

***XEROX TONER FACILITY
ANNUAL ENVIRONMENTAL
REPORT 2010***

**Xerox Technology Park Dundalk
Licence Register No. P0508-02**

March 2011

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Section 1: Introduction

1.1 Licence Number - Licence Register Number P0508-02.

1.2 Name and location of Site - Xerox Technology Park,
Dundalk,
Co. Louth.
Tel. 042 938 7000
Fax: 042 938 7003

1.3 Description of the activities on site

Toner Facility

The colour toner facility at the Technology Park in Dundalk has a capacity to produce 3,400 tonnes of toner material per year. Toner is used in Xerox photocopying and printing devices.

There are two identical production lines supplying a total of four sub-lines. Each production line is capable of producing 1,700 tonnes per year. The process involves the extrusion of a number of raw materials in appropriate ratios to form different colour toner products followed by granule size reduction, classification, powder surface treatment, screening and filling / packaging.

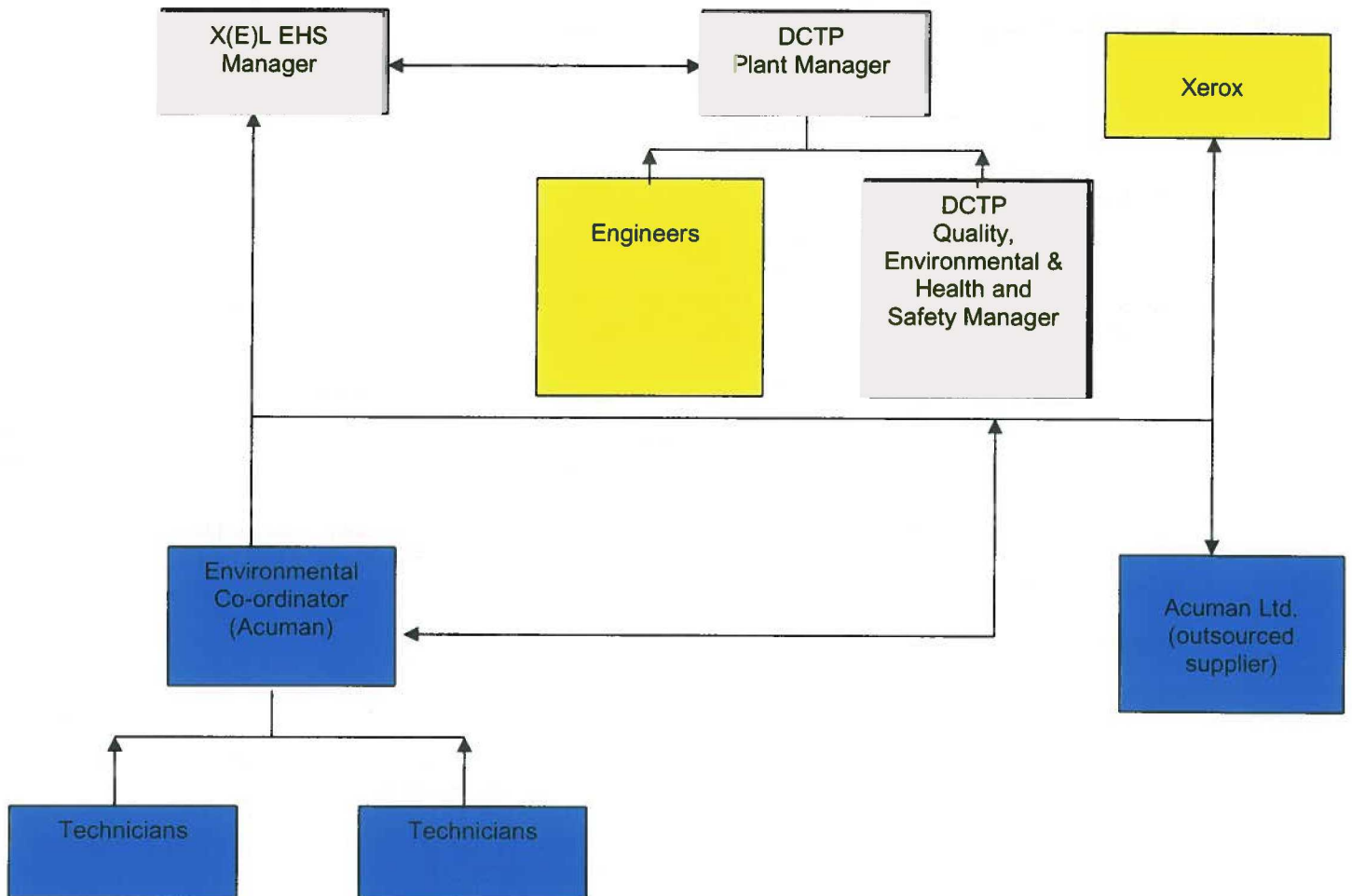
The Toner facility is involved in the production of a new toner variant known as EA toner. The base EA toner powder is manufactured in the U.S.A while the surface treatment (blending), filling and packaging occurs in the Dundalk Toner Facility

