# ANNUAL ENVIRONMENTAL REPORT – 2009

# WASTE TRANSER STATION

# SPRINGFORT CROSS, NENAGH, COUNTY TIPPERARY

# WASTE LICENCE REG. NO. W0240-01

# ORIGINAL

# MARCH 2010

BORD NA MÓNA

AES

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**REVISION CONTROL TABLE**

**User is Responsible for Checking the Revision Status of This Document**

| Rev. Nr. | Description of Changes | Prepared by: | Checked by: | Approved by: | Date: |
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Client: Bord na Móna

Keywords: Waste Transfer Station, Annual Environmental Report (AER), waste recovery & disposal, environmental monitoring

Abstract: This report presents the Annual Environmental Report for a Waste Transfer Station in Nenagh, Co. Tipperary to the Environmental Protection Agency. The report covers the annual reporting period of 2009.

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# 1. INTRODUCTION

The Environmental Protection Agency (EPA) issued Advanced Environmental Solutions (Ireland) Ltd. with a waste licence for its Waste Transfer Station at Springfort Cross, Nenagh, Co. Tipperary on 29th July 2009. The waste licence reference number is W0240-01.

The facility is currently licensed to accept a maximum of 24,750 tonnes of waste per annum (10,529 tonnes of Household waste, 12,730 tonnes of Commercial waste and 1,491 tonnes of Construction and Demolition waste). The site is located in Springfort Cross, west of Nenagh town.

In May 2007, Bord na Móna PLC acquired Advanced Environmental Solution (AES) Ireland Ltd., one of Irelands leading waste management companies which services 5,000 commercial customers and 60,000 domestic customers. The acquisition was a key part of the Bord na Móna PLC's diversification strategy and one which tied in perfectly with the existing Bord na Móna PLC areas of operation.

AES Ireland Ltd. currently operates a network of recycling & transfer facilities throughout Leinster and further afield. These facilities are located in Navan, Co. Meath, Tullamore, Co. Offaly, Portlaoise, Co. Laois, Nenagh, Co. Tipperary and Rosslare, Co. Wexford.

Fehily Timoney & Company (FTC) was retained to prepare and submit the Annual Environmental Report (AER) for the facility in compliance with Condition 11.8 and Schedule E of the waste licence.

This report addresses Condition 11.8 of the waste licence for the facility.

Condition 11.8 states that:

*The licensee shall submit to the Agency, by the 31st March of each year, an AER covering the previous calendar year. This report, which shall be to the satisfaction of the Agency, shall include as a minimum the information specified in Schedule E: Annual Environmental Report of this licence and shall be prepared in accordance with any relevant guidelines issued by the Agency.*

This report addresses the items listed in *Schedule E: Annual Environmental Report* of the waste licence for the facility. This AER covers the reporting period from 1st January 2009 up to 31st December 2009.

## 1.1. Site Description

The site location map and monitoring location maps are included in Appendix I.

# 2. WASTE MANAGEMENT RECORD

## 2.1. Waste Activities carried out at the Facility

Waste activities at the facility are restricted to those outlined in *Part 1 - Activities Licensed* of the Waste Licence.

**Licensed waste disposal activities, in accordance with the Third Schedule of the Waste Management Acts 1996 to 2008**

**Class 11**. Blending or mixture prior to submission to any activity referred to in a preceding paragraph of this Schedule.

**Class 12.** Repacking prior to submission to any activity referred to in a preceding paragraph of this Schedule.

**Class 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 was produced.

**Licensed waste recovery activities, in accordance with the Fourth Schedule of the Waste Management Acts 1996 to 2008**

**Class 2** Recycling or reclamation of organic substances which are not used as solvents (including composting and other biological processes). (P)

**Class 3** Recycling or reclamation of metals and metal compounds:

**Class 4** Recycling or reclamation of other inorganic materials:

**Class 12** Exchange of waste for submission to any activity referred to in a preceding paragraph of this Schedule.

**Class 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:

## 2.2. Waste Quantities and Composition

The incoming and outgoing waste volumes to Nenagh Waste Transfer Station are presented in Table 3.1 & 3.2.

### 2.2.1. Waste Recovery Report

A Waste recovery report is required in compliance with Condition 11.14. Report on the contribution of the facility to the achievement of waste recovery objectives stated in Condition 2.2.2.2 and as otherwise may be stated in National and European Union waste policies, as a minimum, including the following:

(i) the recovery of metals
(ii) the recovery of C&D derived waste materials
(iii) the recovery/treatment of biowaste (including contribution of facility to the pre-treatment targets in the EU Landfill Directive)
(iv) the separation and recovery of other recyclable materials

Table 3.2 presents the waste recovered/ disposed from the facility.

## Table 2.1: Incoming Waste to Nenagh Waste Transfer Station.

| EWC Code | Incoming Waste |
|---|---|
| **15 01 01 BC - Cardboard** | 42.58 |
| **15 01 01 C – Cardboard** | 7.6 |
| **15 01 01 MX – Cardboard** | 181.04 |
| **15 01 02 – Plastic** | 2 |
| **15 01 07 - Glass Packaging** | 56.79 |
| **17 02 01 – Wood** | 225.74 |
| **17 04 07 – Mixed metals** | 117.5 |
| **17 09 04 – C&D** | 51.24 |
| **20 03 01 C – Municipal Waste** | 7,067.28 |
| **20 03 01 D – Municipal Waste** | 7,227.16 |
| **20 03 01 K – Municipal Waste** | 3,434.98 |
| **Grand Total** | 18,413.91 |

## Table 2.2: Outgoing Waste Recovered / Disposed from Nenagh Waste Transfer Station

| EWC Code | Outgoing Waste *(tonne)* | Waste Recovery / Disposal Destination Name | Waste Recovery / Disposal Destination Address | Licence/ Permit No. |
|---|---|---|---|---|
| **15 01 02 - Plastic** | 108.42 | Greenway Ireland Ltd. | 11 Porthill Road, Mountnorris, Co. Armagh. BT61 9EY | NX092009101 |
| **15 01 02 - Plastic** | 13.80 | Asian Eagle Ltd. | Courtstown Industrial Estate, Little Island, Co. Cork | CK(S) 552/08 |
| **15 01 07 - Glass Packaging** | 18.92 | Glassco Recycling Ltd. | Site 4, Osberstown Business Park, Naas, Co. Kildare | WP160/2004 |
| **17 02 01 – Wood** | 123.73 | AES Portlaoise | Kyletalesha, Portlaoise, Co. Laois | W0194-02 |
| **17 02 01 – Wood** | 26.42 | Thomas O'Neill (Grain Merchant) Ltd. | 18 Upper William Street, Limerick | WP LK 05(a) |
| **17 02 01 – Wood** | 4.84 | Shredwood Ltd. | Derryhogan, Littleton, Co. Tipperary. | WP/TN/101. |
| **17 04 07 - Mixed metals** | 134.74 | Hegarty Metal Recycling Ltd. | Ballysimon Road, Limerick | WP 01-2001 |
| **17 04 07 – Mixed metals** | 21.64 | MSM Recycling | Mountmellick, Co Laois. | |
| **17 09 04 – C&D** | 195.42 | John O'Dwyer (Construction Thurles) Ltd. | Bord na Crusha, Thurles, Co. Tipperary | WP TN 16 |
| **20 03 01 C – Municipal Waste** | 11,995.30 | Drehid Waste Management Facility | Killinagh Upper, Carbury, Co. Kildare | W0201-02 |
| **20 03 01 C – Municipal Waste** | 1,097.82 | AES Portlaoise | Kyletalesha, Portlaoise, Co. Laois | W0194-02 |
| **20 03 01 D – Municipal Waste** | 2,198.06 | AES Portlaoise | Kyletalesha, Portlaoise, Co. Laois | W0194-02 |
| **20 03 01 D – Municipal Waste** | 61.40 | Kyletalesha Landfill | Kyletalesha, Portlaoise, Co Laois | W0026-02 |
| **20 03 01 K – Municipal Waste** | 3,682.50 | AES Tullamore | Cappincur Industrial Estate, Daingean Road, Tullamore, Co. Offaly | W0104-01 |
| **20 02 01 – Biodegradable waste** | 54.26 | Michael Dolan | Johnstown Recycling, Slanemore, Millingar, Co. Westmeath | WP-161-2007 |
| **Grand Total** | 19,737.27 | | | |

# 3. EMISSIONS FROM THE FACILITY

Waste Water removed from truck wash, grit traps, Leachate tank, oil interceptor by Thornton's Recycling was 28.84 tonnes

Surface water, groundwater, dust and noise monitoring results are discussed in Section 6 of this report and the full reports are included in Appendix II.

# 4. RESOURCE AND ENERGY CONSUMPTION

## 4.1. Resource Consumption Summary

Resources consumed at the Nenagh Waste Transfer Station are recorded. During the reporting period water usage on-site is not metered and has not been recorded. Road Diesel Consumption was 375,617 Litres and Green Diesel Consumption was 14,712 Litres.

The total electrical consumption at the site was 276,260 kWh during the reporting period. During the same period Waste Water removed from truck wash, grit traps, Leachate tank, oil interceptor by Thornton's Recycling was 28.84 tonnes.

## 4.2. Energy Efficiency Audit Report Summary

To comply with Condition 7.1 of the waste licence an Energy Efficiency Audit is programmed to occur by July 2010.

## 4.3. Water Consumption

During the reporting period Waste Water removed from truck wash, grit traps, Leachate tank, oil interceptor by Thornton's Recycling was28.84 tonnes

Please refer to Objective & Targets 2010 for proposals being developed to minimise water demand and the volume of trade effluent discharge to comply with Condition 7.3 of the waste licence and for proposals in place, any works carried out in relation to water conservation on the site etc.

## 4.4. Raw Materials Consumption & Waste Generation

Please refer to Objective & Targets 2010 for proposals being developed to minimise raw material consumption and waste generation. Proposals develop include stream lining routes to reduce fuel use and improved waste management practices.

# 5. ENVIRONMENTAL OBJECTIVES & TARGETS

## 5.1. Progress against Targets for 2009

There is no report on progress towards Targets for 2009 as the EPA issued Advanced Environmental Solutions (Ireland) Ltd. with a waste licence for its Waste Transfer Station at Springfort Cross, Nenagh, Co. Tipperary on 29th July 2009. The waste licence reference number is W0240-01.

## 5.2. Schedule of Objectives and Targets for 2010

The proposed schedule of Objectives and Targets for 2010 is presented in Table 5.1.

## Table 5.1: Proposed schedule of Objectives and Targets for 2010

| Ref No | Objective | Target | Timescale | Response | Status |
|---|---|---|---|---|---|
| 1 | Completion of Specified Engineering Works | Connection to Local Authority mains water and sewer system. Upgrading of existing on-site drainage system. Installation of manual shut-off valve. | Jan-10 | LA | Ongoing |
| 2 | Construction of New Waste Quarantine Area | Move existing Waste Quarantine Area to purpose built structure as per Licence Cond. 3.17 | Jan-10 | LA | Ongoing |
| 3 | Improved Waste Management | Office - Induct staff and contract cleaners on waste segregation and minimisation. Display signs on segregated bins (residual, recyclable, organic) outlining waste to be deposited in each. Install battery bin and ink/toner cartridge bins in main office and organise collection. | Apr-10 | NM | Ongoing |
| | | Site - Induct yard staff on waste segregation and minimisation. Display signs on segregated bins (residual, recyclable, organic) outlining waste to be deposited in each. | Apr-10 | NM | Ongoing |
| 4 | Improved Energy Efficiency | Develop and implement training & awareness programme that promotes improved environmental performance; Train staff on office equipment, lighting, heating efficiency. Display energy awareness posters in site offices. | Jun-10 | NM | Ongoing |
| | | Implement Energy Efficient Procurement Policy; All news bulbs purchased to be CFL. | Jun-10 | NM | Ongoing |

| | | | | | |
|---|---|---|---|---|---|
| | | Carryout regular electricity bill analysis to determine if peaks are present and investigate mitigating factors. | Dec-10 | NM | Ongoing |
| 5 | Schedule Energy Efficiency Audit | AES Nenagh is required to carry out Energy Efficiency Audit as per Licence Cond. 7.1. within one year of grant of licence. The audit shall identify all practicable opportunities for energy use reduction and efficiency. | Jun-10 | LC | Within 1 year of grant of licence |
| 6 | Schedule Fire-Water Retention Risk Assessment | AES Nenagh is required to carry out a risk assessment to determine if the activity should have a fire-water retention facility within 6 months of grant of licence as per Cond. 3.9. | Jan-10 | LC | Within 6 months of grant of licence |
| 7 | Schedule Decommissioning Management Plan | AES Nenagh is required to prepare a fully detailed and costed plan for the decommissioning or closure of the site within 6 months of grant of licence as per Cond. 10.2.1 | Jan-10 | LC | Annual |
| 8 | Increase usage of "Ad-blue" in Fleet Vehicles to reduce emissions | Ad-blue can only be utilised in vehicles produced in 2007 and onwards. AES Nenagh 2007, 2008 and 2009 vehicles all utilise Ad-Blue. As the fleet is updated with newer vehicles, the use of Ad-blue shall be roll-out to a greater number of vehicles | Dec-10 | LG | Ongoing |
| 9 | Diversion of biodegradable waste from landfill | Roll-out of domestic and commercial brown bin on a phased basis. | Dec-10 | LA | Ongoing |
| 10 | Environmental Monitoring | As per Waste Licence: Should any limits be exceeded, corrective actions to be implemented. | Dec-10 | LA/LG/LC | Ongoing |
| | | Once connnected to mains sewer, commence monitoring emissions to sewer as per licence | Jan-10 | LG/LC | Ongoing |
| | | Review Dust/Odour Control Procedures | Apr-10 | LA/LG/LC | Ongoing |

| | | | | | |
|---|---|---|---|---|---|
| 11 | Investigate options for the reduction and/or re-use of water on-site | Once connected to mains water supply, regularly monitor and record consumption | Nov-10 | LG | Ongoing |
| | | Investigate the feasibility of the collection and re-use of rainwater for vehicle washing | Nov-10 | LG | Ongoing |
| 13 | Efficiency of Fuel Consumption | Streamline Routes. Computer programme being acquired for AES Group to manage collection route to ensure maximum efficiency of labour and raw materials | Dec-10 | Logistics Manager | Ongoing |
| 14 | Upkeep of Environmental Management System | Accreditation of EMS to ISO 14001 | Jun-10 | Enviro Team | Ongoing |
| | | Monthly EMS Meetings | Dec-10 | Enviro Team | Ongoing |
| | | Ongoing review of procedures, objectives & targets, and aspects register | Dec-10 | Enviro Team | Ongoing |
| 15 | Environmental Training & Awareness | As per training matrix and schedule | Feb-10 | L/A | Ongoing |

