

Appendix B14: Index To Nuclear Unit Cause Codes

NUCLEAR UNITS

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BALANCE OF PLANT

TABLE B14-1 Balance of Plant: Auxiliary Systems - Auxiliary Steam					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3830	Auxiliary boiler
Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3831	Auxiliary steam piping
Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3832	Auxiliary steam valves
Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3833	Auxiliary steam controls and instruments
Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3834	Auxiliary boiler tube leaks
Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3835	Auxiliary boiler burner management system

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Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3836	Steam transfer to other unit
Nuclear	Balance of Plant	Auxiliary Systems	Auxiliary Steam	3839	Other auxiliary steam problems (also see extraction steam codes 3520 to 3529; startup bypass codes 0630 to 0660; and soot blower steam code 0870)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-2 Balance of Plant: Auxiliary Systems - Closed Cooling Water Systems

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3820	Closed cooling water pumps and motors
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3821	Closed cooling water piping
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3822	Closed cooling water valves
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3823	Closed cooling water heat exchangers
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3824	Closed cooling water system fouling
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3825	Closed cooling water instrumentation
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3826	Closed cooling water strainer
Nuclear	Balance of Plant	Auxiliary Systems	Closed Cooling Water Systems	3829	Other closed cooling water system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-3 Balance of Plant: Auxiliary Systems - Fire Protection System

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Fire Protection System	3860	Fire protection system pumps
Nuclear	Balance of Plant	Auxiliary Systems	Fire Protection System	3861	Fire protection system piping
Nuclear	Balance of Plant	Auxiliary Systems	Fire Protection System	3862	Fire protection system valves
Nuclear	Balance of Plant	Auxiliary Systems	Fire Protection System	3863	Fire protection system fouling
Nuclear	Balance of Plant	Auxiliary Systems	Fire Protection System	3864	Fire protection system instrumentation and controls
Nuclear	Balance of Plant	Auxiliary Systems	Fire Protection System	3869	Other fire protection system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-4 Balance of Plant: Auxiliary Systems - Instrument Air

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Instrument Air	3850	Instrument air compressors
Nuclear	Balance of Plant	Auxiliary Systems	Instrument Air	3851	Instrument air piping
Nuclear	Balance of Plant	Auxiliary Systems	Instrument Air	3852	Instrument air valves
Nuclear	Balance of Plant	Auxiliary Systems	Instrument Air	3853	Instrument air dryers
Nuclear	Balance of Plant	Auxiliary Systems	Instrument Air	3854	N2 backup to instrument air
Nuclear	Balance of Plant	Auxiliary Systems	Instrument Air	3859	Other instrument air problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-5 Balance of Plant: Auxiliary Systems - Miscellaneous (Auxiliary Systems)

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UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Miscellaneous (Auxiliary Systems)	3898	Miscellaneous plant auxiliary process and services instrumentation and controls
Nuclear	Balance of Plant	Auxiliary Systems	Miscellaneous (Auxiliary Systems)	3899	Other miscellaneous auxiliary system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-6 Balance of Plant: Auxiliary Systems - Open Cooling Water System

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3800	Open cooling water pumps and motors
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3801	Open cooling water piping
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3802	Open cooling water valves
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3803	Open cooling water heat exchangers
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3804	Open cooling water system fouling
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3805	Open cooling water system instrumentation
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3806	Open cooling water strainer
Nuclear	Balance of Plant	Auxiliary Systems	Open Cooling Water System	3809	Other open cooling water problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-7 Balance of Plant: Auxiliary Systems - Seal Air Fans

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Seal Air Fans	3880	Seal air fan
Nuclear	Balance of Plant	Auxiliary Systems	Seal Air Fans	3881	Seal air fan drive - motor
Nuclear	Balance of Plant	Auxiliary Systems	Seal Air Fans	3882	Seal air control dampers and drives
Nuclear	Balance of Plant	Auxiliary Systems	Seal Air Fans	3883	Seal air filters
Nuclear	Balance of Plant	Auxiliary Systems	Seal Air Fans	3889	Other seal air fan problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-8 Balance of Plant: Auxiliary Systems - Service Air

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Service Air	3840	Service air compressors
Nuclear	Balance of Plant	Auxiliary Systems	Service Air	3841	Service air piping
Nuclear	Balance of Plant	Auxiliary Systems	Service Air	3842	Service air valves
Nuclear	Balance of Plant	Auxiliary Systems	Service Air	3843	Service air dryers
Nuclear	Balance of Plant	Auxiliary Systems	Service Air	3849	Other service air problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-9 Balance of Plant: Auxiliary Systems - Service Water (Open System)

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UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Auxiliary Systems	Service Water (Open System)	3810	Service water pumps and motors
Nuclear	Balance of Plant	Auxiliary Systems	Service Water (Open System)	3811	Service water piping
Nuclear	Balance of Plant	Auxiliary Systems	Service Water (Open System)	3812	Service water valves
Nuclear	Balance of Plant	Auxiliary Systems	Service Water (Open System)	3813	Service water heat exchangers
Nuclear	Balance of Plant	Auxiliary Systems	Service Water (Open System)	3814	Service water system fouling
Nuclear	Balance of Plant	Auxiliary Systems	Service Water (Open System)	3815	Service water strainer
Nuclear	Balance of Plant	Auxiliary Systems	Service Water (Open System)	3819	Other service water problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-10 Balance of Plant: Circulating Water Systems					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Circulating Water Systems		3210	Circulating water pumps
Nuclear	Balance of Plant	Circulating Water Systems		3211	Circulating water pump motors
Nuclear	Balance of Plant	Circulating Water Systems		3220	Circulating water piping
Nuclear	Balance of Plant	Circulating Water Systems		3221	Circulating water piping fouling
Nuclear	Balance of Plant	Circulating Water Systems		3230	Circulating water valves
Nuclear	Balance of Plant	Circulating Water Systems		3231	Waterbox
Nuclear	Balance of Plant	Circulating Water Systems		3232	Condenser tube cleaning system including debris filter
Nuclear	Balance of Plant	Circulating Water Systems		3233	Circulating water priming system
Nuclear	Balance of Plant	Circulating Water Systems		3235	Cooling tower booster pump
Nuclear	Balance of Plant	Circulating Water Systems		3236	Cooling tower booster motor
Nuclear	Balance of Plant	Circulating Water Systems		3238	Cooling tower fan motors
Nuclear	Balance of Plant	Circulating Water Systems		3239	Cooling tower fan motors - variable speed
Nuclear	Balance of Plant	Circulating Water Systems		3240	Cooling tower fans
Nuclear	Balance of Plant	Circulating Water Systems		3241	Cooling tower efficiency below design
Nuclear	Balance of Plant	Circulating Water Systems		3242	Cooling tower fill damage
Nuclear	Balance of Plant	Circulating Water Systems		3243	Cooling tower icing
Nuclear	Balance of Plant	Circulating Water Systems		3244	Cooling tower fires
Nuclear	Balance of Plant	Circulating Water Systems		3245	Other cooling tower problems
Nuclear	Balance of Plant	Circulating Water Systems		3246	Cooling tower fouling
Nuclear	Balance of Plant	Circulating Water Systems		3247	Cooling tower instrumentation
Nuclear	Balance of Plant	Circulating Water Systems		3248	Cooling Tower Overhaul
Nuclear	Balance of Plant	Circulating Water Systems		3250	Circulating water system instruments and controls
Nuclear	Balance of Plant	Circulating Water Systems		3260	Traveling screens
Nuclear	Balance of Plant	Circulating Water Systems		3261	Traveling screen fouling
Nuclear	Balance of Plant	Circulating Water Systems		3269	Circulating water biological conditions (ie, zebra mussels)
Nuclear	Balance of Plant	Circulating Water Systems		3270	Intake system problems other than traveling screens

