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## APPENDICES

### Appendix A Results of Life-Cycle Material Flow Analysis (LC-MFA) Model

**Table A1** All PVC products inflow from 1971 to 2013 (ton)

year	Pipe&Fitting	Profile	Cable	Floor tile	Floor covering	Shoes	Hose	Total
1971	7,894	2,014	5,033	-	4,327	1,110	331	20,709
1972	7,894	2,014	5,033	-	4,327	1,110	331	20,709
1973	7,894	2,014	5,033	-	4,327	1,110	331	20,709
1974	7,894	2,014	5,033	500	4,327	1,110	331	21,209
1975	7,894	2,014	5,033	500	4,327	1,110	331	21,209
1976	7,894	2,014	5,033	500	4,327	1,110	331	21,209
1977	7,499	1,914	4,781	475	4,111	1,054	314	20,149
1978	7,499	1,914	4,781	475	4,111	1,054	314	20,149
1979	7,499	1,914	4,781	475	4,111	1,054	314	20,149
1980	7,499	1,914	4,781	475	4,111	1,054	314	20,149
1981	7,499	1,914	4,781	475	4,111	1,054	314	20,149
1982	7,499	1,914	4,781	475	4,111	1,054	314	20,149
1983	7,499	1,914	4,781	475	4,111	1,054	314	20,149
1984	14,999	3,827	9,563	950	8,222	2,108	629	40,297
1985	14,999	3,827	9,563	950	8,222	2,108	629	40,297
1986	14,999	3,827	9,563	950	8,222	2,108	629	40,297
1987	26,050	6,648	16,609	1,650	14,280	3,662	1,092	69,990
1988	26,050	6,648	16,609	1,650	14,280	3,662	1,092	69,990
1989	26,050	6,648	16,609	1,650	14,280	3,662	1,092	69,990
1990	37,102	9,468	23,655	2,349	20,339	5,215	1,555	99,683
1991	37,102	9,468	23,655	2,349	20,339	5,215	1,555	99,683
1992	61,968	15,813	39,509	3,924	33,970	8,711	2,597	166,492
1993	61,968	15,813	39,509	3,924	33,970	8,711	2,597	166,492
1994	61,968	15,813	39,509	3,924	33,970	8,711	2,597	166,492
1995	69,467	17,727	44,291	4,399	38,081	9,765	2,911	186,641
1996	84,466	21,554	53,854	5,349	46,303	11,873	3,540	226,938
1997	86,439	22,058	55,112	5,474	47,385	12,151	3,622	232,240
1998	91,965	23,468	58,635	5,823	50,414	12,927	3,854	247,087
1999	106,569	27,194	67,946	6,748	58,420	14,980	4,466	286,324
2000	110,516	28,202	70,463	6,998	60,584	15,535	4,631	296,928
2001	84,861	21,655	54,105	5,374	46,520	11,929	3,556	227,999
2002	135,382	34,547	86,317	8,573	74,215	19,030	5,673	363,737
2003	137,751	35,151	87,827	8,723	75,513	19,363	5,772	370,100



**Table A2** (cont.) Results of LC-MFA model: the amount of PVC outflow based on single year input (ton)

year	Pipe&Fitting	Profile	Cable	Floor tile	Floor covering	Shoes	Hose	Total
1994	-	-	-	-	-	-	-	-
1995	-	-	-	-	-	-	-	-
1996	-	-	-	-	-	-	-	-
1997	-	-	-	-	-	-	-	-
1998	-	-	-	-	-	-	-	-
1999	-	-	-	-	-	-	-	-
2000	-	-	-	-	-	-	-	-
2001	-	-	-	-	-	-	-	-
2002	-	-	-	-	1,609	412	123	2,144
2003	-	-	-	-	11,087	2,843	847	14,777
2004	-	-	-	-	21,003	5,386	1,606	27,995
2005	-	-	-	-	11,087	2,843	847	14,777
2006	-	-	-	-	1,609	412	123	2,144
2007	-	-	-	186	-	-	-	186
2008	-	-	-	1,281	-	-	-	1,281
2009	-	-	-	2,426	-	-	-	2,426
2010	-	-	-	1,281	-	-	-	1,281
2011	-	43	107	186	-	-	-	335
2012	-	92	230	-	-	-	-	323
2013	-	184	459	-	-	-	-	643
2014	-	337	843	-	-	-	-	1,181
2015	-	572	1,428	-	-	-	-	2,000
2016	-	893	2,231	-	-	-	-	3,124
2017	-	1,286	3,213	-	-	-	-	4,499
2018	-	1,708	4,267	-	-	-	-	5,975
2019	-	2,092	5,226	-	-	-	-	7,318
2020	-	2,362	5,902	-	-	-	-	8,264
2021	98	2,460	6,146	-	-	-	-	8,704
2022	168	2,362	5,902	-	-	-	-	8,433
2023	279	2,092	5,226	-	-	-	-	7,597
2024	445	1,708	4,267	-	-	-	-	6,420
2025	683	1,286	3,213	-	-	-	-	5,182
2026	1,011	893	2,231	-	-	-	-	4,135
2027	1,442	572	1,428	-	-	-	-	3,442
2028	1,980	337	843	-	-	-	-	3,161
2029	2,620	184	459	-	-	-	-	3,263
2030	3,340	92	230	-	-	-	-	3,663