# 6. SUMMARY OF ENVIRONMENTAL MONITORING

Environmental monitoring at the facility is carried out in accordance with Condition 6 and Schedule C of the waste licence for the facility. The following sections 6.1 to 6.3 present the results of monitoring for the year 2009.

The environmental media monitored and the frequencies of monitoring at the facility are as follows:

| | | |
|---|---|---|
| 1. | Noise | Annually |
| 2. | Dust Deposition | Quarterly |
| 3. | Storm Water Emissions | Weekly & Quarterly |
| 4. | Emissions to Sewer | Monthly & Quarterly |

Sections 6.5 and 6.6 present a summary of the Environmental Management Programme and the Pollutant Release and Transfer Register for the facility.

## 6.1. Noise Monitoring Report Summary

The facility was only granted a Waste Licence in July 2009, so reports included in the AER are for the 5 month periods to December, 2010. Noise monitoring was not undertaken during the period.

## 6.2. Ambient monitoring Summary

In compliance with the requirements of the waste licence, W0240-01, dust monitoring at the Nenagh Waste Transfer Station was undertaken. Monitoring was carried out on three times during the reporting period.

There are four dust monitoring locations on site, detailed in Table 6.1.

### Table 6.1: Dust monitoring Locations

| Monitoring Location | Description |
|---|---|
| D1 | South western corner of the facility |
| D2 | North western corner of the facility |
| D3 | North eastern corner of the facility |
| D4 | South eastern corner of the facility |

Four dust pots were exposed for two periods, namely 31 day period between 10 July – 10 August 2009 and for a 30 day monitoring period between 7 December 2009 – 6 January 2010.. The results for monitoring are presented in Table 6.2.

### Table 6.2: Dust monitoring Results

| Monitoring Location | Dust Deposition Limit | Deposition Rate *(10 July – 10 August)* | Deposition Rate *(7 December – 6 January)* |
|---|---|---|---|
| | *($mg.m^2/day$)* | | |
| D1 | 350 | 60 | 22 |
| D2 | 350 | 201 | 39 |
| D3 | 350 | 391 | 95 |
| D4 | 350 | 38 | 107 |

The results were elevated above the EPA limits at D3 during the first round of monitoring. All other results were under the licence limit for the facility.

The full dust monitoring reports are attached in Appendix II.

## 6.3. Storm/Surface Water Monitoring Report Summary

In accordance with Schedule C.2.3 of the Waste Licence W0240-01, the facility is required to carry out an assessment of the surface water emissions from the site on a weekly, monthly and quarterly basis.

As the EPA issued Advanced Environmental Solutions (Ireland) Ltd. with a waste licence for its Waste Transfer Station at Springfort Cross, Nenagh, Co. Tipperary on 29 July 2009, monitoring has only occurred since.

The surface / storm water monitoring locations is described in Table 6.3.

### Table 6.3: Surface / storm monitoring Location

| Monitoring Location | Description |
|---|---|
| SW-1 | Discharge pipe from the oil interceptor |

The results for the weekly and monthly results are presented in Table 6.4, while the quarterly results for the monitoring period are presented in Table 6.5.

### Table 6.4: Surface / storm Monitoring Weekly & Monthly Results

| SW1 | E. Cond | pH | Suspended Solids | COD |
|---|---|---|---|---|
| | *uS/cm* | *pH units* | *mg/l* | *mg/l* |
| 27/08/2009 | 688 | 6.7 | 24 | |
| 03/09/2009 | 101 | 7.5 | 29 | 43 |
| 10/09/2009 | 447 | 7.2 | 33 | |
| 17/09/2009 | 891 | 6.7 | 92 | |
| 22/10/2009 | 375 | 7 | 165 | |
| 26/11/2009 | 865 | 7.1 | 12 | 18 |
| 03/12/2009 | 829 | 7.1 | 16 | |
| 10/12/2009 | 889 | 7.2 | 27 | |

### Table 6.5: Surface / storm Monitoring Quarterly Results

| Parameter | SW-1 |
|---|---|
| pH (pH Units) | 7.2 |
| Conductivity µS/cm @ 25 ° C | 848 |
| On-site visual inspection | Clear colour few suspended solids, very low flow |
| Odour | No odour |
| BOD (TCMP) mg/l | <2 |
| COD mg/l | 23 |
| Suspended solids mg/l | 27 |
| Sulphates (as SO4) mg/l | 21.69 |
| * Oils, , fats & greases mg/l | <1 |
| ** Mineral Oils µg/l | <10.0 |
| Ammonia mg/l as N | 0.44 |
| MBAS mg/l | <0.05 |
| Phosphates mg/l | <0.01 |

* - Non INAB Accredited Method
** - Subcontracted Test

The full surface / storm monitoring reports are attached in Appendix II.

## 6.4. Tank and Pipeline Testing & Inspection Reports

In accordance with the requirements of the company's Waste Licence (W0240-01) AES is required to conduct a bund integrity test, as stated under Condition 6.9.

Condition 6.9 of the waste licence states:

*The integrity and water tightness of all underground pipes, tanks, bunding structures and containers and their resistance to penetration by water or other materials carried or stored therein shall be tested and demonstrated by the licensee within six months of the date of grant of this licence. The testing shall be carried out by the licensee at least once every three years thereafter and reported to the Agency on each occasion. This testing shall be carried out in accordance with any guidance published by the Agency. A written record of all integrity tests and any maintenance or remedial work arising from them shall be maintained by the licensee*

The Integrity Testing of underground pipes scheduled for 2010. The Diesel Tank Bund Integrity Tested in December 2009 and found to be compliant. Mobile bunds were replaced between March and July 2009 and are due for integrity testing in 2012.

## 6.5. Environmental Management Programme

As the EPA issued Advanced Environmental Solutions (Ireland) Ltd. with a waste licence for its Waste Transfer Station at Springfort Cross, Nenagh, Co. Tipperary on 29 July 2009, there is no report on the Environmental Management Program for the previous year.

As indicated in the proposed schedule of Objectives and Targets for 2010, presented in Table 5.1 one of the targets for the site is to obtain Accreditation of EMS to ISO 14001 standards. Monthly Environmental Management System meetings will b undertaken along with an ongoing review of procedures, objectives & targets, and aspects register

# 7. SITE DEVELOPMENT/INFRASTRUCTURAL WORKS

## 7.1. Current Infrastructure in Place

The facility is currently licensed to accept a maximum of 24,750 tonnes of waste per annum (10,529 tonnes of Household waste, 12,730 tonnes of Commercial waste and 1,491 tonnes of Construction and Demolition waste).

On the 30th October 2009 AES submitted a letter to the EPA Ref. Submission of Details on Duty & Standby Capacity - AES Nenagh (Reg. No. 240-1), as per Condition 3.19.2, with details on Duty & Standby Capacity in tonnes per day, of all waste handling and processing equipment to be used at AES Nenagh. Summary details on Duty & Standby Capacity are presented in Table 7.1.

### Table 7.1: Details on Duty & Standby Capacity

| Waste processing equipment | |
|---|---|
| **1** | Weighbridge |
| **2** | Excavator |
| **3** | Skid Steer |
| Waste capability per day of 125 tonne per day or 32,500 tonne per annum. | |

AES Nenagh has a contract in place with an Auto Maintenance Company, Walkers Municipal Services, to regularly inspect and service company vehicles and site machinery. The contractor visits the site twice weekly to inspect the fleet. A record of all inspections and services is maintained. A qualified mechanic is also employed on-site.

## 7.2. Site Development Works during 2009

Full details of site development works undertaken since the site was licences on the 29 July 2009 have been submitted to the EPA in the Specified Engineering Works (SEW) for the site, which include an upgrade to the on-site drainage.

## 7.3. Proposed Development Works for 2010

Full details of the proposed site development works undertaken for 2010 have been submitted to the EPA in the Specified Engineering Works (SEW) for the site, which include connection to mains sewer and construction of new waste quarantine area. Further details are also provided in Table 5.1: Proposed schedule of Objectives and Targets for 2010

## 7.4. Review of Decommissioning Management Plan

As part of Condition 10 of Waste licence W0240-01, AES are required to submit a Decommissioning Management Plan for the Nenagh facility to the EPA.

The objective of this Decommissioning Management Plan is to determine a plan for decommissioning, rendering safe or removing for disposal/recovery, any soil, subsoil, building, plant and/or equipment, any waste materials or substances contained therein or thereon the site, that may result in environmental contamination or degradation.

The full Decommissioning Management Plan is included in Appendix III.

.

# 8. ENVIRONMENTAL LIABILITIES

AES (Ireland) Ltd. is a wholly owned subsidiary of Bord na Móna and has access to the reserves of its parent company.

The environmental liabilities (environmental damage and remedial actions) are those considered to be restricted to the confines of the AES Nenagh facility, therefore, any costs incurred in addressing same will be limited to the removal and safe disposal of the waste remaining onsite following an emergency event (e.g. fire or spillage event) or decommissioning and closure of the site. Such environmental liabilities cover, should account for the cost of the clean up and removal of the maximum amount of waste that may be stored on-site at any given time.

AES (Ireland) Ltd. and Bord na Móna have arranged insurance cover to cover liability arising from damage to property and injury to parties as a result of sudden and unforeseen environmental impairment. AES (Ireland) Ltd. have insurance cover for "Business Interruption" and have adequate reserves for the cost of removing the maximum amount of waste that may be stored on-site at any given time and to ensure that said material is transported to an authorised and capable facility. In the unlikely event of full decommissioning, financial reserves are available to allow a formal surrender of the licence ensuring that the inherent environmental safeguard associated with this regulatory process is activated.

For further details please refer to Decommissioning Management Plan, included in Appendix III.

## 8.1. Environmental Liabilities Risk Assessment Review

The Environmental Liabilities Risk Assessment Report is due to be submitted to the EPA in July 2010.

# 9. INCIDENTS & COMPLAINTS

## 9.1. Complaints Summary

No complaints were made to the site in 2009.

## 9.2. Reported Incidents Summary

One incident regarding an elevation above the dust monitoring limits was reported to the EPA. The Report is included in the Appendix IV.

Additional an EPA Site inspection Report (W0240-01)si01db was issued with non-compliance, pertaining to a site inspection on the 17/11/2009. The site responded to the EPA Re: Notification of Non-Compliance on the 21 December. See attached site inspection report and response.

## 9.3. Accident Prevention and Emergency Response

Condition 9.1 of the waste licence states:

*The licensee shall, within six months of date of grant of this licence, ensure that a documented Accident Prevention Procedure is in place which will address the hazards on-site, particularly in relation to the prevention of accidents with a possible impact on the environment. This procedure shall be reviewed annually and updated as necessary.*

Condition 9.2 of the waste licence states:

*The licensee shall, within six months of date of grant of this licence, ensure that a documented Emergency Response Procedure is in place which shall address any emergency situation which may originate on-site. This Procedure shall include provision for minimising the effects of any emergency on the environment. This procedure shall be reviewed annually and updated as necessary.*

The accident prevention and emergency response has been prepared for the following:

- EP-ERP-01_General Emergency Preparedness & Response.doc
- EP-ERP-02_Spill Clean Up Procedure.doc
- EP-ERP-03_Fire Explosion Procedure.doc
- EP-ERP-04_Malicious Damage Procedure.doc
- EP-ERP-05_Unforeseen Emergencies & Fugitive Emissions.doc
- EPL 5.1 EMERGENCY CONTACT LIST.doc

These documents are included in full in Appendix V.

