



May 25, 2005
GDP 05-0026

Mr. Jack R. Strosnider
Director, Office of Nuclear Material Safety and Safeguards
Attention: Document Control Desk
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555-0001

**Portsmouth Gaseous Diffusion Plant (PORTS)
Docket No. 70-7002; Certificate No. GDP-2
Submittal of Environmental Compliance Status Report (ECSR) Related Information**

Dear Mr. Strosnider:

On January 16, 2001, representatives from USEC and the NRC Staff met at NRC Headquarters to discuss the Environmental Compliance Status Report (ECSR) contained in Volume 3 of the PGDP and PORTS Certification Applications. As a result of this meeting, USEC committed to provide annual summaries of external gamma radiation levels as monitored under Section 5.1 of the Safety Analysis Report (SAR) from calendar year 1997 onward. The format of these summaries was based on the external gamma tables formerly included in the annual DOE Environmental Report for the site. Summary tables covering calendar years 1997 through 2004 were provided to the NRC in accordance with this commitment.

During a review of the external gamma radiation data, USEC personnel identified several minor errors in the previously submitted summaries. Enclosed are replacement summary tables for each of these eight years with the errors corrected. The general conclusion of the data is unchanged. Except for one small area near a UF₆ cylinder storage yard, measured gamma radiation levels on and around the Portsmouth Gaseous Diffusion Plant show no statistically significant difference from natural gamma radiation levels measured offsite.

The primary error was the inadvertent omission of gamma monitoring data from Power Pole # 737 (PP737) from all the annual summaries. PP737 is located along the south side of the active portion of the plant approximately 200 meters west of location A36 (see Figure 5.1-14 of the PORTS SAR). Data has been collected from this location, but was never added to the annual summary tables. Adding this data to the summary tables resulted in a very slight increase (an average change of 0.1 percent over all eight years and a maximum change of five percent in 1997) in the annual dose for the Perimeter Road group.

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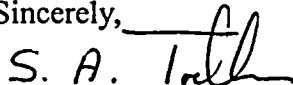
A second error involved small discrepancies between all the 2001 gamma doses reported and those actually calculated from field data. USEC believes this is a transcription error of some type, but cannot identify the specific cause. The net effect of the error was to inflate the reported annual gamma doses over those actually calculated. The corrected doses in the enclosed table range from 0.9 percent to 4.2 percent lower than the doses originally reported, with an average decrease of 2.3 percent.

Another transcription error resulted in the 1997 offsite external gamma monitoring results being reported in place of the corresponding 1998 data. This error caused the largest apparent changes from the previously reported data because 1996 and 1997 had the lowest measured external gamma doses in USEC records while the actual 1998 dose levels were close to average for the area. The only monitoring locations affected by this error were the Piketon and Camp Creek locations. To avoid future transcription errors of all types, the gamma radiation database has been modified to generate the summary tables directly instead of the past practice of copying and pasting the data into a template in a different application.

Two calculation errors were also discovered in the 1997 and 2004 annual average dose rates for the Camp Creek location. In both cases, a time-weighted averaging formula that had been modified to omit one of the quarterly dose rates was copied from the previous year's data table. This modification is used to account for TLDs that have been lost or damaged in the field. To prevent a repetition of this error, all modified annual averages have been tagged with a visible flag and a comment identifying the modification.

Finally, two minor clarifications have been made to the tables themselves. The monitoring location at power pole # 874 has been referred to as either "PP874" or "874". "PP874" is now used throughout the tables. The monitoring location at PP1404A was previously located at the adjacent PP1406. The map of the monitoring locations has the current location, but the existing summary tables still reference "PP1406". The corrected tables use "PP1404A".

Should you have any questions or require additional information, please contact me at (301) 564-3250. There are no new commitments contained in this submittal.