**Table A2** (cont.) Results of LC-MFA model: the amount of PVC outflow based on single year input (ton)

year	Pipe&Fitting	Profile	Cable	Floor tile	Floor covering	Shoes	Hose	Total
2031	4,102	43	107	-	-	-	-	4,251
2032	4,853	-	-	-	-	-	-	4,853
2033	5,530	-	-	-	-	-	-	5,530
2034	6,071	-	-	-	-	-	-	6,071
2035	6,421	-	-	-	-	-	-	6,421
2036	6,542	-	-	-	-	-	-	6,542
2037	6,421	-	-	-	-	-	-	6,421
2038	6,071	-	-	-	-	-	-	6,071
2039	5,530	-	-	-	-	-	-	5,530
2040	4,853	-	-	-	-	-	-	4,853
2041	4,102	-	-	-	-	-	-	4,102
2042	3,340	-	-	-	-	-	-	3,340
2043	2,620	-	-	-	-	-	-	2,620
2044	1,980	-	-	-	-	-	-	1,980
2045	1,442	-	-	-	-	-	-	1,442
2046	1,011	-	-	-	-	-	-	1,011
2047	683	-	-	-	-	-	-	683
2048	445	-	-	-	-	-	-	445
2049	279	-	-	-	-	-	-	279
2050	168	-	-	-	-	-	-	168

**Table A3** Results of LC-MFA model: the amount of PVC outflow based on multiple year inputs (ton)

year	Pipe&Fitting	Profile	Cable	Floor tile	Floor covering	Shoes	Hose	Total
1971	-	-	-	-	-	-	-	-
1972	-	-	-	-	150	38	11	199
1973	-	-	-	-	1,181	303	90	1,574
1974	-	-	-	-	3,135	804	240	4,178
1975	-	-	-	-	4,166	1,068	318	5,553
1976	-	-	-	-	4,316	1,107	330	5,752
1977	-	-	-	-	4,316	1,107	330	5,752
1978	-	-	-	-	4,308	1,105	329	5,742
1979	-	-	-	-	4,257	1,092	325	5,674
1980	-	-	-	17	4,159	1,066	318	5,561
1981	-	4	10	136	4,107	1,053	314	5,625

**Table A3 (cont.)** Results of LC-MFA model: the amount of PVC outflow based on multiple year inputs (ton)

year	Pipe&Fitting	Profile	Cable	Floor tile	Floor covering	Shoes	Hose	Total
1982	-	13	31	362	4100	1051	313	5871
1983	-	30	74	480	4,100	1,051	313	6,049
1984	-	61	152	492	4,100	1,051	313	6,170
1985	-	114	285	480	4,242	1,088	324	6,534
1986	-	197	493	474	5,222	1,339	399	8,125
1987	-	317	791	474	7,078	1,815	541	11,015
1988	-	475	1,187	474	8,267	2,120	632	13,155
1989	-	669	1,671	474	9,853	2,527	753	15,947
1990	-	887	2,216	490	12,589	3,228	962	20,372
1991	9	1,113	2,781	603	14,242	3,652	1,089	23,489
1992	25	1,329	3,320	818	15,895	4,076	1,215	26,677
1993	51	1,517	3,791	955	19,102	4,898	1,460	31,775
1994	92	1,672	4,178	1,138	23,794	6,101	1,819	38,795
1995	156	1,790	4,473	1,454	30,158	7,733	2,305	48,070
1996	250	1,878	4,693	1,645	33,549	8,603	2,565	53,183
1997	383	1,956	4,886	1,836	35,285	9,048	2,697	56,091
1998	567	2,038	5,093	2,207	39,138	10,036	2,992	62,070
1999	809	2,149	5,368	2,749	44,192	11,332	3,378	69,977
2000	1,118	2,312	5,778	3,484	47,781	12,252	3,653	76,377
2001	1,496	2,548	6,366	3,875	51,674	13,250	3,950	83,159
2002	1,943	2,881	7,199	4,076	56,077	14,379	4,287	90,842
2003	2,451	3,326	8,309	4,521	56,672	14,532	4,332	94,143
2004	3,015	3,892	9,725	5,105	57,760	14,811	4,415	98,724
2005	3,615	4,591	11,472	5,519	67,626	17,341	5,170	115,334
2006	4,233	5,434	13,577	5,969	76,797	19,693	5,871	131,574
2007	4,863	6,423	16,048	6,478	83,837	21,498	6,409	145,555
2008	5,488	7,561	18,890	6,546	89,304	22,900	6,827	157,515
2009	6,102	8,848	22,106	6,672	91,440	23,447	6,990	165,605
2010	6,723	10,272	25,664	7,812	89,410	22,927	6,835	169,642
2011	7,361	11,798	29,479	8,871	85,042	21,807	6,501	170,859
2012	8,069	13,424	33,541	9,684	83,840	21,499	6,409	176,467
2013	8,873	15,111	37,755	10,316	88,082	22,586	6,733	189,457
2014	9,820	16,840	42,075	10,562	94,875	24,328	7,253	205,754
2015	10,970	18,596	46,462	10,328	97,235	24,933	7,433	215,956
2016	12,385	20,378	50,916	9,823	76,608	19,644	5,856	195,612
2017	14,111	22,196	55,459	9,685	29,586	7,586	2,262	140,885
2018	16,199	24,059	60,113	10,175	3,793	973	290	115,602



