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Office of Environmental Enforcement,
South East Region,
Environmental Protection Agency,
P.O. Box 3000,
Johnstown Caste Estate,
Co. Wexford

31st March 2010

RE: 2009 Annual Environmental Report - Greenstar Ltd. – Waterford
Reg. No. W0116-02

Dear Sir/Madam,

Please find enclosed an original and 2 no. copies of the 2009 Annual Environmental Report (AER) for the above referenced facility. The AER file has been uploaded to the EPA website and is a true copy of the original Annual Environmental Report. The AER/PRTR emissions data reporting workbook has also been uploaded to the EPA website.

If you have any queries, please call me.

Yours sincerely,

Michael Watson

0904810/MG/MW
Encs.
c.c. Mr. Suzanne Byrne, Greenstar Ltd.
Mr. Denis Mullally, Greenstar Ltd.

email. info@ocallaghanmoran.com Website: www.ocallaghanmoran.com

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ANNUAL ENVIRONMENTAL REPORT

GREENSTAR LIMITED

SIX CROSS ROADS, WATERFORD

LICENCE NO. W0116-02

JANUARY 2009 – DECEMBER 2009

Prepared For: -

Greenstar Ltd.,
Unit 6,
Ballyogan Business Park,
Ballyogan Road,
Sandyford,
Dublin 18.

Prepared By: -

O' Callaghan Moran & Associates,
Granary House,
Rutland Street,
Cork.

31st March 2010

Project	Annual Environmental Report 2009			
Client	Greenstar Ltd. W0116-02			
Report No	Date	Status	Prepared By	Reviewed By
0481005	2603/2010	Draft	Martina Gleeson PhD	Michael Watson MA.
0481005 Rev A	30/03/2010	Draft 2	Martina Gleeson PhD	Michael Watson MA.
0481005 Rev B	31/03/2010	Final Issue	Martina Gleeson PhD	Michael Watson MA.

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1. INTRODUCTION

This is the 2009 Annual Environmental Report (AER) for Greenstar Ltd. (Greenstar) Materials Recovery Facility (MRF) at Six Cross Roads, Waterford. In January 2009 the Waste Licence for the facility W0116-02 was transferred from Waterford Utilities Services to Greenstar Ltd. The report covers the period from the 1st January 2009 to the 31st December 2009. The content of the AER is based on Schedule F of the Waste Licence (W0116-02) and the report format follows guidelines set in the "*Guidance Note for Annual Environmental Report*" issued by the Environmental Protection Agency (Agency)[1].

[1] EPA (Environmental Protection Agency) 1999 Waste Licensing – Draft Guidance on Environmental Management Systems and Reporting to the Agency

2. SITE DESCRIPTION

2.1 Site Location and Layout

The facility is located at Six Cross Roads, Carriganard, Butlerstown, Co Waterford and is accessible from the Six Cross Roads, just south of the Waterford by-pass (R710). The surrounding area to the north, south and east of the facility is occupied by industrial and commercial premises. The facility is bordered to the west by a cul de sac third class road and agricultural land.

2.2 Waste Management Activities

A revised licence was issued in March 2008 permitting Greenstar to accept and process up to 70,000 tonnes of waste per annum, comprising non-hazardous household and commercial, industrial and construction and demolition wastes. The existing plant used at the facility is listed on Table 2.1.

Table 2.1 Existing Plant

No.	Plant	Model	Operational Capacity
1	Loading Shovel	Volvo L90 F	50 hr/wk
1	Track Machine	Cat	50 hr/wk
1	Forklift	Linde	50 hr/wk
1	Power Washer	PWP	10 hr/wk
1	Tractor Unit	Scania	20 hr/wk
1	Baler	Presona LP 40 BH	50 hr/wk
1	Weighbridge	Precia Molen I-200	50 hr/wk

2.2.1 Waste Types

The facility is licensed to accept a maximum of the following waste types and quantities, as specified in Schedule A of the Licence: -

- Household and Commercial (30,000 tonnes)
- Construction & Demolition (20,000 tonnes)
- Industrial Non-Hazardous Solid (20,000 tonnee.

No hazardous wastes or liquid wastes are accepted.

2.2.2 Waste Handling

Waste Processes

All waste is processed internally. Incoming waste is weighed at the weighbridge and then unloaded in the materials recovery building. It is then separated into fractions, which are then compacted and loaded onto trailers for transfer off-site to appropriately licensed facilities. All cardboard and paper is baled in the on-site baler and then loaded onto trailers for transfer off-site. Mobile plant is used – front loaders, track machine and fork lift – to move waste, feed the on-site baler and load the bulk and baled wastes.

Civic Amenity Area

The civic amenity area is located to the front of the materials recovery building. Waste is weighed at the weighbridge and then offloaded by the public within the building. The waste is then moved to designated storage areas by site staff and compacted and loaded onto trailers for transfer off-site to appropriately licensed/permitted facilities.

3. EMISSION MONITORING

Greenstar implements the comprehensive environmental monitoring programme specified in the Licence to assess the significance of emissions from site activities. The programme includes surface water, noise and dust monitoring. The monitoring locations are shown on Figure 3.1.

The monitoring results are submitted to the Agency at quarterly intervals. An overview of the results of the monitoring is presented in this Section, with summary data in tables included below.

