Appendix 3.1 Data not published in this form earlier – PC production

In the tables below the LCI data for "*Personal computer*" are presented. The data are divided as inputs to the system and outputs from the system.

Flow – Inputs	Quantity	Amount	Unit	Origin of data
Steel scrap (St) [Waste for recovery] Not followed to the grave	Mass	1,019571	kg	Calculated
Air [Renewable resources]	Mass	721,2628	kg	(Measured)
Bauxite [Non renewable resources]	Mass	1,030958	kg	Calculated
Bentonite [Non renewable resources]	Mass	0,005617	kg	(Literature)
Cooling water [Operating materials]	Mass	684,7274	kg	(Measured)
Copper ore (0.14%) [Non renewable resources]	Mass	247,6192	kg	Measured
Copper ore (0.3%) [Non renewable resources]	Mass	6,78E-07	kg	Estimated
Crude oil Algeria [Crude oil (resource)]	Mass	0,168297	kg	(Literature)
Crude oil Angola [Crude oil (resource)]	Mass	0,061906	kg	(Estimated)
Crude oil Argentina [Crude oil (resource)]	Mass	0,00043	kg	Literature
Crude oil Australia [Crude oil (resource)]	Mass	0,017127	kg	(Estimated)
Crude oil Brazil [Crude oil (resource)]	Mass	0,009319	kg	Literature
Crude oil Cameroon [Crude oil (resource)]	Mass	0,043576	kg	(Estimated)
Crude oil Canada [Crude oil (resource)]	Mass	0,408247	kg	(Literature)
Crude oil China [Crude oil (resource)]	Mass	0,278631	kg	(Estimated)
Crude oil CIS [Crude oil (resource)]	Mass	0,745165	kg	(Literature)
Crude oil Colombia [Crude oil (resource)]	Mass	0,000157	kg	(Literature)
Crude oil Denmark [Crude oil (resource)]	Mass	0,004754	kg	(Literature)
Crude oil Egypt [Crude oil (resource)]	Mass	0,136757	kg	(Estimated)
Crude oil France [Crude oil (resource)]	Mass	0,003529	kg	(Literature)
Crude oil Gabon [Crude oil (resource)]	Mass	0,00666	kg	(Estimated)
Crude oil Germany [Crude oil (resource)]	Mass	0,052114	kg	(Literature)
Crude oil Indonesia [Crude oil (resource)]	Mass	0,004656	kg	(Estimated)
Crude oil Iran [Crude oil (resource)]	Mass	0,570748	kg	(Estimated)
Crude oil Italy [Crude oil (resource)]	Mass	0,139214	kg	(Literature)
Crude oil Kuwait [Crude oil (resource)]	Mass	0,025215	kg	(Estimated)
Crude oil Libya [Crude oil (resource)]	Mass	0,941355	kg	(Literature)
Crude oil Mexico [Crude oil (resource)]	Mass	0,046474	kg	(Literature)
Crude oil Netherlands [Crude oil (resource)]	Mass	0,006107	kg	(Literature)
Crude oil New Zealand [Crude oil (resource)]	Mass	0,000596	kg	(Estimated)
Crude oil Nigeria [Crude oil (resource)]	Mass	0,194281	kg	(Estimated)
Crude oil Norway [Crude oil (resource)]	Mass	0,47177	kg	(Literature)
Crude oil Oman [Crude oil (resource)]	Mass	0,014679	kg	(Estimated)
Crude oil Qatar [Crude oil (resource)]	Mass	0,002833	kg	(Estimated)
Crude oil Saudi Arabia [Crude oil (resource)]	Mass	0,679082	kg	(Estimated)
Crude oil Tunisia [Crude oil (resource)]	Mass	0,006602	kg	(Literature)
Crude oil United Arab Emirates [Crude oil (resource)]	Mass	0,002168	kg	(Estimated)
Crude oil United Kingdom [Crude oil (resource)]	Mass	0,516548	kg	(Literature)
Crude oil USA [Crude oil (resource)]	Mass	0,00443	kg	(Literature)
Crude oil Venezuela [Crude oil (resource)]	Mass	0,156613	kg	(Literature)
Dolomite [Non renewable resources]	Mass	0,003468	kg	(Literature)
Fluorspar (calcium fluoride; fluorite) [Non renewable resources]	Mass	0,007752	kg	Calculated

Appendix 3.1
Data not published in this form earlier – PC production

Flow – Inputs	Quantity	Amount	Unit	Origin of data
Hard coal Australia [Hard coal (resource)]	Mass	0,526533	kg	(Calculated)
Hard coal Belgium [Hard coal (resource)]	Mass	0,037227	kg	(Calculated)
Hard coal Brazil [Hard coal (resource)]	Mass	0,002519	kg	Estimated
Hard coal Canada [Hard coal (resource)]	Mass	0,214582	kg	(Calculated)
Hard coal China [Hard coal (resource)]	Mass	5,289393	kg	(Calculated)
Hard coal CIS [Hard coal (resource)]	Mass	0,237586	kg	(Calculated)
Hard coal Colombia [Hard coal (resource)]	Mass	0,470917	kg	(Measured)
Hard coal Czech Republic [Hard coal (resource)]	Mass	0,238125	kg	(Calculated)
Hard coal France [Hard coal (resource)]	Mass	0,46773	kg	(Calculated)
Hard coal Germany [Hard coal (resource)]	Mass	6,922958	kg	(Calculated)
Hard coal Indonesia [Hard coal (resource)]	Mass	0,200929	kg	(Measured)
Hard coal Japan [Hard coal (resource)]	Mass	1,21E-06	kg	Calculated
Hard coal Poland [Hard coal (resource)]	Mass	0,91928	kg	(Calculated)
Hard coal Portugal [Hard coal (resource)]	Mass	0,00697	kg	Estimated
Hard coal South Africa [Hard coal (resource)]	Mass	4,4554	kg	(Calculated)
Hard coal Spain [Hard coal (resource)]	Mass	0,923055	kg	(Calculated)
Hard coal United Kingdom [Hard coal (resource)]	Mass	0,112284	kg	(Calculated)
Hard coal USA [Hard coal (resource)]	Mass	2,265276	kg	(Calculated)
Hard coal Venezuela [Hard coal (resource)]	Mass	0,145907	kg	(Measured)
Heavy spar (barytes) [Non renewable resources]	Mass	0,089195	kg	(Literature)
Inert rock [Non renewable resources]	Mass	287,1611	kg	(Literature)
Iron ore [Non renewable resources]	Mass	12,51783	kg	(Calculated)
Iron ore (65%) [Non renewable resources]	Mass	0,011655	kg	(Estimated)
Kaolin ore [Non renewable resources]	Mass	0,220696	kg	Measured
Lead - zinc ore (4.6%-0.6%) [Non renewable resources]	Mass	0,649098	kg	Calculated
Lead ore [Non renewable resources]	Mass	0,011474	kg	Estimated
Lignite Australia [Lignite (resource)]	Mass	0,039178	kg	Literature
Lignite Austria [Lignite (resource)]	Mass	4,03E-05	kg	(Estimated)
Lignite France [Lignite (resource)]	Mass	5,37E-05	kg	Calculated
Lignite Germany [Lignite (resource)]	Mass	17,70678	kg	(Literature)
Lignite Germany (Lausitz) [Lignite (resource)]	Mass	0,003957	kg	Calculated
Lignite Germany (Rheinisch) [Lignite (resource)]	Mass	0,463477	kg	(Calculated)
Lignite Greece [Lignite (resource)]	Mass	8,75831	kg	Literature
Lignite Spain [Lignite (resource)]	Mass	1,761601	kg	(Literature)
Lignite USA [Lignite (resource)]	Mass	0,005035	kg	Literature
Limestone (calcium carbonate) [Non renewable resources]	Mass	3,282695	kg	(Literature)
Manganese ore (R.O.M.) [Non renewable resources]	Mass	0,090201	kg	Calculated
Natural gas Algeria [Natural gas (resource)]	Mass	0,520436	kg	(Literature)
Natural gas Angola [Natural gas (resource)]	Mass	0,005019	kg	(Estimated)
Natural gas Argentina [Natural gas (resource)]	Mass	1,41E-05	kg	Literature
Natural gas Australia [Natural gas (resource)]	Mass	0,007198	kg	(Estimated)
Natural gas Brazil [Natural gas (resource)]	Mass	0,001375	kg	(Estimated)
Natural gas Brunei [Natural gas (resource)]	Mass	8,46E-05	kg	Estimated
Natural gas Cameroon [Natural gas (resource)]	Mass	0,003533	kg	(Estimated)
Natural gas Canada [Natural gas (resource)]	Mass	0,010294	kg	(Literature)
Natural gas China [Natural gas (resource)]	Mass	0,015819	kg	(Estimated)
Natural gas CIS [Natural gas (resource)]	Mass	6,198884	kg	(Literature)
Natural gas Colombia [Natural gas (resource)]	Mass	5,97E-06	kg	(Literature)
Natural gas Denmark [Natural gas (resource)]	Mass	0,170568	kg	(Literature)
Natural gas Egypt [Natural gas (resource)]	Mass	0,011087	kg	(Estimated)
Natural gas France [Natural gas (resource)]	Mass	0,003574	kg	(Literature)
Natural gas Gabon [Natural gas (resource)]	Mass	0,000553	kg	(Estimated)

Appendix 3.1
Data not published in this form earlier – PC production

Flow – Inputs	Quantity	Amount	Unit	Origin of data
Natural gas Germany [Natural gas (resource)]	Mass	3,374771	kg	(Literature)
Natural gas Indonesia [Natural gas (resource)]	Mass	0,000695	kg	(Estimated)
Natural gas Iran [Natural gas (resource)]	Mass	0,021332	kg	(Estimated)
Natural gas Italy [Natural gas (resource)]	Mass	0,294512	kg	(Literature)
Natural gas Japan [Natural gas (resource)]	Mass	2,68E-05	kg	Estimated
Natural gas Kuwait [Natural gas (resource)]	Mass	0,000942	kg	(Estimated)
Natural gas Libyan [Natural gas (resource)]	Mass	0,095732	kg	(Literature)
Natural gas Malaysia [Natural gas (resource)]	Mass	0,00012	kg	Estimated
Natural gas Mexico [Natural gas (resource)]	Mass	0,00153	kg	(Literature)
Natural gas Netherlands [Natural gas (resource)]	Mass	5,06407	kg	(Literature)
Natural gas New Zealand [Natural gas (resource)]	Mass	1,32E-05	kg	(Estimated)
Natural gas Nigeria [Natural gas (resource)]	Mass	0,015751	kg	(Estimated)
Natural gas Norway [Natural gas (resource)]	Mass	2,549678	kg	(Literature)
Natural gas Oman [Natural gas (resource)]	Mass	0,000549	kg	(Estimated)
Natural gas Qatar [Natural gas (resource)]	Mass	0,000106	kg	(Estimated)
Natural gas Saudi Arabia [Natural gas (resource)]	Mass	0,025381	kg	(Estimated)
Natural gas Spain [Natural gas (resource)]	Mass	0,005277	kg	(Estimated)
Natural gas Tunisia [Natural gas (resource)]	Mass	0,000535	kg	(Literature)
Natural gas United Arab Emirates [Natural gas (resource)]	Mass	0,000142	kg	(Estimated)
Natural gas United Kingdom [Natural gas (resource)]	Mass	0,121896	kg	(Literature)
Natural gas USA [Natural gas (resource)]	Mass	0,013701	kg	(Estimated)
Natural gas Venezuela [Natural gas (resource)]	Mass	0,009213	kg	(Literature)
Nickel ore (1.6%) [Non renewable resources]	Mass	0,136186	kg	Measured
Nitrogen [Renewable resources]	Mass	4,27E-05	kg	(Literature)
Pit gas [Natural gas (resource)]	Mass	0,187069	kg	(Literature)
Potassium chloride [Non renewable resources]	Mass	3,16E-06	kg	Calculated
Precious metal ore (R.O.M) [Non renewable resources]	Mass	16,14061	kg	Calculated
Primary energy from hydro power [Renewable energy resources]	Energy ren.	147,8899	MJ	(Literature)
Primary energy from wind power [Renewable energy resources]	Energy ren.	2,643988	MJ	Calculated
Process water [Operating materials]	Mass	1774,971	kg	(Measured)
Quartz sand (silica sand; silicon dioxide) [Non renewable resources]	Mass	0,260295	kg	(Literature)
Sodium chloride (rock salt) [Non renewable resources]	Mass	5,00909	kg	(Literature)
Sodium sulphate [Non renewable resources]	Mass	0,001603	kg	Literature
Soil [Non renewable resources]	Mass	0,521183	kg	(Calculated)
Sulphur [Non renewable elements]	Mass	8,80E-06	kg	(Literature)
Sulphur (bonded) [Non renewable resources]	Mass	4,53E-06	kg	(Literature)
Talc [Non renewable resources]	Mass	0,018	kg	Calculated
Tin ore [Non renewable resources]	Mass	0,07757	kg	Estimated
Titanium ore [Non renewable resources]	Mass	0,000236	kg	(No statement)
Uranium natural [Uranium (resource)]	Mass	0,001588	kg	(Literature)
Water [Water]	Mass	2552,113	kg	(Calculated)
Water (feed water) [Water]	Mass	0,325046	kg	(Literature)
Water (ground water) [Water]	Mass	432,9353	kg	(Estimated)
Water (lake water) [Water]	Mass	9,30E-06	kg	(No statement)
Water (sea water) [Water]	Mass	0,096973	kg	(Literature)
Water (surface water) [Water]	Mass	2844,296	kg	(Literature)
Wood [Renewable energy resources]	Mass	0,231755	kg	(Estimated)
Zinc - copper ore (4.07%-2.59%) [Non renewable resources]	Mass	11,39183	kg	(Estimated)
Zinc - lead - copper ore (12%-3%-2%) [Non renewable	Mass	8,943545	kg	Calculated

