2/2	18.7/12.5	440/120	60	8-9-(5)	71/12
TOOKAI-2	BWR	12	AM2/AG1	2/2	18.7/12.5	440/120	60	8-9-(5)	71/12
HAMAOKA-2	BWR	13	AM1/AG1	2/2	22 /18.0	440/120	60	8-72	72/ 9
HAMAOKA-2	BWR	13	AM1/AG1	2/2	18.5/15	440/120	60	5011.021P12	76/ 1
TOMIOKA-1	BWR	14	AM2/AG1	2/2	30. /18.75	440/120	50	8-9-5	76/ 8
KASHIWAZAKI	BWR	15	AM2/AG1	2/2	30. /18.	440/120		8-9-20	75/ 3
TOMIOKA-2	BWR	16	AM2/AG1	2/2	30. /18.	440/120		8-9-20	76/12

** POWER SUPPLY FOR INST. AND CONTROL 794750

TRANSFORMER

(1)CAPACITY KVA/1

(2)NUMBER

(3)VOLTAGE VOLT

(1)	(2)	(3)
KVA	NO.	V / V

ONAGAWA	BWR	4	45.	2	460/120-240	8-9-(5)	70/ 5
HAMAOKA-1	BWR	5	45.	2	460/120	8-83	70/ 5
HAMAOKA-2	BWR	13	75.	2	460/120	8-72	72/ 9
KASHIWAZAKI	BWR	15	75.	2	/	8-9-20	75/ 3
TOMIOKA-2	BWR	16	75.	2	/	8-9-20	76/12

** 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.G(V)

(6)PHASE OF DRIVE MOTOR

(1)	(2)	(3)	(4)	(5)	(6)
NO.			CAPACITY KW / KW	VOLTAGE AC.V/AC.V	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
OOI-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

(1)TYPE TP1=SEAL
TP2=EBONITE SEAL
TP3=PLASTIC SEAL
TP4=CLAD-SIKI PLASTIC VESSEL
TP5=EBONITE AND PLASTIC VESSEL (SEAL TYPE)
(2)NUMBER
(3)NUMBER OF CELL
(4)VOLTAGE VOLT
(5)CAPACITY AMPARE*H/ H/1

			(1)	(2)	(3)	(4)	(5)	(1)	(2)	(3)	(4)	(5)		
			NO.		V	AH		NO.		V	AH			
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
FUKUSIMA-2,3	BWR	7	(TP3	2	60	125	700 *2)+(TP3	1	120	250	1000	)	82-2-3 P19	70/ 8
FUKUSIMA-5	BWR	9	(TP3	2	60	125	800+1200)+(TP3	1	120	250	2000	)	8-9-(5)	71/ 2
FUKUSIMA-4	BWR	10	(TP3	2	60	125	800+1200)+(TP3	1	120	250	2000	)	8-9-(5)	71/ 8
FUKUSIMA-6	BWR	11	TP3	2	60	125	1000 *2						8-9-(5)	71/12
TOOKAI-2	BWR	12	TP3	2	60	125	1000 *2						8-9-5	71/12
HAMAOKA-2	BWR	13	(TP1	2	60	125	1000 *2)+(TP1	2	120	250	1000*2	)	8-72	72/ 9
HAMAOKA-2	BWR	13					2000/ *2				2000*2		5011.021P10	76/ 1
KASHIWAZAKI	BWR	15	(TP5	2	60	125	1200+3000)+(TP3	1	120	250	2200	)	8-9-18	75/ 3
TOMIOKA-2	BWR	16	(TP5	2	60	125	1200+3000)+(TP3	1	120	250	2200	)	8-9-18	76/12
MIHAMA-1	PWR	21				125	800/10 *2						8-101	66/11
TAKAHAMA-2	PWR	23				125	1600/10 *2						8-97	70/ 5
GENKAI-1	PWR	24				125	1600/10 *2						8-108	70/ 5
OOI-1,2	PWR	26				125	2200/10 *2						8-100	71/ 1
MIHAMA-3	PWR	27				125	2000/10 *2						8-97	71/ 8
IKATA-1	PWR	28				125	1600/10 *2						8-108	72/11
IKATA-2	PWR	30	TP4	2		129	1600/10 *2						8-8-20	75/ 5

** BATTERY CHARGER TYPE

NUMBER CAPACITY

794840

(1)TYPE TP1=STATIC
TP2=SILICON RECTIFIER
(2)NUMBER ()=YOBI
(3)CAPACITY KW/1 , OR KVA OR AMPARE
(4)CHARGE HOOSIKI NF=NORMALY FLOATING
(1) (2) (3) (4) (1) (2) (3) (4)
NO. NO. NO. NO.
KW KW

ONAGAWA	BWR	4	TP1	3	40*3	NF							8-9-(5)	70/ 5
HAMAOKA-1	BWR	5	TP2	3	35*3	NF							8-83	70/ 5
FUKUSIMA-2,3	BWR	7	(TP1	2+(1)	10*3	NF	)+(TP1	1+(1)	20*2	NF	)		82-2-3 P19	70/ 8
FUKUSIMA-5	BWR	9	(TP1	3	24*3	NF	)+(TP1	2	60*2	NF	)		8-9-(5)	71/ 2
FUKUSIMA-4	BWR	10	(TP1	3	24*3	NF	)+(TP1	2	60*2	NF	)		8-9-(5)	71/ 8
FUKUSIMA-6	BWR	11	TP2	3	24	NF							8-9-(5)	71/12
TOOKAI-2	BWR	12	TP2	3	24	NF							8-9-(5)	71/12
HAMAOKA-2	BWR	13	(TP2	3	20*3	NF	)+(TP2	3	25*3	NF	)		8-73	72/ 9
KASHIWAZAKI	BWR	15	(TP1	2+(1)	21+56	NF	)+(TP1	1+(1)	72	NF	)		8-9-18	75/ 3
TOMIOKA-2	BWR	16	(TP1	2+(1)	21+56+(56)	NF	)+(TP1	1+(1)	72	NF	)		8-9-18	76/12
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
IKATA-1	PWR	28	TP2	2	50KVA*2	NF							8-108	72/11

** BATTERY AND

CHARGER

FOR HPCS

794850

BATTERY
(B1)TYPE TP1=PLASTIC SHIELD TYPE
(B2)NUMBER
(B3)NUMBER OF CELL
(B4)VOLTAGE V
(B5)CAPACITY AH
CHARGER
(C1)TYPE TP1=STATIC
(C2)NUMBER
(C3)CAPACITY KW/1
(C4)CHARGE HOOSIKI NF=NORMALY FLOATING
(B1)(B2) (B3) (B4) (B5) (C1) (C2) (C3) (C4)
CELL V AH NO. KW

KASHIWAZAKI	BWR	15	TP1	1	60.	125.	900	TP1	1+(1)	12.	NF	8-9-18,19	75/ 3
TOMIOKA-2	BWR	16	TP1	1	60.	125.	900.	TP1	1+(1)	12.	NF	8-9-19	76/12

** BATTERY AND CHARGER FOR N.MONIT. 794860

BATTERY
 (B1)TYPE TP1=PLASTIC SHIELD TYPE
 (B2)NUMBER
 (B3)NUMBER OF CELL
 (B4)VOLTAGE V
 (B5)CAPACITY AH
 (B5)CAPACITY AH/1
 CHARGER
 (C1)TYPE CH1=STATIC
 (C2)NUMBER
 (C3)CAPACITY KW
 (C3)CAPACITY KW/1
 (C4)CHARGE HOOSIKI NF=NORMALLY FLOATING
 (B1)(B2) (B3) (B4) (B5) (C1) (C2) (C3) (C4)
 TYP. NO. CELL V AH NO. KW

ONAGAWA	BWR	4	2	+-24	2	8-9-(6)	70/ 5	
HAMAOKA-1	BWR	5	2	+-24	CH1 4	8-84	70/ 5	
FUKUSIMA-2,3	BWR	7	2	48	2	82-2-3 P20	70/ 8	
FUKUSIMA-5	BWR	9	2	+-24	2	8-9-(5)	71/ 2	
FUKUSIMA-4	BWR	10	2	+-24	2	8-9-(5)	71/ 8	
FUKUSIMA-6	BWR	11	2	+-24	2	8-9-(6)	71/12	
TOOKAI-2	BWR	12	2	+-24	2	8-9-(6)	71/12	
HAMAOKA-2	BWR	13	2	+-24	CH1 4	8-73	72/ 9	
KASHIWAZAKI	BWR	15	TP1 2	24 130	CH1 2	0.7 NF	8-9-19	75/ 3
TOMIOKA-2	BWR	16	TP1 2	24 +-24 130	CH1 2	0.7 NF	8-5-19	76/12

** OFF GAS SYSTEM MAIN COMPONENTS LIST 801200

FROM (AIR EXTRACTOR) CONDENSER SYSTEM 775230 1
 OFF GAS PRE HEATER 801220 2
 OFF GAS RECOMBINER 801240 3
 OFF GAS CONDENSER 801260 4
 OFF GAS MOISTURE SEPARATOR-1 801270 5
 OFF GAS DECAY TUBE 801480 6
 OFF GAS PRE FILTER FROM AIR EXTRACTOR 801420 7
 OFF GAS COOLER FOR DEHUMIDIFICATION 801290 8
 OFF GAS MOISTURE SERARATOR-2 801270 9
 OFF GAS DEHUMIDIFIER 801300 10
 OFF GAS MESH FILTER 801310 11
 OFF GAS CHARCOAL HOLD UP 801320 12
 OFF GAS POST FILTER 801421 13
 OFF GAS BLOWER 801330 14
 OFF GAS SILENCER 801340 15
 OFF GAS AIR EJECTOR 801350 16
 STACK 801460 17

** 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
 (2)NUMBER
 (3)CAPACITY NM3/H/1
 (1) (2) (3)

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
FUKUSIMA-5	BWR	9	TP3	1+(1)		8-10-(1)	71/ 2
FUKUSIMA-4	BWR	10	TP3	1+(1)		8-10-(1)	71/ 8
FUKUSIMA-6	BWR	11	TP3	1+(1)		8-10-(1)	71/12
TOOKAI-2	BWR	12	TP3	1+(1)		8-10-(1)	71/12
HAMAOKA-2	BWR	13	TP3	1+(1)		8-75	72/ 9
TOMIOKA-1	BWR	14	TP3	1+(1)		8-10-1	76/ 8
KASHIWAZAKI	BWR	15	TP3	1+(1) 40		8-10-10	75/ 3
TOMIOKA-2	BWR	16	TP3	1+(1) 40		8-10-12	76/12

** OFF GAS RECOMBINER

NUMBER AND

TYPE

801240

(1)TYPE TP1=TATE-OKI-ENTOO (CATALYZER IS USED)
 TP2=CATALYZER IS USED
 (2)NUMBER ()=YOB1
 (3)CAPACITY NM3/H/1
 (1) (2) (3)

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
FUKUSIMA-5	BWR	9	TP2	1+(1)		8-10-(1)	71/ 2
FUKUSIMA-4	BWR	10	TP2	1+(1)		8-10-(1)	71/ 8
FUKUSIMA-6	BWR	11	TP2	1+(1)		8-10-(1)	71/12
TOOKAI-2	BWR	12	TP2	1+(1)		8-10-(1)	71/12
HAMAOKA-2	BWR	13	TP2	1+(1)		8-75	72/ 9
TOMIOKA-1	BWR	14	TP2	1+(1)		8-10-1	76/ 8
KASHIWAZAKI	BWR	15	TP2	1+(1)	40	8-10-10	75/ 3
TOMIOKA-2	BWR	16	TP2	1+(1)	40	8-10-12	76/12

** OFF GAS COND. NO.

801260

(1)TYPE TP1=YOKO-OKI-HYOOMEN REIKYAKU (D.S)
 TP2=YOKO-OKI-HYOOMEN REIKYAKU (DOREN-DAME)(T.S)
 TP3=YOKO-OKI-HYOOMEN SESSHOKU SIKI
 (2)NUMBER ()=YOB1
 (3)CAPACITY NM3/H/1
 (1) (2) (3)

JPDR-2	BWR	2	TP1	1		KON-6 P27	70/11
JPDR-2	BWR	2	TP2	1		KON-6 P26	70/11
ONAGAWA	BWR	4		1		8-10-(2)	70/ 5
HAMAOKA-1	BWR	5		1		8-87	70/ 5
FUKUSIMA-5	BWR	9		1		8-10-(1)	71/ 2
FUKUSIMA-4	BWR	10		1		8-10-(1)	71/ 8
FUKUSIMA-6	BWR	11		1		8-10-(1)	71/12
TOOKAI-2	BWR	12		1		8-10-(1)	71/12
HAMAOKA-2	BWR	13		1		8-75	72/ 9
TOMIOKA-1	BWR	14	TP3	1+(1)		8-10-1	76/ 8
KASHIWAZAKI	BWR	15	TP3	1+(1)	40.	8-10-10	75/ 3
TOMIOKA-2	BWR	16	TP3	1+(1)	40.	8-10-12	76/12

** OFF GAS COMPRESSOR

NUMBER TYPE AND PRESSURE 801280

(1)TYPE TP1=DIAPHRAGM
 TP2=CENTRIFUGAL
 TP3=KAITEN ENSIN WATER SEAL TYPE
 (2)NUMBER ()=YOB1
 (3)CAPACITY M3/H
 (4)DERIVERY PRESSURE KG/CM2G
 (5)MATERIAL MT1=CAST IRON
 (1) (2) (3) (4) (5)
 TYPE NO. M3/H KG/CM2G

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
OOI-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-1	PWR	28	TP3	2	7.7	8-113	72/11
GENKAI-2	PWR	29	TP3	2	68NM3/H/1 7.7 MT1	8-10-18	76/ 2
IKATA-2	PWR	30	TP3	2	68NM3/H/1 7.7 MT1	8-10-16	76/12
SENDAI	PWR	31	TP3	2	68NM3/H/1 7.7 MT1	8-10-18	76/ 5

** OFF GAS CHARCOAL HOLDUP

801320

		(1)NUMBER		(2)HOLD UP TIME FOR XENON		DAY		(3)HOLD UP TIME FOR KRYPTON		HOUR		(4)TYPE		TP1=CHARCOAL FILL UP		(5)CAPACITY		NM3/H/1		(6)CHARCOAL WEIGHT		TON	
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)
		NO.	DAY	H	TYPE	CAP.	TON																
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												
TOOKAI-2	BWR	12	1	27	40			8-10-(1)		71/	12												
HAMAOKA-2	BWR	13	1	30	40			8-75		72/	9												
TOMIOKA-1	BWR	14	1					8-10-1		76/	8												
KASHIWAZAKI	BWR	15	1	27	40	TP1	40.	70.		8-10-3.10		75/	3										
TOMIOKA-2	BWR	16	1	27	40	TP1	40.	70.		8-10-3.12		76/	12										

** OFF GAS EJECTOR

VACUUM PUMP

801340

		(1)NUMBER		(2)TYPE		TP1=MECHANICAL PUMP		TP2=AIR-DRIVEN		(3)CAPACITY		NM3/H/1											
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)
		NO.	TYPE	CAP.																			
FUKUSIMA-5	BWR	9	1+(1)	TP1										8-10-(2)		71/	2						
FUKUSIMA-4	BWR	10	1+(1)	TP2										8-10-(2)		71/	8						
FUKUSIMA-6	BWR	11	1+(1)	TP1										8-10-(2)		71/	12						
TOOKAI-2	BWR	12	1	TP1										8-10-(2)		71/	12						
HAMAOKA-2	BWR	13	1+(1)	TP2										8-76		72/	9						
TOMIOKA-1	BWR	14	1+(1)	TP1										8-10-2		76/	8						
KASHIWAZAKI	BWR	15	1+(1)	TP1	40.									8-10-11		75/	3						
TOMIOKA-2	BWR	16	1+(1)	TP2	40.									8-10-13		76/	12						

** OFF GAS DECAY TANK NUMBER CAPACITY PRESSURE 801400

		(1)NUMBER		(2)CAPACITY		M3/1		(3)HOLD-UP CAPACITY		DAY/AT FULL POWER		(4)DESIGN PRESSURE		KG/CM2G		(5)MATERIAL		MT1=CARBON STEEL					
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)
		NO.	CAPACITY	M3/1 DAY	KG/CM2G																		
ONAGAWA	BWR	4	2		1	16		8-10-(2)		70/	5												
HAMAOKA-1	BWR	5	2	28		16		8-87		70/	5												
FUKUSIMA-5	BWR	9	NONE					8-10-(2)		71/	2												
FUKUSIMA-4	BWR	10	NONE					8-10-(2)		71/	8												
FUKUSIMA-6	BWR	11	NONE							/													
TOOKAI-2	BWR	12	NONE							/													
HAMAOKA-2	BWR	13	NONE							/													
MIHAMA-1	PWR	21	4	2.8		7.		8-107		66/	11												
TAKAHAMA-2	PWR	23	4	15		10.6		8-102		70/	5												
GENKAI-1	PWR	24	4	14		10		8-114		70/	5												
OOI-1,2	PWR	26	10(COM 1,2)	17		10.5		8-105		71/	1												
MIHAMA-3	PWR	27	4	17		10.		8-102		71/	8												
IKATA-1	PWR	28	6	15		10.		8-113		72/	11												
GENKAI-2	PWR	29	4	15		10.	MT1	8-10-18		76/	2												
IKATA-2	PWR	30	4	15		10.	MT1	8-10-16		76/	12												
SENDAI	PWR	31	4	17		10.	MT1	8-10-18		76/	5												

** OFF GAS FILTER FROM

AIR EXTRACTOR

801420

		(1)NUMBER		(2)FILTER EFFICIENCY		GT (2)PERCENT FOR (3)MICRON-DIA(PARTICLE)		(4)CAPACITY		NM3/H/1													
		(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)	(5)	(6)	(1)	(2)	(3)	(4)
		NO.	PC.	MICRON	NM3/H																		
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												
HAMAOKA-1	BWR	5	1+(1)	99.97	0.3			8-87		70/	5												
FUKUSIMA-5	BWR	9	1+(1)	99.97	0.3			8-10-(2)		71/	2												
FUKUSIMA-6	BWR	11	1+(1)	99.97	0.3			8-10-(2)		71/	12												
TOOKAI-2	BWR	12	1+(1)	99.97	0.3			8-10-(2)		71/	12												
HAMAOKA-2	BWR	13	1+(1)	99.97	0.3			8-76		72/	9												
TOMIOKA-1	BWR	14	1+(1)	99.97	0.3			8-10-1		76/	8												
KASHIWAZAKI	BWR	15	1+(1)	99.97	0.3	40		8-10-10		75/	3												
TOMIOKA-2	BWR	16	1+(1)	99.97	0.3	40		8-10-12.13		76/	12												

** 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

** OFF GAS DEAERATOR ISOLATE VALVE NUMBER 801440

ONAGAWA BWR 4 NO.=1 8-10-(2) 70/ 5
HAMAOKA-1 BWR 5 NO.=1 8-87 70/ 5

** OFF GAS STACK HEIGHT 801460

TOTAL HEIGHT(M)=(GROUND LEVEL) + (STACK LENGTH)

JPDR-2 BWR 2 = 55. M KON.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/ 8FUKUSIMA-6 BWR 11 133 = 13 + 120 8-10-(2) 71/12
TOOKAI-2 BWR 12 148 = 8 + 140 8-10-(2) 71/12
HAMAOKA-2 BWR 13 106 = 6 + 100 (COMMON WITH 1-GOO) 8-76 72/ 9
TOMIOKA-1 BWR 14 153. M = 33. M + 120. M 8-10-2 76/ 8
KASHIWAZAKI BWR 15 160. M = 10. M + 150. M 8-10-11 75/ 3TOMIOKA-2 BWR 16 153. M = 33. M + 120. M 8-10-13 76/12
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 70/11TAKAHAMA-1 PWR 25 = + 85. M BK80-2 P22 71/ 8
OOI-1+2 PWR 26 65. M = + 85. M 9-12 71/ 1
MIHAMA-3 PWR 27 89. M = + 85. M BK80-2 P22 71/ 8

** OFF GAS DECAY TUBE SIZE AND HOLDUP 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
(6)NUMBER
(7)CAPACITY M3(1) (2) (3) (4) (5) (6) (7)
CM M MIN. MIN. MIN. NO. M3ONAGAWA 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) 71/12TOOKAI-2 BWR 12 30 8-10-(1) 71/12
HAMAOKA-2 BWR 13 30 8-75 72/ 9
TOMIOKA-1 BWR 14 30 1 8-10-1 76/ 8
KASHIWAZAKI BWR 15 30 1 20. 8-10-10 75/ 3
TOMIOKA-2 BWR 16 30 1 20. 8-10-12 76/12

** OFF GAS REGENE. MAIN COMPONENTS 801600

() OFF GAS REGENE. GAS HEATER 801610
() OFF GAS REGENE. GAS GAS COOLER 801620
() OFF GAS REGENE. WATER SEPARATOR 801630
() OFF GAS REGENE. MESH FILTER 801640
() OFF GAS REGENE. GAS BLOWER 801650
() OFF GAS REGENE. GAS BLOWER SILENCER 801660

** OFF GAS REGENE. GAS HEATER 801610

(1)TYPE TP1=ENTOO. TATE-GATA SHEATHED HEATER

(2)NUMBER
(3)CAPACITY NM3/H
(4)MAX. WORKING PRESSURE KG/CM2G
(5)MAX. WORKING TEMPERATURE DEG C
(6)SIZE ID MM
(7)SIZE THICKNESS MM
(8)SIZE HEIGHT MM
(9)MATERIAL MT1=SM41A(1) (2) (3) (4) (5) (6) (7) (8) (9)
NO. NM3/H KG/CM2G C MM MM MM

FUKUSIMA-4 BWR 10 TP1 1 500. 3.5 350. 900. 9. 3670. MT1 5002 75/ 5

** OFF GAS REGENE.

GAS COOLER

801620

(1)TYPE TP1=ENTOO YOKO-GATA U-TUBE
 (2)NUMBER
 (3)CAPACITY NM3/H
 (4)MAX. WORKING PRESSURE PRIMARY/SECONDARY KG/CM2G
 (5)MAX. WORKING TEMPERATURE PRIMARY/SECONDARY DEG C
 (6)HEAT TRANSFER AREA M2
 (7)SIZE ID/THICKNESS/LENGTH MM
 (8)MATERIAL SHELL/TUBE/TUBE-PLATE MT1=SM41A
 MT2=SUS3-4TB
 MT3=SUS304

(1) (2) (3) (4) (5) (6) (7) (8)
 NO. CAP MWP MWT HTA ID/T/L --MATERIAL-
 KG/CM2G C/C M2 MM

FUKUSIMA-4 BWR 10 TP1 1 500 3.5/8.8 250/66 25 490/9/2460 MT1/MT2/MT3 5002 75/ 5

** OFF GAS REGENE.

WATER SEPARATO R

801630

(1)TYPE TP1=ENTOO YOKO-GATA BUFFLE PLATE
 (2)NUMBER
 (3)CAPACITY NM3/H
 (4)MAX. WORKING PRESSURE KG/CM2G
 (5)MAX. WORKING TEMPERATURE DEG C
 (6)SIZE ID/THICKNESS/LENGTH MM
 (7)MATERIAL SHELL MT1=STPG38

(1) (2) (3) (4) (5) (6) (7)
 NO. CAP MWP MWT ID/ T / L MAT.
 C MM

FUKUSIMA-4 BWR 10 TP1 1 500 3.5 66. 381/12.7/1100 MT1 5002 75/ 5

** OFF GAS REGENE.

MESH FILTER

801640

(1)TYPE TP1=ENTOO TATE-GATA WIRE MESH
 (3)CAPACITY NM3/H
 (4)MAX. WORKING PRESSURE KG/CM2G
 (5)MAX. WORKING TEMPERATURE DEG C
 (6)SIZE ID/THICKNESS/HEIGHT MM
 (7)MATERIAL SHELL/DEMISTER MT1=STPG38
 MT2=SUS304

(1) (2) (3) (4) (5) (6) (7)
 NO. CAP MWP MWT ID/ T / L MATERIAL
 C MM SHELL/DEM.

FUKUSIMA-4 BWR 10 TP1 1 500 3.5 250. 381/12.7/1800 MT1/MT2 5002 75/ 5

** OFF GAS REGENE.

GAS BLOWER

801650

(1)TYPE TP1=TOKO-GATA
 (3)CAPACITY NM3/H
 (4)POWER KW
 (5)MATERIAL MT1=FC25
 (1) (2) (3) (4) (5)
 TYPE NO. CAP. POW. MAT.
 NM3/H KW

FUKUSIMA-4 BWR 10 TP1 1+(1) 500. 18.5 MT1 5002 75/ 5

** OFF GAS REGENE.

GAS BLOWER SILENCER

801660

(1)TYPE TP1=ENTOO-GATA
 (3)CAPACITY NM3/H
 (4)MAX. WORKING PRESSURE KG/CM2G
 (5)MAX. WORKING TEMPERATURE DEG C
 (6)SIZE ID/THICKNESS/LENGTH MM
 (7)MATERIAL SHELL MT1=STPG38
 (1) (2) (3) (4) (5) (6) (7)
 NO. CAP. MWP MWT ID/ T / L MAT
 NM3/H C MM

FUKUSIMA-4 BWR 10 TP1 1 500. 3.5 100. 297.9/10.3/1200 MT1 5002 75/ 5

** GWDS

MAIN

COMPONEN TS

LIST

801800

(1)OFF GAS COMPRESSOR 801280
 (2)OFF GAS DECAY TANK 801400
 (3)WASTE H2-GAS COMPRESSOR 801810
 (4)H2-GAS SEPARATOR 801820
 (5)H2-GAS TANK 801830
 (6)WASTE H2-GAS STORAGE TANK 801840

** GWDS WASTE H2-GAS COMPRESS OR

801810

(1)TYPE
(2)NUMBER
(3)CAPACITY
(4)DERIVERY PRESSURE(DSIGN)
(5)MATERIAL

TP1=RECIPRO. SHAFT SEAL
/C1=COMMONLY USED WITH UNIT NO.1
NM3/H/1
KG/CM2G
MT1=STAINLESS STEEL

			(1)	(2)	(3)	(4)	(5)
			NO.		CAP	P	
GENKAI-2	PWR	29	TP1	2	20.	7.5	MT1
IKATA-2	PWR	30	TP1	2(CW1)	10.	7.5	MT1
SENDAI	PWR	31	TP1	2	10.	7.5	MT1

8-10-18 76/ 2
8-10-16 76/11
8-10-18 76/ 4

** GWDS H2-GAS SEPARATO R

801820

(1)TYPE
(2)NUMBER
(3)CAPACITY
(4)MATERIAL

TP1=PALLADIUM ALLOY DIAPHRAGM CELL
/C1=COMMONLY USED WITH UNIT NO.1
NM3/H/1
MT1=STAINLESS STEEL

			(1)	(2)	(3)	(4)
			NO.		CAP	
GENKAI-2	PWR	29	TP1	1	4.0	MT1
IKATA-2	PWR	30	TP1	1/C1	4.0	MT1
SENDAI	PWR	31	TP1	1	4.0	MT1

8-10-18 76/ 2
8-10-16 76/11
8-10-18 76/ 4

** GWDS H2-GAS TANK

801830

(1)TYPE
(2)NUMBER
(3)CAPACITY
(4)DESIGN PRESSURE
(5)MATERIAL

/C1=COMMONLY USED WITH UNIT NO.1
M3
KG/CM2G
MT1=CARBON STEEL

			(1)	(2)	(3)	(4)	(5)
			NO.		CAP	P	
GENKAI-2	PWR	29		1	10.	10.	MT1
IKATA-2	PWR	30		1/C1	2.	10.	MT1
SENDAI	PWR	31		1	2.	10.	MT1

8-10-18 76/ 2
8-10-16 76/11
8-10-18 76/ 4

** GWDS WASTE H2-GAS STORAGE TANK

801840

(1)TYPE
(2)NUMBER
(3)CAPACITY
(4)DESIGN PRESSURE
(5)MATERIAL

/C1=COMMONLY USED WITH UNIT NO.1
NM3/1
KG/CM2G
MT1=CARBON STEEL

			(1)	(2)	(3)	(4)	(5)
			NO.		CAP	P	
GENKAI-2	PWR	29		4	17.	10.	MT1
IKATA-2	PWR	30		4/C1	17.	10.	MT1
SENDAI	PWR	31		4	17.	10.	MT1

8-10-18 76/ 2
8-10-16 76/11
8-10-19 76/ 4

** LWDS TANK LIST PWR

802100

(1)BORON NOOSHUKU EKI CHORYU TANK
(2)HAIEKI CHORYU TANK
(3)HAIEKI HOLDUP TANK
(4)HAIEKI JYOHATU SOOTI FUKUSUI TANK
(5)HAIEKI SUMP TANK
(6)HOJYO TATEYA SUMP TANK
(7)HOLDUP TANK
(8)JUSHI SAISEI HAIEKI CHORYU TANK
(9)KAGAKU HAIEKI TANK
(10)KANSHI TANK
(11)MONITOR TANK
(12)SENTAKU HAISUI TANK
(13)SHORIEKI CHOZOO TANK
(14)YAKUEKI DRAIN TANK
(15)YUKA DRAIN TANK
(16)JI REIKIYAKU ZAI CHOZOO TANK
(17)JI REIKIYAKU ZAI DRAIN TANK

80211
80212
80213
80214
80215
80216
80217
80218
80219
80220
80221
80222
80223
80224
80225
80226
80227

			1	2	3	4	5	6	7	8	9	11	13	15	17
MIHAMA-1	PWR	21	1	3											
TAKAHAMA-2	PWR	23			1										
GENKAI-1	PWR	24			2	1			2	2		2	1	1	3
OOI-1,2	PWR	26			1						2		1		
MIHAMA-3	PWR	27			2						3				
IKATA-1	PWR	28			2										3

8-108 66/11
8-103 70/ 5
8-116 70/11
8-106 71/ 1
8-103 71/ 7
8-114 72/ 5

** LWDS CONDENSE D BORON STORAGE TANK 802110

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3) (4) (5)

MIHAMA-1	PWR	21	1	2.7	MT1	8-109	66/11
GENKAI-2	PWR	29	1	4.	MT1	8-10-19	76/ 2
IKATA-2	PWR	30	1	4.0	MT1	8-10-17	76/12
SENDAI	PWR	31	1	4.0	MT1	8-10-20	76/ 4

** LWDS LIQUID WASTE STORAGE TANK 802120

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3) (4) (5)

MIHAMA-1	PWR	21	3	99	MT1	8-109	66/11
GENKAI-1	PWR	24	1	93	MT1	8-115	70/ 5
IKATA-1	PWR	28	2	30+70	MT1	8-115	72/11
GENKAI-2	PWR	29	2	30+70	MT1	8-10-21	76/ 2

** LWDS LIQUID WASTE HOLDUP TANK 802130

(1)NUMBER
(2)CAPACITY M3/1
(1) (2) (3) (4) (5)

TAKAHAMA-2	PWR	23	1	92		8-103	70/ 5
OOI-1+2	PWR	26	1	38	(COMMON WITH 1,2600)	8-106	71/ 1
MIHAMA-3	PWR	27	2	94		8-103	71/ 7

** LWDS LIQUID WASTE EVAPOLAT OR CONDE NSE TANK 802140

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3) (4) (5)

GENKAI-1	PWR	24	2	3.78	MT1	8-117	70/ 5
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** LWDS LIQUID WASTE SUMP TANK 802150

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3) (4) (5)

MIHAMA-1	PWR	21	1	1.4	MT1	8-108	66/11
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** LWDS AUX. BUILDING SUMP TANK 802160

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3) (4) (5)

GENKAI-1	PWR	24	1	3.5	MT1	8-116	70/ 5
GENKAI-2	PWR	29	1	10.	MT1	8-10-20	76/ 2

** LWDS HOLDUP TANK 802170

(1)NUMBER
(2)CAPACITY M3/1
(1) (2) (3) (4) (5)

TAKAHAMA-2	PWR	23	3	190		8-103	70/ 5
OOI-1+2	PWR	26	2	425	(COMMON WITH 1,2600)	8-106	71/ 1
MIHAMA-3	PWR	27	3	190		8-103	71/ 7