## Appendix B Results of Waste Management Scenarios

**Table B1** Amount of PVC waste emission to landfill on four end-of-life scenarios (ton)

year	(Base case) land-fill 67%	(A) landfill 50 %	(B) landfill 30 %	(C) landfill 10 %
1971	-	-	-	-
1972	134	100	60	20
1973	1,055	787	472	157
1974	2,799	2,089	1,253	418
1975	3,720	2,776	1,666	555
1976	3,854	2,876	1,726	575
1977	3,854	2,876	1,726	575
1978	3,847	2,871	1,723	574
1979	3,801	2,837	1,702	567
1980	3,726	2,780	1,668	556
1981	3,769	2,812	1,687	562
1982	3,933	2,935	1,761	587
1983	4,053	3,024	1,815	605
1984	4,134	3,085	1,851	617
1985	4,378	3,267	1,960	653
1986	5,443	4,062	2,437	812
1987	7,380	5,508	3,305	1,102
1988	8,814	6,577	3,946	1,315
1989	10,684	7,973	4,784	1,595
1990	13,649	10,186	6,112	2,037
1991	15,738	11,745	7,047	2,349
1992	17,874	13,339	8,003	2,668
1993	21,289	15,887	9,532	3,177
1994	25,992	19,397	11,638	3,879
1995	32,207	24,035	14,421	4,807
1996	35,633	26,592	15,955	5,318
1997	37,581	28,045	16,827	5,609
1998	41,587	31,035	18,621	6,207
1999	46,885	34,989	20,993	6,998
2000	51,173	38,189	22,913	7,638
2001	55,717	41,580	24,948	8,316
2002	60,864	45,421	27,252	9,084
2003	63,076	47,072	28,243	9,414
2004	66,145	49,362	29,617	9,872

**Table B1** (cont.) Amount of PVC waste emission to landfill on four end-of-life scenarios (ton)

year	(Base case) landfill 67%	(A) landfill 50 %	(B) landfill 30 %	(C) landfill 10 %
2005	77,274	57,667	34,600	11,533
2006	88,155	65,787	39,472	13,157
2007	97,522	72,778	43,667	14,556
2008	105,535	78,757	47,254	15,751
2009	110,955	82,802	49,681	16,560
2010	113,660	84,821	50,892	16,964
2011	114,475	85,429	51,258	17,086
2012	118,233	88,234	52,940	17,647
2013	126,936	94,728	56,837	18,946
2014	137,855	102,877	61,726	20,575
2015	144,690	107,978	64,787	21,596
2016	131,060	97,806	58,684	19,561
2017	94,393	70,442	42,265	14,088
2018	77,454	57,801	34,681	11,560
2019	80,790	60,291	36,175	12,058
2020	87,635	65,400	39,240	13,080
2021	93,113	69,487	41,692	13,897
2022	96,885	72,302	43,381	14,460
2023	102,443	76,450	45,870	15,290
2024	109,435	81,668	49,001	16,334
2025	116,258	86,759	52,056	17,352
2026	122,325	91,287	54,772	18,257
2027	127,349	95,037	57,022	19,007
2028	131,033	97,786	58,672	19,557
2029	133,061	99,299	59,579	19,860
2030	133,144	99,361	59,617	19,872
2031	131,142	97,868	58,721	19,574
2032	127,168	94,902	56,941	18,980
2033	121,628	90,767	54,460	18,153
2034	115,157	85,938	51,563	17,188
2035	108,698	81,118	48,671	16,224
2036	103,054	76,906	46,144	15,381
2037	98,735	73,683	44,210	14,737
2038	95,856	71,534	42,920	14,307
2039	94,179	70,283	42,170	14,057
2040	93,194	69,548	41,729	13,910
2041	92,298	68,879	41,328	13,776

**Table B1** (cont.) Amount of PVC waste emission to landfill on four end-of-life scenarios (ton)

year	(Base case) land-fill 67%	(A) landfill 50 %	(B) landfill 30 %	(C) landfill 10 %
2042	90,944	67,868	40,721	13,574
2043	88,700	66,194	39,716	13,239
2044	85,304	63,660	38,196	12,732
2045	80,764	60,272	36,163	12,054
2046	74,954	55,936	33,562	11,187
2047	68,079	50,805	30,483	10,161
2048	60,432	45,098	27,059	9,020
2049	52,349	39,066	23,440	7,813
2050	44,189	32,977	19,786	6,595