3.1 Surface Water Monitoring

Surface water monitoring was carried out quarterly at three locations (SW-1, SW-2 and SW-3). The locations initially identified in the application for the original licence (W0116-01) were selected on the understanding that run-off from roofed and paved areas of the facility discharged to the open stream on the western side of the access road. However, following a survey of the drainage system in May 2008, it was found that runoff discharged to a culverted stream on the eastern side of the access road. It was therefore decided to relocate the monitoring points to the culverted stream and the Agency was informed of this in Q2 2008.

The receiving stream runs from the New Ring Road to the Six Cross Roads and is culverted from the start of the Industrial Estate to the Six Cross Roads. The revised monitoring locations include the surface water discharge from the facility and up and downstream of the discharge as shown on Figure 2.1. SW-1 is located to the north and upstream of the facility. SW-2 is at the discharge from the facility and SW-3 is to the south and downstream, where the stream is not culverted. This is the closest accessible downstream location.

The range of analysis was as specified in Schedule C of the Waste Licence and includes quarterly monitoring of pH, electrical conductivity, Chemical Oxygen Demand (COD), total ammonia, suspended solids and mineral oils. There are no Emission Limit Value (ELV) or Trigger Levels set in the Licence. Greenstar has set proposed trigger levels for the surface water emission which were incorporated into the reporting of surface water monitoring at the site commencing in Q1 2009. The proposed trigger levels apply to SW-2 only. The results are included on Tables 3.1 to 3.3.

In general the water quality at SW-1, upstream of the facility is not good and is impacted generally by activities in the surrounding area including commercial/industrial activities and farming.

In Q1 2009 the TSS levels exceeded the proposed trigger levels at SW-2 however at the time of sampling there was a low flow at the monitoring point. The TSS exceedance was attributed to the disturbance of sediment while sampling.

In Q2 2009 the COD and TSS levels exceeded the proposed trigger levels at SW-2. The sample at SW2 was taken following a heavy rainfall event preceded by a long dry period. It is considered likely that the elevated TSS is related to dust on the paved areas and roofs.

In Q3 2009 the COD and Total Ammonia levels exceeded the proposed trigger levels at SW-2. The cause of the elevated levels is not known, however they may be linked to the fact that the sample was taken following a heavy rainfall event, which had been preceded by a long dry period.

In Q4 2009 all of the parameters at SW2 were below the proposed trigger levels with the exception of COD. The cause of the elevated COD levels is not known, however there was no evidence of any spill in the yard prior to or on the day of sampling.

The discharge from the facility did not have any significant adverse effect on the receiving water course in 2009. Low flow from the facility and the dilution capacity of the stream are factors in minimising any potential impacts.

Table 3.1 Surface water Monitoring Results 2009: SW-1

	Units	Q1	Q2	Q3	Q4
pH	pH units	8	7.43	7.52	7.63
Temperature	°C	-	13.6	16	10.5
Conductivity	mS/cm	0.23	0.591	0.377	0.37
COD	mg/l	<7	27	9	15
Total Ammonia	mg/l	<1	0.18	0.19	0.1
Suspended Solids	mg/l	<10	12	<10	<10
Mineral Oils	mg/l	<0.01	0.022	<0.01	<0.01

Table 3.2 Surface water Monitoring Results 2009: SW-2

	Units	Q1	Q2	Q3	Q4	Proposed Trigger Level
pH	pH units	7.96	7.62	7.8	7.61	5.5 – 9.0
Temperature	°C	-	14.4	18	9.7	-
Conductivity	mS/cm	0.175	0.56	0.943	0.284	1.000
COD	mg/l	22	143	269	64	40
Total Ammonia	mg/l	1	1.71	22.62	0.1	3.78
Suspended Solids	mg/l	148	173	58	62	100
Mineral Oils	mg/l	<0.01	<0.01	<0.01	<0.01	1.0

Table 3.3 Surface water Monitoring Results 2009: SW-3

SW-3	Units	Q1	Q2	Q3	Q4
pH	pH units	8	7.49	7.89	7.83
Temperature	°C	-	7.3	16	10.6
Conductivity	mS/cm	0.228	0.427	0.387	0.301
COD	mg/l	<7	9	9	<5
Total Ammonia	mg/l	<1	0.29	0.37	0.1
Suspended Solids	mg/l	<10	12	<10	<10
Mineral Oils	mg/l	<0.01	<0.01	<0.01	<0.01

3.2 Noise Survey

Greenstar carried out the bi-annual noise surveys at the facility in February and July 2009 and the results were submitted to the Agency in April and August 2009. Monitoring was carried out at three onsite monitoring locations (N1, N2 and N3) and two offsite monitoring locations (N4 and N5). The surveys were conducted when the site was fully operational. The surveys concluded that the facility was in compliance with its licence requirements. The results are included on Table 3.4 and 3.5.

In the February survey, noise levels recorded at the offsite stations N4 and N5 were 55 and 67 dB respectively. Noise emissions from the Greenstar facility were not audible at these stations. Levels recorded at both stations were dominated by public road traffic. Schedule B.4 of waste licence W0116-02 specifies that noise emissions from the facility should not exceed 55 dB during daytime hours at any offsite sensitive locations. As facility emissions were not audible at N4 or N5, the licence was complied with.

In the July survey $L_{Aeq\ 30\ min}$ levels recorded at the offsite stations N4 and N5 were 55 and 67 dB respectively. Noise emissions from the Greenstar facility were not audible at these stations, and levels were dominated by public road traffic. As facility emissions were not audible at N4 or N5, again the conditions set in the licence were complied with.

