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**OAK RIDGE
Y-12
PLANT**

MARTIN MARIETTA

Y-12 WASTE MANAGEMENT INFORMATION REPORT

October 1991

N. E. Leonetti
D. W. Woodard

Martin Marietta Energy Systems, Inc.

Waste Management Division, Y-12 Plant

Unclassified
DERIVATIVE CLASSIFIER: Robert C. May
Waste Management Division
DATE: 4/2/92

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Prepared by the
Oak Ridge Y-12 Plant
Oak Ridge, Tennessee 37831
operated by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the
U. S. DEPARTMENT OF ENERGY
Under Contract No. DE-AC05-840R21400

This document has been reviewed by the Y-12 Plant Classification Office and has been determined to be
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OPERATED BY
MARTIN MARIETTA ENERGY SYSTEMS, INC.
FOR THE UNITED STATES
DEPARTMENT OF ENERGY

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Table 1
Summary of Radioactive Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Total	Average
SOLID WASTE															
Low level Waste	ft3	18,768	9,728	8,673	13,153	9,716	10,322	26,832	24,116	14,106	12,728	26,181	8,378	182,701	15,225
Y-12 Operations	lbs	156,705	116,521	66,589	216,968	189,127	112,935	534,785	344,672	161,640	87,440	202,176	138,877	2,328,435	194,036
Contractors	ft3	370	60	26	753	144	230	40	0	0	108	675	1,208	3,614	301
	lbs	3,500	1,200	4,000	70,500	300	4,175	200	0	0	2,000	5,100	3,100	94,075	7,840
Total LLW	ft3	19,138	9,788	8,699	13,906	9,860	10,552	26,872	24,116	14,106	12,836	26,856	9,586	186,315	15,526
Generated by Y-12	lbs	160,205	117,721	70,589	287,468	189,427	117,110	534,985	344,672	161,640	89,440	207,276	141,977	2,422,510	201,876
Received from X-10	ft3	40	0	90	46	0.20	9	0	0	30	0	22	0	237	20
	lbs	500	0	480	455	4	200	0	0	600	0	90	0	2,329	194
Total Solid Low	ft3	19,178	9,788	8,789	13,952	9,860	10,561	26,872	24,116	14,136	12,836	26,878	9,586	186,552	15,546
Level Waste	lbs	160,705	117,721	71,069	287,923	189,431	117,310	534,985	344,672	162,240	89,440	207,366	141,977	2,424,839	202,070
LIQUID WASTE															
Waste Organics	gal	0	0	0	0	390	300	428	0	0	0	0	0	1,118	93
Oils and Solvents	lbs	0	0	0	0	3,200	2,250	3,510	0	0	0	0	0	8,960	747
Wastewaters	gal	10,337	10,197	6,235	23,453	13,477	13,595	41,586	27,217	25,012	23,843	18,741	14,335	228,028	19,002
	lbs	86,297	85,129	52,068	195,623	112,510	113,606	346,724	224,360	205,828	196,604	156,862	119,270	1,894,880	157,907
Total Liquid Low	gal	10,337	10,197	6,235	23,453	13,867	13,895	42,014	27,217	25,012	23,843	18,741	14,335	229,146	19,096
Level Waste	lbs	86,297	85,129	52,068	195,623	115,710	115,856	350,235	224,360	205,828	196,604	156,862	119,270	1,903,840	158,653

Notes:
1. This category of waste includes depleted uranium metal, chips, sawdust or oxide.
2. The threshold limit for low-level radioactive trash is based upon the operating limitations of the Trash Monitoring Station.
3. Radioactive waste organics are defined as waste oils and solvents containing uranium at activity concentrations above 30 pCi/g.
4. Radioactive wastewaters are defined as wastewaters collected for treatment and contain uranium at activities above 2,000 pCi/g (DOT standard for radioactivity).
5. Radioactive waste which also contains PCB's is detailed in Table 5 - Summary of PCB Wastes Generated.