1.4 Company Environmental Policy:

The company environmental policy commits to:

- Giving the protection of the environment and the health and safety of its employees, customers and neighbours priority over economic considerations and this will not be compromised.
- Ensuring that all Xerox operations, services and products are at a minimum in full compliance with applicable legal requirements and Xerox Corporate standards.
- Conducting all Xerox operations and services in a manner that safeguards health, prevents pollution and conserves valuable resources and materials.
- Providing all resources necessary to continuously improve workplace safety and environmental protection.
- Establishing environment health and safety improvement objectives and targets and regularly review progress against designated goals.
- Communicating this documented policy, responsibilities and legal requirements to all Xerox employees, suppliers and contractors and make this policy available to the public

1.5 Company Organisational Chart for Environmental Management



Overall responsibility for the environment rests with the plant manager.

The EHS Department is responsible for:

- Carrying out reporting
- Monitoring
- Sampling
- Documentation management
- Waste contract management
- Expert guidance on environmental issues

Section 2: Summary Information

2.1 Monitoring Data

2.1.1 Emissions to Sewer

1 Toner Facility – Emissions to Sewer

Table 2.1.1: Summary table for emissions to sewer at Emission Reference Number SE-1

Parameter	Mass Emissions 2009 (Kg)	Mass Emissions 2010 (Kg)	Licensed Mass Emissions (Kg)
Volume (M ³)	6651 (m ³)	8003 (m ³)	42,340 (m ³)
PH	-	-	-
Chemical Oxygen Demand	275	354	4234
Total Suspended Solids	104	70	1715.5
Oils, fats and greases	39	39	423.4
Ortho-phosphate	7	9	1058.5
Detergents (as MBAS)	0.7	0.2	-

Table 2.1.2: Non-compliant emissions to sewer at Emission Reference Number SE-1

Date	Non-Compliance	Cause	Corrective Action
January – December 2010*	pH marginally outside specified limits of 6-9	Caused by inhibitor dosing of cooling towers	Cooling tower dosing system Cooling towers cleaned dosing system checked Actions improved pH readings.
January – December 2010*	Hourly trade effluent flow marginally outside specified limit of 4.8m ³ /hr	Cooling tower blow-down.	Tighter control of dosing system.
31 st December 2010*	Surface water sample not taken.	Fire water retention pond frozen in December 2010.	Samples taken in January instead and reported as 2010 figures

* Reported in Quarterly Effluent Monitoring Reports

2.1.2 Emissions to Surface Water

Table 2.1.3: Quarterly Analysis of Surface Water Samples

	Emission Reference Number SW-1				Emission Reference Number SW-2			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
pH (pH units)	7.6	7.8	7.6	7.8	8.6	9.6	8.8	8.2
Chloride (mg/l)	20.5	18.1	17.9	24.4	17.6	14.1	12.4	22.6
BOD (mg/l)	2	<2	<2	<2	<2	<2	<2	<2
Temp. (°C)	13.6	5	10	2	13.6	4.5	11	4

2.1.3 Emissions to Atmosphere – Toner Facility

Table 2.1.4: Summary table for emissions to atmosphere at Toner facility

Parameter	Mass Emissions (2009)	Mass Emissions (2010)	Licensed Mass Emissions*
Volumetric Air Flow (m ³)	345,704,002	323,969,743	1,391,052,960
Particulates (Kg/yr)	89.99	47.79	9372.85

2.2 Agency Monitoring and Enforcement

Xerox self-assessment monitoring programmes were generally in line with monitoring results obtained by the Agency in 2010.

2.3 Energy and Water Consumption

2.3.1 Energy Consumption

Table 2.3.1: Summary table of energy consumption for Toner.