# 10. FACILITY MANAGEMENT

## 10.1. Management & Staffing Structure

The Environmental Organisation and the Site organisations structure for the site are presented in Figure 10.1 and 10.2.

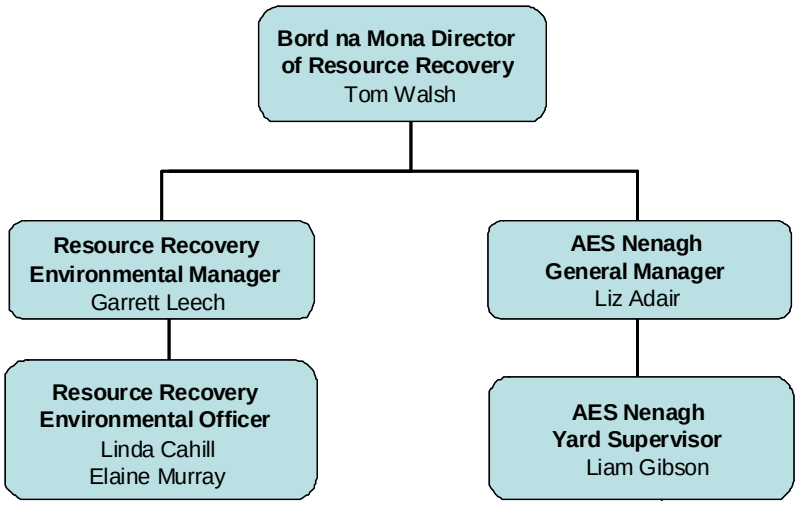


**Figure 10.1: Environmental Organisation Structure**

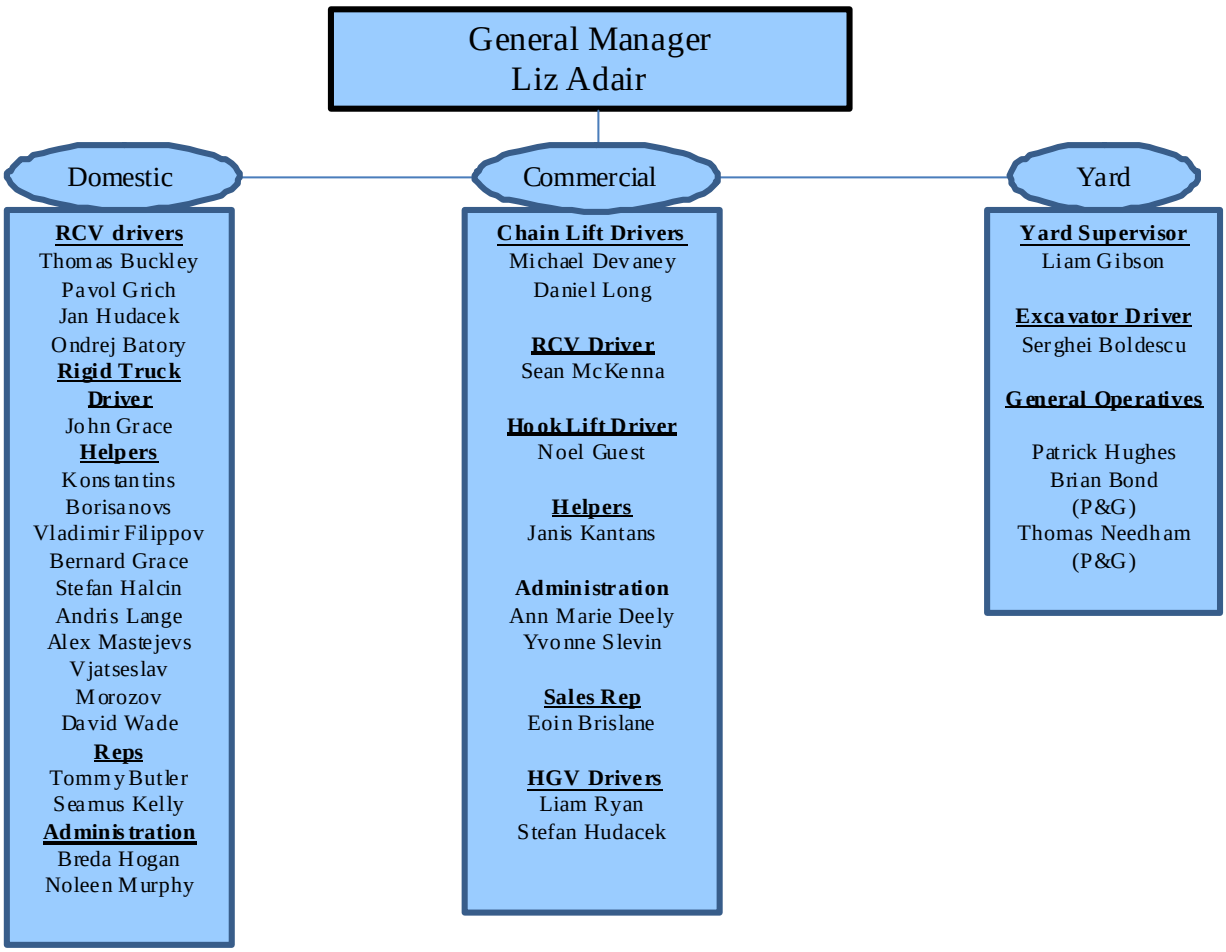


**Figure 10.2: AES Nenagh Organisation Chart**

## 10.2. Public Information Programme

A Public Information Program is in place for the site, namely EP 16.0 Programme for Public Information. The full details are included in Appendix VI.

## 10.3. Procedures Developed During 2009

Since the EPA issued Advanced Environmental Solutions (Ireland) Ltd. with a waste licence for its Waste Transfer Station at Springfort Cross, Nenagh, Co. Tipperary on 29 July 2009 a new Environmental Management System was established for AES Nenagh in 2009 and received ISO14001 certification on the 14 of January, 2010.

## 10.4. Review of Nuisance Controls

There are no nuisance/pest issues to report in 2009. AES Nenagh have a vermin control procedure in place, (Reference - WI 2.0 Site Inspection Procedure) with an associated Daily Environmental Nuisance Inspection Form (Reference - EWIF 2.2 Daily Environmental Nuisance Inspection Form).

The full Procedure is attached in Appendix VII.

There are no proposed amendments for 2010 to nuisance controls.

# Appendix I

Drawings


Site Location Plan
Scale: 1:20,000 @ A3

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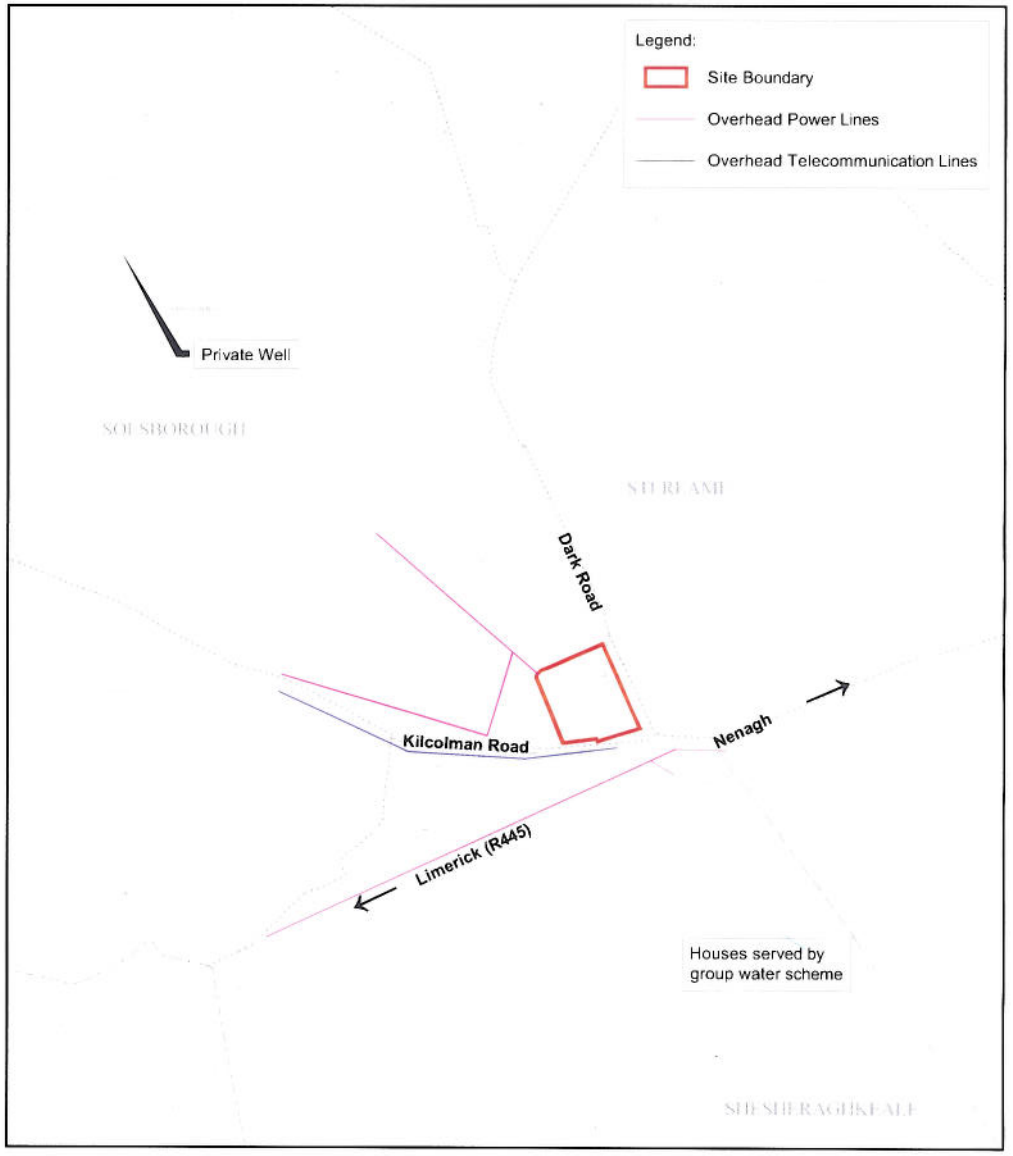


Site Layout Plan
Scale: 1:5,000 @ A3

Client:
AES
Advanced Environmental Solutions (Ireland) Ltd
Unit 1, Monread Commercial Park
Monread Road
Naas
Co. Kildare
T: 045 843800 F: 045 981621
Email: info@aesirl.ie

RPS Consulting Engineers
RPS Consulting Engineers, Carnage House, Library Road, Dun Laoghaire, Co. Dublin, Ireland.

NOTES
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2. All Levels refer to Ordnance Survey Datum Malin Head.
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| No. | Date | Amendment / Issue | App. |
|---|---|---|---|
| A01 | Nov'17 | Issue for Approval | LOT |
| 201 | Nov'17 | Draft Issue | LOT |

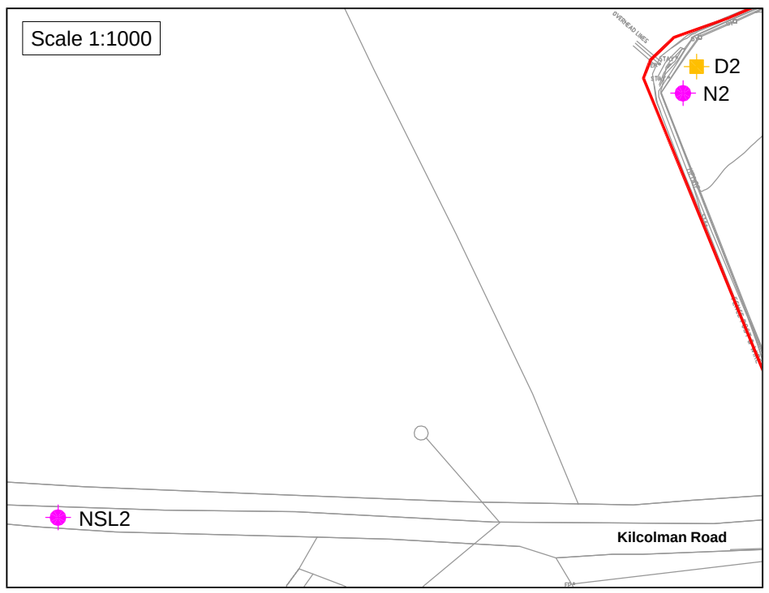
Project: NENAGH WASTE TRANSFER STATION

Title: SITE LOCATION PLAN

| | | | |
|---|---|---|---|
| Drawn by | IF | Job No. | MJN-0015 |
| Checked by | MS | File No. | MJN0015-DG0001-A01 |
| Approved by | LOT | Dwg. No. | DG0001 |
| Scale | As shown | Rev. | A01 |
| Date | Nov '17 | | |