** LWDS RESIN RECLAIM LIQUID WASTE HOLDUP 802180

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=CARBON STEEL
(4)LINING LG1=HOGO UCHIBARI TSUKI
(1) (2) (3) (4) (5)

MIHAMA-1	PWR	21	1	37	MT1 LG1	8-108	66/11
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** LWDS	CHEMICAL S	DRAIN	TANK	802190		
		(1)NUMBER				
		(2)CAPACITY	M3/1			
		(3)MATERIAL	MT1=STAINLESS STEEL			
		(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			
		(1) (2) (3)	(4) (5)			
GENKAI-1	PWR 24	2	28.3	MT1 LG1	8-116	70/ 5
** LWDS	MONITOR	TANK		802210		
		(1)NUMBER				
		(2)CAPACITY	M3/1			
		(3)MATERIAL	MT1=CARBON STEEL			
			MT2=STAINLESS STEEL			
		(4)LINING	LG1=INNER SURFACE LINING			
		(5)GENERATION RATE(ANTICIPATED)	M3/YEAR			
		(1) (2) (3)	(4) (5)			
MIHAMA-1	PWR 21	2	14	MT1 LG1	8-109	66/11
GENKAI-2	PWR 29	2	40	MT2	8-10-19	76/ 2
IKATA-2	PWR 30	2	40	MT2	8-10-17	75/ 5
SENDAI	PWR 31	2	41	MT2	8-10-20	76/ 5
** LWDS	WASHING WATER	TANK		802220		
		(1)NUMBER				
		(2)CAPACITY	M3/1			
		(3)MATERIAL	MT1=STAINLESS STEEL			
		(1) (2) (3)	(4) (5)			
GENKAI-1	PWR 24	2	2.3	MT1	8-116	70/ 5
OOI-1,2	PWR 26	1	38		8-106	71/ 1
				(COMMON WITH 1,2600)		
** LWDS	PROCESS WATER	HOLDUP	TANK	802230		
		(1)NUMBER				
		(2)CAPACITY	M3/1			
		(3)MATERIAL	MT1=STAINLESS STEEL			
		(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			
		(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			
		(1) (2) (3)	(4) (5)			
OOI-1,2	PWR 26	1	38		8-106	71/ 1
				(COMMON WITH 1,2600)		
** LWDS	PRIMARY COOLANT	STORAGE	TANK	802260		
		(1)NUMBER				
		(2)CAPACITY	M3/1			
		(3)MATERIAL	MT1=STAINLESS STEEL			
		(4)DRAIN RATE(ANTICIPATED)	M3/YEAR			
		(1) (2) (3)	(4) (5)			
GENKAI-1	PWR 24	3	119	MT1	8-116	70/ 5
IKATA-1	PWR 28	3	125	MT1	8-114	72/11
GENKAI-2	PWR 29	3	125	MT1	8-10-19,-10	76/ 2
IKATA-2	PWR 30	3	125	MT1	8-10-17	75/ 5
SENDAI	PWR 31	3	223	MT1	8-10-20	76/ 4

** LWDS PRIMARY COOLANT DRAIN TANK 802270

(1)NUMBER
 (2)CAPACITY M3/1
 (3)MATERIAL MT1=STAINLESS STEEL
 (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 LIQUID WASTE EVAPOLAT OR 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 SWDS)		8-119	70/ 5
OOI-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)
 (1) (2) (3) (4) (5)

MIHAMA-1	PWR	21	1	1.14	MT1	8-109	66/11
TAKAHAMA-2	PWR	23	1	2.3		8-103	70/ 5
GENKAI-1	PWR	24	1	2.84	MT1	8-116	70/ 5
OOI-1,2	PWR	26	1	0.19		8-106	71/ 1
MIHAMA-3	PWR	27	1	3.4		8-103	71/ 7
					RM1 (COMMON WITH 1,2GOO)		
					RM1		
JKATA-1	PWR	28	1	3.4	MT1	8-115	72/11
GENKAI-2	PWR	29	1	3.4	MT1	8-10-20	76/ 2
JKATA-2	PWR	30	1	3.4	MT1	8-10-17	76/ 5
SENDAI	PWR	31	1	3.4	MT1	8-10-21	76/ 4

** LWDS BORIC ACID PURIFY DEMINE. 802310

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

** LWDS BORIC 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 BORIC ACID EVAP.C,W DEMINER LIZER 802350

NUMBER RESIN VOLUME CAPACITY MATERIAL

TAKAHAMA-2	PWR	23	SEE 80239				/
GENKAI-1	PWR	24	NO.=2	0.34 CUBM/1	2.84 CUBM/H	SUS	8-117 70/ 5
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/1	MATERIAL=SUS	8-117	70/ 5
GENKAI-1	PWR	24	FROM(80229) 80237 TO(REDISPOSE OR HOOSUIRO 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
OOI-1,2	PWR	26	NO.=5	CAP.=8 CUBM/H/1 *5	COMMON	8-106	71/ 1
MIHAMA-3	PWR	27	NO.=5	CAP.=6.8 CUBM/H/1 *5		8-103	71/ 8

** LWDS TANK LIST

802400

(1)CHUUWA ZAI TENKA TANK 80241
 (2)GYOO SHUKU SUI SAMPLE TANK 80242
 (3)GYOO SHUKU SUI SYUUSHUU TANK 80243
 (4)HAIEKI CHUUWA TANK 80244
 (5)HAIEKI SAMPLE TANK 80245
 (6)HAIEKI SURGE TANK 80246
 (7)HAIEKI SYUUSHUU TANK 80247
 (8)JYOOHATSU NOOSHUKUKI SURGE TANK 80248
 (9)JYOOHYUU SUI SURGE TANK 80249
 (10)KIKI DRAIN ROKASUI TANK 80250
 (11)KIKI DRAIN SAMPLE TANK 80251
 (12)KIKI DRAIN SURGE TANK 80252
 (13)KIKI DRAIN SYUUSHUU TANK 80253
 (14)LAUNDRY DRAIN TANK 80254
 (15)PRECOAT TANK 80255
 (16)ROKA JOZAI TANK 80256
 (17)SAISEI HAIEKI SYUUSHUU TANK 80257
 (18)SENJOO HAIEKI SYUUSHUU TANK 80258
 (19)YUKA DRAIN ROKASUI TANK 80259
 (20)YUKA DRAIN SAMPLE TANK 80260
 (21)YUKA DRAIN SYUUSHUU TANK 80261
 (22)ZATSU HAIEKI SURGE TANK 80262

1 2 3 4 5 6 7 8 9 11 13 15 17 19 21
 10 12 14 16 18 20 22

ONAGAWA	BWR	4		2	2	1	1			2						2	1	8-10-(3)	70/ 5
HAMAOKA-1	BWR	5		2		1				2	1	2					2	8-89	70/ 5
FUKUSIMA-5	BWR	9	2	2	2	1	1					2	2	1			2	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	2	2	2	1	1					2	1	1			2	8-10-(3)	71/ 8
FUKUSIMA-6	BWR	11	2		2	1		2	2	1		1	1	1	2	1	1	8-10-(3)	71/12
TOOKAI-2	BWR	12	2	1	1	2	2	2	1			2	1				2	8-10-(3)	71/12
HAMAOKA-2	BWR	13									2	1	1	2		2	3	8-77	72/ 9

** LWDS NEUTRALIZER ANNEXING TANK

802410

(1)NUMBER
 (3)MATERIAL MT1=CARBON STEEL OR ALUMINUM
 (4)LINING LG1=RUBBER LINING
 (5)REMARKS KAK=KAKUHANKI TSUKI
 (1) (2) (3) (4) (5)
 NO.

FUKUSIMA-5	BWR	9	2				LG1	KAK	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	2				LG1	KAK	8-10-(3)	71/ 8
FUKUSIMA-6	BWR	11	2			MT1		KAK	8-10-(3)	71/12
TOOKAI-2	BWR	12	2						8-10-(3)	71/12

** LWDS LIQUID WASTE NEUTRALIZATION TANK 802440

(1)NUMBER
 (2)CAPACITY M3/1
 (3)MATERIAL MT1=STAINLESS STEEL
 (5)REMARKS NOZ=KONGOO NOZZLE TSUKI
 (1) (2) (3) (4) (5)
 NO.

ONAGAWA	BWR	4	2	65	MT1		NOZ	8-10-(3)	70/ 5
HAMAOKA-1	BWR	5	2	65				8-89	70/ 5
FUKUSIMA-5	BWR	9	2					8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	2				NOZ	8-10-(3)	71/ 8
TOOKAI-2	BWR	12	2					8-10-(3)	71/12

** LWDS LIQUID WASTE SAMPLING TANK 802450

(1)NUMBER
 (2)CAPACITY M3/1
 (3)MATERIAL MT1=ALUMINUM
 (5)REMARKS NOZ=KONGOO NOZZLE TSUKI
 (1) (2) (3) (4) (5)
 NO.

ONAGAWA	BWR	4	2	65	MT1		NOZ	8-10-(3)	70/ 5
FUKUSIMA-5	BWR	9	2				NOZ	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	2				NOZ	8-10-(3)	71/ 8
FUKUSIMA-6	BWR	11	2		MT1		NOZ	8-10-(3)	71/12
TOOKAI-2	BWR	12	2				NOZ	8-10-(3)	71/12

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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)
NO.

ONAGAWA	BWR	4	1	150	MT1	NOZ	8-10-(3)	70/ 5
HAMAOKA-1	BWR	5	1	150			8-89	70/ 5
FUKUSIMA-5	BWR	9	1			NOZ (WITH HEATER)	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	1			NOZ (WITH HEATER)	8-10-(3)	71/ 8
FUKUSIMA-6	BWR	11	1		MT2	NOZ	8-10-(3)	71/12
TOOKAI-2	BWR	12	2			NOZ	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)
NO.

ONAGAWA	BWR	4	1	110	MT1	LG1	8-10-(3)	70/ 5
FUKUSIMA-5	BWR	9	1			LG1	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	1			LG1	8-10-(3)	71/ 8
TOOKAI-2	BWR	12	1				8-10-(3)	71/12

** LWDS EVAPORAT OR SURGE TANK 802480

(1)NUMBER
(3)MATERIAL MT1=STAINLESS STEEL
(5)REMARKS NOZ=KONGOO NOZZLE SSUKI
(1) (2) (3) (4) (5)

FUKUSIMA-6	BWR	11	2		MT1	NOZ	8-10-(3)	71/12
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** LWDS DISTILED WATER SURGE TANK 802490

(1)NUMBER
(3)MATERIAL MT1=CARBON STEEL
(5)REMARKS NOZ=KONGOO NOZZLE TSUKI
(1) (2) (3) (4) (5)

FUKUSIMA-6	BWR	11	2		MT1	NOZ	8-10-(3)	71/12
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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)

FUKUSIMA-6	BWR	11	1		MT1	NOZ	8-10-(3)	71/12
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** LWDS SYSTEM DRAIN SAMPLING TANK 802510

(1)NUMBER
(2)CAPACITY M3/1
(5)REMARKS NOZ=KONGOO NOZZLE TSUKI
(1) (2) (3) (4) (5)
NO.

HAMAOKA-1	BWR	5	2	65			8-89	70/ 5
HAMAOKA-2	BWR	13	2			NOZ	8-77	72/ 9

** LWDS SYSTEM DRAIN COLLECT TANK 802530

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=CARBON STEEL
(1) (2) (3) (4) (5)
NO.

HAMAOKA-1	BWR	5	1	115			8-89	70/ 5
FUKUSIMA-6	BWR	11	1		MT1	NOZ	8-10-(3)	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)
 NO.

ONAGAWA	BWR	4	2	20	MT1	NOZ	8-10-(3)	70/ 5
HAMAOKA-1	BWR	5	2	30			8-89	70/ 5
FUKUSIMA-5	BWR	9	2			NOZ	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	2			NOZ	8-10-(3)	71/ 8
TOOKAI-2	BWR	12	2			NOZ	8-10-(3)	71/12
HAMAOKA-2	BWR	13	2	2(COMMON WITH 1-GOO)			8-77	72/ 9

** LWDS PRECOAT

TANK

802550

(1)NUMBER
 (3)MATERIAL MT1=CARBON STEEL
 (4)LINING LG1,RUBBER LINING
 (5)REMARKS KAK=KAKUHANKI TSUKI
 (1) (2) (3) (4) (5)

FUKUSIMA-5	BWR	9	2			LG1 KAK	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	1			LG1 KAK	8-10-(3)	71/ 8
FUKUSIMA-6	BWR	11	1		MT1	KAK	8-10-(3)	71/12
TOOKAI-2	BWR	12	1			KAK	8-10-(3)	71/12

** LWDS FILTRATION AUX. AGENT

TANK

802560

(1)NUMBER
 (3)MATERIAL MT1=CARBON STEEL
 (5)REMARKS KAK=KAKUHANKI TSUKI
 (1) (2) (3) (4) (5)

FUKUSIMA-5	BWR	9	1			KAK	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	1			KAK	8-10-(3)	71/ 8
FUKUSIMA-6	BWR	11	1		MT1	KAK	8-10-(3)	71/12

** LWDS WASHING WASTE

COLLECT TANK

802580

(1)NUMBER
 (3)MATERIAL MT1=CARBON STEEL
 (5)REMARKS NOZ=KONGOO NOZZLE TSUKI
 (1) (2) (3) (4) (5)

FUKUSIMA-6	BWR	11	2		MT1	NOZ	8-10-(3)	71/12
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** LWDS FLOOR DRAIN

FILTRATE TANK

802590

(1)NUMBER
 (3)MATERIAL MT1=CARBON STEEL
 (5)REMARKS NOZ=KONGOO NOZZLE TSUKI
 (1) (2) (3) (4) (5)

FUKUSIMA-6	BWR	11	1		MT1	NOZ	8-10-(3)	71/12
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** LWDS FLOOR DRAIN

SAMPLING TANK

802600

(1)NUMBER
 (2)CAPACITY M3/1
 (3)MATERIAL MT1=CARBON STEEL
 (4)LINING
 (5)REMARKS NOZ=KONGOO NOZZLE TSUKI
 (1) (2) (3) (4) (5)
 NO.

ONAGAWA	BWR	4	2	65	MT1	NOZ	8-10-(3)	70/ 5
HAMAOKA-1	BWR	5	2	65			8-89	70/ 5
FUKUSIMA-5	BWR	9	2			NOZ	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	2			NOZ	8-10-(3)	71/ 8
TOOKAI-2	BWR	12	2			NOZ	8-10-(3)	71/12
HAMAOKA-2	BWR	13	3			NOZ	8-77	72/ 9

** LWDS	FLOOR	DRAIN	COLLECT	TANK	802610		
			(1)NUMBER				
			(3)MATERIAL	MT1=CARBON STEEL			
			(1) (2) (3) (4) (5)				
			NO. M3/1				
ONAGAWA	BWR	4	1	40	MT1	8-10-(3)	70/ 5
HAMAOKA-1	BWR	5	1	40		8-89	70/ 5
FUKUSIMA-5	BWR	9	1			8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	1			8-10-(3)	71/ 8
FUKUSIMA-6	BWR	11	1	MT1	NOZ	8-10-(3)	71/12
TOOKAI-2	BWR	12	1			8-10-(3)	71/12
HAMAOKA-2	BWR	13	1			8-77	72/ 9

** LWDS	TANK	LIST	802611
		()LOW ELECTRO CONDUCTIVITY LIQUID WASTE RECEIVE TANK	802612
		()LOW ELECTRO CONDUCTIVITY LIQUID WASTE COLLECT TANK	802614
		()LOW ELECTRO CONDUCTIVITY LIQUID WASTE SAMPLE TANK	802616
		()HIGH ELECTRO CONDUCTIVITY LIQUID WASTE RECEIVE TANK	802618
		()HIGH ELECTRO CONDUCTIVITY LIQUID WASTE COLLECT TANK	802620
		()HIGH ELECTRO CONDUCTIVITY LIQUID WASTE SAMPLE TANK	802622
		()HIGH ELECTRO CONDUCTIVITY LIQUID WASTE RESERVOIR TANK	802624
		()LAUNDRY LIQUID WASTE COLLECT TANK	802626
		()DECONTAMINATION LIQUID WASTE COLLECT TANK	802628
		()DECONTAMINATION LIQUID WASTE RECEIVE TANK	802630
		()SHOWER DRAIN COLLECT TANK	802632
		()OIL DRAIN COLLECT TANK	802634
		()OIL DRAIN SAMPLE TANK	802635
		()SUPPRESSION POOL WATER SURGE TANK	802636
		()RESERVOIR TANK	802638

** LWDS	LECLW	RECEIVE TANK	802612
		(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1	
		(2)CAPACITY M3/H	
		(3)MATERIAL MT1=CARBON STEEL	
		(1) (2) (3)	
TOMIOKA-1	BWR	14 3 180. MT1	8-10-10 76/ 8
TOMIOKA-2	BWR	16 3 180. MT1	8-10-14 76/12

** LWDS	LECLW	COLLECT TANK	802614
		(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1	
		(2)CAPACITY M3/H	
		(3)MATERIAL MT1=CARBON STEEL	
		MT2=WITH SUS LINING	
		(1) (2) (3)	
		NO. CAP	
TOMIOKA-1	BWR	14 2 400. MT2	8-10-10 76/ 8
KASHIWAZAKI	BWR	15 3 140. MT1	8-10-12 75/ 3
TOMIOKA-2	BWR	16 2/C1 400. MT2	8-10-14 76/12

** LWDS	LECLW	SAMPLE TANK	802616
		(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1	
		(2)CAPACITY M3/H	
		(3)MATERIAL MT1=STAINLESS STEEL	
		MT2=WITH SUS LINING	
		(1) (2) (3)	
		NO. CAP	
TOMIOKA-1	BWR	14 2 400. MT2	8-10-10 76/ 8
KASHIWAZAKI	BWR	15 2 140. MT1	8-10-12 75/ 3
TOMIOKA-2	BWR	16 2/C1 400. MT2	8-10-14 76/12

** LWDS	HECLW	RECEIVE TANK	802618
		(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1	
		(2)CAPACITY M3/H	
		(3)MATERIAL MT1=STAINLESS STEEL	
		(1) (2) (3)	
		NO. CAP	
TOMIOKA-1	BWR	14 4 80. MT1	8-10-10 76/ 8
TOMIOKA-2	BWR	16 4 80. MT1	8-10-14 76/12

** LWDS HECLW

COLLECT TANK 802620

(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (2)CAPACITY M3/H
 (3)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3)
 NO. CAP

KASHIWAZAKI	BWR	15	4	100.	MT1	8-10-12	75/ 3
TOMIOKA-1	BWR	14	4	80.	MT1	8-10-10	76/ 8
TOMIOKA-2	BWR	16	4/C1	80.	MT1	8-10-14	76/12

** LWDS HECLW

SAMPLE TANK 802622

(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (2)CAPACITY M3/H
 (3)MATERIAL MT1=CARBON STEEL
 MT2=WITH SUS LINING
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	2	200.	MT2	8-10-10	76/ 8
KASHIWAZAKI	BWR	15	2	100.	MT1	8-10-12	75/ 3
TOMIOKA-2	BWR	16	2/C1	200.	MT2	8-10-14	76/12

** LWDS HECLW

RESERVOIR TANK 802624

(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (2)CAPACITY M3/H
 (3)MATERIAL MT1=WITH SUS LINING
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	4	200.	MT1	8-10-10	76/ 8
TOMIOKA-2	BWR	16	2/C1	400.	MT1	8-10-14	76/12

** LWDS LAUNDRY LIQUID

WASTE COLLECT TANK 802626

(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (2)CAPACITY M3/H
 (3)MATERIAL MT1=CARBON STEEL
 MT2=STAINLESS STEEL
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	2	100.	MT2	8-10-10	76/ 8
KASHIWAZAKI	BWR	15	2	70	MT1	8-10-12	75/ 3
TOMIOKA-2	BWR	16	2/C1	100.	MT2	8-10-14	76/12

** LWDS DECONTAM I.

COLLECT TANK 802628

(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (2)CAPACITY M3/H
 (3)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	2	80	MT1	8-10-10	76/ 8
KASHIWAZAKI	BWR	15	2	100	MT1	8-10-12	75/ 3
TOMIOKA-2	BWR	16	2/C1	80	MT1	8-10-14	76/12

** LWDS DECONTAM I.

RECEIVE TANK 802630

(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (2)CAPACITY M3/H
 (3)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	2	80	MT1	8-10-10	76/ 8
TOMIOKA-2	BWR	16	2	80	MT1	8-10-14	76/12

** LWDS SHOWER DRAIN

COLLECT TANK 802632

(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (2)CAPACITY M3/H
 (3)MATERIAL MT1=CARBON STEEL
 MT2=WITH SUS LINING
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	2	200	MT2	8-10-10	76/ 8
KASHIWAZAKI	BWR	15	2	150	MT1	8-10-12	75/ 3
TOMIOKA-2	BWR	16	2/C1	200	MT2	8-10-14	76/12

** LWDS	OIL	DRAIN	COLLECT TANK	802634		
			(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1			
			(2)CAPACITY M3/H			
			(3)MATERIAL MT1=STAINLESS STEEL			
			(1) (2) (3)			
			NO. CAP			
	TOMIOKA-1	BWR 14	2 40 MT1		8-10-10	76/ 8
	TOMIOKA-2	BWR 16	2/C1 40 MT1		8-10-14	76/12
** LWDS	OIL	DRAIN	SAMPLE TANK	802635		
			(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1			
			(2)CAPACITY M3/H			
			(3)MATERIAL MT1=CARBON STEEL			
			(1) (2) (3)			
			NO. CAP			
	KASHIWAZAKI	BWR 15	2 20		8-10-12	75/ 3
** LWDS	SUPRESS. POOL	WATER	SURGE TANK	802636		
			(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1			
			(2)CAPACITY M3/H			
			(3)MATERIAL MT1=CARBON STEEL			
			(1) (2) (3)			
			NO. CAP			
	TOMIOKA-1	BWR 14	1 4000. MT1		8-10-10	76/ 8
	TOMIOKA-2	BWR 16	1/C1 4000. MT1		8-10-14	76/12
** LWDS		RESERVOI R	TANK	802638		
			(1)NUMBER /C1=IN COMMON USE WITH UNIT NO.1			
			(2)CAPACITY M3/H			
			(3)MATERIAL MT1=CARBON STEEL			
			(1) (2) (3)			
			NO. CAP			
	KASHIWAZAKI	BWR 15	4 200 MT1		8-10-12	75/ 3
** LWDS	CRUD	REMOVER		802642		
			(1)TYPE TP1=SEPARATE PLATE CENTRIFUGAL SEPARATOR			
			(2)NUMBER A=FOR LOW ELECTRO CONDUCTIVITY LIQUID WASTE			
			B=FOR HIGH ELECTRO CONDUCTIVITY LIQUID WASTE			
			/C1=IN COMMON USE WITH UNIT NO.1			
			(3)CAPACITY M3/H/1			
			(1) (2) (3)			
			NO. CAP.			
	TOMIOKA-1	BWR 14	TP1 4 10/1		8-10-10	76/ 8
	KASHIWAZAKI	BWR 15	TP1 2A+2B 10+6		8-10-12	75/ 3
	TOMIOKA-2	BWR 16	TP1 4/C1 10/1		8-10-14	76/12
** LWDS	FILTER	FOR LOW ELECTRO CDTVTY	LIQ.W.	802644		
			(1)TYPE TP1=THIN MEMBRANE			
			(2)NUMBER TP2=HUNDA			
			(3)CAPACITY /C1=IN COMMON USE WITH UNIT NO.1			
			(1) (2) (3)			
			NO. CAP			
	TOMIOKA-1	BWR 14	TP2 2 20.		8-10-11	76/ 8
	TOMIOKA-2	BWR 16	TP1 2/C1 20.		8-10-15	76/12
** LWDS	FILTER	FOR LAUNDRY	LIQ.W.	802646		
			(1)TYPE TP1=STRAINER ROTATION			
			(2)NUMBER /C1=IN COMMON USE WITH UNIT NO.1			
			(3)CAPACITY M3/H/1			
			(1) (2) (3)			
			NO. CAP			
	TOMIOKA-1	BWR 14	TP1 2 5.		8-10-11	76/ 8
	TOMIOKA-2	BWR 16	TP1 2/C1 5.		8-10-15	76/12
** LWDS	FILTER	FOR SHOWER DRAIN		802648		
			(1)TYPE TP1=STRAINER ROTATION			
			(2)NUMBER /C1=IN COMMON USE WITH UNIT NO.1			
			(3)CAPACITY M3/H/1			
			(1) (2) (3)			
			NO. CAP			
	TOMIOKA-1	BWR 14	TP1 2 40.		8-10-11	76/ 8
	TOMIOKA-2	BWR 16	TP1 2/C1 40.		8-10-15	76/12

** LWDS DEMINE. FOR LOW ELECTRO CDTVTY LIQ.W. 802652

(1)TYPE TP1=MIXED BED
 (2)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (3)CAPACITY M3/H/1
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	TP1	2	20	8-10-11	76/ 8
KASHIWAZAKI	BWR	15	TP1	2	10.	8-10-12	75/ 3
TOMIOKA-2	BWR	16	TP1	2/C1	10.	8-10-15	76/12

** LWDS DEMINE. FOR HIGH ELECTRO CDTVTY LIQ.W. 802654

(1)TYPE TP1=MIXED BED
 (2)NUMBER /C1=IN COMMON USE WITH UNIT NO.1
 (3)CAPACITY M3/H/1
 (1) (2) (3)
 NO. CAP

TOMIOKA-1	BWR	14	TP1	2	6.	8-10-11	76/ 8
KASHIWAZAKI	BWR	15	TP1	2	6.	8-10-12	75/ 3
TOMIOKA-2	BWR	16	TP1	2/C1	6.	8-10-15	76/12

** LWDS FILTER TYPE DECONTAM I. FACTOR 802820

(1)TYPE TP1=PRESSURE PRECOAT (CELLULOSE BASE FILTER)
 TP2=PRESSURE PRECOAT (FILTER JOZAI SHIYOO)
 (2)NUMBER /A FOR COMPONENTS DRAIN SYSTEM
 /B FOR FLOOR DRAIN SYSTEM
 /C FOR USE IN COMMON
 (3)CAPACITY M3/H/1
 (4)DECONTAMINATION FACTOR = DF
 (1) (2) (3) (4)
 TYPE NUMBER M3/H/1 DF

ONAGAWA	BWR	4	TP1	3(1/A.1/B.1/C)	40/EACH	5	8-10-(3)	70/ 5
HAMAOKA-1	BWR	5	TP1	2(1/A.1/B)	40/EACH	5	8-89	70/ 5
FUKUSIMA-5	BWR	9	TP1	2	45	5	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	TP1	2	45	5	8-10-(3)	71/ 8
HAMAOKA-2	BWR	13	TP2	2(1/A.1/B)	60/A.15/B	5	8-77	72/ 9

** LWDS DEMINE. TYPE DECONTAM I. FACTOR 802830

(1)TYPE TP1=MIXED BED
 (2)NUMBER /A FOR COMPONENTS DRAIN SYSTEM
 /B FOR FLOOR DRAIN SYSTEM
 (3)CAPACITY M3/H/1
 (4)DECONTAMINATION FACTOR = DF
 (1) (2) (3) (4)
 TYPE --NUMBER-- -M3/H/1- DF

ONAGAWA	BWR	4	TP1	2(1/A.1/B)	40/EACH	100	8-10-(4)	70/ 5
HAMAOKA-1	BWR	5	TP1	2(1/A.1/B)	40/EACH	100	8-90	70/ 5
FUKUSIMA-5	BWR	9	TP1	1	45	100	8-10-(3)	71/ 2
FUKUSIMA-4	BWR	10	TP1	1	45	100	8-10-(3)	71/ 8
HAMAOKA-2	BWR	13	TP1	2(1/A.1/B)	60/A.15/B	100	8-78	72/ 9

** LWDS LIQUID WASTE CONCENTRATOR 802840

(1)TYPE TP1=STEAM-HEATED NATURAL CIRCULATION
 TP2=STEAM-HEATED
 TP3=NATURAL CIRCULATION
 TP4=FORCED CIRCULATION
 (2)NUMBER
 (3)CAPACITY M3/H/1
 (4)CONCENTRATE UP TO (4)PERCENT (SOLID)
 (5)USED FOR U1=FOR HIGH-ELECTRO-CONDUCTIVITY LIQUID WASTE
 (1) (2) (3) (4) (5)
 TYPE NO. M3/H PC

ONAGAWA	BWR	4	TP1	2	3.0	25	8-10-(4)	70/ 5
HAMAOKA-1	BWR	5	TP1	2	2.4		8-90	70/ 5
FUKUSIMA-5	BWR	9	TP1	2	4.5	25	8-10-(4)	71/ 2
FUKUSIMA-4	BWR	10	TP1	2	2.3	25	8-10-(4)	71/ 8
HAMAOKA-2	BWR	13	TP2	2	3.0		8-78	72/ 9
TOMIOKA-1	BWR	14	TP3	4	3.		8-10-11	76/ 8
KASHIWAZAKI	BWR	15	TP4	4	3.0	U1	8-10-13	75/ 3
TOMIOKA-2	BWR	16	TP3	4	3.		8-10-15	76/12
TAKAHAMA-2	PWR	23		1	0.45		8-103	70/ 5

** SWDS	TANK	LIST	BWR	803400													
				(1)NOOSHUKU HAIKEI CHOZOO TANK												80341	
				(2)SHIYOOZUMI JUSHI CHOZOO TANK												80342	
				(3)PHASE SEPARATOR												80343	A
				(3)SHIYOOZUMI FUNMATU JUSHI CHOZOO TANK												80343	B
				(3)GENSHIRO-REIKYAKUZAI ZYOOKA-KEI FUNMATU JUSHI CHOZOO TANK												80343	C
				(3)GENSHIRO-JYOOKA-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-JYOOKA-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 HAIKEI KEIRYO TANK												80352	
				(13)TIKA SHIYOOZUMI JUSHI CHOZOO TANK												80353	
				(14)TIKA HAI SLUDGE CHOZOO TANK												80354	
				1	2	3	4	5	6	7	8	9	10	11	12	13	14
ONAGAWA	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									1	1	22 70/ 8
FUKUSIMA-5	BWR	9	3	1	2(A)	1											8-10-(5) 71/ 2
FUKUSIMA-4	BWR	10	3	1	2(A)	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-1	PWR	28		6													8-116 72/ 5

** SWDS	CONCENTR ATED	WASTE			STORAGE	TANK	803410				
		(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)						
		(1)	(2)	(3)	(4)	(5)					
ONAGAWA	BWR	4	2	55	MT1	0.5 YEAR/1	TOTAL WASTE		8-10-(5)	70/ 5	
HAMAOKA-1	BWR	5	3	40					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 6GOO)		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	
TOMIOKA-1	BWR	14	3	80	MT1				8-10-12	76/ 8	
KASHIWAZAKI	BWR	15	3	90	MT1				8-10-14	75/ 3	
TOMIOKA-2	BWR	16	3/C1	80	MT1				8-10-16	76/12	

** SWDS	RCCUS	COUNTER FLOW	RESERVOI R	TANK	803412											
			(1)NUMBER													
			(2)CAPACITY	M3/1												
			(3)MATERIAL	MT1=CARBON STEEL												
				MT2=STAINLESS STEEL												
			(1)	(2)	(3)											
TOMIOKA-1	BWR	14	1	40	MT2									8-10-12	76/ 8	
KASHIWAZAKI	BWR	15	1	40	MT1									8-10-14	75/ 3	
TOMIOKA-2	BWR	16	1	40	MT2									8-10-16	76/12	

** SWDS	RCCUS	SINK	SEPARATI ON			TANK	803414		
			(1)NUMBER			/C1=IN COMMON USE WITH UNIT NO.1			
			(2)CAPACITY			M3/1			
			(3)MATERIAL			MT1=STAINLESS STEEL			
						MT2=SUS LINING			
			(1)	(2)	(3)				
TOMIOKA-1	BWR	14	4	150	MT2			8-10-12	76/ 8
KASHIWAZAKI	BWR	15	2	160	MT1			8-10-14	75/ 3
TOMIOKA-2	BWR	16	4/C1	150	MT2			8-10-16	76/12