Sincerely,


Steven A. Toelle
Director, Nuclear Regulatory Affairs

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Reference: Letter from Steven A. Toelle (USEC) to Mr. Michael F. Weber (NRC), Paducah Gaseous Diffusion Plant (PGDP), Portsmouth Gaseous Diffusion Plant (PORTS), Docket Nos. 70-7001 and 70-7002, "Environmental Compliance Status Report (ECSR) Related Information", GDP 01-0018, dated March 26, 2001.

Enclosure: PORTS Environmental Compliance Status Report Related Information (Correction)

cc: G. Janosko, NRC
J. Henson, NRC Region II
D. Martin, NRC Project Manager

Enclosure 1
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9 Pages Total

PORTS Environmental Compliance Status Report Related Information

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 2004

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND	THIRD	FOURTH	(μ rem/hr)	(mrem/yr)
Perimeter Road (excluding PP874)						
PP518	13.1	11.8	12.2	13.0	12.5	
PP737	12.6	12.7	10.4	15.2	12.6	
PP862	13.1	13.1	13.0	16.8	13.9	
PP906	10.2	8.6	8.2	14.6	10.2	
PP933	14.5	18.6	14.3	22.2	17.2	
PP1404A	12.1	13.1	11.3	17.3	13.3	
A35	13.6	13.1	12.2	16.8	13.8	
A40	11.6	7.7	10.4	16.8	11.4	
A36	12.6	12.7	10.9	15.2	12.7	
Mean	12.6	12.4	11.4	16.4	13.1	115
Std. Deviation	1.2	3.1	1.7	2.6		
PP874*	78.5	80.6	80.7	81.7	80.4	0.35
Reservation Boundary						
A3	12.1	12.2	11.3	17.9	13.2	
A8	13.6	14.5	11.3	21.6	15.0	
A9	12.1	13.1	12.6	17.3	13.7	
A12	11.1	10.9	9.1	16.2	11.6	
A15	11.1	10.9	12.6	17.3	12.8	
A23	12.1	11.8	11.3	14.1	12.2	
A24	TLD Missing	13.1	12.2	16.2	13.7	
A29	10.2	TLD Missing	TLD Missing	15.7	12.8	
Mean	11.8	12.4	11.5	17.0	13.0	114
Std. Deviation	1.1	1.3	1.2	2.2		
Offsite						
Piketon (A6)	12.1	10.4	10.9	15.7	12.1	106
Camp Creek (A28)	12.6	14.0	11.7	13.0	12.8	113

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 2003

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND	THIRD	FOURTH	(μ rem/hr)	(mrem/yr)
Perimeter Road (excluding PP874)						
PP518	10.4	9.5	12.6	11.4	10.9	
PP737	12.1	9.5	13.2	11.8	11.5	
PP862	13.2	11.2	16.4	16.5	14.3	
PP906	10.4	8.2	12.6	11.4	10.6	
PP933	15.9	13.3	20.8	15.3	16.1	
PP1404A	11.0	8.6	15.4	11.4	11.4	
A35	12.1	10.3	11.5	13.4	11.9	
A40	9.9	7.3	12.1	9.4	9.5	
A36	12.1	9.5	15.9	11.4	12.0	
Mean	11.9	9.7	14.5	12.4	12.0	106
Std. Deviation	1.8	1.8	3.0	2.2		
PP874*	75.7	75.2	79.5	75.5	76.3	0.33
Reservation Boundary						
A3	11.0	7.7	13.2	9.4	10.1	
A8	13.2	10.3	16.4	10.2	12.2	
A9	9.3	9.5	15.4	11.8	11.4	
A12	11.5	9.5	14.8	11.4	11.6	
A15	11.0	10.3	16.4	11.0	12.0	
A23	9.9	8.6	11.5	9.0	9.6	
A24	11.5	10.3	13.2	11.4	11.5	
A29	10.4	11.6	14.3	8.6	11.0	
Mean	11.0	9.7	14.4	10.4	11.2	98
Std. Deviation	1.2	1.2	1.7	1.2		
Offsite						
Piketon (A6)	11.0	9.0	13.7	10.6	10.9	96
Camp Creek (A28)	11.5	9.5	Missing	9.4	10.0	88