Legend:

- Dust Monitoring
- Noise Monitoring
- Odour Monitoring
- Surface Water Monitoring
- **O.I.** Oil Interceptor




SW1
D3
O2
O.I.
N3
D2
N2
N1
D1
O1
O4
D4
O3
N4
NSL1
Dark Road
Kilcolman Road
FENCE POST & WIRE
HEDGE
OVERHEAD LINES
WALL
TANK
PIPE
PUMP
RAMP
WEIGHBRIDGE
Cabin
MAST
MH CL56.90
MH CL57.35
MH CL57.71
EL67.63
EL65.68
EL64.93
EL62.16
EL62.02
EL64.73
EL64.74
EL67.66
EL65.66
EL64.76
FFL58.24
EL61.47
EL61.50

Client:

Advanced Environmental Solutions (Ireland) Ltd.
Unit 1, Monread Commercial Park
Monread Road
Naas
Co. Kildare
T: 045-843800 F: 045-981621
Email: info@aesirl.ie

RPS Consulting Engineers
RPS Consulting Engineers, Carnegie House, Library Road, Dun Laoghaire, Co. Dublin, Ireland.
T: +353 1 202 0870 - F: +353 1 202 0707
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| No. | Date | By / Ch | Amendment / Issue | App. |
|---|---|---|---|---|
| D01 | Nov'07 | HF / MS | Draft Issue | LO'T |

Project: NENAGH WASTE TRANSFER STATION

Title: SAMPLING & MONITORING POINTS

| | | | |
|---|---|---|---|
| Drawn by: | HF | Job No: | MDR0515 |
| Checked by: | MS | File No: | MDR0515DG0007D01 |
| Approved by: | LO'T | Drg. No: | DG0007 |
| Scale: | 1:500 @ A3 | Rev: | D01 |
| Date: | Nov. '07 | | |

# Appendix II

Monitoring Results

# DUST DEPOSITION MONITORING AT THE ADVANCED ENVIRONMENTAL SOLUTIONS (IRELAND) LTD. SITE AT NENAGH, CO. TIPPERARY IN ACCORDANCE WITH WASTE LICENCE REGISTER NO. W0240-01

**For the Attention of:**
Ms. Linda Cahill
Environmental Officer
Advanced Environmental Solutions (Ireland) Ltd.
Unit 1 Monread Commercial Park
Monread Road
Naas
Co. Kildare

**Prepared by:**
Ms. Josephine Chadwick
Environmental Scientist

**Reviewed by:**
Mr. Peter Coogan
Monitoring Team Leader

| | |
|---|---|
| **Report No:** | ECS3411 - Dust |
| **Monitoring Period:** | July/ August 2009 |
| **Report Date:** | August 2009 |

## *Executive Summary / Certification of Results*

Bord na Móna Technical Services was commissioned by Advanced Environmental Solutions Ltd. (AES) to conduct dust deposition monitoring at selected locations within their facility in accordance with the company's Waste Licence No. W0240-01. Four Bergerhoff dust gauges were continuously exposed for a 31 day period between the 10th of July 2009 and the 10th of August 2009. The dust deposition samples were then returned to the laboratory for subsequent analysis.

The results of the dust survey show that levels of dust recorded at the D1, D2, and D4 locations were within the dust deposition limit of 350mg/m$^2$/day as per Condition B5 of their Waste Licence W0240-01.

The level of dust recorded at D3 (391mg/m$^2$/day) exceeds the dust deposition limit of 350mg/m$^2$/day as per Condition B5 of the Waste Licence.

This report is certified as accurate and representative of the sampling and associated analysis carried out.

Respectively Submitted,

Ms. Josephine Chadwick
Environmental Scientist

Mr. Peter Coogan
Monitoring Team Leader

## TABLE OF CONTENTS

## 1.0 INTRODUCTION

In compliance with the requirements of their Waste Licence, Register No. W0240-01 (Condition B5), AES Nenagh are required to monitor dust deposition from their facility at Nenagh, Co. Tipperary. Dust deposition is determined using the German Standard method VDI 2119 (Bergerhoff).

Bord na Móna Technical Services was commissioned to perform the sampling and analysis. The site was visited by a Bord na Móna Environmental Scientist on the 10th of July 2009 to install the dust jars. The dust jars were subsequently collected on the 10th of August 2009 (31 days later) and returned to the laboratory for analysis.

This report details the sampling and analytical methodologies adopted.

## 2.0 METHODOLOGY

### 2.1 Dust Monitoring Locations

Dust deposition samples were taken at four locations within the site boundary. Table 2.1 below describes the sampling locations which are accurately marked on the environmental monitoring map locations attached in Appendix 1.

**TABLE 2.1: LOCATION OF DUST MONITORING POSITIONS**

| Sample Name | Location |
|---|---|
| D1 | South western corner of the facility |
| D2 | North western corner of facility |
| D3 | North eastern corner of facility |
| D4 | South eastern corner of the facility |

### 2.2 Sampling

#### *2.2.1 Dust Deposition*

The Bergerhoff Dust Deposition Gauges used for this sampling survey consist of a plastic collecting vessel and a stand with a protective cage. Each vessel was placed in the metal basket which was positioned at a height of between 1.5 and 2 meters above ground level according to the German Standard Method VDI 2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute).

Prior to sampling, the collecting vessels were carefully cleaned with laboratory detergent, rinsed with deionised water and allowed to dry. Following exposure, the sample bottles were securely capped and returned to the laboratory for analysis.

### 2.3 Analysis

All samples returned to the laboratory were stored at 2-8°C. Subsequent analysis of all samples was carried out gravimetrically for dust and strictly followed the standard VDI 2119. The results were expressed in $mg/m^2/day$.

# 3.0 ACCREDITED QUALITY SYSTEM

## 3.1 INAB Accreditation

Bord na Móna Technical Services analytical laboratories is accredited to ISO 17025 by the National Accreditation Board (INAB). ISO 17025 accreditation ensures that the laboratory operates a quality system with technically competent staff. The laboratory has accreditation since 1997 and it is the policy of the laboratory to achieve and maintain a high standard of quality consistent with client's requirements in all aspects of the work carried out within the laboratory.

## 3.2 Interlaboratory Proficiency Schemes

To ensure the accuracy of the analytical testing the laboratory participates in several external proficiency schemes. The ongoing competence of the laboratory and its staff is assessed by participation in various inter-laboratory proficiency testing schemes, such as LGC Aquacheck scheme and the EPA Intercalibration programme organised for environmental laboratories throughout Ireland. Bord na Móna Technical Services & Laboratory Services Analytical Laboratory is listed on the EPA's register of Quality Controlled Laboratories

## 3.3 Control Chain of Custody

As part of the Quality System in place at Bord na Móna Technical Services measures are taken to ensure controlled chain of custody. An outline of the chain of custody is given below.

# BORD NA MÓNA

## CONTROLLED CHAIN OF CUSTODY

| SITE | | TRANSPORT | | LABORATORY |
|---|---|---|---|---|
| Sampling and packaging of all samples were carried out by Bord na Móna Technical Team: | Transport Document Form | Transport to laboratory by Bord na Móna Technical Team. | Sample Reception Form | Receiving of samples at Bord na Móna Environmental Laboratory complex by: Laboratory Manager (Secure laboratory complex access to authorised personnel only) |
| Ms. Josephine Chadwick | → | | → | ↓ |
| | | | | Storage of all samples for 1 month period after report issue. |
| | | | | ↓ |
| | | | | Supervised Disposal |

## 4.0 RESULTS

Table 4.1 below presents the results of the dust deposition monitoring at the AES facility in Nenagh, Co. Tipperary.

**TABLE 4.1: RESULTS OF DUST DEPOSITION**

| Sample Name | Deposition Rate ($mg/m^2/day$) | *Dust Deposition Limit ($mg/m^2/day$)* |
|---|---|---|
| D1 | 60 | *350* |
| D2 | 201 | *350* |
| D3 | 391 | *350* |
| D4 | 38 | *350* |

## 5.0 COMMENT

The results of the dust deposition survey which was carried out from the 10th of July 2009 to the 10th of August 2009 at the AES facility in Nenagh are presented in Table 4.1.

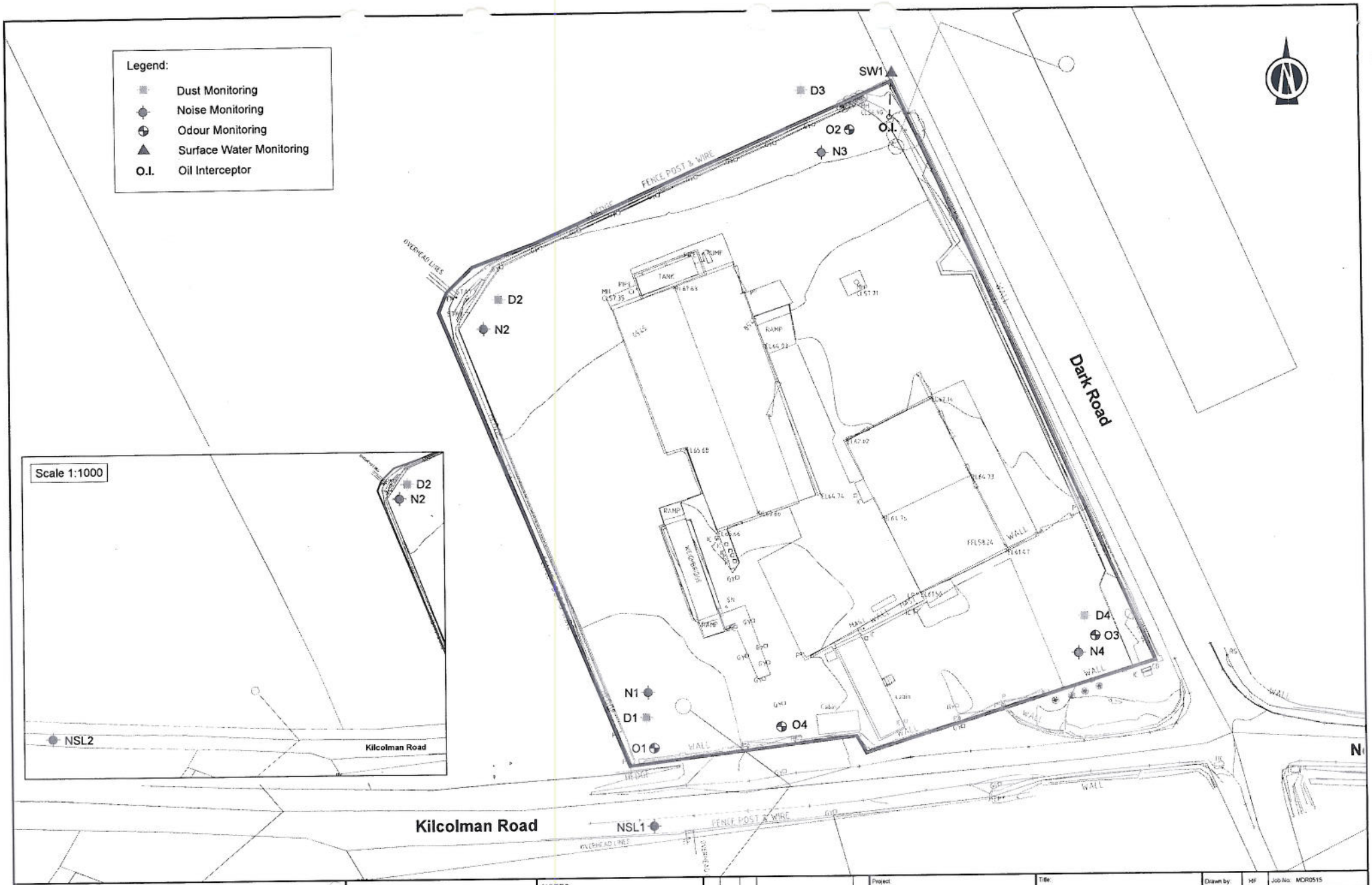
The Waste Licence limit for dust deposition is given as $350mg/m^2/day$ as per Condition B5.

The dust deposition results at the D1, D2 and D4 monitoring locations are in compliance with the limit of $350mg/m^2/day$ as per Condition B5 of the Waste Licence.

The level of dust recorded at D3 ($391mg/m^2/day$) exceeds the dust deposition limit of $350mg/m^2/day$ as per Condition B5 of the Waste Licence. The dust monitoring point D3 is adjacent to an external road which could be the cause of the elevated result.