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Nuclear	Balance of Plant	Circulating Water Systems		3271	Intake grating fouling
Nuclear	Balance of Plant	Circulating Water Systems		3272	Circulating water screenwash system
Nuclear	Balance of Plant	Circulating Water Systems		3273	Debris in circulating water from outside sources (leaves, mud, etc.)
Nuclear	Balance of Plant	Circulating Water Systems		3274	Ice blockages at intake structures including frazil ice, sheets, blocks of ice, etc.
Nuclear	Balance of Plant	Circulating Water Systems		3280	High circulating water temperature (not due to season, tower efficiency below design, or other listed equipment problem)
Nuclear	Balance of Plant	Circulating Water Systems		3281	Circulating water tempering system
Nuclear	Balance of Plant	Circulating Water Systems		3282	Circulating water cooling ponds
Nuclear	Balance of Plant	Circulating Water Systems		3285	Circulating water chemistry
Nuclear	Balance of Plant	Circulating Water Systems		3299	Other circulating water system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-11 Balance of Plant: Condensate System - Low/Intermediate Pressure Heater and Deaerators

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensate System	Low/Intermediate Pressure Heater and Deaerators	3339	LP heater head leaks
Nuclear	Balance of Plant	Condensate System	Low/Intermediate Pressure Heater and Deaerators	3340	LP heater tube leaks
Nuclear	Balance of Plant	Condensate System	Low/Intermediate Pressure Heater and Deaerators	3341	Other LP heater - general
Nuclear	Balance of Plant	Condensate System	Low/Intermediate Pressure Heater and Deaerators	3342	IP heater tube leaks
Nuclear	Balance of Plant	Condensate System	Low/Intermediate Pressure Heater and Deaerators	3343	Other IP heater - general
Nuclear	Balance of Plant	Condensate System	Low/Intermediate Pressure Heater and Deaerators	3344	Deaerator (including level control)
Nuclear	Balance of Plant	Condensate System	Low/Intermediate Pressure Heater and Deaerators	3345	IP heater head leaks

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-12 Balance of Plant: Condensate System - Miscellaneous (Condensate System)

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensate System	Miscellaneous (Condensate System)	3360	Condensate makeup and return (including storage tanks)
Nuclear	Balance of Plant	Condensate System	Miscellaneous (Condensate System)	3370	Condensate system controls and instrumentation (not hotwell level, heater level, or deaerator level controls; see codes 3150-3159, 3344, 3502).
Nuclear	Balance of Plant	Condensate System	Miscellaneous (Condensate System)	3380	Condensate coolers
Nuclear	Balance of Plant	Condensate System	Miscellaneous (Condensate System)	3399	Other miscellaneous condensate system problems

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Notes: 1) For use with Unit Codes 200-299.

TABLE B14-13 Balance of Plant: Condensate System - Polishers/Chemical Addition

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensate System	Polishers/Chemical Addition	3350	Condensate polishing and filtering systems
Nuclear	Balance of Plant	Condensate System	Polishers/Chemical Addition	3351	Chemical addition systems
Nuclear	Balance of Plant	Condensate System	Polishers/Chemical Addition	3352	Feedwater chemistry (not specific to condenser, polishers, or chemical addition)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-14 Balance of Plant: Condensate System - Pumps, Piping, and Valves

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3300	Condensate water pre-treatment
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3310	Condensate/hotwell pumps
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3311	Condensate/hotwell pump motor
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3312	Condensate booster pump
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3313	Condensate booster pump motor
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3314	Condensate booster pump motor - variable speed
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3315	Condensate booster pump drive (other than 3313 and 3314)
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3320	Condensate piping
Nuclear	Balance of Plant	Condensate System	Pumps, Piping, and Valves	3330	Condensate valves

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-15 Balance of Plant: Condensing System - Condenser Casing or Shell and Internals

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensing System	Condenser Casing or Shell and Internals	3120	Tube sheets
Nuclear	Balance of Plant	Condensing System	Condenser Casing or Shell and Internals	3121	Expansion joint
Nuclear	Balance of Plant	Condensing System	Condenser Casing or Shell and Internals	3122	Gaskets and seals
Nuclear	Balance of Plant	Condensing System	Condenser Casing or Shell and Internals	3123	Hot well
Nuclear	Balance of Plant	Condensing System	Condenser Casing or Shell and Internals	3124	Tube sheet fouling
Nuclear	Balance of Plant	Condensing System	Condenser Casing or Shell and Internals	3129	Other condenser casing or shell and internal problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-16 Balance of Plant: Condensing System - Condenser Controls

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensing System	Condenser Controls	3150	Hot well level controls
Nuclear	Balance of Plant	Condensing System	Condenser Controls	3151	Vacuum pump and air ejector controls

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Nuclear	Balance of Plant	Condensing System	Condenser Controls	3152	Air-cooled condenser controls
Nuclear	Balance of Plant	Condensing System	Condenser Controls	3159	Other condensing system controls and instruments

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-17 Balance of Plant: Condensing System - Condenser Tubes and Support Equipment

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3110	Condenser tube leaks
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3111	Condenser tube fouling shell side
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3112	Condenser tube fouling tube side
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3113	Condenser tube and water box cleaning (including circulating water flow reversal)
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3114	Air-cooled condenser tubes
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3115	Air-cooled condenser pumps
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3116	Air-cooled condenser fans
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3117	Air-cooled condenser fan motors
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3118	Other Air-cooled condenser problems
Nuclear	Balance of Plant	Condensing System	Condenser Tubes and Support Equipment	3119	Other condenser tube casing or shell and internal problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-18 Balance of Plant: Condensing System - Miscellaneous (Condensing System)

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensing System	Miscellaneous (Condensing System)	3170	Condenser inspection (use code 3110 to report looking for tube leaks)
Nuclear	Balance of Plant	Condensing System	Miscellaneous (Condensing System)	3171	Air-cooled condenser inspections
Nuclear	Balance of Plant	Condensing System	Miscellaneous (Condensing System)	3180	Major condenser overhaul
Nuclear	Balance of Plant	Condensing System	Miscellaneous (Condensing System)	3185	Water side cathodic protection
Nuclear	Balance of Plant	Condensing System	Miscellaneous (Condensing System)	3190	Air leakage (for losses not attributable to previously noted equipment related codes)
Nuclear	Balance of Plant	Condensing System	Miscellaneous (Condensing System)	3199	Other miscellaneous condensing system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-19 Balance of Plant: Condensing System - Vacuum Equipment

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3130	Air ejectors
Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3131	Air ejector piping and valves
Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3132	Inter and after condensers
Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3133	Vacuum pumps
Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3134	Vacuum pump piping and valves

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Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3135	Vacuum pump motor and auxiliaries
Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3139	Other air extraction system problems - general
Nuclear	Balance of Plant	Condensing System	Vacuum Equipment	3149	Loss of vacuum not attributable to a particular component such as air ejectors or valves, or high back pressure not attributable to high circulating water temperature, or vacuum losses from a known cause.