** SWDS	FPCCUS	COUNTER	FLOW	RESERVOI R	TANK	803416											
				(1)NUMBER													
				(2)CAPACITY	M3/1												
				(3)MATERIAL	MT1=CARBON STEEL												
					MT2=STAINLESS STEEL												
				(1)	(2)	(3)											
TOMIOKA-1	BWR	14	1	40	MT2									8-10-12	76/ 8		
KASHIWAZAKI	BWR	15	1	40	MT1									8-10-14	75/ 3		
TOMIOKA-2	BWR	16	1	40	MT2									8-10-16	76/12		

** SWDS CWCUS COUNTER FLOW RESERVOI R TANK 803418

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3)

UNIT	BWR	14	1	100	MT1	8-10-12	76/ 8
TOMIOKA-1	BWR	16	1	100	MT1	8-10-16	76/12

** SWDS SPENT RESIN TANK 803419

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=STAINLESS STEEL
(1) (2) (3)

UNIT	PWR	25	1	8.5	MT1	77/ 6
TAKAHAMA-1	PWR	25 <td>1 <th>8.5</th> <th>MT1</th> <td></td> </td>	1 <th>8.5</th> <th>MT1</th> <td></td>	8.5	MT1	

** SWDS SPENT RESIN STORAGE TANK 803420

(1)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
(2)CAPACITY M3/1
(3)MATERIAL MT1=CARBON STEEL MT2=STAINLESS STEEL
MT3=SUS LINING
(5)REMARKS HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)
(1) (2) (3) (4) (5)

UNIT	BWR	4	2	10	MT2	1	YEAR/1	TOTAL WASTE	8-10-(5)	70/ 5
ONAGAWA	BWR	5	2	50	MT2				8-91	70/ 5
HAMAOKA-1	BWR	7	1		MT2	0.5	MONTH/1	TOTAL WASTE	22	70/ 8
FUKUSIMA-2,3	BWR	9	1		MT2	0.5	MONTH	(COMMON WITE 5,6G00)	8-10-(5)	71/ 2
FUKUSIMA-5	BWR	10	1		MT2	0.5	MONTH	TOTAL WASTE	8-10-(5)	71/ 8
FUKUSIMA-4	BWR	11	1		MT1	0.5	MONTH	TOTAL WASTE	8-10-(5)	71/12
FUKUSIMA-6	BWR	12	1		MT2	5	YEAR	TOTAL WASTE	8-10-(5)	71/12
TOOKAI-2	BWR	13	2			2	YEAR/1		8-79	72/ 9
HAMAOKA-2	BWR	14	4+4	200+150	MT3				8-10-12	76/ 8
TOMIOKA-1	BWR	15	4	180=2.90=2	MT2				8-10-14	75/ 3
KASHIWAZAKI	BWR	16	4/C1	300	MT3				8-10-16	76/12
TOMIOKA-2	BWR	21	1	8.5	MT2				8-110	66/11
MIHAMA-1	PWR	24	1	8.5	MT2				8-118	70/ 5
GENKAI-1	PWR	25	4	15.	MT2					77/ 6
TAKAHAMA-1	PWR	28	6	9.	MT2				8-116	72/ 5
IKATA-1	PWR	29	6/C1	16.	MT2				8-10-23	76/ 2
GENKAI-2	PWR	29	6/C1	16.	MT2					

** SWDS PHASE SEPARATO R TANK 803430

(1)NUMBER
(2)CAPACITY M3/1
(3)MATERIAL MT1=CARBON STEEL MT2=STAINLESS STEEL
(4)NAME NA1=PHASE SEPARATOR
NA2=SHIYOOZUMU FUNMATU JUSHI CHOZOO TANK
NA3=GENSHIRO-REIKYAKUZAI ZYOOKA-KEI FUNMATU JUSHI CHOZOO TANK
NA4=GENSHIRO-JYOOKA-KEI CHINKOO BUNRI SOO
(5)REMARKS HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)
(1) (2) (3) (4) (5)

UNIT	BWR	4	2	60	MT2	NA4	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	70/ 5
ONAGAWA	BWR	5	2	30	MT2	NA3				8-91	70/ 5
HAMAOKA-1	BWR	7	2		NA1	2.5	YEAR/1	TOTAL WASTE	22	70/ 8	
FUKUSIMA-2,3	BWR	9	2		MT1	NA1	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/ 2
FUKUSIMA-5	BWR	10	2		MT1	NA1	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/ 8
FUKUSIMA-4	BWR	11	2		MT2	NA4	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/12
FUKUSIMA-6	BWR	12	2		MT1	NA2	2.5	YEAR/1	TOTAL WASTE	8-10-(5)	71/12
TOOKAI-2	BWR	13	2			NA3	2.5	YEAR/1		8-79	72/ 9
HAMAOKA-2	BWR	13	2								

** SWDS WASTE SLUDGE STORAGE TANK 803440

(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)
(1) (2) (3) (4) (5)

UNIT	BWR	7	1		MT1	1	DAY/1	TOTAL WASTE	22	70/ 8
FUKUSIMA-2,3	BWR	9	1		MT1	1	DAY	(COMMON WITH 6G00)	8-10-(5)	71/ 2
FUKUSIMA-5	BWR	10	1		MT1	1	DAY	TOTAL WASTE	8-10-(5)	71/.8
FUKUSIMA-4	BWR	11	1		MT1	2	WEEK	TOTAL WASTE	8-10 (5)	71/12
FUKUSIMA-6	BWR	12	3		MT1	5	YEAR/3	TOTAL WASTE	8-10-(5)	71/12
TOOKAI-2	BWR	12	3		MT1					

** SWDS WASTE SLUDGE SEPARATE TANK

803450

(1)NUMBER
 (2)CAPACITY M3/1
 (3)MATERIAL MT1=CARBON STEEL MT2=STAINLESS STEEL
 MT3=SUS LINING
 (5)REMARKS HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)
 (1) (2) (3) (4) (5)

ONAGAWA BWR 4 2 100 MT1 10 MONTH/1 TOTAL WASTE 8-10-(5) 70/ 5
 TOMIOKA-1 BWR 14 2 100 MT3 8-10-12 76/ 8

** SWDS FILTRATE D

SLUDGE STORAGE TANK

803460

(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)
 (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
 KASHIWAZAKI BWR 15 2 150 MT2 8-10-14 75/ 3

** SWDS CONDENSE SYSTEM

RESIN

POWDER

STORAGE

803470

(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)
 (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 M3/1
 (3)MATERIAL MT1=CARBON STEEL MT2=STAINLESS STEEL
 (5)REMARKS HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)
 (1) (2) (3) (4) (5)

FUKUSIMA-6 BWR 11 1 MT2 10 YEAR/1 TOTAL WASTE 8-10-(5) 71/12

** FUEL POND

SLUDGE

STORAGE TANK

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)
 (1) (2) (3) (4) (5)

FUKUSIMA-6 BWR 11 1 MT1 2 WEEK TOTAL WASTE 8-10-(5) 71/12
 HAMAOKA-2 BWR 13 2 2 YEAR/1 8-79 72/ 9

** SWDS SYSTEM DRAIN

FILTER

SLUDGE

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)
 (1) (2) (3) (4) (5)

FUKUSIMA-6 BWR 11 2 MT1 2.5 YEAR/1 TOTAL WASTE 8-10-(5) 71/12

** SWDS SINKING TANK OF CONDENSE D WATER PURIFY

803510

(1)NUMBER
 (2)CAPACITY M3/1
 (3)MATERIAL MT1=CARBON STEEL MT2=STAINLESS STEEL
 MT3=SUS LINING
 (5)REMARKS HOLDUP ABILITY=YEAR OR MONTH/TOTAL WASTE(NORMAL POWER)
 (1) (2) (3) (4) (5)

ONAGAWA BWR 4 2 50 MT1 45 DAY/1 TOTAL WASTE 8-10-(5) 70/ 5
 TOMIOKA-1 BWR 14 6 800 MT3 8-10-12 76/ 8
 TOMIOKA-2 BWR 16 6/C1 800 MT3 8-10-16 76/12

** SWDS CONCENTR ATED

LIQUID WASTE

WEIGHING

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)
 (1) (2) (3) (4) (5)

FUKUSIMA-6 BWR 11 1 200 MT1 8-10-(5) 71/12

** SWDS SPENT RESIN 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)
(1) (2) (3) (4) (5)

FUKUSIMA-2.3 BWR 7 1 MT2 5 YEAR (COMMON WETH 1.2G00) 22 70/ 8

** SWDS WASTE SLUDGE STORAGE TANK UNDERGRO 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)
(1) (2) (3) (4) (5)

FUKUSIMA-2.3 BWR 7 1 MT2 5 YEAR (COMMON WETH 1.2G00) 22 70/ 8

** SWDS STORAGE BUILDING 810000

(1)BUILDING NO.
(2)LOCATION L1=IN SITE
(3)CAPACITY NO OF DRUMS/1
(4)STRUCTURE F1=THE FIRST FLOOR (FERRO-CONCRETE BUILDING)
F2=THE SECOND FLOOR (FERRO-CONCRETE BUILDING)
(5)AREA M2
(1) (2) (3) (4) (5)
DRUM M2

HAMAOKA-1 BWR 5 NO.1 L1 2YEAR F1 1600. 77/ 2
HAMAOKA-1 BWR 5 NO.2 L1 2YEAR F1 2200. 77/ 2
TOMIOKA-1 BWR 14 L1 2YEAR F1 4000. 8-10-13 76/ 8
TOMIOKA-2 BWR 16 NO.1 L1 10000. F1 4000. NO.2=NO.1 8-10-17 76/12
TAKAHAMA-1 PWR 25 A L1 10000. F1 2000. 77/ 6
TAKAHAMA-1 PWR 25 B L1 600. F1 300. 77/ 6
TAKAHAMA-1 PWR 25 C L1 20000/2 F2 4000/2 77/ 6

** CONTROL BUILDING C.B. 810100

(1)*(2) PLANE M*M
(3) HEIGHT M (FROM BASE FLOOR)
(4) HEIGHT M (FROM GROUND LEVEL)
(5)CLASS OF IMPORTANCE AGAINST EARTHQUAKE
(6)NO. OF STORIES ABOVE/UNDER GROUND
(1) (2) (3) (4) (5) (6)
M M M M A/U

TOMIOKA-1 BWR 14 39. 49. 28. 17. A 3/2 8-2-3 76/ 8
TOMIOKA-2 BWR 16 IN COMMON USE WITH UNIT NO. 1 /

** SERVICE BUILDING S.B. 810200

(1)*(2) PLANE M*M
(3) HEIGHT M (FROM BASE FLOOR)
(4) HEIGHT M (FROM GROUND LEVEL)
(5)CLASS OF IMPORTANCE AGAINST EARTHQUAKE
(6)NO. OF STORIES ABOVE/UNDER GROUND
(1) (2) (3) (4) (5) (6)
M M M M A/U

TOMIOKA-1 BWR 14 19. 56. 31. 23. C 4/2 FERRO CONCRETE 8-2-4 76/ 8
TOMIOKA-1 BWR 14 19. 22. 2/0 STEEL STRUCTURE 8-2-4 76/ 8
TOMIOKA-2 BWR 16 IN COMMON USE WITH UNIT NO.1 /

** WASTE DISPOSAL TREATMEN T BUILDING R.W.B. 810300

(1)*(2) PLANE M*M
(3) HEIGHT M (FROM BASE FLOOR)
(4) HEIGHT M (FROM GROUND LEVEL)
(5)CLASS OF IMPORTANCE AGAINST EARTHQUAKE
(6)NO. OF STORIES ABOVE/UNDER GROUND
(1) (2) (3) (4) (5) (6)
M M M M A/U

TOMIOKA-1 BWR 14 125. 50. 50. 35. B 5/2 8-2-4 76/ 8
TOMIOKA-2 BWR 16 IN COMMON USE WITH UNIT NO.1 /

** CHARCOAL HOLDUP

BUILDING CH.B.

810400

(1)*(2) PLANE M*M
 (3) HEIGHT M (FROM BASE FLOOR)
 (4) HEIGHT M (FROM GROUND LEVEL)
 (5) CLASS OF IMPORTANCE AGAINST EARTHQUAKE
 (6) NO. OF STORIES ABOVE/UNDER GROUND
 (1) (2) (3) (4) (5) (6)
 M M M M A/U

TOMIOKA-1 BWR 14 28. 23.

1/2

8-2-5

76/ 8

** SEA

WATER

H, EXCH.

BUILDING HX.B.

810500

(1)*(2) PLANE M*M
 (3) HEIGHT M (FROM BASE FLOOR)
 (4) HEIGHT M (FROM GROUND LEVEL)
 (5) CLASS OF IMPORTANCE AGAINST EARTHQUAKE
 (6) NO. OF STORIES ABOVE/UNDER GROUND
 (1) (2) (3) (4) (5) (6)
 M A/U M M A/U

TOMIOKA-1 BWR 14 29. 23/43 16. 8. 1/1 (TWO BUILDINGS)

8-2-5

76/ 8

** DRY-WELL TYPE

SIZE

822220

(1) TYPE TP1=PRESSURE SUPPRESSION TYPE
 (2) SHAPE SP1=FLASK = MARK I
 SP2=FRUSTUM CONE = MARK II
 (3) SIZE OF FLASK
 (3A) SPHERE DIAMETER (ID)
 (3B) CYLINDER DIAMETER (ID)
 (3C) HEADER DIAMETER
 (4) SIZE OF FRUSTUM CONE
 (4A) DIAMETER OF TOP
 (4B) DIAMETER OF DIAPHRAGM
 (4C) DIAMETER OF CYLINDER
 (4D) HEIGHT OF CYLINDER-PART
 (5) TOTAL HEIGHT

(1) (2) (3A)/(3B) /(3C) (5)
 TYPE SHAPE (4A)*(4B) *(4C) *(4D)
 M M M M

JPDR-1	BWR	1	NONE						/
JPDR-2	BWR	2	NONE						/
TSURUGA	BWR	3	TP1	SP1	18.28 / 8.5 /	32.84	R-9		66/ 8
ONAGAWA	BWR	4	TP1	SP1	19.2 / 9.8 / 1.13	33.1	8-12-(2)		70/ 5
HAMAOKA-1	BWR	5	TP1	SP1	19.2 / 9.8 / 1.03(1D)	33.1	8-98		70/ 5
FUKUSIMA-1	BWR	6	TP1	SP1	17.7 / 9.6	32.	R-9		66/ 8
FUKUSIMA-2,3	BWR	7	TP1	SP1	20.0 / 10.9	34.1			70/ 5
SHIMANE	BWR	8	TP1	SP1	17.7 / 9.6	32.			70/ 5
FUKUSIMA-5	BWR	9	TP1	SP1	20.0 / 10.9 / 1.46	34.1	8-12-(2)		71/ 2
FUKUSIMA-4	BWR	10	TP1	SP1	20.0 / 10.9 / 1.46	34.1	8-12-(2)		71/ 8
FUKUSIMA-6	BWR	11	TP1	SP2	9.7 *24.9 *25.9 *16.0	48.0	8-12-(2)		71/12
TOOKAI-2	BWR	12	TP1	SP2	9.7 *24.9 *25.9 *16.0	48.0	8-12-(2)		71/12
HAMAOKA-2	BWR	13	TP1	SP1	20.0 / 10.9 / 1.37(1D)	34.1	8-84		72/ 9
TOMIOKA-1	BWR	14	TP1	SP2					/
KASHIWAZAKI	BWR	15	TP1	SP2	9.7 *24.9 *26.4	46.5	8-5-22		75/ 3
TOMIOKA-2	BWR	16	TP1	SP2	10.0 *28. *29. *	48.	8-5-25		76/12
VERMONT YANKEE	BWR	52		SP1					70/ 5
MILLSTON	BWR	54		SP1	19.5 / 10.4	33.5	R-9		66/ 8
DRESDEN-2	BWR	56		SP1	19.5 / 10.7		R-9		66/ 8
OYSTER CREEK	BWR	57		SP1	36.6 / 9.8	32.	R-9		66/ 8
DUANE ARNOLD	BWR	58		SP1			A-2 P4		70/ 7

** DRY-WELL FREE VOLUME DESIGN-P DESIGN-T LEAKRATE 822240

(1)FREE VOLUME OF DRY-WELL M3
 (2)FREE VOLUME OF ((DRY-WELL)+(VENT TUBE)) M3
 (3)DESIGN PRESSURE (INNER)/(OUTER) KG/CM2G
 (4)DESIGN TEMPERATURE DEG C
 (5)DESIGN LEAK RATE(EQUIVALENT AIR AT ROOM-TEMP. AND DESIGN PRESSURE) PERCENT/DAY

		(1)	(2)	---(3)--- INNER/OUTER	(4)	(5)		
		M3	M3		C	PC/D		
TSURUGA	BWR 3		4030.	4.36/	138.		R-9	66/ 8
ONAGAWA	BWR 4	3490.	3770.	3.92/0.14	138.	0.5	8-12-(2)	70/ 5
HAMAOKA-1	BWR 5		3740.	3.92/0.14	138.	0.5	8-98	70/ 5
FUKUSIMA-1	BWR 6	3000.		4.35/	138.	0.5		70/ 5
FUKUSIMA-2,3	BWR 7	3770.		3.92/		0.5		70/ 5
SHIMANE	BWR 8	3000.		3.94/		0.5		70/ 5
FUKUSIMA-5	BWR 9	3770.	4240.	3.92/0.14	138.	0.5	8-12-(2)	71/ 2
FUKUSIMA-4	BWR 10	3770.	4240.	3.92/0.14	138.	0.5	8-12-(2)	71/ 8
FUKUSIMA-6	BWR 11	5400.	5700.	2.85/0.14	142.	0.5	8-12-(2)	71/12
TOOKAI-2	BWR 12	5400.	5700.	2.85/0.14	142.	0.5	8-12-(2)	71/12
HAMAOKA-2	BWR 13		4320.	3.92/0.14	138.	0.5	8-85	72/ 9
KASHIWAZAKI	BWR 15		5700.	2.85/0.14	171.	0.5	8-5-22	75/ 3
TOMIOKA-2	BWR 16		8700.	2.85/0.14	171.	0.5	8-5-25	76/12
VERMONT YANKEE	BWR 52		3800.	3.92/0.14			A-2 P4	70/ 5
MILLSTON	BWR 54			4.36	138.		R-9	66/ 8
DRESDEN-2	BWR 56		5100.	4.36	138.		R-9	66/ 8
OYSTER CREEK	BWR 57			4.36			R-9	66/ 8
DUANE ARNOLD	BWR 58		3740.	3.92/0.14	138.		A-2 P4	70/ 5

** DRY-WELL DIAPHRAGM FLOOR 822270

(1)SHAPE SP1=CIRCULAR PLATE
 (2)SIZE OD/ID
 (3)THICKNESS OF SLAB (INCLUDE THERMAL INSULATOR)
 (4)PRESSURE DIFFERENCE FOR DESIGN
 (5)TEMPERATURE DIFFERENCE FOR DESIGN
 (6)STRUCTURE ST1=REINFORCED CONCRETE SUPPORTED BY STEEL-BEAM

(1)	---(2)---	---(3)---	---(4)---	---(5)---	(6)
	OD / ID	FROM / TO			
	M M	MM	KG/CM2.D	DEG-C	

KASHIWAZAKI	BWR 15	SP1	24.8 / 9.1	530. / 610.	1.76	117.	ST1	8-5-23	75/ 3
TOMIOKA-2	BWR 16	SP1	28. / 9.	530. / 610.	1.76	117.	ST1	8-5-26	76/12

** DRY-WELL VACUUM BREAKER 822272

(1)TYPE TP1=YOKO-GATA SWING TYPE
 (2)DIAMETER
 (3)NUMBER
 (1) (2) (3)
 TYPE M NO.

KASHIWAZAKI	BWR 15	TP1	0.5	11				8-5-23	75/ 3
TOMIOKA-2	BWR 16	TP1	0.5	11				8-5-26	76/12

** DRY-WELL FGCS FLOW RATE 822273

(1)NUMBER KEITOO
 (2)FLOW RATE NM3/H/KEITOO
 (1) (2)
 NO.

TOMIOKA-2	BWR 16	1+(1)	225./1					8-5-27	76/12
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** DRY-WELL FGCS BLOWER 822274

(1)TYPE TP1=CENTRIFUGAL BLOWER
 (2)NUMBER
 (3)CAPACITY NORMAL CUBIC METER /HOUR =NM3/H
 (1) (2) (3)
 TYPE NO. NM3/H

TOMIOKA-1	BWR 14	TP1	1+(1)	340/H/1				8-12-3	76/ 8
KASHIWAZAKI	BWR 15	TP1	1+(1)	170/H/1				8-5-24	75/ 3
TOMIOKA-2	BWR 16	TP1	1/1	255/H/1				8-5-27	76/12

** DRY-WELL FGCS

RECOMBINER

822275

(1)TYPE TP1=KANETSU-SIKI RECOMBINER
TP2=THERMAL-REACTION TYPE
(2)NUMBER
(3)CAPACITY OF HEATER KW/1
(4)CAPACITY OF TREATMENT NORMAL CURIC METER /HOUR =NM3/H
(1) (2) (3) (4)
TYPE NO. KW/1 NM3/H

TOMIOKA-1	BWR	14	TP2	1+(1)		8-12-3	76/ 8
KASHIWAZAKI	BWR	15	TP1	1+(1)	60/1 170/H/1	8-5-24	75/ 3
TOMIOKA-2	BWR	16	TP2	1/1		8-5-27	76/12

** DRY-WELL FGCS

COOLER

822276

(1)TYPE TP1=YOKOGATA STRAIGHT TUBE
TP2=SPRAY TYPE
(2)NUMBER
(3)COOLING WATER W1=WATER FOR RHRS
(1) (2) (3)

TOMIOKA-1	BWR	14	TP2	1+(1)	W1	8-12-3	76/ 8
KASHIWAZAKI	BWR	15	TP1	1+(1)		8-5-24	75/ 3
TOMIOKA-2	BWR	16	TP2	1/1		8-5-27	76/12

** DRY-WELL FGCS

HEATER

822277

(1)TYPE TP1=ELECTRIC HEATER
(2)NUMBER NO./KEITOO
(3)CAPACITY KW/1
(1) (2) (3)

TOMIOKA-2	BWR	16	TP1	1/1	90.	8-5-27	76/12
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** DRY-WELL INERTGAS SYSTEM

LIQ.N2 STORAGE TANK

822278

(1)TYPE TP1=OUTDOOR TYPE
(2)NUMBER
(3)CAPACITY TON/1
(1) (2) (3)

TOMIOKA-1	BWR	14	TP1	1.	60M3/1	8-12-4	76/ 8
KASHIWAZAKI	BWR	15	TP1	1.	50.T/1	8-5-24	75/ 3

** DRY-WELL SPRAY

HEADER

822279

(D1)NUMBER
(D2)FLOW RATE M3/H
(S1)NUMBER
(S2)FLOW RATE M3/H
----- DRY-WELL SIDE ----- SUPPRESSION CHAMBER SIDE
(D1) (D2) (S1) (S2)
M3/H M3/H

KASHIWAZAKI	BWR	15	2	1600.	1	90.	8-5-25	75/ 3
TOMIOKA-2	BWR	16	2	1600.	1	90.	8-5-28	76/12

** DRY-WELL S.CHAMB. MATERIAL NDT

822280

(1)MATERIAL
MT1=GENSIRYOKU HATSUDENYOO TANSOKOO ATSUN 4-SHU
MT2=JIS G3118 CHUU-JOC-ON ATSURYOKU YOOKI-YOO TANSO KOCHAN 3-SHU
MT3=JIS G3115 ATSURYOKU YOOKI-YOO KOCHAN 4-SHU
MT4=ASTM A516 GR.70
MT5=ASTM A516.
MT6=ASME SA516 GR.60
MT7=ASME SA516 GR.70
MT8=CARRON STEEL(GENSIRYOKU HATSUDENYOO TANSOKOO ATSUN-KOCHAN)
MT9=ATSURYOKU YOOKI YOO KOCHAN 5-SHU
MT10=JIS G3115 ATSURYOKU YOOKI-YOO KOCHAN 5-SHU
(2)NIL DUCTILITY TRANSITION TEMPERATURE DEG C
----- (1) ----- (2)
DEG-C

ONAGAWA	BWR	4	MT6 OR MT7	-17.	8-12-(3)	70/ 5
HAMAOKA-1	BWR	5	MT5	DES.T-17.	8-99	70/ 5
FUKUSIMA-5	BWR	9	MT7	-17.	8-12-(3)	71/ 2
FUKUSIMA-4	BWR	10	MT7	-17.	8-12-(3)	71/ 8
FUKUSIMA-6	BWR	11	MT7 SOOTOO	-17.	8-12-(3)	71/12
TOOKAI-2	BWR	12	MT7 SOOTOO	-17.	8-12-(3)	71/12
HAMAOKA-2	BWR	13	MT8 SOOTOO	DES.T-17.	8-85	72/ 9
KASHIWAZAKI	BWR	15	MT1 SOOTOO(MT4 OR MT2) OR MT3		8-5-23	75/ 3
TOMIOKA-2	BWR	16	MT1-SOOTOO(MT2) OR MT9-SOOTOO(MT10)		8-5-25	76/12

** EGRSIRC EME.GAS RECIRC. SYST. IN REACTOR CONTAINR 822292

(1)NUMBER OF SYSTEM
 (2)DESIGN FLOW RATE NORMAL M3/D
 (3)TIMES OF AIR VOLUME IN CONTAINER PER ONE-DAY-RECIRCULATION
 (4)FILTER EFFICIENCY AGAINST IODINE (4A)PC AT (4B)PC OF HUMIDITY
 (1) (2) (3) (4A) (4B)
 NO. NM3/D TIMES PC PC

KASHIWAZAKI BWR 15 1+(1) 36000. 6. 97. LE 80. 8-5-26 75/ 3

** EGVSIRC EME.GAS VENT. SYST. IN REACTOR CONTAINR 822294

(1)NUMBER OF SYSTEM
 (2)DESIGN FLOW RATE NORMAL M3/D
 (3)TIMES OF AIR VOLUME IN CONTAINER PER ONE-DAY-VENTILATION
 (4)FILTER EFFICIENCY AGAINST IODINE (4A)PC AT (4B)PC OF HUMIDITY
 (5)CHARCOAL BED THICKNESS CM
 (6)FILTER EFFICIENCY AGAINST PARTICLE (6A)PC AT (6B) MICRON DOP
 (1) (2) (3) (4A) (4B) (5) (6A) (6B)
 NO. NM3/H TIMES PC PC CM PC MICRON

KASHIWAZAKI BWR 15 1+(1) 6000. 1. 99. LE 70. 8-5-26 75/ 3
 TOMIOKA-2 BWR 16 1+(1) 6000 1. 99. LE 70 20 99.9 0.3 8-5-28 76/12

** PWR REACTOR CONTAINR R PRESSURE TEST 822300

(1)DESIGN PRESSURE PD KG/CM2G
 (2)MAX. ALLOWABLE PRESSURE (MITI KOKUJI 501) PD/0.9 KG/CM2G
 (3)TEST PRESSURE (MITI KOKUJI 501) PD*1.25 KG/CM2G
 (1) (2) (3)
 PD PD/0.9
 -----KG/CM2G-----

SENDAI PWR 31 2.33 2.59 2.91 123BUKA1 76/11

** PWR REACTOR CONTAINR R TYPE 822310

(1)TYPE TP1=JOORU-HANKYUU-GATA KABU-SARA-GATA KAGAMI ENTOO-GATA
 TP2=JOORU-HANKYUU-GATA KABU-HANDAEN KAGAMI ENTOKOKEI
 TP3=HYBRID
 (2)DESIGN PRESSURE KG/CM2G
 (3)DESIGN TEMPERATURE DEG-C
 (4)INNER DIAMETER M
 (5)TOTAL HEIGHT M
 (6)SIDE-WALL THICKNESS MM
 (7)DOME-PLATE THICKNESS MM
 (8)LEAK RATE PC/DAY
 CONDITION(A)=AT ROOM TEMP., DESIGN=P,AIR
 CONDITION(B)=AT DESIGN PRESSURE
 CONDITION(C)=AT TEST PRESSURE
 (9)MATERIAL MT1=CARBON STEEL

(1) (2) (3) (4) (5) (6) (7) (8) (9)
 P C M M MM MM PC/D

MIHAMA-1 PWR 21 TP1 2.4 133 33.2 64.3 0.1B BK-80-2 P26 71/ 8
 MIHAMA-2 PWR 22 TP1 2.5 137 33.2 68.0 0.1B BK-80-2 P26 71/ 8
 TAKAHAMA-2 PWR 23 TP1 2.4 122 38. 81. 38 0.1(A) 8-111 70/ 5
 GENKAI-1 PWR 24 TP2 2.45 141 33.4 66.5 35 0.1(A) 8-126 70/ 5
 TAKAHAMA-1 PWR 25 TP1 2.4 130 0.1(C) BK80-2 P26 71/ 8
 OOI-1.2 PWR 26 TP1 2.4 130 /
 OOI-1.2 PWR 26 TP3 0.84 116 37. 52. 12/38 0.5(A) 8-113 71/ 1
 OOI-1.2 PWR 26 TP3 0.84 116 37. 52. 12/38 0.5(A) 8-113 71/ 1
 MIHAMA-3 PWR 27 TP1 2.4 122 38. 81. 38 0.1(A) 8-111 71/ 8
 IKATA-1 PWR 28 TP2 2.45 141 33.4 66.5 35 0.1(A) 8-123 72/11
 GENKAI-2 PWR 29 TP1 2.45 141 33.4 66.515 35 5101,011P4 76/ 4
 GENKAI-2 PWR 29 TP2 2.45 141 33. 67. 35 0.1(A) MT1 8-5-25 76/ 2
 IKATA-2 PWR 30 TP1 2.45 141 33. 67. 35 19 0.1(A) 8-5-24 75/ 5
 SENDAI PWR 31 TP2 2.33 128 40. 87. 38 0.1(A) 8-5-25 76/ 5
 P 80 STANDARD PWR 49 TP2 2.25 127 40. 87. 38 19 0.1(B) MT1 77/ 5

** PWR REACTOR CONTAINR R LEAK RATE ACT.RES. 822320

(1)TEST GAS
 (2)TEST PRESSURE KG/CM2G
 (3)TEST TEMPERATURE DEG-C
 (4)TEST METHOD TM1=JAEC 4203.1974
 (5)TEST TIME HR
 (6)MEASURING INTERVAL HR
 (7)AVERAGE LEAK RATE PC/DAY
 (1) (2) (3) (4) (5) (6) (7)-----
 P C H H PC/D

GENKAI-1 PWR 24 AIR 2.45 29/32 TM1 24 1 0.027+-0.006 74/ 9
 GENKAI-1 PWR 24 AIR 1.30 28/31 TM1 24 1 0.020+-0.008 74/ 9

** PWR REACTOR CONTAINER MATERIAL 822350

(1) MATERIAL
(2) TUBE MATERIAL

MT1=CARBON STEEL
 MT2=ASTM A516 GR70A 300 SOOTOO
 MT3=GENSIRYOKU HATUDENYOO TANSO KOO ATUEN KOOHAN 4SH1
 (JIS-G-3118 SGV 49)
 MT4=JIS-G-3460 TEION-HAIKAN-YOO KOOKAN SOOTOO
 (ASME SA-333GR6)

(1) (2)

MIHAMA-1	PWR	21	MT1	BK80-2 P26	71/ 8
MIHAMA-2	PWR	22	MT1	BK80-2 P26	71/ 8
TAKAHAMA-2	PWR	23	MT1	BK80-2 P26	71/ 8
TAKAHAMA-1	PWR	25	MT1	BK80-2 P26	71/ 8
OOI-1+2	PWR	26	UPPER=MT1, LOWER=CONCRETE WITH CARBON STEEL LINING	8-113	71/ 1
MIHAMA-3	PWR	27	MT2	BK80-2 P26	71/ 8
IKATA-1	PWR	28	MT1	8-124	72/11
GENKAI-2	PWR	29	MT3	5101.011P4	76/ 4
IKATA-2	PWR	30	MT3 MT4	8-5-24	75/ 5
SENDAI	PWR	31	MT1	8-5-25	76/ 5

