

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
France: CEA-civil (1950-1956)	Film-open window	Dental film	Open	Open window			
France: CEA-civil (1957-1966)	Multi Sn 300mg.cm <sup>-2</sup>	Film	Kodak type 1	Open window			
				Sn	291	0.4	
				Cd	311	0.36	
France: CEA-civil (1967-2004)	PS1: Multi Cu-Pb	Film	Kodak type 1	Open window			(32-38)
				plastic	300		
				Al	400	1.5	
				Cu+Al	528	0.2+1.3	
				Cu	530	0.6	
				Cd+Sn+Pb	295+345+452	0.34+0.6+0.4	
				Sn+ Pb	575+452	1+0.4	
France: CEA-civil (1985-2004)	Li plastic filter	Li based TLD	PGP1	Open window			(33)
				Plastic	300		
France: CEA-civil (1994-2004)	Li plastic filter	Li based TLD	Harshaw	Open window			(33)
				Plastic	300 or 1000		
France: COGEMA-Marcoule Pierrelatte (1955-1964)	Multi Sn 300mg.cm <sup>-2</sup>	Film	Kodak type 1	Open window			
				Sn	291	0.4	
				Cd	311	0.36	
France: COGEMA-Marcoule-Pierrelatte (1965-1987)	Multi Cu-Pb	Film	Kodak type 2 DM6	Open window			
				Polypropylen	245	3	
				Cd	531.5	0.4	
				Sn	535.5	0.4	
				Sn + Pb	1715	0.4+1	
				Al	451	1	
France: COGEMA-Marcoule-Pierrelatte (1988-2003)	Multi Cu-Pb +TLD	Film + TLD	Cogebadge <sup>a</sup>	Open window			(39)
				Polypropylen	282	3	
				Cu 1st filter	427	0.3	
				Cu 2nd filter	1091	1	
				Sn + Pb	1591	0.4+1	
				Al	453	1	
France: COGEMA-Marcoule-Pierrelatte (2003-2004)	TLD part only	Li based TLD	Cogebadge (TLD only)	Plastic ABS		1	(39)
				mylar	7		
				Plastic ABS + Cd		3+0.8	
				Al + Cd		1+0.8	
France: COGEMA-La Hague (1965-1968)	Multi Sn 300mg.cm <sup>-2</sup>	Film	Dupont DeNemours	Open window			
				Sn	282		
				Cd	299		
	>100mg.cm <sup>-2</sup>			Pb	1020	0.9	

<sup>a</sup> Designed by COGEMA

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
France: COGEMA-La Hague (1968-1970)	Multi Cu-Pb	Film	Dupont DeNemours DM6	Open window			
				Polypropylen	245	3	
				Cd	531.5	0.4	
				Sn	535.5	0.4	
				Sn + Pb	1715	0.4+1	
				Al	451	1	
France: COGEMA-La Hague (1971-1986)		Film	Kodak type 3 DM6	As above			
France: COGEMA-La Hague (1987-2004 <sup>b</sup> )	Multi Cu-Pb +TLD	Film +TLD	Cogebadge-Kodak type3	Open window			
				Polypropylen	282	3	
				Cu 1st filter	427	0.3	
				Cu 2nd filter	1091	1	
				Sn + Pb	1591	0.4+1	
				Al	453	1	
France: EDF (1968-1982)	Multi Sn 300mg.cm <sup>-2</sup>	Film	Film DMA-CEA	Sn	291	0.4	(40)
				PVC		2.1	
France: EDF (1982-1999)	Multi Sn/Pb	Film	Kodak type 2	PVC		1	
				Pb		0.5 to 1	
France: EDF (1999-2003)	Multi Cu-Pb	Film	LCIE LANDAUER Type 7 Kodak type 2	Open window	75		(41)
				Cu	250	0.2	
				Cu	610	0.6	
				Pb+Cu	800	0.5+0.2	

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: BNFL-Capenhurst (?-?); BNFL-Springfields (?-?); Others (?-?)	Missing info	?	?	?			
UK: AEA-Dounreay (1956-1963)	Tinplate: Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	AERE-Tinplate  Ilford PM1+ Kodak RM	Open window			(42)
				Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	
UK: AEA-Dounreay (1964-1990)	AERE/RPS: Multi British Sn-Pb	Film	Kodak  +	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: AEA-Harwell (1946-1950)	One elem. Pb	Dental Film		Open, Pb	~1150	1	
UK: AEA-Harwell (1951-1961)	Missing info	Film	Ilford PM1+Kodak RM	Open window			
				Sn or Cd	730 (864)	1	
UK: AEA-Harwell (1962-1990)	AERE/RPS: Multi British Sn-Pb	Film	Kodak	Open window			(43-50)
				Plastic	50+300	0.5+3	

<sup>b</sup> Since 2006, cogebadge used with TLD only

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: AEA-Winfrith (1959-1961)	Tinplate : Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	AERE-Tinplate	Open window			(42)
			Ilford PM1+ Kodak RM	Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	
UK: AEA-Winfrith (1962-1970)	AERE/RPS: Multi British Sn-Pb	Film	Kodak	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: AEA-Winfrith (1970-1990)	Li other filters	Li based TLD		Open, Cd	864	1	
UK: AEA/BNFL-Risley (62-63)	Multi British Sn-Pb	Film	Kodak RM 1	Open window			
				Sn	730	1	
				Pb	~1150	1	
UK: AEA/BNFL-Risley (1964-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM1	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
				Ta	166	0.1	
UK: AEA/BNFL-Risley (1982-1990)		Film	Eastman Kodak type 2	AERE/RPS + Ta	166	0.1	
UK: Amersham (1940-1947)	One elem. Pb	Dental Film		Pb	~1150	1	
UK: Amersham (1948-1955)	One elem. Pb	Film	Ilford Industrial A in clip	Pb	~1150	1	
UK: Amersham (1956-1963)	Tinplate : Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	AERE-Tinplate Ilford PM1	Open window			(42)
				Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	
UK: Amersham (1963-1982)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Amersham (1982-1997)		Film	Kodak type 2	As above			
UK: AWE (1947-1949)	One elem. Pb	Dental Film		Open, Pb	~1150	1	
UK: AWE (1950-1955)	Tinplate : Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	AERE-Tinplate Ilford PM1	Open window			(42)
				Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: AWE (1956-1961)		Film	Ilford PM1+ Kodak RM	AERE-Tinplate			
UK: AWE (1962-1988)	<b>AERE/RPS: Multi British Sn-Pb</b>	Film	Kodak	Open window			(43-50)
				<b>Plastic</b>	<b>50+300</b>	<b>0.5+3</b>	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
			+	Pb edge shielding	350	0.3	
				Indium (4g)			
UK: AWE (1988-1994)	Ca and mixed	LiF TLD/ PTFE disc +CaSO <sub>4</sub> TLD/TFE disc (30:70% wt for both )	Vinten Type 31				(51)
UK: BNFL-Chapelcross (1958-1959)	Multi British Sn-Pb	Film	Ilford PM 1&3	Open, Sn/Pb		1	
UK: BNFL-Chapelcross (1960-1964)	<b>Tinplate :</b> Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	<b>AERE-Tinplate</b> Kodak RM	Open window			(42)
				Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	
UK: BNFL-Chapelcross (1965-1969)	Multi Sn 600mg.cm <sup>-2</sup>	Film	Kodak RM	Open window			
				Sn	730	1	
				Cd	864	1	
				Dural	300		
UK: BNFL-Chapelcross (1970-1980)	<b>AERE/RPS: Multi British Sn-Pb</b>	Film	Black spot (Kodak RM)	Open window			(43-50)
				<b>Plastic</b>	<b>50+300</b>	<b>0.5+3</b>	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
			+	Pb edge shielding	350	0.3	
				Indium (4g)			
UK: BNFL-Chapelcross (1981-1997)		Film	Black spot Kodak type 2	As above			
UK: BNFL-Sellafield (1950-1950)	One elem. Sn/Cd/Ag	Dental film	Ilford	Open, Cd	864	1	
UK: BNFL-Sellafield (1951-1952)	One elem. Pb	Film	Ilford industrial A	Open, Pb	~1150	1	
UK: BNFL-Sellafield (1953-1959)	Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	Ilford PM1	Open window			
				Fe + Pb +Al	250+635+124	0.38+0.56+ 0.46	
UK: BNFL-Sellafield (1960-1963)	Multi British Sn-Pb	Film	Kodak RM 1	Open window			
				Sn	730	1	
				Pb	~1150	1	
UK: BNFL-Sellafield (1964-1981)	<b>AERE/RPS: Multi British Sn-Pb</b>	Film	Kodak RM1	Open window			(43-50)
				<b>Plastic</b>	<b>50+300</b>	<b>0.5+3</b>	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
			+	Pb edge shielding	350	0.3	
				Indium (4g)			
				Ta	166	0.1	