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-20 Balance of Plant: Electrical

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Electrical		3600	Switchyard transformers and associated cooling systems - external (OMC)
Nuclear	Balance of Plant	Electrical		3601	Switchyard transformers and associated cooling systems - external (not OMC)
Nuclear	Balance of Plant	Electrical		3610	Switchyard circuit breakers - external (not OMC)
Nuclear	Balance of Plant	Electrical		3611	Switchyard circuit breakers - external (OMC)
Nuclear	Balance of Plant	Electrical		3612	Switchyard system protection devices - external (OMC)
Nuclear	Balance of Plant	Electrical		3613	Switchyard system protection devices - external (not OMC)
Nuclear	Balance of Plant	Electrical		3618	Other switchyard equipment - external (not OMC)
Nuclear	Balance of Plant	Electrical		3619	Other switchyard equipment - external (OMC)
Nuclear	Balance of Plant	Electrical		3620	Main transformer
Nuclear	Balance of Plant	Electrical		3621	Unit auxiliaries transformer
Nuclear	Balance of Plant	Electrical		3622	Station service startup transformer
Nuclear	Balance of Plant	Electrical		3623	Auxiliary generators
Nuclear	Balance of Plant	Electrical		3624	Auxiliary generator voltage supply system
Nuclear	Balance of Plant	Electrical		3629	Other switchyard or high voltage system problems - external
Nuclear	Balance of Plant	Electrical		3630	400-700 volt transformers
Nuclear	Balance of Plant	Electrical		3631	400-700 volt circuit breakers
Nuclear	Balance of Plant	Electrical		3632	400-700 volt conductors and buses
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Nuclear	Balance of Plant	Electrical		3649	Other AC instrument power problems
Nuclear	Balance of Plant	Electrical		3650	DC instrument power battery chargers
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Nuclear	Balance of Plant	Electrical		3653	DC protection devices
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Nuclear	Balance of Plant	Electrical		3671	12-15kV circuit breakers
Nuclear	Balance of Plant	Electrical		3672	12-15kV conductors and buses
Nuclear	Balance of Plant	Electrical		3673	12-15kV insulators
Nuclear	Balance of Plant	Electrical		3674	12-15kV protection devices
Nuclear	Balance of Plant	Electrical		3679	Other 12-15kV problems
Nuclear	Balance of Plant	Electrical		3680	Other voltage transformers
Nuclear	Balance of Plant	Electrical		3681	Other voltage circuit breakers
Nuclear	Balance of Plant	Electrical		3682	Other voltage conductors and buses
Nuclear	Balance of Plant	Electrical		3683	Other voltage insulators
Nuclear	Balance of Plant	Electrical		3684	Other voltage protection devices
Nuclear	Balance of Plant	Electrical		3689	Other voltage problems
Nuclear	Balance of Plant	Electrical		3690	Station Service Power Distribution System, General

Notes: 1) For use with Unit Codes 200-299. 2) Exclude nuclear safety (Class 1E) systems.

TABLE B14-21 Balance of Plant: Extraction Steam

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Extraction Steam		3520	HP Extraction steam piping
Nuclear	Balance of Plant	Extraction Steam		3521	HP Extraction steam valves
Nuclear	Balance of Plant	Extraction Steam		3522	HP Extraction steam instruments and controls
Nuclear	Balance of Plant	Extraction Steam		3529	Other HP extraction steam system problems
Nuclear	Balance of Plant	Extraction Steam		3530	IP Extraction steam piping
Nuclear	Balance of Plant	Extraction Steam		3531	IP Extraction steam valves
Nuclear	Balance of Plant	Extraction Steam		3532	IP Extraction steam instruments and controls
Nuclear	Balance of Plant	Extraction Steam		3539	Other IP extraction steam system problems
Nuclear	Balance of Plant	Extraction Steam		3540	LP Extraction steam piping
Nuclear	Balance of Plant	Extraction Steam		3541	LP Extraction steam valves
Nuclear	Balance of Plant	Extraction Steam		3542	LP Extraction steam instruments and controls

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Nuclear	Balance of Plant	Extraction Steam		3549	Other LP extraction steam system problems
Notes: 1) For use with Unit Codes 200-299.					

TABLE B14-22 Balance of Plant: Feedwater System					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Feedwater System		3401	Startup feedwater pump
Nuclear	Balance of Plant	Feedwater System		3402	Startup feedwater pump drives - all types
Nuclear	Balance of Plant	Feedwater System		3407	Feedwater pump suction screens
Nuclear	Balance of Plant	Feedwater System		3408	Feedwater pump drive - local controls
Nuclear	Balance of Plant	Feedwater System		3409	Feedwater pump drive motor - variable speed
Nuclear	Balance of Plant	Feedwater System		3410	Feedwater pump
Nuclear	Balance of Plant	Feedwater System		3411	Feedwater pump drive - motor
Nuclear	Balance of Plant	Feedwater System		3412	Feedwater pump drive - steam turbine
Nuclear	Balance of Plant	Feedwater System		3413	Feedwater pump coupling and drive shaft
Nuclear	Balance of Plant	Feedwater System		3414	Feedwater pump local controls
Nuclear	Balance of Plant	Feedwater System		3415	Feedwater pump/drive lube oil system
Nuclear	Balance of Plant	Feedwater System		3416	Other feedwater pump problems
Nuclear	Balance of Plant	Feedwater System		3417	Feedwater pump drive - main shaft
Nuclear	Balance of Plant	Feedwater System		3418	Feedwater pump drive - other
Nuclear	Balance of Plant	Feedwater System		3419	Feedwater pump drive - gear
Nuclear	Balance of Plant	Feedwater System		3420	Feedwater piping and supports
Nuclear	Balance of Plant	Feedwater System		3430	Feedwater regulating (boiler level control) valve
Nuclear	Balance of Plant	Feedwater System		3431	Other feedwater valves
Nuclear	Balance of Plant	Feedwater System		3439	HP heater head leaks
Nuclear	Balance of Plant	Feedwater System		3440	High pressure heater tube leaks
Nuclear	Balance of Plant	Feedwater System		3441	Other high pressure heater problems (see condensate system for LP and IP heater codes)
Nuclear	Balance of Plant	Feedwater System		3451	Feedwater booster pump suction screens
Nuclear	Balance of Plant	Feedwater System		3452	Feedwater booster pump drive - local controls
Nuclear	Balance of Plant	Feedwater System		3453	Feedwater booster pump drive motor - variable speed
Nuclear	Balance of Plant	Feedwater System		3454	Feedwater booster pump
Nuclear	Balance of Plant	Feedwater System		3455	Feedwater booster pump drive - motor
Nuclear	Balance of Plant	Feedwater System		3456	Feedwater booster pump drive - steam turbine
Nuclear	Balance of Plant	Feedwater System		3457	Feedwater booster pump coupling and drive shaft
Nuclear	Balance of Plant	Feedwater System		3458	Feedwater booster pump local controls
Nuclear	Balance of Plant	Feedwater System		3459	Feedwater booster pump/drive lube oil system
Nuclear	Balance of Plant	Feedwater System		3460	Other feedwater booster pump problems

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Nuclear	Balance of Plant	Feedwater System		3461	Feedwater booster pump drive - main shaft
Nuclear	Balance of Plant	Feedwater System		3462	Feedwater booster pump drive - other
Nuclear	Balance of Plant	Feedwater System		3463	Feedwater booster pump drive - gear
Nuclear	Balance of Plant	Feedwater System		3499	Other feedwater system problems

Notes: 1) For use with Unit Codes 200-299. 2) Excluding extraction or drain systems.