Energy Stream	Annual Quantity 2008	Annual Quantity 2009	Annual Quantity 2010	Units	Comments
Electricity consumed Onsite	17,075,166	14,132,585	14,995,966	kWh	-
Electricity imported	17,075,166	14,132,585	14,995,966	kWh	-
Electricity Generated Onsite (CHP sites only)	0	0	0	kWh	n/a
Electricity Exported Offsite (CHP sites only)	0	0	0	kWh	n/a
Natural Gas Total	2,558,043	2,269,848	2,562,003	kWh	
Natural Gas for CHP	0	0	0	kWh	n/a
Gasoil	0	0	0	litre	n/a
LPG	0	0	0	litre	n/a
Light Fuel Oil	0	0	0	litre	n/a
Medium Fuel Oil	0	0	0	litre	n/a
Heavy Fuel Oil	0	0	0	litre	n/a
Other please - specify	0	0	0	n/a	n/a

2.3.2 Water Consumption

Table 2.3.2: Summary table of water consumption for Toner.

Water Source	Toner Facility 2009	Toner Facility 2010
On-site Ground water	0	0
On-site surface water	0	0
Municipal supply (units m ³)	17,884	19,919

2.4 Environmental Incidents and Complaints

2.4.1 Environmental Incidents

Xerox (Europe) Ltd were unable collect surface water samples in Q4 2010 for point SW-2. This was because the firewater retention pond was frozen. This was included in the quarterly report for the period.

During an inspection carried out by the agency in June 2010. No non-compliances and three observations were identified

2.4.2 Environmental Complaints

There were no environmental complaints in 2010

2.5 Submission of Summary Information

A completed Annual Environmental Report Summary report has been electronically submitted to the Agency and the summary report has been entered into the appendix of this report.

Section 3: Management of the Activity

3.1 Introduction

The Schedule of environmental management objectives and targets and associated environmental management programmes for Xerox Technology Park, have been formulated with the support of business centre management. The following sections are based on the Environmental Management Programme (EMP) for the period 2010 – 2015. The progress made on each individual project in 2010 is detailed in section 3.3 and the proposed EMP for 2010 – 2015 is given in Section 3.4

The overall Objectives and Targets are as follows:

- Cleaner production
- Recovery, re-use and recycling of waste
- Use of natural resources

3.2 Environmental Management Report

The details of the specific projects used to achieve the overall objectives and targets are outlined in the following table. These include the associated targets and achievements and the current status of each project.

Table 3.1: Summary table of Schedule of Environmental Objectives and Targets; Achievements of Environmental Management Programme 2010 – 2015

Objectives		Targets	Achievements	Status
1. Cleaner production Techniques				
1.1	To implement measures to reduce the amount of packaging on final product	To introduce twin-pack to reduce packaging waste.	Corrugate used per unit of final product has been reduced	Project ongoing
2. Recovery, Reuse and recycling of Waste				
2.1	To increase the re-use of Toner cartridges	To re-use 150,000 toner cartridges annually	Reuse has already been proven on products and continues on a 'business as usual' basis. 352,719 cartridges reused in 2010	Project ongoing
2.2	To decrease the amount of pallets recycled with no value-add	To increase the amount of pallets reused within the wider Xerox community. To reduce the number of pallets purchased.	These pallets will subsequently be reused	Project ongoing

Objectives		Targets	Achievements	Status
2.3	To decrease the amount of cardboard recycled with no value-add	To implement a supplier return loop to allow cardboard to be reused	Reduced cardboard recycled figure by diverting to reuse	Project ongoing
3. Use of natural resources				
3.1	Reduce Air Demand and Limit Instrument Air Leaks throughout the Plant.	To maintain minimum instrument air consumption	Monitoring and targeting process established to reduce air leaks throughout the plant.	Project ongoing
3.2	To use the DCTP plant information system to track plant utility usage and make readily available for key energy performance indicators.	Make critical energy readings available for tracking and monitoring	Comprehensive monitoring and targeting programme established to enable energy demand reduction.	Project ongoing
3.3	To reduce the amount of time that the blowers run on Grinder, Classifier and Screener	Assess possible reductions in unnecessary blower power consumption	Measures implemented to allow automatic shutdown idle blowers from grinders and classifiers.	Project ongoing
3.4	To investigate the improvement of freight utilisation	To reduce the number of shipping containers needed to ship Cartridges to Dundalk Colour Toner Plant	Efficiency of Cartridge shipments from the far east increased by 20% in 2010	Project complete