**Table B2** Amount of PVC waste accumulation on four end-of-life scenarios (ton)

year	(Base case) land-fill 67 %	(A) landfill 50 %	(B) landfill 30	(C) landfill 10
1971	-	-	-	-
1972	134	100	60	20
1973	1,188	887	532	177
1974	3,988	2,976	1,786	595
1975	7,708	5,752	3,451	1,150
1976	11,562	8,628	5,177	1,726
1977	15,416	11,505	6,903	2,301
1978	19,263	14,376	8,625	2,875
1979	23,065	17,212	10,327	3,442
1980	26,790	19,993	11,996	3,999
1981	30,559	22,805	13,683	4,561
1982	34,492	25,741	15,444	5,148
1983	38,545	28,765	17,259	5,753
1984	42,679	31,850	19,110	6,370
1985	47,057	35,117	21,070	7,023
1986	52,500	39,179	23,508	7,836
1987	59,880	44,687	26,812	8,937
1988	68,694	51,264	30,759	10,253
1989	79,378	59,238	35,543	11,848
1990	93,028	69,424	41,654	13,885
1991	108,766	81,168	48,701	16,234
1992	126,639	94,507	56,704	18,901
1993	147,928	110,394	66,237	22,079

**Table B2 (cont.)** Amount of PVC waste accumulation on four end-of-life scenarios (ton)

year	(Base case) land-fill 67 %	(A) landfill 50 %	(B) landfill 30	(C) landfill 10
1994	173,921	129,792	77,875	25,958
1995	206,127	153,826	92,296	30,765
1996	241,760	180,418	108,251	36,084
1997	279,341	208,463	125,078	41,693
1998	320,928	239,498	143,699	47,900
1999	367,812	274,487	164,692	54,897
2000	418,985	312,675	187,605	62,535
2001	474,702	354,255	212,553	70,851
2002	535,566	399,676	239,806	79,935
2003	598,642	446,748	268,049	89,350
2004	664,787	496,109	297,666	99,222
2005	742,061	553,777	332,266	110,755
2006	830,215	619,563	371,738	123,913
2007	927,737	692,341	415,405	138,468
2008	1,033,272	771,098	462,659	154,220
2009	1,144,227	853,901	512,340	170,780
2010	1,257,887	938,721	563,233	187,744
2011	1,372,362	1,024,151	614,490	204,830
2012	1,490,595	1,112,384	667,431	222,477
2013	1,617,531	1,207,113	724,268	241,423
2014	1,755,386	1,309,990	785,994	261,998
2015	1,900,076	1,417,967	850,780	283,593
2016	2,031,136	1,515,773	909,464	303,155
2017	2,125,529	1,586,215	951,729	317,243
2018	2,202,982	1,644,017	986,410	328,803
2019	2,283,772	1,704,308	1,022,585	340,862
2020	2,371,408	1,769,707	1,061,824	353,941
2021	2,464,521	1,839,194	1,103,517	367,839
2022	2,561,405	1,911,497	1,146,898	382,299
2023	2,663,849	1,987,947	1,192,768	397,589
2024	2,773,284	2,069,615	1,241,769	413,923
2025	2,889,542	2,156,375	1,293,825	431,275
2026	3,011,866	2,247,662	1,348,597	449,532
2027	3,139,215	2,342,698	1,405,619	468,540
2028	3,270,249	2,440,484	1,464,291	488,097
2029	3,403,310	2,539,783	1,523,870	507,957
2030	3,536,453	2,639,144	1,583,486	527,829

**Table B2** (cont.) Amount of PVC waste accumulation on four end-of-life scenarios (ton)

year	(Base case) land-fill 67 %	(A) landfill 50 %	(B) landfill 30	(C) landfill 10
2031	3,667,596	2,737,012	1,642,207	547,402
2032	3,794,764	2,831,914	1,699,148	566,383
2033	3,916,392	2,922,681	1,753,608	584,536
2034	4,031,549	3,008,619	1,805,171	601,724
2035	4,140,248	3,089,737	1,853,842	617,947
2036	4,243,302	3,166,643	1,899,986	633,329
2037	4,342,037	3,240,326	1,944,196	648,065
2038	4,437,892	3,311,860	1,987,116	662,372
2039	4,532,071	3,382,143	2,029,286	676,429
2040	4,625,265	3,451,690	2,071,014	690,338
2041	4,717,564	3,520,570	2,112,342	704,114
2042	4,808,507	3,588,438	2,153,063	717,688
2043	4,897,207	3,654,632	2,192,779	730,926
2044	4,982,511	3,718,292	2,230,975	743,658
2045	5,063,275	3,778,564	2,267,138	755,713
2046	5,138,229	3,834,500	2,300,700	766,900
2047	5,206,309	3,885,305	2,331,183	777,061
2048	5,266,740	3,930,403	2,358,242	786,081
2049	5,319,089	3,969,470	2,381,682	793,894
2050	5,363,279	4,002,447	2,401,468	800,489