** PWR REACTOR CONTAINER SHIELD BUILDING 822390

(1) TYPE TP1=TATE-OKI ENTDO
TP2=ENTDO JOOBU DOME

(2) ID M
 (3) HEIGHT FROM GROUND LEVEL M
 (4) WALL THICKNESS M
 (5) DOME THICKNESS (TOP) M
 (6) MATERIAL MT1=FERRO-CONCRETE
 (7) ANNULUS VOLUME M3
 (1) (2) (3) (4) (5) (6) (7)
 --INNER DIA.-- H -----T----- --T--- MAT. VOL.
 M M M M M M3

MIHAMA-1	PWR	21	TP1 36.	50.		MT1	BK80-2 P26	71/ 8	
MIHAMA-2	PWR	22	TP1 37.	52.		MT1	BK80-2 P26	71/ 8	
TAKAHAMA-2	PWR	23	TP1 42.	81.		MT1	BK80-2 P26	71/ 8	
GENKAI-1	PWR	24	TP1 36.4	43.		MT1	8-126	70/ 5	
TAKAHAMA-1	PWR	25	TP1 42.	80.		MT1	BK80-2 P26	71/ 8	
OOI-1+2	PWR	26	TP2 40.	54.		MT1	8-113	71/ 1	
MIHAMA-3	PWR	27	TP1 42.	81.		MT1	BK80-2 P26	71/ 8	
IKATA-1	PWR	28	TP1 36.	68.		MT1	8-124	72/11	
GENKAI-2	PWR	29	TP2 36.47	44.95	0.8(MIN)	MT1	5101.011P5	76/ 4	
IKATA-2	PWR	30	TP2 36.3/36.5/36.7	67.	0.9/0.8/0.7	0.6/0.2	MT1 3200	8-5-24	75/ 5
P 80 STANDARD	PWR	49	TP2 43. / /	61.	/ /		MT1		77/ 5

** S.CHAMB. TYPE SIZE VOLUME DESIGN.P DESIGN.T 822420

(1) TYPE ANN=ANNULAR
CYL=CYLINDER
 (2) ANNULAR-CIRCLE MEAN DIAMETER M
 (3) ANNULAR SECTION DIAMETER M
 (4) FREE VOLUME M3
 (5) POOL WATER VOLUME M3
 (6) DESIGN PRESSURE INNER/OUTER KG/CM2G
 (7) DESIGN TEMPERATURE DEG-C
 (1) (2) (3) (4) (5) --- (6) --- (7)
 TYPE M M F.LOL W.VOL DES.PRESS.
 M3 M3 --KG/CM2G-- C

TSURUGA	BWR	3	ANN	26.8	8.24	4490T	1620.	4.36 /		R-9	66/ 8
ONAGAWA	BWR	4	ANN	31.4	8.1	2820.	1850.	3.92 /0.14	138.	8-12-(2)	70/ 5
HAMAOKA-1	BWR	5	ANN	31.7	7.6	2690.	1670.	3.92 /0.14	138.	8-98	70/ 5
HAMAOKA-1	BWR	5	ANN	31.4	8.1	2798.	1880.			85-4-2	70/11
FUKUSIMA-1	BWR	6	ANN	29.6	8.08	2620.	1800.	4.36 /		R-9	66/ 8
FUKUSIMA-2,3	BWR	7	ANN	33.5							/
SHIMANE	BWR	8	ANN	29.6			1800.			8-12-(3)	71/ 2
FUKUSIMA-5	BWR	9	ANN	33.5	8.9	3160.	2980.	3.92 /0.14	138.	8-12-(3)	71/ 2
FUKUSIMA-4	BWR	10	ANN	33.5	8.9	3160.	2980.	3.92 /0.14	138.	8-12-(3)	71/ 8
FUKUSIMA-6	BWR	11	CYL			4100.	3200.	2.85 /0.14	99.	8-12-(2)	71/12
TOOKAI-2	BWR	12	CYL			4100.	3200.	2.85 /0.14	99.	8-12-(2)	71/12
KASHIWAZAKI	BWR	15	CYL			4000.	3300.	2.85 /0.14	104.	8-5-22	75/ 3
TOMIOKA-2	BWR	16	CYL			5700.	3800.	2.85 /0.14	104.	8-5-25	76/12
VERMONT YANKEE	BWR	52	ANN			3066.	2208.	3.92 /0.14	138.	A-2	70/ 5
MILLSTON	BWR	54	ANN	31.7	8.84	3110.	2660.	4.36 /		R-9	66/ 8
DRESDEN-2	BWR	56	ANN	29.6		3110.	3350.	4.36 /		R-9	66/ 8
OYSTER CREEK	BWR	57	ANN	30.78	8.84					R-9	66/ 8
DUANE ARNOLD	BWR	58	ANN			2690.	1670.	3.92 /0.14	138.	A2 P5	70/ 7

** S.CHAMB. VENT TUBE NUMBER AND SIZE 822460

(1)TYPE TP1=VERTICAL TUBE
 (2)NUMBER
 (3)DIAMETER I=ID
 (4)DESIGN PRESSURE INNER/OUTER
 (5)DESIGN TEMPERATURE DEG C

(1) (2) (3) ----(4)---- (5)
 TYPE NO. DIA. INNER/OUTER
 M KG/SQCM C

ONAGAWA	BWR	4	8	1.6			8-12-(3)	70/ 5
HAMAOKA-1	BWR	5	8	1.45 I			8-98,99	70/ 5
FUKUSIMA-1	BWR	6	8	1.75 I				70/ 5
FUKUSIMA-2,3	BWR	7	8	2.06 I				70/ 5
SHIMANE	BWR	8	8	1.75 I				70/ 5
FUKUSIMA-5	BWR	9	8	2.06 I			8-12-(3)	71/ 2
FUKUSIMA-4	BWR	10	8	2.06 I			8-12-(3)	71/ 8
FUKUSIMA-6	BWR	11	108	0.61			8-12-(2,3)	71/12
TOOKAI-2	BWR	12	108	0.61			8-12-(2,3)	71/12
KASHIWAZAKI	BWR	15	TP1	108	0.61	1.76/0.07	171.	75/ 3
TOMIOKA-2	BWR	16	108	0.61	1.76/0.07	171.	8-5-26	76/12

** S.CHAMB. DOWN-C. TUBE NUMBER HEADER DIA 822480

(1)NO. OF DOWN-COMMER TUBE
 (2)HEADER DIAMETER M.
 (1) (2)
 NO. M

ONAGAWA	BWR	4	64	1.13			8-12-(2,3)	70/ 5
HAMAOKA-1	BWR	5	48	1.03(ID)			8-99	70/ 5
FUKUSIMA-5	BWR	9	96	1.46			8-12-(2,3)	71/ 2
FUKUSIMA-4	BWR	10	96	1.46			8-12-(2,3)	71/ 8
HAMAOKA-2	BWR	13	80	1.37			8-84	72/ 9

** ICE COND. SIZE 825000

INNER DIA OUTER DIA ICE BED HEIGHT

OOI-1,2	PWR	26	28.7 M	36.6 M	14.6 M		8-115	71/ 1
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** ICE COND. CAPACITY COMPARTMENT DOOR OPERAT-P 825200

CAPACITY DOOR OPERAT-P

OOI-1,2	PWR	26	1250. TON	0.0005 KG/SQCM-G			8-115	71/ 1
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** CONTAINER SPRAY PUMP 825410

(1)TYPE TP1=YOKO-OKI ENSHIN MOTOR DRIVE
 TP2=ENSHIN MOTOR DRIVE
 TP3=YOKO-OKI UZUMAKI MOTOR DRIVE
 TP4=YOKO-OKI UZUMAKI

(2)NUMBER
 (3)CAPACITY M3/H/1
 (4)HEAD M
 (5)DESIGN PRESSURE KG/CM2G
 (6)DESIGN TEMPERATURE DEG-C
 (7)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4) (5) (6) (7)
 NO. M3/H/1 M KG/CM2G C

TAKAHAMA-2	PWR	23	TP1	4	396.	155.		8-112	70/ 5
GENKA1-1	PWR	24	TP1	2	600.	135.		8-131	70/ 5
OOI-1,2	PWR	26	TP2	2	1000.	124.		8-115	71/ 1
MIHAMA-3	PWR	27	TP1	4	423.	124.		8-112	71/ 8
IKATA-1	PWR	28	TP1	2	630.	140.		8-128	72/11
GENKA1-2	PWR	29	TP3	2	630.	135.	28.	MT1	8-5-26
IKATA-2	PWR	30	TP3	2	630.	135.	28.	MT1	8-5-25
SENDAI	PWR	31	TP4	4	470.	170.	28.	150. MT1	8-5-26
P 80 STANDARD	PWR	49	TP4	2	940.	170.	28.	150. MT1	77/ 5

** CONTAINER

SPRAY

H.EXCH.

825450

(1)TYPE

TP1=SHELL AND U-TUBE

TP2=U-TUBE

TP3=YOKO-OKI U-TUBE

(8)MATERIAL

MT1=STAINLESS STEEL

1) TUBE

MS1=CARBON STEEL

2) SHELL

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
TYPE	NO.	CAP.	(DESIGN PRES.)	(DESIGN TEMP.)	1)	2)	
			(TUBE) (SHELL)	(TUBE) (SHELL)			
			KCAL/H	--KG/S	CMG--	----	DEG-C---

GENKAI-1	PWR	24	TP1	2	1.64E7/1	28.	10.	150.	95.			8-131	70/ 5
IKATA-1	PWR	28	TP1	2	1.57E7/1	28.	10.	150.	95.			8-127	72/11
GENKAI-2	PWR	29	TP1	2	1.3 E7/1	28.	10.	150.	95.	MT1	MS1	8-5-26	76/ 2
IKATA-2	PWR	30	TP2	2	1.3 E7/1	28.	10.	150.	95.	MT1	MS1	8-5-25	75/ 5
SENDAI	PWR	31	TP3	2	2.3 E7/1	28.	10.	150.	95.	MT1	MS1	8-5-26	76/ 5
P 80 STANDARD	PWR	49	TP3	2	2.7 E7/1	28.	10.	150.	95.	MT1	MS1		77/ 5

** CONTAINER

IODINE

REMOVE

CHEMICAL TANK

825490

(1)TYPE

TP1=YOKO-OKI ENTOO GATA

(2)NUMBER

(3)CAPACITY

M3

(4)FLUID

(5)DESIGN PRESSURE

KG/CM2G

(6)MATERIAL

MT1=STAINLESS STEEL

(1)	(2)	(3)	(4)	(5)	(6)					
NO.	M3			KG/CM2G						
GENKAI-1	PWR	24	1	26	NAOH	8-130	70/11			
IKATA-1	PWR	28	1	26	NAOH	8-128	72/11			
GENKAI-2	PWR	29	TP1	1	26	NAOH(30WT/O)	1.	MT1	8-5-26	76/ 2
IKATA-2	PWR	30	TP1	1	26	NAOH(30WT/O)	1.	MT1	8-5-25	76/12
SENDAI	PWR	31	TP1	1	15	NAOH(30WT/O)	0.7	MT1	8-5-26	76/ 5
P 80 STANDARD	PWR	49	TP1	1	15	NAOH(30WT/O)	0.7	MT1		77/ 5

** CONTAINER

SPRAY

NOZZLE

825500

(1)TYPE

TP1=HOLLOW CONE TYPE

(2)NUMBER

(3)INORGANIC IODINE WASH OUT EFFICIENCY (EQUIVALENT HALF LIFE) SEC

(4)MATERIAL

MT1=STAINLESS STEEL

(1)	(2)	(3)	(4)					
NO.	SEC							
GENKAI-2	PWR	29	TP1	350	LT100	MT1	8-5-26	76/ 2
IKATA-2	PWR	30	TP1	350	LT100	MT1	8-5-25	76/12
SENDAI	PWR	31	TP1	520	LT100	MT1	8-5-26	76/ 5
P 80 STANDARD	PWR	49	TP1	350	LT100	MT1		77/ 5

** CONTAINER

ANNULUS AIR

RECIRC. FAN

825700

(1)TYPE

(2)NUMBER

(3)CAPACITY

M3/H/1

(1)	(2)	(3)				
NO.	M3/H/1					
TAKAHAMA-2	PWR	23	2.	20400.	8-113	70/ 5
GENKAI-1	PWR	24	2.	6000.	8-130	70/ 5
OOI-1.2	PWR	26	2.	36600.	8-115	71/ 1
MIHAMA-3	PWR	27	2.	6800.	8-113	71/ 8

** CONTAINER

ANNULUS

AIR VENT

FILTER UNIT

825720

(1)TYPE

TP1=ROUGH FILTER,PARTICLE-FILTER,AND IODINE FILTER BUILT IN

(2)NUMBER

TP2=PRI-FILTER,PARTICLE-FILTER BUILT IN

(3)CAPACITY

M3/MIN/1

(4)CHARCOAL THICKNESS

MM

(5)IODINE FILTER EFFICIENCY

PC (TEMP=100 C,RELATIVE HUMIDITY=80PC)

(6)PARTICLE FILTER EFFICIENCY

PC (0.7MICRON PARTICLE)

(1)	(2)	(3)	(4)	(5)	(6)			
NO.	M3/M/1	MM	PC	PC				
GENKAI-2	PWR	29	TP2	2	100	99	8-5-27	76/ 2
IKATA-2	PWR	30	TP1	2	100	50	95	99
SENDAI	PWR	31	TP1	2	226			99
P 80 STANDARD	PWR	49	TP1	2		50	95	99

** CONTAINER

ANNULUS AIR VENT IODINE FILTER 825730

(1)TYPE TP1=IODINE FILTER AND PARTICLE-FILTER BUILT IN
 (2)NUMBER
 (3)CAPACITY M3/MIN/1
 (4)ACTIVATED CARBON LAYER THICKNESS (MM)
 (5)IODINE FILTER EFFICIENCY PC (TEMP=100 C,RELATIVE HUMIDITY=80PC)
 (6)PARTICLE FILTER EFFICIENCY PC (0.7 MICRON PARTICLE)
 (1) (2) (3) (4) (5) (6)
 M3/M/1 MM PC PC

GENKAI-2	PWR	29	TP1	2	100.	50.	95.	99	8-5-27	76/ 2
SENDAI	PWR	31	TP1	2	226.	50.	95.	99.	8-5-27	76/ 5

** CONTAINER

ANNULUS AIR VENT FAN 825740

(1)NUMBER
 (2)CAPACITY M3/MIN/1* MMAQ
 (1) (2)
 NO. M3/M/1*MMAQ

GENKAI-2	PWR	29	2	100.	* 275	8-5-27	76/ 2
IKATA-2	PWR	30	2	100.	* 250	8-5-26	75/ 5
SENDAI	PWR	31	2		226	8-5-27	76/ 5
P 80 STANDARD	PWR	49	2				77/ 5

** REACTOR BUILDING SIZE

827200

*NO. OF STORIES ABOVE/UNDER GROUND
 R.BUILD.SIZE M BASE SIZE HEIGHT

ONAGAWA	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
FUKUSIMA-6	BWR	11	41.1*41.1*67 M		67. =55. +12.	8-12-(6)	71/12
TOOKAI-2	BWR	12	41.1*41.1*67 M		67. =54.8+12.2	8-12-(6)	71/12
TOMIOKA-1	BWR	14	46*49*69(H) M	76*76	69. =57. +12.	8-2-2	76/ 8
KASHIWAZAKI	BWR	15	48*48*66(H) M	94*94	66. =29. +37.	8-2-4	75/ 3
TOMIOKA-2	BWR	16	50*53*69(H) M	80*80	69. =57. +12. 6/2*	8-1-53	76/12

** REACTOR BUILDING DESIGN

LEAK RATE

827400

LT (A1) PC/DAY AT (A2) MM NEGATIVE WATER HEAD
 (B)DESIGN INNER PRESSURE KG/CM2G
 (A1) (A2) (B)
 PC MM KG/CM2G

ONAGAWA	BWR	4	100.	6.4		8-12-(6)	70/ 5
HAMAOKA-1	BWR	5	100.	6.	0.018	8-102	70/ 5
FUKUSIMA-5	BWR	9	100.	6.4		8-12-(7)	71/ 2
FUKUSIMA-4	BWR	10	100.	6.4		8-12-(7)	71/ 8
FUKUSIMA-6	BWR	11	100.	6.4		8-12-(6)	71/12
KASHIWAZAKI	BWR	15	100.	6.4		8-5-12	75/ 3

** MAKE-UP WATER

DEMINE. CAPACITY WATER QUALITY 831220

(A)CAPACITY OF DEMINERALIZER T/H OR T/DAY
 (B)MIXED BED OUTLET WATER QUALITY
 SOLID IMPURITY LE (B1) PPM
 SILICA LE (B2) PPM
 ELECTRO CONDUCTIVITY LE (B3) MICRO MHO/CM AT (B4) DEG C
 -CL ION LE (B5) PPM
 (A) (B1) (B2) (B3/B4) (B5)
 CAPACITY SOLID SI /C PPM
 *SYSTEM PPM PPM

HAMAOKA-1	BWR	5	35T/H*2	0.1	0.01	1.0/25	0.05	8-13-(1)	70/ 5
FUKUSIMA-5	BWR	9	35T/H*2		0.01	1.0/25		8-105	70/ 5
FUKUSIMA-4	BWR	10	500T/D*2	0.1	0.01	1.0/25	0.01	8-13-(1)	71/ 2
FUKUSIMA-6	BWR	11	500T/D*2	0.1	0.01	1.0/25	0.01	8-13-(1)	71/ 8
TOOKAI-2	BWR	12	500T/D*2	0.1	0.01	1.0/25	0.01	8-13-(1)	71/12
TAKAHAMA-2	PWR	23	COMMON WITH TAKAHAMA UNIT NO.1						

** MAKE-UP WATER

831260

MAKE-UP WATER DESALINATION

TP1=MULTI STAGE FLASH TYPE
 (1)TYPE
 (2)NUMBER
 (3)CAPACITY M3/DAY
 (4)SEAWATER M3/DAY
 (5)RECIRCULATION WATER M3/DAY
 (6)QUALITY OF WATER
 (6A) SOLID STATE IMPURITY PPM
 (6B) CL-ION PPM
 (1) (2) (3) (4) (5) (6A) (6B)
 M3/DAY M3/DAY M3/DAY SOLID CL-ION

KASHIWAZAKI BWR 15 TP1 1 1000. 11000. 7500. LT 20. LT 10. 8-12-23 75/ 3

** MAKE-UP WATER STEAM FOR BRINE HEATER 831270

(1)STEAM PRESSURE KG/CM2G
 (2)STEAM TEMPERATURE DEG C
 (3)STEAM FLOW RATE KG/H
 (1) (2) (3)

KASHIWAZAKI BWR 15 1.5 127. 5200. 8-12-23 75/ 3

** MAKE-UP WATER CONDENSE D-W STORAGE TANK 831280

TP1=ENTOO TATE-GATA
 (1)TYPE
 (2)NUMBER
 (3)CAPACITY M3
 (4)MATERIAL MT1=STAINLESS STEEL
 (1) (2) (3) (4)
 TYPE NO. M3

KASHIWAZAKI BWR 15 TP1 2 1600. M1 8 -12-24 7 5 /3
 TOMIOKA-2 BWR 16 TP1 1 3200. M1 8 -12-21 7 6 1/2

** SWSS MAIN COMPONENTS LIST 831400

SWSS=SERVICE WATER SUPPLY SYSTEM

1..DESALINATION SYSTEM
 1-(1)FLASH EVAPORATOR 831410
 1-(2)BRINE HEATER 831420
 1-(3)FLASH TANK 831430
 1-(4)EJECTOR AND CONDENSER 831440
 1-(5)S.W. TAKE UP PUMP 831450
 1-(6)BRINE CIRCULATION PUMP 831460
 1-(7)WATER PUMP 831470
 1-(8)DRAIN PUMP 831480
 1-(9)DEGAS PUMP 831490
 1-(10)H2SO4 TANK 831500
 2..PURE WATER SYSTEM
 2-(1)CATION EXCHANGER 831520
 2-(2)ANION EXCHANGER 831530
 2-(3)MIXED BED POLISHER 831540
 2-(4)DECARBONIZATION 831550
 2-(5)VACUUM DEGASSER 831560
 3..RAW WATER TANK 831570
 4..FILTRATED WATER TANK 831580
 5..DFMINERALIZED WATER TANK 831590
 6..SECONDARY SYSTEM PURE WATER TANK 831600
 7..PRIMARY SYSTEM PURE WATER TANK 831610

** SWSS DESALI.S FLASH EVAPORATOR 831410

TP1=TADAN CHOOKAN-SIKI YOKO-OKI ENTOO GATA
 (1)TYPE
 (2)CAPACITY M3/D/1 (MAX.)
 (3)NUMBER CW1=COMMONLY USED WITH UNIT NO.1
 (4)MATERIAL SHELL S1=CARBON STEEL
 (5)MATERIAL TUBE PLATE TP1=NABAL BRASS
 (6)MATERIAL TUBE T1=AL BRASS, CUPRO NI
 (1) -----(2)-----(3)----- (4)/(5)/(6)
 TYPE CAPACITY NUMBER MATERIAL
 M3/DAY/1

IKATA-2 PWR 30 TP1 1000.(2000) 2(3MODULE/1)(CW1) S1/TP1/T1 8-12-15 76/11

** SWSS DESALI.S BRINE HEATER 831420

TP1=YOKO-OKI HYOOMEN KANETSU SIKI
 (1)TYPE
 (2)HEAT TRANSFER AREA M2/1
 (3)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (4)MATERIAL SHELL S1=CARBON STEEL
 (5)MATERIAL TUBE PLATE TP1=NABAL BRASS
 (6)MATERIAL TUBE T1=CUPRO NI
 (1) (2) (3) (4)/(5)/(6)
 TYPE NO. MATERIAL
 M2/1

IKATA-2 PWR 30 TP1 86.5 1/1/C1 S1/TP1/T1 8-12-15 76/12

** SWSS	DESALI.S FLASH	TANK	831430					
		(1)TYPE	TP1=TATE-OKI ENT00 SPRAY					
		(2)CAPACITY	T/H(MAX. DISPOSABILITY)					
		(3)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1					
		(4)MATERIAL	MT1=CARBON STEEL					
		(1) (2) (3) (4)						
		CAP. NO.						
		T/H						
IKATA-2	PWR 30	TP1 7.09	1/1/C1	MT1		8-12-15	76/12	
** SWSS	DESALI.S EJECTOR AND	COND	831440					
		(1)TYPE	EJECTOR		TPE1=1-REN TADAN SIKI			
		(2)TYPE	CONDENSER		TPC1=YOKO-OKU HY00MEN REIKYAKU SIKI			
		(3)NUMBER	/C1 =COMMONLY USED WITH UNIT NO.1					
		(4)CAPACITY	VACUUM		MMHG			
		(5)	EJECTED AIR		KG/H			
		(6)	HEAT TRANSFER AREA		M2/1			
		(7)MATERIAL	SHELL		S1=ALLOY STEEL			
		(8)	TUBE PLATE		TP1=TITANIUM			
		(9)	TUBE		T1=TITANIUM			
		(1) (2) (3) (4) (5) (6) (7)/(8)/(9)						
		TYPE TYPE NO.	----CAPACITY----		MATERIAL			
			MMHG KG/H M2/1					
IKATA-2	PWR 30	TPE1 TPC1	1/1/C1	722.	15.	45.2	S1/TP1/T1	
							8-12-15 76/12	
** SWSS	DESALI.S S.W.	TAKE UP PUMP	831450					
		(1)TYPE	TP1=TATE-OKI SHARYUU PUMP DIRECTLY COUPLED WITH MOTOR					
		(2)CAPACITY	M3/H					
		(3)HEAD	M					
		(4)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1					
		(5)MATERIAL	MT1=ALLOY STEEL					
		(1) (2) (3) (4) (5)						
		CAP. HEAD NO.						
		M3/H M						
IKATA-2	PWR 30	TP1 700.	45.	2/C1	MT1		8-12-15 76/12	
** SWSS	DESALI.S BRINE	CIRCULATION PUMP	831460					
		(1)TYPE	TP1=TATE-OKI UZUMAKI PUMP DIRECTLY COUPLED WITH MOTOR					
		(2)CAPACITY	T/H/1					
		(3)TOTAL HEAD	M					
		(4)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1					
		(5)MATERIAL	MT1=ALLOY STEEL					
		(1) (2) (3) (4) (5)						
		TYPE CAP. HEAD NO.						
		T/H/1 M						
IKATA-2	PWR 30	TP1 449.9	65.	3/C1	MT1		8-12-15 76/12	
** SWSS	DESALI.S WATER	PUMP	831470					
		(1)TYPE	TP1=YOKO-OKI UZUMAKI PUMP DIRECTLY COUPLED WITH MOTOR					
		(2)CAPACITY	T/H/1					
		(3)TOTAL HEAD	M					
		(4)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1					
		(5)MATERIAL	MT1=ALLOY STEEL					
		(1) (2) (3) (4) (5)						
		TYPE CAP. HEAD NO.						
		T/H/1 M						
IKATA-2	PWR 30	TP1 64.	60.	3/C1	MT1		8-12-15 76/12	
** SWSS	DESALI.S DRAIN	PUMP	831480					
		(1)TYPE	TP1=YOKO-GATA UZUMAKI PUMP DIRECTLY COUPLED WITH MOTOR					
		(2)CAPACITY	T/H/1					
		(3)TOTAL HEAD	M					
		(4)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1					
		(5)MATERIAL	MT1=CAST IRON					
		(1) (2) (3) (4) (5)						
		TYPE CAP. HEAD NO.						
		T/H/1 M						
IKATA-2	PWR 30	TP1 10.8	60.	2/C1	MT1		8-12-16 76/12	

** SWSS	DESALIN. S DE GAS	PUMP	831490						
		(1)TYPE	TP1=TATE-OKI ENTOO SPRAY						
		(2)CAPACITY	T/H/1 (DISPOSABILITY)						
		(3)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1						
		(4)MATERIAL	MT1=CARBON STEEL						
		(1) (2) (3) (4)							
		TYPE CAP. NO.							
		T/H/1							
IKATA-2	PWR 30	TP1	112.6	1/1/C1	MT1			8-12-16	76/12
** SWSS	DESALIN. S H2SO4	TANK	831500						
		(1)TYPE	TP1=YOKO-OKI ENTOO GATA						
		(2)CAPACITY	M3/1						
		(3)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1						
		(4)MATERIAL	MT1=CARBON STEEL						
		(1) (2) (3) (4)							
		TYPE CAP. NO.							
		M3/1							
IKATA-2	PWR 30	TP1	8.	1/1/C1	MT1			8-12-16	76/12
** SWSS	PURE W.S CATION	EXCHANGE R	831520						
		(1)TYPE	TP1=TATE-OKI ENTOO GATA						
			TP2=ENTOO GATA						
		(2)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1						
		(3)DISPOSABILITY	T/H/1						
		(4)RESIN	R1=AMBERLITE						
		(5)VOLUME OF RESIN	LITRE						
		(6)DESIGN PRESSURE	KG/CM2						
		(7)MATERIAL	MT1=CARBON STEEL						
		(1) (2) (3) (4) (5) (6) (7)							
		TYPE NO. T/H L D.P. MAT.							
GENKAI-2	PWR 29		2	50.	R1	4500.	5.5	MT1	8-12-18 76/ 2
IKATA-2	PWR 30	TP1	1/C1	62.	R1	2100.	5.	MT1	8-12-16 76/12
SENDAI	PWR 31	TP2	2	75.				MT1	8-12-18 76/ 4
** SWSS	PURE W.S ANION	EXCHANGE R	831530						
		(1)TYPE	TP1=TATE-OKI ENTOO GATA						
			TP2=ENTOO GATA						
		(2)NUMBER							
		(3)DISPOSABILITY	T/H/1						
		(4)RESIN	R1=AMBERLITE						
		(5)VOLUME OF RESIN	LITRE						
		(6)DESIGN PRESSURE	KG/CM2						
		(7)MATERIAL	MT1=CARBON STEEL						
		(1) (2) (3) (4) (5) (6) (7)							
		TYPE NO. T/H L D.P. MAT.							
GENKAI-2	PWR 29		2	50.	R1	5100.	7.5	MT1	8-12-18 76/ 2
IKATA-2	PWR 30	TP1	1	62.	R1	4100.	6.	MT1	8-12-16 76/11
SENDAI	PWR 31	TP2	2	75.				MT1	8-12-18 76/ 4
** SWSS	PURE W.S MIXED	BED POLISHER	831540						
		(1)TYPE	TP1=TATE-OKI ENTOO GATA						
			TP2=ENTOO GATA						
		(2)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1						
		(3)DISPOSABILITY	T/H/1						
		(4)RESIN	R1=AMBERLITE						
		(5)VOLUME OF RESIN	LITRE						
		(6)DESIGN PRESSURE	KG/CM2						
		(7)MATERIAL	MT1=CARBON STEEL						
		(1) (2) (3) (4) (5) (6) (7)							
		TYPE NO. T/H/1 L D.P. MAT.							
GENKAI-2	PWR 29		2	50.	R1	1200.	7.5	MT1	8-12-18 76/ 2
IKATA-2	PWR 30	TP1	2/C1	62.	R1	1600.	6.	MT1	8-12-16 76/12
SENDAI	PWR 31	TP2	2	75.				MT1	8-12-18 76/ 4
** SWSS	PURE W.S DECARBON IZATION		831550						
		(1)TYPE	TP1=TATE-OKI ENTOO GATA						
			TP2=ENTOO GATA						
		(2)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1						
		(3)MATERIAL	MT1=CARBON STEEL						
		(1) (2) (3)							
		TYPE NO. MAT.							
GENKAI-2	PWR 29		2	MT1				8-12-19 76/ 2	
IKATA-2	PWR 30	TP1	1/C1	MT1				8-12-17 76/12	
SENDAI	PWR 31	TP2	2	MT1				8-12-18 76/ 4	

** SWSS	PURE W.S VACUUM	DEGASSER	831560	
		(1)TYPE	TP1=TATE-OKI ENT00 GATA	
		(2)NUMBER	TP2=ENT00 GATA	
		(3)CAPACITY	/C1=COMMONLY USED WITH UNIT NO.1	
		(4)MATERIAL	MT1=CARBON STEEL	
		(1) (2) (3)		
		TYPE NO. MAT.		
GENKA1-2	PWR 29	2	MT1	8-12-19 76/ 2
IKATA-2	PWR 30	TP1 1/C1	MT1	8-12-17 76/12
SENDAI	PWR 31	TP2 2	MT1	8-12-18 76/ 4
** SWSS	RAW	WATER TANK	831570	
		(1)TYPE	TP1=TATE-OKI ENT00 GATA	
		(2)CAPACITY		
		(3)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1	
		(4)MATERIAL	MT1=CARBON STEEL	
		(1) (2) (3) (4)		
		TYPE CAP. NO. MAT.		
		M3		
IKATA-2	PWR 30	TP1 10000.	1/C1 MT1	8-12-17 76/12
SENDAI	PWR 31	120.	1	8-12-17 76/ 4
** SWSS	RWPAF	RAW WATER PUMP	831572	
		(1)TYPE		
		(2)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1	
		(3)CAPACITY	M3/H/1	
		(4)MATERIAL	MT1=CARBON STEEL	
		(1) (2) (3) (4)		
		TYPE NO. M3/H		
GENKA1-2	PWR 29	3/C1 50.	MT1	8-12-17 76/ 2
SENDAI	PWR 31	2 60.	MT1	8-12-17 76/ 4
** SWSS	RWPAF	PULSATOR	831574	
		(1)TYPE	TP1=TATE-OKI(COATED INSIDE SURFACE WITH EPOXY)	
		(2)NUMBER		
		(3)CAPACITY	T/H/1	
		(4)MATERIAL	MT1=CARBON STEEL	
		(1) (2) (3) (4)		
		TYPE NO. T/H		
GENKA1-2	PWR 29	1/C1 150.	MT1	8-12-17 76/ 2
SENDAI	PWR 31	TP1 1 180.	MT1	8-12-17 76/ 4
** SWSS	RWPAF	CHEMICAL S INJECT. PUMP	831576	
		(1)TYPE	TP1=RECIPROCAL. CONSTANT FLOW	
		(2)NUMBER		
		(3)		
		(4)MATERIAL	MT1=STAINLESS STEEL	
		(1) (2) (3) (4)		
		TYPE NO.		
GENKA1-2	PWR 29	TP1 2	MT1	8-12-17 76/ 2
SENDAI	PWR 31	TP1 2	MT1	8-12-17 76/ 4
** SWSS	RWPAF	FILTER	831578	
		(1)TYPE	TP1=MONO VALVE FILTER	
		(2)NUMBER	TATE-OKI(COATED INSIDE SURFACE WITH EPOXY)	
		(3)CAPACITY	/C1=COMMONLY USED WITH UNIT NO.1	
		(4)MATERIAL	MT1=CARBON STEEL	
		(1) (2) (3) (4)		
		TYPE NO. T/H		
GENKA1-2	PWR 29	2/C1 75.	MT1	8-12-17 76/ 2
SENDAI	PWR 31	TP1 2 90.	MT1	8-12-17 76/ 4
** SWSS	FILTRATE D	WATER TANK	831580	
		(1)TYPE	TP1=TATE-OKI ENT00 GATA	
		(2)CAPACITY		
		(3)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1	
		(4)MATERIAL	MT1=CARBON STEEL	
		(1) (2) (3) (4)		
		TYPE CAP. NO. MAT.		
		M3		
GENKA1-2	PWR 29	TP1 2000.	2/C1 MT1	8-12-17 76/ 2
IKATA-2	PWR 30	TP1 6000.	1/C1 MT1	8-12-18 76/11
SENDAI	PWR 31	TP1 2500.	2 MT1	8-12-17 76/ 4