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 2002

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND ($\mu\text{rem/hr}$)	THIRD	FOURTH	($\mu\text{rem/hr}$)	(mrem/yr)
Perimeter Road (excluding PP874)						
PP518	10.5	9.2	8.9	8.3	9.2	
PP737	10.0	9.7	10.2	9.5	9.9	
PP862	13.6	10.7	13.2	9.5	11.6	
PP906	8.0	7.3	8.5	7.5	7.8	
PP933	12.6	13.1	14.5	13.9	13.6	
PP1404A	10.0	9.2	8.9	9.5	9.4	
A35	11.0	9.7	10.2	9.9	10.2	
A40	7.5	7.8	6.4	7.9	7.4	
A36	9.5	8.7	9.4	9.1	9.2	
Mean	10.3	9.5	10.0	9.5	9.8	86
Std. Deviation	1.9	1.7	2.5	1.8		
PP874*	67.8	66.4	72.7	76.6	71.2	0.31
Reservation Boundary						
A3	8.5	8.2	8.9	8.7	8.6	
A8	10.0	10.2	9.8	9.9	10.0	
A9	9.5	8.7	9.8	9.5	9.4	
A12	8.5	9.7	8.5	8.7	8.8	
A15	9.5	10.2	10.2	9.9	10.0	
A23	9.0	10.2	9.4	7.9	9.1	
A24	9.5	8.2	8.9	9.1	9.0	
A29	8.5	8.7	8.5	8.3	8.5	
Mean	9.2	9.3	9.2	9.0	9.2	81
Std. Deviation	0.6	0.9	0.6	0.7		
Offsite						
Piketon (A6)	9.0	8.7	8.9	7.9	8.6	76
Camp Creek (A28)	9.0	10.7	9.4	9.1	9.5	84

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 2001

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND ($\mu\text{rem/hr}$)	THIRD	FOURTH	($\mu\text{rem/hr}$)	(mrem/yr)
Perimeter Road (excluding PP874)						
PP518	9.8	8.9	10.2	8.8	9.4	
PP737	9.8	7.1	10.7	8.4	8.9	
PP862	11.1	11.1	11.2	12.2	11.4	
PP906	8.4	8.0	8.6	8.0	8.2	
PP933	14.2	12.0	13.7	13.5	13.3	
PP1404A	9.8	7.5	11.2	9.3	9.4	
A35	11.5	8.4	10.2	10.5	10.2	
A40	8.4	6.6	8.6	7.2	7.7	
A36	10.2	9.3	10.7	8.4	9.6	
Mean	10.3	8.8	10.6	9.6	9.8	86
Std. Deviation	1.8	1.8	1.5	2.1		
PP874*	76.2	70.9	73.7	74.1	73.7	0.32
Reservation Boundary						
A3	10.6	9.3	10.2	9.7	9.9	
A8	11.5	9.8	11.7	10.1	10.7	
A9	22.6	8.4	9.7	9.7	12.6	
A12	8.4	6.6	9.1	TLD Missing	8.0	
A15	10.2	8.0	10.7	9.3	9.5	
A23	10.2	8.4	10.2	8.4	9.3	
A24	9.8	8.9	10.2	8.8	9.4	
A29	10.6	8.9	TLD Missing	8.8	9.4	
Mean	11.7	8.5	10.2	9.3	9.9	87
Std. Deviation	4.5	0.9	0.8	0.6		
Offsite						
Piketon (A6)	9.3	9.3	9.1	8.4	9.0	79
Camp Creek (A28)	9.8	8.9	10.2	9.3	9.5	83