# APPENDIX 1

Map of Dust Monitoring Locations




Client:
AES
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T: 045-843800 F: 045-981621
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| No. | Date | Amendment / Issue | App. |
|---|---|---|---|
| D01 | Nov'07 | Draft Issue | LOT |

Project: NENAGH WASTE TRANSFER STATION

Title: SAMPLING & MONITORING POINTS

| | | | |
|---|---|---|---|
| Drawn by: | HF | Job No: | MDR0515 |
| Checked by: | MS | File No: | MDR0515DG0007D01 |
| Approved by: | LOT | Drg. No: | DG0007 |
| Scale: | 1:500 @ A3 | Rev: | D01 |
| Date: | Nov. '07 | | |

BORD NA MÓNA

BORD NA MÓNA ENVIRONMENTAL LIMITED

# DUST DEPOSITION MONITORING AT THE ADVANCED ENVIRONMENTAL SOLUTIONS (IRELAND) LTD. SITE AT NENAGH, CO. TIPPERARY IN ACCORDANCE WITH WASTE LICENCE REGISTER NO. W0240-01


**For the Attention of:**
Ms. Linda Cahill
Environmental Officer
Advanced Environmental Solutions (Ireland) Ltd.
Unit 1 Monread Commercial Park
Monread Road
Naas
Co. Kildare

**Prepared by:**
Ms. Linda Lenihan
Environmental Scientist

**Reviewed by:**
Mr. Peter Coogan
Monitoring Team Leader


| | |
|---|---|
| **Report No:** | ECS3508 - Dust |
| **Monitoring Period:** | December 2009 / January 2010 |
| **Report Date:** | January 2010 |

## *Executive Summary / Certification of Results*

Bord na Móna Technical Services was commissioned by Advanced Environmental Solutions Ltd. (AES) to conduct dust deposition monitoring at selected locations within their facility in accordance with the company's Waste Licence No. W0240-01. Four Bergerhoff dust gauges were continuously exposed for a 30 day period between the 7th of December 2009 and the 6th of January 2010. The dust deposition samples were then returned to the laboratory for subsequent analysis.

The results of the dust survey show that levels of dust recorded at the D1, D2, D3 and D4 locations were within the dust deposition limit of 350mg/m$^2$/day as per Condition B5 of their Waste Licence W0240-01.

This report is certified as accurate and representative of the sampling and associated analysis carried out.

Respectively Submitted,

Ms. Linda Lenihan
Environmental Scientist

Mr. Peter Coogan
Monitoring Team Leader

## TABLE OF CONTENTS

## 1.0 INTRODUCTION

In compliance with the requirements of their Waste Licence, Register No. W0240-01 (Condition B5), AES Nenagh are required to monitor dust deposition from their facility at Nenagh, Co. Tipperary. Dust deposition is determined using the German Standard method VDI 2119 (Bergerhoff).

Bord na Móna Technical Services was commissioned to perform the sampling and analysis. The site was visited by a Bord na Móna Environmental Scientist on the 7th of December 2009 to install the dust jars. The dust jars were subsequently collected on the 6th of January 2010 (30 days later) and returned to the laboratory for analysis.

This report details the sampling and analytical methodologies adopted.

## 2.0 METHODOLOGY

### 2.1 Dust Monitoring Locations

Dust deposition samples were taken at four locations within the site boundary. Table 2.1 below describes the sampling locations which are accurately marked on the environmental monitoring map locations attached in Appendix 1.

**TABLE 2.1: LOCATION OF DUST MONITORING POSITIONS**

| Sample Name | Location |
|---|---|
| D1 | South western corner of the facility |
| D2 | North western corner of facility |
| D3 | North eastern corner of facility |
| D4 | South eastern corner of the facility |

### 2.2 Sampling

#### *2.2.1 Dust Deposition*

The Bergerhoff Dust Deposition Gauges used for this sampling survey consist of a plastic collecting vessel and a stand with a protective cage. Each vessel was placed in the metal basket which was positioned at a height of between 1.5 and 2 meters above ground level according to the German Standard Method VDI 2119 (Measurement of Dustfall, Determination of Dustfall using Bergerhoff Instrument (Standard Method) German Engineering Institute).

Prior to sampling, the collecting vessels were carefully cleaned with laboratory detergent, rinsed with deionised water and allowed to dry. Following exposure, the sample bottles were securely capped and returned to the laboratory for analysis.

### 2.3 Analysis

All samples returned to the laboratory were stored at 2-8°C. Subsequent analysis of all samples was carried out gravimetrically for dust and strictly followed the standard VDI 2119. The results were expressed in $mg/m^2/day$.

# 3.0 ACCREDITED QUALITY SYSTEM

## 3.1 INAB Accreditation

Bord na Móna Technical Services analytical laboratories is accredited to ISO 17025 by the National Accreditation Board (INAB). ISO 17025 accreditation ensures that the laboratory operates a quality system with technically competent staff. The laboratory has accreditation since 1997 and it is the policy of the laboratory to achieve and maintain a high standard of quality consistent with client's requirements in all aspects of the work carried out within the laboratory.

## 3.2 Interlaboratory Proficiency Schemes

To ensure the accuracy of the analytical testing the laboratory participates in several external proficiency schemes. The ongoing competence of the laboratory and its staff is assessed by participation in various inter-laboratory proficiency testing schemes, such as LGC Aquacheck scheme and the EPA Intercalibration programme organised for environmental laboratories throughout Ireland. Bord na Móna Technical Services & Laboratory Services Analytical Laboratory is listed on the EPA's register of Quality Controlled Laboratories

## 3.3 Control Chain of Custody

As part of the Quality System in place at Bord na Móna Technical Services measures are taken to ensure controlled chain of custody. An outline of the chain of custody is given below.

BORD NA MÓNA

## CONTROLLED CHAIN OF CUSTODY

| SITE | | TRANSPORT | | LABORATORY |
|---|---|---|---|---|
| Sampling and packaging of all samples were carried out by Bord na Móna Technical Team: | Transport Document Form | Transport to laboratory by Bord na Móna Technical Team. | Sample Reception Form | Receiving of samples at Bord na Móna Environmental Laboratory complex by: Laboratory Manager (Secure laboratory complex access to authorised personnel only) |
| Ms. Linda Lenihan | → | | → | ↓ |
| | | | | Storage of all samples for 1 month period after report issue. |
| | | | | ↓ |
| | | | | Supervised Disposal |

## 4.0 RESULTS

Table 4.1 below presents the results of the dust deposition monitoring at the AES facility in Nenagh, Co. Tipperary.

**TABLE 4.1: RESULTS OF DUST DEPOSITION**

| Sample Name | Deposition Rate ($mg/m^2/day$) | *Dust Deposition Limit ($mg/m^2/day$)* |
|---|---|---|
| D1 | 22 | ***350*** |
| D2 | 39 | ***350*** |
| D3 | 95 | ***350*** |
| D4 | 107 | ***350*** |

## 5.0 COMMENT

The results of the dust deposition survey which was carried out from the 7th of December 2009 to the 6th of January 2010 at the AES facility in Nenagh are presented in Table 4.1.

The Waste Licence limit for dust deposition is given as $350mg/m^2/day$ as per Condition B5.

The dust deposition results at the D1, D2, D3 and D4 monitoring locations are in compliance with the limit of $350mg/m^2/day$ as per Condition B5 of the Waste Licence.

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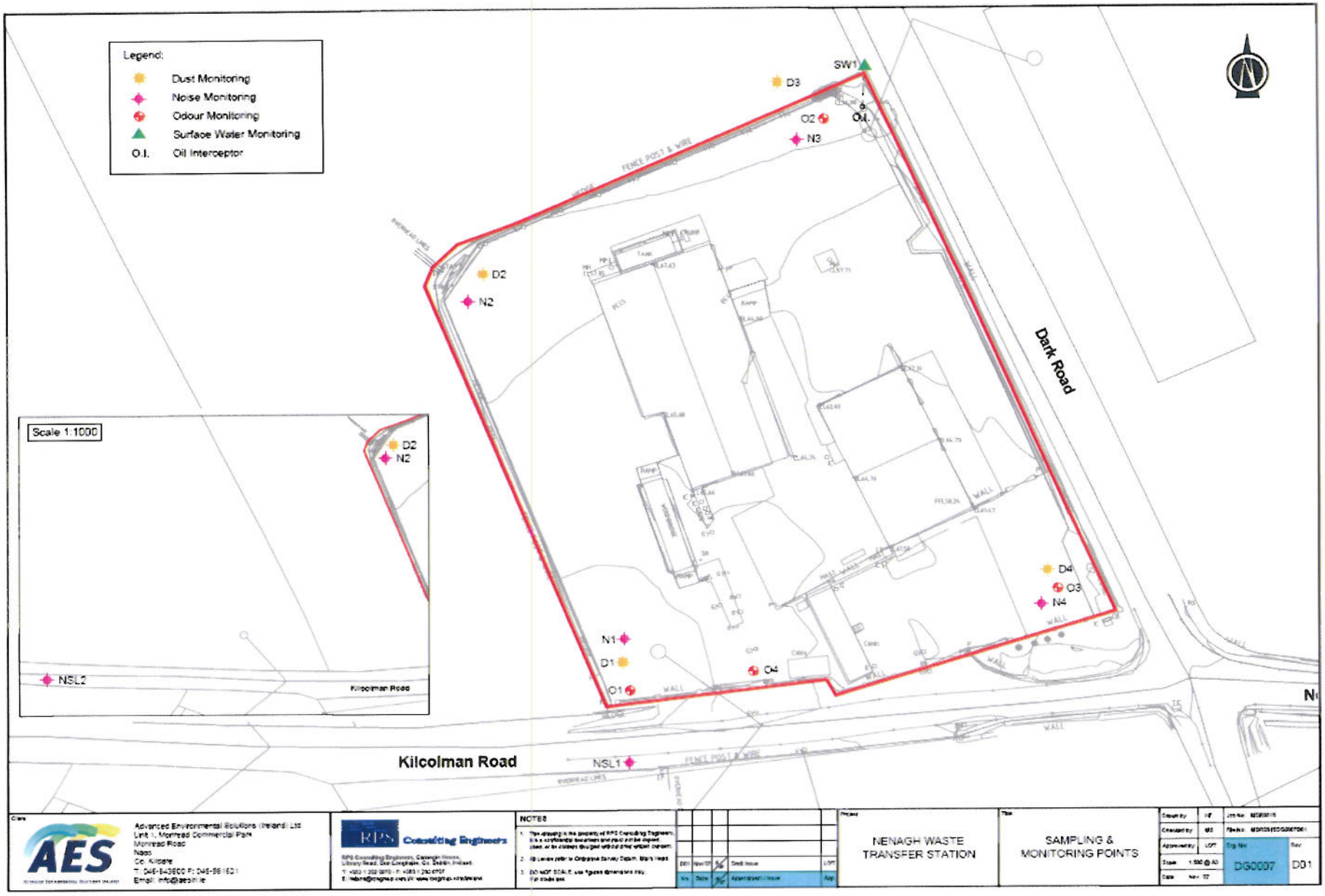
*All queries concerning the report or its contents should be forwarded to the Monitoring Team leader.*

# APPENDIX 1

Map of Dust Monitoring Locations


Legend:
Dust Monitoring
Noise Monitoring
Odour Monitoring
Surface Water Monitoring
O.I. Oil Interceptor
Scale 1:1000
D2
N2
NSL2
Kilcolman Road
SW1
D3
O2
O.I.
N3
D2
N2
Dark Road
D4
O3
N4
N1
D1
O1
O4
Kilcolman Road
NSL1
Advanced Environmental Solutions (Ireland) Ltd
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Naas
Co. Kildare
RPS Consulting Engineers
NOTES
NENAGH WASTE TRANSFER STATION
SAMPLING & MONITORING POINTS
DG0007
D01

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED

# Analysis Report

ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO.0831

**Project Code :** 09-20845 **Report Unique ID:** 24266
**Report Date :** 11-Sep-2009 **Commen. Date:** 27/08/2009


***Customer:*** Linda Cahill
AES Nenagh
Springfort Cross
Nenagh
Co Tipperary

***Contact Details:***
LCahill@aesirl.ie


**Approved by :** Rita Tunstead
Environmental Scientist

**Sample Number : 212160** Client ID: SW1 27/8/09
Sample Type: Surface Water Received: 27/08/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| Conductivity | * Conductivity @ 25°C | - | 688 | µS/cm |
| pH | * pH | - | 6.7 | pH units |
| Suspended solids | * Suspended solids | - | 24 | mg/l |

## *Methods of Analysis*

| Analysis Name: | Method: |
|---|---|
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |
| pH | G/05 Based on APHA, 2005, 21st Edition, Method 4500 H+B |
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |

## *Notes*

* = INAB accredited test ** = subcontracted test *** = outside accredited range

## *Conditions*

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2. Results contained in this report relate only to the items tested.
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BORD NA MÓNA ENVIRONMENTAL LIMITED

**Analysis Report**

**Project Code :** 09-20941 **Report Unique ID:** 24355
**Report Date :** 18-Sep-2009 **Commen. Date:** 03/09/2009


***Customer:*** **Linda Cahill**
**AES Nenagh**
**Springfort Cross**
**Nenagh**
**Co Tipperary**

***Contact Details:***
**LCahill@aesirl.ie**


**Approved by :** **Austin Lanham**
**Environmental Scientist**

**Sample Number : 213029** Client ID: SW-1 4.00 2/9/09
Sample Type:Surface Water Received: 03/09/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| COD | *COD | - | 43 | mg/l |
| Conductivity | *Conductivity @ 25°C | - | 101 | µS/cm |
| pH | *pH | - | 7.5 | pH units |
| Suspended solids | *Suspended solids | - | 29 | mg/l |

