

Appalachian Compact 2012 LLRW Data

The following charts and tables are a compilation of data directly from Energy Solutions, Clive, Utah and the PA Department of Environmental Protection - Bureau of Radiation Protection's data as of August, 2013.

MIMS Website

<http://mims.apps.em.doe.gov/>

Low-Level Radioactive Waste (LLRW) Classification

- **NRC regulations (10 CFR Part 61) has specified a waste classification system for LLRW**
- **There are three (3) classes of LLRW: Class A, Class B and Class C**
- **The majority of LLRW volume is Class A waste**
- **The majority of LLRW activity is Class B &C waste**

Table 1

Radionuclide	Concentration, curies per cubic meter
C-14.....	8
C-14 in activated metal.....	80
Ni-59 in activated metal.....	220
Nb-94 in activated metal.....	0.2
Tc-99.....	3
I-129.....	0.08
Alpha emitting transuranic nuclides with half-life greater than 5 years.....	*100
Pu-241.....	*3,500
Cm-242.....	*20,000

*Units are nanocuries per gram

Table 2

Radionuclide	Concentration, curies per cubic meter		
	Col. 1	Col. 2	Co.3
Total of all nuclides with less than 5 year half-life.....	700	*	*
H-3.....	40	*	*
Co-60	700	*	*
Ni-63.....	3.5	70	700
Ni-63 in activated metal.....	35	700	7000
Sr-90.....	0.04	150	7000
Cs-137.....	1	44	4600

***There are no limits established for these radionuclides in class B or C wastes**

(a) *Classification by long-lived radionuclides.* If the waste contains only radionuclides listed in Table 1, classification shall be determined as follows:

(1) If the concentration does not exceed 0.1 times the value in Table 1, the waste is Class A.

(2) If the concentration exceeds 0.1 times the value in Table 1 but does not exceed the value in Table 1, the waste is Class C.

(3) If the concentration exceeds the value in Table 1, the waste is not generally acceptable for disposal.

(4) For waste containing mixtures of radionuclides listed in Table 1, the total concentration shall be determined under § 236.506 (relating to sum of fractions rule).

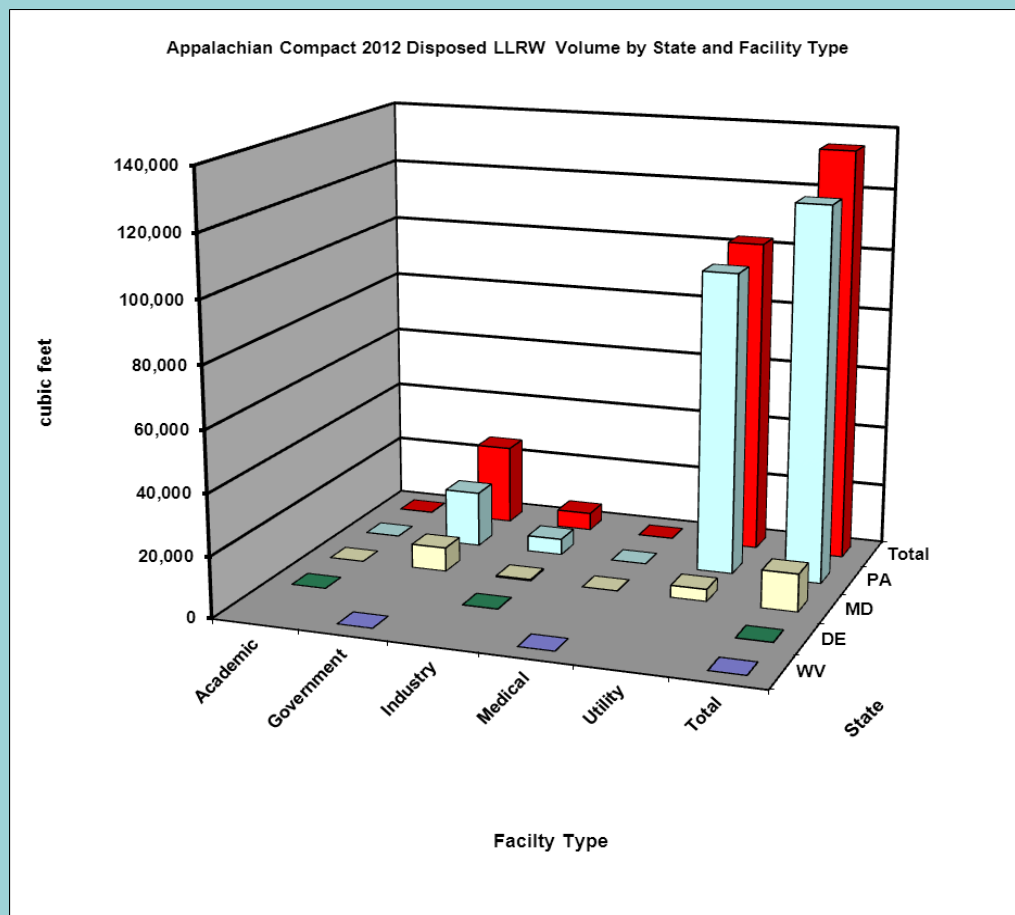
(b) *Classification by short-lived radionuclides.* If the waste does not contain any radionuclide listed in Table 1, classification shall be determined based on the concentrations shown in Table 2. If the waste does not contain a radionuclide listed in Table 1 or Table 2, it is Class A.

