

# AmerGen

A PECO Energy/British Energy Company

## Clinton Power Station

P.O. Box 678  
Clinton, IL 61727  
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U-603342  
1A.120  
March 17, 2000

Docket No. 50-461

Document Control Desk  
Nuclear Regulatory Commission  
Washington, D.C. 20555

Subject: Annual Occupational Radiation Exposure Report

Dear Madam or Sir:

In accordance with Section 5.6.1 of the Clinton Power Station Technical Specifications, AmerGen Energy Company, LLC (AmerGen) is submitting the Annual Occupational Radiation Exposure Report for the period of January 1, 1999, through December 31, 1999, for the Clinton Power Station. Attachment 1 provides the required information.

Sincerely yours,



Michael A. Reandean  
Director-Licensing

GBS/mlh

Attachment

cc: NRC Clinton Licensing Project Manager  
NRC Resident Office, V-690  
Regional Administrator, Region III, USNRC  
Director, Office of Nuclear Regulatory Research  
Illinois Department of Nuclear Safety

IEB6

## **Report of Personnel and Man-Rem by Work and Job Function**

This report is a tabulation on an annual basis of the number of Station, Utility and other personnel (including contractors) who received exposures greater than 100 mrem/year and their associated man-rem exposure according to work and job functions.

The work and job function grand totals for personnel with exposures greater than 100 mrem/year are different than the actual number of personnel at the bottom of the report, because an individual may perform work under more than one work and job function during the year.

The total man-rem is based on a ratio of the official TLD results.

A description of the Special Plant Maintenance performed in 1999 is as follows:

- **Radiation Work Permit 19991025** was for work in support of the Feedwater (FW)-039 modification (mod). This included scaffolding, piping/hanger layout and installation, coatings, boroscope inspections, Quality Assurance (QA) and Inservice Inspection (ISI), Post Maintenance Testing (PMT), insulation removal/installation, temporary power and Radiation Protection (RP) support.
- **Radiation Work Permit 19991026** was for radiography on the FW-039 mod piping welds in the Auxiliary Building Steam Tunnel (ABST).
- **Radiation Work Permit 19991027** was for installation and removal of scaffolding and shielding in support of FW-039 activities in the A and B Residual Heat Removal (RHR) System rooms. Support activities include grating removal and RP and ALARA support.
- **Radiation Work Permit 19991028** was for modification FW-039 work activities including installing hangers, pipe, valves and drilling. Also Bisco seals removal/replacement, core drilling, electrical work, painting, insulation removal/replacement, post heat treatment, QA/ISI, post maintenance testing (PMT), and RP/ALARA support.
- **Radiation Work Permit 19991029** was for performing radiography in RHR "A" Heat Exchanger room, Auxiliary Building (AB) 762' elevation, to support the FW-039 modification.
- **Radiation Work Permit 19991030** was for work in support of FW-039 activities to include: pipe/hanger layout; installing hangers, pipe, conduit and shielding; tie-in RHR pipe (drilling), insulation removal/replacement, painting, PMT, QA and RP support, remove debris and fiberscope inspection.