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: BNFL-Sellafield (1982-1990)		Film	Eastman Kodak type 2	AERE/RPS + Ta	166	0.1	
UK CCLRC-Daresbury (1966-1981 and 1987-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: CCLRC-Daresbury (1981-1986)	Li plastic filter	LiF TLD in PTFE	NRPB	LiF		0.4	(52-54)
				Plastic	700		
UK: CCLRC-Daresbury (1986-1987)	Unknown filters	LiF TLD in PTFE		Multiple filters	?	?	
UK: CCLRC-RAL (1960-1961)	Missing info	Film	Ilford PM1+Kodak RM	Open window			
				Sn or Cd	730 (864)	1	
UK: CCLRC-RAL (1962-1990)	AERE/RPS: Multi British Sn-Pb	Film	Kodak	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: DRPS (196319-83)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: DRPS (1983-1997)	Li plastic filter	Li based TLD	Panasonic 803	Plastic	1011		
UK: Magnox-Berkeley centre (1961-1963)	Tinplate : Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	AERE-Tinplate Ilford PM1	Open window			(42)
				Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	
UK: Magnox-Berkeley centre (1964-1965)	AERE/RPS: Multi British Sn-Pb	Film	Nos 1&2 (Kodak RM)	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Berkeley centre (1965-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: Magnox-Berkeley PS (1961-1965)	Tinplate : Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	AERE-Tinplate Ilford PM1	Open window			(42)
				Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	
UK: Magnox-Berkeley PS (1966-1980)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM  +	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Berkeley PS (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2  +	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Bradwell (1961-1963)	RPS/Sutton: Multi British Sn-Pb	Film	RPS Sutton nylon holder Ilford PM1	Open window			(55)
				Nylon	207	1.8	
				Sn + nylon	730 + 92	1 + 0.8	
				Dural + nylon	252 + 104	0.9 + 0.9	
UK: Magnox-Bradwell (1963-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM  +	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Bradwell (1982-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2  +	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Dungeness (1964-1965)	AERE/RPS: Multi British Sn-Pb	Film	No 2 (Kodak RM)  +	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: Magnox-Dungeness (1965-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Dungeness (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-HinkleyA (1963-1964)	Tinplate : Multi Sn/Pb >100mg.cm <sup>-2</sup>	Film	AERE-Tinplate Ilford PM1	Open window			(42)
				Fe + Sn	250 + 730	0.38 +1	
				Fe + Cd	250 + 864	0.38 +1	
UK: Magnox-HinkleyA (1964-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-HinkleyA (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Oldbury (1966-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Oldbury (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: Magnox-SizewellA (1963-1982)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-SizewellA (1982-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Trawsfynydd (1964-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Trawsfynydd (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Wylfa (1969-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Magnox-Wylfa (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			



Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: Nuclear-DungenessB (1971-1980)	AERE/RPS: Multi British Sn-Pb	Film	Black spot (Kodak RM)	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Nuclear-DungenessB (1980-1997)	AERE/RPS: Multi British Sn-Pb	Film	Black spot Kodak type 2	As above			(43-50)
				Open window			
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
UK: Nuclear-Hartlepool (1980-1997)	AERE/RPS: Multi British Sn-Pb	Film	Loxford black spot (Kodak type 2)	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Nuclear-Heysham1 (1972-1980)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Nuclear-Heysham (1980-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Nuclear-Hinkley B (1974-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Nuclear-Hinkley B (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: Nuclear-Sizewell B (1994-1997)	AERE/RPS: Multi British Sn-Pb	Film	Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Rolls Royce-Aerospace (1957-1961)	RPS/Sutton: Multi British Sn-Pb	Film	RPS Sutton nylon holder Ilford PM1	Open window			(55)
				Nylon	207	1.8	
				Sn + nylon	730 + 92	1 + 0.8	
				Dural + nylon	252 + 104	0.9 + 0.9	
UK: Rolls Royce-Aerospace (1961-1995)	AERE/RPS: Multi British Sn-Pb	Film	+	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Rolls Royce-AMD (1960-1961)	RPS/Sutton: Multi British Sn-Pb	Film	RPS Sutton nylon holder Ilford PM1	Open window			(55)
				Nylon	207	1.8	
				Sn + nylon	730 + 92	1 + 0.8	
				Dural + nylon	252 + 104	0.9 + 0.9	
UK: Rolls Royce-AMD (1961-1997)	AERE/RPS: Multi British Sn-Pb	Film	+	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: Rolls Royce-AMS (1962-1997)	AERE/RPS: Multi British Sn-Pb	Film	+	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			
UK: SNL/BEG-Hunterston (1963-1981)	AERE/RPS: Multi British Sn-Pb	Film	Kodak RM	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
				Indium (4g)			

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
UK: SNL/BEG-Hunterston (1981-1997)	AERE/RPS: Multi British Sn-Pb	Film	Black spot Kodak type 2	Open window			(43-50)
				Plastic	50+300	0.5+3	
				Dural	280	1	
				Sn + Pb	520 + 350	0.71 + 0.3	
				Cd + Pb	610 + 350	0.71 + 0.3	
				Pb edge shielding	350	0.3	
UK: SNL/BEG-Torness (1986-1997)	Li plastic filter	Li based TLD		Plastic	171+840		

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Amchitka (1971-1972)	Multi-element	Film	Kodak type 3	Open window	103		
				Cd+Ta	826		
				Plastic	507		
				Ta_Plastic	1087		
USA: AMES (1953-1961)	Missing info	Film		Open window, ???			
USA: AMES (1962-1965)	Multi Al-Ag	Film	DuPont 558	Open window			
				Al			
				Ag			
				Cd	~1000		
USA: AMES (1954-1957) Synchrotron	Multi Al-Ag	Film	Kodak type 552/BNL	Open			
				Al	439		
				Cd	945		
				plastic			
USA: AMES (1957-1963) Synchrotron	Multi Cu-Pb	Film	Dupont 556/NCA	Open window			
				Pb	~1000		
				Cd	150		
				Cu	300		
				plastic	7		
USA: AMES (1966-1981)	Multi-element	Film	Dupont 556	Open window			
				Cu			
				Al			
				Cd			
				plastic			
USA: AMES (1980-1994)	Li other filters	Li based TLD	Landauer	Open window/Mylar	17		
USA: AMES (1995-1996)			Siemens SLD 100	Plastic	1000		
				Plastic + Cu	242		
USA: AMES (1996-1998) USA: AMES (1998-2004) USA: AMES (2005-present)	Li other filters	Li based TLD	ICN 760 Siemens SLD 760 Global dosimetry TLD 760	Open window/Mylar	7		
				Plastic	600		
				Plastic + Cu	242		
				Plastic	600		
USA: Argonne National Lab. (1945-1961)	One elem. Sn/Cd/Ag	Film		Open, Cd			