(1) If the concentration does not exceed the value in Table 2, Column 1, the waste is Class A.

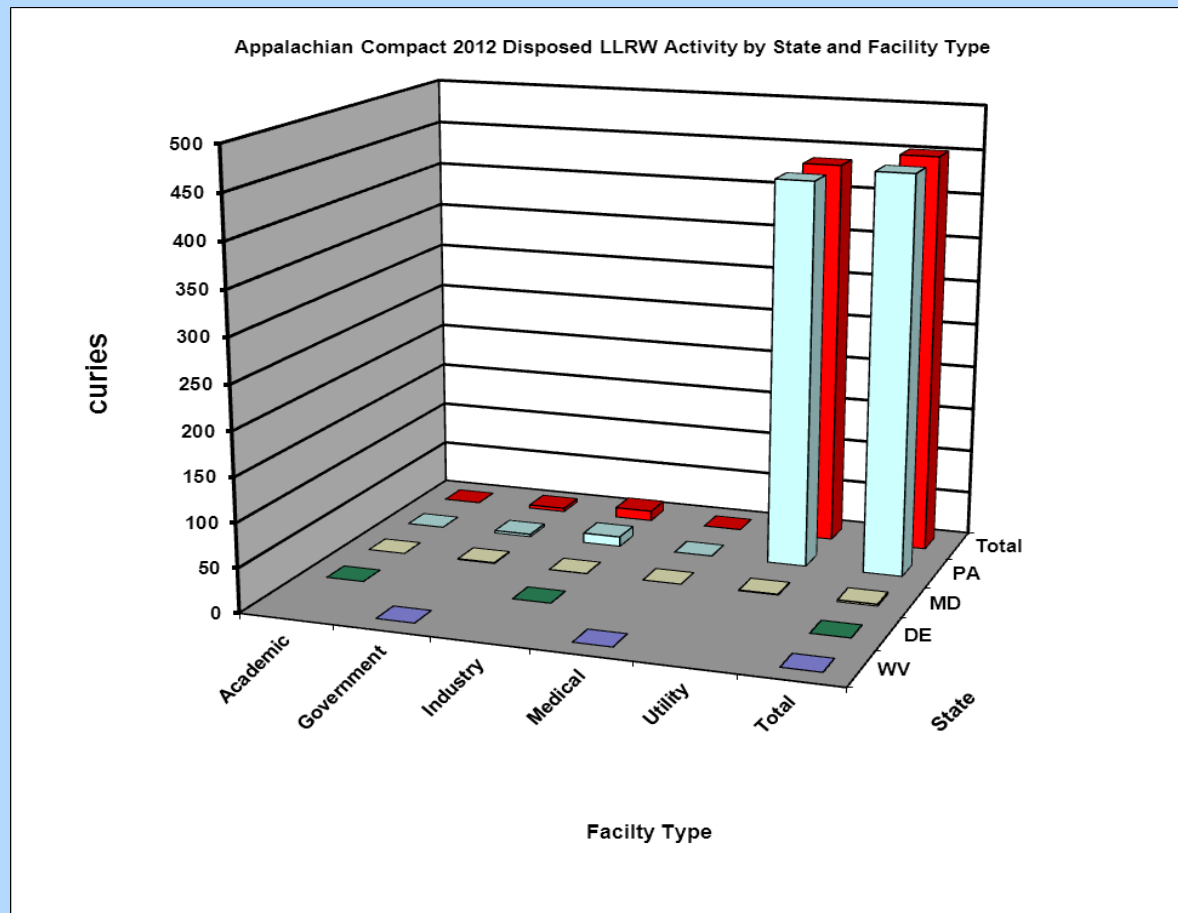
(2) If the concentration exceeds the value in Table 2, Column 1, but does not exceed the value in Table 2, Column 2, the waste is Class B.