**Table B3** Amount of PVC recycle which can be used as a new material on four end-of-life scenarios (ton)

year	(Base case) Recycle 30 %	(A) recycle 50 %	(B) recycle 70 %	(C) recycle 90 %
1971	-	-	-	-
1972	60	100	140	180
1973	472	787	1,102	1,417
1974	1,253	2,089	2,925	3,760
1975	1,666	2,776	3,887	4,998
1976	1,726	2,876	4,027	5,177
1977	1,726	2,876	4,027	5,177
1978	1,723	2,871	4,020	5,168
1979	1,702	2,837	3,971	5,106
1980	1,668	2,772	3,880	4,989
1981	1,687	2,744	3,842	4,940

**Table B3** (cont.) Amount of PVC recycle which can be used as a new material on four end-of-life scenarios (ton)

year	(Base case) Recycle 30 %	(A) recycle 50 %	(B) recycle 70 %	(C) recycle 90 %
1982	1,761	2,754	3,856	4,958
1983	1,815	2,784	3,898	5,012
1984	1,851	2,839	3,975	5,110
1985	1,960	3,027	4,238	5,448
1986	2,437	3,825	5,355	6,885
1987	3,305	5,271	7,379	9,488
1988	3,946	6,341	8,877	11,413
1989	4,784	7,736	10,831	13,926
1990	6,112	9,941	13,917	17,894
1991	7,047	11,443	16,020	20,598
1992	8,003	12,930	18,102	23,274
1993	9,532	15,410	21,574	27,738
1994	11,638	18,828	26,360	33,891
1995	14,421	23,308	32,631	41,954
1996	15,955	25,769	36,077	46,384
1997	16,827	27,127	37,978	48,829
1998	18,621	29,932	41,904	53,877
1999	20,993	33,614	47,060	60,506
2000	22,913	36,447	51,026	65,604
2001	24,948	39,642	55,499	71,355
2002	27,252	43,383	60,736	78,089
2003	28,243	44,811	62,736	80,660
2004	29,617	46,809	65,533	84,257
2005	34,600	54,908	76,871	98,834
2006	39,472	62,802	87,923	113,044
2007	43,667	69,539	97,354	125,170
2008	47,254	75,484	105,678	135,871
2009	49,681	79,466	111,253	143,039
2010	50,892	80,915	113,281	145,647
2011	51,258	80,994	113,391	145,789
2012	52,940	83,391	116,748	150,105
2013	56,837	89,571	125,399	161,227
2014	61,726	97,596	136,634	175,672
2015	64,787	102,814	143,939	185,065
2016	58,684	92,894	130,052	167,209
2017	42,265	65,600	91,840	118,080
2018	34,681	52,714	73,799	94,885
2019	36,175	54,812	76,736	98,661

**Table B3** (cont.) Amount of PVC recycle which can be used as a new material on four end-of-life scenarios (ton)

year	(Base case) Recycle 30 %	(A) recycle 50 %	(B) recycle 70 %	(C) recycle 90 %
2020	39,240	59,784	83,697	107,611
2021	41,692	65,062	91,087	117,112
2022	43,381	70,593	98,831	127,068
2023	45,870	76,231	106,724	137,216
2024	49,001	81,668	114,335	147,003
2025	52,056	86,759	121,463	156,167
2026	54,772	91,287	127,802	164,317
2027	57,022	95,037	133,051	171,066
2028	58,672	97,786	136,901	176,015
2029	59,579	99,299	139,019	178,738
2030	59,617	99,361	139,105	178,850
2031	58,721	97,868	137,015	176,162
2032	56,941	94,902	132,863	170,823
2033	54,460	90,767	127,074	163,381
2034	51,563	85,938	120,314	154,689
2035	48,671	81,118	113,565	146,013
2036	46,144	76,906	107,668	138,431
2037	44,210	73,683	103,156	132,629
2038	42,920	71,534	100,148	128,761
2039	42,170	70,283	98,396	126,509
2040	41,729	69,548	97,367	125,186
2041	41,328	68,879	96,431	123,983
2042	40,721	67,868	95,016	122,163
2043	39,716	66,194	92,672	119,149
2044	38,196	63,660	89,124	114,588
2045	36,163	60,272	84,380	108,489
2046	33,562	55,936	78,310	100,685
2047	30,483	50,805	71,127	91,450
2048	27,059	45,098	63,138	81,177
2049	23,440	39,066	54,693	70,320
2050	19,786	32,977	46,168	59,359

**Table B4** Amount of PVC recycle accumulation on four end-of-life scenarios (ton)

year	Base case recycle 30 %	A recycle 50 %	B recycle 70 %	C recycle 90 %
1971	-	-	-	-
1972	60	100	140	180
31973	532	887	1,241	1,596

