

Appendix H

Summary of Direct Radiation Monitoring Data

H - I

WVDP Annual Site Environmental Report

Calendar Year 2005

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Table H-1
Summary of 2005 Quarterly Averages of Off-Site TLD Measurements
 $(mR \pm 2 SD/\text{quarter})$

Location Number ^a	1st Quarter	2nd Quarter	3rd Quarter	4th Quarter	Location Average
DFTLD01	17±4	23±5	22±5	17±6	20±5
DFTLD02	17±4	22±5	24±5	17±6	20±5
DFTLD03	15±3	19±4	20±5	15±6	17±5
DFTLD04	16±4	23±5	22±5	18±6	20±5
DFTLD05	17±4	23±5	24±5	19±7	21±5
DFTLD06	16±4	24±5	21±5	18±6	20±5
DFTLD07	14±3	17±4	18±4	15±6	16±4
DFTLD08	17±4	21±4	22±5	18±6	19±5
DFTLD09	17±4	20±4	23±5	16±6	19±5
DFTLD10	15±3	18±4	23±5	15±6	18±5
DFTLD11	15±3	17±4	20±5	14±6	17±5
DFTLD12	20±4	20±4	21±5	16±6	19±5
DFTLD13	18±4	21±5	25±6	18±6	20±5
DFTLD14	16±4	19±4	22±5	NA	19±4
DFTLD15	15±3	18±4	23±5	15±6	18±5
DFTLD16	16±4	20±4	23±5	16±6	19±5
DFTLD20	14±3	17±4	18±4	13±6	15±4
DFTLD21	17±4	21±4	26±6	17±6	20±5
DFTLD22	17±4	21±5	25±5	17±6	20±5
DFTLD23	17±4	20±4	23±5	16±6	19±5

NA - 4th-quarter 2005 result unreliable.

^a Off-site locations are shown on Figures A-13, A-14, and A-15.

Conversion factor: Milliroentgen (mR) units are used to report exposure rates in air. To convert mR to mrem (dose to humans), a conversion factor of 1.03 must be applied. For example, a reported exposure rate of 18.1 mR/quarter would be equivalent to 18.6 mrem/quarter (based upon dose-equivalent phantom calibration using cesium-137).

Table H-2
Summary of 2005 Quarterly Averages of On-Site TLD Measurements

Location Number ^a	1st Quarter (mR/quarter)	2nd Quarter (mR/quarter)	3rd Quarter (mR/quarter)	4th Quarter (mR/quarter)	Location Average (mR/quarter)
DNTLD18	28±6	32±7	NA	NA	30±4
DNTLD19	21±4	22±5	24±5	19±7	22±5
DNTLD24	454±89	452±89	486±95	447±88	460±90
DNTLD25	20±4	24±5	27±6	20±7	23±6
DNTLD26	20±4	25±5	27±6	20±7	23±6
DNTLD27	17±4	22±5	23±5	18±6	20±5
DNTLD28	19±4	24±5	25±5	20±7	22±5
DNTLD29	19±4	23±5	28±6	19±7	22±5
DNTLD30	20±4	24±5	27±6	21±7	23±6
DNTLD31	18±4	20±4	NA	NA	19±3
DNTLD32	26±5	30±6	NA	NA	28±4
DNTLD33	27±6	31±6	33±7	28±8	30±7
DNTLD34	45±9	48±10	NA	NA	47±7
DNTLD35	76±15	78±15	86±17	77±16	79±16
DNTLD36	56±11	58±12	68±14	88±18	68±14
DNTLD38	32±7	36±7	44±9	36±9	37±8
DNTLD39	45±9	51±10	57±11	47±11	50±10
DNTLD40	108±21	111±22	115±23	110±22	111±22
DNTLD42	70±14	73±14	72±14	71±15	72±14
DNTLD43	27±6	30±6	33±7	27±8	29±7

NA - Sampling was discontinued at these on-site TLD locations.

^a On-site locations are shown on Figure A-12.