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED

Analysis Report

**Project Code : 09-20941** **Report Unique ID: 24355**

***Methods of Analysis***

| Analysis Name: | Method: |
|---|---|
| COD | G/03: Based on APHA, 2005, 21st Edition, Method 5220D |
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |
| pH | G/05 Based on APHA,2005,21st Edition,Method 4500 H+B |
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |

***Notes***

* = INAB accredited test ** = subcontracted test *** = outside accredited range

***Conditions***

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BORD NA MÓNA ENVIRONMENTAL LIMITED

# Analysis Report

ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO.0831

**Project Code :** 09-21030 **Report Unique ID:** 24507 /1
**Report Date :** 29-Sep-2009 **Commen. Date:** 10/09/2009


***Customer:*** Liz Adair
AES Nenagh
Springfort Cross
Nenagh
Co Tipperary

***Contact Details:***
LCahill@aesirl.ie


**Approved by :** Rita Tunstead
Environmental Scientist

**Sample Number : 213863** Client ID: SW-1 10/9/09 2.30
Sample Type: Surface Water Received: 10/09/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| Conductivity | * Conductivity @ 25°C | - | 447 | µS/cm |
| pH | * pH | - | 7.2 | pH units |
| Suspended solids | * Suspended solids | - | 33 | mg/l |

Supplementary report due to LIMS error

***Methods of Analysis***

| Analysis Name: | Method: |
|---|---|
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |
| pH | G/05 Based on APHA,2005,21st Edition,Method 4500 H+B |

***Notes***

* = INAB accredited test ** = subcontracted test *** = outside accredited range

***Conditions***

1. Reports shall not be reproduced except in full, without the expressed approval of Bord Na Mona Technical Services Analytical Laboratory
2. Results contained in this report relate only to the items tested.
3. All Comments concerning this report or its contents should be forwarded to the Laboratory Manager

BORD NA MÓNA
BORD NA MÓNA ENVIRONMENTAL LIMITED

# Analysis Report

ISO 17025 INAB ACCREDITED TESTING DETAILED IN SCOPE REG NO.0831T

**Project Code :** 09-21102 **Report Unique ID:** 24545
**Report Date :** 02-Oct-2009 **Commen. Date:** 17/09/2009


***Customer:*** Liz Adair
AES Nenagh
Springfort Cross
Nenagh
Co Tipperary

***Contact Details:***
LCahill@aesirl.ie


**Approved by :** Sophie Kearon
Environmental Scientist

**Sample Number : 214805** Client ID: SW1 16/9/09
Sample Type: Surface Water Received: 17/09/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| Conductivity | * Conductivity @ 25°C | - | 891 | µS/cm |
| pH | * pH | - | 6.7 | pH units |
| Suspended solids | * Suspended solids | - | 92 | mg/l |

## *Methods of Analysis*

| Analysis Name: | Method: |
|---|---|
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |
| pH | G/05 Based on APHA,2005,21st Edition,Method 4500 H+B |
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |

## *Notes*

* = INAB accredited test ** = subcontracted test *** = outside accredited range

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BORD NA MÓNA

# Analysis Report

**Project Code :** 09-21502 **Report Unique ID:** 25054
**Report Date :** 12-Nov-2009 **Commen. Date:** 23/10/2009

***Customer:*** **Liz Adair**
**AES Nenagh**
**Springfort Cross**
**Nenagh**
**Co Tipperary**

***Contact Details:***
**LCahill@aesirl.ie**

**Approved by :** **Linda Reid**
**Team Leader**

**Sample Number : 219231** Client ID: SW-1 21/10/09
Sample Type: Surface Water Received: 22/10/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| Conductivity | * Conductivity @ 25°C | - | 375 | µS/cm |
| pH | * pH | - | 7.0 | pH units |
| Suspended solids | * Suspended solids | - | 165 | mg/l |

***Methods of Analysis***

| **Analysis Name:** | **Method:** |
|---|---|
| pH | G/05 Based on APHA, 2005, 21st Edition, Method 4500 H+B |
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |

***Notes***

* = INAB accredited test ** = subcontracted test *** = outside accredited range

***Conditions***

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2. Results contained in this report relate only to the items tested.
3. All Comments concerning this report or its contents should be forwarded to the Laboratory Manager

Bord na Móna Environmental Ltd., Technical Services Analytical Laboratory.
Main St., Newbridge, Co. Kildare, Ireland.
Telephone: +353-45-439416, Fax: +353-45-434207

BORD NA MÓNA

Analysis Report

**Project Code :** 09-21886 **Report Unique ID:** 25446

**Report Date :** 11-Dec-2009 **Commen. Date:** 26/11/2009


***Customer:*** Liz Adair
AES Nenagh
Springfort Cross
Nenagh
Co Tipperary

***Contact Details:***
LCahill@aesirl.ie


**Approved by :** Roisin Kavanagh
Team Leader

**Sample Number : 223417** Client ID: SW-1 26/11/09

Sample Type: Surface Water Received: 26/11/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| COD | * COD | - | 18 | mg/l |
| Conductivity | * Conductivity @ 25°C | - | 865 | µS/cm |
| pH | * pH | - | 7.1 | pH units |
| Suspended solids | * Suspended solids | - | 12 | mg/l |

***Methods of Analysis***

| **Analysis Name:** | **Method:** |
|---|---|
| COD | G/03: Based on APHA, 2005, 21st Edition, Method 5220D |
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |
| pH | G/05 Based on APHA, 2005, 21st Edition, Method 4500 H+B |
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |

***Notes***

* = INAB accredited test ** = subcontracted test *** = outside accredited range

***Conditions***

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BORD NA MÓNA

Analysis Report

**Project Code :** 09-21982 **Report Unique ID:** 25561

**Report Date :** 18-Dec-2009 **Commen. Date:** 04/12/2009


***Customer:*** **Liz Adair**
**AES Nenagh**
**Springfort Cross**
**Nenagh**
**Co Tipperary**

***Contact Details:***
**LCahill@aesirl.ie**


**Approved by :** **Austin Lanham**
**Environmental Scientist**

**Sample Number : 224359** Client ID: SW-1 2/12/09

Sample Type:Surface Water Received: 03/12/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| Conductivity | * Conductivity @ 25°C | - | 829 | µS/cm |
| pH | * pH | - | 7.1 | pH units |
| Suspended solids | * Suspended solids | - | 16 | mg/l |

***Methods of Analysis***

| **Analysis Name:** | **Method:** |
|---|---|
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |
| pH | G/05 Based on APHA,2005,21st Edition,Method 4500 H+B |
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |

***Notes***

* = INAB accredited test ** = subcontracted test *** = outside accredited range

***Conditions***

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BORD NA MÓNA

# Analysis Report

**Project Code :** 09-22058 **Report Unique ID:** 25650
**Report Date :** 23-Dec-2009 **Commen. Date:** 10/12/2009


***Customer:*** Liz Adair
AES Nenagh
Springfort Cross
Nenagh
Co Tipperary

***Contact Details:***
LCahill@aesirl.ie


**Approved by :** Shona Fox

**Sample Number : 225151** Client ID: SW-1 10/12/09
Sample Type:Surface Water Received: 10/12/2009 Condition: Good

| *Analysis* | *Component* | *Specification* | *Result* | *Units* |
|---|---|---|---|---|
| Conductivity | * Conductivity @ 25°C | - | 889 | µS/cm |
| pH | * pH | - | 7.2 | pH units |
| Suspended solids | * Suspended solids | - | 27 | mg/l |

## *Methods of Analysis*

| **Analysis Name:** | **Method:** |
|---|---|
| Conductivity | G/06 Based on APHA, 2005, 21st Edition, Method 2510B |
| pH | G/05 Based on APHA,2005,21st Edition,Method 4500 H+B |
| Suspended solids | G/19 Based on APHA, 2005, 21st Edition, Method 2540D |

## *Notes*

* = INAB accredited test ** = subcontracted test *** = outside accredited range

## *Conditions*

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# Appendix III

## Decommissioning Management Plan

# Advanced Environmental Solutions

## Decommissioning Management Plan

January 2010

TOBIN CONSULTING ENGINEERS

TOBIN
Patrick J. Tobin & Co. Ltd.

# REPORT

**PROJECT:** **Decommissioning Management Plan**

**CLIENT:** **Advanced Environmental Solutions (AES)**
Solsborough
Springfield Cross
Nenagh
County Tipperary

**COMPANY:** **TOBIN Consulting Engineers**
Block 10-4,
Blanchardstown Corporate Park,
Dublin 15.

**www.tobin.ie**

## DOCUMENT AMENDMENT RECORD

| | |
|---|---|
| **Client:** | **Advanced Environmental Solutions (AES)** |
| **Project:** | **AES Waste Transfer Station Nenagh** |
| **Title:** | **Decommissioning Management Plan** |

| **PROJECT NUMBER: 5875** | | | | **DOCUMENT REF: 5875 – 04 – 01** | | | |
|---|---|---|---|---|---|---|---|
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| | | | | | | | |
| A | Final Issue | DC | 28/01/10 | PON | 03/02/10 | DG | 03/02/10 |
| **Revision** | **Description & Rationale** | **Originated** | **Date** | **Checked** | **Date** | **Authorised** | **Date** |
| **TOBIN Consulting Engineers** | | | | | | | |

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# TABLES & APPENDICES

## TABLES



## APPENDICES

# Executive Summary

As part of Condition 10 of Waste licence Reg No: W0240-01, Advanced Environmental Solutions Ltd. (hereafter referred to as AES) are required to submit to the Environmental Protection Agency (hereafter referred to as the Agency) a Decommissioning Management Plan for the Nenagh facility.

The objective of this Decommissioning Management Plan is to determine a plan for decommissioning, rendering safe or removing for disposal/recovery, any soil, subsoil, building, plant and/or equipment, any waste materials or substances contained therein or thereon the site, that may result in environmental contamination or degradation.

TOBIN Consulting Engineers (hereafter referred to as TOBIN) were commissioned to carry out an assessment for the purposes of drafting a Decommissioning Management Plan. A suitably qualified TOBIN Engineer visited the site on Monday 7th December 2009 to carry out an on site risk assessment.

# 1 INTRODUCTION

AES propose to make the following provisions with regard to all or partial site closure (greater than 6 months) at their waste transfer facility at Nenagh, Co. Tipperary. Contained within this closure plan are details on how AES plan to decommission, render safe, remove or dispose of any soil, subsoil, building, plant and equipment, waste materials, waste substances or other matter contained therein, or thereon, that has the potential for environmental degradation.

The aim of this Report is to assign the correct decommissioning category applicable to the facility, and allocate correct financial provisions so the site can be decommissioned correctly in the event of unforeseen site closure. A site layout plan is available in Appendix A.

The proposed lifetime of the transfer station is unlimited, thus there is no short or long term plan for cessation of operations at the facility. In the unlikely event of closure the facility closure plan will be implemented. This plan shall be reviewed annually and proposed amendments notified to the Agency for agreement as part of the annual environmental report (AER).

A costed plan for the decommissioning/closure of the site and a scope statement for implementation are included in this Report. In the unlikely event of the activation of this plan a final validation report including a certificate of completion will be furnished to the Agency no less than 3 months from the date of execution of the closure plan.

# 2 SCOPE

As part of the decommissioning plan it is necessary to assess the risk category of the facility as defined by the EPA Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision.

As part of this assessment a clean closure plan is envisaged for this facility. To achieve this clean closure status the facility must be described as either a category 1 or 2 facility. Waste licence W0240-01 states that the facility is licensed for both waste disposal and recovery activities. Reference to appendix B of the EPA Guidance on Environmental Liability Risk Assessment, Residuals Management Plans and Financial Provision demonstrates that the Nenagh facility has an Office of Environmental Enforcement (OEE) banding of G3. This rating is used in conjunction with the environmental sensitivity sub-matrix to achieve an environmental sensitivity classification. The environmental attribute score for the facility is 8, which is within the moderate attribute score and gives an environmental sensitivity classification of 2 (see Appendix B).