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Argonne National Lab. (1962-1987)	Multi Al-Ag	Film	DuPont 553,558 (INEL/NRTS)	Open window			
				Al	175		
				Ag	203		
				Cd	950		
USA: Argonne National Lab. (1988-2005)	Li Al-plastic filter	Li based TLD	Panasonic 814AS4	Al/plastic	16+58+600+600		(56)
USA: Batelle Memorial Columbus (1953-1967)	One elem. Sn/Cd/Ag	Film	Landauer/Dupont	Open, Cd	1000	1	
USA: Batelle Memorial Columbus (1968-1969)	Multi element	Film	Eberline FD11 Dupont 556	Open window	7		
				Al	540		
				Tn+Cd	1600		
				plastic	350		
USA: Batelle Memorial Columbus(1969-1984)	Multi element	Film	Landauer/Kodak type 3	Open window	7		
				Plastic	350		
				Al	540		
				Pb	1000		
USA: Batelle Memorial Columbus(1985-1994)	Li other filters	Li based TLD	Landauer	Mylar	17		
				Plastic	1000		
				Plastic + Cu	242		
USA: Batelle Memorial Columbus(1994-1996)	Li other filters	Li based TLD	Siemens/ICN	Open window/Mylar	17		
				Plastic	600		
				Plastic + Cu	242		
				Plastic	600		
USA: Batelle Memorial Columbus (1997-2005)	Li other filters	Li based TLD		Open window	7		
				Plastic	175		
				Al+ Plastic	275		
				Sn+ Al+ Plastic	515		
USA: Bettis Pittsburgh PA (1955-1956) <sup>°</sup>	Multi Sn 300mg.cm <sup>-2</sup>	Film	Eastman, DF-7	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Bettis Pittsburgh PA (1957-1969) <sup>°</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Bettis Pittsburgh PA (1969-1972) <sup>°</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Bettis Pittsburgh PA (1972-1975) <sup>°</sup>	Li other filters	Li based TLD	One chip				
USA: Bettis Pittsburgh PA (1975-1992) <sup>°</sup>	Li other filters	Li based TLD	Two chips	Open window			
				Cd	330	0.381	
USA: Bettis Pittsburgh PA (1992-2005) <sup>°</sup>	Li other filters	Li based TLD	Four chips	ABS	600	5.77	
				ABS + Cu:Al	242 + 91	2.31 + 0.12	
				Mylar + Teflon	14 + 3	0.04 +0.03	
				ABS	600	5.77	

<sup>°</sup> In the absence of specific information, Porthmouth Naval Shipyard dosimetry information was considered as a default for other naval facilities.

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Braidwood Station (1985-1986)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
60%Pb+40%Sn +alloy+plastic	1630						
USA: Braidwood Station (1986-1999)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	28		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	960		
USA: Brookhaven National Lab (1947-1954)	One elem. Sn/Cd/Ag	Film	Dupont 552 (BNL/ORNL)	Open, Cd	945		
USA: Brookhaven National Lab (1955-1985)	Multi Al-Ag	Film	Kodak Typ. 2 (BNL/ORNL)	Open			
				Al	439		
				Cd	945		
USA: Brookhaven National Lab (1986-1993)	Multi Al-Ag	Film	Kodak Typ. 3 (Landauer)	Open window			
				Al	439		
				Cd	945		
USA: Brookhaven National Lab (1994-1995)	Multi Al-Ag	Film	Kodak Typ. 3 (BNL/ORNL)	Open			
				Al	439		
				Cd	945		
USA: Brookhaven National Lab (1996-2005)	Li other filters	Li based TLD	Harshaw	Open window/Mylar	17		
				Plastic	300		
				Plastic + Cu	333		
				Plastic+ Teflon	1000		
USA: Byron Station (1982-1988)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
60%Pb+40%Sn +alloy+plastic	1630						
USA: Byron Station (1988-1999)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	28		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	960		
USA: Catawba Station (1985-1992)	Ca and mixed	CaSO <sub>4</sub>	Teledyne CaSO <sub>4</sub> PB-3	Open window	7		
				Teflon	1000		
				Cu	1000		
				Cd	1000		
USA: Catawba Station (1993-1999)	Li other filters	LiF TLD	Harshaw 8805 system	Plastic/Cu	333		
				Plastic/Teflon	1000		
				Mylar	17		
				Plastic	300		

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Charleston Shipyard (1964-1969) <sup>c</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Charleston Shipyard (1969-1974) <sup>c</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Charleston Shipyard (1974-2005) <sup>c</sup>	Ca and mixed	CaF <sub>2</sub>	Harshaw bulb style	Glass enclosed Sn/Pb			
USA: Clinton Power Station (1982-1986)	Ca and mixed	CaSO <sub>4</sub>	Teledyne CaSO <sub>4</sub> PB-3	Open window	7		
				Teflon	1000		
				Cu	1000		
				Cd	1000		
USA: Clinton Power Station (1986-1992)		LiF TLD	Eberline	Mylar	10		
				Mylar / Plastic	285		
				Mylar / Plastic	285		
USA: Clinton Power Station (1992-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 ISA model 820 Holder	Mylar	19		(56,57)
				Plastic	345		
				Plastic	345		
				Pb	1045		
USA: Comanche Peak Station (1983-1999)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 Landauer service	Mylar	19		(56,57)
				Plastic	340		
				Plastic	340		
				Pb	1060		
USA: Davis Besse (1977-1997)	Ca and mixed	CaSO <sub>4</sub>	Teledyne CaSO <sub>4</sub> PB-5	Al, Cu and Cd filters	?		
USA: Davis Besse (1997-1999)	Li other filters	LiF TLD	Harshaw 8805 system	Plastic/Cu	345		
				Plastic/Teflon	1000		
				Mylar	17		
				Plastic	312		
USA: Dresden (1960-1985)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
				60%Pb+40%Sn +alloy+plastic	1630		
USA: Dresden (1985-1999)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	28		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	960		
USA: Electric Boat, Groton (1950-1952) <sup>c</sup>	One elem. Pb	Film	Kodak type 3	Open, Pb	~30, 58	0.05	
USA: Electric Boat, Groton (1952-1956) <sup>c</sup>	Multi Sn 300mg.cm <sup>-2</sup>	Film	Eastman, DF-7	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Electric Boat, Groton (1957-1969) <sup>c</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Electric Boat, Groton (1969-1974) <sup>c</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Electric Boat, Groton (1974-2005) <sup>c</sup>	Ca and mixed	CaF <sub>2</sub>	Harshaw bulb style	Glass enclosed Sn/Pb			