Table 2
Summary of Hazardous (RCRA) Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Total	Average
SOLID WASTE															
Drummed	ft3	86	69	192	191	159	494	64	180	116	356	168	156	2,232	186
	lbs	1,478	2,434	3,942	4,236	4,639	31,193	2,022	5,422	4,353	4,684	6,184	4,941	75,528	6,294
Contractors	ft3	0	0	0	0	0	0	0	0	19	0	0	0	19	2
	lbs	0	0	0	0	0	0	0	0	175	0	0	0	175	15
Treatment Residues	ft3	0	0	0.20	37	0.07	0.11	0	83	0	7	7	20	154	13
(Sludges)	lbs	0	0	6	802	7	3	0	5,311	0	300	398	1,500	8,327	694
Treatment Residues	ft3	0	0	0	0	0	0	0	0	158	0	0	0	158	13
Sent to K-25	lbs	0	0	0	0	0	0	0	0	9,251	0	0	0	9,251	771
Total Solid Waste	ft3	86	69	192	228	159	494	64	263	293	363	175	176	2,563	214
Generated by Y-12	lbs	1,478	2,434	3,948	5,038	4,646	31,196	2,022	10,733	13,779	4,984	6,582	6,441	93,281	7,773
Received from X-10	ft3	5	14	25	12	21	28	2.74	17	42	22	68	1	258	21
	lbs	74	565	688	349	485	1,630	57.61	387	2,149	457	3,905	86	10,833	903
Total Solid Waste	ft3	91	83	217	240	180	522	67	280	336	385	243	177	2,821	235
	lbs	1,552	2,999	4,636	5,387	5,131	32,826	2,080	11,120	15,928	5,441	10,487	6,527	104,114	8,676
LIQUID WASTE															
Waste Organics	gal	1,350	1,755	2,240	1,247	788	920	851	878	612	810	985	365	12,801	1,067
Oils and Solvents	lbs	11,170	11,730	16,757	10,340	7,333	7,036	6,776	7,445	5,214	7,517	11,550	2,813	105,681	8,807
Wastewaters	gal	17,356	7,303	12,997	18,513	14,802	13,765	22,595	21,671	28,620	23,434	14,808	13,365	209,229	17,436
	lbs	145,226	60,774	108,632	153,426	123,250	115,926	188,260	180,907	238,130	195,887	124,011	105,685	1,740,115	145,010
Steam Plant															
Regeneration	gal	508,300	640,900	773,500	618,800	552,500	442,000	375,700	419,900	353,600	331,500	375,700	331,500	5,723,900	476,992
Wastewaters	lbs	4,243,451	5,350,438	6,457,426	5,165,940	4,612,447	3,689,957	3,136,464	3,505,460	2,951,966	2,767,468	3,136,464	2,767,468	47,784,949	3,982,079
Total Liquid Waste	gal	527,006	649,958	788,737	638,560	568,090	456,685	399,146	442,449	382,832	355,744	391,493	345,230	5,945,930	495,494
Generated by Y-12	lbs	4,399,847	5,422,942	6,582,815	5,329,706	4,743,029	3,812,919	3,331,500	3,693,812	3,195,310	2,970,872	3,272,025	2,875,966	49,630,744	4,135,895
Received from X-10	gal	1	392	111	206	110	0	0	220	51	0	675	0	1,766	147
Oils and Solvents	lbs	8	3,150	748	1,646	826	0	0	1,780	465	0	4,000	0	12,623	1,052
Received from X-10	gal	61	128	116	92	29	125	226	335	120	53	851	254	2,390	199
Wastewaters	lbs	459	992	908	711	295	975	1,830	2,641	966	473	7,505	2,112	19,866	1,656
Total Liquid Waste	gal	527,068	650,478	788,964	638,858	568,229	456,810	399,372	443,004	383,003	355,797	393,019	345,484	5,950,086	495,841
	lbs	4,400,314	5,427,084	6,584,471	5,332,063	4,744,150	3,813,894	3,333,329	3,698,233	3,196,741	2,971,345	3,283,530	2,878,078	49,663,234	4,138,603

Notes:
1. The treatment residues category includes sludges and other residues generated at wastewater treatment facilities.
2. The Wastewaters category includes only wastewaters collected and sent for treatment.
3. Steam Plant regeneration rates are estimated.
4. RCRA wastes which are also PCB are detailed in Table 5 ; RCRA Waste which are also Classified are detailed in Table 6.