(3) If the concentration exceeds the value in Table 2, Column 2, but does not exceed the value in Table 2, Column 3, the waste is Class C.

Facility Type/State	WV	DE	MD	PA	Total
Academic	0	9.6	6.7	40.2	56.5
Government	1.2	0	7,886.9	18,176.5	26,064.6
Industry	0	65.6	471.6	5,235.0	5,772.2
Medical	19.8	0	13.5	0.7	34.0
Utility	0	0	3,985.6	98,927.8	102,913.4
Total	21.0	75.2	12,364.3	122,380.2	134,840.7



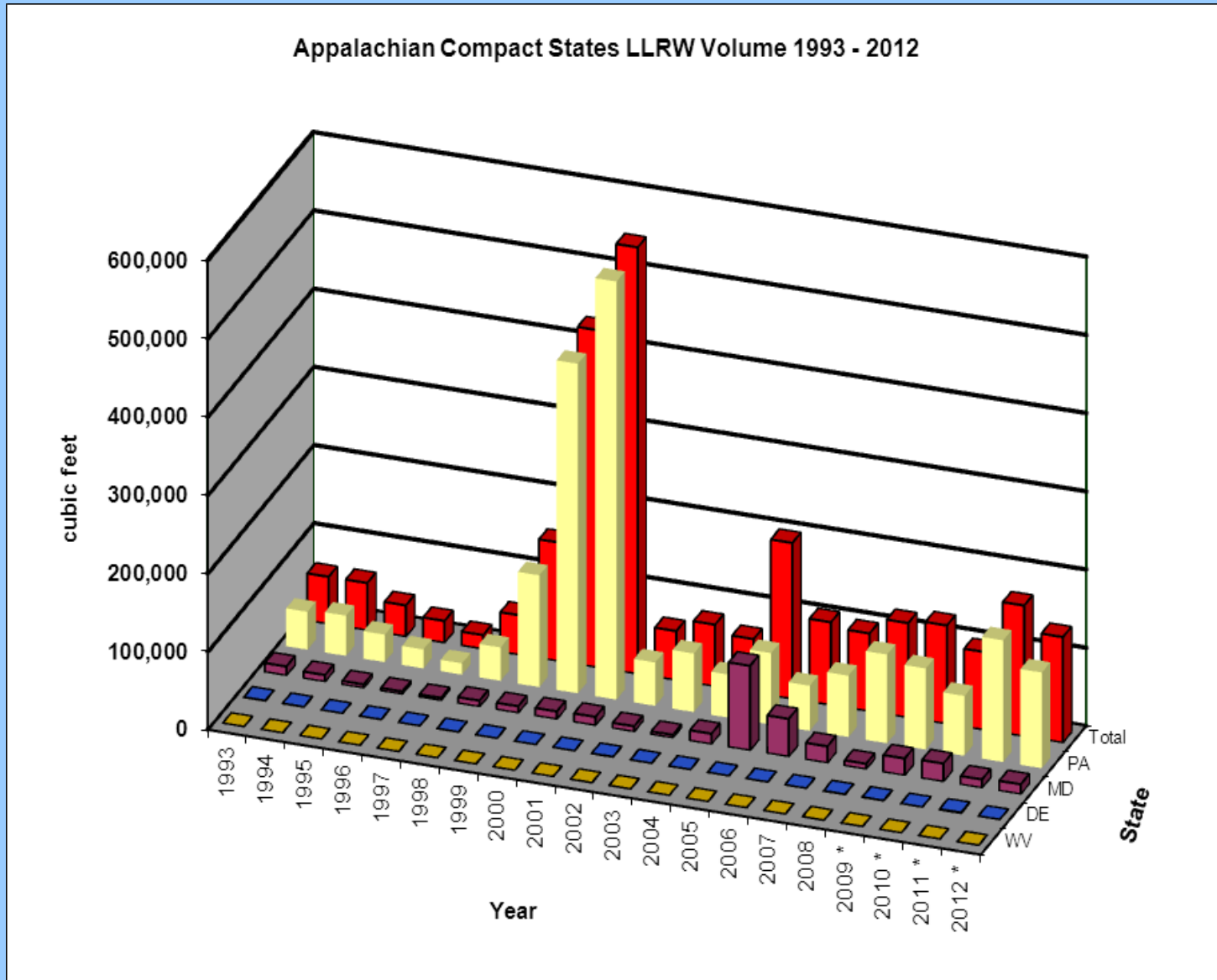
Facility Type/State	WV	DE	MD	PA	Total
Academic	0	0.002	0.004	0.01	0.02
Government	0.001	0	0.99	2.87	3.87
Industry	0	0.005	0.22	11.29	11.52
Medical	0.002	0	0.02	0.0003	0.02
Utility	0	0	0.89	435.13	436.02
Total	0.003	0.007	2.13	449.30	451.44