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Fermi (pre 1970)		Film	Landauer/Kodak type 2	?			
USA: Fermi (1970-2000)	TLD	Li based TLD		brass Al Plastic Kapton			
USA: Fermi (2000-2005)	OSL	Al <sub>2</sub> O <sub>3</sub>	Landauer OSL	?			
USA: Fermi Station (1984-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>10</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sub>2</sub> <sup>10</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar Plastic Plastic Pb	34 371 371 1071		(56,57)
USA: Feed Materials Production Center (1951-1954)	One elem. Sn/Cd/Ag	Film	Dupont 552	Open, Cd	~1000	1	
USA: Feed Materials Production Center (1954-1985)	Multi Cu-Pb	Film	ORNL-Dupont 552	Open window Pb Cd Cu plastic	~1000 150 300 7		
USA: Feed Materials Production Center (1985-2005)	Ca and mixed	Li and Ca based TLD	Panasonic UD-802	Teflon Plastic+mylar Plastic+mylar Pb	14 68 160 828		(56,57)
USA: Hanford (1944-1956)	One elem. Sn/Cd/Ag	Film	DuPont 552	Open, Ag	1050	1	(58-60)
USA: Hanford (1957-1962)	Multi Al-Ag	Film	DuPont 552	Open window Al Ag	132 1050+137	0.49 1+0.13	(58-60)
USA: Hanford (1962-1971)	Multi Al-Ag	Film	DuPont 558	Open window Plastic Fe + plastic Ta + plastic	130 20+273 843+267	0.025 0.5	(58-60)
USA: Hanford (1972-1995)	Li other filters	Li based TLD	Five chips	Open window Al Cd Sn Sn	379 912 980 912		(58-60)
USA: Hanford (1995-1997)	Li other filters	Li based TLD	Harshaw 8825	Open plastic Sn Cu	~1000		(58-60)
USA: Idaho National Laboratory (1951-1956)	One elem. Sn/Cd/Ag	Film	Kodak/Dupont type 552	Open, Cd	~1000	1	
USA: Idaho National Laboratory (1957-1965)	Multi Al-Ag	Film	DuPont 552	Open window Al Ag Cd	175 203 950		
USA: Idaho National Laboratory (1966-1985)	Li Al filter	Li based TLD	Two chips	Open window Al(Cd)	203(950)		

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Idaho National Laboratory (1986-1997)	Li Al-plastic filter	Li based TLD	Panasonic 814 / 808	Al/plastic	16+58+600+600		(56)
USA: Indian Point (1973-1985)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
				60%Pb+40%Sn +alloy+plastic	1630		
USA: Indian Point (1985-1999)	Ca and mixed	Li and Ca based TLD	Panasonic UD-802	Mylar	14		(56,57)
				Plastic+mylar	320		
				Plastic+mylar	320		
				Pb	1020	0.7	
USA: Kansas City plant (1950-1972)	One elem. Sn/Cd/Ag	Film	Dupont 558, Kodak typ.2	Open, Cd	865		
USA: Kansas City plant (1973-1982)	Li Al filters	Li based TLD		Mylar	10		
				Al	285		
USA: Kansas City plant (1983-1990)	Li Al filters	Li based TLD		Mylar	10		
				Al	285		
				Al	285		
USA: Kansas City plant (1991-2000)	Li other filters	Li based TLD	Landauer (3 chipTLD700)	Mylar	17		
				Plastic	1000		
				Plastic + Cu	333		
USA: Kansas City plant (2000-2005)		Al <sub>2</sub> O <sub>3</sub> TLD	Landauer OSL	Sn			
USA: Kewaunee (1973-1995)		LiF TLD	Eberline	Mylar	10		
				Mylar / Plastic	285		
				Mylar / Plastic	285		
USA: Kewaunee (1995-1998)	Li other filters	LiF TLD	Landauer-Alnor TLD-100-K1	Mylar	7		
				Mylar/Plastic	70		
				Sn/Al/Plastic	495		
				Al/Plastic	275		
USA: Kewaunee (1998-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>9</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>9</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 Landauer service	Mylar	19		(56,57)
				Plastic	331		
				Plastic	331		
				Pb	1061		
USA: Knolls Atomic Power lab (1958-1969) <sup>c</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Knolls Atomic Power lab (1969-1973) <sup>c</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Knolls Atomic Power lab (1973-1992) <sup>c</sup>	Li other filters	Li based TLD	Two chips	Open window			
USA: Knolls Atomic Power lab (1992-2005) <sup>c</sup>	Li other filters	Li based TLD	Four chips	Cd	330	0.381	
				ABS	600	5.77	
				ABS + Cu:Al	242 + 91	2.31 + 0.12	
				Mylar + Teflon	14 + 3	0.04 +0.03	
				ABS	600	5.77	



Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Lasalle County Station (1978-1986)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
				60%Pb+40%Sn +alloy+plastic	1630		
USA: Lasalle County Station (1986-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>7</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sub>2</sub> <sup>7</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	28		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	960		
USA: Lawrence Livermore National Lab. (1952-1959)	One elem. Sn/Cd/Ag	Film	Dupont or Kodak	Open, Cd			
USA: Lawrence Livermore National Lab. (1959-1964)	Multi Cu-Pb	Film	Dupont 558	Open window	7		
				Pb	2200		
				Cd	1070		
				Cu	270		
USA: Lawrence Livermore National Lab. (1965-1969)	Multi element	Film	Dupont 558	Open window			
				Al	275		
				Cd	439		
				Pb	1148		
USA: Lawrence Livermore National Lab. (1969-1985)	TLD	Li based TLD	LLNL Harshaw phosphors	Open window	32		
				Plastic	1400		
USA: Lawrence Livermore National Lab. (1985-2005)	Ca and mixed	Li and Ca based TLD	PANASONIC 810AS and 802AS	Teflon	19		
				Plastic	320		
				Plastic	320		
				Plastic +Pb	1020		
USA: Limerick Station (1988-1994)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>7</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sub>2</sub> <sup>7</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	14		(56,57)
				Plastic	49		
				Plastic	350		
				Pb	1000		
USA: Limerick Station (1994-1997)	Li other filters	LiF TLD	Eberline TLD-100	Mylar	10		
				Mylar	285		
USA: Limerick station (1997-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>7</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sub>2</sub> <sup>7</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	14		(56,57)
				Plastic	49		
				Plastic	350		
				Pb	1000		
USA: Lawrence Berkeley National Lab. (1946-1959)	One elem. Sn/Cd/Ag	Film	Kodak type K (OR 1) Dupont or Kodak	Open, Cd	878		
USA: Lawrence Berkeley National Lab. (1959-1964)	Multi Cu-Pb	Film	Dupont 558	Open window	7		
				Pb	2200		
				Cd	1070		
				Cu	270		