Table 3.4 Noise Monitoring Results 2009: February 2009

Station	Time	LAeq 30 min dB	LAF10 30 min dB	LAF90 30 min dB	Noise audible
N1	1340-1410	67	67	46	Emissions from trucks and cars manoeuvring around site and through entrance dominant. No offsite emissions apart from truck manoeuvring at adjacent premises 1351-1353.
N2	1307-1337	71	71*	40*	SLM 0.5 m from wall for safety, and thus noise levels presented incorporate **-3 dB** correction. Emissions from trucks manoeuvring nearby dominant. Truck idling at 4 m for first 5 min intrusive. No offsite emissions audible.
N3	1413-1443	59	61	51	Emissions from manoeuvring cars and trucks around site and through entrance dominant. Mobile plant also audible in buildings. No offsite emissions audible apart from sporadic vehicle movements on adjacent site.
N4	1450-1520	57	59	43	No site emissions specifically audible, although low level emissions audible from several commercial premises to N. Intermittent truck movements audible on adjacent access road. Frequent traffic through adjacent junction significant. Also cars x4 passing adjacent to SLM. Birdsong and crows.
N5	1523-1553	66	69	45	No site emissions specifically audible, although emissions audible from several commercial premises to N and W, including power hose for 10 min at nearby premises. Frequent traffic on adjacent public road. Birdsong and crows.

SLM: Sound level meter

Table 3.5 Noise Monitoring Results 2009: July 2009

Station	Time	LAeq 30 min dB	LAF10 30 min dB	LAF90 30 min dB	Noise audible
N1	1407-1437	68	69	54	Vehicle movements through entrance and weighbridge dominant, particularly occasionally idling trucks. No other emissions audible apart from sporadic traffic passing entrance.
N2	1438-1508	75	76*	58*	SLM 0.5 m from wall for safety, and thus noise levels presented incorporate **-3 dB** correction. Truck and other vehicle movements almost continuously present around yard, and dominant. During lulls, FEL engine and reversing alarm audible in buildings. Truck passed adjacent to SLM twice.
N3	1511-1541	62	66	51	Yard and gate movements less frequent, although still dominant. FLT and FEL audible in buildings. No offsite noise audible other than FLT at adjacent yard.
N4	1545-1615	55	57	43	No site emissions audible. Frequent local traffic through junction dominant. Also birdsong, rustling vegetation and distant thunder. Drizzle beginning to fall on overhead leaves audible. Cars on adjacent access road x10.
N5	1620-1650	67	70	41	No facility emissions audible. Local road traffic dominant. Rustling vegetation and birdsong.

SLM: Sound level meter
FEL: Front end loader
FLT: Forklift truck

3.3 Dust Monitoring

Greenstar conducted dust monitoring on two occasions (June and August) at four on-site locations (D1, D2, D3 and D4). The licence only requires monitoring at three on-site locations, however following discussions with the Agency during an Audit on March 19th 2009 in relation to the previous exceedances of the dust deposition limit, an extra dust gauge was erected at the facility (D4). This location is in the centre of the yard at the facility and is believed to be representative of the dust generated solely at the facility. The licence requires that these monitoring events be carried out between May and September. The results are included in Table 3.6.

The dust deposition limit (350 mg/m^2/day) was only exceeded at D2 and D3 in the June monitoring event with levels of 397 mg/m^2/day and 429 mg/m^2/day respectively. There were no exceedances in the August monitoring event.

The exceedence was likely associated with contributions from various off site sources, as well as the facility. Location D4 which is in the middle of the site was not exceeded. D2 is on the western boundary of the facility, adjacent to the public access road to the industrial estate. D3 is on the north-eastern boundary, adjacent to a neighbouring warehousing facility. The weather was particularly dry during the monitoring period. The traffic movements and other activities on these adjoining areas are potentially significant off-site sources of the dust recorded at the monitoring points. There is also significant dust generated by traffic on the public access road to the industrial estate.

Given the facility location within an industrial area and bordered by an access road, it is not possible to determine the level of dust emission from the Greenstar site alone, although the levels are not expected to be significant. The primary source of dust emissions are vehicle movements on paved open yard areas during dry periods. The Greenstar yard area is relatively small (1,600 m^2) and therefore vehicles have to travel slowly, which reduces the potential for dust generation. Waste unloading and processing is carried out internally and there are negligible fugitive emissions from this source.

Table 3.6 Dust Monitoring Results 2009

	June '09	**August '09**	**Deposition Limit mg/m^2/day**
D1	269	187	350
D2	397	346	350
D3	429	220	350
D4	345	342	350

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CLIENT

Greenstar

TITLE

Monitoring Locations
Waterford

LEGEND

- Commercial/Industrial unit
- Private Dwelling
- Agricultural Land
- Surface Water Monitoring Point
- Dust Monitoring Point
- Noise Monitoring Point

FIGURE NUMBER

3.1

Scale

Not To Scale

Revision

A

4. SITE DEVELOPMENT WORKS

4.1 Specified Engineering Works

Table 4.1 shows the engineering works which were scheduled for 2009. There are no engineering works planned for 2010. The Agency will be notified of all engineering works as per Condition 3.2 of the Licence.