TABLE B14-23 Balance of Plant: Heater Drain Systems

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Heater Drain Systems		3501	Heater drain pumps
Nuclear	Balance of Plant	Heater Drain Systems		3502	Heater level control
Nuclear	Balance of Plant	Heater Drain Systems		3503	Heater drain piping
Nuclear	Balance of Plant	Heater Drain Systems		3504	Heater drain valves
Nuclear	Balance of Plant	Heater Drain Systems		3505	Heater drain pump drive
Nuclear	Balance of Plant	Heater Drain Systems		3509	Other heater drain system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-24 Balance of Plant: Miscellaneous (Balance of Plant)

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3950	Process computer
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3960	Thermal derating (thermal efficiency losses in balance of plant when specific cause(s) unknown)
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3970	Distributive Control System (DCS) - process computer
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3971	DCS - data highway
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3972	DCS - hardware problems (including card failure)
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3973	DCS - internal and termination wiring
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3974	DCS - logic problems
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3975	DCS - upgrades
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3979	Other DCS problems
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3980	Programmable Logic Controller (PLC)
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3981	PLC - data highway
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3982	PLC - hardware problems (including card failure)
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3983	PLC - internal and termination wiring
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3984	PLC - logic problems
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3985	PLC - upgrades
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3989	Other PLC problems

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Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3995	Powerhouse heating and ventilating systems
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3996	Air conditioning systems - rooms and areas
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3998	Balance of plant overhaul/outage
Nuclear	Balance of Plant	Miscellaneous (Balance of Plant)		3999	Other miscellaneous balance of plant problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-25 Balance of Plant: Power Station Switchyard

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Power Station Switchyard		3700	Power Station switchyard (non generating unit equipment)
Nuclear	Balance of Plant	Power Station Switchyard		3710	Transmission line (connected to powerhouse switchyard to 1st Substation)
Nuclear	Balance of Plant	Power Station Switchyard		3720	Transmission equipment at the 1st substation (see code 9300 if applicable)
Nuclear	Balance of Plant	Power Station Switchyard		3730	Transmission equipment beyond the 1st substation (see code 9300 if applicable)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-26 Balance of Plant: Waste Water (zero discharge) Systems

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Balance of Plant	Waste Water (zero discharge) Systems		3290	Waste water (zero discharge) tanks, pumps, and motors
Nuclear	Balance of Plant	Waste Water (zero discharge) Systems		3291	Waste water (zero discharge) system fouling
Nuclear	Balance of Plant	Waste Water (zero discharge) Systems		3292	Waste water (zero discharge) piping
Nuclear	Balance of Plant	Waste Water (zero discharge) Systems		3293	Waste water (zero discharge) valves
Nuclear	Balance of Plant	Waste Water (zero discharge) Systems		3294	Waste water (zero discharge) controls and instrumentation
Nuclear	Balance of Plant	Waste Water (zero discharge) Systems		3295	Other waste water (zero discharge) problems

Notes: 1) For use with Unit Codes 200-299.

EXTERNAL

Use this set of codes to report events caused by external factors (flood, lightning, etc.); economic factors (lack of fuel, labor strikes, etc.); operator training; and transmission system problems external to the plant.

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	External	Catastrophe		9000	Flood
Nuclear	External	Catastrophe		9001	Drought
Nuclear	External	Catastrophe		9010	Fire including wildfires, not related to a specific component
Nuclear	External	Catastrophe		9020	Lightning
Nuclear	External	Catastrophe		9025	Geomagnetic disturbance
Nuclear	External	Catastrophe		9030	Earthquake
Nuclear	External	Catastrophe		9031	Tornado
Nuclear	External	Catastrophe		9035	Hurricane
Nuclear	External	Catastrophe		9036	Storms (ice, snow, etc)
Nuclear	External	Catastrophe		9040	Other catastrophe

Notes: 1) For use with Unit Codes 200-299.

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	External	Economic		0	Reserve shutdown
Nuclear	External	Economic		9110	Core coastdown (nuclear)
Nuclear	External	Economic		9120	Core conservation (nuclear)
Nuclear	External	Economic		9130	Failure of fuel supplier to fulfill contractual obligations or a pre-arranged deal due to physical fuel disruptions or operational impairments (e.g. force majeure on a pipeline or compressor down; making the pipeline incapable of making its firm deliveries.)
Nuclear	External	Economic		9131	Lack of fuel – due to contractual or tariff provisions that allow for service interruption or price fluctuations during peak demand periods.
Nuclear	External	Economic		9134	Fuel conservation
Nuclear	External	Economic		9137	Ground water or other water supply problems
Nuclear	External	Economic		9150	Labor strikes company-wide problems or strikes outside the company's jurisdiction such as manufacturers (delaying repairs) or transportation (fuel supply) problems.
Nuclear	External	Economic		9151	Labor strikes direct plant management grievances that result in a walkout or strike are under plant management control.

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Nuclear	External	Economic		9160	Other economic problems
Nuclear	External	Economic		9180	Economic (for internal use at plants only)
Nuclear	External	Economic		9181	Economic (for internal use at plants only)
Nuclear	External	Economic		9182	Economic (for internal use at plants only)
Nuclear	External	Economic		9183	Economic (for internal use at plants only)
Nuclear	External	Economic		9184	Economic (for internal use at plants only)
Nuclear	External	Economic		9185	Economic (for internal use at plants only)
Nuclear	External	Economic		9186	Economic (for internal use at plants only)
Nuclear	External	Economic		9187	Economic (for internal use at plants only)
Nuclear	External	Economic		9188	Economic (for internal use at plants only)
Nuclear	External	Economic		9189	Economic (for internal use at plants only)
Nuclear	External	Economic		9190	Economic (for internal use at plants only)
Nuclear	External	Economic		9191	Economic (for internal use at plants only)
Nuclear	External	Economic		9192	Economic (for internal use at plants only)
Nuclear	External	Economic		9193	Economic (for internal use at plants only)
Nuclear	External	Economic		9194	Economic (for internal use at plants only)
Nuclear	External	Economic		9195	Economic (for internal use at plants only)
Nuclear	External	Economic		9196	Economic (for internal use at plants only)
Nuclear	External	Economic		9197	Economic (for internal use at plants only)
Nuclear	External	Economic		9198	Economic (for internal use at plants only)
Nuclear	External	Economic		9199	Economic (for internal use at plants only)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-29 External: Miscellaneous (External)

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	External	Miscellaneous (External)		9300	Transmission system problems other than catastrophes (do not include switchyard problems in this category; see codes 3600 to 3629, 3720 to 3730)
Nuclear	External	Miscellaneous (External)		9310	Operator training
Nuclear	External	Miscellaneous (External)		9320	Other miscellaneous external problems

Notes: 1) For use with Unit Codes 200-299.

GENERATOR

This set of codes contains the generator, exciter, generator cooling systems, and generator controls. Note the main leads up to and includes the generator output breaker in this set of codes.

TABLE B14-30 Generator: Controls

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Generator	Controls		4700	Generator voltage control

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Nuclear	Generator	Controls		4710	Generator metering devices
Nuclear	Generator	Controls		4720	Generator synchronization equipment
Nuclear	Generator	Controls		4730	Generator current and potential transformers
Nuclear	Generator	Controls		4740	Emergency generator trip devices
Nuclear	Generator	Controls		4741	Frequency Trip (81 Relay)
Nuclear	Generator	Controls		4750	Other generator controls and metering problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-31 Generator: Cooling System

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Generator	Cooling System		4610	Hydrogen cooling system piping and valves
Nuclear	Generator	Cooling System		4611	Hydrogen coolers
Nuclear	Generator	Cooling System		4612	Hydrogen storage system
Nuclear	Generator	Cooling System		4613	Hydrogen seals
Nuclear	Generator	Cooling System		4619	Other hydrogen system problems
Nuclear	Generator	Cooling System		4620	Air cooling system
Nuclear	Generator	Cooling System		4630	Liquid cooling system
Nuclear	Generator	Cooling System		4640	Seal oil system and seals
Nuclear	Generator	Cooling System		4650	Other cooling system problems

Notes: 1) For use with Unit Codes 200-299. 2) Report failures caused by water leaks into generator as codes 4500, 4510, etc.