Table 3
Summary of Mixed (Hazardous and Radioactive) Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Total	Average
SOLID WASTE															
Trash and debris	ft3	140	49	62	145	45	93	169	28	42	525	32	60	1,390	116
	lbs	3,466	2,670	1,233	10,310	649	3,878	3,386	8,573	566	8,222	408	694	44,055	3,671
Contractors	ft3	0	0	0	0	0	0	0	0	74	0	0	0	74	6
	lbs	0	0	0	0	0	0	0	0	1,320	0	0	0	1,320	110
Treatment Residues	ft3	614	0	773	0	686	0	546	264	7	0	0	0	2,890	241
Sent to K-25	lbs	43,708	0	54,730	0	43,201	0	25,240	18,674	63	0	0	0	185,616	15,468
Sludge	ft3	1,588	1,569	601	2,124	1,330	1,869	1,297	1,333	1,202	2,867	1,667	1,109	18,556	1,546
	lbs	36,303	38,411	16,212	50,065	35,033	44,410	33,944	34,795	32,484	66,493	38,302	30,956	457,408	38,117
Total Solid Waste	ft3	2,342	1,618	1,436	2,269	2,061	1,962	2,012	1,625	1,325	3,392	1,699	1,169	22,910	1,909
Generated by Y-12	lbs	83,477	41,081	72,175	60,375	78,883	48,288	62,570	62,042	34,433	74,715	38,710	31,650	688,399	57,367
Received from X-10	ft3	0	0	0	1	0	0	0	4	0	0	0	0	5	0.42
	lbs	0	0	0	40	0	0	0	75	0	0	0	0	115	10
Total Solid Waste	ft3	2,342	1,618	1,436	2,270	2,061	1,962	2,012	1,629	1,325	3,392	1,699	1,169	22,915	1,910
	lbs	83,477	41,081	72,175	60,415	78,883	48,288	62,570	62,117	34,433	74,715	38,710	31,650	688,514	57,376
LIQUID WASTE															
Waste Organics	gal	885	825	2,860	387	910	635	210	130	644	1,029	450	1,005	9,970	831
Oils and Solvents	lbs	7,140	6,488	25,785	4,991	7,155	5,610	1,300	1,100	5,289	8,634	3,694	5,000	82,186	6,849
Wastewaters	gal	84,278	70,763	43,784	69,506	87,395	62,845	67,888	74,035	63,992	74,906	51,089	73,552	824,033	68,669
	lbs	703,545	590,752	365,529	580,258	729,601	524,593	566,805	617,926	534,208	631,535	420,094	614,254	6,879,102	573,259
Contractors	gal	0	0	0	0	0	0	0	0	39	0	0	0	39	3
	lbs	0	0	0	0	0	0	0	0	270	0	0	0	270	23
Total Liquid Waste	gal	85,163	71,588	46,644	69,893	88,305	63,480	68,098	74,165	64,675	75,935	51,539	74,557	834,042	69,503
Generated by Y-12	lbs	710,685	597,240	391,314	585,249	736,756	530,203	568,105	619,026	539,767	640,169	423,788	619,254	6,961,558	580,130
Received from X-10	gal	0	1	0	0	0	0	0	0	0	0	0	0	1	0.08
Wastewaters	lbs	0	8	0	0	0	0	0	0	0	0	0	0	8	1
Total Liquid Waste	gal	85,163	71,589	46,644	69,893	88,305	63,480	68,098	74,165	64,675	75,935	51,539	74,557	834,043	69,504
	lbs	710,685	597,248	391,314	585,249	736,756	530,203	568,105	619,026	539,767	640,169	423,788	619,254	6,961,566	580,131

Notes:

1. Mixed wastewaters are defined as RCRA wastewaters containing uranium at activities above 2000 pCi/g (DOT standard for radioactivity) unless otherwise designated as Mixed. All other Mixed wastes are defined as RCRA wastes containing uranium at activities above 30 pCi/g.
2. Mixed wastes which are also PCB are detailed in Table 5 - Summary of PCB Waste Generated.
3. The Wastewaters category includes only wastes collected for treatment.
4. The treatment residues category includes sludges and other residues generated at wastewater treatment facilities. Sludges are estimated at 35 wt % solids.