Conversion factor: Milliroentgen (mR) units are used to report exposure rates in air. To convert mR to mrem (dose to humans), a conversion factor of 1.03 must be applied. For example, a reported exposure rate of 18.1 mR/quarter would be equivalent to 18.6 mrem/quarter (based upon dose-equivalent phantom calibration using cesium-137).

Table H-3
Third-Quarter 2005 TLD Results and Instantaneous Exposure Rate Readings
With a High-Pressure Ion Chamber (HPIC) at Each Monitoring Location

Off-Site Location Number	3rd-Quarter TLD Result ($\mu\text{R}/\text{hr}$)	3rd-Quarter HPIC Result ($\mu\text{R}/\text{hr}$)	On-Site Location Number	3rd-Quarter TLD Result ($\mu\text{R}/\text{hr}$)	3rd-Quarter HPIC Result ($\mu\text{R}/\text{hr}$)
DFTLD01	9.9	9.2	DNTLD19	10.9	9.7
DFTLD02	10.8	9.0	DNTLD24	220.1	313.7
DFTLD03	9.0	9.0	DNTLD25	12.1	11.5
DFTLD04	10.0	8.8	DNTLD26	12.1	10.7
DFTLD05	11.0	9.2	DNTLD27	10.6	9.4
DFTLD06	9.5	9.1	DNTLD28	11.1	10.1
DFTLD07	8.1	8.4	DNTLD29	12.9	10.7
DFTLD08	10.0	7.5	DNTLD30	12.2	11.9
DFTLD09	10.2	9.7	DNTLD33	14.8	14.3
DFTLD10	10.3	8.6	DNTLD35	38.9	42.1
DFTLD11	9.1	7.9	DNTLD36	30.8	37.8
DFTLD12	9.6	9.1	DNTLD38	19.9	24.6
DFTLD13	11.5	9.2	DNTLD39	25.8	25.0
DFTLD14	9.9	9.1	DNTLD40	51.9	57.1
DFTLD15	10.6	8.6	DNTLD42	32.7	27.3
DFTLD16	10.3	9.1	DNTLD43	14.9	12.9
DFTLD20	8.0	8.5			
DFTLD21	11.6	9.0			
DFTLD22	11.1	9.2			
DFTLD23	10.4	8.5			