Appendix 3.1
Data not published in this form earlier – PC production

Flow – Inputs	**Quantity**	**Amount**	**Unit**	**Origin of data**
resources]				
Zinc - lead ore (4.21%-4.96%) [Non renewable resources]	Mass	9,47E-09	kg	Estimated

Appendix 3.1
Data not published in this form earlier – PC production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
Personal computer [Flows] Product	Number of pieces	1	pcs.	(No statement)
Acetaldehyde (Ethanal) [Group NMVOC to air]	Mass	4,12E-05	kg	(Literature)
Acetic acid [Group NMVOC to air]	Mass	0,000176	kg	(Estimated)
Acetone (dimethylcetone) [Group NMVOC to air]	Mass	4,17E-05	kg	(Literature)
Acid (calculated as H+) [Inorganic emissions to fresh water]	Mass	0,00029	kg	(Literature)
Acrylonitrile [Hydrocarbons to fresh water]	Mass	0,000534	kg	(Estimated)
Adsorbable organic halogen compounds (AOX) [Analytical measures to fresh water]	Mass	0,004184	kg	(Measured)
Aldehyde (unspecified) [Group NMVOC to air]	Mass	1,25E-06	kg	(Literature)
Alkane (unspecified) [Group NMVOC to air]	Mass	0,000586	kg	(Calculated)
Alkene (unspecified) [Group NMVOC to air]	Mass	0,000393	kg	(Calculated)
Aluminum [Inorganic emissions to fresh water]	Mass	0,001038	kg	(Estimated)
Aluminum scrap [Waste for recovery]	Mass	7,89E-05	kg	Measured
Americium (Am241) [Radioactive emissions to fresh water]	Activity	1,819976	Bq	Calculated
Ammonia [Inorganic emissions to air]	Mass	0,000348	kg	(Literature)
Ammonia [Inorganic emissions to fresh water]	Mass	1,92E-05	kg	Measured
Ammonium / ammonia [Inorganic emissions to fresh water]	Mass	0,000912	kg	(Literature)
Ammonium [Inorganic emissions to air]	Mass	8,32E-06	kg	Measured
Ammonium nitrate [Inorganic emissions to air]	Mass	2,67E-08	kg	(Literature)
Antimony (Sb124) [Radioactive emissions to air]	Activity	0,013043	Bq	(Literature)
Antimony (Sb124) [Radioactive emissions to fresh water]	Activity	0,029689	Bq	(Literature)
Antimony (Sb125) [Radioactive emissions to fresh water]	Activity	0,019326	Bq	(Literature)
Antimony [Heavy metals to air]	Mass	9,68E-06	kg	(Calculated)
Argon (Ar41) [Radioactive emissions to air]	Activity	5167,678	Bq	(Literature)
Aromatic hydrocarbons (unspecified) [Group NMVOC to air]	Mass	1,64E-05	kg	(Calculated)
Aromatic hydrocarbons (unspecified) [Hydrocarbons to fresh water]	Mass	2,32E-18	kg	Literature
Arsenic [Heavy metals to air]	Mass	2,91E-05	kg	(Calculated)
Arsenic [Heavy metals to fresh water]	Mass	2,02E-06	kg	(Literature)
Arsenic [Heavy metals to industrial soil]	Mass	2,66E-05	kg	Measured
Arsenic trioxide [Heavy metals to air]	Mass	4,90E-10	kg	Measured
Barium [Inorganic emissions to air]	Mass	0,00013	kg	(Calculated)
Barium [Inorganic emissions to fresh water]	Mass	4,08E-06	kg	(Literature)
Benzene [Group NMVOC to air]	Mass	0,000115	kg	(Literature)
Benzene [Hydrocarbons to fresh water]	Mass	2,35E-05	kg	(Literature)
Benzo{a}pyrene [Group PAH to air]	Mass	3,92E-07	kg	(Calculated)
Beryllium [Inorganic emissions to air]	Mass	6,26E-07	kg	(Literature)
Beryllium [Inorganic emissions to fresh water]	Mass	3,98E-08	kg	(Literature)
Biological oxygen demand (BOD) [Analytical measures to fresh water]	Mass	0,006196	kg	(Literature)
Boron [Inorganic emissions to fresh water]	Mass	2,56E-05	kg	(Literature)
Boron compounds (unspecified) [Inorganic emissions to air]	Mass	0,000364	kg	(Calculated)
Bromine [Inorganic emissions to air]	Mass	0,00017	kg	(Calculated)
Cadmium [Heavy metals to air]	Mass	5,07E-06	kg	(Literature)
Cadmium [Heavy metals to fresh water]	Mass	2,67E-06	kg	(Literature)
Cadmium [Heavy metals to industrial soil]	Mass	4,31E-06	kg	Measured
Calcium [Inorganic emissions to fresh water]	Mass	0,124631	kg	(Literature)

Appendix 3.1
Data not published in this form earlier – PC production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
Carbon (C14) [Radioactive emissions to air]	Activity	3610,075	Bq	(Literature)
Carbon (C14) [Radioactive emissions to fresh water]	Activity	94,24488	Bq	(Estimated)
Carbon dioxide [Inorganic emissions to air]	Mass	147,0331	kg	(Literature)
Carbon monoxide [Inorganic emissions to air]	Mass	0,181462	kg	(Literature)
Carbonate [Inorganic emissions to fresh water]	Mass	0,000576	kg	(Literature)
Cesium (Cs134) [Radioactive emissions to air]	Activity	0,507769	Bq	(Literature)
Cesium (Cs134) [Radioactive emissions to fresh water]	Activity	121,0959	Bq	(Literature)
Cesium (Cs137) [Radioactive emissions to air]	Activity	1,131804	Bq	(Literature)
Cesium (Cs137) [Radioactive emissions to fresh water]	Activity	855,4925	Bq	(Literature)
Chemical oxygen demand (COD) [Analytical measures to fresh water]	Mass	0,517569	kg	(Literature)
Chloride (unspecified) [Inorganic emissions to air]	Mass	0,000139	kg	Measured
Chloride [Inorganic emissions to fresh water]	Mass	2,063708	kg	(Literature)
Chlorinated hydrocarbons (unspecified) [Halogenated organic emissions to fresh water]	Mass	6,19E-06	kg	(Estimated)
Chlorine (dissolved) [Inorganic emissions to fresh water]	Mass	0,001475	kg	(Literature)
Chlorine [Inorganic emissions to air]	Mass	2,13E-06	kg	(Literature)
Chloromethane (methyl chloride) [Halogenated organic emissions to air]	Mass	2,75E-07	kg	Estimated
Chloromethane (methyl chloride) [Halogenated organic emissions to fresh water]	Mass	1,16E-05	kg	(Literature)
Chromium (unspecified) [Heavy metals to air]	Mass	1,58E-05	kg	(Calculated)
Chromium (unspecified) [Heavy metals to fresh water]	Mass	2,94E-06	kg	(Literature)
Chromium +III [Heavy metals to fresh water]	Mass	2,74E-06	kg	(Literature)
Cobalt (Co58) [Radioactive emissions to air]	Activity	0,033667	Bq	(Literature)
Cobalt (Co58) [Radioactive emissions to fresh water]	Activity	1,010457	Bq	(Literature)
Cobalt (Co60) [Radioactive emissions to air]	Activity	0,379175	Bq	(Literature)
Cobalt (Co60) [Radioactive emissions to fresh water]	Activity	397,1766	Bq	(Literature)
Cobalt [Heavy metals to air]	Mass	8,51E-06	kg	(Literature)
Copper [Heavy metals to air]	Mass	0,000302	kg	(Calculated)
Copper [Heavy metals to fresh water]	Mass	3,46E-05	kg	(Literature)
Copper [Heavy metals to industrial soil]	Mass	9,94E-05	kg	Measured
Curium (Cm alpha) [Radioactive emissions to fresh water]	Activity	2,412017	Bq	Calculated
Cyanide [Inorganic emissions to fresh water]	Mass	1,69E-06	kg	(Literature)
Detergent (unspecified) [Other emissions to fresh water]	Mass	1,33E-08	kg	(Literature)
Dichloromethane (methylene chloride) [Halogenated organic emissions to air]	Mass	1,81E-06	kg	(No statement)
Dichloropropane [Halogenated organic emissions to fresh water]	Mass	0	kg	Estimated
Diethyl amine (ethylene ethane amine) [Group NMVOC to air]	Mass	2,08E-10	kg	Measured
Dust (unspecified) [Particles to air]	Mass	0,07609	kg	(Literature)
Ethane [Group NMVOC to air]	Mass	0,014393	kg	(Calculated)
Ethanol [Group NMVOC to air]	Mass	8,97E-05	kg	(Literature)
Ethene (ethylene) [Group NMVOC to air]	Mass	5,82E-06	kg	Literature
Ethyl benzene [Group NMVOC to air]	Mass	0,000385	kg	(Calculated)
Ethyl benzene [Hydrocarbons to fresh water]	Mass	4,33E-06	kg	(Literature)
Exhaust [Other emissions to air]	Mass	576,1518	kg	(Calculated)
Fluoride (unspecified) [Inorganic emissions to air]	Mass	4,06E-05	kg	(Literature)
Fluoride [Inorganic emissions to fresh water]	Mass	0,012367	kg	(Literature)
Fluorides [Inorganic emissions to air]	Mass	2,65E-08	kg	Estimated
Fluorine [Inorganic emissions to air]	Mass	7,90E-07	kg	(Literature)
Fluorine [Inorganic emissions to fresh water]	Mass	0,000232	kg	(Measured)