TABLE B14-32 Generator: Exciter

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Generator	Exciter		4600	Exciter drive - motor
Nuclear	Generator	Exciter		4601	Exciter field rheostat
Nuclear	Generator	Exciter		4602	Exciter commutator and brushes
Nuclear	Generator	Exciter		4603	Solid state exciter element
Nuclear	Generator	Exciter		4604	Exciter drive - shaft
Nuclear	Generator	Exciter		4605	Exciter transformer
Nuclear	Generator	Exciter		4609	Other exciter problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-33 Generator: Generator

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Generator	Generator		4500	Rotor windings (including damper windings and fan blades on hydro units)
Nuclear	Generator	Generator		4510	Rotor collector rings
Nuclear	Generator	Generator		4511	Rotor, General
Nuclear	Generator	Generator		4512	Retaining Rings
Nuclear	Generator	Generator		4520	Stator windings, bushings, and terminals

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Nuclear	Generator	Generator		4530	Stator core iron
Nuclear	Generator	Generator		4535	Stator, General
Nuclear	Generator	Generator		4536	Generator Heaters
Nuclear	Generator	Generator		4540	Brushes and brush rigging
Nuclear	Generator	Generator		4550	Generator bearings and lube oil system (including thrust bearings on hydro units)
Nuclear	Generator	Generator		4551	Generator bearings
Nuclear	Generator	Generator		4552	Generator lube oil system
Nuclear	Generator	Generator		4555	Bearing cooling system
Nuclear	Generator	Generator		4560	Generator vibration (excluding vibration due to failed bearing and other components)
Nuclear	Generator	Generator		4570	Generator casing
Nuclear	Generator	Generator		4580	Generator end bells and bolting

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-34 Generator: Miscellaneous (Generator)					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Generator	Miscellaneous (Generator)		4800	Generator main leads
Nuclear	Generator	Miscellaneous (Generator)		4805	Generator Bus Duct Cooling System
Nuclear	Generator	Miscellaneous (Generator)		4810	Generator output breaker
Nuclear	Generator	Miscellaneous (Generator)		4830	Major generator overhaul (720 hours or longer) (use for non-specific overhaul only; see page B-CCGT-2)
Nuclear	Generator	Miscellaneous (Generator)		4831	Minor generator overhaul (less than 720 hours) (use for non-specific overhaul only; see page B-CCGT-2)
Nuclear	Generator	Miscellaneous (Generator)		4840	Inspection
Nuclear	Generator	Miscellaneous (Generator)		4841	Generator dole testing
Nuclear	Generator	Miscellaneous (Generator)		4842	Reactive and capability testing
Nuclear	Generator	Miscellaneous (Generator)		4850	Core monitor alarm
Nuclear	Generator	Miscellaneous (Generator)		4860	Generator neutral grounding equipment
Nuclear	Generator	Miscellaneous (Generator)		4899	Other miscellaneous generator problems

Notes: 1) For use with Unit Codes 200-299.

INACTIVE STATES

TABLE B14-35 Inactive States: Inactive States					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Inactive States	Inactive States		2	Inactive Reserve Shutdown
Nuclear	Inactive States	Inactive States		9990	Retired unit
Nuclear	Inactive States	Inactive States		9991	Mothballed unit

Notes: 1) For use with Unit Codes 200-299.

NUCLEAR REACTOR

This set of codes contains the following:

- The reactor
- The containment system
- The reactor coolant system, including chemical, volume, and pressure control system
- Safety systems, both electrical and mechanical
- Residual heat removal systems
- Closed loop cooling water for reactor systems
- Service water for closed loop cooling and other reactor systems
- Steam generators
- Main steam systems up to the outboard containment isolation valve
- Feedwater systems from the reactor or steam generator up to the outboard containment isolation valve
- Blowdown systems
- Radioactive waste and off-gas systems

TABLE B14-36 Nuclear Reactor: Auxiliary Systems					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Auxiliary Systems		2840	Auxiliary feedwater pumps
Nuclear	Nuclear Reactor	Auxiliary Systems		2841	Auxiliary feedwater pump motors
Nuclear	Nuclear Reactor	Auxiliary Systems		2842	Auxiliary feedwater pump steam turbines (including steam control valves)
Nuclear	Nuclear Reactor	Auxiliary Systems		2843	Auxiliary feedwater piping
Nuclear	Nuclear Reactor	Auxiliary Systems		2844	Auxiliary feedwater valves
Nuclear	Nuclear Reactor	Auxiliary Systems		2849	Other auxiliary feedwater problems
Nuclear	Nuclear Reactor	Auxiliary Systems		2870	Radioactive liquid waste system problems
Nuclear	Nuclear Reactor	Auxiliary Systems		2880	Radioactive gas and waste system problems
Nuclear	Nuclear Reactor	Auxiliary Systems		2890	Condenser off-gas system problems
Notes: 1) For use with Unit Codes 200-299. 2) See codes 3110 to 3999 for other auxiliary systems.					

TABLE B14-37 Nuclear Reactor: Chemical and Volume Control/Reactor Water Cleanup					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2805	Moderator systems (CANDU)
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2806	Moderator purification (CANDU)

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Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2807	Moderator poison injection (CANDU)
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2810	Makeup pumps
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2811	Boric acid transfer pumps
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2812	Tanks
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2813	Demineralizers
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2814	Filters
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2815	Heat exchangers
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2816	Valves and piping
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2817	Instruments and controls
Nuclear	Nuclear Reactor	Chemical and Volume Control/Reactor Water Cleanup		2819	Other CVCS and RWC problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-38 Nuclear Reactor: Containment System

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Containment System		2700	Containment structure
Nuclear	Nuclear Reactor	Containment System		2701	Containment liner
Nuclear	Nuclear Reactor	Containment System		2702	Containment hatches
Nuclear	Nuclear Reactor	Containment System		2703	Containment penetrations
Nuclear	Nuclear Reactor	Containment System		2720	Containment isolation valves and dampers
Nuclear	Nuclear Reactor	Containment System		2730	Containment isolation actuation
Nuclear	Nuclear Reactor	Containment System		2740	Containment penetration pressurization system
Nuclear	Nuclear Reactor	Containment System		2750	Containment hydrogen control system (vents, recombiners, etc.)
Nuclear	Nuclear Reactor	Containment System		2760	Containment spray system (including actuation)
Nuclear	Nuclear Reactor	Containment System		2770	Containment cooling system - normal
Nuclear	Nuclear Reactor	Containment System		2771	Containment cooling and gas cleanup - post accident
Nuclear	Nuclear Reactor	Containment System		2780	Containment testing
Nuclear	Nuclear Reactor	Containment System		2799	Other containment system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-39 Nuclear Reactor: Control Rods and Drives

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
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Nuclear	Nuclear Reactor	Control Rods and Drives		2110	Control rod drive motors
Nuclear	Nuclear Reactor	Control Rods and Drives		2111	Control rod magnetic jack drives
Nuclear	Nuclear Reactor	Control Rods and Drives		2112	Control rod hydraulic drives
Nuclear	Nuclear Reactor	Control Rods and Drives		2120	Control rod scram mechanisms
Nuclear	Nuclear Reactor	Control Rods and Drives		2125	Reactivity control units (CANDU)
Nuclear	Nuclear Reactor	Control Rods and Drives		2130	Control rod assemblies other than drive and scram mechanisms
Nuclear	Nuclear Reactor	Control Rods and Drives		2140	Control rod drive cooling
Nuclear	Nuclear Reactor	Control Rods and Drives		2150	Control rod instrumentation
Nuclear	Nuclear Reactor	Control Rods and Drives		2151	Control rod drive controls
Nuclear	Nuclear Reactor	Control Rods and Drives		2152	Control rod drive power supplies
Nuclear	Nuclear Reactor	Control Rods and Drives		2155	Control rod testing
Nuclear	Nuclear Reactor	Control Rods and Drives		2160	Other control rod drive problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-40 Nuclear Reactor: Core Cooling/Safety Injection

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2600	High pressure safety injection, core injection, or core spray pumps (including RCIC)
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2601	Motors for high pressure pumps
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2602	Steam turbine drives for high pressure pumps (including RCIC)
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2603	High pressure piping
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2604	High pressure valves
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2609	Other high pressure injection problems
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2620	Low pressure safety injection, core spray, or decay heat pumps
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2621	Motors for low pressure pumps
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2622	Low pressure piping
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2623	Low pressure valves
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2624	Low pressure heat exchangers
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2625	Accumulators (up to and including check valves)
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2628	Residual heat removal/decay heat removal system
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2629	Other low pressure problems
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2630	Safeguard actuation system (including sensors, logic, activators, and sequencers)
Nuclear	Nuclear Reactor	Core Cooling/Safety Injection		2649	Other emergency core cooling/residual heat removal system problems

Notes: 1) For use with Unit Codes 200-299. 2) Where portions of these systems also serve in the makeup system, report problems as CVCS problems.