** SWSS	DEMINERALIZED	WATER	TANK	831590		
		(1)TYPE	TP1=TATE-OKI ENTOO GATA			
		(2)CAPACITY	M3			
		(3)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1			
		(4)MATERIAL	MT1=CARBON STEEL			
		(1) (2)	(3) (4)			
		TYPE CAP.	NO. MAT.			
IKATA-2	PWR 30	TP1	3000.	1/C1	MT1	8-12-18 76/11
** SWSS	SECONDARY SYST.	PURE	WATER	TANK	831600	
		(1)TYPE	TP1=TATE-OKI ENTOO GATA			
		(2)CAPACITY	TP2=TATE ENTOO DIAPHRAGM SEAL			
		(3)NUMBER	M3			
		(4)MATERIAL	/CU=COMMONLY USED WITH UNIT NO.1			
		(1) (2)	MT1=CARBON STEEL			
		TYPE CAP.	(3) (4)			
			NO. MAT.			
GENKAI-2	PWR 29	TP2	1000.	2/C1	MT1	8-12-19 76/ 2
IKATA-2	PWR 30	TP1	1500.	1	MT1	8-12-18 76/11
SENDAI	PWR 31	TP2	1000.	2	MT1	8-12-18 76/ 4
** SWSS	PRIMARY SYST.	PURE	WATER	TANK	831610	
		(1)TYPE	TP1=TATE-OKI ENTOO DIAPHRAGM SEAL			
		(2)CAPACITY				
		(3)NUMBER	/C1=COMMONLY USED WITH UNIT NO.1			
		(4)MATERIAL	MT1=ALLOY STEEL			
			MT2=STAINLESS STEEL			
		(1) (2)	(3) (4)			
		TYPE CAP.	NO. MAT.			
GENKAI-2	PWR 29	TP1	230.	2/C1	MT2	8-12-19 76/ 2
IKATA-2	PWR 30	TP1	230.	1	MT1	8-12-18 76/11
SENDAI	PWR 31	TP1	510.	1	MT2	8-12-18 76/ 4
** SWSS	WATER	QUALITY	EXIT OF DESALIN.		831620	
		(1)TOTAL SOLID	LT PPM			
		(2)ELECT. CONDUCTIVITY	LT MICRO MHO/CM			
		(3)FE-TOTAL	LT PPM			
		(4)COPPER	LT PPM			
		(5)CL ION	LT PPM			
		(6)NA ION	LT PPM			
		(7)RESOLVED OXYGEN	LT PPH			
		(8)TEMPERATURE	LT DEG C			
		(1) (2) (3) (4) (5) (6) (7) (8)				
		SOL. E.C FE CU CL NA O2				
		PPM PPM PPM PPM PPM PPM PPB C				
IKATA-2	PWR 30	5. 10. 0.05 0.1 2.7 1.5 10. 40.				8-12-19 76/11
** SWSS	WATER	QUALITY	EXIT OF 2BEDS- 3TOWERS		831622	
		(1)ELECT. CONDUCTIVITY	LT MICRO MHO/CM			
		(2)SILICA	LT PPM			
		(1) (2)				
		E.C SIO2				
		PPM				
IKATA-2	PWR 30	5. 0.05				8-12-20 76/11
** SWSS	WATER	QUALITY	EXIT OF POLISHER (831540)		831624	
		(1)ELECT. CONDUCTIVITY	LT MICRO MHO/CM			
		(2)SILICA	LT PPM			
		(3)PH				
		(4)CL ION	LT PPB			
		(5)F ION	LT PPB			
		(6)NA ION	LT PPB			
		(7)FE TOTAL	LT PPM			
		(8)CU TOTAL	LT PPM			
		(9)RESOLVED OXYGEN	LT PPM			
		(1) (2) (3) (4) (5) (6) (7) (8) (9)				
		E.C SIO2 PH CL F NA FE CU O				
		PPM PPM PPB PPB PPB PPM PPM PPM				
GENKAI-2	PWR 29	0.5 0.02 6.0/8.0				8-12-20 76/ 2
IKATA-2	PWR 30	0.2 0.015 6.0/7.5 15. 30. 10. 0.01 0.01 0.1				8-12-20 76/11
SENDAI	PWR 31	0.5 0.02 6.0/8.0				8-12-19 76/ 4
GENKAI-2	PWR 29	0.5 0.02 6.0/8.0				8-12-20 76/ 2
IKATA-2	PWR 30	0.2 0.015 6.0/7.5 15. 30. 10. 0.01 0.01 0.1				8-12-20 76/11
SENDAI	PWR 31	0.5 0.02 6.0/8.0				8-12-19 76/ 4

831710

BUILT-IN TYPE

8-12-21 76/ 2
8-12-21 76/11
8-12-20 76/ 4

831720

8-12-21 76/ 2
8-12-21 76/11
8-12-20 76/ 4

831730

BUILT-IN TYPE
BUILT-IN TYPE

8-12-21 76/ 2
8-12-21 76/11
8-12-20 76/ 4

831740

8-12-21 76/ 2
8-12-21 76/11
8-12-20 76/ 4

831750

8-12-21 76/ 2
8-12-21 76/11
8-12-20 76/ 4

831760

AUX. COMPONENT-COOLING-WATER,
P/F BUILT-IN TYPE
OR AUX. COMPONENT-COOLING-WATER.

8-12-22 76/ 2
8-12-22 76/11
8-12-21 76/ 4

** RCAVARS

AIR RECIRC. FAN 831770

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

	PWR	29	4	1400. *	160.	8-12-22	76/ 2
GENKAI-2	PWR	30	4	1400. *	160.	8-12-22	76/11
IKATA-2	PWR	31	4	3400.		8-12-21	76/ 4

** RCAVARS RECIRC.

AIR PURIFIC. FILTER UNIT 831780

(1)TYPE TP1=R/F, P/F, I/F BUILT-IN TYPE
 TP2=PRE/F, P/F, I/F BUILT-IN TYPE
 (3)CAPACITY M3/MIN/1
 (4)CHARCOAL THICKNESS MM
 (5)I/F EFFICIENCY (GT(A)PC (TEMP=(B)DEG C, RELATIVE HUMIDITY=(C)PC))
 (6)P/F EFFICIENCY (GT(D)PC ((E)MICRON PARTICLE))
 (1) (2) (3) (4) -----(5)----- (6)-----
 NO. CAP. (A) (B) (C) (D) (E)
 M3/M MM PC C PC PC MICRON

	PWR	29	TP2	2	140.	50.	95.	50.	80.	99.	0.7	8-12-22	76/ 2
GENKAI-2	PWR	30	TP1	2	145. <td>50. <td>95. <td>50. <td>80. <td>99. <td>0.7 <td>8-12-22</td> <td>76/11</td> </td></td></td></td></td></td>	50. <td>95. <td>50. <td>80. <td>99. <td>0.7 <td>8-12-22</td> <td>76/11</td> </td></td></td></td></td>	95. <td>50. <td>80. <td>99. <td>0.7 <td>8-12-22</td> <td>76/11</td> </td></td></td></td>	50. <td>80. <td>99. <td>0.7 <td>8-12-22</td> <td>76/11</td> </td></td></td>	80. <td>99. <td>0.7 <td>8-12-22</td> <td>76/11</td> </td></td>	99. <td>0.7 <td>8-12-22</td> <td>76/11</td> </td>	0.7 <td>8-12-22</td> <td>76/11</td>	8-12-22	76/11
IKATA-2	PWR	31	TP1	2	255. <td>50. <td>95. <td>50. <td>80. <td>99. <td>0.7 <td>8-12-21</td> <td>76/ 4</td> </td></td></td></td></td></td>	50. <td>95. <td>50. <td>80. <td>99. <td>0.7 <td>8-12-21</td> <td>76/ 4</td> </td></td></td></td></td>	95. <td>50. <td>80. <td>99. <td>0.7 <td>8-12-21</td> <td>76/ 4</td> </td></td></td></td>	50. <td>80. <td>99. <td>0.7 <td>8-12-21</td> <td>76/ 4</td> </td></td></td>	80. <td>99. <td>0.7 <td>8-12-21</td> <td>76/ 4</td> </td></td>	99. <td>0.7 <td>8-12-21</td> <td>76/ 4</td> </td>	0.7 <td>8-12-21</td> <td>76/ 4</td>	8-12-21	76/ 4

** RCAVARS RECIRC.

AIR PURIFIC. FAN 831790

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

	PWR	29	2	140. *	120.	8-12-22	76/ 2
GENKAI-2	PWR	30 <th>2</th> <td>145. *</td> <td>130.</td> <td>8-12-22</td> <td>76/11</td>	2	145. *	130.	8-12-22	76/11
IKATA-2	PWR	31 <th>2</th> <td>255.</td> <td></td> <td>8-12-21</td> <td>76/ 4</td>	2	255.		8-12-21	76/ 4

** RCIASV CRD

COOLING UNIT 831800

(1)TYPE TP1=R/F, COOLING COIL FOR AUX.COMPONENT-COOLING-WATER
 BUILT-IN TYPE
 (3)CAPACITY M3/MIN/1
 (1) (2) (3)
 TYPE NO. CAP.
 M3/M

	PWR	29	TP1	3	220.	8-12-23	76/ 2
GENKAI-2	PWR	30 <td>TP1</td> <td>3</td> <td>220.</td> <td>8-12-23</td> <td>76/11</td>	TP1	3	220.	8-12-23	76/11
IKATA-2	PWR	31 <td>TP1</td> <td>1</td> <td>1246.</td> <td>8-12-22</td> <td>76/ 4</td>	TP1	1	1246.	8-12-22	76/ 4

** RCIASV CRD

COOLING FAN 831810

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

	PWR	29	3	220. *	500.	8-12-23	76/ 2
GENKAI-2	PWR	30 <th>3</th> <td>220. *</td> <td>500.</td> <td>8-12-23</td> <td>76/11</td>	3	220. *	500.	8-12-23	76/11
IKATA-2	PWR	31 <th>3</th> <td>623.</td> <td></td> <td>8-12-22</td> <td>76/ 4</td>	3	623.		8-12-22	76/ 4

** RCIASV REACTOR VESSEL

COOLING FAN 831820

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

	PWR	29	2	850. *	190.	8-12-23	76/ 2
GENKAI-2	PWR	30 <th>2</th> <td>850. *</td> <td>190.</td> <td>8-12-23</td> <td>76/11</td>	2	850. *	190.	8-12-23	76/11
IKATA-2	PWR	31 <th>2</th> <td>860.</td> <td></td> <td>8-12-22</td> <td>76/ 4</td>	2	860.		8-12-22	76/ 4

** RCIASV RCWSVS

AIR SUPPLY FAN 831830

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

	PWR	29	1	160. *	25.	8-12-23	76/ 2
GENKAI-2	PWR	30 <th>1</th> <td>225. *</td> <td>50.</td> <td>8-12-23</td> <td>76/11</td>	1	225. *	50.	8-12-23	76/11
IKATA-2	PWR	31 <th>1</th> <td>250.</td> <td></td> <td>8-12-22</td> <td>76/ 4</td>	1	250.		8-12-22	76/ 4

** RCIASV RCWSVS EXHAUST AIR FAN 831840

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
(1) (2) -----(3)-----
TYPE NO. CAPACITY
(A) * (B)
M3/M MM AQ

GENKAI-2	PWR	29	1	530.	*	110.	8-12-23	76/ 2
IKATA-2	PWR	30	1	535.	*	100.	8-12-23	76/11
SENDAI	PWR	31	1	476.			8-12-22	76/ 4

** RABVS AUX,B AIR SUPPLY UNIT 831850

(1)TYPE TP1=R/F, H/C, RH/C BUILT-IN TYPE
(3)CAPACITY M3/MIN/1
(1) (2) (3)
TYPE NO. CAP,
M3/M

GENKAI-2	PWR	29	TP1	1	3400.	8-12-24	76/ 2
IKATA-2	PWR	30	TP1	1	3250.	8-12-24	76/11
SENDAI	PWR	31	TP1	2	2500.	8-12-23	76/ 4

** RABVS AUX,B AIR SUPPLY FAN 831860

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
(1) (2) -----(3)-----
TYPE NO. CAPACITY
(A) * (B)
M3/M MM AQ

GENKAI-2	PWR	29	2	1700.	*	85.	8-12-24	76/ 2
IKATA-2	PWR	30	2	1625.	*	100.	8-12-24	76/11
SENDAI	PWR	31	2	2500.			8-12-23	76/ 4

** RABVS SACR EXHAUST AIR FAN 831870

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
(1) (2) -----(3)-----
TYPE NO. CAPACITY
(A) * (B)
M3/M MM AQ

GENKAI-2	PWR	29	2	450.	*	260.	8-12-24	76/ 2
IKATA-2	PWR	30	2	560.	*	320.	8-12-24	76/11
SENDAI	PWR	31	2	640.			8-12-23	76/ 4

** RABVS SACR EXHAUST AIR FILTER UNIT 831880

(1)TYPE TP1=P/F, I/F, P/F BUILT-IN TYPE
TP2=P/F, I/F BUILT-IN TYPE
(3)CAPACITY M3/MIN/1
(4)CHARCOAL THICKNESS MM
(5)I/F EFFICIENCY (GT(A)PC (TEMP=(B)DEG C, RELATIVE HUMIDITY=(C)PC))
(6)P/F EFFICIENCY (GT(D)PC ((E)MICRON PARTICLE))
(1) (2) (3) (4) -----(5)----- -----(6)-----
NO. CAP. (A) (B) (C) (D) (E)
M3/M MM PC C PC PC MICRON

GENKAI-2	PWR	29	TP2	1	450.	50.	95.	50.	80.	99.	0.7	8-12-24	76/ 2
IKATA-2	PWR	30	TP1	1	560.	50.	95.	50.	80.	99.	0.7	8-12-24	76/11
SENDAI	PWR	31	TP2	1	640.	50.	95.	50.	80.	99.	0.7	8-12-24	76/ 4

** RABVS SFPES EXHAUST AIR FILTER UNIT 831890

(1)TYPE TP1=P/F, I/F BUILT-IN TYPE
(3)CAPACITY M3/MIN/1
(4)CHARCOAL THICKNESS MM
(5)I/F EFFICIENCY (GT(A)PC (TEMP=(B)DEG C, RELATIVE HUMIDITY=(C)PC))
(6)P/F EFFICIENCY (GT(D)PC ((E)MICRON PARTICLE))
(1) (2) (3) (4) -----(5)----- -----(6)-----
NO. CAP. (A) (B) (C) (D) (E)
M3/M MM PC C PC PC MICRON

GENKAI-2	PWR	29	TP1	1	620.	50.	95.	50.	80.	99.	0.7	8-12-25	76/ 2
IKATA-2	PWR	30	TP1	1	850.	50.	95.	50.	80.	99.	0.7	8-12-24	76/11
SENDAI	PWR	31	TP1	1	1130.	50.	95.	50.	80.	99.	0.7	8-12-24	76/ 4

** RABVS SFPES EXHAUST AIR FAN 831900

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
(1) (2) -----(3)-----
TYPE NO. CAPACITY
(A) * (B)
M3/M MM AQ

GENKAI-2	PWR	29	2	620.	*	160.	8-12-25	76/ 2
IKATA-2	PWR	30	2	850.	*	135.	8-12-25	76/11
SENDAI	PWR	31	2	1130.			8-12-24	76/ 4

** RABVS AUX.BES EXHAUST AIR FILTER UNIT 831910

(1)TYPE TP1=R/F, P/F BUILT-IN TYPE
 TP2=PRE/F, P/F BUILT-IN TYPE
 (2)NUMBER
 (3)CAPACITY M3/MIN/1
 (4)FILT. EFFICIENCY (GT (A)PC ((B)MICRON PARTICLE))
 (1) (2) (3) (4)
 TYPE NO. CAP. FILT.EFFI.
 A B
 M3/M PC MICRON

GENKA1-2	PWR	29	TP2	2	1700.	99.	0.7	8-12-25	76/ 2
IKATA-2	PWR	30	TP1	2	1750.	99.	0.7	8-12-25	76/11
SENDAI	PWR	31	TP1	2	2500.	99.	0.7	8-12-23	76/ 4

** RABVS AUX.BES EXHAUST AIR FAN 831920

(3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) (3)
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

GENKA1-2	PWR	29	3	1700.	*	275.	8-12-25	76/ 2
IKATA-2	PWR	30	3	1750.	*	355.	8-12-25	76/11
SENDAI	PWR	31	3	2500.			8-12-23	76/ 4

** RABVS AUX.BES EXHAUST AIR STACK 831930

(2)SIZE MM*MM
 (3)HEIGHT M(FROM GROUND LEVEL)
 (1) (2) (3)
 NO. SIZE H
 MM*MM M

GENKA1-2	PWR	29	2	1400*1000	43.	8-12-25	76/ 2
IKATA-2	PWR	30	1	2500*1100	68.	8-12-25	76/11
SENDAI	PWR	31	2	2200*1200	61	8-12-24	76/ 4

** CCRVS AIR CONDITIO NING UNIT 831940

(1)TYPE TP1=R/F, C/W, AIR CONDITIONING FAN BUILT-IN TYPE
 (2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) (3)
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

GENKA1-2	PWR	29	TP1	3/C1	760.	*	80.	8-12-26	76/ 2
IKATA-2	PWR	30	TP1	3/C1	760.	*	90.	8-12-26	76/11
SENDAI	PWR	31	TP1	2	1560.			8-12-25	76/ 4

** CCRVS AIR RECIRC. FAN 831950

(2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) (3)
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

GENKA1-2	PWR	29	3/C1	760.	*	25.	8-12-26	76/ 2
IKATA-2	PWR	30	3/C1	760.	*	40.	8-12-26	76/11
SENDAI	PWR	31	2	1560.			8-12-25	76/ 4

** CCRVS EMERGENC Y AIR FILTER UNIT 831960

(1)TYPE TP1=P/F, I/F BUILT-IN TYPE
 (2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY M3/MIN/1
 (4)CHARCOAL THICKNESS MM
 (5)I/F EFFICIENCY (GT(A)PC (TEMP=(B)DEG C, RELATIVE HUMIDITY=(C)PC))
 (6)P/F EFFICIENCY (GT(D)PC ((E)MICRON PARTICLE))
 (1) (2) (3) (4) (5) (6)
 NO. CAP. (A) (B) (C) (D) (E)
 M3/M MM PC C PC PC MICRON

GENKA1-2	PWR	29	TP1	1/C1	160.	50.	95.	50.	80.	99.	0.7	8-12-26	76/ 2
IKATA-2	PWR	30	TP1	1/C1	170.	50.	95.	50.	80.	99.	0.7	8-12-26	76/11
SENDAI	PWR	31	TP1	1	340.	50.	95.	50.	80.	99.	0.7	8-12-25	76/ 4

** CCRVS EMERGENCY

AIR SUPPLY FAN 831970

(2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

GENKAI-2	PWR	29	2/C1	160.	*	90.	8-12-26	76/ 2
IKATA-2	PWR	30	2/C1	170.	*	100.	8-12-26	76/11
SENDAI	PWR	31	2	340.			8-12-25	76/ 4

** CCRVS

AIR VENTILATOR 831980

(2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

GENKAI-2	PWR	29	2/C1	6.5	*	5.	8-12-26	76/ 2
IKATA-2	PWR	30	2/C1	6.5	*	5.	8-12-26	76/11
SENDAI	PWR	31	2	8.			8-12-25	76/ 4

** CCRVS

AIR SUPPLY HEATER COIL 831990

(1)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (1)

GENKAI-2	PWR	29	4/C1				8-12-26	76/ 2
IKATA-2	PWR	30	4/C1				8-12-26	76/11
SENDAI	PWR	31	6				8-12-25	76/ 4

** CCRVS

CENTRAL CONTROL ROOM HUMIDIFIER 832000

(1)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (1)

GENKAI-2	PWR	29	1/C1				8-12-27	76/ 2
IKATA-2	PWR	30	1/C1				8-12-26	76/11
SENDAI	PWR	31	1				8-12-25	76/ 4

** CCRVS

RRCR

AIR SUPPLY UNIT 832010

(1)TYPE TP1=P/F, C/W BUILT-IN TYPE
 TP2=R/F, C/W BUILT-UN TYPE
 (2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY M3/MIN/1
 (1) (2) (3)
 TYPE NO. CAP.
 M3/M

GENKAI-2	PWR	29	TP2	1/C1	330.		8-12-27	76/ 2
IKATA-2	PWR	30	TP1	1/C1	400.		8-12-27	76/11
SENDAI	PWR	31	TP1	1	708.		8-12-26	76/ 4

** CCRVS

RRCR

AIR SUPPLY FAN 832020

(2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) -----(3)-----
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

GENKAI-2	PWR	29	2/C1	330.	*	95.	8-12-27	76/ 2
IKATA-2	PWR	30	2/C1	400.	*	105.	8-12-27	76/11
SENDAI	PWR	31	2	708.			8-12-26	76/ 4

** CCRVS

RRCR

AIR SUPPLY HEATER COIL 832030

/C1=COMMONLY USED WITH UNIT NO.1
 (1)
 NO.

GENKAI-2	PWR	29	4/C1				8-12-27	76/ 2
IKATA-2	PWR	30	4/C1				8-12-27	76/11
SENDAI	PWR	31	5				8-12-26	76/ 4

** CCRVS RRCR EXHAUST AIR FILTER UNIT 832040

(1)TYPE TP1=R/F, P/F, I/F BUILT-IN TYPE
 TP2=PRE/F, P/F, I/F BUILT-IN TYPE
 (2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY M3/MIN/1
 (4)CHARCOAL THICKNESS MM
 (5)I/F EFFICIENCY (GT(A)PC (TEMP=(B)DEG C, RELATIVE HUMIDITY=(C)PC))
 (6)P/F EFFICIENCY (GT(D)PC ((E)MICRON PARTICLE))
 (1) (2) (3) (4) (5) (6)
 NO. CAP. (A) (B) (C) (D) (E)
 M3/M MM PC C PC PC MICRON

GENKAI-2	PWR	29	TP2	1/C1	330.	50.	95.	50.	80.	99.	0.7	8-12-27	76/ 2
IKATA-2	PWR	30	TP1	1/C1	400.	50.	95.	50.	80.	99.	0.7	8-12-27	76/11
SENDAI	PWR	31	TP1	1	708.	50.	95.	50.	80.	99.	0.7	8-12-26	76/ 4

** CCRVS RRCR EXHAUST AIR FAN 832050

(2)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (3)CAPACITY (A)M3/MIN * (B)MM AQ/1
 (1) (2) (3)
 TYPE NO. CAPACITY
 (A) * (B)
 M3/M MM AQ

GENKAI-2	PWR	29	2/C1	330. *	230.	8-12-27	76/ 2
IKATA-2	PWR	30	2/C1	400. *	230.	8-12-27	76/11
SENDAI	PWR	31	2	708.		8-12-26	76/ 4

** AVS BWR REACTOR BUILDING SUPPLY FAN 833010

(1)NUMBER
 (2)CAPACITY M3/H/1
 (1) (2)

TOMIOKA-2	BWR	16	1+(1)	280000.	8-12-27	76/12
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** AVS BWR REACTOR BUILDING EXHAUST FAN 833020

(1)NUMBER
 (2)CAPACITY M3/H/1
 (1) (2)

TOMIOKA-2	BWR	16	1+(1)	280000.	8-12-27	76/12
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** AVS BWR TROPF SUPPLY FAN 833040

(1)NUMBER
 (2)CAPACITY M3/H/1
 (1) (2)

TOMIOKA-1	BWR	14	1+(1)	150000.	8-13-10	76/ 8
TOMIOKA-2	BWR	16	1+(1)	200000.	8-12-27	76/12

** AVS BWR TROPF EXHAUST FAN 833050

(1)NUMBER
 (2)CAPACITY M3/H/1
 (1) (2)

TOMIOKA-1	BWR	14	1+(1)	150000.	8-13-10	76/ 8
TOMIOKA-2	BWR	16	1+(1)	200000.	8-12-27	76/12

** AVS BWR TROPF SUPPLY FAN 833070

(1)NUMBER
 (2)CAPACITY M3/H/1
 (1) (2)

TOMIOKA-1	BWR	14	2+(1)	270000.	8-13-10	76/ 8
TOMIOKA-2	BWR	16	2+(1)	250000.	8-12-27	76/12

** AVS BWR TROPF EXHAUST FAN 833080

(1)NUMBER
 (2)CAPACITY M3/H/1
 (1) (2)

TOMIOKA-1	BWR	14	2+(1)	270000.	8-13-10	76/ 8
TOMIOKA-2	BWR	16	2+(1)	250000.	8-12-27	76/12

** AVS BWR CCRVS	AIR-CON. FAN				833100		
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1+(1)	60000.			8-13-10	76/ 8
TOMIOKA-2	BWR 16	1+(1)	60000.			8-12-28	76/12
** AVS BWR CCRVS	BOOSTER FAN				833110		
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1+(1)	60000.			8-13-10	76/ 8
TOMIOKA-2	BWR 16	1+(1)	60000.			8-12-28	76/12
** AVS BWR AUX.B	SUPPLY FAN				833130		
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-2	BWR 16	1+(1)	130000.			8-12-28	76/12
** AVS BWR AUX.B	EXHAUST FAN				833140		
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-2	BWR 16	1+(1)	130000.			8-12-28	76/12
** AVS BWR AUX.B	WDR.TANK ROOM	SUPPLY FAN		833150			
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1+(1)	50000.			8-13-11	76/ 8
** AVS BWR AUX.B	WDR.TANK ROOM	EXHAUST FAN		833152			
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1+(1)	50000.			8-13-11	76/ 8
** AVS BWR WDBVS	CONTROL ROOM	SUPPLY FAN		833160			
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1	120000.			8-13-11	76/ 8
TOMIOKA-2	BWR 16	1	120000.			8-12-28	76/12
** AVS BWR WDBVS	CONTROL ROOM	EXHAUST FAN		833170			
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1+(1)	80000.			8-13-11	76/ 8
TOMIOKA-2	BWR 16	1+(1)	80000.			8-12-28	76/12
** AVS BWR WDBVS	LAUNDRY CENTER	SUPPLY FAN		833190			
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1	60000.			8-13-11	76/ 8
TOMIOKA-2	BWR 16	1	60000.			8-12-29	76/12
** AVS BWR WDBVS	LAUNDRY CENTER	EXHAUST FAN		833200			
		(1)NUMBER					
		(2)CAPACITY		M3/H/1			
		(1)	(2)				
TOMIOKA-1	BWR 14	1+(1)	60000.			8-13-11	76/ 8
TOMIOKA-2	BWR 16	1+(1)	60000.			8-12-29	76/12

** AVS BWR WDBVS DISPOSIN G ROOM SUPPLY FAN 833220

(1)NUMBER
(2)CAPACITY M3/H/1
(1) (2)TOMIOKA-1 BWR 14 2+(1) 200000.
TOMIOKA-2 BWR 16 2+(1) 200000.8-13-11 76/ 8
8-12-29 76/12

** AVS BWR WDBVS DISPOSIN G ROOM EXHAUST FAN 833230

(1)NUMBER
(2)CAPACITY M3/H/1
(1) (2)TOMIOKA-1 BWR 14 2+(1) 200000.
TOMIOKA-2 BWR 16 2+(1) 200000.8-13-12 76/ 8
8-12-29 76/12

** AVS BWE WDBVS STACK 833250

(1)GROUND LEVEL M
(2)STACK HEIGHT M
O.P.=ONAHAMA POINT
(1) (2)TOMIOKA-1 BWR 14 O.P.33 120
TOMIOKA-2 BWR 16 O.P.33 1208-13-12 76/ 8
8-12-29 76/12

** AVS BWR CGHU BUILDING SUPPLY FAN 833260

(1)NUMBER
(2)CAPACITY M3/H/1
(1) (2)

TOMIOKA-1 BWR 14 1+(1) 20000.

8-13-12 76/ 8

** AVS BWR CGHU BUILDING EXHAUST FAN 833270

(1)NUMBER
(2)CAPACITY M3/H/1
(1) (2)

TOMIOKA-1 BWR 14 1+(1) 20000.

8-13-12 76/ 8

** ACSFC AIR COMPRES. 834220

(1)TYPE TP1=TATE-GATA WATER COOL OIL FREE
TP2=TATE-GATA CARBON RING OIL FREE
TP3=RECIPROCAL OIL FREE
TP4=OIL FREE(2)NUMBER
(3)CAPACITY NORMAL M3/MIN
(4)DELIV. PRESSURE KG/CM2G
(1) (2) (3) (4)
CAP. P
TYPE NO. NM3/M KG/CM2G

JPDR-2	BWR	2	TP1	1+(1)	1.59	7.0	TURBINE CYATEM	KON-6 P19	70/11
JPDR-2	BWR	2	TP2	1	2.31	7.0	DUMP CONDENSER SYSTEM	KON-6 P20	70/11
ONAGAWA	BWR	4	TP3	1+(1)	5.6	7.0		8-13-(3)	70/ 5
HAMAOKA-1	BWR	5		1+(1)				8-106	70/ 5
TAKAHAMA-2	PWR	23		2				8-118	70/ 5
GENKAI-1	PWR	24		2				8-134	70/ 5
GENKAI-2	PWR	29	TP1	2	8.	7.0		8-12-28	76/ 2
IKATA-2	PWR	30	TP4	2	12.	7.0		8-12-28	76/12
SENDAI	PWR	31	TP3	2	10.	7.0		8-12-27	76/ 4

** ACSFC AIR RESERVOI R 834230

(1)CAPACITY M3/1
(1) (2)
M3/1 NO.

GENKAI-2	PWR	29	7.5	2			8-12-28	76/ 2
IKATA-2	PWR	30	5	2			8-12-28	76/11
SENDAI	PWR	31	7.5	2			8-12-27	76/ 4

** ACSFC AIR DEHUMIDIFIER

834240

(1)TYPE

TP1=AUTOMATIC

TP2=CONTINUOUS OPERATION WITH ALTERNATIONS
OF ADSORPTION AND DEHUMIDIFICATION

(2)CAPACITY

NM3/MIN/1

(4)REGENERATING METHOD

RM1=ELECTRICALLY HEAT AND VENTILATION

(5)DEHUMIDIZING METHOD

(1) (2) (3) (4) (5)
CAP NO.

GENKAI-2	PWR 29	TP2	8.	1				8-12-28	76/ 2
IKATA-2	PWR 30	TP1	12.	2	RM1	TP2		8-12-28	76/11
SENDAI	PWR 31	TP2	10.	1				8-12-27	76/ 4

** ACSFF AIR COMPRES.

834260

(1)TYPE

TP1=TATE-GATA WATER COOL, OIL FREE DOUBLE CONTROL

TP2=RECIPROCAL

TP3=OIL FREE

(2)NUMBER

(3)CAPACITY

NORMAL M3/MIN

(4)DELIVERY PRESSURE

KG/CM2G

(R1)=THIS COMPRESSOR IS ALSO TO BE USED AS BACK-UP FOR CONTROL.