Note: More information is available on site for inspection

3.3 Environmental Management Programme

Environmental management Programme 2010 – 2015

Table 3.2: Environmental Management Programme 2010 – 2015

Programme	Objectives	Targets	Responsibility
1. To increase the use of cleaner production techniques.	To reduce the amount of waste to landfill	Increase the amount of product reused within the process. Introduce measures to limit the amount of waste product produced. Introduce measures to limit the amount of raw material used in the process	Production
2. To increase the percentage of waste reused or recycled	To reduce the amount of waste recycled with specific focus on reuse rather than recycling	To implement measures to reduce the amount of waste to landfill as much as possible and increase the rate of reuse recycling in line with this.	Environmental Department
3. To reduce the use of natural resources	To reduce the energy demand per unit of production	To implement measures to reduce the energy demand per unit of production	Energy manager

3.4 Recommendations from the Energy Audit Report

Table 3.3: Energy Management programmes

Ref	Opportunity	Investment Cost Category	Payback period	Potential Annual Energy Saving		Annual CO ₂ Emissions Savings	Target Date	Assigned to
			(Year)	(kWh)	(€)	(tonne)		
EMP 17	Assess and minimise energy demand impact of New Full Process Products NPI-9011 & NPI-10002	Low Cost / high complexity	Not Quantified	n/a	n/a	n/a	Q4 2011	Area Engineer
EMP 18	Reduce screener energy consumption	Medium Cost / high complexity	Not Quantified	n/a	n/a	n/a	Q4 2011	Area Engineer
EMP 22	Transition from EN16001 certification to ISO 50001	Low Cost / Med Complexity	Not Quantified	n/a	n/a	n/a	Q4 2012	Energy Manager
EMP 23	Review of lighting energy demand and opportunities for improvement	High Cost / Med Complexity	Not Quantified	n/a	n/a	n/a	Q4 2012	Facilities Team



3.5 Pollution Emissions Register

Facility Identification														
Facility Name	Toner Facility - Xerox Technology Park													
Register No.	P0508-02													
Grid Reference	3040N, 3052E													
Reporting Period	January - December 2010													
Production Units	Manufacture of Toner													
Employee Numbers	103													
Pollutant Name	CAS No.	Input	Gross Usage	Air	MOM	Liquid Effluent	MOM	Waste	MOM	Product	MOM	Recovery	Treated	Unaccounted
Titanium Dioxide	13483-57-7	8086	3086	0	E	0	E	143	E	7943	E	0	0	0
Toner - carbon black	N/A	12440	12440	0	E	0	E	1313	E	11127	E	0	0	0
Toluene*	108-88-3	4	4	0	E	0	E	0	E	0	E	0	0	0

* Based on the usage of toluene in laboratory fume-cupboard with venting of vapours to atmosphere

Section 4: Licence specific reports

4.1 Environmental Noise Monitoring

Xerox (Europe) Ltd. commissioned Healthy Buildings International Ltd. to carry out an environmental noise assessment in December 2010. All results were found to be within licensed limits and there was no noise nuisance identified at noise sensitive locations. The full environmental noise report is attached to this report.

4.2 Groundwater Monitoring

Xerox (Europe) Ltd. commissioned Healthy Buildings International Ltd. to carry out an assessment of groundwater in December 2010. All results were found to be within licensed limits. The full groundwater monitoring report is attached to this report.

4.3 Atmospheric Emissions Monitoring

Xerox (Europe) Ltd. commissioned Healthy Buildings International Ltd. to carry out an assessment atmospheric emissions in November 2010. All results were found to be within licensed limits. The full atmospheric emissions monitoring report is attached to this report.

4.4 CCTV Survey

Xerox (Europe) Ltd. commissioned McAllister Bros. Ltd. to carry out a CCTV survey of the pipe work at the facility in September 2010. The recommendations of this report are currently under review. The full CCTV survey report is attached to this report.

4.6 Energy Audit Summary

Xerox (Europe) Ltd. carried out a complete energy audit of the facility. The recommendations of this report have been incorporated into the environmental management programmes for the facility. A summary of the energy audit is attached to this report.

4.6 Summary Report (PRTR Submission)

A completed Annual Environmental Report Summary data table has been electronically submitted to the Agency and the summary table has been entered into the appendix of this report.

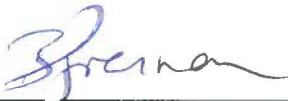
The following reports are included as attachments to this report:

Environmental Noise Report
Groundwater Monitoring Report
Atmospheric Emissions Monitoring Report
CCTV Survey Report
Energy Audit Summary Report
AER Summary Report 2010

5 Declaration

Declaration:

All the data and information presented in this report has been checked and certified as being accurate. The quality of the information is assured to meet license requirements.



Signature

Installation/ Facility manager

(or nominated, suitably qualified and experienced deputy)



Date