The operational risk assessment is classified according to Table 2-1 below:

*Table 2-1 Operational Risk Assessment Matrix*

| Complexity | | Score |
|---|---|---|
| **Licensed Activity Class**<br>R2, R3, R4, R12 & R13<br>D11, D12 & D13 | **G3** | **3*** |
| **Environmental Sensitivity** | | |
| **Human Occupation**<br>- Located <50m from publicly occupied building | 5 | |
| **Groundwater Protection**<br>- Overlying Locally Important Aquifer (GSI)<br>- Groundwater Vulnerability High (GSI) | 1<br>2 | |
| **Sensitivity of Receiving Waters**<br>Class D | 0 | |
| **Protected Ecological Sites**<br>>1km from protected sites | 0 | |
| **Air Quality & Topography**<br>- Simple terrain | 0 | |
| **Sensitive Agricultural Receptors**<br>>150m from activity area | 0 | |
| **TOTAL ENVIRONMENTAL SENSITIVITY** | **8** | **2**** |
| **Compliance Record**<br>*Discharge to SW - non compliance*<br>*Elevated dust non-compliance* | 1<br>1 | **3***** |
| **Overall Risk Score ((Complexity x Environmental Sensitivity) x Compliance Record)** | ***3 x 2 x 3 =*** | **18** |
| **RISK CATEGORY** | **Category 1 = <5**<br>**Category 2 = 5 - 23**<br>**Category 3 = >23** | **CATEGORY 2** |

* Operational Risk Assessment Complexity Band
** Environmental Sensitivity Classification
*** Compliance Record Score

As part of the scoping plan the transfer facility is described as **CATEGORY 2**. Clean Closure is envisaged, as there is little potential for long-term environmental degradation. On going monitoring at

the facility will demonstrate that there will be no outstanding environmental issues should sudden closure occur.

# 3 DECOMMISSIONING

Decommissioning of the waste transfer facility will commence as follows:

1. **Appointment of Project Manager:** A suitably competent person or company will be charged with responsibility for overseeing the decommissioning plan for the site.
2. ***Cessation of acceptance of waste:*** Waste will no longer be accepted at the site and existing contracts will be terminated.
3. ***Removal of all waste materials:*** Any remaining waste material on the site will be collected and removed from the site for recovery or disposal to a suitably licensed facility.
4. ***Removal of all consumable materials:*** All consumables will be sold, returned to distributor or disposed of to an approved location.
5. ***Fuel storage infrastructure:*** The fuel storage infrastructure on site will be emptied, cleaned and decontaminated. The fuelling infrastructure can be decommissioned and sold should it not be required for future activities on the site.
6. ***Plant and equipment:*** All plant and equipment will be cleaned, decontaminated and then either sold at auction or sent for scrap.
7. ***Existing infrastructure:*** The existing infrastructure such as buildings, drainage systems, sewer systems, silt traps/oil interceptors and pumps can be left in situ for future ventures at the site. Any necessary decontamination will be conducted prior to handover.
8. ***Site monitoring:*** An integrated monitoring plan currently exists on the site to eliminate residual pollution and contaminant build up. However upon cessation of activities at the site a monitoring programme will commence to confirm there is no residual contamination pertaining to the waste transfer activity.
9. ***Validation report:*** A validation report will be issued to the Agency when all the above provisions have been accounted for.

It is anticipated that AES (Bord na Móna) will provide a company guarantee to cover the estimated financial provision required to implement this closure plan.

# 4 PROJECT MANAGEMENT

Upon determination of closure a project manager will be assigned. Initial duties will include setting up a time scale for facility closure. Other duties the project manager will be responsible for include overseeing the scaling back of activities, termination of waste acceptance, removal of waste and consumables from site, decommissioning plant and infrastructure, implementation of the site environmental monitoring, issuing the validation report and surrendering the waste licence to the Agency.

### *4.1.1 Costing*

*Table 4-1 Cost of Project Manager*

| Personnel | Rate per Day € | Required No of Days | Total Cost € |
|---|---|---|---|
| Site Project Manager | 850 | 15 | 12,750 |

**Assumption:** It is assumed that the project manager will be assigned for a period of 3 months, assuming no aftercare or remedial works are required. Over this 3 month period the project manager will be required on this project for approximately 15 days (3 working weeks).

# 5 TERMINATION OF WASTE ACCEPTANCE

Once it is determined that the transfer station is closing it is envisaged that waste acceptance will be phased out until eventual site closure is complete. It is not anticipated that this will happen instantaneously and arrangements will be put in place to assist customers to find alternative waste management services.

### *5.1.1 Costing*

*Table 5-1 Cost of Termination of Waste Acceptance*

| Process | Cost € |
|---|---|
| Notification of Closure to Customers | 0 |
| Facilitation of Existing Customers with New Waste Collection Service | 0 |
| **Total** | **0** |

**Assumption:** It is assumed that any costs associated with the termination of waste acceptance will be absorbed into the running costs of the facility. This process will primarily be an administrative task where existing AES staff and facilities can be used to facilitate this element of the closure plan.

# 6 REMOVAL OF ALL MUNICIPAL WASTE

All materials and wastes are currently stored in designated bunded areas. In the event of closure all waste at the facility will be transported off site for either reprocessing or landfill. Where the usual outlets cannot accept specific waste types from the facility alternative locations will be sourced. These locations will be properly documented and waste will only be sent to approved and appropriately licensed facilities. Municipal waste is normally only held at the facility for a maximum period of 48hrs, therefore the volume of waste requiring removal off site will not be significant.

### *6.1.1 Costing*

*Table 6-1 Waste Removal and Disposal Costs*

| Type of Material | Quantity (Tonnes) | Disposal (D) or Recovery (R) | Disposal/Recovery Costs € (per tonne) | Total Cost € |
|---|---|---|---|---|
| **Domestic*** | 40 | D | 100 | 4000 |
| **Recycling*** | 40 | R | 25 | 1000 |
| **Timber** | 12 | R | 18 | 216 |
| **Hazardous**** | 4 | D | 1000 | 4000 |
| **Metals***** | 8 | R | 100 | -800 |
| **Total****** | 64 | - | - | **7416** |

***** Domestic and recycling wastes are collected on alternating weeks so there is only potential for one of these waste types to be present at the facility.
** Gas cylinders have free collection and a rebate is possible on lead acid batteries.
*** Metals removed from site are sold for a profit and will be subtracted from waste disposal costs.
**** Domestic collection week selected to show largest potential cost, recycling cost not included in final total.

**Assumption:** It is assumed that wastes stored on site will be sent to their usual recovery or disposal destinations. The costs associated with this removal will remain similar to current waste removal costs from the facility.

# 7 REMOVAL OF ALL CONSUMABLE MATERIALS

Table 7.1 below indicates the quantity of consumable materials on site, broken down into generic types that will need to be removed off site in the event of the activation of the closure plan. Quantities of consumables requiring removal from site will most likely be low as a sudden cessation of activity is not envisaged and consumables could be allowed to deplete over the staggered closure period.

*Table 7-1 Quantities Consumables On Site*

| Type of Material | Quantity | |
|---|---|---|
| **Diesel** | 45,000 | ***Litres*** |
| **Disinfectant & Detergents** | 35 | ***Litres*** |
| **Engine Oil** | 850 | ***Litres*** |
| **Hydraulic Oil** | 700 | ***Litres*** |
| **Grease** | 120 | ***Kg*** |
| **Odour Block** | 75 | ***Litres*** |
| **Ad Blue** | 850 | ***Litres*** |
| **AFT** | 70 | ***Litres*** |

All raw materials where allowable will be returned to vendors, this is particularly relevant to unopened containers of chemicals. Where the return of product is not possible materials will be sent off site for reuse at additional AES facilities or for recovery, treatment or disposal at a suitably licensed location. All waste transported off site shall be transported in accordance with good environmental practice and appropriate National and European legislation and protocols.

### *7.1.1 Costing*

For this cost assessment it is assumed that all materials on site will be sent for disposal to ensure all potential costs are accounted for.

*Table 7-2 Cost of Disposal/Removal of Consumables*

| Material | Quantity Tonnes | Removal Cost € | |
|---|---|---|---|
| | | Disposal cost per tonne | Total Disposal Cost |
| **Disinfectant & Detergents** | **0.361** | 450 | 162 |
| **Engine Oil** | **0.739** | 450 | 333 |
| **Hydraulic Oil** | **0.621** | 450 | 279 |
| **Grease** | **0.12** | 450 | 54 |
| **Odour Block** | **0.075** | 450 | 338 |
| **Ad Blue** | **0.207** | 450 | 93 |
| **AFT** | **0.0597** | 450 | 27 |
| **Total Cost** | **-** | - | **1286** |

*Table 7-3 Total Removal and Disposal Cost of Consumables*

| Total Removal and Disposal Cost € | |
|---|---|
| **Total Disposal Cost** | 1286 |
| **Total Transport Cost*** | 976 |
| **Total Cost** | **2262** |

*A maximum transport event of 8hrs (€976) has been assigned as the transport cost for removal of all chemicals from site.

**Assumption:** In practice it is envisaged that consumables will be allowed to deplete, be returned to vendor or used at another AES facility before the option of disposal will be considered. Therefore costs associated with removal of consumables from site will be significantly lower.

# 8 DECOMMISSIONING OF THE FUEL AND DRAINAGE SYSTEMS

In the unlikely event of facility closure all on site fuel volumes will be removed. If approved by the Agency fuelling infrastructure can remain on site for potential future operations. If this is acceptable all fuelling infrastructure will be rendered safe by securing of fuelling tanks and equipment prior to handover. However, if removal is deemed necessary by the Agency the plant-fuelling infrastructure can be decommissioned and sold, sent for use at another AES facility or sent for scrap.

All effluent tanks (oil interceptors, silt traps and leachate tanks) will be emptied by vacuum tanker and decontaminated by a suitably qualified contractor. If the closure plan is implemented then both the storm water and foul sewer systems will be decontaminated where necessary and left in situ for future operations at the site. Decommissioning the foul and storm water interceptors will be one of the final activities carried out on site to prior to closure. This will ensure any contaminants entering the drainage system during the overall site decontamination will be contained in the interceptors and removed to a suitable facility for treatment.

## 8.1 REMOVAL OF FUEL AND WASTEWATER

As plant closure will not occur instantaneously any on site fuel levels will be allowed to deplete over a pre-determined decommissioning period. If there is any unused fuel remaining it will be removed by tanker and taken to another AES facility, returned to vendor or sent for disposal to an appropriately licensed facility. A vacuum tanker will empty all on site attenuation tanks and removed effluent will be sent for disposal at a suitably licensed facility.

### *8.1.1 Costing*

Costs for fuel and waste disposal are calculated per tonne. Leachate and bin wash effluent are contained in the foul interceptor.

*Table 8-1 Cost of Disposal of Fuel & Wastewater*

| Disposal | Tonnage | Rate per tonne € | Total Disposal Cost € |
|---|---|---|---|
| Disposal of foul interceptor effluent | **5** | **115** | **575** |
| Disposal of Storm Water | **41** | **115** | **4715** |
| Disposal of Diesel | **0** | **0** | **0** |
| **Total Disposal Cost** | **46** | **115** | **5290** |

*Table 8-2 Cost of Removal of Fuel and Wastewater*

| Removal | Transport Rate € per/hr | No of hrs required | Total Removal Costs € |
|---|---|---|---|
| Disposal of foul interceptor effluent | **122** | **4** | **488** |
| Disposal of Storm Water | **122** | **10** | **1220** |
| Disposal of Diesel | **122** | **6** | **732** |
| Total Removal Costs | **122** | **20** | **2440** |

*Table 8-3 Total Cost of Removal and Disposal of Fuel and Wastewater*

| Total Removal and Disposal Cost € | |
|---|---|
| **Total Disposal Cost** | 5290 |
| **Total Transport Cost** | 2440 |
| **Total Cost** | **7730** |

**Assumption:** Wastewater volumes within the storm water and foul sewer attenuation tanks are assumed to be at maximum capacity. This will allow for a worst-case scenario assessment of cost for decommissioning.

Diesel volumes within the storage tank are assumed to be at maximum capacity, requiring one tanker load to be removed off site. As diesel is free to send for reprocessing only the transport cost to site need be addressed. As diesel is such a valuable commodity it is not envisaged that there will be any remaining fuel oil on site upon closure. If there is any remaining fuel oil it will be returned to vendor, taken to another AES facility or sold. This could result in the elimination of transport costs to a processing facility.

## 8.2 DECOMMISSIONING AND DECONTAMINATING OF FUEL AND DRAINAGE NETWORKS

It is envisaged that the fuelling infrastructure on site will remain in situ for use by another venture at the site. However if required by the Agency the on site fuelling facilities will be decontaminated and all remaining fuel residue will be cleaned by a specialist contractor prior to the facility handover or closure. All on site attenuation tanks and drainage networks will be decommissioned and where necessary decontaminated.

### *8.2.1 Costing*

Costs for decommissioning are calculated on an hourly rate (include travel time).

*Table 8-4 Cost of Decommissioning and Decontaminating Fuel & Drainage Systems*

| Decommissioning | Costing | | |
|---|---|---|---|
| | Hourly Rate € | Time | Cost € |
| Decommissioning of foul Silt/Oil interceptor | **122** | **5** | **244** |
| Decommissioning of Storm Water Silt/Oil interceptor | **122** | **6** | **488** |
| Decommissioning of Fuel Tank | **122** | **8** | **244** |
| Decommissioning of underground pipe network | **122** | **4** | **244** |
| Travelling Time | **122** | **8** | **976** |
| **Total Decommissioning Cost** | **122** | **31** | **3782** |

**Assumptions:** Decommissioning is charged at an hourly rate and travel time must be added to the number of hours worked on site. It is also assumed that actual decommissioning time will be less than specified in Table 8.4 and that travel time costs to site could overlap with fuel and wastewater removal costs.