Appendix 3.1
Data not published in this form earlier – PC production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
Formaldehyde (methanal) [Group NMVOC to air]	Mass	0,00038	kg	(Estimated)
Graphites [Particles to air]	Mass	0	kg	Estimated
Halon (1301) [Halogenated organic emissions to air]	Mass	3,62E-07	kg	(Estimated)
Hazardous waste (unspec.) [Hazardous waste]	Mass	4,112994	kg	(Literature)
Heavy metals to water (unspecified) [Heavy metals to fresh water]	Mass	8,31E-06	kg	Measured
Helium [Inorganic emissions to air]	Mass	0,000206	kg	(Literature)
Hexane (isomers) [Group NMVOC to air]	Mass	2,97E-06	kg	(Literature)
Highly radioactive waste [Radioactive waste]	Mass	0,000524	kg	(Calculated)
Highly-active fission product solution [Radioactive waste]	Mass	3,79E-06	kg	(Estimated)
Hydrocarbons (unspecified) [Hydrocarbons to fresh water]	Mass	0,000151	kg	(Literature)
Hydrogen (H3) [Radioactive emissions to air]	Activity	9374,654	Bq	(Literature)
Hydrogen (H3) [Radioactive emissions to fresh water]	Activity	2727507	Bq	(Literature)
Hydrogen [Inorganic emissions to air]	Mass	0,002902	kg	(Measured)
Hydrogen arsenic (arsine) [Heavy metals to air]	Mass	4,06E-08	kg	Measured
Hydrogen chloride [Inorganic emissions to air]	Mass	0,011119	kg	(Calculated)
Hydrogen chloride [Inorganic emissions to fresh water]	Mass	1,09E-10	kg	Estimated
Hydrogen cyanide (prussic acid) [Inorganic emissions to air]	Mass	3,25E-06	kg	(Calculated)
Hydrogen fluoride (hydrofluoric acid) [Inorganic emissions to fresh water]	Mass	1,79E-07	kg	Measured
Hydrogen fluoride [Inorganic emissions to air]	Mass	0,002456	kg	(Calculated)
Hydrogen sulphide [Inorganic emissions to air]	Mass	0,005955	kg	(Literature)
Hydroxide [Inorganic emissions to fresh water]	Mass	0,000341	kg	Estimated
Inorganic salts and acids (unspecified) [Inorganic emissions to fresh water]	Mass	2,23E-16	kg	Literature
Iodine (I129) [Radioactive emissions to air]	Activity	3,946936	Bq	Calculated
Iodine (I129) [Radioactive emissions to fresh water]	Activity	269,5642	Bq	(Estimated)
Iodine (I131) [Radioactive emissions to air]	Activity	2,428188	Bq	(Literature)
Iodine (I131) [Radioactive emissions to fresh water]	Activity	0,017607	Bq	(Literature)
Iron [Heavy metals to air]	Mass	5,54E-05	kg	(Literature)
Iron [Heavy metals to fresh water]	Mass	0,048854	kg	(Literature)
Krypton (Kr85) [Radioactive emissions to air]	Activity	69656220	Bq	(Literature)
Krypton (Kr85m) [Radioactive emissions to air]	Activity	114,2242	Bq	(Literature)
Lanthanides [Heavy metals to air]	Mass	6,25E-08	kg	(Estimated)
Lead [Heavy metals to air]	Mass	0,000197	kg	(Estimated)
Lead [Heavy metals to fresh water]	Mass	6,68E-05	kg	(Literature)
Lead [Heavy metals to industrial soil]	Mass	0,000191	kg	Measured
Liquid hazardous waste [Hazardous waste]	Mass	8,14E-05	kg	(Estimated)
Magnesium [Inorganic emissions to fresh water]	Mass	0,000979	kg	(Literature)
Magnesium chloride [Inorganic emissions to fresh water]	Mass	5,24E-08	kg	(No statement)
Manganese (Mn54) [Radioactive emissions to fresh water]	Activity	61,50705	Bq	(Literature)
Manganese [Heavy metals to air]	Mass	2,55E-05	kg	(Calculated)
Manganese [Heavy metals to fresh water]	Mass	0,000149	kg	(Estimated)
Medium and low radioactive liquid waste [Radioactive waste]	Mass	5,29E-06	kg	(Estimated)
Medium and low radioactive wastes [Radioactive waste]	Mass	0,000622	kg	(Literature)
Mercaptan (unspecified) [Group NMVOC to air]	Mass	1,33E-08	kg	(Literature)
Mercury [Heavy metals to air]	Mass	4,00E-06	kg	(Literature)
Mercury [Heavy metals to fresh water]	Mass	1,09E-07	kg	(Literature)
Mercury [Heavy metals to industrial soil]	Mass	1,08E-06	kg	Measured
Metal ions (unspecific) [Inorganic emissions to fresh	Mass	0,000445	kg	(Calculated)

Appendix 3.1
Data not published in this form earlier – PC production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
water]				
Metals (unspecified) [Particles to air]	Mass	1,33E-08	kg	(Literature)
Metals (unspecified) [Particles to fresh water]	Mass	3,27E-05	kg	(Literature)
Methacrylate [Group NMVOC to air]	Mass	1,16E-07	kg	(No statement)
Methane [Organic emissions to air (group VOC)]	Mass	0,318192	kg	(Calculated)
Methanol [Group NMVOC to air]	Mass	8,26E-05	kg	(Literature)
Methanol [Hydrocarbons to fresh water]	Mass	0,000109	kg	(Measured)
Methyl methacrylate (MMA) [Group NMVOC to air]	Mass	3,18E-06	kg	(No statement)
Molybdenum [Heavy metals to air]	Mass	1,08E-07	kg	(Literature)
Molybdenum [Heavy metals to fresh water]	Mass	2,97E-05	kg	(Estimated)
Municipal waste [Consumer waste]	Mass	0,019751	kg	(Calculated)
Nickel [Heavy metals to air]	Mass	0,000113	kg	(Literature)
Nickel [Heavy metals to fresh water]	Mass	1,06E-05	kg	(Estimated)
Nitrate [Inorganic emissions to fresh water]	Mass	0,000667	kg	(Literature)
Nitrogen [Inorganic emissions to fresh water]	Mass	1,33E-08	kg	(Literature)
Nitrogen organic bounded [Inorganic emissions to fresh water]	Mass	6,07E-19	kg	Literature
Nitrogen oxides [Inorganic emissions to air]	Mass	0,313466	kg	(Calculated)
Nitrous oxide (laughing gas) [Inorganic emissions to air]	Mass	0,005575	kg	(Literature)
NMVOC (unspecified) [Group NMVOC to air]	Mass	0,066996	kg	(Literature)
non used primary energy from water power [Other emissions to fresh water]	Energy ren.	24,3471	MJ	(Calculated)
non used primary energy from wind power [Other emissions to air]	Energy ren.	1,909547	MJ	(Calculated)
Oil (unspecified) [Hydrocarbons to fresh water]	Mass	0,000328	kg	(Estimated)
Organic chlorine compounds (unspecified) [Organic emissions to fresh water]	Mass	1,33E-08	kg	(Literature)
Organic chlorine compounds [Organic emissions to air (group VOC)]	Mass	1,33E-08	kg	(Literature)
Organic compounds (dissolved) [Organic emissions to fresh water]	Mass	4,30E-07	kg	Calculated
Pentane (n-pentane) [Group NMVOC to air]	Mass	0,000392	kg	(Calculated)
Phenol (hydroxy benzene) [Hydrocarbons to fresh water]	Mass	3,15E-05	kg	(Estimated)
Phosphate [Inorganic emissions to fresh water]	Mass	8,56E-05	kg	(Measured)
Plutonium (Pu alpha) [Radioactive emissions to air]	Activity	0,021629	Bq	(Estimated)
Plutonium (Pu alpha) [Radioactive emissions to fresh water]	Activity	7,81274	Bq	(Estimated)
Plutonium as residual product [Radioactive waste]	Mass	1,07E-06	kg	(Calculated)
Polychlorinated dibenzo-p-dioxins (2,3,7,8 - TCDD) [Halogenated organic emissions to air]	Mass	2,69E-10	kg	(Literature)
Polychlorinated dibenzo-p-dioxins (2,3,7,8 - TCDD) [Halogenated organic emissions to fresh water]	Mass	7,17E-19	kg	Estimated
Polycyclic aromatic hydrocarbons (PAH) [Group PAH to air]	Mass	2,11E-06	kg	(Literature)
Polycyclic aromatic hydrocarbons (PAH, unspec.) [Hydrocarbons to fresh water]	Mass	3,46E-05	kg	(Literature)
Potassium [Inorganic emissions to fresh water]	Mass	0,000183	kg	(Literature)
Propane [Group NMVOC to air]	Mass	0,006782	kg	(Literature)
Propanol (iso-propanol; isopropanol) [Group NMVOC to air]	Mass	0,00244	kg	Estimated
Propene (propylene) [Group NMVOC to air]	Mass	3,50E-05	kg	(Calculated)
Propionic acid (propane acid) [Group NMVOC to air]	Mass	8,11E-08	kg	(Literature)
R 11 (trichlorofluoromethane) [Halogenated organic emissions to air]	Mass	1,13E-05	kg	(Literature)
R 114 (dichlorotetrafluoroethane) [Halogenated organic emissions to air]	Mass	1,16E-05	kg	(Literature)

Appendix 3.1
Data not published in this form earlier – PC production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
R 116 (hexafluoroethane) [Halogenated organic emissions to air]	Mass	1,67E-06	kg	Calculated
R 12 (dichlorodifluoromethane) [Halogenated organic emissions to air]	Mass	2,44E-06	kg	(Literature)
R 13 (chlorotrifluoromethane) [Halogenated organic emissions to air]	Mass	1,53E-06	kg	(Literature)
R 22 (chlorodifluoromethane) [Halogenated organic emissions to air]	Mass	2,67E-06	kg	(Literature)
Radium (Ra226) [Radioactive emissions to fresh water]	Activity	30360,77	Bq	(Literature)
Radon (Rn222) [Radioactive emissions to air]	Activity	991357,4	Bq	(Calculated)
Residues for incineration [Waste for disposal]	Mass	0,000116	kg	(No statement)
Ruthenium (Ru106) [Radioactive emissions to fresh water]	Activity	1,819976	Bq	Calculated
Scandium [Inorganic emissions to air]	Mass	3,13E-08	kg	(Estimated)
Selenium [Heavy metals to air]	Mass	1,79E-05	kg	(Literature)
Selenium [Heavy metals to fresh water]	Mass	5,07E-06	kg	(Literature)
Silicon dioxide (silica) [Particles to air]	Mass	0	kg	Estimated
Silicon dioxide (silica) [Particles to fresh water]	Mass	0	kg	Estimated
Silver (Ag110m) [Radioactive emissions to fresh water]	Activity	0,004343	Bq	(Literature)
Silver [Heavy metals to fresh water]	Mass	1,38E-07	kg	(Literature)
Sodium [Inorganic emissions to fresh water]	Mass	1,084769	kg	(Literature)
Sodium hypochlorite [Inorganic emissions to fresh water]	Mass	4,57E-06	kg	(Estimated)
Solids (dissolved) [Analytical measures to fresh water]	Mass	0,006165	kg	(Literature)
Solids (suspended) [Particles to fresh water]	Mass	0,088155	kg	(Estimated)
Strontium (Sr90) [Radioactive emissions to fresh water]	Activity	100,5838	Bq	(Literature)
Strontium [Heavy metals to fresh water]	Mass	0,000121	kg	(Literature)
Strontium [Inorganic emissions to air]	Mass	1,24E-06	kg	(Estimated)
Sulphate [Inorganic emissions to fresh water]	Mass	0,281189	kg	(Literature)
Sulphide [Inorganic emissions to fresh water]	Mass	1,28E-07	kg	(Literature)
Sulphite [Inorganic emissions to fresh water]	Mass	7,97E-06	kg	(Literature)
Sulphur dioxide [Inorganic emissions to air]	Mass	1,146749	kg	(Literature)
Sulphur hexafluoride [Inorganic emissions to air]	Mass	2,94E-09	kg	(Literature)
Sulphuric acid [Inorganic emissions to air]	Mass	6,77E-06	kg	(Calculated)
Tetrafluoromethane [Halogenated organic emissions to air]	Mass	1,57E-05	kg	Measured
Thallium [Heavy metals to air]	Mass	2,34E-07	kg	(Calculated)
Thallium [Heavy metals to fresh water]	Mass	2,36E-08	kg	(Measured)
Tin [Heavy metals to air]	Mass	1,41E-05	kg	(Calculated)
Tin [Heavy metals to fresh water]	Mass	1,08E-09	kg	(Literature)
Titanium [Heavy metals to air]	Mass	3,23E-06	kg	(Estimated)
Titanium [Heavy metals to fresh water]	Mass	3,41E-06	kg	(Literature)
Toluene (methyl benzene) [Group NMVOC to air]	Mass	0,000176	kg	(Estimated)
Toluene (methyl benzene) [Hydrocarbons to fresh water]	Mass	2,43E-05	kg	(Estimated)
Total dissolved organic bounded carbon [Analytical measures to fresh water]	Mass	9,85E-07	kg	(Literature)
Total organic bounded carbon [Analytical measures to fresh water]	Mass	0,017687	kg	(Measured)
Uranium (U234) [Radioactive emissions to air]	Activity	4,312902	Bq	(Literature)
Uranium (U235) [Radioactive emissions to air]	Activity	0,207741	Bq	(Literature)
Uranium (U238) [Radioactive emissions to air]	Activity	10,15027	Bq	(Literature)
Uranium [Radioactive emissions to fresh water]	Activity	559,5653	Bq	(Literature)
Uranium depleted [Radioactive waste]	Mass	0,001235	kg	(Calculated)
Used air [Other emissions to air]	Mass	48,03476	kg	(Measured)
Vanadium [Heavy metals to air]	Mass	4,84E-05	kg	(Literature)

Appendix 3.1
Data not published in this form earlier – PC production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
Vanadium [Heavy metals to fresh water]	Mass	9,89E-06	kg	(Literature)
Waste heat [Other emissions to air]	Energy	1018,184	MJ	(Calculated)
Waste heat [Other emissions to fresh water]	Energy	251,6703	MJ	(Measured)
Waste radioactive [Radioactive waste]	Mass	0,001044	kg	(Literature)
Waste water [Other emissions to fresh water]	Mass	7116,97	kg	(Literature)
Waste water processing residue [Hazardous waste for recovery]	Mass	4,426664	kg	Literature
Wave solder dross [Hazardous waste for recovery]	Mass	0,010746	kg	Estimated
Vinyl chloride (VCM; chloroethene) [Halogenated organic emissions to air]	Mass	9,47E-07	kg	Calculated
VOC (unspecified) [Organic emissions to air (group VOC)]	Mass	0,009329	kg	(Literature)
Volatile fission products (inert gases;iodine;C14) [Radioactive waste]	Mass	3,89E-08	kg	(Estimated)
Xenon (Xe131m) [Radioactive emissions to air]	Activity	76,62976	Bq	(Literature)
Xenon (Xe133) [Radioactive emissions to air]	Activity	12355,24	Bq	(Literature)
Xenon (Xe133m) [Radioactive emissions to air]	Activity	116,2035	Bq	(Literature)
Xenon (Xe135) [Radioactive emissions to air]	Activity	4448,366	Bq	(Literature)
Xenon (Xe135m) [Radioactive emissions to air]	Activity	987,8282	Bq	(Literature)
Xenon (Xe137) [Radioactive emissions to air]	Activity	1,018903	Bq	(Literature)
Xenon (Xe138) [Radioactive emissions to air]	Activity	227,0062	Bq	(Literature)
Xylene (dimethyl benzene) [Group NMVOC to air]	Mass	0,00161	kg	(Calculated)
Xylene (isomers; dimethyl benzene) [Hydrocarbons to fresh water]	Mass	0,000173	kg	(Literature)
Zinc [Heavy metals to air]	Mass	0,00039	kg	(Literature)
Zinc [Heavy metals to fresh water]	Mass	0,000141	kg	(Measured)
Zinc [Heavy metals to industrial soil]	Mass	0,000257	kg	Measured
Zinc sulphate [Inorganic emissions to air]	Mass	8,57E-07	kg	Measured

Appendix 3.2 Data not published in this form earlier – Screen production

In the tables below the LCI data for "*TFT screen 15*"" are presented. The data are divided as inputs to the system and outputs from the system.