(1) (2) (3) (4)

TYPE NO. NM3/M KG/CM2G

JPDR-2	BWR 2	TP1	1	2.84				KON=6 P40	70/11
ONAGAWA	BWR 4	TP2	1	12.8	7			8-13-(3)	70/ 5
HAMAOKA-1	BWR 5		(R1)					8-106	70/ 5
TAKAHAMA-2	PWR 23		2					8-118	70/ 5
GENKAI-1	PWR 24		2					8-134	70/ 5
GENKAI-2	PWR 29	TP1	3/C1	8.	7			8-12-29	76/ 2
SENDAI	PWR 31	TP3	2/C1	7.8	7			8-12-29	76/12

** ACSFF AIR RESERVOIR

834270

(1)NUMBER

/C1=COMMONLY USED WITH UNIT NO.1

(2)CAPACITY

M3/1

(1) (2)

NO. CAP
M3/1

GENKAI-2	PWR 29	2/C1	2.5					8-12-29	76/ 2
IKATA-2	PWR 30	1/C1	4.38					8-12-29	76/12
SENDAI	PWR 31	2	2.5					8-12-28	76/ 4

** AUX. STEAM SYSTEM COMPONENTS

835000

(1)AUX. STEAM SYSTEM

AUX. BOILER

835030

(2)AUX. STEAM SYSTEM

STEAM CONVERTER

835050

(3)AUX. STEAM SYSTEM

DRAIN PUMP

835070

(4)AUX. STEAM SYSTEM

STEAM DRAIN TANK

835090

** AUX. STEAM SYSTEM AUX. BOILER

835030

(1)TYPE

TP1=2-DRUM WATER-TUBE NATURAL CIRCULATION BOILER

(2)CAPACITY

TON/H/1

(3)NUMBER

/C1=COMMONLY USED WITH UNIT NO.1

(4)STEAM CONDITION

PRESSURE

KG/CM2G

(5)STEAM CONDITION

TEMPERATURE

DEG-C

(6)FUEL

H=HEAVY OIL, L=LIGHT OIL, K=KEROSENE

(7)FUEL TANK CAPACITY

KL

(8)MATERIAL

1) DRUM

MD1=CARBON STEEL

2) TUBE

MT1=CARBON STEEL

MT2=LOW CARBON STEEL

(1) (2) (3) (4) (5) (6) (7) (8)
T/H NO. P C FUEL KL 1) 2)

ONAGAWA	BWR 4		10.	2					8-13-(3)	70/ 5
FUKUSIMA-5	BWR 9		12.	2					8-13-(3)	71/ 2
FUKUSIMA-4	BWR 10		10.	2					8-13-(2)	71/ 8
FUKUSIMA-6	BWR 11		10.	2					8-13-(3)	71/12
TOOKAI-2	BWR 12		10.	2					8-13-(2)	71/12
HAMAOKA-2	BWR 13		13.	2						/
KASHIWAZAKI	BWR 15		30.	2	9.8				8-12-30	75/ 3
TOMIOKA-2	BWR 16		65.	2+(1)/C1	9.8				8-12-30	76/12
GENKAI-2	PWR 29	TP1	16.	2/C1	8.	175.	H(A)	300.	MD1 MT2	8-12-30
IKATA-2	PWR 30	TP1	13.	2/C1	8.	175.	H,L,K	360.	MD1 MT1	8-12-30
SENDAI	PWR 31	TP1	16.	2	8.	175.	H	300.	MD1 MT2	8-12-29

** AUX. STEAM SYSTEM STEAM CONVERTE R 835050

(1)TYPE TP1=PACKAGE OUTDOOR TYPE
 (2)CAPACITY TON/H
 (3)NUMBER
 (4)STEAM CONDITION(HEATER) PRESSURE KG/CM2G
 (5)STEAM CONDITION(HEATER) TEMPERATURE DEG-C
 (6)GENERATED STEAM PRESSURE KG/CM2G
 (7)GENERATED STEAM TEMPERATURE DEG C
 (8)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6) (7) (8)
 T/H P C P C

GENKAI-2	PWR	29	TP1	12.	1	25.	221.8	8.	175.	MT1	8-12-30	76/ 2
IKATA-2	PWR	30	TP1	20.	1	22.2	219.	7.	170.	MT1	8-12-30	76/12
SENDAI	PWR	31	TP1	12.	1	25.	222.	8.	175.	MT1	8-12-29	76/ 5

** AUX. STEAM SYSTEM DRAIN PUMP 835070

(1)NUMBER
 (2)DESIGN PRESSURE KG/CM2G
 (3)DESIGN TEMPERATURE DEG-C
 (4)CAPACITY M3/H
 (5)MATERIAL MT1=CASTING IRON
 (1) (2) (3) (4) (5)
 NO. P C M3/H MAT

IKATA-2	PWR	30	2	5.	100	20	MT1	8-12-30	76/12

** AUX. STEAM SYSTEM STEAM DRAIN TANK 835090

(1)TYPE TP1=SQUARE TANK
 (2)DESIGN PRESSURE
 (3)DESIGN TEMPERATURE DEG-C
 (4)CAPACITY M3
 (5)NUMBER
 (6)MATERIAL MT1=CARBON STEEL
 (1) (2) (3) (4) (5) (6)
 P C M3 NO.

IKATA-2	PWR	30	TP1	1ATM	100	10	1	MT1	8-12-30	76/12
SENDAI	PWR	31	TP1	1ATM	100	9.4	1	MT1	8-12-29	76/ 5

** FIRE PROTECT. PUMP 836100

(1)NUMBER /C1=COMMONLY USED WITH UNIT NO.1
 (2)CAPACITY M3/MIN/1
 (3)HEAD M
 (4)MOTOR OUTPUT KW
 (5)TYPE TP1=ELECTRIC MOTOR AND DIESEL ENGINE
 (6)MATERIAL MT1=CAST IRON
 (7)DIESEL ENGINE CAPACITY PS
 (8)DIESEL ENGINE FUEL L=LIGHT OIL
 (1) (2) (3) (4) (5) (6) (7) (8)
 NO. M3/M/1 M KW PS

GENKAI-2	PWR	29	2/C1	7.	100.	200.	MT1	300	L	8-12-32	76/ 2	
IKATA-2	PWR	30	2/C1	8.4	75.	160	MT1			8-12-31	76/12	
SENDAI	PWR	31	2	9.5	110.	250	TP1	MT1	360	L	8-12-30	76/ 5

** FIRE PROTECT. BACKUP COMPONEN TS 836120

(1)WATER TANK CAPACITY M3
 (2)MOTOR OPERATED VALVE CAPACITY M3/MIN
 (3)STATICAL WATER HEAD M
 (4)MATERIAL OF VALVE MT1=CARBON STEEL
 (1) (2) (3) (4)
 M3 M3/M M

IKATA-2	PWR	30	10000.	8.4	100	MT1	8-12-31	76/12

** N.DATA K-EFF SHUTDOWN MARGINE CONTROL WORTH 842220

(1)K-EFFECTIVE(TOTAL)
 (2)SHUT DOWN MARGINE
 (3)CONTROL TOTAL WORTH
 (4)CONTROL ROD WORTH
 (5)POISON CURTAIN WORTH
 (6)BURNABLE POISON
 (1)=INITIAL
 (F)=FINAL

PERCENT
 PERCENT
 PERCENT
 PERCENT
 PERCENT
 PERCENT

----- (1)----- (2) (3) (4) (5) (6)

JPDR-1	BWR	1	27.	4.	31.	20.	11.		70/ 8
JPDR-2	BWR	2	21.	8.2	29.2	21.9	7.3		70/ 8
JPDR-2	BWR	2	29.2	8.2	29.2	21.9	7.3		71/ 1
TSURUGA	BWR	3	24.	4.	28.	18.	10.	R-9	66/ 8
TSURUGA	BWR	3	15.	3.	18.	18.	----	8-14-(1)	75/ 1
ONAGAWA	BWR	4	25.(1) 13.(F)	5.	30.	18.	12.	8-14-(2,4)	70/ 5
HAMAOKA-1	BWR	5	25.(1) 13.(F)	4.	29.	17.	12.	8-112	70/ 5
HAMAOKA-1	BWR	5	25.(1) 13.(F)	4.	30.	18.	12.	85-4-2	70/11
HAMAOKA-1	BWR	5	12.	5.	17.	17.	----	95-2-3 P9	71/ 9
FUKUSIMA-1	BWR	6	24.	4.	28.	18.	10.		70/ 5
FUKUSIMA-2,3	BWR	7	25.	4.	29.	17.	12.	70/6/20	/
FUKUSIMA-2,3	BWR	7	12.	5.	17.	17.	----	82-2-3 P12	70/ 8
SHIMANE	BWR	8	24.	4.	28.	18.	10.		70/ 5
FUKUSIMA-6	BWR	11	13.(1)(8*8)					5006.031 P4	75/ 8
TOOKAI-2	BWR	12	13.(1)(8*8)					5006.041 P2	75/ 8
BROWNS FERRY	BWR	53	25.					GSK-19	69/ 2
MILLSTON	BWR	54	26.					R-9	66/ 8
DRESDEN-1	BWR	55	12.(1)		15.			DNR V4 P91	62/
DRESDEN-2	BWR	56	26.(1)		18.			DNR V7	68/
OYSTER CREEK	BWR	57	27.					R-9	66/ 8

** N.DATA K-EFF SHUTDOWN MARGINE CONTROL WORTH 842230

(A)=EXCESS REACTIVITY (COLD CLEAN) ***UNIT=PERCENT***

(B)=SHUT-DOWN MARGINE

(C)=TOTAL CONTROL WORTH

(F)=BURNABLE POISON (SEE 73372,73373)

---(A)--- --- (B)--- --- (C)--- --- (D)--- --- (E)--- --- (F)---
 K-EFF C=(D+E) CONTROL BORON BURNABLE
 (TOTAL) CLUSTER NOODO POISON
 CHOOSEI (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	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	PWR	69	K=15.7 B=5.0		D=15.4			DNR V4 P36	61/
SAXTON	PWR	70	K=25.0		D=24.0			DNR V4 P50	61/
BURLINGTON	PWR	71	K=29.3					GSK-19	69/ 2

** N.DATA CORE COOLANT VS FUEL VOLUME RATIO 842240

JPDR-1	BWR	1	2.7						/
JPDR-2	BWR	2	2.68					R-9,80-3-3	70/ 8
TSURUGA	BWR	3	2.38					8-14-(5)	70/ 5
ONAGAWA	BWR	4	2.41					8-108,8-113	70/ 5
HAMAOKA-1	BWR	5	2.41						
FUKUSIMA-1	BWR	6	2.38					R-9	66/ 8
FUKUSIMA-2,3	BWR	7	2.41					82-2-3 P13	70/ 8
SHIMANE	BWR	8	2.38(7*7 I),2.54(7*7 TORIKAE),2.60(8*8 BWR/6)					8-14-(11)	75/ 7
FUKUSIMA-5	BWR	9	2.41					8-14-(5)	71/ 2
FUKUSIMA-4	BWR	10	2.41					8-14-(5)	71/ 8
FUKUSIMA-6	BWR	11	2.41					8-14-(5)	71/12
TOOKAI-2	BWR	12	2.41					8-14-(5)	71/12
TOMIOKA-1	BWR	14	2.55					8-14-18	76/ 8
KASHIWAZAKI	BWR	15	2.60					8-3-36	75/ 3
TAKAHAMA-2	PWR	23	3.48					8-126	70/ 5
TAKAHAMA-2	PWR	23	3.48(TORIKAE,A-GATA) 3.55(TORIKAE,B-GATA)					-50-	76/11
GENKAI-1	PWR	24	3.32					8-143	70/ 5
TAKAHAMA-1	PWR	25	3.48					-13-	75/11
OOI-1,2	PWR	26	3.59					8-129	71/ 1
MIHAMA-3	PWR	27	3.48					8-126	71/ 8
IKATA-2	PWR	30	3.32					8-3-44	75/ 5
SENDAI	PWR	31	3.43					8-3-52	76/ 5
P 80 STANDARD	PWR	49	3.43						77/ 5
VERMONT YANKEE	BWR	52	2.41					A-2	/
BROWNS FERRY	BWR	53	2.41					GSK-19	69/ 2
MILLSTON	BWR	54	2.38					R-9	66/ 8
DRESDEN-2	BWR	56	2.38					R-9	66/ 8
OYSTER CREEK	BWR	57	2.38					R-9	66/ 8
DUANE ARNOLD	BWR	58	2.41					A-2 P1	70/ 7
BURLINGTON	PWR	71	1.66					GSK-19	69/ 2

** N.DATA REFLECT. THICK. RADIAL AXIAL 842260

(1) REFLECTION THICKNESS (RADIAL)
 (2) REFLECTION THICKNESS (AXIAL)
 NOTE *1: WATER
 *2: WATER+STEEL

		(1)		(2)			
		M		UPPER M	LOWER M		
ONAGAWA	BWR	4	0.6	1.8		8-14-(5)	70/ 5
HAMAOKA-1	BWR	5	0.6	1.8		8-113	70/ 5
SHIMANE	BWR	8	0.6	1.8		8-14-(11)	75/ 7
MIHAMA-1	PWR	21	0.381 *2	0.254 *2	0.254 *2	BK80-4 P6	71/ 9
MIHAMA-2	PWR	22	0.381 *2	0.254 *2	0.254 *2	BK80-4 P6	71/ 9
TAKAHAMA-2	PWR	23	0.38	0.25		8-126	70/ 5
GENKAI-1	PWR	24	0.381	0.25		8-143	70/ 5
TAKAHAMA-1	PWR	25	0.381 *2	0.254 *2	0.254 *2	BK80-4 P6	71/ 9
OOI-1,2	PWR	26	0.38	0.25		8-129	71/ 1
MIHAMA-3	PWR	27	0.38	0.25		8-126	71/ 8
IKATA-1	PWR	28	0.381	0.254			76/10
GENKAI-2	PWR	29	0.380	0.25		8-3-48	76/ 2
IKATA-2	PWR	30	0.38	0.25		8-3-44	75/ 5
SENDAI	PWR	31	0.380	0.25		8-3-52	76/ 5
YANKEE	PWR	69	0.203 *1			DNR V4 P36	61/
SAXTON	PWR	70	0.254 *1			DNR V4 P52	61/
TURKEY POINT-3,4	PWR	72	0.381 *2	0.254 *2	0.254 *2	BK80-4 P5	71/ 9
H.B.ROBINSON-2	PWR	73	0.381 *2	0.254 *2	0.254 *2	BK80-4 P5	71/ 9
SURRY-1,-2	PWR	74	0.381 *2	0.254 *2	0.254 *2	BK80-4 P5	71/ 9
BEAVER VALLEY	PWR	75	0.381 *2	0.254 *2	0.254 *2	BK80-4 P5	71/ 9
NORTH ANNA-12	PWR	76	0.381 *2	0.254 *2	0.254 *2	BK80-4 P6	71/ 9
JOSEPH M.FARLEY	PWR	77	0.381 *2	0.254 *2	0.254 *2	BK80-4 P6	71/ 9

** N.DATA EFFECT. MULTIPLICATION CONST.OF INITIAL 842280

		COLD CLEAN		HIGH TEMP ZERO POWER	HIGH TEMP FUEL POWER (NON POISON)	HIGH TEMP FUEL POWER (XESM HEIKOO)		
MIHAMA-1	PWR	21	1.211	1.167		1.114	BK80-4 P6	71/ 9
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
TAKAHAMA-2	PWR	23	1.23	1.18	1.16	1.11	(15*15)TORIKAE	-50- 76/11
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
OOI-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
IKATA-1	PWR	28	1.23	1.17	1.14	1.10	8-142	72/11
GENKAI-2	PWR	29	1.13	1.17	1.14	1.10	8-3-49	76/ 2
IKATA-2	PWR	30	1.23	1.17	1.14	1.10	8-3-45	75/ 5
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 M.FARLEY	PWR	77	1.207	1.163		1.094	BK80-4 P5	71/ 9

** N.DATA BORON CONCENTRATION INITIAL CORE 842300

(1) HIGH TEMPERATURE CONDITION (ALL CONTROL ROD CLUSTERS WITHDRAW)
 1-1 FULL POWER PPM
 1-2 RELOAD CORE INITIAL PPM
 1-3 EQUILIBRIUM CORE FINAL PPM
 (2) LOW TEMPERATURE CONDITION (ALL CONTROL ROD CLUSTERS INSERT)
 2-1 ZERO POWER PPM
 2-2 EFFECTIVE MULTIPLICATION FACTOR KEFF

		(1)			(2)			
		1-1	1-2	1-3	2-1	2-2		
		PPM	PPM	PPM	PPM	KEFF		
TAKAHAMA-2	PWR	23	1300.		2000.	0.9		8-127
TAKAHAMA-2	PWR	23	1100.		1800.	0.9	(INITIAL)	-51-
TAKAHAMA-2	PWR	23	1600.		1900.	0.9	(TORIKAE)	-51-
GENKAI-1	PWR	24	1300.	1100.	2000.	0.9		8-144
TAKAHAMA-1	PWR	25	1100.	1600.	10.	2000.	2600.	-15-
OOI-1,2	PWR	26	1200.		1725.	0.9		8-130
MIHAMA-3	PWR	27	1200.		2000.	0.9		8-127
IKATA-1	PWR	28	1300.	1100.	2000.	0.9		8-142
GENKAI-2	PWR	29	1300.	1400.	10.	2000.	0.9	8-3-49
IKATA-2	PWR	30	1300.	1600.	10.	2000.	0.9	8-3-45
								70/ 5
								76/11
								76/11
								70/ 5
								75/11
								71/ 1
								71/ 8
								72/11
								76/ 2
								76/12

** N.DATA BORON CONCENTRATION AT BOL 842310

(1)LOW TEMP. ZERO POWER (ALL CONTROL ROD CLUSTER INSERT) INITIAL LOAD
 (2)LOW TEMP. ZERO POWER (ALL CONTROL ROD CLUSTER INSERT) EQUILIBRIUM *
 (3)HIGH TEMP. ZERO POWER (ALL CONTROL ROD CLUSTER WITHDRAW) INITIAL LOAD
 (4)HIGH TEMP. ZERO POWER (ALL CONTROL ROD CLUSTER WITHDRAW) EQUILIBRIUM *
 (5)HIGH TEMP. FULL POWER (ALL CONTROL ROD CLUSTER WITHDRAW) INITIAL LOAD
 (6)HIGH TEMP. FULL POWER (ALL CONTROL ROD CLUSTER WITHDRAW) EQUILIBRIUM *
 (7)HIGH TEMP. FULL POWER (ALL CONTROL ROD CLUSTER WITHDRAW) INITIAL LOAD
 (XE,SM EQUILIBRIUM)
 (8)HIGH TEMP. FULL POWER (ALL CONTROL ROD CLUSTER WITHDRAW) EQUILIBRIUM *
 (XE,SM EQUILIBRIUM)

* EXAMPLE WHICH RELOAD-FUEL-ENRICHMENT IS (9) WEIGHT PC

(1) (2) (3) (4) (5) (6) (7) (8) (9)

-----EFFECTIVE MULTIPLICATION FACTOR----- WT,PC

-----BORON CONCENTRATION (PPM)-----

SENDAI	PWR	31	0.95	0.95	0.99	0.99	1.00	1.00	1.00	1.00	8-3-53	76/ 4
SENDAI	PWR	31	1300.	1500.	1400.	1600.	1200.	1400.	900	1100.	8-3-53	76/ 4
P 80 STANDARD	PWR	49	0.95	0.95	0.99	0.99	1.00	1.00	1.00	1.00		77/ 5
P 80 STANDARD	PWR	49	1300.	1500.	1400.	1600.	1200.	1400.	900	1100.	3.15	77/ 5

** N.DATA CONTROL REACTIVITY 842320

(1)CONTROL ROD CLUSTER INITIAL/EQUILIBRIUM* ABOUT DELTA K/K
 (WITH ONE CLUSTER STUCK)
 (2)BORON CONTROL (A) PPM INITIAL/EQUILIBRIUM* .GE. DELTA K/K
 (3)BURNABLE POISON(BOL) INITIAL/EQUILIBRIUM* ABOUT DELTA K/K
 (4)BURNABLE POISON(EOL) INITIAL/EQUILIBRIUM* ABOUT DELTA K/K

* EXAMPLE WHICH RELOAD-FUEL-ENRICHMENT IS (5) WEIGHT PC

(1) (A) (2) (3) (4) (5)

PPM

WT PC

GENKAI-2	PWR	29	0.05/		0.20/	0.07/	0.02/	8-3-49	76/ 2
IKATA-2	PWR	30	0.05/0.05		0.20/0.20	0.07/0.07	0.02/0.02	8-3-45	76/ 5
SENDAI	PWR	31	0.07/0.06	2000.	0.21/0.21	0.07/0.07		8-3-53	76/ 4
P 80 STANDARD	PWR	49	0.07/0.06*	2000.	0.21/0.21*	0.07/0.07*	3.15		77/ 5

** N.DATA REACTIVITY COEFFICIENT 842330

COEFFICIENT OF
 (1)MODERATOR TEMP. (DELTA K/K)/DEG C FROM/TO
 (2)DOPPLER (DELTA K/K)/DEG C FROM/TO
 (3)VOID (DELTA K/K)/PC VOID FROM/TO
 (4)PRESSURE (DELTA K/K)/(KG/CM2) FROM/TO
 (5)MODERATOR DENSITY (DELTA K/K)/(G/CM3) FROM/TO

(1) (2) (3) (4) (5)
 MOD.TEMP. DOPPLER VOID PRESSURE DENSITY
 *E-4 *E-5 *E-3 *E-5

TAKAHAMA-2	PWR	23	+0.5/-6.3	-1.8/-2.3	+0.5/-2.5	-0.04/+0.5	8-127(R-0)	70/ 5
TAKAHAMA-2	PWR	23	+0.5/-6.3	-1.8/-2.9	+0.5/-2.5	-0.4/+0.5	8-127(R-1)	70/10
TAKAHAMA-2	PWR	23	0/-8.1	-1.8/-3.5	0/-2.3	0/+4.5	-51-	76/11
GENKAI-1	PWR	24	+0.5/-6.5	-1.8/-2.9	+0.5/-2.5	-0.5/+5.0	8-144	70/ 5
OOI-1.2	PWR	26	0/-5.4	-2.2/-2.9	+0.5/-2.5	+0.16/+0.69	8-130	71/ 1
IKATA-1	PWR	28	+0.5/-6.5	-1.8/-2.9	+0.5/-2.5	-0.5/+5.0	8-143	72/11
GENKAI-2	PWR	29	+0.5/-8.5	-1.8/-3.5	+0.5/-2.8	+7.3/-0.5	8-3-49	76/ 2
IKATA-2	PWR	30	+0.5/-8.5	-1.8/-3.5	+0.5/-2.8	+7.3/-0.5	8-3-45	75/ 5
SENDAI	PWR	31	+0.8/-7.8	-2.3/-5.6	+0.6/-2.5	+7.2/-0.7 +0.43/0	8-3-53	76/ 5
P 80 STANDARD	PWR	49	+0.8/-7.8	-2.3/-5.6	+0.6/-2.5	+7.2/-0.7 +0.43/0		77/ 5

** N.DATA SHUTDOWN MARGINE INITIAL LOAD CORE EOL 842340

(1)TOTAL REACTIVITY= SUM((2) TO (6))
 (2)DOPPLER
 (3)MODERATOR TEMPERATURE
 (4)VOID
 (5)FLUX REDISTRIBUTION
 (6)CONTROL ROD INSERTION LIMIT
 (7)CONTROL ROD CLUSTER WORTH(ONE STUCK)*9
 (8)SHUTDOWN MARGINE =(7)-(1)
 UNIT=PERCENT DELTA K/K

(1) (2) (3) (4) (5) (6) (7) (8)

SENDAI	PWR	31	3.77	1.20	1.17	0.05	0.85	0.50	7.03	3.26	8-3-54	76/ 4
P 80 STANDARD	PWR	49	3.77	1.20	1.17	0.05	0.85	0.50	7.03	3.26		77/ 5

** N.DATA SHUTDOWN MARGINE EQUILIBRIUM CORE EOL 842350

(1)TOTAL REACTIVITY= SUM((2) TO (6))
 (2)DOPPLER
 (3)MODERATOR TEMPERATURE
 (4)VOID
 (5)FLUX REDISTRIBUTION
 (6)CONTROL ROD INSERTION LIMIT
 (7)CONTROL ROD CLUSTER WORTH(ONE STUCK)*9
 (8)SHUTDOWN MARGINE =(7)-(1)
 UNIT=PERCENT DELTA K/K
 (1) (2) (3) (4) (5) (6) (7) (8)

SENDAI	PWR	31	3.95	1.30	1.25	0.05	0.85	0.50	5.97	2.02	8-3-54	76/ 4
P 80 STANDARD	PWR	49	3.95	1.30	1.25	0.05	0.85	0.50	5.97	2.02		77/ 5

** N.DATA NEUTRON FLUX FAST EPI-TH THERMAL 842420

			FAST	EPI-TH	THERMAL	E13	N/SQCM/S		
JPDR-1	BWR	1			T=1.42	E13	N/SQCM/S		70/ 8
JPDR-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	R-9	66/ 8
TSURUGA	BWR	3	F= 3.73		T=3.57	E13	N/SQCM/S	80-3-3 P32	70/ 5
ONAGAWA	BWR	4	F=15.		T=4.3	E13	N/SQCM/S	8-14-(6)	70/ 5
HAMAOKA-1	BWR	5	F=15.		T=4.0	E13	N/SQCM/S	8-113	70/ 5
HAMAOKA-1	BWR	5	F=15.		Y=4.7	E13	N/SQCM/S	95-2-3 P11	71/ 9
FUKUSIMA-1	BWR	6			T=2.8*	E13	N/SQCM/S	R-9	66/ 8
FUKUSIMA-1	BWR	6			T=3.5	E13	N/SQCM/S	KUGE	71/ 1
FUKUSIMA-2,3	BWR	7	F=13.		T=4.3	E13	N/SQCM/S	82-2-3 P13	70/ 8
SHIMANE	BWR	8	F= 3.6		T=3.5	E13	N/SQCM/S	8-14-(12)	75/ 7
FUKUSIMA-5	BWR	9	F=13.		T=4.3	E13	N/SQCM/S	8-14-(5)	71/ 2
FUKUSIMA-4	BWR	10	F=13.		T=4.3	E13	N/SQCM/S	8-14-(5)	71/ 8
TOOKAI-2	BWR	12	F=13.		T=4.3	E13	N/SQCM/S	8-14-(5)(6)	71/12
KASHIWAZAKI	BWR	15	F=13.		T=4.6	E13	N/SQCM/S	8-3-50	75/ 3
YANKEE	PWR	69	F=28.8		T=2.5(11.9)	E13	N/SQCM/S	DNR V4 P33	61/
SAXTON	PWR	70	F=10.		T=1.5(4.9)	E13	N/SQCM/S	DNR V4 P47	61/

** H.TRANS. HEAT

FLUX

MAX

MEAN

843220

REF.1=REACTOR TECHNOLOGY VOL.14-1 1971 P82

REACTOR NAME ---REFER 73244

(1)100 PERCENT POWER

MEAN

KCAL/SQM/H

MAX.

KCAL/SQM/H

(2)112 PERCENT POWER

MEAN

KCAL/SQM/H

MAX.

KCAL/SQM/H

(3)125 PERCENT POWER

MEAN

KCAL/SQM/H

MAX.

KCAL/SQM/H

*1 7*7 574 W/CM

*2 BEFORE POWER UP

*3 AFTER POWER UP

(1)

(2)

(3)

----100 PC----

----112 PC----

----125 PC----

MEAN

MAX.

MEAN

MAX.

MEAN

MAX.