**Table B4 (cont.)** Amount of PVC recycle accumulation on four end-of-life scenarios (ton)

year	Base case recycle 30 %	A recycle 50 %	B recycle 70 %	C recycle 90 %
1974	1,786	2,976	4,166	5,357
1975	3,451	5,752	8,053	10,354
1976	5,177	8,628	12,080	15,531
1977	6,903	11,505	16,106	20,708
1978	8,625	14,376	20,126	25,876
1979	10,327	17,212	24,097	30,982
1980	11,996	19,984	27,978	35,971
1981	13,683	22,728	31,820	40,911
1982	15,444	25,483	35,676	45,869
1983	17,259	28,267	39,574	50,880
1984	19,110	31,106	43,548	55,991
1985	21,070	34,133	47,786	61,439
1986	23,508	37,958	53,141	68,324
1987	26,812	43,229	60,520	77,812
1988	30,759	49,569	69,397	89,225
1989	35,543	57,306	80,228	103,151
1990	41,654	67,247	94,146	121,044
1991	48,701	78,690	110,166	141,642
1992	56,704	91,620	128,268	164,916
1993	66,237	107,030	149,841	192,653
1994	77,875	125,858	176,201	226,544
1995	92,296	149,166	208,832	268,498
1996	108,251	174,935	244,908	314,882
1997	125,078	202,062	282,887	363,711
1998	143,699	231,994	324,791	417,588
1999	164,692	265,608	371,851	478,094
2000	187,605	302,055	422,877	543,698
2001	212,553	341,697	478,375	615,054
2002	239,806	385,080	539,111	693,143
2003	268,049	429,891	601,847	773,803
2004	297,666	476,700	667,380	858,060
2005	332,266	531,608	744,251	956,894
2006	371,738	594,410	832,174	1,069,938
2007	415,405	663,949	929,529	1,195,108
2008	462,659	739,433	1,035,206	1,330,979
2009	512,340	818,899	1,146,459	1,474,019
2010	563,233	899,814	1,259,740	1,619,666
2011	614,490	980,808	1,373,131	1,765,454

**Table B4 (cont.)** Amount of PVC recycle accumulation on four end-of-life scenarios (ton)

year	Base case recycle 30 %	A recycle 50 %	B recycle 70 %	C recycle 90 %
2012	667,431	1,064,199	1,489,879	1,915,559
2013	724,268	1,153,770	1,615,278	2,076,786
2014	785,994	1,251,366	1,751,912	2,252,458
2015	850,780	1,354,179	1,895,851	2,437,523
2016	909,464	1,447,074	2,025,903	2,604,732
2017	951,729	1,512,674	2,117,743	2,722,812
2018	986,410	1,565,387	2,191,542	2,817,697
2019	1,022,585	1,620,199	2,268,279	2,916,358
2020	1,061,824	1,679,983	2,351,976	3,023,969
2021	1,103,517	1,745,045	2,443,063	3,141,081
2022	1,146,898	1,815,638	2,541,894	3,268,149
2023	1,192,768	1,891,870	2,648,618	3,405,365
2024	1,241,769	1,973,538	2,762,953	3,552,368
2025	1,293,825	2,060,297	2,884,416	3,708,535
2026	1,348,597	2,151,584	3,012,218	3,872,852
2027	1,405,619	2,246,621	3,145,269	4,043,918
2028	1,464,291	2,344,407	3,282,170	4,219,933
2029	1,523,870	2,443,706	3,421,188	4,398,671
2030	1,583,486	2,543,067	3,560,294	4,577,520
2031	1,642,207	2,640,934	3,697,308	4,753,682
2032	1,699,148	2,735,836	3,830,171	4,924,505
2033	1,753,608	2,826,603	3,957,245	5,087,886
2034	1,805,171	2,912,542	4,077,558	5,242,575
2035	1,853,842	2,993,660	4,191,124	5,388,588
2036	1,899,986	3,070,566	4,298,792	5,527,019
2037	1,944,196	3,144,249	4,401,948	5,659,647
2038	1,987,116	3,215,783	4,502,096	5,788,409
2039	2,029,286	3,286,065	4,600,491	5,914,918
2040	2,071,014	3,355,613	4,697,858	6,040,104
2041	2,112,342	3,424,493	4,794,290	6,164,087
2042	2,153,063	3,492,361	4,889,305	6,286,250
2043	2,192,779	3,558,555	4,981,977	6,405,399
2044	2,230,975	3,622,215	5,071,101	6,519,987
2045	2,267,138	3,682,486	5,155,481	6,628,475
2046	2,300,700	3,738,422	5,233,791	6,729,160
2047	2,331,183	3,789,228	5,304,919	6,820,610
2048	2,358,242	3,834,326	5,368,056	6,901,787
2049	2,381,682	3,873,392	5,422,749	6,972,106

## Appendix C Results of landfill site visit

**Table C1** Municipal solid waste compositions at On-nuch site

	Sample 1	Sample 2	Sample 3	sample 4	Sample 5	Sample 6
	kg	kg	kg	kg	kg	kg
Organic waste	105.6	74.4	151.9	124.5	32.2	30
Plastic Shopping bag	15	9.2	32.3	24.5	15.8	17.2
Other plastic products	1.8	7.5	2.8	2.6	3	2.9
Paper	4.5	5.8	21	23.3	6.8	14.8
Fabric	3.8	3	8	10.8	6	4.3
Glass	2.7	4.1	7.4	9.2	2.1	2
Aluminium and metal	1.2	0.4	1.2	1.3	0.8	0.4
Plastic Bottle	1.4	1	3.8	4.1	0.8	0.5
Hazarsous waste	0	0	0	0	0	0
Pipe and fitting	0	0	0	0	0	0
Profile	0	0	0	0	0	0
Cable	0	0	0	0	0	0
Floor tile	0	0	0	0	0	0
Floor covering	0	0	0	0	0	0
Foot wear	0.2	0.8	0.9	1.7	0.2	0.2
Hose	0	0	0	0	0	0
<b>Total</b>	<b>136.2</b>	<b>106.2</b>	<b>229.3</b>	<b>202</b>	<b>67.7</b>	<b>72.3</b>