Flow – Inputs	Quantity	Amount	Unit	Origin of data
Steel scrap (St) [Waste for recovery] Not followed to the cradle	Mass	0,086093	kg	Calculated
Air [Operating materials]	Mass	4,24E-15	kg	Estimated
Air [Renewable resources]	Mass	735,4294	kg	(Estimated)
Bauxite [Non renewable resources]	Mass	0,218102	kg	Calculated
Bentonite [Non renewable resources]	Mass	0,003833	kg	(Literature)
Calcium chloride [Non renewable resources]	Mass	9,26E-10	kg	Literature
Carbon dioxide [Renewable resources]	Mass	0,201735	kg	Calculated
Catalyst [Operating materials]	Mass	3,89E-05	kg	Calculated
Circuit material (Fe carrier) [Metals]	Mass	4,50E-07	kg	Calculated
Colemanite ore [Non renewable resources]	Mass	0,021876	kg	Calculated
Copper ore (0.14%) [Non renewable resources]	Mass	55,77959	kg	(Measured)
Copper ore (0.3%) [Non renewable resources]	Mass	5,55E-07	kg	Estimated
Crude oil [Crude oil (resource)]	Mass	0,67626	kg	(Literature)
Crude oil Algeria [Crude oil (resource)]	Mass	0,221777	kg	(Literature)
Crude oil Angola [Crude oil (resource)]	Mass	0,088487	kg	(Estimated)
Crude oil Argentina [Crude oil (resource)]	Mass	0,00046	kg	(Literature)
Crude oil Australia [Crude oil (resource)]	Mass	0,016985	kg	(Estimated)
Crude oil Brazil [Crude oil (resource)]	Mass	0,009957	kg	(Literature)
Crude oil Cameroon [Crude oil (resource)]	Mass	0,016367	kg	(Estimated)
Crude oil Canada [Crude oil (resource)]	Mass	0,096608	kg	(Literature)
Crude oil Central Africa [Crude oil (resource)]	Mass	0,005236	kg	(Calculated)
Crude oil Central America [Crude oil (resource)]	Mass	0,003216	kg	(Calculated)
Crude oil China [Crude oil (resource)]	Mass	2,307886	kg	Calculated
Crude oil CIS [Crude oil (resource)]	Mass	0,898956	kg	(Literature)
Crude oil Colombia [Crude oil (resource)]	Mass	3,87E-05	kg	(Literature)
Crude oil Denmark [Crude oil (resource)]	Mass	0,001152	kg	(Literature)
Crude oil Egypt [Crude oil (resource)]	Mass	0,032888	kg	(Calculated)
Crude oil France [Crude oil (resource)]	Mass	0,00122	kg	(Literature)
Crude oil Gabon [Crude oil (resource)]	Mass	0,001282	kg	(Estimated)
Crude oil Germany [Crude oil (resource)]	Mass	0,11632	kg	(Literature)
Crude oil Indonesia [Crude oil (resource)]	Mass	0,005085	kg	(Estimated)
Crude oil Iran [Crude oil (resource)]	Mass	0,203343	kg	(Estimated)
Crude oil Italy [Crude oil (resource)]	Mass	0,034602	kg	(Literature)
Crude oil Kuwait [Crude oil (resource)]	Mass	0,048939	kg	(Estimated)
Crude oil Libya [Crude oil (resource)]	Mass	0,599985	kg	(Literature)
Crude oil Mexico [Crude oil (resource)]	Mass	0,009328	kg	(Literature)
Crude oil Middle East [Crude oil (resource)]	Mass	0,013784	kg	(Calculated)
Crude oil Netherlands [Crude oil (resource)]	Mass	0,010432	kg	(Literature)
Crude oil New Zealand [Crude oil (resource)]	Mass	0,000591	kg	(Estimated)
Crude oil Nigeria [Crude oil (resource)]	Mass	0,206532	kg	(Estimated)
Crude oil North Africa [Crude oil (resource)]	Mass	0,009997	kg	(Calculated)
Crude oil Norway [Crude oil (resource)]	Mass	0,878716	kg	(Literature)
Crude oil Oman [Crude oil (resource)]	Mass	0,121658	kg	(Estimated)

Appendix 3.2
Data not published in this form earlier – Screen production

Flow – Inputs	Quantity	Amount	Unit	Origin of data
Crude oil Qatar [Crude oil (resource)]	Mass	0,001117	kg	(Estimated)
Crude oil Saudi Arabia [Crude oil (resource)]	Mass	0,484857	kg	(Estimated)
Crude oil Tunisia [Crude oil (resource)]	Mass	0,001271	kg	(Literature)
Crude oil United Arab Emirates [Crude oil (resource)]	Mass	0,002906	kg	(Estimated)
Crude oil United Kingdom [Crude oil (resource)]	Mass	0,780844	kg	(Literature)
Crude oil USA [Crude oil (resource)]	Mass	0,001091	kg	(Literature)
Crude oil Venezuela [Crude oil (resource)]	Mass	0,187596	kg	(Literature)
Dolomite [Non renewable resources]	Mass	0,001334	kg	(Literature)
Fluorspar (calcium fluoride; fluorite) [Non renewable resources]	Mass	0,002166	kg	Calculated
Hard coal [Hard coal (resource)]	Mass	0,037862	kg	(Literature)
Hard coal Australia [Hard coal (resource)]	Mass	0,14966	kg	(Calculated)
Hard coal Belgium [Hard coal (resource)]	Mass	0,008691	kg	(Calculated)
Hard coal Brazil [Hard coal (resource)]	Mass	0,001722	kg	Estimated
Hard coal Canada [Hard coal (resource)]	Mass	0,058266	kg	(Calculated)
Hard coal China [Hard coal (resource)]	Mass	42,60869	kg	(Calculated)
Hard coal CIS [Hard coal (resource)]	Mass	0,057385	kg	(Calculated)
Hard coal Colombia [Hard coal (resource)]	Mass	0,130597	kg	(Measured)
Hard coal Czech Republic [Hard coal (resource)]	Mass	0,08396	kg	(Measured)
Hard coal France [Hard coal (resource)]	Mass	0,090808	kg	(Measured)
Hard coal Germany [Hard coal (resource)]	Mass	2,432563	kg	(Calculated)
Hard coal Indonesia [Hard coal (resource)]	Mass	0,049656	kg	(Measured)
Hard coal Japan [Hard coal (resource)]	Mass	0,000443	kg	(Calculated)
Hard coal Poland [Hard coal (resource)]	Mass	0,307897	kg	(Calculated)
Hard coal Portugal [Hard coal (resource)]	Mass	0,00134	kg	Estimated
Hard coal South Africa [Hard coal (resource)]	Mass	1,063124	kg	(Measured)
Hard coal Spain [Hard coal (resource)]	Mass	0,179298	kg	(Calculated)
Hard coal United Kingdom [Hard coal (resource)]	Mass	0,031861	kg	(Calculated)
Hard coal USA [Hard coal (resource)]	Mass	0,573455	kg	(Calculated)
Hard coal Venezuela [Hard coal (resource)]	Mass	0,474701	kg	(Measured)
Heavy spar (barytes) [Non renewable resources]	Mass	0,063026	kg	(Literature)
Inert rock [Non renewable resources]	Mass	116,3229	kg	(Literature)
Iron [Non renewable elements]	Mass	5,93E-08	kg	(Estimated)
Iron ore (65%) [Non renewable resources]	Mass	0,003984	kg	(Calculated)
Iron ore [Non renewable resources]	Mass	4,791508	kg	(Calculated)
Kaolin ore [Non renewable resources]	Mass	0,039281	kg	Measured
Lead - zinc ore (4.6%-0.6%) [Non renewable resources]	Mass	0,460363	kg	Calculated
Lead ore [Non renewable resources]	Mass	0,0094	kg	Estimated
Lignite [Lignite (resource)]	Mass	0,053059	kg	(Estimated)
Lignite Australia [Lignite (resource)]	Mass	0,004361	kg	Literature
Lignite Australia [Lignite (resource)]	Mass	0,004094	kg	Literature
Lignite Austria [Lignite (resource)]	Mass	1,68E-05	kg	(Calculated)
Lignite France [Lignite (resource)]	Mass	1,29E-05	kg	Calculated
Lignite Germany (Lausitz) [Lignite (resource)]	Mass	0,000934	kg	Calculated
Lignite Germany (Rheinisch) [Lignite (resource)]	Mass	0,156714	kg	Calculated
Lignite Germany [Lignite (resource)]	Mass	5,382143	kg	(Estimated)
Lignite Greece [Lignite (resource)]	Mass	1,684254	kg	Literature
Lignite Spain [Lignite (resource)]	Mass	0,339226	kg	(Literature)
Lignite USA [Lignite (resource)]	Mass	0,00114	kg	Literature
Limestone (calcium carbonate) [Non renewable resources]	Mass	1,1944	kg	(Calculated)
Manganese ore (R.O.M.) [Non renewable resources]	Mass	0,000103	kg	Calculated
Molybdenite (Mo 0,24%) [Non renewable resources]	Mass	0,002788	kg	Estimated