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Lawrence Berkeley National Lab. (1965-1981)	Multi element	Film	Dupont 558	Open window			
				Al	275		
				Cd	439		
				Pb	1148		
USA: Lawrence Berkeley National Lab. (1982-1985)	TLD	Li based TLD	LLNL Harshaw phosphors	Open window	32		
				Plastic	1400		
USA: Lawrence Berkeley National Lab. (1985-2005)	Ca and mixed	Li and Ca based TLD	PANASONIC 810AS and 802AS	Teflon	19		
				Plastic	320		
				Plastic	320		
				Plastic +Pb	1020		
USA: Los Alamos National Lab. (1944-1947)	One elem. Pb	Film	Kodak type K	Open, Brass	985		
USA: Los Alamos National Lab. (1947-1950)	One elem. Pb	Film	Kodak type K	Open, Brass	420		
USA: Los Alamos National Lab. (1950-1968)	Brass + Cd film	Film	Dupont 543	Open window			
				Brass	420		
				Cd	432		
USA: Los Alamos National Lab. (1968-1978)	Multi-element	Film	Dupont 555, Kodak typ.2	Open window			
				Composite 20	445		
				Composite 21	442		
				Cu			
USA: Los Alamos National Lab. (1978-1998)	Li other filters	Li based TLD	LASL 7776	Plastic	90		
				Cu+plastic	340		
				Cd+plastic	550		
USA: Los Alamos National Lab. (1998-2005)	Ca and mixed	Li and Ca based TLD	LASL 8823 2 Harshaw TLD cards	Plastic	600		
				Al+mylar	5		
				Al+mylar	10		
				Plastic	600		
				Plastic	185		
				Plastic	185		
				Plastic+Cd	645		
				Plastic+Cd	645		
USA: Mare Island Naval Shipyard (1957-1969) <sup>°</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Mare Island Naval Shipyard (1969-1974) <sup>°</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Mare Island Naval Shipyard (1974-2005) <sup>°</sup>	Ca and mixed	CaF <sub>2</sub>	Harshaw bulb style	Glass enclosed Sn/Pb			
USA: McGuire Station (1981-1992)	Ca and mixed	CaSO <sub>4</sub>	Teledyne CaSO <sub>4</sub> PB-3	Open window	7		
				Teflon	1000		
				Cu	1000		
				Cd	1000		
USA: McGuire Station (1993-1999)	Li other filters	LiF TLD	Harshaw 8805 system	Plastic/Cu	333		
				Plastic/Teflon	1000		
				Mylar	17		
				Plastic	300		

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Mound (1946-1948)	One elem. Sn/Cd/Ag	Film	Kodak type A/MOUND	Open, Cd (or brass)	~1000	1	
USA: Mound (1949-1969)	One elem. Sn/Cd/Ag	Film	Dupont 552,556/MOUND	Open, Cd	~1000	1	
USA: Mound (1970-1977)	Multi element	Film	Kodak type 3/MOUND	Open window	<b>103</b>		
				Cd+Ta	826		
				Plastic	507		
				Ta_Plastic	1087		
USA: Mound (1977-1991)	Li other filters	Li based TLD	Harshaw	Open window			
				Brass	213		
USA: Mound (1991-2005)	Li other filters	Li based TLD	Harshaw 8801	Open window/Mylar	7		
				Plastic	200		
				Plastic + Cu	93		
				Teflon	980		
USA: Naval reactors facility (1975-2005) <sup>°</sup>	Ca and mixed	CaF <sub>2</sub>	Harshaw bulb style	Glass enclosed Sn/Pb			
USA: Nevada test site (1950-1953)	Brass + Cd film	Film	Dupont 552 Dupont 553	Open window			
				Brass	420		
				Cd	432		
USA: Nevada Test Site (1954-1965)	One element	Pb filter		Open Pb	803		
USA: Nevada Test Site (1966-1986)	Multi-element	Film	Kodak type 3	Open window	<b>103</b>		
				Cd+Ta	826		
				Plastic	507		
				Ta_Plastic	1087		
USA: Nevada Test Site (1987-2005)	Ca and mixed	Li and Ca based TLD	Panasonic UD-802	Teflon	14		
				Plastic	68		
				Plastic	160		
				Plastic +Pb	828		
USA: New Brunswick (1949-1977)	One elem. Sn/Cd/Ag	Film	Dupont 552 (ORNL)	Open, Cd	1000	1	
USA: New Brunswick (1977-1987)	Multi Al-Ag	Film	DuPont 553,558 (INEL/NRTS)	Open window	52		
				Al	175		
				Ag	203		
				Cd	950		
USA: New Brunswick (1988-2005)	Li Al-plastic filter	Li based TLD	Panasonic 814AS4	Al/plastic	16+58+600+600		(56)
USA: Newport News Nuclear Shipyard (1950-1952) <sup>°</sup>	One elem. Pb	Film	Kodak Type K	Open, Pb	~30, 58	0.05	
USA: Newport News Nuclear Shipyard (1952-1956) <sup>°</sup>	Multi Sn 300mg.cm <sup>-2</sup>	Film	Eastman, DF-7	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Newport News Nuclear Shipyard (1957-1969) <sup>°</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Newport News Nuclear Shipyard (1969-1976) <sup>°</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Newport News Nuclear Shipyard (1976-2005) <sup>°</sup>	Li other filters	Li based TLD	Three chips	Open window			
				Cd	330	0.381	
USA: Norfolk Naval Shipyard (1970-1974) <sup>°</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Norfolk Naval Shipyard (1974-2005) <sup>c</sup>	Ca and mixed	CaF <sub>2</sub>	Harshaw bulb style	Glass enclosed Sn/Pb			
USA: North Anna (1978-1993)	Ca and mixed	CaSO <sub>4</sub>	Teledyne CaSO <sub>4</sub> PB-3	Open window	7		
				Teflon	500		
				Cu	1000		
				Cd	1000		
USA: North Anna (1993-1995)	Ca and mixed	<sup>6</sup> Li <sup>7</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sup>7</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 model 879 holder	Mylar	17		(56,57)
				Plastic	78		
				Plastic	310		
				Pb	990		
USA: North Anna (1996-1997)	Ca and mixed	<sup>6</sup> Li <sup>7</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sup>7</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 model 874 holder	Mylar	17		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	990		
USA: North Anna (1997-1999)	Ca and mixed	<sup>6</sup> Li <sup>7</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sup>7</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 model 879 holder	Mylar	17		(56,57)
				Plastic	78		
				Plastic	310		
				Pb	990		
USA: Oak Ridge National Lab. (1943-1943) <sup>d</sup>	Uncommon (PIC)	Pocket Ionisation chamber	Victoreen Pocket meter, 352	Al or polystyrene (walls)		2.5	
USA: Oak Ridge National Lab. (1944-1952) <sup>d</sup>	One elem. Sn/Cd/Ag	Film	Kodak/Dupont type 552	Open, Cd	~1000	1	
USA: Oak Ridge National Lab. (1953-1957) <sup>d</sup>	Multi Cu-Pb	Film	Kodak type 552	Open window	~1000		
				Pb			
				Cd			
				Cu			
				plastic			
USA: Oak Ridge National Lab. (1958-1979) <sup>d</sup>	Multi Al-Ag	Film	Kodak type 552	Open	~1000		
				Al			
				Cd			
				plastic			
USA: Oak Ridge National Lab. (1980-1988) <sup>d</sup>	Li Al-plastic filter	Li based TLD	Two chips	Open, plastic			
USA: Oak Ridge National Lab. (1989-1997) <sup>d</sup>	Li other filters	Li based TLD	Harshaw 8805	Al	430		
				Open window			(61)
				Plastic	300		
				Cu	242		
				Teflon	~1000		
USA: Oak Ridge, K25 (1945-1953)	One elem. Sn/Cd/Ag	Film	Dupont 552	Open, Cd	~1000	1	
USA: Oak Ridge, K25 (1954-1979)	Multi Cu-Pb	Film	ORNL-Dupont 552	Open window			
				Pb	~1000		

<sup>d</sup> i) U.S. facilities prior to the mid to late 1950s used film badges with a single filter. Penetrating radiation was determined from the optical density beneath the filter. Filters were usually Cd, Ag, or Pb filter with a density thickness of around 1000 mg/cm<sup>2</sup>. Oak Ridge National Laboratory (ORNL) badge was chosen as the default dosimeter when unknown.

ii) The ORNL dosimeter designs were the most copied throughout the Atomic Energy Commission and in commercial settings. When in doubt, ORNL dosimeters were considered as default.