Table 4
Summary of Industrial (Nonhazardous and Nonradioactive) Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Total	Average
SOLID WASTE															
Trash and debris	ft3	279,030	222,927	213,313	239,105	148,251	168,554	222,575	211,830	182,718	201,865	141,541	173,359	2,405,068	200,422
Y-12 Operations	lbs	1,136,002	894,175	875,709	1,066,635	604,014	693,660	902,197	868,062	690,161	915,920	625,273	832,727	10,104,535	842,045
Contractors	ft3	98,648	88,671	57,721	48,627	89,319	70,091	47,196	58,644	71,029	32,983	30,085	21,961	714,975	59,581
	lbs	1,267,226	533,846	348,106	291,222	551,067	420,366	283,176	351,864	1,797,564	1,537,408	462,850	926,808	8,771,503	730,959
Treatment Residues	ft3	14	4	0	14	0	0.21	0	0	9	0	0	675	716	60
	lbs	842	252	0	1,000	0	2	0	0	107	0	0	33,500	35,703	2,975
Total Solid Waste	ft3	377,692	311,602	271,034	287,746	237,570	238,645	269,771	270,474	253,756	234,848	171,626	195,995	3,120,760	260,063
Generated by Y-12	lbs	2,404,070	1,428,273	1,223,815	1,358,857	1,155,081	1,114,028	1,185,373	1,219,926	2,487,832	2,453,328	1,088,123	1,793,035	18,911,741	1,575,978
Received from X-10	ft3	77,562	57,978	36,871	50,409	49,757	35,591	47,431	46,427	38,907	58,680	48,895	70,027	618,535	51,545
	lbs	355,511	349,879	522,669	211,626	202,630	145,896	215,185	220,403	440,160	622,264	493,260	2,574,681	6,354,164	529,514
Received from K-25	ft3	31,347	23,733	18,549	23,598	24,624	27,338	32,481	23,126	26,703	28,323	23,031	23,841	306,694	25,558
	lbs	125,388	99,360	75,492	96,228	100,062	112,050	129,924	92,502	185,069	197,280	319,600	248,100	1,781,055	148,421
Total Solid Waste	ft3	486,601	393,313	326,454	361,753	311,951	301,574	349,683	340,027	319,366	321,851	243,552	289,863	4,045,988	337,166
	lbs	2,884,969	1,877,512	1,821,976	1,666,711	1,457,773	1,371,974	1,530,482	1,532,831	3,113,061	3,272,872	1,900,983	4,615,816	27,046,960	2,253,913
LIQUID WASTE															
Waste Organics	gal	0	0	0	740	150	156	886	1,017	0	105	0	0	3,054	255
Oils and Solvents	lbs	0	0	0	5,800	1,503	1,335	8,209	9,428	0	890	0	0	27,165	2,264
Wastewaters	gal	25,346	5,873	711	8,710	8,931	7,305	19,592	21,020	7,997	23,677	17,086	40,046	186,294	15,525
	lbs	211,574	49,015	5,910	72,687	74,571	60,598	148,750	174,798	66,930	196,656	135,824	332,129	1,529,442	127,453
Steam Plant	gal	2,204,500	2,674,300	3,852,700	2,464,200	3,484,400	2,783,900	2,511,000	2,086,300	1,637,500	3,045,500	1,719,000	2,396,400	30,859,700	2,571,642
Wastewaters	lbs	18,403,871	22,325,912	32,163,572	20,571,930	29,088,886	23,240,888	20,962,632	17,417,100	13,670,374	25,424,809	14,350,762	20,005,914	257,626,651	21,468,888
Total Liquid Waste	gal	2,229,846	2,680,173	3,853,411	2,473,650	3,493,481	2,791,361	2,531,478	2,108,337	1,645,497	3,069,282	1,736,086	2,436,446	31,049,048	2,587,421
Generated by Y-12	lbs	18,615,446	22,374,927	32,169,482	20,650,417	29,164,960	23,302,821	21,119,591	17,601,326	13,737,304	25,622,355	14,486,587	20,338,043	259,183,258	21,598,605
Received from X-10/K-	gal	17	63	6	29	552	299	94	1,804	1	110	1,201	23,003	27,180	2,265
	lbs	170	519	55	233	4,021	2,205	756	14,420	11	912	9,604	184,029	216,935	18,078
Total Liquid Waste	gal	2,229,863	2,680,236	3,853,417	2,473,679	3,494,033	2,791,660	2,531,572	2,110,141	1,645,498	3,069,392	1,737,287	2,459,449	31,076,228	2,589,686
	lbs	18,615,616	22,375,446	32,169,537	20,650,650	29,168,981	23,305,026	21,120,347	17,615,746	13,737,314	25,623,267	14,496,191	20,522,072	259,400,192	21,616,683

Notes:
1. The treatment residues category includes sludges and other residues generated at wastewater treatment facilities.
2. The Wastewaters category includes only wastewaters collected and sent for treatment.