Appendix 3.2
Data not published in this form earlier – Screen production

Flow – Inputs	Quantity	Amount	Unit	Origin of data
Natural Aggregate [Non renewable resources]	Mass	1,10E-07	kg	Calculated
Natural gas [Natural gas (resource)]	Mass	0,115321	kg	(Literature)
Natural gas Algeria [Natural gas (resource)]	Mass	0,128203	kg	(Literature)
Natural gas Angola [Natural gas (resource)]	Mass	0,007174	kg	(Estimated)
Natural gas Argentina [Natural gas (resource)]	Mass	1,51E-05	kg	(Literature)
Natural gas Australia [Natural gas (resource)]	Mass	0,006388	kg	(Estimated)
Natural gas Brazil [Natural gas (resource)]	Mass	0,003467	kg	(Estimated)
Natural gas Brunei [Natural gas (resource)]	Mass	0,000419	kg	Estimated
Natural gas Cameroon [Natural gas (resource)]	Mass	0,001327	kg	(Estimated)
Natural gas Canada [Natural gas (resource)]	Mass	0,002498	kg	(Literature)
Natural gas China [Natural gas (resource)]	Mass	0,131029	kg	Calculated
Natural gas CIS [Natural gas (resource)]	Mass	2,17326	kg	(Estimated)
Natural gas Colombia [Natural gas (resource)]	Mass	1,47E-06	kg	(Literature)
Natural gas Denmark [Natural gas (resource)]	Mass	0,055018	kg	(Estimated)
Natural gas Egypt [Natural gas (resource)]	Mass	0,002666	kg	(Calculated)
Natural gas France [Natural gas (resource)]	Mass	0,017097	kg	(Estimated)
Natural gas Gabon [Natural gas (resource)]	Mass	0,000106	kg	(Estimated)
Natural gas Germany [Natural gas (resource)]	Mass	1,092614	kg	(Literature)
Natural gas Indonesia [Natural gas (resource)]	Mass	0,001772	kg	(Estimated)
Natural gas Iran [Natural gas (resource)]	Mass	0,0076	kg	(Estimated)
Natural gas Italy [Natural gas (resource)]	Mass	0,05708	kg	(Literature)
Natural gas Japan [Natural gas (resource)]	Mass	0,000117	kg	Estimated
Natural gas Kuwait [Natural gas (resource)]	Mass	0,001829	kg	(Estimated)
Natural gas Libyan [Natural gas (resource)]	Mass	0,053196	kg	(Literature)
Natural gas Malaysia [Natural gas (resource)]	Mass	0,000593	kg	Estimated
Natural gas Mexico [Natural gas (resource)]	Mass	0,000307	kg	(Estimated)
Natural gas Netherlands [Natural gas (resource)]	Mass	2,477864	kg	(Estimated)
Natural gas New Zealand [Natural gas (resource)]	Mass	1,31E-05	kg	(Estimated)
Natural gas Nigeria [Natural gas (resource)]	Mass	0,016744	kg	(Estimated)
Natural gas Norway [Natural gas (resource)]	Mass	1,005694	kg	(Estimated)
Natural gas Oman [Natural gas (resource)]	Mass	0,004547	kg	(Estimated)
Natural gas Qatar [Natural gas (resource)]	Mass	4,18E-05	kg	(Estimated)
Natural gas Saudi Arabia [Natural gas (resource)]	Mass	0,018122	kg	(Estimated)
Natural gas Spain [Natural gas (resource)]	Mass	0,001016	kg	(Estimated)
Natural gas Tunisia [Natural gas (resource)]	Mass	0,000103	kg	(Literature)
Natural gas United Arab Emirates [Natural gas (resource)]	Mass	0,000409	kg	(Estimated)
Natural gas United Kingdom [Natural gas (resource)]	Mass	0,056424	kg	(Calculated)
Natural gas USA [Natural gas (resource)]	Mass	0,003106	kg	(Estimated)
Natural gas Venezuela [Natural gas (resource)]	Mass	0,011036	kg	(Literature)
Nickel ore (1.6%) [Non renewable resources]	Mass	0,710882	kg	(Measured)
Nitrogen [Renewable resources]	Mass	1,19E-05	kg	(Estimated)
Phosphorus minerals [Non renewable resources]	Mass	2,42E-05	kg	Literature
Pit gas [Natural gas (resource)]	Mass	0,349987	kg	(Calculated)
Potassium chloride [Non renewable resources]	Mass	0,00085	kg	Calculated
Precious metal ore (R.O.M) [Non renewable resources]	Mass	3,336988	kg	(No statement)
Primary energy from hydro power [Renewable energy resources]	Energy ren.	108,3923	MJ	(Literature)
Primary energy from solar energy [Renewable energy resources]	Energy ren.	1,940183	MJ	Literature
Primary energy from wind power [Renewable energy resources]	Energy ren.	0,778113	MJ	Calculated
Process and cooling water [Operating materials]	Mass	3,41E-07	kg	Literature
Process water [Operating materials]	Mass	353,3033	kg	(Calculated)

Appendix 3.2
Data not published in this form earlier – Screen production

Flow – Inputs	Quantity	Amount	Unit	Origin of data
Quartz sand (silica sand; silicon dioxide) [Non renewable resources]	Mass	0,279959	kg	(Literature)
Refractory [Minerals]	Mass	1,68E-10	kg	Measured
Sodium chloride (rock salt) [Non renewable resources]	Mass	1,770886	kg	(Estimated)
Sodium sulphate [Non renewable resources]	Mass	6,98E-06	kg	Literature
Soil [Non renewable resources]	Mass	0,178857	kg	(Calculated)
Sulphur (bonded) [Non renewable resources]	Mass	1,26E-06	kg	(Estimated)
Tin ore [Non renewable resources]	Mass	0,006769	kg	Estimated
Titanium ore [Non renewable resources]	Mass	3,14E-05	kg	(No statement)
Uranium free ore [Uranium (resource)]	Mass	7,78E-15	kg	Literature
Uranium natural [Uranium (resource)]	Mass	0,000395	kg	(Estimated)
Water (feed water) [Water]	Mass	0,178655	kg	(Estimated)
Water (ground water) [Water]	Mass	89,61223	kg	(Estimated)
Water (lake water) [Water]	Mass	1,24E-06	kg	(No statement)
Water (sea water) [Water]	Mass	0,01636	kg	(Literature)
Water (surface water) [Water]	Mass	4607,695	kg	(Calculated)
Water [Water]	Mass	784,6414	kg	(Literature)
Water for industrial use [Operating materials]	Mass	229,4893	kg	(Calculated)
Wood [Renewable energy resources]	Mass	0,052323	kg	(Estimated)
Zinc - copper ore (4.07%-2.59%) [Non renewable resources]	Mass	3,134841	kg	(Estimated)
Zinc - lead - copper ore (12%-3%-2%) [Non renewable resources]	Mass	1,913592	kg	Calculated
Zinc - lead ore (4.21%-4.96%) [Non renewable resources]	Mass	7,76E-09	kg	Estimated
Zinc ore (sulphide) [Non renewable resources]	Mass	1,19E-09	kg	Calculated

Appendix 3.2
Data not published in this form earlier – Screen production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
TFT 15" [Flows] Product	Mass	5,605	kg	(No statement)
Acetaldehyde (Ethanal) [Group NMVOC to air]	Mass	4,76E-05	kg	(Literature)
Acetic acid [Group NMVOC to air]	Mass	0,000194	kg	(Literature)
Acetone (dimethylcetone) [Group NMVOC to air]	Mass	6,66E-05	kg	(Literature)
Acid (calculated as H+) [Inorganic emissions to fresh water]	Mass	0,001488	kg	(Literature)
Acrylonitrile [Hydrocarbons to fresh water]	Mass	0,000673	kg	Calculated
Adsorbable organic halogen compounds (AOX) [Analytical measures to fresh water]	Mass	0,000746	kg	(Measured)
Aldehyde (unspecified) [Group NMVOC to air]	Mass	1,89E-06	kg	(Literature)
Alkane (unspecified) [Group NMVOC to air]	Mass	0,001382	kg	(Calculated)
Alkene (unspecified) [Group NMVOC to air]	Mass	0,001159	kg	(Calculated)
Aluminum [Inorganic emissions to fresh water]	Mass	0,000301	kg	(Literature)
Aluminum scrap [Waste for recovery]	Mass	5,21E-05	kg	Measured
Americium (Am241) [Radioactive emissions to fresh water]	Activity	0,450871	Bq	Calculated
Ammonia [Inorganic emissions to air]	Mass	0,000107	kg	(Calculated)
Ammonia [Inorganic emissions to fresh water]	Mass	3,59E-05	kg	(Measured)
Ammonium / ammonia [Inorganic emissions to fresh water]	Mass	0,001963	kg	(Literature)
Ammonium [Inorganic emissions to air]	Mass	0,000294	kg	Measured
Ammonium nitrate [Inorganic emissions to air]	Mass	7,41E-09	kg	(Estimated)
Antimony (Sb124) [Radioactive emissions to air]	Activity	0,003286	Bq	(Literature)
Antimony (Sb124) [Radioactive emissions to fresh water]	Activity	0,007162	Bq	(Literature)
Antimony (Sb125) [Radioactive emissions to fresh water]	Activity	0,004676	Bq	(Literature)
Antimony [Heavy metals to air]	Mass	7,07E-05	kg	(Calculated)
Argon (Ar41) [Radioactive emissions to air]	Activity	1298,136	Bq	(Literature)
Aromatic hydrocarbons (unspecified) [Group NMVOC to air]	Mass	1,89E-05	kg	(Literature)
Aromatic hydrocarbons (unspecified) [Hydrocarbons to fresh water]	Mass	2,19E-10	kg	Literature
Arsenic [Heavy metals to air]	Mass	5,58E-05	kg	(Literature)
Arsenic [Heavy metals to fresh water]	Mass	6,11E-07	kg	(Literature)
Arsenic [Heavy metals to industrial soil]	Mass	1,16E-07	kg	Measured
Arsenic trioxide [Heavy metals to air]	Mass	3,23E-10	kg	Measured
Barium [Inorganic emissions to air]	Mass	0,000243	kg	(Literature)
Barium [Inorganic emissions to fresh water]	Mass	1,47E-06	kg	(Literature)
Benzene [Group NMVOC to air]	Mass	9,61E-05	kg	(Literature)
Benzene [Hydrocarbons to fresh water]	Mass	3,27E-05	kg	(Literature)
Benzo{a}pyrene [Group PAH to air]	Mass	9,57E-07	kg	(Literature)
Beryllium [Inorganic emissions to air]	Mass	2,22E-06	kg	(Measured)
Beryllium [Inorganic emissions to fresh water]	Mass	9,85E-09	kg	(Literature)
Biological oxygen demand (BOD) [Analytical measures to fresh water]	Mass	0,004011	kg	(Literature)
Boron [Inorganic emissions to fresh water]	Mass	7,91E-06	kg	(Literature)
Boron compounds (unspecified) [Inorganic emissions to air]	Mass	0,000659	kg	(Calculated)
Bromine [Inorganic emissions to air]	Mass	0,000723	kg	(Calculated)
Butane (n-butane) [Group NMVOC to air]	Mass	0,000161	kg	(Measured)
Butane [Group NMVOC to air]	Mass	0,000179	kg	(Literature)
Cadmium [Heavy metals to air]	Mass	1,10E-05	kg	(Literature)
Cadmium [Heavy metals to fresh water]	Mass	2,24E-07	kg	(Literature)
Cadmium [Heavy metals to industrial soil]	Mass	1,88E-08	kg	Measured

Appendix 3.2
Data not published in this form earlier – Screen production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
CaF2 (low radioactice) [Radioactive waste]	Mass	4,47E-05	kg	(Literature)
Calcium [Inorganic emissions to fresh water]	Mass	0,056489	kg	(Measured)
Carbon (C14) [Radioactive emissions to air]	Activity	902,3859	Bq	(Literature)
Carbon (C14) [Radioactive emissions to fresh water]	Activity	23,43624	Bq	(Calculated)
Carbon dioxide [Inorganic emissions to air]	Mass	150,5194	kg	(Literature)
Carbon monoxide [Inorganic emissions to air]	Mass	0,182603	kg	(Literature)
Carbonate [Inorganic emissions to fresh water]	Mass	0,000546	kg	(Literature)
Cesium (Cs134) [Radioactive emissions to air]	Activity	0,125807	Bq	(Literature)
Cesium (Cs134) [Radioactive emissions to fresh water]	Activity	31,33965	Bq	(Literature)
Cesium (Cs137) [Radioactive emissions to air]	Activity	0,281028	Bq	(Literature)
Cesium (Cs137) [Radioactive emissions to fresh water]	Activity	211,934	Bq	(Literature)
Chemical oxygen demand (COD) [Analytical measures to fresh water]	Mass	1,145185	kg	(Literature)
Chemical oxygen demand (COD) [Analytical measures to sea water]	Mass	2,66E-08	kg	Estimated
Chloride (unspecified) [Inorganic emissions to air]	Mass	0,000418	kg	(Measured)
Chloride [Inorganic emissions to fresh water]	Mass	0,845515	kg	(Literature)
Chlorinated hydrocarbons (unspecified) [Halogenated organic emissions to fresh water]	Mass	3,48E-06	kg	(Literature)
Chlorine (dissolved) [Inorganic emissions to fresh water]	Mass	0,00039	kg	(Literature)
Chlorine [Inorganic emissions to air]	Mass	5,81E-07	kg	(Estimated)
Chloromethane (methyl chloride) [Halogenated organic emissions to air]	Mass	1,55E-07	kg	Estimated
Chloromethane (methyl chloride) [Halogenated organic emissions to fresh water]	Mass	7,45E-06	kg	(Literature)
Chromium (unspecified) [Heavy metals to air]	Mass	3,30E-05	kg	(Literature)
Chromium (unspecified) [Heavy metals to fresh water]	Mass	2,57E-06	kg	(Literature)
Chromium +III [Heavy metals to fresh water]	Mass	6,78E-07	kg	(Literature)
Cobalt (Co58) [Radioactive emissions to air]	Activity	0,008484	Bq	(Literature)
Cobalt (Co58) [Radioactive emissions to fresh water]	Activity	0,245308	Bq	(Literature)
Cobalt (Co60) [Radioactive emissions to air]	Activity	0,095582	Bq	(Literature)
Cobalt (Co60) [Radioactive emissions to fresh water]	Activity	98,38625	Bq	(Literature)
Cobalt [Heavy metals to air]	Mass	1,30E-05	kg	(Literature)
Copper [Heavy metals to air]	Mass	8,30E-05	kg	(Literature)
Copper [Heavy metals to fresh water]	Mass	8,09E-06	kg	(Literature)
Copper [Heavy metals to industrial soil]	Mass	4,33E-07	kg	Measured
Curium (Cm alpha) [Radioactive emissions to fresh water]	Activity	0,59754	Bq	Calculated
Cyanide [Inorganic emissions to fresh water]	Mass	4,56E-06	kg	(Literature)
Detergent (unspecified) [Other emissions to fresh water]	Mass	3,71E-09	kg	(Estimated)
Dichloromethane (methylene chloride) [Halogenated organic emissions to air]	Mass	0,000673	kg	Calculated
Diethyl amine (ethylene ethane amine) [Group NMVOC to air]	Mass	7,35E-09	kg	Measured
Dust (unspecified) [Particles to air]	Mass	0,185709	kg	(Literature)
Ethane [Group NMVOC to air]	Mass	0,005268	kg	(Literature)
Ethanol [Group NMVOC to air]	Mass	9,70E-05	kg	(Literature)
Ethene (ethylene) [Group NMVOC to air]	Mass	4,47E-05	kg	Calculated
Ethyl benzene [Group NMVOC to air]	Mass	0,001149	kg	(Calculated)
Ethyl benzene [Hydrocarbons to fresh water]	Mass	6,04E-06	kg	(Literature)
Exhaust [Other emissions to air]	Mass	577,9182	kg	(Calculated)
Fluoride (unspecified) [Inorganic emissions to air]	Mass	1,01E-05	kg	(Literature)
Fluoride [Inorganic emissions to fresh water]	Mass	0,00412	kg	(Literature)
Fluorides [Inorganic emissions to air]	Mass	1,42E-08	kg	(Estimated)