**Table C2** Municipal solid waste compositions at Kanjana Buri site

	Sample 1	Sample 2	Sample 3	sample 4	Sample 5	Sample 6
	kg	kg	kg	kg	kg	kg
Organic waste	14.5	17	29.5	20.5	17	17.5
Plastic Shopping bag	1.5	2	3	3.5	1.5	1.4
Other plastic products	4	4	4	4.2	5.2	4.6
Paper	3	2	3	2.5	3.5	4.8
Fabric	1	1	0.3	0	0.5	0.8
Glass	0.6	1	0.5	0.4	0.5	2
Aluminium and metal	0	0.2	0.3	0.4	0.6	0.5
Plastic Bottle	0.5	0.5	0.2	0.2	1	1.2
Hazarsous waste	0	0	0	0	0	0
Pipe and fitting	0	0	0	0	0	0
Profile	0	0	0	0	0	0
Cable	0	0	0	0	0	0
Floor tile	0	0	0	0	0	0
Floor covering	0	0	0	0	0	0
Foot wear	0	0.3	0	0	0	0
Hose	0	0	0	0	0	0
<b>Total</b>	<b>25.1</b>	<b>28</b>	<b>40.8</b>	<b>31.7</b>	<b>29.8</b>	<b>32.8</b>

**Table C3** Municipal solid waste compositions at Chaiyaphum site

	Sample 1	Sample 2	Sample 3	sample 4	Sample 5	Sample 6
	kg	kg	kg	kg	kg	kg
Organic waste	10.5	7.5	7	12	11.5	9.5
Plastic Shopping bag	4	5	4.5	4	3	3
Other plastic products	1.5	2	1	2.5	1.8	1.5
Paper	0.5	1	1	2.5	1.3	1
Fabric	1	0	0	0.8	0.5	1.5
Glass	0.2	- 0	0	0.5	0	0.5
Aluminium and metal	0.1	0.1	0.1	0	0	0
Plastic Bottle	0.2	0.2	0.2	0.2	0.2	0.2
Hazarsous waste	0	0	0	0	0	0
Pipe and fitting	0	0	0	0	0	0
Profile	0	0	0	0	0	0
Cable	0	0	0	0	0	0
Floor tile	0	0	0	0	0	0
Floor covering	0	0	0	0	0	0
Foot wear	0.2	0.5	0	0	0	0
Hose	0	0	0	0	0	0
Total	18.2	16.3	13.8	22.5	18.3	17.2

**Table C4** Municipal solid waste compositions at Nakhon Ratchasima site

	Sample 1	Sample 2	Sample 3	sample 4	Sample 5	Sample 6
	kg	kg	kg	kg	kg	kg
Organic waste	15	14	17	22	12	16.5
Plastic Shopping bag	2.5	2.5	2	2	1.5	1
Other plastic products	2.5	2.5	4	4	2	3.5
Paper	4.5	3	2.5	2.5	2	2.5
Fabric	0	0	0.3	0	1	1
Glass	1.5	1	1	1.5	1.2	1.5
Aluminium and metal	0.5	0.5	1	0.5	0.2	0.5
Plastic Bottle	2.5	1.5	0.8	0.5	1.5	1.5
Hazarsous waste	0	0	0	0	0	0
Pipe and fitting	0	0	0	0	0	0
Profile	0	0	0	0	0	0
Cable	0	0	0	0	0.1	0
Floor tile	0	0	0	0	0	0
Floor covering	0	0	0	0	0	0
Foot wear	0	0	1	0	0.8	0.5
Hose	0	0	0	0	0	0
<b>Total</b>	<b>29</b>	<b>25</b>	<b>29.6</b>	<b>33</b>	<b>22.3</b>	<b>28.5</b>

**Table C5** Municipal solid waste compositions at Chaing Rai site

	Sample 1	Sample 2	Sample 3	sample 4
	kg	kg	kg	kg
Organic waste	77.5	63.5	25	41
Plastic Shopping bag	5.5	2.5	3	7.5
Other plastic products	13	8.5	7	4
Paper	8	4.5	4	3
Fabric	1	0.2	0.5	2
Glass	2	2.5	2.5	0.5
Aluminium and metal	0.5	0.3	0.7	0.5
Plastic Bottle	0.5	1	0.5	0.5
Hazarsous waste	0	0	0	0
Pipe and fitting	0	0	0	0
Profile	0	0	0	0
Cable	0	0	0	0
Floor tile	0	0	0	0
Floor covering	0	0	0	0
Foot wear	0	0	0	0
Hose	0	0	0	0
Total	108	83	43.2	59