TABLE B14-41 Nuclear Reactor: Core/Fuel

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UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Core/Fuel		2010	Fuel failure, including high activity in Reactor Coolant System (RCS) or off-gas system
Nuclear	Nuclear Reactor	Core/Fuel		2020	Control rod pattern changes and control rod repatch. (Preconditioning following a pattern change is to be reported using code 2031.)
Nuclear	Nuclear Reactor	Core/Fuel		2021	Power limited by rod pattern. (If rod pattern is limited by fuel limits, use appropriate code below.)
Nuclear	Nuclear Reactor	Core/Fuel		2030	Fuel limits - peaking factors
Nuclear	Nuclear Reactor	Core/Fuel		2031	Fuel preconditioning
Nuclear	Nuclear Reactor	Core/Fuel		2032	Fuel limits - MCPR (Minimum Critical Power Ratio - BWR units only)
Nuclear	Nuclear Reactor	Core/Fuel		2033	Fuel limits - MAPLHGR (Maximum Average Planar Linear Heat Generation Rate - BWR units only)
Nuclear	Nuclear Reactor	Core/Fuel		2034	Core tilt restrictions
Nuclear	Nuclear Reactor	Core/Fuel		2035	Core xenon restrictions
Nuclear	Nuclear Reactor	Core/Fuel		2036	End of life scram reactivity/rod worth restrictions
Nuclear	Nuclear Reactor	Core/Fuel		2037	Other fuel limits (use codes 9110 and 9120 for core coastdown, conservation, or stretch)
Nuclear	Nuclear Reactor	Core/Fuel		2040	Core physics tests
Nuclear	Nuclear Reactor	Core/Fuel		2050	Burnable poison problems including poison curtains
Nuclear	Nuclear Reactor	Core/Fuel		2060	Excore nuclear instrumentation
Nuclear	Nuclear Reactor	Core/Fuel		2061	Incore nuclear instrumentation
Nuclear	Nuclear Reactor	Core/Fuel		2062	Other fuel/core related instrumentation problems
Nuclear	Nuclear Reactor	Core/Fuel		2070	Normal refueling
Nuclear	Nuclear Reactor	Core/Fuel		2071	Refueling equipment problems
Nuclear	Nuclear Reactor	Core/Fuel		2072	Fuel storage
Nuclear	Nuclear Reactor	Core/Fuel		2080	Fueling machine and auxiliaries (CANDU)
Nuclear	Nuclear Reactor	Core/Fuel		2082	Fuel transfer problems (CANDU)
Nuclear	Nuclear Reactor	Core/Fuel		2090	Other core/fuel problems
Notes: 1) For use with Unit Codes 200-299.					

TABLE B14-42 Nuclear Reactor: Electrical Safety Systems					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Electrical Safety Systems		2650	Emergency diesel generators (including actuating systems)
Nuclear	Nuclear Reactor	Electrical Safety Systems		2651	Emergency diesel generator output breakers

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Nuclear	Nuclear Reactor	Electrical Safety Systems		2660	Safeguard buses and associated equipment (transformers, breakers, etc.)
Nuclear	Nuclear Reactor	Electrical Safety Systems		2670	DC safety system power supplies
Nuclear	Nuclear Reactor	Electrical Safety Systems		2680	120V AC safety system power supplies (including inverter)
Nuclear	Nuclear Reactor	Electrical Safety Systems		2699	Other electrical safety system power supplies (use codes 3600 to 3659 for nonsafety electrical systems)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-43 Nuclear Reactor: Miscellaneous (Reactor)

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Miscellaneous (Reactor)		2900	Reactor overhaul (use for non-specific overhaul only; see page B-CCGT-2)
Nuclear	Nuclear Reactor	Miscellaneous (Reactor)		2990	Plant radiation levels
Nuclear	Nuclear Reactor	Miscellaneous (Reactor)		2991	Radioactivity discharge levels to the environment
Nuclear	Nuclear Reactor	Miscellaneous (Reactor)		2995	Reactor performance testing (use code 9999 for total unit performance testing)
Nuclear	Nuclear Reactor	Miscellaneous (Reactor)		2999	Other miscellaneous nuclear reactor problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-44 Nuclear Reactor: Nuclear Cooling Water Systems

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2820	Nuclear closed cooling water pumps
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2821	Nuclear closed cooling water piping
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2822	Nuclear closed cooling water valves
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2823	Nuclear closed cooling heat exchanger
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2825	Turbine building closed cooling water system
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2829	Other closed cooling water system problems
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2830	Nuclear service water pumps
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2831	Nuclear service water piping
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2832	Nuclear service water valves
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2833	Nuclear service water heat exchangers
Nuclear	Nuclear Reactor	Nuclear Cooling Water Systems		2839	Other service water problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-45 Nuclear Reactor: Reactor Coolant System - Instruments and Controls

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Reactor Coolant System	Instruments and Controls	2330	Pressurizer level instruments and controls
Nuclear	Nuclear Reactor	Reactor Coolant System	Instruments and Controls	2340	Pressurizer pressure instruments and controls

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Nuclear	Nuclear Reactor	Reactor Coolant System	Instruments and Controls	2350	BWR feedwater controls
Nuclear	Nuclear Reactor	Reactor Coolant System	Instruments and Controls	2360	BWR pressure controls
Nuclear	Nuclear Reactor	Reactor Coolant System	Instruments and Controls	2370	Reactor trip system including sensors, logic, and actuators (includes spurious trips but not valid trips)
Nuclear	Nuclear Reactor	Reactor Coolant System	Instruments and Controls	2380	Reactor control system/integrated control system problems
Nuclear	Nuclear Reactor	Reactor Coolant System	Instruments and Controls	2390	Other reactor coolant system instruments and controls

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-46 Nuclear Reactor: Reactor Coolant System - Miscellaneous (Reactor Coolant System)					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Reactor Coolant System	Miscellaneous (Reactor Coolant System)	2399	Other miscellaneous reactor coolant system problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-47 Nuclear Reactor: Reactor Coolant System - Piping					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Reactor Coolant System	Piping	2230	Reactor coolant system piping
Nuclear	Nuclear Reactor	Reactor Coolant System	Piping	2240	Reactor coolant system pipe supports
Nuclear	Nuclear Reactor	Reactor Coolant System	Piping	2250	Reactor coolant system filters and strainers
Nuclear	Nuclear Reactor	Reactor Coolant System	Piping	2260	Reactor coolant flanges, fittings, and manways