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 2000

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND ($\mu\text{ram/hr}$)	THIRD	FOURTH	($\mu\text{ram/hr}$)	from work.
Perimeter Road (excluding PP874)						
PP518	14.9	12.4	10.9	11.0	12.2	
PP737	15.4	7.8	13.4	11.0	11.7	
PP862	14.4	8.3	12.4	9.6	11.0	
PP906	15.4	7.4	11.9	7.5	10.3	
PP933	17.9	11.6	16.9	13.6	14.8	
PP1404A	14.4	7.8	12.9	9.6	11.0	
A35	14.4	9.1	14.9	10.5	12.0	
A40	14.9	6.6	9.9	8.8	9.8	
A36	17.9	9.1	11.9	9.6	11.9	
Mean	15.5	8.9	12.8	10.1	11.6	102
Std. Deviation	1.4	1.9	2.1	1.7		
PP874*	76.9	68.9	82.3	71.9	74.6	0.32
Reservation Boundary						
A3	15.9	8.3	11.9	9.6	11.2	
A8	17.4	9.1	13.9	12.3	12.9	
A9	16.4	7.8	12.9	10.1	11.6	
A12	14.4	6.2	11.9	10.1	10.4	
A15	16.9	8.3	12.9	10.5	11.9	
A23	18.4	7.4	11.9	10.1	11.7	
A24	12.4	7.4	12.4	11.0	10.6	
A29	15.4	7.4	12.4	8.3	10.6	
Mean	15.9	7.7	12.5	10.3	11.4	100
Std. Deviation	1.9	0.8	0.6	1.1		
Offsite						
Piketon (A6)	13.9	7.4	11.4	9.2	10.3	90
Camp Creek (A28)	14.9	7.8	12.4	9.6	11.0	97

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 1999

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND ($\mu\text{ram/hr}$)	THIRD	FOURTH	($\mu\text{ram/hr}$)	(mrem/yr)
Perimeter Road (excluding PP874)						
PP518	10.0	9.0	7.8	10.2	9.3	
PP737	9.5	9.5	7.8	10.2	9.3	
PP862	9.5	9.0	9.2	10.6	9.6	
PP906	9.0	8.2	7.3	9.4	8.5	
PP933	9.5	8.2	9.2	14.0	10.3	
PP1404A	9.5	9.5	10.2	12.3	10.4	
A35	11.0	9.9	9.2	10.6	10.2	
A40	8.0	7.7	7.3	8.5	7.9	
A36	9.5	9.9	9.7	11.1	10.1	
Mean	9.5	9.0	8.6	10.8	9.5	83
Std. Deviation	0.8	0.8	1.1	1.6		
PP874*	68.3	60.1	63.0	71.4	65.7	0.29
Reservation Boundary						
A3	9.5	11.6	9.7	11.1	10.5	
A8	10.5	9.9	10.2	11.5	10.5	
A9	9.5	9.0	9.2	9.8	9.4	
A12	10.5	9.0	8.7	10.2	9.6	
A15	10.5	9.9	9.7	11.1	10.3	
A23	9.5	9.0	9.2	10.2	9.5	
A24	9.5	9.0	9.2	10.2	9.5	
A29	8.5	9.0	8.7	9.8	9.0	
Mean	9.8	9.6	9.3	10.5	9.8	86
Std. Deviation	0.7	0.9	0.5	0.6		
Offsite						
Piketon (A6)	9.0	9.0	8.7	9.8	9.2	80
Camp Creek (A28)	9.5	9.9	9.7	10.6	10.0	87