Table 4.1 Site Infrastructural Works in 2009

Description of Works	Scheduled Date	Proposed Date of Completion	Date of Completion
Moving of Septic Tank	01.03.09	01.04.09	April 2009
Refurbishment of Welfare Facilities	01.06.09	01.07.09	July 2009

In 2009, an upgrade of the sewer drainage system was carried out at the facility as agreed with the Agency. The upgrade involved the construction of a new 11,000 litre underground waste water storage tank in the main yard area and the subsequent sealing of the septic tank. The change of location of the waste water storage tank also necessitated the construction of an additional sewer and connections to the new tank.

4.2 Summary of Resource & Energy Consumption

Table 4.3 presents an estimate of the resources used on-site during the reporting period.

Table 4.3 Estimated On-Site Resource Use

Resources	Quantities
Diesel	18,000 litres
Ad Blue	1,000 litres
Hydraulic Oil	410 litres
Engine Oil	600 litres
Anti Freeze	205 litres
Electricity	61,040 units

4.3 Bund Integrity Test

Bund integrity tests were carried out in April 2008 bund testing will be carried out again in 2011 in accordance with the Licence.

5. WASTE RECEIVED AND CONSIGNED FROM THE FACILITY

Table 5.1 shows the total quantities of waste received and consigned from the facility in 2009, Table 5.2 shows the quantities for 2008 and Table 5.3 shows the quantities of waste received and consigned in previous years. A breakdown of the waste types is provided in accordance with the European Waste Catalogue and Hazardous Waste (EWC/HWL) list.

The total amount received in 2009 was 22,366.16 tonnes. The total amount consigned was 22,650.92 tonnes. There is a difference of 284.76 tonnes more consigned than received in 2009. This is due to the consignment of approximately 5 skips which were scrapped at the facility in 2009 and also C&D waste removed from the site during the installation of the septic tank in the yard. The recovery rate is estimated at 100% as all of the wastes were sent to recovery facilities and none of the waste was sent directly to landfill.

All the wastes consigned from the site went to recovery facilities agreed in advance with the Agency.

Table 5.1 Waste Received & Consigned 2009

EWC	Description	Waste In	Waste Out
15 01 01	Cardboard Packaging	698.28	914.00
15 01 02	Plastic Packaging	23.64	7.26
15 01 03	Wooden Packaging	2.30	92.22
			463.58
			285.70
15 01 04	Aluminium	0.12	
	Aluminium Cans	46.68	43.54
15 01 06	Mixed Packaging	2,184.28	77.08
			497.68
			253.18
			479.28
17 01 07	C&D Inert Mixed	2,892.81	4,072.54
17 05 04	C&D Inert Mixed	355.63	
	Soil & Stones	36.88	
17 08 02	Plasterboard	14.16	
19 12 12	C&I Dry Mixed	1.06	4,277.07
	MSW Municipal Mixed		10,652.37
20 01 01	Cardboard & Paper	13.34	45.00
	Multigrade Baled		47.00
	Multigrade Loose		50.56
	Recy Paper		247.48
	Multigrade for Rebaling		25.44
20 01 02	Glass	10.24	
20 01 38	Wood	914.30	11.04
20 01 39	Plastic	0.28	
20 01 40	Metal	113.55	108.90
20 03 01	MSW Municipal Mixed	7,462.46	
20 03 07	C&I Dry Mixed	7,596.15	
	Total Received	**22,366.17**	
	Total Consigned		**22,650.92**
	Total Recovered		**21,636.22**
	Total Disposed		**479.28**
	Recovery Rate		**95.5%**

Table 5.2 Waste Received & Consigned 2008

EWC	Description	Waste In	Waste Out
15 01 01	Cardboard Packaging	948.01	1,116
			22.52
15 01 02	Plastic Packaging	22.65	52.70
15 01 03	Wooden Packaging		23.34
			317.24
15 01 04	Aluminium	0.38	2.04
	Aluminium Cans	53.04	16.12
			18.80
15 01 06	Mixed Packaging	1,487.58	6.64
15 01 07	Glass Packaging	121.05	142.38
17 01 07	C&D Inert Mixed	993.10	4,785.93
17 05 04	C&D Inert Mixed	3,756.39	
	Soil & Stones	2.38	
17 08 02	Plasterboard	89.75	
19 12 07	Wood	25.84	
19 12 12	C&I Dry Mixed	52.13	25.18
			326.40
			101.28
			8,727.14
	MSW Municipal Mixed		567.72
			1,594.36
			9,151.75
20 01 01	Cardboard & Paper	15.16	469.82
	Newsprint		26.28
	Recy Paper	2.60	48.74
			22.38
20 01 38	Wood	1,264.33	822.92
			143.56
20 01 40	Metal	128.85	182.86
20 03 01	MSW Municipal Mixed	9,135.25	
20 03 07	C&I Dry Mixed	10,497.24	
	Total Received	**28,595.73**	
	Total Consigned		**28,714.10**
	Total Recovered		**27,794.87**
	Total Disposed		**919.3**
	Recovery Rate		**96.80%**

Table 5.3 – Waste Received and Consigned since 2006

	2008	2007	2006
Total Received	28,595.73	31,010	34,643
Total Consigned	28,714.10	34,854	34,978
Recovery Rate	96.8%	79%	62.66%

6. ENVIRONMENTAL INCIDENTS AND COMPLAINTS

6.1 Incidents

The routine environmental monitoring identified just one incident in 2009. The dust deposition limit (350 mg/m^2/day) specified in the Licence was exceeded at two monitoring locations in June as described in Section 3. The Agency was informed of the exceedance in accordance with Condition 9.3 of the Licence. There were no other reportable incidents in 2009.