JPDR-1	BWR	1	226100.				1030200.	70/ 8
JPDR-2	BWR	2	381000.	1080000.			1350000.	70/ 8
JPDR-2	BWR	2	381000.	1080000.			1349000.	71/ 1
TSURUGA	BWR	3	318000.	1053000.				70/ 5
TSURUGA	BWR	3	351000.					70/ 5
ONAGAWA	BWR	4	445000.	1162000.				70/ 5
HAMAOKA-1	BWR	5	445000.	1160000.				70/ 5
FUKUSIMA-1	BWR	6	307000.	1107000.				66/ 8
FUKUSIMA-1	BWR	6	352000.	1085000.				71/ 1
FUKUSIMA-1	BWR	6		960402.				74/11
SHIMANE	BWR	8	352000.	1090000.			*1	8-14-(3)(20) 75/ 7
SHIMANE	BWR	8	356000.	1100000.			*1	8-14-(3)(20) 75/ 7
SHIMANE	BWR	8	316000.	960000.			*2	8-14-(20) 75/ 7
FUKUSIMA-5	BWR	9	446000.	1160000.				8-14-(10) 71/ 2
FUKUSIMA-4	BWR	10	446000.	1160000.				8-14-(10) 71/ 8
TOOKAI-2	BWR	12	446000.	1160000.				8-14-(10) 71/12
TOMIOKA-1	BWR	14	387000.	960000.				8-14-33 76/ 8
KASHIWAZAKI	BWR	15	387000.	960000.				8-3-63 75/ 3
TOMIOKA-2	BWR	16	387000.	960000.				8-3-78 76/12
MIHAMA-1	PWR	21	388000.	1246000.	1416000.			BK80-4 P4 71/ 9
MIHAMA-2	PWR	22	457000.	1288000.				BK80-4 P4 71/ 9
TAKAHAMA-2	PWR	23	518000.		1625000.			8-16 70/ 5
TAKAHAMA-2	PWR	23	518000.	1450000.	1625000.			8-16 70/ 5
TAKAHAMA-2	PWR	23	516000.	1244000.				-62- 76/11
GENKAI-1	PWR	24	518000.	1450000.	1624000.			8-17 70/ 5
GENKAI-1	PWR	24	518000.	1383000.				76/10
TAKAHAMA-1	PWR	25	518183.	1451500.				BK80-4 P4 71/ 9
TAKAHAMA-1	PWR	25	516000.	1450000.	1625000.			-7- 75/11
OOI-1,2	PWR	26	589000.	1573000.	1762000.			8-16 71/ 1
MIHAMA-3	PWR	27	518000.	1450000.	1625000.			8-16 71/ 8
IKATA-1	PWR	28	518000.	1383000.	1549000.			8-146 72/11
IKATA-1	PWR	28	518000.	1383000.				76/10
GENKAI-2	PWR	29	521000.	1255000.				8-3-50 76/ 2
IKATA-2	PWR	30	521000.	1255000.				8-3-46 76/12
SENDAI	PWR	31	492000.	1186000.				8-3-55 76/ 5
P 80 STANDARD	PWR	49	492000.	1142000.				77/ 5
VERMONT YANKEE	BWR	52	445000.	1160000.				A-2 70/ 5
BROWNS FERRY	BWR	53	442800.	1153000.				GSK-19 69/ 2
MILLSTON	BWR	54	302000.	905000.				R-9 66/ 8
DRESDEN-1	BWR	55	255500.			938500.		GSK-19 62/
DRESDEN-2	BWR	56	314000.	947000.				R-9 66/ 8
OYSTER CREEK	BWR	57	293000.	1080000.				R-9 66/ 8
OYSTER CREEK	BWR	57	355000.	1315000.				R-9 66/ 8
DUANE ARNOLD	BWR	58	445000.	1160000.				A-2 P1 70/ 7
YANKEE	PWR	69	289750.	1210000.				DNR V4 P36 61/
SAXTON	PWR	70	371680.	1204572.				DNR V4 P50 61/
BURLINGTON	PWR	71	532600.	1502000.				GSK-19 69/ 2
TURKEY POINT-3,4	PWR	72	465600.	1503500.				BK80-4 P3 71/ 9
H.B.ROBINSON-2	PWR	73	465600.	1503500.				BK80-4 P3 71/ 9
SURRY-1,-2	PWR	74	518500.	1449000.				BK80-4 P3 71/ 9
BEAVER VALLEY	PWR	75	563200.	1503800.				BK80-4 P4 71/ 9
NORTH ANNA-12	PWR	76	563200.	1503800.				BK80-4 P4 71/ 9
JOSEPH M.FARLEY	PWR	77	563200.	1572400.				BK80-4 P4 71/ 9
OTHERS		0	DNP1 TP1	950000=100,MAX				REF.1 /
OTHERS		0	DNP1 TP3B	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 SIRYOO		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 SIRYOO		MEMO P6	70/ 3
OTHERS		0	HUMB,TP3	1050000=100,MAX				/

** H. TRANS. HEAT	FLUX	MAX	MEAN	843220		
		(1)	(2)	(3)		
		-----100 PC-----	-----112 PC-----	-----125 PC-----		
		MEAN MAX.	MEAN MAX.	MEAN MAX.		
OTHERS	0	HUMB.TP3	870000=100,MAX	FUKUSIMA-1 SIRYOO	MEMO P6	70/ 3
OTHERS	0	KRB	1000000=100,MAX		REF.1	/
OTHERS	0	BRP-B	1180000=100,MAX		REF.1	/
OTHERS	0	BRP-E	1110000=100,MAX		REF.1	/
OTHERS	0	BRP-FG	1110000=100,MAX		REF.1	/
OTHERS	0	TARAPUR	1000000=100,MAX		REF.1	/
OTHERS	0	CURRENT BWR	1160000=100,MAX		REF.1	/

** FUEL	HEAT	TRANS.	AREA AND	FLOW AREA	843240	
			(1) HEAT TRANSFER AREA			
			SQM : SQUARE METER			
			SQFT: SQUARE FOOT			
			(2) EFFECTIVE FLOW SECTION AREA FOR HEAT TRANSFER			
			SQM : SQUARE METER			
			SQFT: SQUARE FOOT			
			----- (1) -----	----- (2) -----		
			SQM SQFT	SQM SQFT		
JPDR-1	BWR	1	166.			/
JPDR-2	BWR	2	196.			70/ 8
TSURUGA	BWR	3	2510.		80-3-3	70/ 5
ONAGAWA	BWR	4	2958.		8-14-(9)	70/ 5
HAMAOKA-1	BWR	5	2958.		8-114	70/ 5
FUKUSIMA-1	BWR	6	9065.		BWR/6	70/ 5
SHIMANE	BWR	8	8.14 SQM/ASSY(7*7 INITIAL)		8-14-(20)	75/ 7
SHIMANE	BWR	8	8.04 SQM/ASSY(7*7 TORIKAE)		8-14-(20)	75/ 7
SHIMANE	BWR	8	9.06 SQM/ASSY(8*8 BWR/6)		8-14-(20)	75/ 7
FUKUSIMA-5	BWR	9	4404.		8-14-(10)	71/ 2
FUKUSIMA-4	BWR	10	4404.		8-14-(10)	71/ 8
TOOKAI-2	BWR	12	6150.		8-14-(6)	71/12
TOMIOKA-1	BWR	14	7020.		8-14-33	76/ 8
KASHIWAZAKI	BWR	15	7020.		8-3-63	75/ 3
TOMIOKA-2	BWR	16	7020.		8-3-78	76/12
MIHAMA-1	PWR	21	2223.	23929.	2.3411	25.2
MIHAMA-2	PWR	22	2668.	28714.	2.3597	25.4
TAKAHAMA-2	PWR	23	3945.	42460.	3.6232	39.
GENKAI-1	PWR	24	2668.	28714.		
TAKAHAMA-1	PWR	25	3945.	42460.	3.6232	39.
MIHAMA-3	PWR	27	3945.	42460.	3.8833	41.8
IKATA-1	PWR	28	2668.	28714.		
GENKAI-2	PWR	29	2654.			
IKATA-2	PWR	30	2654.			
SENDAI	PWR	31	4515.			
P 80 STANDARD	PWR	49	4515.			
BROWNS FERRY	BWR	53	6040.			
DRESDEN-1	BWR	55	2002.	21550.	2.7161	
DRESDEN-2	BWR	56		63527.		
YANKEE	PWR	69	1440.	15500.	1.4310	15.4
SAXTON	PWR	70	46.3	498.	0.2555	2.75
BURLINGTON	PWR	71	4849.			
TURKEY POINT-3,4	PWR	72	3944.7	42460.	3.8833	41.8
H.B.ROBINSON-2	PWR	73	3944.7	42460.	3.8833	41.8
SURRY-1,-2	PWR	74	3944.7	42460.	3.8833	41.8
BEAVER VALLEY	PWR	75	3944.7	42460.	3.8833	41.8
NORTH ANNA-12	PWR	76	3944.7	42460.	3.8833	41.8
JOSEPH M.FARLEY	PWR	77	3944.7	42460.	3.8833	41.8

PLANT PERFORMANCE DATA

DATE=77-08-12

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** CORE	POWER	DENSITY	MEAN	KW/H	KW/KGUO2	843420		
			(1)FUEL	POWER	DENSITY	MEAN	KW/L	
			(2)FUEL	POWER	DENSITY	MEAN	KW/KGUO2	
			(3)FUEL	POWER	DENSITY	MEAN	KW/KGU	
			(1)	(2)	(3)			
			KW/L	KW/KGUO2	KW/KGU			
JPDR-1	BWR	1	22.5	9.4				/
JPDR-2	BWR	2	46.5	18.8				70/ 8
TSURUGA	BWR	3	37.07	14.1			80-3-3-R-9	70/ 5
TSURUGA	BWR	3	40.6	15.5			KUGE	71/ 1
ONAGAWA	BWR	4	50.9				8-14-(9)	70/ 5
HAMAOKA-1	BWR	5	51.				2-2	70/ 5
FUKUSIMA-1	BWR	6	40.6	13.6			R-9	66/ 8
FUKUSIMA-1	BWR	6		15.5			KUGE	71/ 1
FUKUSIMA-2,3	BWR	7	51.2					/
SHIMANE	BWR	8	40.6					/
FUKUSIMA-5	BWR	9	51.2				8-14-(10)	71/ 2
FUKUSIMA-4	BWR	10	51.2				8-14-(10)	71/ 8
TOOKAI-2	BWR	12	51.2				8-14-(10)	71/12
TOMIOKA-1	BWR	14	50.0				8-14-33	76/ 8
KASHIWAZAKI	BWR	15	50.0				8-3-63	75/ 3
TOMIOKA-2	BWR	16	50.0				8-3-78	76/12
TAKAHAMA-2	PWR	23	92.				80-9-1	70/ 5
GENKAI-1	PWR	24	95.				80-9-1	70/ 5
IKATA-1	PWR	28	95.				8-147	72/11
GENKAI-2	PWR	29	95.				8-3-50	76/ 2
IKATA-2	PWR	30	95.				8-3-46	75/ 5
SENDAI	PWR	31	100.				8-3-55	76/ 5
P 80 STANDARD	PWR	49	100.					77/ 5
VERMONT YANKEE	BWR	52	50.9				A-2	/
BROWNS FERRY	BWR	53	50.8		22.		GSK-19	69/ 2
MILLSTON	BWR	54	35.03	13.3			R-9	66/ 8
DRESDEN-1	BWR	55	31.2	10.9			DNR V4 P91	62/
DRESDEN-2	BWR	56	36.7	13.9			R-9	66/ 8
DRESDEN-2	BWR	56		16.13			DNR V7 P192	68/
OYSTER CREEK	BWR	57	35.4				R-9	66/ 8
DUANE ARNOLD	BWR	58	50.9				A-2 P1	70/ 7
YANKEE	PWR	69	72.		23.23		DNR V4 P33	61/
SAXTON	PWR	70	54.	20.			DNR V4 P47	61/
BURLINGTON	PWR	71	93.1		34.8		GSK-19	69/ 2
MONJU	FAST	92	292.				GAKKAISI43P	72/ 5

** PEAKING FACTOR	TOTAL	CHANNEL	AXIAL	LOCAL	843620			
		TOTAL	CHANNEL	AXIAL	LOCAL	GROSS	RADIAL	AZIMUTH OVER,P
JPDR-1	BWR	1	T=4.56		L=1.46		AZ=	O=1.25
JPDR-2	BWR	2	T=3.29	X=1.75	L=1.20	G=2.2	R=1.21	AZ=1.03
JPDR-2	BWR	2	T=3.54	X=1.75	L=1.30	G=2.18	R=1.21	AZ=1.03
JPDR-2	BWR	2	T=G*L*OP			G=X*R*AZ		
TSURUGA	BWR	3	T=3.60	C=----	X=1.57	L=1.30	G=2.31	R=1.27
							AZ=1.16	O=1.20(R-9)
TSURUGA	BWR	3	T=3.00	C=1.47	A=1.57	L=1.30	(1970/5)REVISED	80-3-3 P38.
ONAGAWA	BWR	4	T=2.61	C=1.405	A=1.50	L=1.24		8-14-(9)
HAMAOKA-1	BWR	5	T=2.61	C=1.405	A=1.50	L=1.24		8-118
HAMAOKA-1	BWR	5	DEFINITION OF PEAKING FACTOR HAS BEEN REVISED ---					
HAMAOKA-1	BWR	5	I.E. UNIT CELL OF RADIAL AND LOCAL IS 4-ASSY-CELL(196					
								95-2-3 P11
HAMAOKA-1	BWR	5	RODS) INSTEAD OF 1-ASSY-CELL(49 RODS)					
FUKUSIMA-1	BWR	6	T=2.82		X=1.57	L=1.22	R=1.47	95-2-3 P11
FUKUSIMA-1	BWR	6	T=3.0	C=1.47	A=1.57	L=1.30		BWR/6
FUKUSIMA-2,3	BWR	7	T=2.60			L=1.24		7 4//11
FUKUSIMA-2,3	BWR	7	DEFINITION OF PEAKING FACTOR HAS BEEN REVISED ---					
								O=1.20(R-9)
FUKUSIMA-2,3	BWR	7	REVISION IS SAME AS HAMAOKA(FROM 1ASSY TO 4ASSY)					
SHIMANE	BWR	8	T=3.00		X=1.57	L=1.30	R=1.47	82-2-3
SHIMANE	BWR	8	T=2.82		X=1.57	L=1.22	R=1.47	89-7-3 P19
TOOKAI-2	BWR	12			X=1.50		R=1.40	8-14-(10)
TOMIOKA-1	BWR	14			1.40	1.24	1.40	8-14-(10)
KASHIWAZAKI	BWR	15			X=1.40	L=1.24		8-14-9
VERMONT YANKEE	BWR	52	T=2.61	C=1.405	A=1.50	L=1.24		8-14-14
BROWNS FERRY	BWR	53	T=2.60		A=1.74			75/ 3
MILLSTON	BWR	54	T=3.60	C=1.47	A=1.57	L=1.30		70/ 5
DRESDEN-1	BWR	55	T=3.60		X=1.6	L=1.4		70/ 5
DRESDEN-2	BWR	56	T=3.0	C=1.47	A=1.57	L=1.30		69/ 2
OYSTER CREEK	BWR	57	T=3.70		A=1.57	L=1.30		O=1.20(R-9)
DUANE ARNOLD	BWR	58	T=2.61	C=1.405	A=1.50	L=1.24		O=1.25 DNR
BURLINGTON	PWR	71	T=2.82		A=1.70			66/ 8
							R=1.30	66/ 8
							AZ=1.16	A-2 P1
								GSK-19

** HOT

CHANNEL FACTOR

N.DATA

THERMAL DATA

843640

(1) THERMAL HOT CHANNEL FACTOR (HEAT FLUX) FQ
 (2) NUCLEAR HOT CHANNEL FACTOR (HEAT FLUX) FQ N
 (3) THERMAL HOT CHANNEL FACTOR (ENTHALPY RISE) F DELTA H
 (4) NUCLEAR HOT CHANNEL FACTOR (ENTHALPY RISE) F DELTA H N
 * FILM-TEMPERATURE-DROP
 ** COOLANT-TEMPERATURE-RISE
 (1) (2) (3) (4)

MIHAMA-1	PWR	21	3.25		1.88			BK80-4 P2	71/ 9
MIHAMA-2	PWR	22	2.82		1.70			BK80-4 P2	71/ 9
TAKAHAMA-2	PWR	23	2.82	2.71	1.70	1.58		8-126,8-130	70/ 5
TAKAHAMA-2	PWR	23	2.41		1.55			-62-	76/11
GENKAI-1	PWR	24	2.80	2.72	1.60	1.58		8-143,8-148	70/ 5
GENKAI-1	PWR	24	2.67		1.52				76/10
TAKAHAMA-1	PWR	25							/
OOI-1,2	PWR	26							/
MIHAMA-3	PWR	27							/
IKATA-1	PWR	28	2.67	2.59	1.52	1.51		8-141,8-147	72/11
GENKAI-2	PWR	29	2.41		1.52			8-3-50	76/ 2
GENKAI-2	PWR	29	2.41		1.52				76/10
IKATA-2	PWR	30	2.41	2.34	1.52	1.51		8-3-44,46	76/12
SENDAI	PWR	31	2.41	2.34	1.55	1.55		8-3-52	76/ 5
P 80 STANDARD	PWR	49	2.32	2.25		1.55			77/ 5
YANKEE	PWR	69	4.19		**2.56			DNR V4 P36	61/
YANKEE	PWR	69	*5.32					DNR V4 P36	61/
SAXTON	PWR	70	3.24		2.30			DNR V4 P50	61/
TURKEY POINT-3,4	PWR	72	3.23		1.77			BK80-4 P1	71/ 9
H.B.ROBINSON-2	PWR	73	3.23		1.77			BK80-4 P1	71/ 9
SURRY-1,-2	PWR	74	2.80		1.60			BK80-4 P1	71/ 9

** MCPR

843810

(1) MCPR LIMIT (TRANSIENT)
 INI.=INITIAL CORE, REL.=RELOADED-CORE
 (1)=(6)-(2),(7)-(3),(8)-(4),(9)-(5)
 (1) (2) (3) (4) (5) (6) (7) (8) (9)
 ---DELTA MCPR(MAX)--- LIMIT(NORMAL OPERATION)
 ---7*7--- ---8*8--- ---7*7--- ---8*8---
 INI. REL. INI. REL. INI. REL. INI. REL.

TSURUGA	BWR	3	1.06	0.17	0.18	1.23		1.24	77/ 1
ONAGAWA	BWR	4	1.06	-----	0.17 0.22	-----		1.23 1.28	77/ 1
HAMAOKA-1	BWR	5	1.06	0.16 0.16	0.17 0.17	1.22 1.22	1.23 1.23		77/ 1
FUKUSIMA-1	BWR	6	1.06	0.20	0.23	1.26		1.29	77/ 1
FUKUSIMA-2,3	BWR	7	1.06	0.16 0.18	0.17 0.22	1.22 1.24	1.23 1.28		77/ 1
SHIMANE	BWR	8	1.06	0.20	0.23	1.26		1.29	77/ 1
FUKUSIMA-5	BWR	9	1.06	0.16 0.18	0.17 0.22	1.22 1.24	1.23 1.28		77/ 1
FUKUSIMA-4	BWR	10	1.06	0.16 0.18	0.17 0.22	1.22 1.24	1.23 1.28		77/ 1
FUKUSIMA-6	BWR	11	1.07	-----	0.12 0.19	-----	1.19 1.26		77/ 1
TOOKAI-2	BWR	12	1.07	-----	0.12 0.19	-----	1.19 1.26		77/ 1
HAMAOKA-2	BWR	13	1.06	-----	0.17 0.23	-----	1.23 1.29		77/ 1
TOMIOKA-1	BWR	14	1.07	-----	0.12 0.19	-----	1.19 1.26		77/ 1
KASHIWAZAKI	BWR	15	1.07	-----	0.12 0.19	-----	1.19 1.26		77/ 1

** MCHFR

843820

(1) 100 PERCENT POWER
 (2) 125 PERCENT OVER POWER
 (1) (2)
 100PC 125PC

JPDR-1	BWR	1	1.7					/
JPDR-2	BWR	2	2.4	1.94				70/ 8
JPDR-2	BWR	2		1.5				71/ 1
TSURUGA	BWR	3	1.9					81-3-2
ONAGAWA	BWR	4	1.9					8-14-(9)
HAMAOKA-1	BWR	5	1.9					8-155
FUKUSIMA-1	BWR	6	1.9					70/ 5
FUKUSIMA-2,3	BWR	7	1.9					85-7-2
SHIMANE	BWR	8	1.9					70/ 5
FUKUSIMA-5	BWR	9	1.9					8-14-(10)
FUKUSIMA-4	BWR	10	1.9					8-14-(10)
TOOKAI-2	BWR	12	1.9					71/12
KASHIWAZAKI	BWR	15	2.3					8-3-64
VERMONT YANKEE	BWR	52	1.9					A-2
BROWNS FERRY	BWR	53	1.9					GSK-19
DUANE ARNOLD	BWR	58	1.9					69/ 2
								A-2 P1
								70/ 7

** DNBR

843830

(1)DNBR AT RATED POWER
 (2)DNBR AT ABNORMAL TRANSIENT
 GT=GREATER THAN. AB=ABOUT
 (1) (2)

MIHAMA-1	PWR	21	1.83(W-3)	GT1.3(W-3)		76/10
MIHAMA-2	PWR	22	1.84(W-3)	GT1.3(W-3)		76/10
TAKAHAMA-2	PWR	23		1.3		/
TAKAHAMA-2	PWR	23	GT1.80	GT1.3	-62-	76/11
GENKAI-1	PWR	24	GT1.80(W-3)	GT1.3(W-3)		76/10
TAKAHAMA-1	PWR	25		1.3		/
OOI-1,2	PWR	26		1.3		/
MIHAMA-3	PWR	27		1.3		/
IKATA-1	PWR	28	GT1.80(W-3)	GT1.3(W-3)		76/10
GENKAI-2	PWR	29	GT1.80(W-3)	GT1.3(W-3)	8-3-50	76/ 2
IKATA-2	PWR	30	1.80(W-3)	GT1.3(W-3)		76/10
SENDAI	PWR	31	AB1.80	1.3		/
P 80 STANDARD	PWR	49	AB1.8	GE1.30		77/ 5
BURLINGTON	PWR	71	1.8		GSK-19	69/ 2
TURKEY POINT-3,4	PWR	72		1.3	BK80-4 P2	71/ 9
H.B.ROBINSON-2	PWR	73		1.3	BK80-4 P2	71/ 9
SURRY-1,-2	PWR	74		1.3	BK80-4 P1	71/ 9
BEAVER VALLEY	PWR	75		1.3	BK80-4 P1	71/ 9
NORTH ANNA-12	PWR	76		1.3	BK80-4 P1	71/ 9
JOSEPH M.FARLEY	PWR	77		1.3	BK80-4 P1	71/ 9
MUTSU	PWR	80		GT1.3(AT 130 PC OVER POWER)		/

** HEAT GENERATE RATIO FUEL VS TOTAL 843840

(1)HEAT GENERATE RATIO PC
 (1)
 PC

JPDR-2	BWR	2	96.0			70/11
MIHAMA-1	PWR	21	97.4			76/10
MIHAMA-2	PWR	22	97.4		6783-5	70/10
TAKAHAMA-2	PWR	23	97.4		8-130	70/ 5
GENKAI-1	PWR	24	97.4		6783-5	70/10
TAKAHAMA-1	PWR	25	97.4		6783-5	70/10
OOI-1,2	PWR	26	97.4		8-133	71/ 1
MIHAMA-3	PWR	27	97.4		8-130	71/ 8
IKATA-1	PWR	28	97.4		8-147	72/11
GENKAI-2	PWR	29	97.4		8-3-50	76/ 2
IKATA-2	PWR	30	97.4		8-3-46	75/ 5
SENDAI	PWR	31	97.4		8-3-55	76/ 5
P 80 STANDARD	PWR	49	97.4			77/ 5
BROWNS FERRY	BWR	53	96.0		GSK-19	69/ 2
BURLINGTON	PWR	71	97.4		GSK-19	69/ 2
TURKEY POINT-3,4	PWR	72	97.4		BK80-4 P1	71/ 9
H.B.ROBINSON-2	PWR	73	97.4		BK80-4 P1	71/ 9
SURRY-1,-2	PWR	74	97.4		BK80-4 P1	71/ 9
BEAVER VALLEY	PWR	75	97.4		BK80-4 P1	71/ 9
NORTH ANNA-12	PWR	76	97.4		BK80-4 P2	71/ 9
JOSEPH M.FARLEY	PWR	77	97.4		BK80-4 P2	71/ 9

** EARTHQUAKE-PROOF DESIGN GAL 853400

(NOTE)EC=EL CENTRA, GG=GOLDEN GATE, TF=TAFT, ST=SITE, DC=DESIGN CURVE

TSURUGA	BWR	3	250. (375)	EC,GG	BK80-2 P6	71/ 9
ONAGAWA	BWR	4	250. (375)	EC,TF,ST	BK80-2 P6	71/ 9
HAMAOKA-1	BWR	5	300. (450)	EC,TF,ST	BK80-2 P6	71/ 9
SHIMANE	BWR	8	200. (300)	EC,TF,ST	BK80-2 P6	71/ 9
MIHAMA-1	PWR	21	300. (400)	DC	BK80-2 P6	71/ 9
MIHAMA-2	PWR	22	300. (400)	DC	BK80-2 P6	71/ 9
TAKAHAMA-2	PWR	23	270. (360)	DC	BK80-2 P6	71/ 9
GENKAI-1	PWR	24	180. (270)	EC,GG,ST	BK80-2 P6	71/ 9
TAKAHAMA-1	PWR	25	270. (360)	DC	BK80-2 P6	71/ 9
OOI-1,2	PWR	26	270. (405)	DC	BK80-2 P6	71/ 9
MIHAMA-3	PWR	27	270. (405)	DC	BK80-2 P6	71/ 9

** REACTION OF BED- ROCK FOR REACTOR BUILDING WEIGHT 854200

			WEIGHT TON	ZIBAN-HANRYOKU T/SQM	DESIGN LEAK RATE PERCENT/DAY		
ONAGAWA	BWR	4	100000 TON	50.	100. PC (AT -6.4MM-WATER-H)	8-15-(3)	70/ 5
HAMAOKA-1	BWR	5	140000 TON	33.	100. PC (AT -6.0MM-WATER-H)	8-126	70/ 5
FUKUSIMA-5	BWR	9	110000 TON	41.	100. PC (AT -6.4MM-WATER-H)	8-15-(3)	71/ 2
FUKUSIMA-4	BWR	10	110000 TON	41.	100. PC (AT -6.4MM-WATER-H)	8-15-(3)	71/ 8
TOOKAI-2	BWR	12	270000 TON	60.		8-5-(3)	71/12
TOMIOKA-1	BWR	14	250000 TON	45.		8-15-1	76/ 8
KASHIWAZAKI	BWR	15			100. PC (AT -6.0MM-WATER-H)	30	75/ 3

** REACTOR BUILDING DESIGN-P (INNER)

854400

DESIGN-P(INNER)
KG/SQCMG

HAMAOKA-1	BWR	5	0.018 KG/SQCMG			8-102	70/ 5
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** TURBINE BUILDING SIZE EARTHQUAKE-PROOF GRADE 856300

			(1)*(2)	PLANE (3) HEIGHT (4) HEIGHT (5) EARTHQUAKE GRADE	M*M M M M	(FROM BASE BOTTOM) (FROM GROUND LEVEL)		
			(1)	(2)	(3)	(4)	(5)	
			M	M	M	M	GRADE	
ONAGAWA	BWR	4	52.	93.	38.		(B)	8-15-(4) 70/ 5
HAMAOKA-1	BWR	5	50.	110.	36.		(B)	8-127 70/ 5
FUKUSIMA-5	BWR	9	67.	110.	37.		(B)	8-15-(4) 71/ 2
FUKUSIMA-4	BWR	10	67.	105.	37.		(B)	8-15-(4) 71/ 8
FUKUSIMA-6	BWR	11	70.	104.	42.		(B)	8-15-(4) 71/12
TOOKAI-2	BWR	12	70.	105.	47.			8-15-(4) 71/12
HAMAOKA-2	BWR	13	50.	120.	40.		(B)	8-107 72/ 9
TOMIOKA-1	BWR	14	78.	147.	44.	32.	(B)	8-15-2 76/ 8
KASHIWAZAKI	BWR	15	78.	148.	45.			8-2-5 75/ 3
TOMIOKA-2	BWR	16	78.	108.			(B) 2/1	8-1-54 76/12
TAKAHAMA-2	PWR	23	40.	95.		31.	(C)	8-140 70/ 5
GENKAI-1	PWR	24	34.	88.5		27.	(C)	8-158 70/ 5
MIHAMA-3	PWR	27	40.	103.		33.	(C)	8-140 71/ 7
IKATA-2	PWR	30	38.	82.		25.		76/11

** RAD. SHIELD REGION STANDARD

920000

REG-A REG-B REG-C REG-D REG-E REG-F
UNIT (LE, HOUR/WEEK) / (LE, MILLI-REM/HOUR)
NOTE S.T=VERY SHORT TIME, OL=OFF LIMIT

ONAGAWA	BWR	4	FREE/0.6	48/1.0	10/6.0	5/12.	S.T/50	OL/GT 50.	9-2-(1) 70/ 5
HAMAOKA-1	BWR	5	FREE/0.5	48/1.0	10/6.0	5/12.	S.T/50	OL/GT 50.	9-2 70/ 5
FUKUSIMA-5	BWR	9	FREE/0.6	48/1.0	10/6.0	5/12.	S.T/50	OL/GT 50.	9-2-(1) 71/ 2
FUKUSIMA-4	BWR	10	SAME AS	FUKUSIMA-5					9-2-(1) 71/ 8
KASHIWAZAKI	BWR	15		48/1.0	10/5.0	2/25.0	S.T/100.	OL/GT 100.	9-2-3 75/ 3
TAKAHAMA-2	PWR	23	FREE/0.625	/1.0		/15.		/GT 15	9-7 70/ 5
GENKAI-1	PWR	24	FREE/0.625	48/1.0		7/15.		OL/GT 15	9-5 70/ 5
OOI-1,2	PWR	26	FREE/0.625	/1.0		/15.		/GT 15	9-6 71/ 1
MIHAMA-3	PWR	27	FREE/0.625			/15.		/GT 15	9-7 71/ 8
IKATA-2	PWR	30		48/1.0		7/15.		OL/GT 15.	9-2-3 75/ 5

PLANT PERFORMANCE DATA

DATE=77-08-12

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** RAD.	LEVEL	NORMAL	WASTE	GAS	DISPOSAL	942000	-----TOTAL----- MICRO CI/SEC			
			FROM DEAERATOR 30-MINUT (A) (N-13+AR-41)	24HR (B)	TURBINE COND. 2-MINUT DECAY (C) (N-16+O-19+N-13)		(A+C)	(B+C)		
ONAGAWA	BWR	4	213+2	0	1+21+2		239.	24.	9-4-(2)	70/ 5
HAMAOKA-1	BWR	5	213+2	0	1+21+2		239.	24.	9-5	70/ 5
FUKUSIMA-1	BWR	6	N -17= 1	0	1		2	1	MEMO-P291	70/ 5
FUKUSIMA-1	BWR	6	N -16= 1	0	1		2	1	MEMO-P291	70/ 5
FUKUSIMA-1	BWR	6	O -19= 1	0	1		2	1	MEMO-P291	70/ 5
FUKUSIMA-1	BWR	6	N -13=170	0	1		171	1	MEMO-P291	70/ 5
FUKUSIMA-1	BWR	6	AR-41= 7	9E-4	0		6	0	MEMO-P291	70/ 5
FUKUSIMA-1	BWR	6	AR-37=2E-4	2E-4	0		0	0	MEMO-P291	70/ 5
FUKUSIMA-1	BWR	6	H - 3= 1	1	0		1	1	MEMO-P291	70/ 5
FUKUSIMA-1	BWR	6	TOTAL=181.	1.	4.		184.	5.	MEMO-P291	70/ 5
FUKUSIMA-5	BWR	9		CHARCOAL					9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9		HOLD UP					9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	N-17 = 1	0	1		2	1	9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	N-16 = 1	0	1		2	1	9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	O-19 = 1	0	1		2	1	9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	N-13 =250	0	2		252	2	9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	AR-41= 6	4	0		6	4	9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	AR-37= 0	0	0		0	0	9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	H-3 = 1	1	0		1	1	9-4-(2)	71/ 2
FUKUSIMA-5	BWR	9	TOTAL=260	5	5		265	10	9-4-(2)	71/ 2
FUKUSIMA-4	BWR	10	SAME AS FUKUSIMA-5						9-4-(2)	71/ 8

** OFF GAS ACT.RES. OF GAS- RELEASE

942200

- (1)TOTAL AMOUNT OF RELEASED ACTIVITY
 (2)AVERAGE RELEASE RATE OF ACTIVITY THROUGH YEAR
 (3)ESTIMATED IRRADIATION DOSE
 (4)YEAR

CI/Y
 MILLI CI/SEC
 MREM/Y

*1)CHARCOAL BED HAS BEEN USED SINCE 1971/12

HB : HUMBOLDT BAY (BWR)
 BRP : BIG ROCK POINT (BWR)
 IP : INDIAN POINT (PWR)
 YR : YANKEE ROWE (PWR)
 SO : SAN ONOFRE (PWR)
 CY : CONNECTICUT YANKEE (PWR)
 G : GINNA (PWR)
 NMP : NINE MILE POINT (BWR)