- **Radiation Work Permit 19991031** was for radiography in the AB 762' level general area in support of the FW-039 mod.
- **Radiation Work Permit 19991039** was to allow radiography in Fuel Building (FB) room F1-5 per Maintenance Work Requests (MWRs) D81257, D81258 and D81259 for the FW-039 mod.
- **Radiation Work Permit 19991041** was for the installation of a fire barrier wall on 707' AB general walkway. This included all support activities as well. The MWRs utilized were D82080, D82086, D82881, D82027 and D82085.
- **Radiation Work Permit 19991065** was to support MWR D77852 which included removing existing thermo-lag, hanger/conduit and electrical work. MWR D77853 supported the installation of new fire barrier on cable trays.
- **Radiation Work Permit 19991072** was to perform radiography in FB room F1-6 per maintenance work orders (MWOs) D81257, D81258 and D81259 for the FW-039 mod.
- **Radiation Work Permit 19991079** was used to investigate the stuck radiography source in the FB 712' level room F1-6.
- **Radiation Work Permit 19991088** was in support of radiography in the Gas Control Boundary 762' East AB for FW-039 modification and for MWO D81257.
- **Radiation Work Permit 19991103** was for installation of equalization lines on valves 1E12F068A&B/F014A&B, removal and replacement of relief valves 1SX208A and B, insulation of valve 1E12F068A, and for preventive maintenance task PEMRHA329 to clean/inspect valve 1E12F014A. Work included the support activities of QA, RP, and scaffold and temporary shielding requests (TSR) for engineering change notices (ECNs) 31288 and 30331.
- **Radiation Work Permit 19991139** was in support of the removal/installation of the mechanical seal from the "B" Reactor Recirculation (RR) pump. This included shielding installation/removal, scaffolding erection/removal and decon activities.
- **Radiation Work Permit 19991165** was in support of Action Request (AR) F09530, to replace orifice 1E21D003A with a smaller one. This RWP also supported relocating valve 1E21F343 down stream of new orifice 1E21D003A, including all support activities such as RP, painting, flow testing and QA.
- **Radiation Work Permit 19991188** was for AR F09529 to install 1E12D002A & 1E12D002B flow orifices. Work included scaffolding erection/removal, RP support, shielding and painting.

ILLINOIS POWER / AMERGEN  
CLINTON POWER STATION  
P. O. Box 678  
Clinton, IL 61727  
Reg. Guide 1.16 Report

Reporting Year: 1999

WORK & JOB FUNCTION	# PERSONNEL (>100 MREM)			TOTAL MAN-REM		
	STATION	UTILITY	CONTRACT	STATION	UTILITY	CONTRACT
-----+-----						
Reactor Operations and Surveillance						
Maintenance and Construction	73	0	95	2.630	0.000	3.159
Operations	55	0	0	9.094	0.000	0.000
Health Physics and Lab	32	0	11	6.625	0.000	1.832
Supervisory and Office Staff	1	0	1	0.108	0.000	0.162
Engineering Staff	2	0	5	0.182	0.000	0.170
-----+-----						
Routine Plant Maintenance						
Maintenance and Construction	74	0	92	21.019	0.000	15.834
Operations	47	0	0	1.617	0.000	0.000
Health Physics and Lab	28	0	11	3.491	0.000	1.024
Supervisory and Office Staff	2	0	1	0.027	0.000	0.321
Engineering Staff	2	0	3	0.128	0.000	0.242
-----+-----						
Inservice Inspection						
Maintenance and Construction	0	0	0	0.000	0.000	0.000
Operations	0	0	0	0.000	0.000	0.000
Health Physics and Lab	0	0	0	0.000	0.000	0.000
Supervisory and Office Staff	0	0	0	0.000	0.000	0.000
Engineering Staff	0	0	0	0.000	0.000	0.000
-----+-----						
Special Plant Maintenance						
Maintenance and Construction	15	0	70	0.272	0.000	3.696
Operations	6	0	0	0.033	0.000	0.000
Health Physics and Lab	15	0	5	0.131	0.000	0.056
Supervisory and Office Staff	1	0	0	0.005	0.000	0.000
Engineering Staff	0	0	5	0.000	0.000	0.369
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Waste Processing						
Maintenance and Construction	2	0	3	0.062	0.000	0.519
Operations	8	0	0	0.193	0.000	0.000
Health Physics and Lab	13	0	1	0.200	0.000	0.001
Supervisory and Office Staff	0	0	0	0.000	0.000	0.000
Engineering Staff	0	0	0	0.000	0.000	0.000
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Refueling Operations						
Maintenance and Construction	0	0	0	0.000	0.000	0.000
Operations	0	0	0	0.000	0.000	0.000
Health Physics and Lab	0	0	0	0.000	0.000	0.000
Supervisory and Office Staff	0	0	0	0.000	0.000	0.000
Engineering Staff	0	0	0	0.000	0.000	0.000
-----+-----						
WORK & JOB FUNCTION TOTALS:	376	0	303	45.817	0.000	27.385
-----+-----						
GRAND TOTALS:						
Actual # of Personnel	170	0	105			