Table 5
Summary of PCB Wastes Generated at the Y-12 Plant

Waste Category	Units	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Total	Average
Nonradioactive															
Y-12 Operations	ft3	0	730	297	317	37	2,012	110	406	136	74	879	109	5,107	426
Solid Waste	lbs	0	49,205	5,900	21,030	980	108,540	3,455	10,210	5,292	3,025	21,220	3,013	231,870	19,323
Received from X-10	ft3	0	50	7	21	140	56	365	575	21	22	10	15	1,282	107
	lbs	0	1,580	70	330	3,625	10,200	43,725	27,775	2,200	700	390	500	91,095	7,591
Total Solid Waste	ft3	0	780	304	338	177	2,068	475	981	157	96	889	124	6,389	532
	lbs	0	50,785	5,970	21,360	4,605	118,740	47,180	37,985	7,492	3,725	21,610	3,513	322,965	26,914
Y-12 Operations	gal	0	55	285	708	5	1,025	52,490	30	155	0	60	53	54,866	4,572
Liquid Waste	lbs	0	300	2,000	5,500	60	9,320	395,484	250	1,100	0	575	525	415,114	34,593
Received from X-10	gal	0	165	330	125	50	220	0	0	650	0	0	110	1,650	138
	lbs	0	2,505	2,637	1,020	400	1,760	0	0	5,200	0	0	900	14,422	1,202
Total Liquid Waste	gal	0	220	615	833	55	1,245	52,490	30	805	0	60	163	56,516	4,710
	lbs	0	2,805	4,637	6,520	460	11,080	395,484	250	6,300	0	575	1,425	429,536	35,795
Radioactive															
Solid Waste	ft3	24	3	40	17	50	16	136	44	203	15	12	67	626	52
	lbs	440	50	1,273	230	450	344	3,280	1,399	8,730	150	300	982	17,628	1,469
Liquid Waste	gal	0	0	35	20	30	0	0	0	0	50	300	188	623	52
	lbs	0	0	400	150	495	0	0	0	0	225	2,400	903	4,573	381

Notes:
1. This waste category consists entirely of oils, transformer carcasses, and PCB contaminated solids containing 2 or more ppm PCB.
2. Nonradioactive liquids contain less than 30 pCi/gram uranium.
3. Nonradioactive PCB waste may also contain RCRA contamination.
4. Radioactive PCB waste may also contain RCRA contamination.

Table 6
Summary of Classified Wastes Generated at the Y-12 Plant

Waste Category	Units	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Total	Average
Nonhazardous															
Solid Waste	ft3	508	258	177	108	0	54	0	0	84	0	0	672	1,861	155
	lbs	4,500	5,400	3,000	3,000	0	1,400	0	0	3,445	0	0	13,100	33,845	2,820
Hazardous															
Solid Waste	ft3	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	lbs	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Liquid Waste	gal	0	0	0	0	0	0	0	0	1,400	0	0	0	1,100	92
	lbs	0	0	0	0	0	0	0	0	9,130	0	0	0	9,130	761
Radioactive															
Solid Waste	ft3	16	0	0	1	0	0	0	0	22	30	0	0	69	6
	lbs	3,000	0	0	30	0	0	0	0	1,250	2,050	0	0	6,330	528
Liquid Waste	gal	0	0	0	0	0	0	0	0	0	0	0	0	0	0
	lbs	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note:
This waste category is considered to be classified because of its' shape, composition, contaminant or content.

Table 7
Summary of Scrap Metal Generated at the Y-12 Plant

Waste Category	Units	Oct-90	Nov-90	Dec-90	Jan-91	Feb-91	Mar-91	Apr-91	May-91	Jun-91	Jul-91	Aug-91	Sep-91	Total	Average
Nonradioactive															
Y-12 Operations	ft3	4,299	2,674	2,352	1,013	1,534	2,376	2,378	2,799	4,385	4,104	3,704	2,330	33,945	2,829
	tons	151	94	82	35	54	83	74	69	96	93	93	58	982	82
Contractors	ft3	1,400	494	2,260	1,407	1,436	1,626	279	267	136	650	2,782	914	13,651	1,138
	tons	49	17	79	49	50	57	10	9	5	23	21	12	381	32
Total Nonradioactive Generated by Y-12	ft3	5,699	3,168	4,612	2,420	2,969	4,002	2,657	3,066	4,520	4,754	6,486	3,244	47,596	3,966
	tons	200	111	161	85	104	140	84	79	100	116	114	69	1,363	114
Received from X-10	ft3	0	0	0	307	664	493	1,350	807	0	258	136	584	4,599	383
	tons	0	0	0	11	23	17	21	28	0	9	5	20	134	11
Total Nonradioactive	ft3	5,699	3,168	4,612	2,727	3,634	4,495	4,007	3,873	4,520	5,011	6,621	3,828	52,195	4,350
	tons	200	111	161	95	127	157	105	107	100	125	119	89	1,497	125
Radioactive															
Y-12 Operations	ft3	1,249	605	851	1,153	1,139	1,229	2,516	2,440	912	3,024	1,940	628	17,687	1,474
	tons	44	21	30	40	40	43	39	57	21	55	41	1	432	36
Contractors	ft3	200	29	36	121	51	57	0	0	0	0	500	0	994	83
	tons	7	1	1	4	2	2	0	0	0	0	10,000	0	10,017	835
Total Radioactive Generated by Y-12	ft3	1,449	633	887	1,275	1,190	1,287	2,516	2,440	912	3,024	2,440	628	18,681	1,557
	tons	51	22	31	45	42	45	39	57	21	55	10,041	1	10,450	871
Received from X-10	ft3	0	11,025	0	14	0	0	0	0	0	0	0	0	11,039	920
	tons	0	19	0	1	0	0	0	0	0	0	0	0	20	2
Total Radioactive	ft3	1,449	11,658	887	1,289	1,190	1,287	2,516	2,440	912	3,024	2,440	628	29,720	2,477
	tons	51	41	31	45	42	45	39	57	21	55	10,041	1	10,469	872