6.2 Register of Complaints

Greenstar maintains a register of complaints received in accordance with Condition 3.13 of the waste licence. No complaints were received in 2009.

7. ENVIRONMENTAL DEVELOPMENT

7.1 Environmental Management Programme Report

In compliance with Conditions 2.1 and 2.2 of the Licence, Greenstar has established an Environmental Management System (EMS) for the facility. As part of this EMS Greenstar has developed a list of environmental, management, operating and maintenance procedures, details of which are outlined in Appendix 1. With the exception of the Schedule of Objectives and Targets, which are amended annually as part of the AER the environmental management programme was not amended in 2009. The schedule of Objectives and Targets, including their status for 2009 (Table 7.1), as well as the proposed Objectives and Targets for 2010 (Table 7.2) are presented below.

7.1.1 Schedule of Objectives 2009

The objectives that were achieved during this reporting period are outlined in Table 7.1. Details on the progress made are also included on the table and an evaluation of what has been achieved to date is presented below.

Objective 1 - Implementation of an improved Environmental Management System
An updated EMS was implemented in 2009.

Objective 2 - Reduce the energy/fuel usage at the facility. Monitor diesel, water and electricity usage quarterly
The resource usage has been monitored and the diesel usage has dropped considerably.

Objective 3 - Continuous collection and segregation of waste on-site
The collection and segregation of waste on site is ongoing.

Objective 4 - Review the dust monitor locations and causes of dust on site
A new dust location has been placed in the middle of the site. Monitoring results for August have shown an improvement in dust levels at the facility.

Objective 5 - Improve on-site storage facilities
Improvements to the storage facilities are ongoing.

Objective 6 - Environmental awareness and training to be carried out as necessary throughout the year
Training was carried out as needed during the reporting period.

7.1.2 Schedule of Objectives 2010

A schedule of targets and objectives for 2010 has been set by the management of the facility. These objectives are outlined in Table 7.2.

7.1.3 Site Management Structure

Management and Staffing structure: -

Name: Declan O'Reilly

Responsibility: General Manager

Experience: 7 years experience waste management experience; has completed the FÁS waste management course.

Name: Denis Mullally

Responsibility: Operations Manager

Experience: 5 years experience waste management experience; has completed the FÁS waste management course.

Name: Ivan Cummins

Responsibility: Facility Supervisor

Experience: 26 years experience waste management experience.

7.1.4 Staff Training

Staff training carried out during the year included baler lockout tagout training in January 2009, manual handling training in March 2009 and Fire Warden training in October 2009.

Table 7.1 Schedule of Objective and Targets 2009

No	2009 Objective	Responsibility	Update
1	Implementation of an improved Environmental Management System	Facility Manager	Implemented
2	Reduce the energy/fuel usage at the facility. Monitor diesel, water and electricity usage quarterly	Facility Manager	Implemented and Diesel usage down considerably
3	Continuous collection and segregation of waste on-site	Facility Manager	Ongoing
4	Review the dust monitor locations and causes of dust on site	Facility Manager	New dust location on trial in middle of site
5	Improve on-site storage facilities	Facility Manager	Ongoing
6	Environmental awareness and training to be carried out as necessary throughout the year	Facility Manager	Ongoing

Table 7.2 Schedule of Objective and Targets 2010

No	Objective	Target	Responsibility	Timescale
1	**Awareness and Training**	Continue to ensure that appropriate training is carried out specific to all site personnel as per the Company's established Training Matrix.	Site Management	Ongoing
		Spill training, inclusive of a spill scenario to be carried out.		
2	**Energy & Resource Consumption**	Summarise energy and resource usage on a quarterly basis with a view to reducing consumption	Site Management	Ongoing
		Review and implement findings of Energy Audit		
3	**Review and Assess the Effectiveness of Nuisance Control Procedures**	Continually review and assess all nuisance control procedures to ensure minimal impact on the surrounding area.	Site Management	Ongoing
4	**Pollution Prevention**	Strive to ensure that monitoring results comply with the licence limits and investigate any exceedances of emission limit values.	Site Management	Ongoing
		Continue to ensure the integrity and maintenance of all drainage infrastructure.		
5	**Customer Communication & Awareness**	Increase route and truck efficiency.	Site Management	Ongoing
		Improve Customer Recycling Rates through the implementation of AMCS Environmental Reporting System		
6	**Operations Management**	Review segregation organisation within the Material Recovery Building	Site Management	Q3 2010

7.2 Communications Programme

All correspondence received and sent to the Agency (except commercially sensitive information) is available to the public to view at the facility.

Records available for public inspection on site include:-

- Environmental Policy,
- Waste Licence,
- Licence Application and Review documentation,
- Monitoring Records,
- Complaints File,
- EPA Correspondence File.

Opening Times for Inspection of Records are from 10 am – 4 pm. Visits to the site should be arranged in advance by ringing the Facility Manager or Supervisor at 1890 600 900.

7.3 Report Financial Provision

Greenstar has accrued over €3,000,000 in funds to provide for any potential environmental liabilities including the unexpected closure of the facility. Greenstar Ltd. has adequate insurance cover for environmental liabilities to €6,500,000 for any one occurrence, which will apply to "sudden identifiable and unintended incidents" that might occur in the decommissioning period.