Appendix 3.2
Data not published in this form earlier – Screen production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
Fluorine [Inorganic emissions to air]	Mass	1,76E-06	kg	(Literature)
Fluorine [Inorganic emissions to fresh water]	Mass	6,08E-05	kg	(Measured)
Formaldehyde (methanal) [Group NMVOC to air]	Mass	0,00057	kg	(Literature)
Formaldehyde (methanal) [Hydrocarbons to fresh water]	Mass	3,19E-08	kg	Literature
Gypsum (FDI) [Waste for recovery]	Mass	0,1293	kg	(Measured)
Gypsum [Waste for recovery]	Mass	0,00744	kg	(Estimated)
Halogenated hydrocarbons (unspecified) [Halogenated organic emissions to air]	Mass	2,57E-14	kg	Literature
Halon (1301) [Halogenated organic emissions to air]	Mass	4,57E-07	kg	(Literature)
Hazardous waste (unspec.) [Hazardous waste]	Mass	0,768766	kg	(Estimated)
Heavy metals to water (unspecified) [Heavy metals to fresh water]	Mass	3,56E-06	kg	(Measured)
Helium [Inorganic emissions to air]	Mass	0,00025	kg	(Literature)
Hexane (isomers) [Group NMVOC to air]	Mass	7,35E-07	kg	(Literature)
Highly radioactive waste [Radioactive waste]	Mass	0,00013	kg	(Calculated)
Highly-active fission product solution [Radioactive waste]	Mass	1,11E-06	kg	(Estimated)
Hydrocarbons (unspecified) [Hydrocarbons to fresh water]	Mass	0,000172	kg	(Literature)
Hydrogen (H3) [Radioactive emissions to air]	Activity	2339,725	Bq	(Literature)
Hydrogen (H3) [Radioactive emissions to fresh water]	Activity	675585,9	Bq	(Literature)
Hydrogen [Inorganic emissions to air]	Mass	0,000156	kg	(Measured)
Hydrogen arsenic (arsine) [Heavy metals to air]	Mass	2,68E-08	kg	Measured
Hydrogen chloride [Inorganic emissions to air]	Mass	0,022013	kg	(Literature)
Hydrogen chloride [Inorganic emissions to fresh water]	Mass	4,05E-11	kg	Estimated
Hydrogen cyanide (prussic acid) [Inorganic emissions to air]	Mass	1,28E-06	kg	(Calculated)
Hydrogen fluoride (hydrofluoric acid) [Inorganic emissions to fresh water]	Mass	3,87E-08	kg	(Measured)
Hydrogen fluoride [Inorganic emissions to air]	Mass	0,005971	kg	(Literature)
Hydrogen sulphide [Inorganic emissions to air]	Mass	0,001948	kg	(Literature)
Hydroxide [Inorganic emissions to fresh water]	Mass	0,000349	kg	Estimated
Incineration good [Waste for disposal]	Mass	0,011047	kg	Literature
Industrial waste for municipal disposal [Consumer waste]	Mass	1,141017	kg	(Literature)
inert chemical waste [Consumer waste]	Mass	0,018894	kg	(Literature)
Iodine (I129) [Radioactive emissions to air]	Activity	0,977793	Bq	Calculated
Iodine (I129) [Radioactive emissions to fresh water]	Activity	67,07814	Bq	(Estimated)
Iodine (I131) [Radioactive emissions to air]	Activity	0,61215	Bq	(Literature)
Iodine (I131) [Radioactive emissions to fresh water]	Activity	0,004303	Bq	(Literature)
Iron [Heavy metals to air]	Mass	3,92E-05	kg	(Literature)
Iron [Heavy metals to fresh water]	Mass	0,012969	kg	(Literature)
Jacket and body material [Radioactive waste]	Mass	6,68E-07	kg	(Estimated)
Krypton (Kr85) [Radioactive emissions to air]	Activity	17332941	Bq	(Literature)
Krypton (Kr85m) [Radioactive emissions to air]	Activity	28,60289	Bq	(Literature)
Lanthanides [Heavy metals to air]	Mass	4,65E-08	kg	(Estimated)
Lead [Heavy metals to air]	Mass	0,000182	kg	(Literature)
Lead [Heavy metals to fresh water]	Mass	1,59E-05	kg	(Literature)
Lead [Heavy metals to industrial soil]	Mass	8,31E-07	kg	Measured
Liquid hazardous waste [Hazardous waste]	Mass	2,75E-05	kg	(Estimated)
Liquid waste [Consumer waste]	Mass	855394,6	kg	(Calculated)
Magnesium [Inorganic emissions to fresh water]	Mass	0,000299	kg	(Literature)
Magnesium chloride [Inorganic emissions to fresh water]	Mass	6,97E-09	kg	(No statement)
Manganese (Mn54) [Radioactive emissions to fresh water]	Activity	15,23717	Bq	(Literature)
Manganese [Heavy metals to air]	Mass	4,64E-05	kg	(Calculated)

Appendix 3.2
Data not published in this form earlier – Screen production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
Manganese [Heavy metals to fresh water]	Mass	8,05E-05	kg	(Literature)
Medium and low radioactive liquid waste [Radioactive waste]	Mass	1,53E-06	kg	(Calculated)
Medium and low radioactive wastes [Radioactive waste]	Mass	0,000154	kg	(Literature)
Mercaptan (unspecified) [Group NMVOC to air]	Mass	3,71E-09	kg	(Estimated)
Mercury [Heavy metals to air]	Mass	4,73E-06	kg	(Literature)
Mercury [Heavy metals to fresh water]	Mass	6,06E-08	kg	(Calculated)
Mercury [Heavy metals to industrial soil]	Mass	4,70E-09	kg	Measured
Metal ions (unspecific) [Inorganic emissions to fresh water]	Mass	0,000628	kg	(Calculated)
Metals (unspecified) [Inorganic emissions to fresh water]	Mass	5,35E-14	kg	Literature
Metals (unspecified) [Particles to air]	Mass	3,77E-09	kg	(Estimated)
Metals (unspecified) [Particles to fresh water]	Mass	1,10E-05	kg	(Literature)
Methacrylate [Group NMVOC to air]	Mass	5,83E-06	kg	Calculated
Methane [Organic emissions to air (group VOC)]	Mass	0,422805	kg	(Literature)
Methanol [Group NMVOC to air]	Mass	9,62E-05	kg	(Literature)
Methanol [Hydrocarbons to fresh water]	Mass	0,001385	kg	(Measured)
Methanol [Organic intermediate products]	Mass	3,19E-08	kg	Literature
Methyl methacrylate (MMA) [Group NMVOC to air]	Mass	0,00016	kg	Calculated
Mineral waste [Consumer waste]	Mass	2,86E-05	kg	(Estimated)
Molybdenum [Heavy metals to air]	Mass	9,02E-08	kg	(Literature)
Molybdenum [Heavy metals to fresh water]	Mass	7,36E-06	kg	(Literature)
Municipal waste [Consumer waste]	Mass	0,006098	kg	(Measured)
Nickel [Heavy metals to air]	Mass	0,000106	kg	(Literature)
Nickel [Heavy metals to fresh water]	Mass	1,17E-05	kg	(Literature)
Nitrate [Inorganic emissions to fresh water]	Mass	0,000197	kg	(Literature)
Nitrogen [Inorganic emissions to fresh water]	Mass	1,04E-07	kg	(Estimated)
Nitrogen organic bounded [Inorganic emissions to fresh water]	Mass	5,73E-11	kg	Literature
Nitrogen oxides [Inorganic emissions to air]	Mass	0,667614	kg	(Literature)
Nitrous oxide (laughing gas) [Inorganic emissions to air]	Mass	0,006129	kg	(Literature)
NMVOC (unspecified) [Group NMVOC to air]	Mass	0,070354	kg	(Literature)
non used primary energy from water power [Other emissions to fresh water]	Energy ren.	17,89572	MJ	(Measured)
non used primary energy from wind power [Other emissions to air]	Energy ren.	0,556503	MJ	(Measured)
Oil (unspecified) [Hydrocarbons to fresh water]	Mass	0,000255	kg	(Literature)
Oil (unspecified) [Organic emissions to industrial soil]	Mass	3,99E-08	kg	Measured
Organic chlorine compounds (unspecified) [Organic emissions to fresh water]	Mass	3,71E-09	kg	(Estimated)
Organic chlorine compounds [Organic emissions to air (group VOC)]	Mass	3,71E-09	kg	(Estimated)
Organic compounds (dissolved) [Organic emissions to fresh water]	Mass	4,40E-06	kg	Calculated
Organic compounds (unspecified) [Organic emissions to fresh water]	Mass	4,27E-13	kg	Literature
Organic waste [Consumer waste]	Mass	1,30E-07	kg	Literature
Overburden [Stockpile goods]	Mass	140,8589	kg	(Calculated)
Pentane (n-pentane) [Group NMVOC to air]	Mass	0,000796	kg	(Literature)
Phenol (hydroxy benzene) [Group NMVOC to air]	Mass	6,20E-07	kg	Literature
Phenol (hydroxy benzene) [Hydrocarbons to fresh water]	Mass	4,12E-05	kg	(Literature)
Phosphate [Inorganic emissions to fresh water]	Mass	0,000143	kg	(Literature)
Plastic (unspecified) [Waste for recovery]	Mass	0,007339	kg	(Literature)
Plutonium (Pu alpha) [Radioactive emissions to air]	Activity	0,009253	Bq	(Calculated)
Plutonium (Pu alpha) [Radioactive emissions to fresh	Activity	1,959233	Bq	(Calculated)

Appendix 3.2
Data not published in this form earlier – Screen production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
water]				
Plutonium as residual product [Radioactive waste]	Mass	2,66E-07	kg	(Calculated)
Polychlorinated dibenzo-p-dioxins (2,3,7,8 - TCDD) [Halogenated organic emissions to air]	Mass	8,19E-11	kg	(Literature)
Polycyclic aromatic hydrocarbons (PAH) [Group PAH to air]	Mass	1,90E-06	kg	(Literature)
Polycyclic aromatic hydrocarbons (PAH, unspec.) [Hydrocarbons to fresh water]	Mass	3,02E-05	kg	(Literature)
Potassium [Inorganic emissions to fresh water]	Mass	0,000118	kg	(Literature)
Propane [Group NMVOC to air]	Mass	0,002497	kg	(Literature)
Propanol (iso-propanol; isopropanol) [Group NMVOC to air]	Mass	0,000926	kg	Estimated
Propene (propylene) [Group NMVOC to air]	Mass	0,000104	kg	(Calculated)
Propionic acid (propane acid) [Group NMVOC to air]	Mass	6,23E-08	kg	(Literature)
R 11 (trichlorofluoromethane) [Halogenated organic emissions to air]	Mass	2,81E-06	kg	(Estimated)
R 114 (dichlorotetrafluoroethane) [Halogenated organic emissions to air]	Mass	2,88E-06	kg	(Estimated)
R 116 (hexafluoroethane) [Halogenated organic emissions to air]	Mass	2,06E-06	kg	Calculated
R 12 (dichlorodifluoromethane) [Halogenated organic emissions to air]	Mass	6,04E-07	kg	(Estimated)
R 13 (chlorotrifluoromethane) [Halogenated organic emissions to air]	Mass	3,79E-07	kg	(Estimated)
R 22 (chlorodifluoromethane) [Halogenated organic emissions to air]	Mass	6,60E-07	kg	(Estimated)
Radioactive emissions (general) [Radioactive emissions to air]	Activity	0,000942	Bq	Literature
Radioactive tailings [Radioactive waste]	Mass	0,078573	kg	(Calculated)
Radium (Ra226) [Radioactive emissions to fresh water]	Activity	7536,174	Bq	(Literature)
Radon (Rn222) [Radioactive emissions to air]	Activity	245635,6	Bq	(Literature)
Red mud (wet) (3% NaOH) [Hazardous waste for disposal]	Mass	0,089633	kg	Measured
Rolling tinder [Waste for recovery]	Mass	0,059499	kg	Calculated
Ruthenium (Ru106) [Radioactive emissions to fresh water]	Activity	0,450871	Bq	Calculated
Scandium [Inorganic emissions to air]	Mass	2,33E-08	kg	(Estimated)
Selenium [Heavy metals to air]	Mass	6,15E-05	kg	(Literature)
Selenium [Heavy metals to fresh water]	Mass	1,26E-06	kg	(Estimated)
Sewage sludge (waste water processing) [Hazardous waste]	Mass	0,025714	kg	Calculated
Silver (Ag110m) [Radioactive emissions to fresh water]	Activity	0,001048	Bq	(Literature)
Silver [Heavy metals to fresh water]	Mass	1,58E-07	kg	(Literature)
Slag (Iron plate production) [Waste for recovery]	Mass	0,600453	kg	(Measured)
Slag (Mo-containing) [Waste for recovery]	Mass	3,33E-06	kg	Estimated
Slag [Hazardous waste]	Mass	0,060523	kg	(Literature)
Slag [Waste for recovery]	Mass	0,108514	kg	(Literature)
Sludge [Hazardous waste]	Mass	0,411487	kg	(Calculated)
Sludge from water works (6% dry matter-content) [Waste for disposal]	Mass	1,69E-06	kg	(No statement)
Sodium [Inorganic emissions to fresh water]	Mass	0,409265	kg	(Literature)
Sodium chloride (rock salt) [Inorganic intermediate products]	Mass	0,002173	kg	Calculated
Sodium hypochlorite [Inorganic emissions to fresh water]	Mass	1,47E-06	kg	(Calculated)
Solder paste waste [Hazardous waste for recovery]	Mass	0,002745	kg	Estimated
Solids (dissolved) [Analytical measures to fresh water]	Mass	0,006248	kg	(Estimated)