Notes:
1. The radioactive waste category consists entirely of uranium and thorium contaminated scrap collected and stored at the Y-12 Salvage Yard.
2. The nonradioactive waste category consists entirely of uncontaminated scrap collected and stored at the Y-12 Salvage Yard.

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Y-12 WASTE MANAGEMENT INFORMATION REPORT

OAK RIDGE Y-12 PLANT

Y-12 SITE
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January 1992

MARTIN MARIETTA

N. E. Leonetti
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Martin Marietta Energy Systems, Inc.

Waste Management Division, Y-12 Plant

Prepared by the
Oak Ridge Y-12 Plant
Oak Ridge, Tennessee 37831
operated by
MARTIN MARIETTA ENERGY SYSTEMS, INC.
for the
U. S. DEPARTMENT OF ENERGY
Under Contract No. DE-AC05-840R21400

OPERATED BY
MARTIN MARIETTA ENERGY SYSTEMS, INC.
FOR THE UNITED STATES
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Y/IA-217/R10

Y-12 WASTE MANAGEMENT INFORMATION REPORT

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Table 1
Summary of Radioactive Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Total
SOLID WASTE														
Low level Waste	ft3	9,748	7,320	5,683										22,751
Y-12 Operations	lbs	111,162	99,775	53,456										264,393
Contractors	ft3	1,020	250	285										1,555
	lbs	3,200	7,500	9,410										20,110
Environmental	ft3	0	0	58										58
Restoration	lbs	0	0	800										800
Total LLW	ft3	10,768	7,570	6,026										24,364
Generated by Y-12	lbs	114,362	107,275	63,666										285,303
Received from X-10	ft3	0	0	0										0
	lbs	0	0	0										0
Total Solid Low	ft3	10,768	7,570	6,026										24,364
Level Waste	lbs	114,362	107,275	63,666										285,303
LIQUID WASTE														
Waste Organics	gal	0	0	0										0
Oils and Solvents	lbs	0	0	0										0
Wastewaters	gal	11,997	6,844	26,296										45,137
	lbs	100,125	57,258	219,493										376,876
Total Liquid Low	gal	11,997	6,844	26,296										45,137
Level Waste	lbs	100,125	57,258	219,493										376,876

Notes:
1. This category of waste includes depleted uranium metal, chips, sawdust or oxide.
2. The threshold limit for low-level radioactive trash is based upon the operating limitations of the Trash Monitoring Station.
3. Radioactive waste organics are defined as waste oils and solvents containing uranium at activity concentrations above 30 pCi/g.
4. Radioactive wastewaters are defined as wastewaters collected for treatment and contain uranium at activities above 2,000 pCi/g (DOT standard for radioactivity).
5. Radioactive waste which also contains PCB's is detailed in Table 5 - Summary of PCB Wastes Generated.

Table 2
Summary of Hazardous (RCRA) Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Total
SOLID WASTE														
Drummed	ft3	114	98	115										327
	lbs	3,856	3,485	4,957										12,298
Contractors	ft3	0	0	0.20										0
	lbs	0	0	30										30
Treatment Residues (Sludges)	ft3	6	0	6										12
	lbs	194	0	286										480
Treatment Residues Sent to K-25	ft3	0	0	0										0
	lbs	0	0	0										0
Total Solid Waste Generated by Y-12	ft3	120	98	121										339
	lbs	4,050	3,485	5,273										12,808
Received from X-10	ft3	19	9	8										36
	lbs	337	300	361										998
Total Solid Waste	ft3	139	107	129										375
	lbs	4,387	3,785	5,634										13,806
LIQUID WASTE														
Waste Organics Oils and Solvents	gal	3,025	345	450										3,820
	lbs	26,393	2,350	3,750										32,493
Wastewaters	gal	15,192	4,818	14,779										34,789
	lbs	126,721	40,835	123,368										290,925
Environmental Restoration	gal	0	0	50										50
	lbs	0	0	550										550
Steam Plant Regeneration Wastewaters	gal	530,400	596,700	530,400										1,657,500
	lbs	4,427,949	4,981,443	4,427,949										13,837,340
Total Liquid Waste Generated by Y-12	gal	548,617	601,863	545,679										1,696,159
	lbs	4,581,063	5,024,628	4,555,617										14,161,308
Received from X-10 Wastewaters	gal	105	603	118										826
	lbs	489	5,049	705										6,243
Total Liquid Waste	gal	548,722	602,466	545,797										1,696,985
	lbs	4,581,552	5,029,677	4,556,322										14,167,551