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 1998

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND ($\mu\text{ram/hr}$)	THIRD	FOURTH	($\mu\text{ram/hr}$)	(mrem/yr)
Perimeter Road (excluding PP874)						
PP518	10.9	9.3	13.7	10.1	11.0	
PP737	11.4	9.8	11.9	11.8	11.2	
PP862	11.9	9.8	13.7	11.4	11.7	
PP906	13.4	9.8	13.3	10.5	11.7	
PP933	12.9	9.8	14.2	11.8	12.1	
PP1404A	11.4	9.8	13.7	11.4	11.6	
A35	12.9	9.8	14.7	12.3	12.4	
A40	9.9	8.4	12.8	9.6	10.2	
A36	11.4	10.6	15.1	11.4	12.1	
Mean	11.8	9.7	13.7	11.2	11.5	101
Std. Deviation	1.1	0.6	1.0	0.9		
PP874*	61.0	69.1	72.8	66.7	67.5	0.29
Reservation Boundary						
A3	11.9	9.8	13.7	11.8	11.8	
A8	13.4	10.6	15.1	12.3	12.8	
A9	11.4	TLD Missing	15.6	11.8	13.0	
A12	11.4	9.8	12.8	11.4	11.3	
A15	12.9	10.2	15.1	12.3	12.6	
A23	11.9	11.1	14.2	11.8	12.2	
A24	11.9	9.3	14.7	11.0	11.7	
A29	10.9	9.3	13.3	10.5	11.0	
Mean	12.0	10.0	14.3	11.6	11.6	102
Std. Deviation	0.8	0.7	0.9	0.6		
Offsite						
Piketon (A6)	11.4	8.9	12.4	10.1	10.6	93
Camp Creek (A28)	11.4	9.8	14.2	12.3	11.9	104

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.

PORTSMOUTH GASEOUS DIFFUSION PLANT AMBIENT GAMMA RADIATION LEVELS

QUARTERLY EXTERNAL GAMMA RADIATION LEVELS FOR 1997

TLD LOCATION	QUARTER				ANNUAL DOSE	
	FIRST	SECOND ($\mu\text{ram/hr}$)	THIRD	FOURTH	($\mu\text{ram/hr}$)	(mrem/yr)
Perimeter Road (excluding PP874)						
PP518	6.9	6.8	6.4	7.4	6.9	
PP737	36.3	6.5	7.2	7.6	14.4	
PP862	21.5	6.7	7.8	7.4	10.7	
PP906	34.1	5.9	6.2	6.6	13.0	
PP933	35.3	6.6	6.5	7.4	13.7	
PP1404A	6.8	6.5	7.1	7.4	6.9	
A35	9.4	6.6	5.9	8.3	7.6	
A40	5.4	5.0	4.9	5.5	5.2	
A36	36.3	7.5	6.9	7.1	14.3	
Mean	19.5	6.4	6.5	7.2	10.3	90
Std. Deviation	13.1	0.7	0.8	0.8		
PP874*	49.6	64.4	70.4	77.7	65.7	0.29
Reservation Boundary						
A3	36.5	5.9	6.2	7.1	13.7	
A8	21.0	8.4	7.8	8.0	11.2	
A9	21.1	6.3	6.6	7.4	10.2	
A12	20.8	6.1	6.7	7.0	10.0	
A15	36.8	6.6	7.5	7.8	14.4	
A23	8.7	6.3	6.2	6.8	7.0	
A24	7.6	6.6	7.0	7.9	7.3	
A29	20.5	5.9	5.8	6.3	9.5	
Mean	21.6	6.5	6.7	7.3	10.4	91
Std. Deviation	10.1	0.7	0.6	0.6		
Offsite						
Piketon (A6)	6.1	6.3	6.5	6.3	6.3	55
Camp Creek (A28)	6.8	6.0	6.3	7.5	6.6	58

Alphanumeric locations refer to Figures 5.1-14 and 5.1-15 of the Safety Analysis Report.

PP874 is located on Perimeter Road near the corner of a material storage yard within the DOE reservation with elevated gamma levels. The annual dose calculated for this location is an incremental dose based on historical public access to this area throughout the year. This was limited to drive through traffic and the most exposed member of the public was presumed to be a family member driving a plant worker to and from work. There has been no routine public access to this area since September 11, 2001.