Appalachian Compact Disposed LLRW Volume from 1993 to 2012

Year	WV	DE	MD	PA	Total
1993	26.8	479.8	11,358.8	48,439.3	60,304.7
1994	81.8	374.8	8,421.1	51,441.6	60,319.3
1995	4.2	57.8	4,428.7	35,199.6	39,690.3
1996	34.8	127.2	3,391.1	24,203.1	27,756.1
1997	1.8	23.9	3,096.5	14,486.2	17,608.4
1998	48.0	173.8	7,604.6	42,686.0	50,512.4
1999	158.7	80.6	8,406.8	143,043.7	151,689.8
2000	53.4	27.6	9,766.8	421,398.1	431,246.0
2001	44.1	76.2	10,759.9	534,429.4	545,309.6
2002	183.3	366.4	6,752.8	55,371.4	62,673.8
2003	151.8	73.5	3,703.1	74,901.0	78,829.4
2004	34.8	48.8	13,177.8	55,136.0	68,397.4
2005	2.4	74.2	107,956.4	91,292.6	199,325.6
2006	38.0	59.2	48,131.8	57,627.7	105,856.8
2007	48.69	42.7	21,015.6	78,454.5	99,561.5
2008	132.15	414.8	6,702.5	113,483.2	120,732.6
2009 *	134.08	431.2	21,451.3	103,666.9	125,683.5
2010 *	11.3	29.4	22,957.6	76,519.4	99,517.7
2011 *	19.1	1,061.0	10,568.7	155,508.5	167,157.3
2012 *	21.0	75.2	12,364.3	122,380.2	134,840.7
Total 1993 to 2012	1,230.3	4,098.1	342,016.1	2,299,668.4	grand total 2,647,012.8

Appalachian Compact Disposed LLRW Volume from 1993 to 2012



Appalachian Compact Disposed LLRW Activity from 1993 to 2012

Year	WV	DE	MD	PA	Total
1993	5.5	45.1	5,019.4	84,346.7	89,416.7
1994	0.5	69.3	1,439.7	93,729.6	95,239.0
1995	4.6	0.01	346.2	5,691.9	6,042.7
1996	0.1	5.6	349.1	71,900.5	72,255.4
1997	0.03	1.3	198.5	8,017.9	8,217.7
1998	37.3	0.1	531.5	43,691.0	44,259.9
1999	0.5	0.1	1,335.7	86,618.0	87,954.3
2000	2.2	0.02	484.0	357,624.4	358,110.7
2001	0.03	0.03	903.3	168,919.6	169,822.9
2002	0.1	0.5	244.5	6,777.4	7,022.5
2003	0.2	24.7	166.3	241,649.8	241,840.9
2004	0.8	0.2	11,830.7	18,890.3	30,722.0
2005	0.7	31.3	156.8	58,786.2	58,974.9
2006	0.03	11.9	60.1	91,719.1	91,791.1
2007	0.16	12.9	25,304.7	492,579.3	517,897.0
2008	0.14	12.2	2,181.5	283,328.8	285,522.6
2009 *	0.02	0.5	4.7	1,001.4	1,006.6
2010 *	0.01	0.03	1.4	656.8	658.2
2011 *	0.02	1.0	1.8	492.6	495.5
2012 *	0.003	0.007	2.1	449.3	451.4
Total 1993 to 2012	52.9	216.7	50,561.9	2,116,870.4	grand total 2,167,701.9

Appalachian Compact Disposed LLRW Activity from 1993 to 2012

Appalachian Compact States LLRW Activity 1993 - 2012