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
				Cd	150		
				Cu	300		
				plastic	7		
USA: Oak Ridge, K25 (1980-1987)	Li Al-plastic filter	Li based TLD	ORNL/Harshaw	Open, plastic			
				Al	430		
USA: Oak Ridge, K25 (1987-2005)	Li other filters	Li based TLD	Harshaw	Open window			
				Plastic	300		
				Plastic + Cu	242		
				Teflon	1000		
USA: Oak Ridge Y-12 (1950-1960)	One elem. Sn/Cd/Ag	Film	Dupont 552	Open, Cd	~1000	1	
USA: Oak Ridge Y-12 (1961-1979)	Multi Cu-Pb	Film	Dupont 552	Open window			
				Pb	~1000		
				Cd	150		
				Cu	300		
				plastic	7		
USA: Oak Ridge Y-12 (1980-1988)	Li Al-plastic filter	Li based TLD	ORNL/Harshaw	Open, plastic			
USA: Oak Ridge Y-12 (1989-2005)	Li other filters	Li based TLD	Harshaw	Open window			
				Plastic	300		
				Plastic + Cu	242		
				Teflon	1000		
USA: Oconee Station (1974-1978)	LiF TLD	Eberline	Mylar Mylar / Plastic Mylar / Plastic	10 285 285			
USA: Oconee Station (1978-1992)	Ca and mixed	CaSO <sub>4</sub>	Teledyne CaSO <sub>4</sub> PB-3	Open window Teflon Cu Cd	7 1000 1000 1000		
USA: Oconee Station (1993-1999)	Li other filters	LiF TLD	Harshaw 8805 system	Plastic/Cu Plastic/Teflon Mylar Plastic	333 1000 17 300		
USA: Oyster Creek Station (1968-1973)	Multi Cu-Pb	Film	Landauer Film type G	Open window Plastic Plastic Plastic Plastic + Al 60%Pb+40%Sn +alloy+plastic	7 160 310 340 1630		
USA: Oyster Creek Station (1974-1983)	Li other filters	LiF TLD	Teledyne Model PB-5	Teflon/Plastic Teflon/Plastic Teflon/Plastic/Al/Cu Teflon/Plastic/Al/Cu/Pb	4 173 173+210+917 173+210+117+725		
USA: Oyster Creek Station (1984-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>10</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sub>2</sub> <sup>10</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 ISA model 830	Mylar Plastic Plastic Pb	14 75 350 1000		(56,57)

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Paducah Gaseous Diffusion Plant (1954-1980)	One elem. Sn/Cd/Ag	Film	Kodak type 2 (ORNL)	Open, Cd	~1000	1	
USA: Paducah Gaseous Diffusion Plant (1981)	Missing information						
USA: Paducah Gaseous Diffusion Plant (1982-1998)	Li other filters	LiF TLD	Harshaw 2276, 8801	Al	300		
				Cd/Au	1000		
				Mylar	10		
				Plastic	300		
USA: Paducah Gaseous Diffusion Plant (1999-2005)	Ca and mixed	Li and Ca based TLD	Panasonic UD-802	Mylar	14		(56,57)
				Plastic+mylar	320		
				Plastic+mylar	320		
				Pb	1020	0.7	
USA: Paducah Gaseous Diffusion Plant (1999-2005) USEC employees	Li other filters	Li based TLD	Harshaw (ICN TLD 760)	Open window/Mylar	7		
				Plastic	600		
				Plastic + Cu	242		
				Plastic	600		
USA: Palo Verde Station (1983-1999)		<sup>7</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-812	Mylar	14		(56,57)
				Plastic	320		
				Plastic	320		
				Pb	960		
USA: Pantex (1952-1963)	One elem. Sn/Cd/Ag	Film	Kodak type 2 (tracerlab)	Open, Cd	~1000	1	
USA: Pantex (1964-1965)	Missing info	Film	Eberline	Al			
USA: Pantex (1966-1972)	One elem. Sn/Cd/Ag	Film	Landauer	Open, Cd	~1000	1	
USA: Pantex (1973-1976)	Li Al filter	Li based TLD	Pantex/Landauer	Mylar	10		
				Al	290		
USA: Pantex (1977-1980)	Li Al filters	Li based TLD	Pantex	Cd covered	7		
				Cd backed			
				Cd covered			
				Al			
				Cd backed			
USA: Pantex (1980-1993)	Ca and mixed	Li and Ca based TLD	Panasonic UD-802	Mylar	20		(56,57)
				Plastic+mylar	300		
				Plastic+mylar	300		
				Pb	1000		
USA: Pantex (1994-2005)	Ca and mixed	Li and Ca based TLD	Panasonic UD-812	Mylar	17		(56,57)
				Plastic+mylar	150		
				Plastic+mylar	300		
				Pb	1000		
USA: Peach Bottom (1974-1988)	Li other filters	LiF TLD	Eberline TLD-100	Mylar	10		
				Mylar	285		
USA: Peach Bottom (1988-1994)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	14		(56,57)
				Plastic	49		
				Plastic	350		
				Pb	1000		
USA: Peach Bottom (1994-1997)	Li other filters	LiF TLD	Eberline TLD-100	Mylar	10		
				Mylar	285		

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Peach Bottom (1997-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>6</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>6</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	14		(56,57)
				Plastic	49		
				Plastic	350		
				Pb	1000		
USA: Pearl Harbor (1963-1969)			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Pearl Harbor (1969-1971)			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Perry Nuclear Station (1982-1985)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>6</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>6</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 Landauer service	Mylar	14		(56,57)
				Plastic	350		
				Plastic	350		
				Pb	1000		
USA: Perry Nuclear Station (1985-1992)		LiF TLD	Eberline	Mylar	10		
				Mylar / Plastic	285		
				Mylar / Plastic	285		
USA: Perry Nuclear Station (1992-1999)	Li other filters	LiF TLD	Harshaw 8805 system	Plastic/Cu	345		
				Plastic/Teflon	1000		
				Mylar	17		
				Plastic	312		
USA: Point Beach (1970)	Missing info	Film	Eberline	Al and Cd	?		
USA: Point Beach (1970-1981)		LiF TLD	Eberline	Mylar	10		
				Mylar / Plastic	285		
				Mylar / Plastic	285		
USA: Point Beach (1981-1988)	Li other filters	LiF TLD	Landauer TLD-100-T1	?			
USA: Point Beach (1988-1995)	Li other filters	LiF TLD	Landauer-Alnor TLD-100-K1	Mylar	7		
				Mylar/Plastic	70		
				Sn/Al/Plastic	495		
				Al/Plastic	275		
USA: Point Beach (1995-1998)	Li other filters	LiF TLD	Landauer TLD-700-M1	?			
USA: Point Beach (1999-2000)	Li other filters	LiF TLD	Harshaw 8805 system	Plastic/Cu	345		
				Plastic/Teflon	1000		
				Mylar	17		
				Plastic	312		
USA: Portsmouth Gaseous Diffusion Plant (1954-1980)	Missing info	Film		Open window			
				Au			
				Cd			
USA: Portsmouth Gaseous Diffusion Plant (1981-1999)	Li other filters	LiF TLD	Harshaw 2276, 8801	Al	436		
				Cd/Au	1177		
				Mylar	16		
				Plastic	167		
USA: Portsmouth Gaseous Diffusion Plant (1999-2005)	Ca and mixed	Li and Ca based TLD	Panasonic UD-802	Mylar	14		(56,57)
				Plastic+mylar	320		
				Plastic+mylar	320		
				Pb	1020	0.7	