7.4 Nuisance Control

Greenstar carry out routine site inspections and litter collections including on site, the roadway and boundary fence and daily road cleansing and monitoring. Greenstar has contracted a vermin control company Quality Pest Ltd to carry out nuisance control at the facility.

As mitigation against dust generation Greenstar regularly dampen the site and sweep it with a mechanical road sweeper. The frequency of this cleaning is increased depending on weather conditions.

7.5 European Pollutant Release and Transfer Register

Under the European Pollutant Release and Transfer Register Regulation (EC) No. 166/2006 Greenstar are required to submit information annually to the Agency. A copy of the information submitted to the Agency via the web-based data reporting system is included in Appendix 2.

7.6 Foul water Volume Transported Off-Site

The total amount of foul water removed to an authorised Waste Water Treatment Plant from the facility during the reporting period was 50,880 litres.

8. OTHER REPORTS

In April 2009, Greenstar carried out an Energy Audit at the facility which was submitted to the Agency on the 21st April 2009.

A Decommissioning Plan for the facility was submitted to the Agency in October 2009.

A Firewater Retention Report was submitted to the Agency in November 2009. The Agency required some additional works to be carried out in relation to this report, which have also been completed.

APPENDIX 1

Procedures List

Integrated Procedures		
IP 01	Document & Data Control Procedure	Rev 01, 10/07/09
IP 02	Environmental Aspects & Impacts Procedure	Rev 01, 10/07/09
IP 03	Environmental Legal & Regulatory Requirements Procedure	Rev 01, 10/07/09
IP 04	Environmental Objectives, Targets & Management Programmes Procedure	Rev 01, 10/07/09
IP 05	Competence, Training & Awareness Procedure	Rev 02, 20/01/10
IP 06	Communication & Consultation Procedure	Rev 02, 06/10/09
IP 07	Monitoring, Measurement & Improvement Procedure	Rev 01, 10/07/09
IP 08	Evaluation of Compliance Procedure	Rev 02, 17/08/09
IP 09	Non Conformances, Corrective/Preventive Actions Procedure	Rev 02, 06/10/09
IP 10	EMS Internal Audit Procedure	Rev 02, 20/01/10
IP 11	Management Review Procedure	Rev 01, 10/07/09

Operational Procedures		
OP 01	Waste Acceptance Procedure	Rev 01, 10/07/09
OP 02	Unacceptable Waste Procedure	Rev 01, 10/07/09
OP 03	Waste & Material Storage Procedure	Rev 01, 10/07/09
OP 04	Waste Processing Procedure	Rev 01, 10/07/09
OP 05	Waste Permits & Licences Procedure	Rev 01, 10/07/09
OP 06	Maintenance & Calibration Procedure	Rev 02, 17/08/09
OP 07	Control of Contractors/Visitors Procedure	Rev 01, 10/07/09
OP 08	Civic Amenity Site Procedure	Rev 02, 17/08/09

Environmental Procedures		
EP 01	Office Waste & Energy Management Procedure	Rev 01, 10/07/09
EP 02	Environmental Monitoring Procedure	Rev 01, 10/07/09
EP 03	Emergency Preparedness & Response Procedure	Rev 01, 10/07/09
EP 04	Nuisance Management Procedure	Rev 02, 17/08/09
EP 05	Decommissioning and Aftercare Procedure	Rev 01, 10/07/09
EP 06	Site Infrastructure Procedure	Rev 02, 17/08/09
EP 07	EPA Communications Procedure	Rev 01, 10/07/09

Amendment History

Date	Amendment No.	Procedure No:	Revision No:	Comment	Authorised By
10/04/09	01	All	Draft 01	Issued for comment	Suzanne Byrne
10/07/09	02	All	Rev 01	Official Issue	Suzanne Byrne
17/08/09	03	IP 08, OP 06, OP 08, EP 04 & EP 06	Rev 02	Amendment to include EF-04A(i) Sligo, EF-04B SERCL, EF-0B(i) Sligo & EF-04C SERCL & EF-04C(i) Sligo	Suzanne Byrne
06/10/09	04	IP 09	Rev 02	Amendment to include Communications Database	Suzanne Byrne
20/01/10	05	IP 10	Rev 02	Deletion of Audit Checklist IF 10B	Suzanne Byrne
20/01/10	06	IP 05	Rev 02	Deletion of Procedure Sign off Sheet IF 05B	Suzanne Byrne

Circulation List

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2	Greenstar Limited – Waterford EPA Licence No: W0116-02
3	Greenstar Limited – Sligo EPA Licence No: W0058-01
4	South East Recycling Company Limited EPA Licence No: W0111-01

APPENDIX 2

European Pollutant Release and Transfer Register

Environmental Protection Agency

AER Returns Worksheet

Version 1.1.10

REFERENCE YEAR	2009

1. FACILITY IDENTIFICATION

Parent Company Name	Waterford Utility Services (Waste Disposal) Ltd
Facility Name	Greenstar Limited
PRTR Identification Number	W0116
Licence Number	W0116-02

Waste or IPPC Classes of Activity

No.	class_name
4.2	Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes).
3.11	Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.12	Repackaging prior to submission to any activity referred to in a preceding paragraph of this Schedule.
3.13	Storage prior to submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where the waste concerned is produced.
4.13	Storage of waste intended for submission to any activity referred to in a preceding paragraph of this Schedule, other than temporary storage, pending collection, on the premises where such waste is produced.
4.3	Recycling or reclamation of metals and metal compounds.
4.4	Recycling or reclamation of other inorganic materials.

