

Content of Volume 1

1. BACKGROUND.....	1
2. OBJECTIVES AND APPROACH.....	3
3. STRUCTURE OF REPORT	4
4. SUMMARY OF RESULTS COVERED BY VOLUME 2.....	5
4.1. DESKTOP STUDIES	5
4.1.1. <i>Dioxin Emissions to Land and Water</i>	5
4.1.2. <i>Domestic solid fuel combustion</i>	6
4.1.3. <i>France — The French Dioxin Emission Inventory</i>	8
4.1.3.1. <i>Municipal solid waste incineration in France</i>	8
4.1.3.2. <i>Dioxin emissions from the French metallurgical industries</i>	8
4.1.3.3. <i>Other French dioxin emission sources</i>	9
4.1.4. <i>Dioxin data from Central European Countries (Poland, Estonia, Latvia and Czech Republic)</i> ...	10
4.1.4.1. <i>Poland</i>	10
4.1.4.2. <i>Estonia</i>	10
4.1.4.3. <i>Latvia</i>	11
4.1.4.4. <i>Czech Republic</i>	11
4.2. EMISSION MEASUREMENT PROGRAMMES	11
4.2.1. <i>Belgium — Emissions from Iron Ore Sintering Plants</i>	12
4.2.2. <i>Denmark — Co-incineration of Hospital Waste with Municipal Solid Waste</i>	12
4.2.3. <i>Germany — Measurement programs</i>	13
4.2.3.1. <i>Dioxin Emissions from Cold wind Cupola Furnaces in Iron Foundries</i>	13
4.2.3.2. <i>Emissions from a titanium dioxide production plant</i>	14
4.2.3.3. <i>Case study on "PCDD/F sulphur analogue compounds" (PCDTs/PCTAs)</i>	14
4.2.3.4. <i>Dioxin emissions from Diesel Engines</i>	15
4.2.3.5. <i>Dioxin emissions from small single room domestic heating stoves</i>	16
4.2.4. <i>Greece — Measurements EAF steel plant, rotary kiln, hospital waste incinerator</i>	16
4.2.5. <i>Portugal — Emission measurements at various industrial facilities</i>	17
5. SUMMARY OF RESULTS COVERED BY VOLUME 3.....	17
5.1. REVISED PCDD/F EMISSION INVENTORIES.....	18
5.2. DEVELOPMENT OF EUROPEAN DIOXIN EMISSIONS FROM 1985-2005	18
6. DISCUSSION.....	18
6.1. DIOXIN EMISSIONS TO AIR, LAND AND WATER.....	18
6.2. EMISSION MEASUREMENT RESULTS COMPARED TO THE EPER LIMIT	19
6.3. ACTUAL AND FUTURE DEVELOPMENTS OF DIOXIN EMISSIONS	21
6.3.1. <i>Waste incineration</i>	21
6.3.1.1. <i>Municipal solid waste incineration</i>	21
6.3.1.2. <i>Hospital and health care waste (hew) incineration</i>	22
6.3.2. <i>Iron and Steel industry</i>	24
6.3.2.1. <i>Iron ore Sintering</i>	24
6.3.2.2. <i>Electric Arc Furnaces (EAF)</i>	25
6.3.2.3. <i>Iron foundries</i>	26
6.3.3. <i>Non-ferrous metal industry</i>	27
6.3.4. <i>Non-industrial sources</i>	29
6.3.4.1. <i>Domestic solid fuel combustion</i>	29
6.3.4.2. <i>Traffic</i>	30
6.3.4.3. <i>Other sources</i>	31
7. CONCLUSION AND RECOMMENDATIONS.....	32
7.1. EMISSION INVENTORIES	32
7.2. WASTE INCINERATION.....	33
7.2.1. <i>Municipal solid waste incineration</i>	33
7.2.2. <i>Hospital waste incineration</i>	34
7.3. IRON AND STEEL INDUSTRY	35
7.3.1. <i>Iron ore sintering</i>	35
7.3.2. <i>Electric arc furnaces</i>	35
7.4. NON-FERROUS METAL INDUSTRY	36

7.4.1.	<i>Zinc recovery from EAF filter dusts</i>	36
7.5.	MISCELLANEOUS INDUSTRIAL SOURCES	37
7.6.	NON-INDUSTRIAL EMISSION SOURCES	38
7.6.1.	<i>Domestic solid fuel combustion</i>	38
7.6.2.	<i>Other sources</i>	39
8.	EMISSION TREND 1985 – 2005	39
9.	TABLES AND FIGURES	41
10.	ACKNOWLEDGEMENTS	50
11.	REFERENCES	51
12.	GLOSSARY AND LIST OF ABBREVIATIONS FOR VOLUMES 1-3	56