**Table C6** Municipal solid waste compositions at Chaing Mai site

	Sample 1	Sample 2	Sample 3	sample 4
	kg	kg	kg	kg
Organic waste	36	44	31	32
Plastic Shopping bag	3	3.7	2	3
Other plastic products	7	8.5	6	8
Paper	3.5	4.5	4.3	4.5
Fabric	1.8	3	3.8	2
Glass	4.5	2	1	2.7
Aluminium and metal	0.1	0.5	0.2	0.1
Plastic Bottle	0.3	0.3	0.8	1
Hazardous waste	0	0	0	0
Pipe and fitting	0	0	0	0
Profile	0	0	0	0
Cable	0	0	0	0
Floor tile	0	0	0	0
Floor covering	0	0	0	0
Foot wear	0.9	0.5	0.5	0.5
Hose	0	0	0	0
Total	57.1	67	49.6	53.8

**Table C7** Municipal solid waste compositions at Meahongsorn site

	Sample 1	Sample 2
	kg	kg
Organic waste	9	19.5
Plastic Shopping bag	2	2.5
Other plastic products	2.5	3.4
Paper	1.4	3
Fabric	0.6	0.5
Glass	1.7	2.5
Aluminium and metal	0.6	0.5
Plastic Bottle	1	0.5
Hazardous waste	0	0
Pipe and fitting	0	0
Profile	0	0
Cable	0	0
Floor tile	0	0
Floor covering	0	0
Foot wear	1	0
Hose	0	0
Total	19.8	32.4

**Table C8** Municipal solid waste compositions at Krabi site

	Sample 1	Sample 2	Sample 3	sample 4	Sample 5	Sample 6
	kg	kg	kg	kg	kg	kg
Organic waste	10	12	6	13	11	8
Plastic Shopping bag	2	1	1	0.2	2	1
Other plastic products	1.2	3.5	4	3.5	3	2.5
Paper	2.5	3	4.5	2	1.5	2
Fabric	0	0.2	0.5	0.2	0.2	0.2
Glass	1	1	3	1	3.5	2
Aluminium and metal	0.2	0.3	0.5	0.5	0.2	0.5
Plastic Bottle	0.5	0.3	0.5	0.3	1	1
Hazardous waste	0	0	0.5	0.3	0	0
Pipe and fitting	0	0	0	0	0	0
Profile	0	0	0	0	0	0
Cable	0	0	0	0	0	0
Floor tile	0	0	0	0	0	0
Floor covering	0	0	0	0	0	0
Foot wear	1	0.5	0.5	1	0	0
Hose	0	0	0	0.05	0	0.05
Total	18.4	21.8	21.5	22.05	22.4	17.25

Table C9 Municipal solid waste compositions at Phuket site

	Sample 1	Sample 2	Sample 3	sample 4	Sample 5	Sample 6
	kg	kg	kg	kg	kg	kg
Organic waste	6.5	11.5	11.5	6.5	13.5	14
Plastic Shopping bag	1.8	1	1.5	1	1	2
Other plastic products	3.5	4	2.5	2	3.5	4.5
Paper	1	1	3.5	3	3.5	3.5
Fabric	1	0.5	1	0.3	1.5	1
Glass	0	0	2.5	2	2	3
Aluminium and metal	0.1	0	1	0.3	0	0.5
Plastic Bottle	0.1	0	0.3	0	0.5	0.5
Hazardous waste	0.1	0	0	0	0	0
Pipe and fitting	0	0	0	0	0	0
Profile	0	0	0	0	0	0
Cable	0	0	0	0	0	0
Floor tile	0	0	0	0	0	0
Floor covering	0	0	0	0	0	0
Foot wear	1.5	0	1.5	0	1	1
Hose	0	0	0.1	0	0	0
Total	15.6	18	28.3	15.1	26.5	30

**Table C10** Municipal solid waste compositions at Surat Thani site

	Sample 1	Sample 2	Sample 3	sample 4	Sample 5	Sample 6
	kg	kg	kg	kg	kg	kg
Organic waste	11.5	16	17	20	21	13
Plastic Shopping bag	3	4.5	4	3	2.5	3.5
Other plastic products	4	6	4.5	3.5	5	3
Paper	4.5	8	4	3	5	5
Fabric	0.5	0.1	3	4	1	3
Glass	0.5	1.5	2	2	2.5	3.5
Aluminium and metal	0.2	0.3	0	0	0	0.2
Plastic Bottle	0.2	0.1	0.5	0.1	0.2	0.2
Hazardous waste	0	0	0	0	0	0
Pipe and fitting	0	0	0	0	0	0
Profile	0	0	0	0	0	0
Cable	0	0	0	0.05	0	0
Floor tile	0	0	0	0	0	0
Floor covering	0	0	0	0	0	0
Footwear	0	0	0	0	0.2	0.3
Hose	0	0		0.05	0	0
Total	24.4	36.5	35	35.7	37.4	31.7