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-48 Nuclear Reactor: Reactor Coolant System - Pressurizer					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Reactor Coolant System	Pressurizer	2265	Pressurizer (also see codes 2290, 2330, and 2340)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-49 Nuclear Reactor: Reactor Coolant System - Pumps					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Reactor Coolant System	Pumps	2200	Reactor coolant/recirculating pumps
Nuclear	Nuclear Reactor	Reactor Coolant System	Pumps	2210	Reactor coolant/recirculating pump motors
Nuclear	Nuclear Reactor	Reactor Coolant System	Pumps	2220	Reactor coolant/recirculating pump MG sets

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-50 Nuclear Reactor: Reactor Coolant System - Valves					
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UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Reactor Coolant System	Valves	2270	Power operated relief and safety/relief valves
Nuclear	Nuclear Reactor	Reactor Coolant System	Valves	2280	Non-power operated safety valves
Nuclear	Nuclear Reactor	Reactor Coolant System	Valves	2290	Pressurizer spray valves
Nuclear	Nuclear Reactor	Reactor Coolant System	Valves	2300	Recirculation loop flow control valves
Nuclear	Nuclear Reactor	Reactor Coolant System	Valves	2320	Other reactor coolant valves (including RCS boundary valves in connected systems)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-51 Nuclear Reactor: Reactor Vessel and Internals					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2170	Reactor vessel flanges and seals
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2171	Reactor vessel nozzles
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2172	Feedwater spargers
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2173	Jet pumps
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2174	Core support
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2175	Specimen holders
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2176	Control rod guides (not in fuel)
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2180	Calandria and Calandria tubes (CANDU)
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2185	Coolant assemblies (pressure tubes) (CANDU)
Nuclear	Nuclear Reactor	Reactor Vessel and Internals		2199	Other reactor vessel problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-52 Nuclear Reactor: Steam Generators and Steam System					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2400	Steam generator tube leaks
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2411	Steam generator tube inspections
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2412	Steam generator tube supports
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2420	Steam generator moisture separators and dryers
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2421	Steam generator feedwater nozzles
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2422	Other steam generator internals problems
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2430	Steam generator shell
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2431	Steam generator flanges, manways, and fittings
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2432	Steam generator supports and snubbers
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2440	Steam generator chemistry (excluding feedwater chemistry)
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2441	Steam generator tube lancing
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2442	Steam generator chemical cleaning

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Nuclear	Nuclear Reactor	Steam Generators and Steam System		2443	Steam generator modifications
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2450	Blowdown system piping
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2460	Blowdown system valves
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2470	Blowdown system instruments and controls
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2480	Other blowdown
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2500	Steam piping (up to turbine stop valves and bypass valves)
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2510	Main steam isolation valves (BWR and PWR)
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2515	Main steam isolation valve testing
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2520	Main steam safety/relief valves
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2521	Main steam safety/relief valve testing
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2530	Atmospheric or condenser dump valves (not SRVs)
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2540	Other steam valves
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2550	Steam generator instruments (including piping and valves) (no RPS or SAS inputs)
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2560	Steam generator controls
Nuclear	Nuclear Reactor	Steam Generators and Steam System		2599	Other steam generator problems

Notes: 1) For use with Unit Codes 200-299.

PERFORMANCE

TABLE B14-53 Performance: Performance					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Performance	Performance		9997	NERC Reliability Standard Requirement
Nuclear	Performance	Performance		9998	Black start testing
Nuclear	Performance	Performance		9999	Total unit performance testing (use appropriate codes for individual component testing)

Notes: 1) For use with Unit Codes 200-299.

PERSONNEL OR PROCEDURAL ERRORS

TABLE B14-54 Personnel or Procedural Errors: Personnel or Procedural Errors					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Personnel or Procedural Errors	Personnel or Procedural Errors		9900	Operator error
Nuclear	Personnel or Procedural Errors	Personnel or Procedural Errors		9910	Maintenance personnel error
Nuclear	Personnel or Procedural Errors	Personnel or Procedural Errors		9920	Contractor error
Nuclear	Personnel or Procedural Errors	Personnel or Procedural Errors		9930	Operating procedure error

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Nuclear	Personnel or Procedural Errors	Personnel or Procedural Errors		9940	Maintenance procedure error
Nuclear	Personnel or Procedural Errors	Personnel or Procedural Errors		9950	Contractor procedure error
Nuclear	Personnel or Procedural Errors	Personnel or Procedural Errors		9960	Staff shortage

Notes: 1) For use with Unit Codes 200-299.

REGULATORY, SAFETY, ENVIRONMENTAL

Use these codes only for events not directly attributable to equipment failures. Inspections or testing of certain equipment due to regulation are reported using the appropriate equipment cause codes, and the fact that it was a regulatory requirement noted in the verbal description section.

TABLE B14-55 Regulatory, Safety, Environmental: Other Operating Environmental Limitations

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Regulatory, Safety, Environmental	Other Operating Environmental Limitations		9660	Thermal discharge limits - fossil and nuclear
Nuclear	Regulatory, Safety, Environmental	Other Operating Environmental Limitations		9670	Noise limits (not for personnel safety) – fossil and nuclear
Nuclear	Regulatory, Safety, Environmental	Other Operating Environmental Limitations		9680	Fish kill - fossil and nuclear
Nuclear	Regulatory, Safety, Environmental	Other Operating Environmental Limitations		9690	Other miscellaneous operational environmental limits - fossil and nuclear

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-56 Regulatory, Safety, Environmental: Regulatory

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Regulatory, Safety, Environmental	Regulatory		9500	Regulatory (nuclear) proceedings and hearings - regulatory agency initiated
Nuclear	Regulatory, Safety, Environmental	Regulatory		9502	Regulatory (nuclear) proceedings and hearings - intervenor initiated
Nuclear	Regulatory, Safety, Environmental	Regulatory		9504	Regulatory (environmental) proceedings and hearings - regulatory agency initiated
Nuclear	Regulatory, Safety, Environmental	Regulatory		9506	Regulatory (environmental) proceedings and hearings - intervenor initiated
Nuclear	Regulatory, Safety, Environmental	Regulatory		9510	Plant modifications strictly for compliance with new or changed regulatory requirements (scrubbers, cooling towers, etc.)
Nuclear	Regulatory, Safety, Environmental	Regulatory		9520	Oil spill in Gulf of Mexico (OMC)
Nuclear	Regulatory, Safety, Environmental	Regulatory		9590	Miscellaneous regulatory (this code is primarily intended for use with event contribution code 2 to indicate that a regulatory-related factor contributed to the primary cause of the event)

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-57 Regulatory, Safety, Environmental: Safety					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Regulatory, Safety, Environmental	Safety		9700	OSHA-related retrofit or inspection
Nuclear	Regulatory, Safety, Environmental	Safety		9710	Investigation of possible nuclear safety problems
Nuclear	Regulatory, Safety, Environmental	Safety		9720	Other safety problems

Notes: 1) For use with Unit Codes 200-299.

STEAM TURBINE

Besides the turbine, this set includes the steam stop/control valves, turbine control system, and the turbine auxiliaries. The extraction steam codes are contained in the Balance of Plant set.