Notes:
1. The treatment residues category includes sludges and other residues generated at wastewater treatment facilities.
2. The Wastewaters category includes only wastewaters collected and sent for treatment.
3. Steam Plant regeneration rates are estimated.
4. RCRA wastes which are also PCB are detailed in Table 5 ; RCRA Waste which are also Classified are detailed in Table 6.

Table 3
Summary of Mixed (Hazardous and Radioactive) Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Total
SOLID WASTE														
Trash and debris	ft3	250	115	94										459
	lbs	4,427	7,472	2,694										14,593
Contractors	ft3	0.03	0	0										0
	lbs	10	0	0										10
Treatment Residues Sent to K-25	ft3	0	0	0										0
	lbs	0	0	0										0
Sludge	ft3	3,199	4,941	3,002										11,142
	lbs	70,982	109,084	68,433										248,499
Total Solid Waste Generated by Y-12	ft3	3,449	5,056	3,096										11,601
	lbs	75,419	116,556	71,127										263,102
Received from X-10	ft3	0	0	0										0
	lbs	0	0	0										0
Total Solid Waste	ft3	3,449	5,056	3,096										11,601
	lbs	75,419	116,556	71,127										263,102
LIQUID WASTE														
Waste Organics Oils and Solvents	gal	575	307	310										1,192
	lbs	4,648	2,456	2,599										9,703
Wastewaters	gal	68,928	30,345	45,818										145,091
	lbs	575,466	253,330	382,683										1,211,478
Contractors	gal	3	0	0										3
	lbs	78	0	0										78
Total Liquid Waste Generated by Y-12	gal	69,506	30,652	46,128										146,286
	lbs	580,192	255,786	385,282										1,221,259
Received from X-10 Wastewaters	gal	0	0	0										0
	lbs	0	0	0										0
Total Liquid Waste	gal	69,506	30,652	46,128										146,286
	lbs	580,192	255,786	385,282										1,221,259

Notes:
1. Mixed wastewaters are defined as RCRA wastewaters containing uranium at activities above 2000 pCi/g (DOT standard for radioactivity) unless otherwise designated as Mixed. All other Mixed wastes are defined as RCRA wastes containing uranium at activities above 30 pCi/g.
2. Mixed wastes which are also PCB are detailed in Table 5 - Summary of PCB Waste Generated.
3. The Wastewaters category includes only wastes collected for treatment.
4. The treatment residues category includes sludges and other residues generated at wastewater treatment facilities. Sludges are estimated at 35 wt % solids.

Table 4
Summary of Industrial (Nonhazardous and Nonradioactive) Waste Generated at the Y-12 Plant

Waste Category	Units	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Total
SOLID WASTE														
Trash and debris	ft3	206,065	162,903	132,852										501,820
Y-12 Operations	lbs	1,253,211	775,486	773,347										2,802,044
Contractors	ft3	18,938	21,893	15,904										56,735
	lbs	592,403	771,134	525,470										1,889,007
Environmental	ft3	0	429	102										531
Restoration	lbs	0	26,700	1,120										27,820
Total Solid Waste	ft3	225,003	185,225	148,858										559,086
Generated by Y-12	lbs	1,845,614	1,573,320	1,299,937										4,718,871
Received from X-10/K-25	ft3	96,165	127,764	108,783										332,712
	lbs	1,276,306	2,428,182	2,387,423										6,091,911
Total Solid Waste	ft3	321,168	312,989	257,641										891,798
	lbs	3,121,920	4,001,502	3,687,360										10,810,782
LIQUID WASTE														
Waste Organics	gal	165	0.10	30										195
Oils and Solvents	lbs	1,240	0.25	270										1,510
Wastewaters	gal	34,380	75,747	81,229										191,356
	lbs	286,200	632,066	678,227										1,596,492
Environmental	gal	0	4,415	0										4,415
Restoration	lbs	0	32,500	0										32,500
Steam Plant	gal	2,541,800	2,796,200	3,784,400										9,122,400
Wastewaters	lbs	21,219,760	23,343,572	31,593,382										76,156,714
Total Liquid Waste	gal	2,576,345	2,871,947	3,865,659										9,313,951
Generated by Y-12	lbs	21,507,200	23,975,638	32,271,879										77,754,717
Received from X-10/K-25	gal	15,001	101	3,602										18,704
	lbs	120,007	722	30,070										150,799
Total Liquid Waste	gal	2,591,346	2,872,048	3,869,261										9,332,655
	lbs	21,627,207	23,976,360	32,301,949										77,905,516