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Portsmouth Gaseous Diffusion Plant (1999-2005) USEC Employees	Li other filters	Li based TLD	Harshaw (ICN TLD 760)	Open window/Mylar	7		
				Plastic	600		
				Plastic + Cu	242		
				Plastic	600		
USA: Portsmouth Naval Shipyard (1950-1952) <sup>c</sup>	One elem. Pb	Film	Kodak Type K	Open, Pb	~30, 58	0.05	
USA: Portsmouth Naval Shipyard (1952-1956) <sup>c</sup>	Multi Sn 300mg.cm <sup>-2</sup>	Film	Eastman, DF-7	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Portsmouth Naval Shipyard (1957-1969) <sup>c</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Portsmouth Naval Shipyard (1969-1974) <sup>c</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Portsmouth Naval Shipyard (1974-2005) <sup>c</sup>	Ca and mixed	CaF <sub>2</sub>	Harshaw bulb style	Glass enclosed Sn/Pb			
USA: Pugen Sound (1966-1969) <sup>c</sup>			Dupont SX-233	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Pugen Sound (1969-1974) <sup>c</sup>			Kodak Type 3	Open window	~30	0	
				SS / Cd	400 / 865	0.51 / 1	
USA: Pugen Sound (1974-2005) <sup>c</sup>	Ca and mixed	CaF <sub>2</sub>	Harshaw bulb style	Glass enclosed Sn/Pb			
USA: Quad Cities Station (1970-1985)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
				60%Pb+40%Sn +alloy+plastic	1630		
USA: Quad Cities Station (1985-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>6</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>6</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	28		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	960		
USA: Rocketdyne (1954-1962)	Missing info	Film	Kodak Type k Dupont 552 (1956)	Open window			
				Brass Pb			
USA: Rocketdyne (1963-1993)	Multi Cu-Pb	Film	Dupont Kodak type 2 (1968)	Open window			
				Pb/Tn	1660		
				Cd			
				Al	540		
USA: Rocketdyne (1994-2005)	Li other filters	Li based TLD	Harshaw (Landauer)	Open window/Mylar	17		
				Plastic	600		
				Plastic + Cu	242		
				Plastic+ Teflon	600		
USA: Rocky Flats Golden Co (1951-1963)	One elem. Sn/Cd/Ag	Film	Dupont 552	Open, Cd	~1000	1	
USA: Rocky Flats Golden Co (1964-1969)	Multi-element	Film	Dupont 558	Open window			
				Cd	878		
				Be	470		
				Cu	114		



Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Rocky Flats Golden Co (1969-1979)	Li other filters	Li based TLD		Open window plastic Brass			
USA: Rocky Flats Golden Co (1971-1982)	Li other filters	Li based TLD	Harshaw	Open window Plastic Plastic + Cu Teflon	300 242 1000		
USA: Rocky Flats Golden Co (1983-2005) 2 dosimeters  or	Ca and mixed	Li and Ca based TLD	Panasonic UD-802  Panasonic UD-809	Teflon Plastic Plastic Plastic+ Pb Plastic+ Cd Plastic+ Sn Plastic+ Cd Plastic+ Cd	36 390 490 1160 930 840 930 930		(56,57)
USA: Sandia (1949-1958)	One elem. Sn/Cd/Ag	Film	Kodak type A/MOUND	Open, Brass	213		
USA: Sandia (1959-1971)	Multi element	Film	Dupont 558/MOUND	Open window Al Sn+Cd Sn	1000		
USA: Sandia (1971-1988)	Li Al filter	Li based TLD	Harshaw TLD-100		30 280		
USA: Sandia (1989-2005)	Li other filters	Li based TLD	Harshaw 8801 8802 (95-2005)	Open window/Mylar Plastic Plastic + Cu Plastic	7 600 242 600		
USA: San Onofre (1966-1967)	Missing info	Film	Technical Associates	?			
USA: San Onofre (1967-1984)	Multi Cu-Pb	Film	Landauer Film type G	Open window Plastic Plastic Plastic Plastic + Al 60%Pb+40%Sn +alloy+plastic	7 160 310 340 1630		
USA: San Onofre (1984-1999)	Ca and mixed	<sup>6</sup> Li <sub>2</sub> <sup>10</sup> B <sub>4</sub> O <sub>7</sub> <sup>6</sup> Li <sub>2</sub> <sup>10</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar Plastic Plastic Pb	14 49 350 1000		(56,57)
USA: Savannah River (1951-1958)	One elem. Sn/Cd/Ag	Film	Kodak/Dupont type 552	Open, Cd	~1000	1	
USA: Savannah River (1958-1970)	Multi Al-Ag	Film	DuPont type 552	Open window Al Ag	540 1050	2 1	
USA: Savannah River (1970-1982)	Li Al filter	Li based TLD	Harshaw	Open window Al	540	2	
USA: Savannah River (1982-1997)	Ca and mixed	Li and Ca based TLD	Panasonic UD-802	Mylar Plastic+mylar	14 320		(56,57)

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
				Plastic+mylar	320		
				Pb	1020	0.7	
USA: St Lucie (1976-1985)	Li Al filter	Li based TLD	Harshaw TLD-100		30		
				Al	280		
USA: St Lucie (1985-1991)	Li other filters	LIF TLD	Harshaw 8805 system	Plastic/Cu	345		
				Plastic/Teflon	1000		
				Mylar	17		
				Plastic	312		
USA: St Lucie (1991-1999)	Ca and mixed	<sup>7</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 ISA model 820 Holder	Mylar	19		(56,57)
				Plastic	345		
				Plastic	345		
				Pb	1045		
USA: Surry (1972-1979)	Li other filters	LIF TLD	Eberline TLD-100	Mylar	10		
				Mylar	285		
USA: Surry (1980-1989)	Ca and mixed	CaSO <sub>4</sub>	Teledyne CaSO <sub>4</sub> PB-3	Open window	7		
				Teflon	500		
				Cu	1000		
				Cd	1000		
USA: Surry (1990-1995)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 model 879 holder	Mylar	17		(56,57)
				Plastic	78		
				Plastic	310		
				Pb	990		
USA: Surry (1996-1999)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 model 874 holder	Mylar	17		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	990		
USA: Three Mile Island (1970-1975)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
				60%Pb+40%Sn +alloy+plastic	1630		
USA: Three Mile Island (1976-1983)	Li Al filter	Li based TLD	Harshaw TLD-100		30		
				Al	280		
USA: Three Mile Island (1983-1999)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 ISA model 830	Mylar	14		(56,57)
				Plastic	75		
				Plastic	350		
				Pb	1000		
USA: Turkey point Station (1972-1975)		LIF TLD	Eberline	Mylar	10		
				Mylar / Plastic	285		
				Mylar / Plastic	285		
USA: Turkey point Station (1976-1985)	Li Al filter	Li based TLD	Harshaw TLD-100		30		
				Al	280		

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation

Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.