TABLE B14-58 Steam Turbine: Controls					
UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	Controls		4290	Hydraulic system pumps
Nuclear	Steam Turbine	Controls		4291	Hydraulic system coolers
Nuclear	Steam Turbine	Controls		4292	Hydraulic system filters
Nuclear	Steam Turbine	Controls		4293	Hydraulic system pipes and valves
Nuclear	Steam Turbine	Controls		4299	Other hydraulic system problems
Nuclear	Steam Turbine	Controls		4300	Turbine supervisory system (use codes 4290 to 4299 for hydraulic oil)
Nuclear	Steam Turbine	Controls		4301	Turbine governing system
Nuclear	Steam Turbine	Controls		4302	Turbine trip devices (including instruments)
Nuclear	Steam Turbine	Controls		4303	Exhaust hood and spray controls
Nuclear	Steam Turbine	Controls		4304	Automatic turbine control systems - mechanical
Nuclear	Steam Turbine	Controls		4305	Automatic turbine control systems - mechanical - hydraulic
Nuclear	Steam Turbine	Controls		4306	Automatic turbine control systems - electro-hydraulic - analog
Nuclear	Steam Turbine	Controls		4307	Automatic turbine control systems - electro-hydraulic - digital
Nuclear	Steam Turbine	Controls		4308	Automatic turbine control systems - digital control and monitoring
Nuclear	Steam Turbine	Controls		4309	Other turbine instrument and control problems
Nuclear	Steam Turbine	Controls		4310	Steam Turbine Control System - data highway
Nuclear	Steam Turbine	Controls		4311	Steam Turbine Control System - hardware problems (including card failure)
Nuclear	Steam Turbine	Controls		4312	Steam Turbine Control System - internal and termination wiring
Nuclear	Steam Turbine	Controls		4313	Steam Turbine Control System - logic problems

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Nuclear	Steam Turbine	Controls		4314	Steam Turbine Control System - upgrades
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Notes: 1) For use with Unit Codes 200-299.

TABLE B14-59 Steam Turbine: High Pressure Turbine

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	High Pressure Turbine		4000	Outer casing
Nuclear	Steam Turbine	High Pressure Turbine		4001	Inner casing
Nuclear	Steam Turbine	High Pressure Turbine		4009	Nozzle bolting
Nuclear	Steam Turbine	High Pressure Turbine		4010	Nozzles and nozzle blocks
Nuclear	Steam Turbine	High Pressure Turbine		4011	Diaphragms
Nuclear	Steam Turbine	High Pressure Turbine		4012	Buckets or blades
Nuclear	Steam Turbine	High Pressure Turbine		4013	Diaphragms unit and shroud type
Nuclear	Steam Turbine	High Pressure Turbine		4014	Bucket or blade fouling
Nuclear	Steam Turbine	High Pressure Turbine		4015	Wheels or spindles
Nuclear	Steam Turbine	High Pressure Turbine		4020	Shaft seals
Nuclear	Steam Turbine	High Pressure Turbine		4021	Dummy rings
Nuclear	Steam Turbine	High Pressure Turbine		4022	Gland rings
Nuclear	Steam Turbine	High Pressure Turbine		4030	Rotor shaft
Nuclear	Steam Turbine	High Pressure Turbine		4040	Bearings
Nuclear	Steam Turbine	High Pressure Turbine		4041	Thrust bearings
Nuclear	Steam Turbine	High Pressure Turbine		4099	Other high pressure turbine problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-60 Steam Turbine: Intermediate Pressure Turbine

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4100	Outer casing
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4101	Inner casing
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4109	Nozzle bolting
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4110	Nozzles and nozzle blocks
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4111	Diaphragms
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4112	Buckets or blades
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4113	Bucket or blade fouling
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4115	Wheels or spindles
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4120	Shaft seals
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4121	Dummy rings
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4122	Gland rings
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4130	Rotor shaft
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4140	Bearings
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4141	Thrust bearings
Nuclear	Steam Turbine	Intermediate Pressure Turbine		4199	Other intermediate pressure turbine problems

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Notes: 1) For use with Unit Codes 200-299.

TABLE B14-61 Steam Turbine: Low Pressure Turbine

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	Low Pressure Turbine		4200	Outer casing
Nuclear	Steam Turbine	Low Pressure Turbine		4201	Inner casing
Nuclear	Steam Turbine	Low Pressure Turbine		4209	Nozzle bolting
Nuclear	Steam Turbine	Low Pressure Turbine		4210	Nozzles and nozzle blocks
Nuclear	Steam Turbine	Low Pressure Turbine		4211	Diaphragms
Nuclear	Steam Turbine	Low Pressure Turbine		4212	Buckets or blades
Nuclear	Steam Turbine	Low Pressure Turbine		4213	Bucket or blade fouling
Nuclear	Steam Turbine	Low Pressure Turbine		4215	Wheels or spindles
Nuclear	Steam Turbine	Low Pressure Turbine		4220	Shaft seals
Nuclear	Steam Turbine	Low Pressure Turbine		4221	Dummy rings
Nuclear	Steam Turbine	Low Pressure Turbine		4222	Gland rings
Nuclear	Steam Turbine	Low Pressure Turbine		4230	Rotor shaft
Nuclear	Steam Turbine	Low Pressure Turbine		4240	Bearings
Nuclear	Steam Turbine	Low Pressure Turbine		4241	Thrust bearings
Nuclear	Steam Turbine	Low Pressure Turbine		4250	Other low pressure turbine problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-62 Steam Turbine: Lube Oil

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	Lube Oil		4280	Lube oil pumps
Nuclear	Steam Turbine	Lube Oil		4281	Lube oil coolers
Nuclear	Steam Turbine	Lube Oil		4282	Lube oil conditioners
Nuclear	Steam Turbine	Lube Oil		4283	Lube oil system valves and piping
Nuclear	Steam Turbine	Lube Oil		4284	Lube oil pump drive
Nuclear	Steam Turbine	Lube Oil		4289	Other lube oil system problems

Notes: 1) For use with Unit Codes 200-299. 2) Do not include bearing failures due to lube oil.

TABLE B14-63 Steam Turbine: Miscellaneous (Steam Turbine)

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4400	Major turbine overhaul (720 hours or longer) (use for non-specific overhaul only; see page B-CCGT-2)
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4401	Inspection
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4402	Minor turbine overhaul (less than 720 hours) (use for non-specific overhaul only; see page B-CCGT-2)
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4410	Turning gear and motor

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Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4411	Steam turbine gear box (single shaft configuration)
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4412	Steam turbine clutch (single shaft configuration)
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4415	Shaft coupling mechanism
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4420	Vibration of the turbine generator unit that cannot be attributed to a specific cause such as bearings or blades (use this code for balance moves)
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4430	Gland seal system
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4440	Moisture separator/reheater (nuclear including MSR drains, controls, etc.)
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4445	Steam reheater
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4450	Water induction
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4460	Turbine overspeed trip test
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4470	Differential expansion
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4490	Turbine performance testing (use code 9999 for total unit performance testing)
Nuclear	Steam Turbine	Miscellaneous (Steam Turbine)		4499	Other miscellaneous steam turbine problems

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-64 Steam Turbine: Piping

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	Piping		4270	Crossover or under piping
Nuclear	Steam Turbine	Piping		4279	Miscellaneous turbine piping

Notes: 1) For use with Unit Codes 200-299.

TABLE B14-65 Steam Turbine: Valves

UNIT TYPE	SYSTEM	COMPONENT	SUB-COMPONENT	CAUSE CODE	DESCRIPTION
Nuclear	Steam Turbine	Valves		4260	Main stop valves
Nuclear	Steam Turbine	Valves		4261	Control valves
Nuclear	Steam Turbine	Valves		4262	Intercept valves
Nuclear	Steam Turbine	Valves		4263	Reheat stop valves
Nuclear	Steam Turbine	Valves		4264	Combined intercept valves
Nuclear	Steam Turbine	Valves		4265	Miscellaneous drain and vent valves
Nuclear	Steam Turbine	Valves		4266	Main stop valve testing
Nuclear	Steam Turbine	Valves		4267	Control valve testing
Nuclear	Steam Turbine	Valves		4268	Reheat/intercept valve testing
Nuclear	Steam Turbine	Valves		4269	Other turbine valves (including LP steam admission valves)

Notes: 1) For use with Unit Codes 200-299.