Notes:
1. The treatment residues category includes sludges and other residues generated at wastewater treatment facilities.
2. The Wastewaters category includes only wastewaters collected and sent for treatment.

Table 5
Summary of PCB Wastes Generated at the Y-12 Plant

Waste Category	Units	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Total
Nonradioactive														
Y-12 Operations	ft3	66	55	278										399
Solid Waste	lbs	1,815	1,895	11,620										15,330
Received from X-10	ft3	22	2	0										24
	lbs	875	137	0										1,012
Total Solid Waste	ft3	88	57	278										423
	lbs	2,690	2,032	11,620										16,342
Y-12 Operations	gal	38	65	275										378
Liquid Waste	lbs	340	550	1,900										2,790
Received from X-10	gal	0	0	4										4
	lbs	0	0	250										250
Total Liquid Waste	gal	38	65	279										382
	lbs	340	550	2,150										3,040
Radioactive														
Solid Waste	ft3	112	12	720										844
	lbs	3,035	441	35,620										39,096
Liquid Waste	gal	650	0	82										732
	lbs	4,005	0	720										4,725

Notes:
1. This waste category consists entirely of oils, transformer carcasses, and PCB contaminated solids containing 2 or more ppm PCB.
2. Nonradioactive liquids contain less than 30 pCi/gram uranium.
3. Nonradioactive PCB waste may also contain RCRA contamination.
4. Radioactive PCB waste may also contain RCRA contamination.

Table 6
Summary of Classified Wastes Generated at the Y-12 Plant

Waste Category	Units	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Total
Nonhazardous														
Solid Waste	ft3	460	1,104	359										1,923
	lbs	390	17,733	12,826										30,949
Hazardous														
Solid Waste	ft3	0	0	0										0
	lbs	0	0	0										0
Liquid Waste	gal	0	0	0										0
	lbs	0	0	0										0
Radioactive														
Solid Waste	ft3	0	0	0										0
	lbs	0	0	0										0
Liquid Waste	gal	0	0	0										0
	lbs	0	0	0										0

Note:
This waste category is considered to be classified because of its' shape, composition, contaminant or content.

Table 7
Summary of Scrap Metal Generated at the Y-12 Plant

Waste Category	Units	Oct-91	Nov-91	Dec-91	Jan-92	Feb-92	Mar-92	Apr-92	May-92	Jun-92	Jul-92	Aug-92	Sep-92	Total
Nonradioactive														
Y-12 Operations	ft3	2,790	5,091	1,886										9,767
	lbs	145,330	152,255	122,195										419,780
Contractors	ft3	1,874	4,716	14										6,604
	lbs	26,700	816,000	1,000										843,700
Total Nonradioactive	ft3	4,664	9,807	1,900										16,371
Generated by Y-12	lbs	172,030	968,255	123,195										1,263,480
Received from X-10	ft3	2,987	526	907										4,420
	lbs	115,900	19,400	34,500										169,800
Total Nonradioactive	ft3	7,651	10,333	2,807										20,791
	lbs	287,930	987,655	157,695										1,433,280
Radioactive														
Y-12 Operations	ft3	4,210	9,461	3,713										17,384
	lbs	119,043	317,406	127,388										563,837
Contractors	ft3	0	4,027	0										4,027
	lbs	0	813,000	0										813,000
Total Radioactive	ft3	4,210	13,488	3,713										21,411
Generated by Y-12	lbs	119,043	1,130,406	127,388										1,376,837
Received from X-10	ft3	143	79	0										222
	lbs	10,000	5,500	0										15,500
Total Radioactive	ft3	4,353	13,567	3,713										21,633
	lbs	129,043	1,135,906	127,388										1,392,337

Notes:
1. The radioactive waste category consists entirely of uranium and thorium contaminated scrap collected and stored at the Y-12 Salvage Yard.
2. The nonradioactive waste category consists entirely of uncontaminated scrap collected and stored at the Y-12 Salvage Yard.

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