Appendix 3.2
Data not published in this form earlier – Screen production

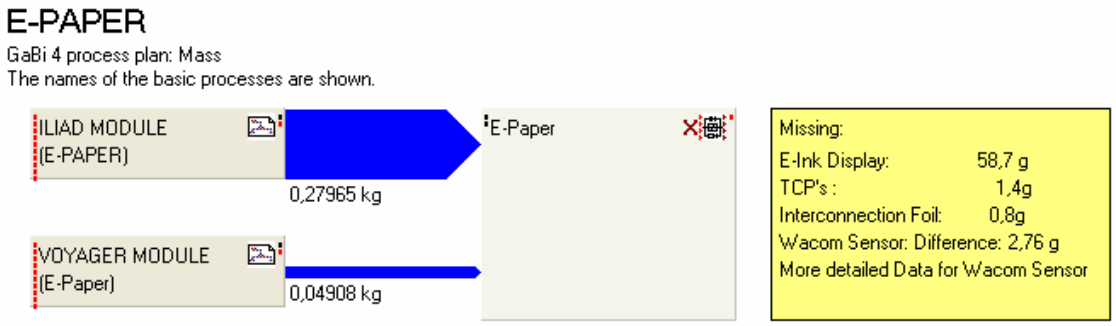
Flow - Outputs	Quantity	Amount	Unit	Origin of data
Solids (suspended) [Particles to fresh water]	Mass	0,080379	kg	(Estimated)
Spoil [Stockpile goods]	Mass	1,98E-08	kg	Calculated
Steam [Inorganic emissions to air]	Mass	257,6272	kg	(Estimated)
Steel works slag [Waste for recovery]	Mass	0,310652	kg	Calculated
Strontium (Sr90) [Radioactive emissions to fresh water]	Activity	25,51369	Bq	(Literature)
Strontium [Heavy metals to fresh water]	Mass	0,000228	kg	(Literature)
Strontium [Inorganic emissions to air]	Mass	9,26E-07	kg	(Estimated)
Sulphate [Inorganic emissions to fresh water]	Mass	0,090451	kg	(Literature)
Sulphide [Inorganic emissions to fresh water]	Mass	3,17E-08	kg	(Literature)
Sulphite [Inorganic emissions to fresh water]	Mass	2,88E-06	kg	(Literature)
Sulphur dioxide [Inorganic emissions to air]	Mass	1,359835	kg	(Literature)
Sulphur hexafluoride [Inorganic emissions to air]	Mass	1,45E-10	kg	(Literature)
Sulphuric acid [Inorganic emissions to air]	Mass	3,18E-06	kg	(Calculated)
Tailings [Stockpile goods]	Mass	40,70715	kg	(Literature)
Tetrafluoromethane [Halogenated organic emissions to air]	Mass	2,06E-05	kg	Measured
Thallium [Heavy metals to air]	Mass	8,66E-08	kg	(Calculated)
Thallium [Heavy metals to fresh water]	Mass	1,52E-08	kg	(Measured)
Tin [Heavy metals to air]	Mass	9,75E-06	kg	(Calculated)
Tin [Heavy metals to fresh water]	Mass	2,67E-10	kg	(Literature)
Titanium [Heavy metals to air]	Mass	2,36E-06	kg	(Estimated)
Titanium [Heavy metals to fresh water]	Mass	8,45E-07	kg	(Literature)
Toluene (methyl benzene) [Group NMVOC to air]	Mass	0,00053	kg	(Literature)
Toluene (methyl benzene) [Hydrocarbons to fresh water]	Mass	2,90E-05	kg	(Literature)
Total dissolved organic bounded carbon [Analytical measures to fresh water]	Mass	1,00E-05	kg	(Estimated)
Total organic bounded carbon [Analytical measures to fresh water]	Mass	0,043967	kg	(Measured)
Treatment residue (mineral) [Stockpile goods]	Mass	0,080642	kg	(Calculated)
Uranium (total) [Radioactive emissions to air]	Activity	4,209826	Bq	(Literature)
Uranium (U234) [Radioactive emissions to air]	Activity	1,068892	Bq	(Estimated)
Uranium (U235) [Radioactive emissions to air]	Activity	0,051465	Bq	(Estimated)
Uranium (U238) [Radioactive emissions to air]	Activity	33,09915	Bq	(Literature)
Uranium [Radioactive emissions to fresh water]	Activity	140,2605	Bq	(Literature)
Uranium depleted [Radioactive waste]	Mass	0,000308	kg	(Calculated)
Uranium spent as residue [Radioactive waste]	Mass	1,44E-07	kg	(Calculated)
Used air [Other emissions to air]	Mass	41,58571	kg	(Measured)
Used oil [Hazardous waste for recovery]	Mass	1,39E-10	kg	(Literature)
Vanadium [Heavy metals to air]	Mass	6,42E-05	kg	(Literature)
Vanadium [Heavy metals to fresh water]	Mass	2,45E-06	kg	(Literature)
Waste (unspecified) [Consumer waste]	Mass	0,14658	kg	(Calculated)
Waste heat [Other emissions to air]	Energy	987,2512	MJ	(Measured)
Waste heat [Other emissions to fresh water]	Energy	217,2337	MJ	(Measured)
Waste paper [Waste for recovery]	Mass	0,000134	kg	Measured
Waste radioactive [Radioactive waste]	Mass	0,000259	kg	(Literature)
Waste water [Other emissions to fresh water]	Mass	499920,9	kg	(Literature)
Water (river water) [Water]	Mass	0,026614	kg	Literature
Vinyl chloride (VCM; chloroethene) [Halogenated organic emissions to air]	Mass	9,69E-06	kg	Calculated
VOC (unspecified) [Organic emissions to air (group VOC)]	Mass	0,003189	kg	(Literature)
Volatile fission products (inert gases;iodine;C14) [Radioactive waste]	Mass	1,14E-08	kg	(Estimated)
Xenon (Xe131m) [Radioactive emissions to air]	Activity	19,23058	Bq	(Literature)

Appendix 3.2
Data not published in this form earlier – Screen production

Flow - Outputs	Quantity	Amount	Unit	Origin of data
Xenon (Xe133) [Radioactive emissions to air]	Activity	3100,891	Bq	(Literature)
Xenon (Xe133m) [Radioactive emissions to air]	Activity	29,10754	Bq	(Literature)
Xenon (Xe135) [Radioactive emissions to air]	Activity	1113,261	Bq	(Literature)
Xenon (Xe135m) [Radioactive emissions to air]	Activity	246,6689	Bq	(Literature)
Xenon (Xe137) [Radioactive emissions to air]	Activity	0,255925	Bq	(Literature)
Xenon (Xe138) [Radioactive emissions to air]	Activity	56,67772	Bq	(Literature)
Xylene (dimethyl benzene) [Group NMVOC to air]	Mass	0,004806	kg	(Calculated)
Xylene (isomers; dimethyl benzene) [Hydrocarbons to fresh water]	Mass	0,000238	kg	(Literature)
Zinc [Heavy metals to air]	Mass	0,000432	kg	(Literature)
Zinc [Heavy metals to fresh water]	Mass	3,28E-05	kg	(Literature)
Zinc [Heavy metals to industrial soil]	Mass	1,12E-06	kg	Measured
Zinc sulphate [Inorganic emissions to air]	Mass	5,65E-07	kg	Measured

Appendix 3.3 Data not published in this form earlier – Tablet e-paper production

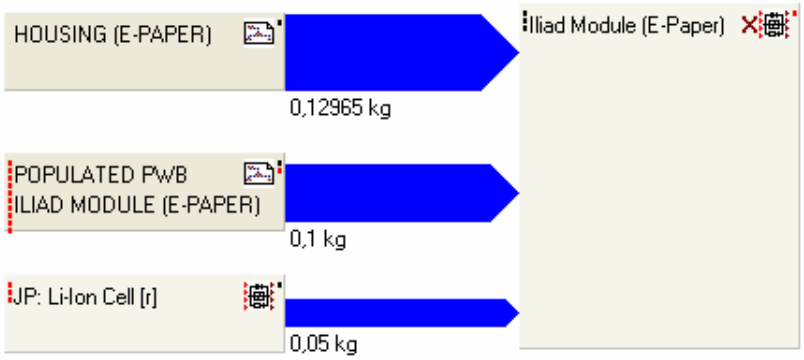
In the process plans below the LCI data for "*Tablet-e-paper*" are presented. Each dark gray box represents a process plan, and the light greay boxes represent single processes. The process plans are shown from the highest level, E-PAPER, down to the lowest levels, e.g. BOTTOM COVER (E-Paper). All boxes on the lowest levels represent single processes with data available in the GaBi database.



Appendix 3.3
Data not published in this form earlier – Tablet e-paper production

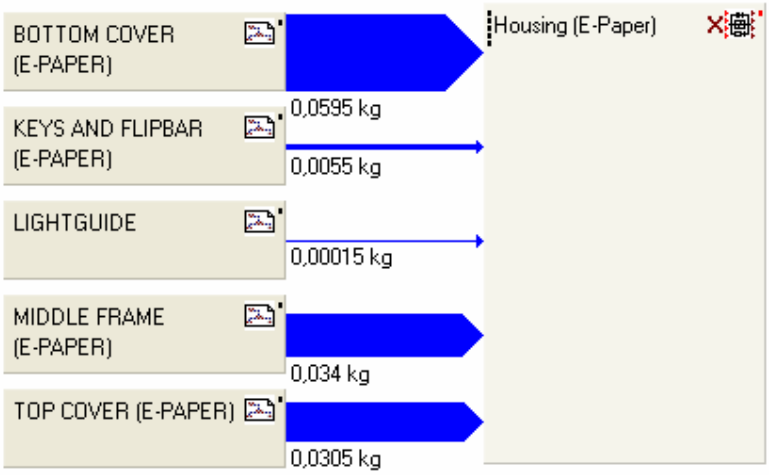
ILIAD MODULE (E-PAPER)

GaBi 4 process plan: Mass
The names of the basic processes are shown.



HOUSING (E-PAPER)

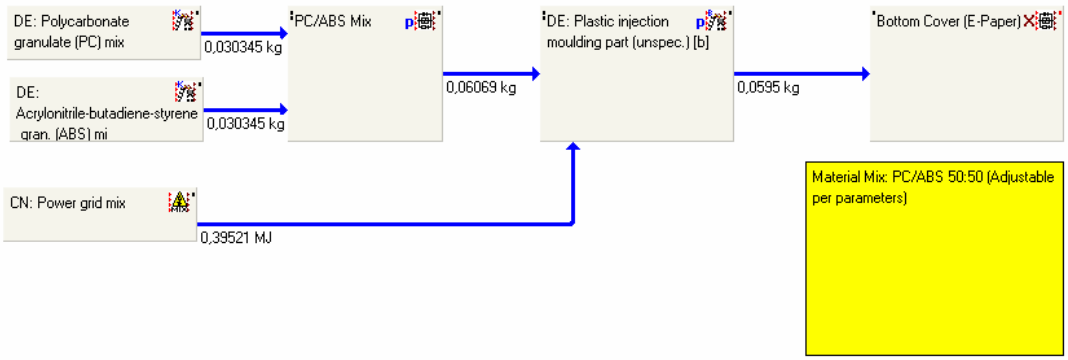
GaBi 4 process plan: Mass
The names of the basic processes are shown.