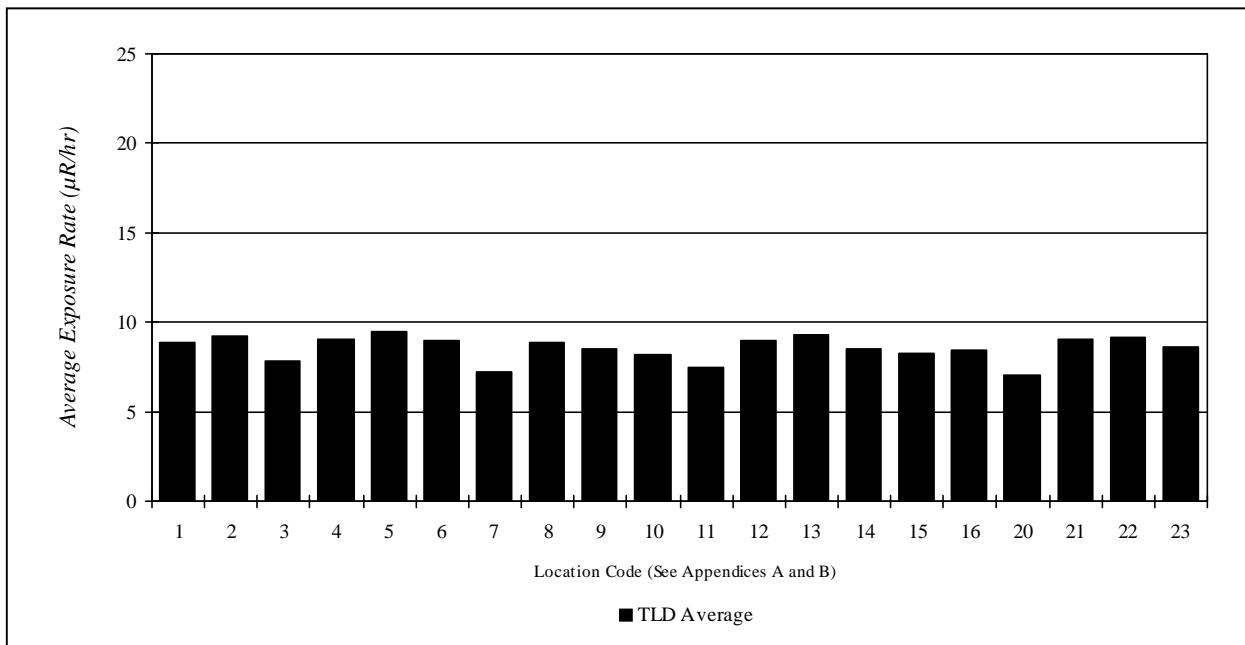


Figure H-1. 2005 Average Annual Gamma Exposure Rates Around the WVDP

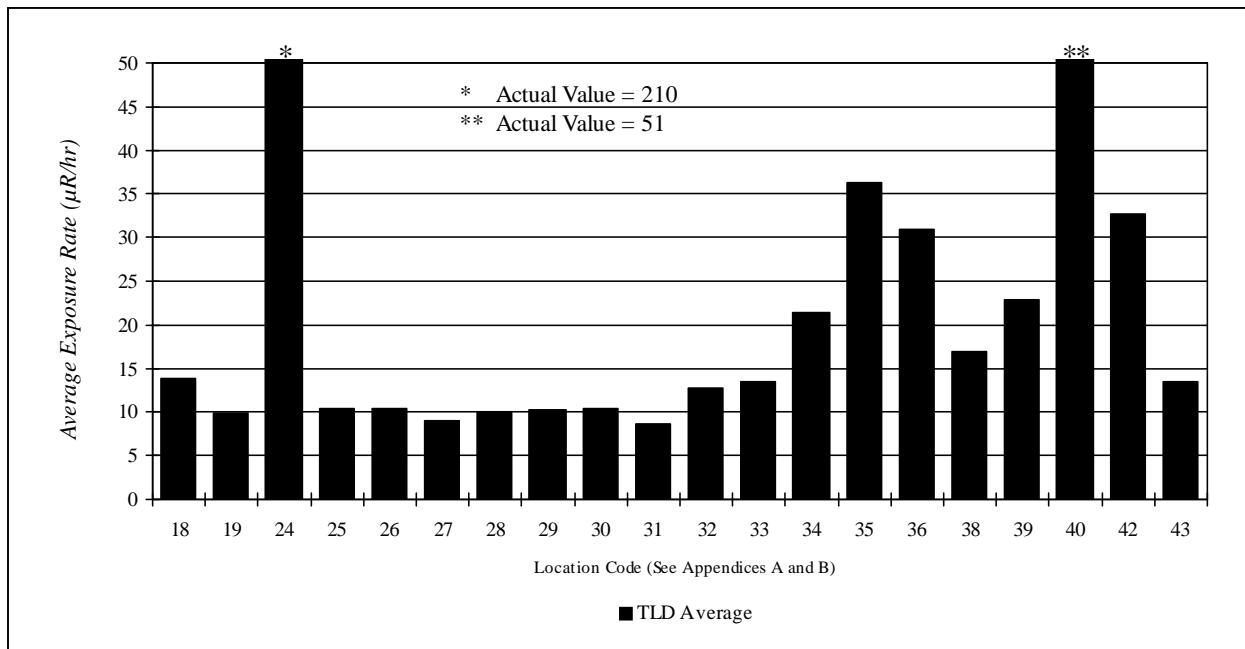


Figure H-2. 2005 Average Annual Gamma Exposure Rates on the WVDP