Address 1	Six Cross Roads
Address 2	Carriganard
Address 3	Butlerstown
Address 4	Co Waterford
Country	Ireland
Coordinates of Location	-7.14587 52.2306
River Basin District	IESE
NACE Code	3821
Main Economic Activity	Treatment and disposal of non-hazardous waste
AER Returns Contact Name	Suzanne Byrne
AER Returns Contact Email Address	suzanne.byrne@greenstar.ie
AER Returns Contact Position	Environmental Executive
AER Returns Contact Telephone Number	01-2947949
AER Returns Contact Mobile Phone Number	
AER Returns Contact Fax Number	01-2947900
Production Volume	0.0
Production Volume Units	
Number of Installations	0
Number of Operating Hours in Year	0
Number of Employees	0
User Feedback/Comments	
Web Address	

2. PRTR CLASS ACTIVITIES

Activity Number	Activity Name
50.1	General

5(c) 50.1	Installations for the disposal of non-hazardous waste General

3. SOLVENTS REGULATIONS (S.I. No. 543 of 2002)

Is it applicable?	
Have you been granted an exemption ?	
If applicable which activity class applies (as per Schedule 2 of the regulations) ?	
Is the reduction scheme compliance route being used ?	

4.1 RELEASES TO AIR

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

RELEASES TO AIR								
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO AIR								
POLLUTANT		METHOD				QUANTITY		
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (As required in your Licence)

RELEASES TO AIR								
POLLUTANT		METHOD				QUANTITY		
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

Additional Data Requested from Landfill operators

For the purposes of the National Inventory on Greenhouse Gases, landfill operators are requested to provide summary data on landfill gas (Methane) flared or utilised on their facilities to accompany the figures for total methane generated. Operators should only report their Net methane (CH4) emission to the environment under T(total) KG/yr for Section A: Sector specific PRTR pollutants above. Please complete the table below:

Landfill: Greenstar Limited

Please enter summary data on the quantities of methane flared and / or utilised			Method Used			
	T (Total) kg/Year	**M/C/E**	**Method Code**	**Designation or Description**	**Facility Total Capacity m3 per hour**	
Total estimated methane generation (as per site model)	0.0				N/A	
Methane flared	0.0				0.0	(Total Flaring Capacity)
Methane utilised in engine/s	0.0				0.0	(Total Utilising Capacity)
Net methane emission (as reported in Section A above)	0.0				N/A	

4.2 RELEASES TO WATERS

SECTION A : SECTOR SPECIFIC PRTR POLLUTANTS

Data on ambient monitoring of storm/surface water or groundwater, conducted as part of your licence requirements, should NOT be submitted under AER / PRTR Reporting as this

RELEASES TO WATERS								
POLLUTANT					QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING PRTR POLLUTANTS

RELEASES TO WATERS								
POLLUTANT					QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION C : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO WATERS								
POLLUTANT					QUANTITY			
			Method Used		SW-2			
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
306	COD	E	Estimate	Estimated based on average rainfall over the year and average results	228.854	228.854	0.0	0.0
238	Ammonia (as N)	E	Estimate	Estimated based on average rainfall over the year and average results	9.61041	9.61041	0.0	0.0
240	Suspended Solids	E	Estimate	Estimated based on average rainfall over the year and average results	202.6598	202.6598	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.3 RELEASES TO WASTEWATER OR SEWER

| PRTR# : W0116 | Facility Name : Greenstar Limited | Filename : W0116_2009.xls | Return Year : 2 31/03/2010 17:02

SECTION A : PRTR POLLUTANTS

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER								
POLLUTANT		METHOD			QUANTITY			
			Method Used					
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

OFFSITE TRANSFER OF POLLUTANTS DESTINED FOR WASTE-WATER TREATMENT OR SEWER								
POLLUTANT		METHOD			QUANTITY			
			Method Used					
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year	F (Fugitive) KG/Year
					0.0	0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

4.4 RELEASES TO LAND

SECTION A : PRTR POLLUTANTS

RELEASES TO LAND							
POLLUTANT		METHOD				QUANTITY	
			Method Used				
No. Annex II	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

SECTION B : REMAINING POLLUTANT EMISSIONS (as required in your Licence)

RELEASES TO LAND							
POLLUTANT		METHOD				QUANTITY	
			Method Used				
Pollutant No.	Name	M/C/E	Method Code	Designation or Description	Emission Point 1	T (Total) KG/Year	A (Accidental) KG/Year
					0.0	0.0	0.0

* Select a row by double-clicking on the Pollutant Name (Column B) then click the delete button

5. ONSITE TREATMENT & OFFSITE TRANSFERS OF WASTE

| PRTR# : W0116 | Facility Name : Greenstar Limited | Filename : W0116_2009.xls | Return Year : 2009 |