Appendix 3.3
Data not published in this form earlier – Tablet e-paper production

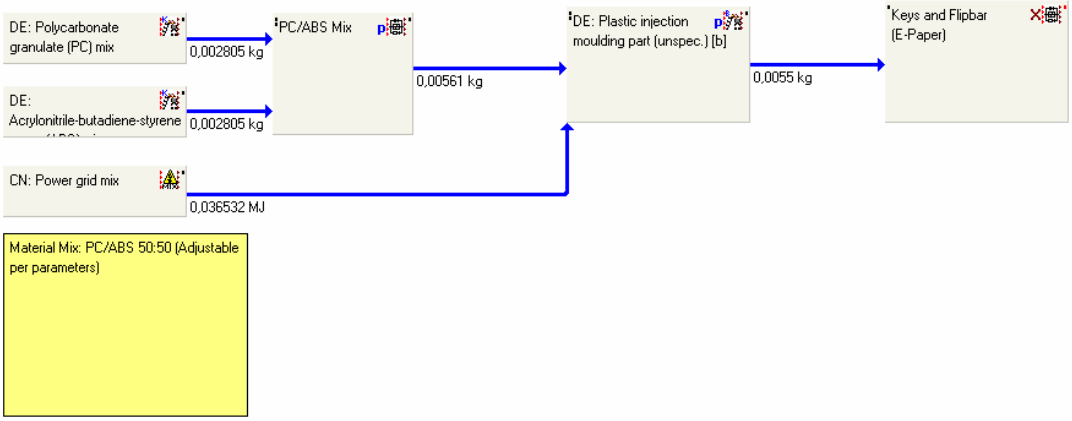
BOTTOM COVER (E-PAPER)

GaBi 4 process plan:Reference quantities
The names of the basic processes are shown.



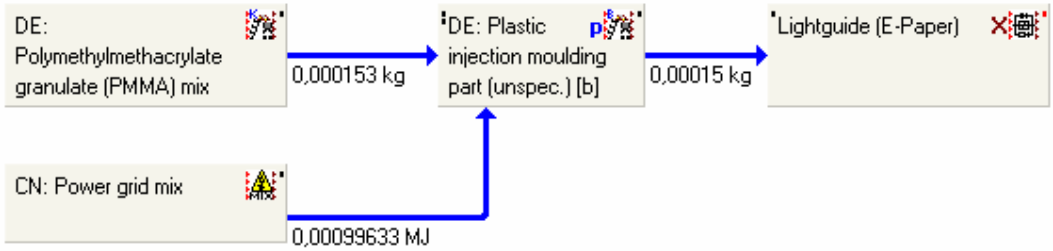
KEYS AND FLIPBAR (E-PAPER)

GaBi 4 process plan:Reference quantities
The names of the basic processes are shown.



LIGHTGUIDE

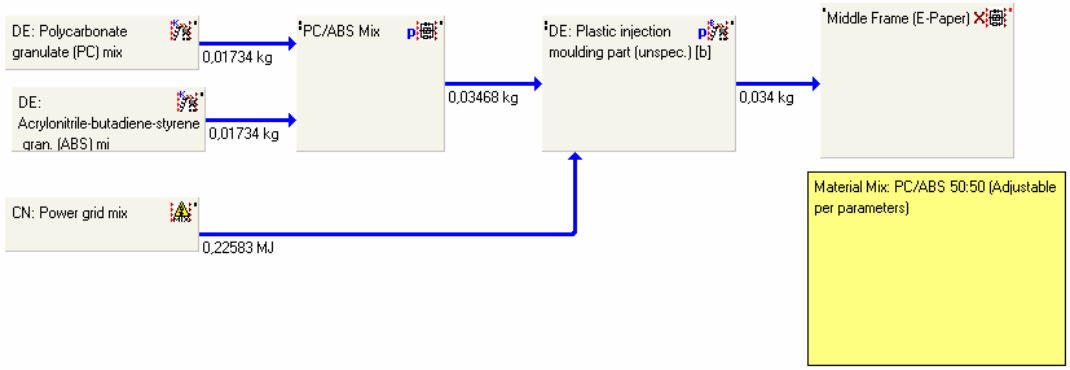
GaBi 4 process plan:Reference quantities
The names of the basic processes are shown.



Appendix 3.3
Data not published in this form earlier – Tablet e-paper production

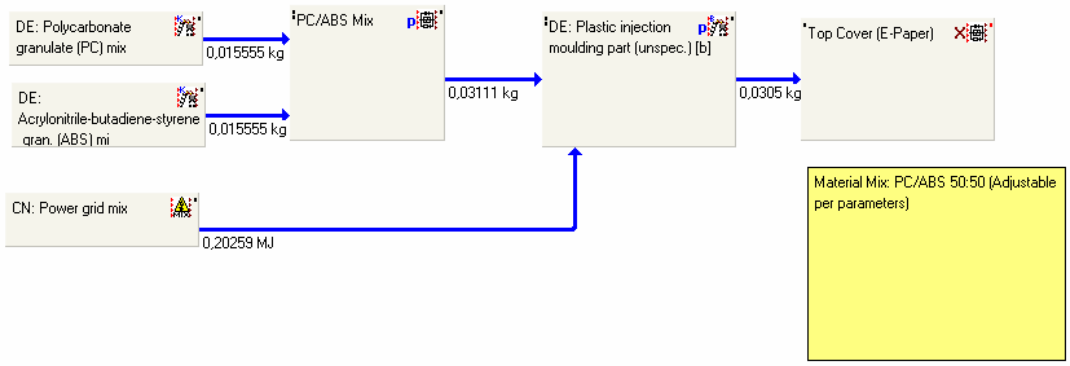
MIDDLE FRAME (E-PAPER)

GaBi 4 process plan:Reference quantities
The names of the basic processes are shown.



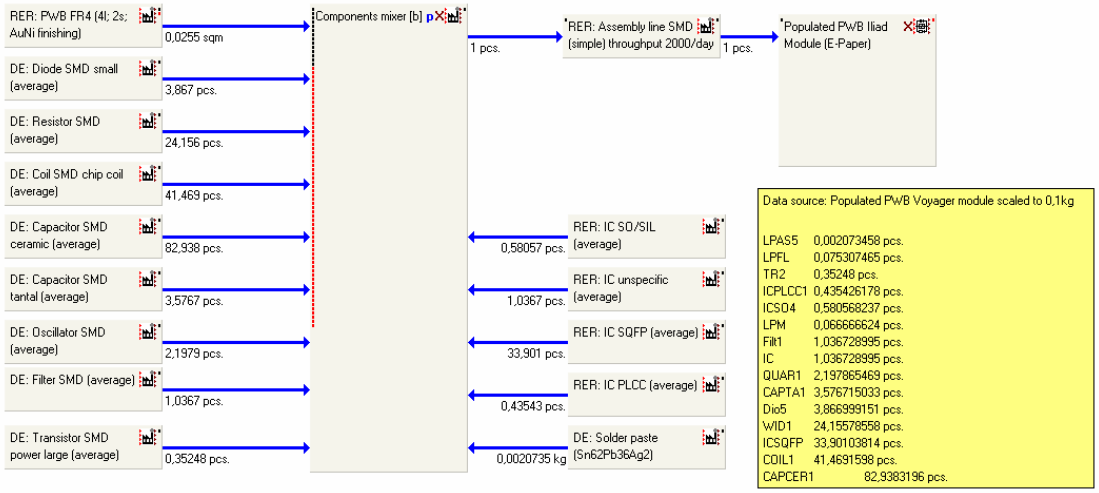
TOP COVER (E-PAPER)

GaBi 4 process plan:Reference quantities
The names of the basic processes are shown.

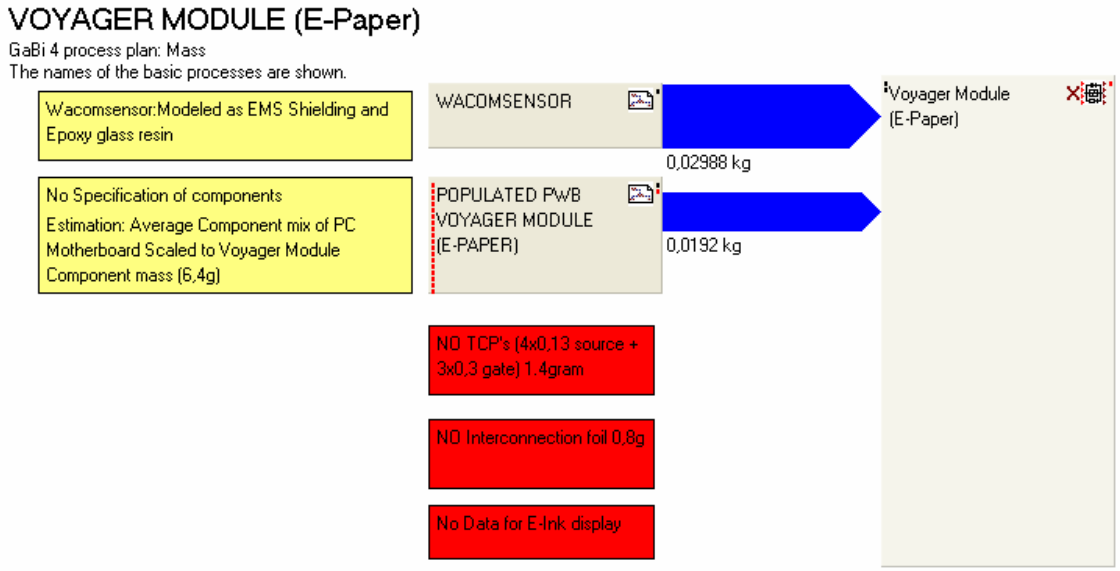


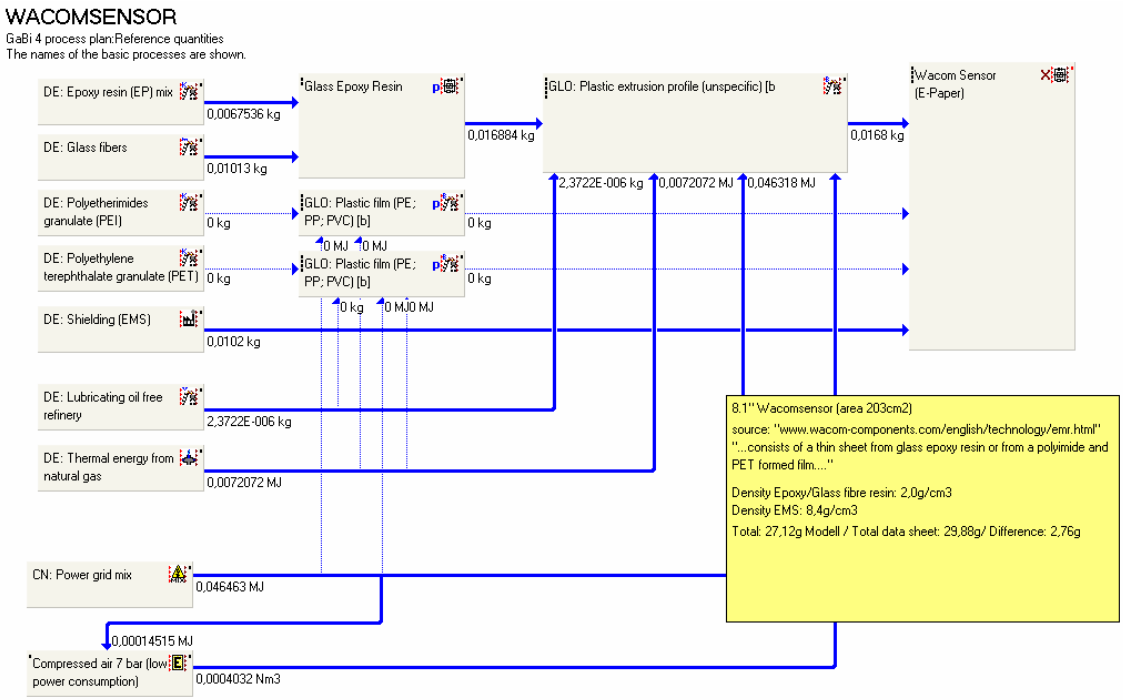
POPULATED PWB ILIAD MODULE (E-PAPER)

GaBi 4 process plan:Reference quantities
The names of the basic processes are shown.



Appendix 3.3
Data not published in this form earlier – Tablet e-paper production





Appendix 3.3
Data not published in this form earlier – Tablet e-paper production