Country: Facility (period)	Dosimeter Type	Dosimeter material	Commercial type	Filters	Density thickness (mg.cm <sup>-2</sup> )	Thickness (mm)	Ref
USA: Turkey point Station (1985-1991)	Li other filters	LiF TLD	Harshaw 8805 system	Plastic/Cu	345		
				Plastic/Teflon	1000		
				Mylar	17		
				Plastic	312		
USA: Turkey point Station (1991-1999)	Ca and mixed	<sup>7</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> <sup>7</sup> Li <sub>2</sub> <sup>11</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802 ISA model 820 Holder	Mylar	19		(56,57)
				Plastic	345		
				Plastic	345		
				Pb	1045		
USA: West Valley (1965-1970)	Missing info	Film	Nuclear Chicago	Open window			
				Al			
				Cd			
				Pb			
USA: West Valley (1970-1982)	Multi element	Film	Dupont 552	Open window			
				Plastic	350		
				Al	540		
				Pb/Tn	1660		
USA: West Valley (1982-1986)	Li other filters	Li based TLD	Harshaw	Open window			
				Plastic	300		
				Plastic + Cu	242		
				Teflon	1000		
USA: West Valley (1986-2005)	Li Al-plastic filter	Li based TLD	Panasonic 814AS4	Al/plastic	7+15+68+600		(56)
USA: Zion (1972-1985)	Multi Cu-Pb	Film	Landauer Film type G	Open window			
				Plastic	7		
				Plastic	160		
				Plastic	310		
				Plastic + Al	340		
	60%Pb+40%Sn +alloy+plastic	1630					
USA: Zion (1985-1999)	Ca and mixed	<sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> <sup>n</sup> Li <sub>2</sub> <sup>n</sup> B <sub>4</sub> O <sub>7</sub> Ca <sub>2</sub> SO <sub>4</sub> Ca <sub>2</sub> SO <sub>4</sub>	Panasonic UD-802	Mylar	28		(56,57)
				Plastic	310		
				Plastic	310		
				Pb	960		

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation  
**Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.**

## References

32. Bermann F, Chanourdie JC. Reconnaissance assistée des rayonnements à partir des données d'un dosimètre photographique. Radioprotection 1973; 8:189-205.
33. Bermann F. La dosimétrie individuelle au laboratoire d'exploitation dosimétrique de Fontenay-aux-Roses. Report CEA/IPSN/LED. Fontenay-aux-Roses: Commissariat à l'Energie Atomique; 1987.
34. Ribault S, Chemtob M. Dosimètre photographique PS-1. Report CTHIR 97-118. Fontenay-aux-Roses: Institut de Protection et Sûreté Nucléaire; 1997.
35. Ribault S, Chemtob M. Dosimètre photographique PS-1. Report CTHIR 97-118c. Fontenay-aux-Roses: Institut de Protection et Sûreté Nucléaire; 1997.
36. Ribault S, Ginistry C, Chemtob M. Dosimètre photographique PS-1. Report Procès verbal CTHIR 97-119. Fontenay-aux-Roses: Institut de Protection et Sûreté Nucléaire; 1997.
37. Soudain G. Aspects Théoriques et Techniques de la Dosimétrie Photographique. Industries Atomiques 1965; 5/6/7/8:1-18.
38. Soudain G. Le dosimètre photographique. Sécurité et médecine du travail 1972; 21-7.
39. AREVA NC. Caractéristiques techniques des détecteurs et des dosimètres du SPR/DMR. Report REC MAR 05146028 R1. 2008.
40. Coudert M. Précision des dosimètres - intercomparaison film-dosimètre électronique. Report D584-SRE/TM-90. Saint-Denis: Electricité de France; 1990.

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation  
**Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.**

41. Le Roy G. Dosimètre photographique type 7. Report LCIE.SPE-TEC-001. Fontenay-aux-Roses: Laboratoire Central des Industries Electriques; 2004.
42. Heard MJ, Cook JE, Holt PD. Photographic Emulsion Dosimetry and the AERE Film Dosimeter. AERE Report R3300. London: Her Majesty's Stationary Office; 1960.
43. Adams N, Heard MJ, Holt PD. Film Dosimetry Practice with the AERE/RPS Film Holder: A collection of Experimental Data. Report AERE-R4669. London: Her Majesty's Stationary Office; 1965.
44. Burt AK, Smith JW. Film dosimetry with the AERE/RPS film holder. A reassessment using the "Estar" film. AERE Report R-6156. London: Her Majesty's Stationary Office; 1972.
45. Hall EJ. Physics of X-Rays absorption. Radiobiology for the radiologist. New York: Harper&Row; 1978.
46. Heard MJ, Jones BE. A New Film Holder for Personnel Dosimetry. In Symposium on Personnel Dosimetry Techniques for External Radiation and their Application in Nuclear Establishments; Madrid: ENEA; 1963.
47. Iles WJ, Milton MIL, Bartlett DT, Burgess PH, Hill CE. Type testing of the NRPB/AERE film badge dosimeter in terms of the new ICRU secondary quantities. Part 1: Photons over the energy range 10 keV-1250 keV. Report NRPB-R236. London: National Radiological Protection Board; 1990.
48. Iles WJ, Milton MIL, . Type testing of the NRPB/AERE film badge dosimeter in terms of the new ICRU secondary quantities. Part 2: Photons over the energy range 4 MeV- 7MeV. Report NRPB-R257. London: National Radiological Protection Board; 1992.

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation  
**Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.**

49. Langmead WA, Adams N. Investigations of the accuracy attained in routine film badge dosimetry. *Health Phys* 1967; 13(2):167-80.
50. Marshall TO, Iles WJ, Overend JK, Twyman A. An evaluation of the Eastman Kodak Type 2 film. Report NRPB R-103. London: National Radiological Protection Board; 1980.
51. Report on the performance of the automated Alnor TLD system comprising TLD reader and TLD irradiator. Roskilde: Riso National Laboratory; 1987.
52. Bartlett DT, Burgess PH, Francis TM, Dutt JC, Dimbylow PJ. The Energy and Angle Dependence of the Response to photons of the NRPB Thermoluminescence Dosimeter in terms of the New ICRU Quantities. *Radiat Prot Dosimetry* 1986; 17:29-31.
53. Perry KEG, Preston HE. Progress towards thermoluminescent dosimetry system for large-scale routine personnel monitoring. In Second international congress of the international radiation protection association; Brighton: International Radiation Protection Association; 1970.
54. Shaw KB, Wall BF. Performance Tests on the NRPB Thermoluminescent Dosimeter. Report NRPB-R65. London: Her Majesty's Stationary Office; 1977.
55. Dealler JFB, Jones BE, Smith EE. Personnel monitoring for external radiation: a national service. *Occup Saf Health* 1958; Jul-Sept:137-53.
56. TL badge - Technical Data. Report E-BDG/TD-2. Osaka : Matsushita Electric Industrial Co.; 1985.
57. Westinghouse Savannah River compagny. External angular dependance external dosimetry. Report Technical basis manual WSRC-IM-92101. Aiken: Department of Energy; 1993.

Supplementary Information \_ Characteristics of dosimeters used for photon dose estimation  
**Supplementary Table S1 was completed by health physicists using the best available information; however, expert judgment was also necessary.**

58. Fix JJ, Gilbert ES, Baumgartner WV. An assessment of bias and uncertainty in recorded dose from external sources of radiation for workers at the Hanford site. Report PNL-10066. Richland, WA: National Research Council; 1994.
59. Wilson RH. Historical Review of Personnel Dosimetry Development and its Use in Radiation Protection Programs at Hanford. Report PNL-6125. Richland, WA: Pacific Northwest Laboratory; 1987.
60. Wilson RH, Fix JJ, Baumgartner WV, Nichols LL. Description and evaluation of the Hanford personal dosimeter program from 1944 through 1989. Report PNL-7447. Richland, WA: Pacific Northwest Laboratory; 1990.
61. Ahmed AB, McMahan KL, Colwell DS. Angular response characterization of the Martin Marietta energy systems. Report ORNL-TM-1202. Oak Ridge, Tennessee: Oak ridge National Laboratory; 1993.