31/03/2010 17:02

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Transfer Destination	European Waste Code	Hazardous	Quantity (Tonnes per Year)	Description of Waste	Waste Treatment Operation	Method Used		Location of Treatment	Haz Waste : Name and Licence/Permit No of Next Destination Facility Non Haz Waste: Name and Licence/Permit No of Recover/Disposer	Haz Waste : Address of Next Destination Facility Non Haz Waste: Address of Recover/Disposer	Name and License / Permit No. and Address of Final Recoverer / Disposer (HAZARDOUS WASTE ONLY)	Actual Address of Final Destination i.e. Final Recovery / Disposal Site (HAZARDOUS WASTE ONLY)
						M/C/E	Method Used					
Within the Country	15 01 01	No	914.0	Cardboard Packaging	R3	M	Weighed	Offsite in Ireland	Bailey Waste Paper,WPT (1) B	Rosemount Business Park,Blanchardstown,Dublin 16,.,Ireland		
Within the Country	15 01 02	No	7.26	Plastic Packaging	R13	M	Weighed	Offsite in Ireland	Clearpoint Recycling,WM/WP/12/05	Ballylynch,Carrick-On-Suir,Co. Tipperary,.,Ireland		
Within the Country	15 01 03	No	92.22	Wooden Packaging	R3	M	Weighed	Offsite in Ireland	Eras Eco Ltd.,W0211-01	Foxhole,Youghal,Co. Cork,.,Ireland		
Within the Country	15 01 03	No	463.58	Wooden Packaging	R3	M	Weighed	Offsite in Ireland	OD Recycling,WM/WP/06/03b	Ballyboe,Ballypatrick,Clonmel ,Co. Tipperary,Ireland		
Within the Country	15 01 03	No	285.7	Wooden Packaging	R3	M	Weighed	Offsite in Ireland	Weyerhauser Ltd.,P0593-01	Clonmel,Co. Tipperary,.,.,Ireland		
Within the Country	15 01 04	No	43.54	Aluminium Cans	R4	M	Weighed	Offsite in Ireland	Molloy Metals Recycling,WP/000/15	Ballycarney,Enniscorthy,Co. Wexford,.,Ireland		
Within the Country	15 01 06	No	77.08	Mixed Packaging	R13	M	Weighed	Offsite in Ireland	Clearpoint Recycling,WM/WP/12/05	Ballylynch,Carrick-On-Suir,Co. Tipperary,.,Ireland		
Within the Country	15 01 06	No	497.68	Mixed Packaging	R13	M	Weighed	Offsite in Ireland	Mr. Binman (Clearpoint Recycling),WM/WP/12/05	Ballylynch,Carrick-On-Suir,Co. Tipperary,.,Ireland		
Within the Country	15 01 06	No	253.18	Mixed Packaging	R13	M	Weighed	Offsite in Ireland	Greenstar Ltd.,W0053-03	Fassaroe,Bray ,Co. Wicklow,.,Ireland		
Within the Country	17 01 07	No	4072.54	C&D Inert Mixed	R5	M	Weighed	Offsite in Ireland	Thomas Driver,WP 50/06	Rockett's Castle Estate,Portlaw,Co. Waterford,.,Ireland		
Within the Country	19 12 12	No	4277.07	C&I Dry Mixed	R13	M	Weighed	Offsite in Ireland	Greenstar Ltd.,W0183-01	Millennium Business Park,Ballycoolin,Dublin 11,.,Ireland		
Within the Country	19 12 12	No	10652.37	MSW Municipal Mixed	R13	M	Weighed	Offsite in Ireland	Greenstar Ltd.,W0053-03	Fassaroe,Bray ,Co. Wicklow,.,Ireland		
Within the Country	20 01 01	No	45.0	Cardboard & Paper	R3	M	Weighed	Offsite in Ireland	Bailey Waste Paper,WPT (1) B	Rosemount Business Park,Blanchardstown,Dublin 16,.,Ireland		
Within the Country	20 01 01	No	47.0	Multigrade Baled	R3	M	Weighed	Offsite in Ireland	Bailey Waste Paper,WPT (1) B	Rosemount Business Park,Blanchardstown,Dublin 16,.,Ireland		
Within the Country	20 01 01	No	50.56	Multigrade Loose	R3	M	Weighed	Offsite in Ireland	Bailey Waste Paper,WPT (1) B	Rosemount Business Park,Blanchardstown,Dublin 16,.,Ireland		
Within the Country	20 01 01	No	247.48	Recy Paper	R3	M	Weighed	Offsite in Ireland	Bailey Waste Paper,WPT (1) B	Rosemount Business Park,Blanchardstown,Dublin 16,.,Ireland		
Within the Country	20 01 01	No	25.44	Multigrade for Rebaling	R3	M	Weighed	Offsite in Ireland	Bailey Waste Paper,WPT (1) B	Rosemount Business Park,Blanchardstown,Dublin 16,.,Ireland		
Within the Country	20 01 38	No	11.04	Wood	R3	M	Weighed	Offsite in Ireland	Eras Eco Ltd.,W0211-01	Foxhole,Youghal,Co. Cork,.,Ireland		
Within the Country	20 01 40	No	108.9	Metal	R4	M	Weighed	Offsite in Ireland	Molloy Metals Recycling,WP/000/15	Ballycarney,Enniscorthy,Co. Wexford,.,Ireland		
Within the Country	15 01 06	No	479.28	Mixed Packaging	R5	M	Weighed	Offsite in Ireland	Waterford County Council,W0189-01	Shandon,Dungarvan,Co. Waterford,.,Ireland		

* Select a row by double-clicking the Description of Waste then click the delete button