(1) (2) (3) (4)
 CI/Y MCI/S MREM/Y YEAR

TSURUGA	BWR	3	1.3E5	4.2	6.4	1970		BINRANP172	74/
TSURUGA	BWR	3	4.2E4	1.3	2.0	1971		P172	74/
TSURUGA	BWR	3	4.9E3	0.15	1.1	1972		P172	74/
FUKUSIMA-1	BWR	6	7.0E4	2.2	1.4	1971	*1)	P172	74/
FUKUSIMA-1	BWR	6	9.7E4	3.1	2.0	1972		P172	74/
MIHAMA-1	PWR	21	1.4E3	0.44	0.02	1971		P172	74/
MIHAMA-1	PWR	21	0.6E3	0.02	*0.01	1972	**INCL.M-2	P172	74/
MIHAMA-2	PWR	22	2.6E2	0.01		1972		P172	74/
DRESDEN-1	BWR	55	3.48E4		0.97	1961		137 6 2	75/ 5
DRESDEN-1	BWR	55	2.84E5		7.9	1962		137 6 2	75/ 5
DRESDEN-1	BWR	55	7.16E4		2.0	1963		137 6 2	75/ 5
DRESDEN-1	BWR	55	5.21E5		14.	1964		137 6 2	75/ 5
DRESDEN-1	BWR	55	6.1 E5		17.	1965		137 6 2	75/ 5
DRESDEN-1	BWR	55	7.36E5		20.	1966		137 6 2	75/ 5
DRESDEN-1	BWR	55	2.6 E5		7.4	1967		137 6 2	75/ 5
DRESDEN-1	BWR	55	2.4 E5		6.8	1968		137 6 2	75/ 5
DRESDEN-1	BWR	55	8. F5		23.	1969		137 6 2	75/ 5
DRESDEN-1	BWR	55	9.1 E5		25.	1970		137 6 2	75/ 5
DRESDEN-1	BWR	55	7.53E5		21.	1971		137 6 2	75/ 5
DRESDEN-1	BWR	55	8.77E5		24.	1972		137 6 2	75/ 5
DRESDEN-2	BWR	56	5.8 E5		13.	1971		137 6 2	75/ 5
DRESDEN-2	BWR	56	4.29E5		9.7	1972		137 6 2	75/ 5
OYSTER CREEK	BWR	57	7.00E3		0.38	1969		137 6 2	75/ 5
OYSTER CREEK	BWR	57	1.10E5		6.0	1970		137 6 2	75/ 5
OYSTER CREEK	BWR	57	5.16E5		27.	1971		137 6 2	75/ 5
OYSTER CREEK	BWR	57	8.66E5		4.6	1972		137 6 2	75/ 5
OTHERS		0	5.5 F1		0.001	1969		137 6 2 NMP	75/ 5
OTHERS		0	9.5 E3		0.18	1970		137 6 2 NMP	75/ 5
OTHERS		0	2.53E5		4.7	1971		137 6 2 NMP	75/ 5
OTHERS		0	5.17E5		9.6	1972		137 6 2 NMP	75/ 5
OTHERS		0	7.16E2		0.22	1963		137 6 2 HB	75/ 5
OTHERS		0	5.98E3		1.9	1964		137 6 2 HB	75/ 5
OTHERS		0	1.97E5		62.	1965		137 6 2 HB	75/ 5
OTHERS		0	2.82E5		88.	1966		137 6 2 HB	75/ 5
OTHERS		0	9.00E5		280.	1967		137 6 2 HB	75/ 5
OTHERS		0	8.97E5		280.	1968		137 6 2 HB	75/ 5
OTHERS		0	4.90E5		160.	1969		137 6 2 HB	75/ 5
OTHERS		0	5.40E5		170.	1970		137 6 2 HB	75/ 5
OTHERS		0	5.14E5		160.	1971		137 6 2 HB	75/ 5
OTHERS		0	4.30E5		130.	1972		137 6 2 HB	75/ 5
OTHERS		0	2.56E1		0.0004	1962		137 6 2 BRP	75/ 5
OTHERS		0	8.03E2		0.013	1963		137 6 2 BRP	75/ 5
OTHERS		0	7.83E2		0.012	1964		137 6 2 BRP	75/ 5
OTHERS		0	1.32E5		2.1	1965		137 6 2 BRP	75/ 5
OTHERS		0	7.05E5		11.	1966		137 6 2 BRP	75/ 5
OTHERS		0	2.64E5		4.1	1967		137 6 2 BRP	75/ 5
OTHERS		0	2.32E5		3.6	1968		137 6 2 BRP	75/ 5
OTHERS		0	2.00E5		3.1	1969		137 6 2 BRP	75/ 5
OTHERS		0	2.80E5		4.4	1970		137 6 2 BRP	75/ 5
OTHERS		0	2.84E5		4.4	1971		137 6 2 BRP	75/ 5
OTHERS		0	2.58E5		4.0	1972		137 6 2 BRP	75/ 5
OTHERS		0	0.0072		6.8E-7	1963		137 6 2 IP	75/ 5
OTHERS		0	1.32E1		0.0012	1964		137 6 2 IP	75/ 5
OTHERS		0	3.31E1		0.0031	1965		137 6 2 IP	75/ 5
OTHERS		0	3.64E1		0.0034	1966		137 6 2 IP	75/ 5
OTHERS		0	2.3 E1		0.0022	1967		137 6 2 IP	75/ 5
OTHERS		0	5.52E1		0.0050	1968		137 6 2 IP	75/ 5
OTHERS		0	6.00E2		0.055	1969		137 6 2 IP	75/ 5
OTHERS		0	1.70E3		0.15	1970		137 6 2 IP	75/ 5
OTHERS		0	3.60E2		0.034	1971		137 6 2 IP	75/ 5
OTHERS		0	5.43E2		0.051	1972		137 6 2 IP	75/ 5
OTHERS		0	9.6 E-4		7.3E-5	1961		137 6 2 YR	75/ 5
OTHERS		0	2.17E1		1.64	1962		137 6 2 YR	75/ 5
OTHERS		0	7.4 E0		0.56	1963		137 6 2 YR	75/ 5
OTHERS		0	0.95E0		0.072	1964		137 6 2 YR	75/ 5
OTHERS		0	1.7 E0		0.13	1965		137 6 2 YR	75/ 5

** OFF GAS ACT.RES. OF GAS- RELEASE

942200

OTHERS	0	2.4 E0	0.18	1966	137 6 2 YR	75/ 5
OTHERS	0	2.3 E0	0.17	1966	137 6 2 YR	75/ 5
OTHERS	0	0.66E0	0.05	1968	137 6 2 YA	75/ 5
OTHERS	0	4.00E0	0.30	1969	137 6 2 YR	75/ 5
OTHERS	0	1.7 E1	1.3	1970	137 6 2 YR	75/ 5
OTHERS	0	1.28E1	0.97	1971	137 6 2 YR	75/ 5
OTHERS	0	1.83E1	1.4	1972	137 6 2 YR	75/ 5
OTHERS	0	4.0 E0	0.0035	1967	137 6 2 SO	75/ 5
OTHERS	0	4.8 E0	0.0042	1968	137 6 2 SO	75/ 5
OTHERS	0	2.60E2	0.23	1969	137 6 2 SO	75/ 5
OTHERS	0	4.2 E3	3.8	1970	137 6 2 SO	75/ 5
OTHERS	0	7.67E3	6.7	1971	137 6 2 SO	75/ 5
OTHERS	0	1.91E4	17.	1972	137 6 2 SO	75/ 5
OTHERS	0	0.02E0	4.0E-5	1967	137 6 2 CY	75/ 5
OTHERS	0	3.7 E0	0.0065	1968	137 6 2 CY	75/ 5
OTHERS	0	1.90E2	0.33	1969	137 6 2 CY	75/ 5
OTHERS	0	7.00E2	1.2	1970	137 6 2 CY	75/ 5
OTHERS	0	3.25E3	5.8	1971	137 6 2 CY	75/ 5
OTHERS	0	6.45E2	1.2	1972	137 6 2 CY	75/ 5
OTHERS	0	LT.1.	LT. 0.0014	1969	137 6 2 G	75/ 5
OTHERS	0	1. E4	14.	1970	137 6 2 G	75/ 5
OTHERS	0	3.18E4	44.	1971	137 6 2 G	75/ 5
OTHERS	0	1.18E4	16.	1972	137 6 2 G	75/ 5

** MAX RAD. LEVEL FP TOTAL IN REACTOR WATER 943220

(1)=FISSION PRODUCT TOTAL (I+BR+TC+MO)
 (2)=CORROSION PRODUCT TOTAL (F+MN+NI+CU+ZN+NA+W+CO+FE+P+CR+AG)
 UNIT=MICRO CI/CC
 (1) (2)

TSURUGA	BWR	3	28.	9E-2	125.2.2P21	74/ 3
ONAGAWA	BWR	4	33.8	7E-2	9-4-(6)	70/ 5
HAMAOKA-1	BWR	5	40.0	7E-2	9-10(REV-0)	70/ 5
HAMAOKA-1	BWR	5	45.0	7E-2	9-10(REV-1)	70/11
FUKUSIMA-1	BWR	6			/	
FUKUSIMA-2,3	BWR	7	64.0	7E-2	SHK(89-7-2)	71/ 3
SHIMANE	BWR	8			/	
FUKUSIMA-5	BWR	9	64.0	7E-2	9-4-(7)	71/ 2
FUKUSIMA-4	BWR	10	64.0	7E-2	9-4-(7)	71/ 8

** MAX RAD. LEVEL IODINE IN REACTOR WATER 943240

I-131 I-132 I-133 I-134 I-135 I-136 I-137 I-138 MICRO CI/CC

TSURUGA	BWR	3	0.4	4.	3.	8.	4.	1.	1.	0.3	125.2.2P21	74/ 3
ONAGAWA	BWR	4	0.5	4.6	3.3	8.9	4.9	1.0	0.8	0.3	9-4-(6)	70/ 5
HAMAOKA-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
HAMAOKA-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
FUKUSIMA-2,3	BWR	7	FUKUSIMA-2 REVISE				SAME AS FUKUSIMA-5 (9-4-(7) 71/2)				SHK(89-7-2)	71/ 3
FUKUSIMA-5	BWR	9	1.4	8.4	8.8	12.9	11.3	1.1	0.5	0.2	9-4-(7)	71/ 2
FUKUSIMA-4	BWR	10	1.4	8.4	8.8	12.9	11.3	1.1	0.5	0.2	9-4-(7)	71/ 8
TOOKAI-2	BWR	12	0.5	3.7	3.0	5.9	4.1	0.6	0.5	0.2	9-4-(2)	71/12
HAMAOKA-2	BWR	13	1.1	6.6	6.4	9.8	8.2	0.8	0.7	0.2	9-10	73/ 5
KASHIWAZAKI	BWR	15	0.5	3.7	3.3	5.9	4.1	0.6	0.5	0.2	9-4-12	75/ 3
TOMIOKA-2	BWR	16	0.042		0.3						9-4-8	76/12

** MAX RAD. LEVEL BR,TC,MO IN REACTOR WATER 943260

BR-83 BR-84 BR-85 BR-87 BR-88 TC-99M MO-99 MICRO CI/CC

TSURUGA	BWR	3	0.5	1.	0.8	0.8	0.5	0.4	2.	125.2.2P21	74/ 3	
ONAGAWA	BWR	4	0.5	1.0	0.6	0.7	0.4	4.5	1.8	9-4-(6)	70/ 5	
HAMAOKA-1	BWR	5	0.65	0.79	0.39	0.49	0.31	6.42	2.63	9-10(REV-0)	70/ 5	
HAMAOKA-1	BWR	5	0.7	1.0	0.5	0.5	0.3	7.0	3.4	9-10(REV-1)	70/11	
FUKUSIMA-2,3	BWR	7	FUKUSIMA-2 REVISE				SAME AS FUKUSIMA-5 (9-4-(7) 71/2)				SHK(89-7-2)	71/ 3
FUKUSIMA-5	BWR	9	1.0	1.3	0.7	0.6	0.4	10.1	5.0	9-4-(7)	71/ 2	
FUKUSIMA-4	BWR	10	1.0	1.3	0.7	0.6	0.4	10.1	5.0	9-4-(7)	71/ 8	
TOOKAI-2	BWR	12	0.5	0.8	0.4	0.4	0.2	0.4	1.7	9-4-(7)	71/12	
HAMAOKA-2	BWR	13	0.7	1.2	0.6	0.6	0.3	0.8	3.7	9-10	73/ 5	
KASHIWAZAKI	BWR	15	0.4	0.8	0.4	0.4	0.2	0.4	1.7	9-4-12	75/ 3	

** MAX RAD. LEVEL	CORR-P.	(1)	IN	REACTOR	WATER	943280							
			F-18	MN-54	MN-56	NI-65	CU-64	ZN-65	ZN-69M	NA-24	W-187	MICRO	CI/CC
TSURUGA	BWR	3	4E-3	4E-5	5E-2	3E-4	2E-2	2E-6	3E-5	2E-3	2E-4	125.2,2P21	74/ 3
ONAGAWA	BWR	4	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	3E-3	9-4-(6)	70/ 5
HAMAOKA-1	BWR	5	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	3E-3	9-10	70/ 5
FUKUSIMA-2,3	BWR	7	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	2E-4	SHK(89-7-2)	71/ 3
FUKUSIMA-5	BWR	9	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	2E-4	9-4-(7)	71/ 2
FUKUSIMA-4	BWR	10	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	2E-4	9-4-(7)	71/ 8
TOOKAI-2	BWR	12	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	2E-4	9-4-(7)	71/12
HAMAOKA-2	BWR	13	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	3E-3	9-10	72/ 9
KASHIWAZAKI	BWR	15	4E-3	4E-5	5E-2	3E-4		2E-6	3E-5	2E-3	2E-4	9-4-12	75/ 3

** MAX RAD. LEVEL		CORR-P.	(2) IN		REACTOR WATER				943400			
			CO-58	CO-60	FE-59	P-32	CR-51	AG-110M		MICRO CI/CC		
TSURUGA	BWR	3	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		125.2,2P21	74/	3
ONAGAWA	BWR	4	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		9-4-(6)	70/	5
HAMAOKA-1	BWR	5	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		9-10	70/	5
FUKUSIMA-2,3	BWR	7	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		SHK(89-7-2)	71/	3
FUKUSIMA-5	BWR	9	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		9-4-(7)	71/	2
FUKUSIMA-4	BWR	10	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		9-4-(7)	71/	8
TOOKAI-2	BWR	12	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		9-4-(7)	71/12	
HAMAOKA-2	BWR	13	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		9-10	72/	9
KASHIWAZAKI	BWR	15	5E-3	5E-4	8E-5	2E-5	5E-4	6E-5		9-4-12	75/	3

** MAX RAD. LEVEL		KR	IN		REACTOR	WATER	943500			
			KR-83M	KR-85M	KR-85	KR-87	KR-88	MICRO CI/G		
GENKAI-2	PWR	29	3.32E-1	2.02	1.54	1.18	3.47		9-4-8	76/ 2
SENDAI	PWR	31		2.15	2.00	1.24	3.69		9-4-9	76/ 4

** MAX RAD. LEVEL		XE	IN REACTOR		WATER		943510				
			XE-131M	XE-133M	XE-133	XE-135M	XE-135	XE-138	MICRO CI/G		
GENKAI-2	PWR	29	2.08	2.94	2.14E2	1.08E-1	2.77	5.75E-1	9-4-8	76/	2
SENDAI	PWR	31	2.39	3.21	2.38E2	1.13E-1	2.56	6.02E-1	9-4-9	76/	4

** MAX RAD. LEVEL		I	IN REACTOR WATER		943520				
			I-131	I-133					MICRO CI/G
GENKAI-2	PWR	29	1.91	3.37			9-4-8		76/ 2
SENDAI	PWR	31	2.31	3.91			9-4-9		76/ 4

** MAX RAD. LEVEL	I-131	IN	REACTOR	WATER	943600		
						MICRO CI/CC	
GENKAI-2	PWR 29	7.3				15	76/ 2
IKATA-2	PWR 30	1.4				18	76/12
SENDAI	PWR 31	1.7				14	76/ 4

** SWD USED RESIN PRODUCTI ON RATE 944220

(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 WAST DISPOSAL SYSTEM DEMINERALIZER
 * SPECIFIC WEIGHT=0.34 GR/CC (ASSUMPTION)
 UNIT----MC/CC=MICRO CURIE/CC, MC/G=MICRO CURIE/GRAM
 A1 A2 B1 B2 C1 C2 D1 D2 E1 E2
 M3/Y MC/CC M3/Y MC/CC M3/Y MC/CC M3/Y MC/CC M3/Y MC/CC M3/Y MC/CC
 (T/Y)(MC/G)(T/Y)(MC/G)(T/Y)(MC/G)(T/Y)(MC/G)(T/Y)(MC/G)

TSURUGA	BWR	3	6. 2000.			10. 2. 5.		2. 500.	125.2,2P22		74/ 3
ONAGAWA	BWR	4	(2.3)(100)	(8.3)(20)	(1.1)(140.)(0.7)		(1.2)(140.)		9-4-(7)		70/ 5
ONAGAWA	BWR	4	(2.3)(110)	(8.3) (2)	(1.1)(140.)(0.7)		(1.2)(140.)		-39-		73/ 6
HAMAOKA-1	BWR	5			6. 0.02		6. 0.01		9-11		70/ 5
FUKUSIMA-5	BWR	9	*4. 2000.		15. 2. *16.		3. 500.		9-4-(8)		71/ 2
FUKUSIMA-4	BWR	10	*4. 2000.		15. 2. *16.		3. 500.		9-4-(8)		71/ 8
TOOKAI-2	BWR	12	15. 2000.		23. 2. 10. 500.		10.		9-4-(8)		71/12
HAMAOKA-1	BWR	13			16. 0.02		4. 0.1		9-11		72/ 9
TOMIOKA-1	BWR	14	15.		20.		10.	5.0	9-4-20		76/ 8
TOMIOKA-2	BWR	16	15.	170.	20.		10.	5.	9-4-19		76/12

** SWD USED POWDER RESIN PRODUCTI ON RATE ACTIVITY 944240

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

UNIT	TYPE	QTY	ACTIVITY	DATE	REMARKS
HAMAOKA-1	BWR	5	2.5 CUBM/Y	9-12	70/ 5
HAMAOKA-1	BWR	5	45. MC/CC	9-12	70/ 5
HAMAOKA-2	BWR	13	4. M3/Y(AS 0.34GR/CC)	9-11	72/ 9
HAMAOKA-2	BWR	13	50. MC/CC	9-11	72/ 9

** SWD FILTER SLUDGE PRODUCTI ON RATE ACTIVITY 944260

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

UNIT	TYPE	QTY	ACTIVITY	DATE	REMARKS
ONAGAWA	BWR	4	5.8 T/Y	9-4-(8)	70/ 5
ONAGAWA	BWR	4	3.8 T/Y	-40-	73/ 6
HAMAOKA-1	BWR	5	40. CUBM/Y	9-12	70/ 5
FUKUSIMA-5	BWR	9	45. CUBM/Y	9-4-(8)	71/ 2
FUKUSIMA-4	BWR	10	45. CUBM/Y	9-4-(8)	71/ 8
TOOKAI-2	BWR	12	70. CUBM/Y	9-4-(8)	71/12
HAMAOKA-2	BWR	13	80. M3/Y	9-11	72/ 9
TOMIOKA-1	BWR	14	175. M3/Y	9-4-20	76/ 8

** SWD FROM CONCENTRATOR PRODUCTI ON RATE ACTIVITY 944280

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

UNIT	TYPE	QTY	ACTIVITY	DATE	REMARKS
TSURUGA	BWR	3	130. M3/Y	125.2.2	74/ 3
ONAGAWA	BWR	4	0.2*365 T/Y	9-4-(8)	70/ 5
ONAGAWA	BWR	4	0.6*365 T/Y	-40-	73/ 6
HAMAOKA-1	BWR	5	120. CUBM/Y	9-12	70/ 5
FUKUSIMA-5	BWR	9	720. CUBM/Y	9-4-(9)	71/ 2
FUKUSIMA-4	BWR	10	720. CUBM/Y	9-4-(9)	71/ 8
TOOKAI-2	BWR	12	260. CUBM/Y	9-4-(8)	71/12
HAMAOKA-2	BWR	13	360. M3/Y	9-12	72/ 9

** SWD CONTROL ROD CHANNEL BOX CURTAIN 944320

POISON CONTROL ROD CHANNEL BOX
 CURTAIN AFTER () YEARS AFTER () YEARS

UNIT	TYPE	QTY	ACTIVITY	DATE	REMARKS
TSURUGA	BWR	3	7. HON/YEAR	40. /Y(5) 8HON/LPRM	128-4-2P41 74/ 7
ONAGAWA	BWR	4	156. HON	9. HON/YEAR(5) 90. /YEAR(5)	9-4-(8) 70/ 5
HAMAOKA-1	BWR	5	156. HON	9. HON/YEAR(5) 90. /YEAR(5)	9-12 70/ 5
FUKUSIMA-5	BWR	9	-----	14. HON/YEAR(5) 140. /YEAR(5)	9-4-(9) 71/ 2
FUKUSIMA-4	BWR	10	-----	14. HON/YEAR(5) 140. /YEAR(5)	9-4-(9) 71/ 8
TOOKAI-2	BWR	12	-----	19. HON/YEAR(5) 200. /YEAR(5)	9-4-(9) 71/12
HAMAOKA-2	BWR	13	-----	14. HON/YEAR(5) 140. /YEAR(5)	9-12 73/ 5
TOMIOKA-1	BWR	14	-----	19. HON/YEAR(5) 200. /YEAR(5)	9-4-20 76/ 8
KASHIWAZAKI	BWR	15	-----	19. HON/YEAR(5) 200. /YEAR(5)	9-4-15 75/ 3
TOMIOKA-2	BWR	16	-----	19. HON/YEAR(5) 200. /YEAR(5)	9-4-19 76/12

** 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

NOTE R=(REVISED)

UNIT	TYPE	QTY	ACTIVITY	DATE	REMARKS
TAKAHAMA-2	PWR	23	2300 300A	40A	9-12 70/ 5
GENKAI-1	PWR	24	1300 700A	10A	9-9 70/ 5
OOI-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-1	PWR	28	1300 300	300 100 2000 150 200	9-9 72/11

** LWD

ACT.RES. OF LWD- RELEASE

953200

(A) EXCLUDE TRITIUM

(A1) RELEASED ACTIVITY TOTAL

(A2) AVERAGE CONCENTRATION THROUGH YEAR

CI/YEAR

MICRO CI/CC=MCI/CC

(B) TRITIUM ONLY

(B1) RELEASED ACTIVITY TOTAL

(B2) AVERAGE CONCENTRATION THROUGH YEAR

CI/YEAR

MICRO CI/CC=MCI/CC

(C) YEAR

NMP : NINE MILE POINT (BWR)
 HB : HUMBOLDT BAY (BWR)
 BRP : BIG ROCK POINT (BWR)
 IP : INDIAN POINT (PWR)
 YR : YANKEE ROWE (PWR)
 SO : SAN ONOFRE (PWR)
 CY : CONNECTICUT YANKEE (PWR)
 G : GINNA (PWR)

---TRITIUM---

			(A1) CI/Y	(A2) MCI/CC	(B1) CI/Y	(B2) MCI/CC	(C)		
TSURUGA	BWR	3	1.8	3.2E-9			1970	BINRANP173	74/
TSURUGA	BWR	3	0.17	3.3E-10	5.0	9.6E-9	1971		74/
TSURUGA	BWR	3	0.21	3.7E-10	5.3	9.5E-9	1972		74/
FUKUSIMA-1	BWR	6	3.	4.6E-9			1971		74/
FUKUSIMA-1	BWR	6	0.25	4.4E-10			1972		74/
MIHAMA-1	PWR	21	0.15	1.8E-10	140.	1.7E-7	1971		74/
MIHAMA-1	PWR	21	0.02	*1.8E-11	85.	*1.5E-7	1972	**INCL.M2	74/
MIHAMA-2	PWR	22	0.01		145.		1972		74/
OTHERS		0	0.38	2.5E-9	0.		1969	TOOKAI-1	74/
OTHERS		0	0.24	1.4E-9	0.		1970	TOOKAI-1	74/
OTHERS		0	0.46	2.2E-9	0.		1971	TOOKAI-1	74/
OTHERS		0	0.21	6.7E-10	0.		1972	TOOKAI-1	74/
DRESDEN-1	BWR	55	0.77				1960	137 6 2	75/ 5
DRESDEN-1	BWR	55	2.095				1961	137 6 2	75/ 5
DRESDEN-1	BWR	55	2.61				1962	137 6 2	75/ 5
DRESDEN-1	BWR	55	2.78				1963	137 6 2	75/ 5
DRESDEN-1	BWR	55	3.82				1964	137 6 2	75/ 5
DRESDEN-1	BWR	55	8.7				1965	137 6 2	75/ 5
DRESDEN-1	BWR	55	11.5				1966	137 6 2	75/ 5
DRESDEN-1	BWR	55	4.3				1967	137 6 2	75/ 5
DRESDEN-1	BWR	55	6.		2.9		1968	137 6 2	75/ 5
DRESDEN-1	BWR	55	9.5		6.0		1969	137 6 2	75/ 5
DRESDEN-1	BWR	55	8.2		5.0		1970	137 6 2	75/ 5
DRESDEN-1	BWR	55	6.2		8.7		1971	137 6 2	75/ 5
DRESDEN-1	BWR	55	6.75		43.3		1972	137 6 2	75/ 5
DRESDEN-2	BWR	56			31.0		1970	137 6 2	75/ 5
DRESDEN-2	BWR	56	23.2		38.5		1971	137 6 2	75/ 5
DRESDEN-2	BWR	56	22.1		25.9		1972	137 6 2	75/ 5
OYSTER CREEK	BWR	57	0.48		5.0		1969	137 6 2	75/ 5
OYSTER CREEK	BWR	57	18.5		22.0		1970	137 6 2	75/ 5
OYSTER CREEK	BWR	57	12.1		21.5		1971	137 6 2	75/ 5
OYSTER CREEK	BWR	57	10.0		61.6		1972	137 6 2	75/ 5
OTHERS		0	0.9		LT0.001		1969	137 6 2 NMP	75/ 5
OTHERS		0	28.		20.0		1970	137 6 2 NMP	75/ 5
OTHERS		0	32.2		12.4		1971	137 6 2 NMP	75/ 5
OTHERS		0	34.6		27.8		1972	137 6 2 NMP	75/ 5
OTHERS		0	0.397		214.		1963	137 6 2 HB	75/ 5
OTHERS		0	0.664		100.		1964	137 6 2 HB	75/ 5
OTHERS		0	1.89		54.		1965	137 6 2 HB	75/ 5
OTHERS		0	2.34		60.		1966	137 6 2 HB	75/ 5
OTHERS		0	3.1		166.		1967	137 6 2 HB	75/ 5
OTHERS		0	3.2		7.2		1968	137 6 2 HB	75/ 5
OTHERS		0	1.5		LT5.2		1969	137 6 2 HB	75/ 5
OTHERS		0	2.4		LT7.		1970	137 6 2 HB	75/ 5
OTHERS		0	1.8		LT7.5		1971	137 6 2 HB	75/ 5
OTHERS		0	1.4		13.0		1972	137 6 2 HB	75/ 5
OTHERS		0	0.2				1962	137 6 2 BRP	75/ 5
OTHERS		0	0.63				1963	137 6 2 BRP	75/ 5
OTHERS		0	6.22				1964	137 6 2 BRP	75/ 5
OTHERS		0	2.80				1965	137 6 2 BRP	75/ 5
OTHERS		0	6.12				1966	137 6 2 BRP	75/ 5
OTHERS		0	10.				1967	137 6 2 BRP	75/ 5
OTHERS		0	7.9		34.		1968	137 6 2 BRP	75/ 5
OTHERS		0	12.		28.		1969	137 6 2 BRP	75/ 5
OTHERS		0	4.7		54.		1970	137 6 2 BRP	75/ 5
OTHERS		0	3.5		10.3		1971	137 6 2 BRP	75/ 5
OTHERS		0	1.09		10.4		1972	137 6 2 BRP	75/ 5
OTHERS		0	0.13				1962	137 6 2 IP	75/ 5
OTHERS		0	0.164				1963	137 6 2 IP	75/ 5
OTHERS		0	13.				1964	137 6 2 IP	75/ 5
OTHERS		0	26.3				1965	137 6 2 IP	75/ 5
OTHERS		0	43.7		125.		1966	137 6 2 IP	75/ 5
OTHERS		0	28.		300.		1967	137 6 2 IP	75/ 5

** LWD	ACT.RES.	OF LWD- RELEASE	953200		
OTHERS	0	34.6	790.	1968	137 6 2 JP 75/ 5
OTHERS	0	28.	1100.	1969	137 6 2 IP 75/ 5
OTHERS	0	7.8	410.	1970	137 6 2 IP 75/ 5
OTHERS	0	81.1	725.	1971	137 6 2 IP 75/ 5
OTHERS	0	25.4	574.	1972	137 6 2 IP 75/ 5
OTHERS	0	0.008		1961	137 6 2 YR 75/ 5
OTHERS	0	0.008		1962	137 6 2 YR 75/ 5
OTHERS	0	0.003		1963	137 6 2 YR 75/ 5
OTHERS	0	0.002		1964	137 6 2 YR 75/ 5
OTHERS	0	0.029	1300.	1965	137 6 2 YR 75/ 5
OTHERS	0	0.036	1920.	1966	137 6 2 YR 75/ 5
OTHERS	0	0.009	1600.	1967	137 6 2 YR 75/ 5
OTHERS	0	0.009	1170.	1968	137 6 2 YR 75/ 5
OTHERS	0	0.019	1200.	1969	137 6 2 YR 75/ 5
OTHERS	0	0.034	1500.	1970	137 6 2 YR 75/ 5
OTHERS	0	0.01	1680.	1971	137 6 2 YR 75/ 5
OTHERS	0	0.0206	803.	1972	137 6 2 YR 75/ 5
OTHERS	0	0.32		1967	137 6 2 SO 75/ 5
OTHERS	0	1.5	2400.	1968	137 6 2 SO 75/ 5
OTHERS	0	8.	3500.	1969	137 6 2 SO 75/ 5
OTHERS	0	7.6	4800.	1970	137 6 2 SO 75/ 5
OTHERS	0	1.54	4570.	1971	137 6 2 SO 75/ 5
OTHERS	0	30.3	3480.	1972	137 6 2 SO 75/ 5
OTHERS	0	0.39	120.	1967	137 6 2 CY 75/ 5
OTHERS	0	3.8	1700.	1968	137 6 2 CY 75/ 5
OTHERS	0	12.	5200.	1969	137 6 2 CY 75/ 5
OTHERS	0	6.7	7400.	1970	137 6 2 CY 75/ 5
OTHERS	0	5.9	5830.	1971	137 6 2 CY 75/ 5
OTHERS	0	4.78	5890.	1972	137 6 2 CY 75/ 5
OTHERS	0	0.02	7.6E-5	1969	137 6 2 75/ 5
OTHERS	0	10.	110.	1970	137 6 2 75/ 5
OTHERS	0	0.96	154.	1971	137 6 2 75/ 5
OTHERS	0	0.375	119.	1972	137 6 2 75/ 5

** SWD DRUM QUANTITY

954100

(1)SPENT RESIN
 (2)SPENT POWDER SESIN
 (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
 (8)=LAUNDRY WASTE SLUDGE

UNIT = DRUM(HON)/YEAR

A =ASPHALT
 B =CEMENT

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	TOTAL		
TSURUGA	BWR	3				400.	200.	(ASH=50)		650.	128-4-2P41	74/ 7	
ONAGAWA	BWR	4	60.	130.	240.	500.	600.			1530.	9-4-(9)	70/ 5	
ONAGAWA	BWR	4	60.	140.	160.	1690.	600.			480.	-41-	73/ 6	
HAMAOKA-1	BWR	5	170.	220.	290.	1000.	250.			1930.	9-13	70/ 5	
FUKUSIMA-5	BWR	9	500.		450.	5200.	600.			6750.	9-4-(9)	71/ 2	
TOOKAI-2	BWR	12	700.		2400.	2600.	600.			6300.	9-4-(9)	71/12	
HAMAOKA-2	BWR	13	300.	50.	600.	3600.	250.C			4800.	9-12	72/ 9	
TOMIOKA-1	BWR	14				4100.	600.C			4700.	9-4-20	76/ 8	
KASHIWAZAKI	BWR	15	600.		200.	4100.	600.			5500.	9-4-15	75/ 3	
TOMIOKA-2	BWR	16				4100.	600.				9-4-19	76/12	
TAKAHAMA-2	PWR	23	310.				190.	140.		640.	9-13	70/ 5	
GENKAI-1	PWR	24	130.				140.	70.		340.	9-9	70/ 5	
OOI-1,2	PWR	26	540.				500.	180.	190.	1410.	9-14	71/ 1	
OOI-1,2	PWR	26	12M3/Y			2200.	800.			3000.	9-5-2	75/ 5	
MIHAMA-3	PWR	27	310.				190.	140.			9-14	71/ 8	
MIHAMA-3	PWR	27	13M3/Y(INCL 1.2)			450.A	300.	(ASH=50)		530.	-92-	76/ 1	
MIHAMA-3	PWR	27	13M3/Y(INCL 1.2)			2600.C	300.	(ASH=50)		2950.	-92-	76/ 1	
IKATA-1	PWR	28	5M3/Y			100.	200.	500.			8-11	72/11	
IKATA-2	PWR	30	5M3/Y			100.	200.				9-4-24	76/12	

** SWD ACT.RES. OF DRUM STORAGE ON SITE 954200

(1) SPENT RESIN ***UNIT*** = DRUM(HON)/(AS OF YEAR)
 (2) SPENT POWDER RESIN (200LITRE)
 (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
 (8) LAUNDRY WASTE SLUDGE
 UNIT = (HON / 200 LITRE DRUM)

			(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	TOTAL	ASOF
TSURUGA	BWR	3				1978	1863				3841.	BINRAN 73/ 3
FUKUSIMA-1	BWR	6				1357	1906				3263.	1974 73/ 3
MIHAMA-1	PWR	21				2166	734				2900.	PAGE.173 73/ 3

** SWD RADIO ACTIVITY ON THE SURFACE OF DRUM 954300

(A) NO. OF DRUMS IN PC ----- CONC. LIQUID WASTE DISPOSAL
 (A1) LT50 MR/H (MILLI ROENTGEN/HOUR)
 (A2) GT 50 LT200 MR/H
 (A3) GT200 MR/H
 (B) NO. OF DRUMS IN PC ----- MISCELLANEOUS SOLID WASTE DISPOSAL
 (B1) LT50 MR/H
 (B2) GT 50 LT200 MR/H
 (B3) GT200 MR/H

			(A)-----			(B)-----			
			(A1)	(A2)	(A3)	(B1)	(B2)	(B3)	
			PC	PC	PC	PC	PC	PC	
TSURUGA	BWR	3	90.5	7.3	2.1	93.8	4.1	2.1	BINRANP188 74/
MIHAMA-1	PWR	21	91.1	8.8	0.4	92.5	4.3	3.3	BINRANP188 74/