The contractor will issue a decommissioning cert upon completion of works. Once decommissioned the fuel and foul system will be secured.

## 8.3 REMOVAL OF INFRASTRUCTURE

If required the fuelling infrastructure and foul system pumps can be decontaminated, decommissioned and sold at auction, sent for scrap or reused at another AES facility. Attenuation tanks once

decontaminated should be inert and pose no environmental risk. Tank integrity testing can be carried out if deemed necessary by the Agency and tanks can remain in situ for future use at the site.

### *8.3.1 Costing*

Costs for infrastructure removal or integrity testing if necessary are calculated below:

*Table 8-5 Cost of Infrastructure Removal & Integrity Testing*

| Infrastructure Removal/Testing | Costing | | |
|---|---|---|---|
| | Sale € | Scrap € | Cost € |
| ***Removal*** | | | |
| Fuelling Infrastructure – Tank Removal | 0 | 0 | 0 |
| Foul System – Pump Removal | 0 | 0 | 0 |
| **Total** | | | **0** |
| ***Testing*** | **Site Work €** | **Report €** | **Cost €** |
| Bund Integrity Testing | 1350 | 850 | 2200 |
| **Total** | **1350** | **850** | **2200** |

**Assumptions:** The removal costs associated with the foul pumps and fuel tank can be offset by their sale at auction or sale for scrap. As the sale cost will offset the removal cost a value of €0 is associated with this process. If necessary a bund integrity test carried out by competent persons will cost approximately €2200.

## 9 EXISTING PLANT AND EQUIPMENT

All existing plant and equipment (including weighbridge) will be decontaminated prior to removal from site. Plant and equipment can be decommissioned and moved to another AES site, sold at auction or as scrap. All decommissioning will be carried out in accordance with the current decommissioning guidance plan stated in Section K of the Waste Licence application, where it states all vehicles will be removed from site.

Details of all plant and equipment are detailed below:

*Table 9-1 Vehicle Register*

| Vehicle Type* | No of Vehicles |
|---|---|
| **Articulated Lorry** | *2* |
| **Articulated Lorry (yard use)** | *1* |
| **REL Skip Eater** | *1* |
| **RCV 8** | *4* |
| **RCV 6** | *4* |
| **Rigid 4** | *2* |
| **RCV 4** | *2* |
| **Skip – Chain** | *4* |
| **Skip Hook** | *1* |
| **Van** | *3* |
| **Skip Trailer** | *1* |
| **Nissan Forklift** | *1* |
| **Cat 312C** | *1* |

| | |
|---|---|
| **Bobcat 753 Skid steer** | *1* |
| **Total** | **28** |

* A full fleet register is available in Appendix C

## 9.1 COSTING

All vehicles will be removed from site prior to site closure.

*Table 9-2 Cost of Plant & Equipment Removal*

| Plant & Equipment | Decontamination € | Transport € | Cost € |
|---|---|---|---|
| Weighbridge | **0** | **0** | **0** |
| Road Vehicles | **0** | **0** | **0** |
| Site Vehicles | **0** | **0** | **0** |
| Site Equipment (handheld tools) | **0** | **0** | **0** |
| **Total Removal Cost** | **0** | **0** | **0** |

**Assumptions:** It is envisaged that in the event of site closure the weighbridge will be decommissioned and removed to another AES facility, sold at auction or sent for scrap. If required the costs associated with the removal of the weighbridge can be absorbed by moneys received for its sale.

It is envisaged that the cost associated with transport of vehicles from site will be absorbed by the facility running costs. All mobile plant will be taken off site by AES staff, provision will be made for slow moving plant and if necessary AES will hire a suitable haulier for this. Costing for a haulier is deemed unnecessary, if required the sale value of the heavy plant would off set the cost of haulage off site.

Decontamination involves power washing of vehicles and equipment. Costs associated with this will be absorbed into the running costs of the facility. AES staff will decontaminate all vehicles and plant at the bin wash area prior to removal from site.

# 10 BUILDING INFRASTRUCTURE

Plant infrastructure remaining on site will be dependant on the future use. The prefabricated structures used in the southern section of the site can be easily transported off site to another location. Due to their use as administrative buildings they will require minimal decontamination. If necessary AES will organise portacabin removal and transport off site by a suitable haulier.

It is envisaged that the main shed and workshop buildings will be decontaminated and retained for use by future ventures at the site. Due to the nature of materials stored in the main shed a specialist contractor will conduct the decontamination process.

In the unlikely event of required demolition of the workshop special provision will be put in place for the removal and disposal of a section of asbestos roofing. The roof of the workshop is approximately 50 percent asbestos and its removal to a suitably licensed location will be required before any additional demolition activity can be carried out.

The open yard area of the site will be left empty prior to closure. All materials stored in this area will be removed and the area will be power washed by AES staff.

All remaining infrastructure will be validated as clean and posing no risk of environmental contamination before decommissioning of the site is complete and the waste licence surrendered to the Agency.

## 10.1 COSTING

*Table 10-1 Cost of Decommissioning and Removal of Infrastructure*

| Building Infrastructure | Decontamination € | Demolition € | Transport € | Cost € |
|---|---|---|---|---|
| Prefabricated Buildings | **0** | **0** | **0** | **0** |
| Main Shed | **1200** | **-** | **-** | **1200** |
| Workshop* | **600** | **-** | **-** | **600** |
| Yard Area | **0** | **0** | **0** | **0** |
| **Total Removal Cost** | **1800** | **0** | **0** | **1800** |

* It is envisaged that the workshop will remain intact if facility closure should occur. However if required by the Agency – Asbestos roofing will be removed and disposed to a suitable location, this is not included in the costing.

**Assumption:** If required AES staff can empty the administration buildings. All internal equipment such as computers, printers, desks, chairs and unused stationary will be sent by AES to another AES facility or sold. Any domestic waste from the building will be disposed of in an appropriate manner. Due to the nature of the operations taking place in these buildings thorough decontamination is deemed unnecessary. Any transport costs associated with portacabin removal could be off set by their sale and are not included in this costing.

Industrial cleaners will decontaminate the main shed. It is envisaged that two workers using industrial washing equipment could sanitise the main shed in one day.

AES staff will empty the workshop and remove all equipment, chemicals and waste prior to the commencement of the decontamination process. Industrial cleaners using suitable power washing equipment will clean the workshop area and ensure it is completely decontaminated prior to site closure.

AES staff will remove all materials from the open yard area prior to site closure. Any waste material present will be sent to an appropriate facility for recovery or disposal. The hardstanding area within the site boundary will be cleaned by AES staff prior to site closure or handover.

# 11 TEST PROGRAMME

The monitoring and reporting requirements, which are set out in Waste Licence Reg No: W0240-01 will be complied with until the licence is surrendered to the Agency. The final suite of testing will determine if any environmental contamination has occurred as a result of operations at the facility. If contamination is detected further investigations will be carried out to determine the source, nature and scale of the problem and remedial measures will be proposed to the Agency for its agreement.

## 11.1 COSTING

*Table 11-1 Cost of Environmental Testing Closure Plan*

| Required testing | Monitoring € | Analysis € | Frequency *** | Cost € |
|---|---|---|---|---|
| Surface Water Monitoring | **800** | **1300** | **1** | **2100** |
| Groundwater Monitoring | **NR** | **NR** | **NR** | **NR** |
| Foul Water Monitoring** | **NR** | **NR** | **NR** | **NR** |
| Air Monitoring* | **NR** | **NR** | **NR** | **NR** |
| Noise Monitoring* | **NR** | **NR** | **NR** | **NR** |
| Soil Monitoring | **NR** | **NR** | **NR** | **NR** |
| **Total Sampling Cost** | **800** | **1300** | **-** | **2100** |

NR – Not Required
* As the facility will be closed there will be no emissions from the site to these environmental bodies.
** As the facility will be closed there will be no effluent discharge to the foul sewer.
*** The frequency of required analysis is dependant on the results from the final monitoring event. If contamination is identified then further analysis will be required, if no contamination is detected then monitoring will be complete.

**Assumptions:** It is not deemed necessary to conduct noise or dust monitoring as operations at the facility will have ceased, so any recorded levels will not be from site activity. Groundwater monitoring is not required in waste licence W0240-01. As the site is 100 percent hardstanding and all underground tanks are designed to approved specification it is not deemed necessary to conduct groundwater and soil monitoring as part of the final test event.

The facility has Category 2 status and it is assumed that the potential for post closure monitoring will be minimal. Residual contamination issues are unlikely as there is ongoing environmental monitoring at the facility.

# 12 VALIDATION REPORT

Once the decommissioning plan is implemented a validation report will be prepared demonstrating successful implementation. This Report will confirm that there is no continuing or future environmental risk from the site. The validation report will be submitted to the agency within three months of executing the decommissioning plan.

This validation report will address:

1. Disposal and/or recovery of all wastes.
2. Disposal or reuse of all consumable materials.
3. Decommissioning or decontamination of all plant and equipment.
4. Disposal of all equipment.
5. Monitoring and testing to ensure compliance with licence Conditions.
6. Requirements for all future monitoring, if any.

Upon completion of the above validation plan a report will be issued to the Agency detailing decommissioning completion and indicate any required aftercare.

## 12.1 COSTING

*Table 12-1 Validation Report Costs*

| Report | Cost € |
|---|---|
| Validation Report | 5000* |
| **Total Cost** | **5000** |

* Figure is approximate and dependent on potential aftercare and remedial work requirements.

**Assumption:** This costing is assumed on the basis that no significant aftercare or remedial measures will be required upon site closure.

# 13 AFTERCARE

It is not envisaged that any aftercare will be required at this Category 2 facility once the decommissioning plan has been implemented. All potential contaminant sources will be removed from the site prior to closure. In the unlikely event of contaminants being detected during the final monitoring programme an additional period of monitoring will be commissioned and if necessary remedial measures discussed with the Agency.

Costing details for potential post closure surface water monitoring is contained in Table 11.1 above.

Aftercare measures at the Nenagh site will be unlikely as the facility was constructed in adherence with best practice techniques and there is ongoing environmental monitoring at the site. In the event that contaminants are detected remedial measures will be implemented.

Any costs resulting from these remedial measures will be paid out of the contingency provision put in place as part of this decommissioning plan.

## 13.1 COSTING

*Table 13-1 Cost of Aftercare*

| Aftercare Measures* | Cost € |
|---|---|
| Environmental Monitoring** | NR |
| Aftercare Measures* | NR |
| **Total Aftercare Cost** | 0 |

NR – Not required
*Category 2 Facility – Aftercare measures not envisaged
** If a price is required for environmental monitoring – see Table 11.1

# 14 FINANCIAL PROVISION

AES and *Bord na Móna* (Parent Company) will make a financial provision in their 2010 financial statement for implementation of this decommissioning plan. Financial provision will be given to decommissioning of plant, equipment, consumable materials, stockpiled waste and any additional residuals identified in this Report.

In order to provide for this eventuality a provision of €58,552 is recommended, as outlined in Table 14.1 below.

Advanced Environmental Solutions (Ireland) Ltd. propose to provide a Parent Company Guarantee (Bord na Móna PLC) to the value of €58,552. This figure will be reviewed annually in accordance with Condition 10.2.2 of waste licence W0240-01.

## 14.1 COSTING

Table 14.1 below is used to calculate the required financial provision:

*Table 14-1 Closure Plan Costing*

| Closure Plan Costing | € |
|---|---|
| Project manager | 12,750 |
| Termination of Waste Acceptance | 0 |
| Removal of all on Municipal Waste | 7416 |
| Removal of all Consumable Materials | 2262 |
| Removal of Fuel and Waste | 7730 |
| Decommissioning and Decontaminating of Fuel and Drainage Networks | 3782 |
| Removal of Infrastructure | 2200 |
| Existing Plant and Equipment | 0 |
| Building Infrastructure | 1800 |
| Test Programme | 2100 |
| Validation Report | 5000 |
| Aftercare | 0 |
| **Total Decommissioning Cost** | 45,040 |
| Contingency Plan 30% | 13,512 |
| **Total Closure Cost (ex Vat)** | **58,552** |

The financial provision for the closure plan will be updated annually and included in the AER.

The above figures are calculated based on current disposal costs and waste quantities that would be generated upon activation of this plan. It is also important to note that it would be possible to recover some or all of the cost of decommissioning the facility through the sale of plant and equipment either by auction or for scrap.

# 15 CONCLUSION

It is proposed that AES (Bord na Móna) provide a company guarantee (under their company seal) to fully decommission the Nenagh site upon cessation of activities at the facility. In the unlikely event of facility closure the Nenagh site could be adapted into a large warehouse facility, storage yard, industrial unit or sold as a going concern.

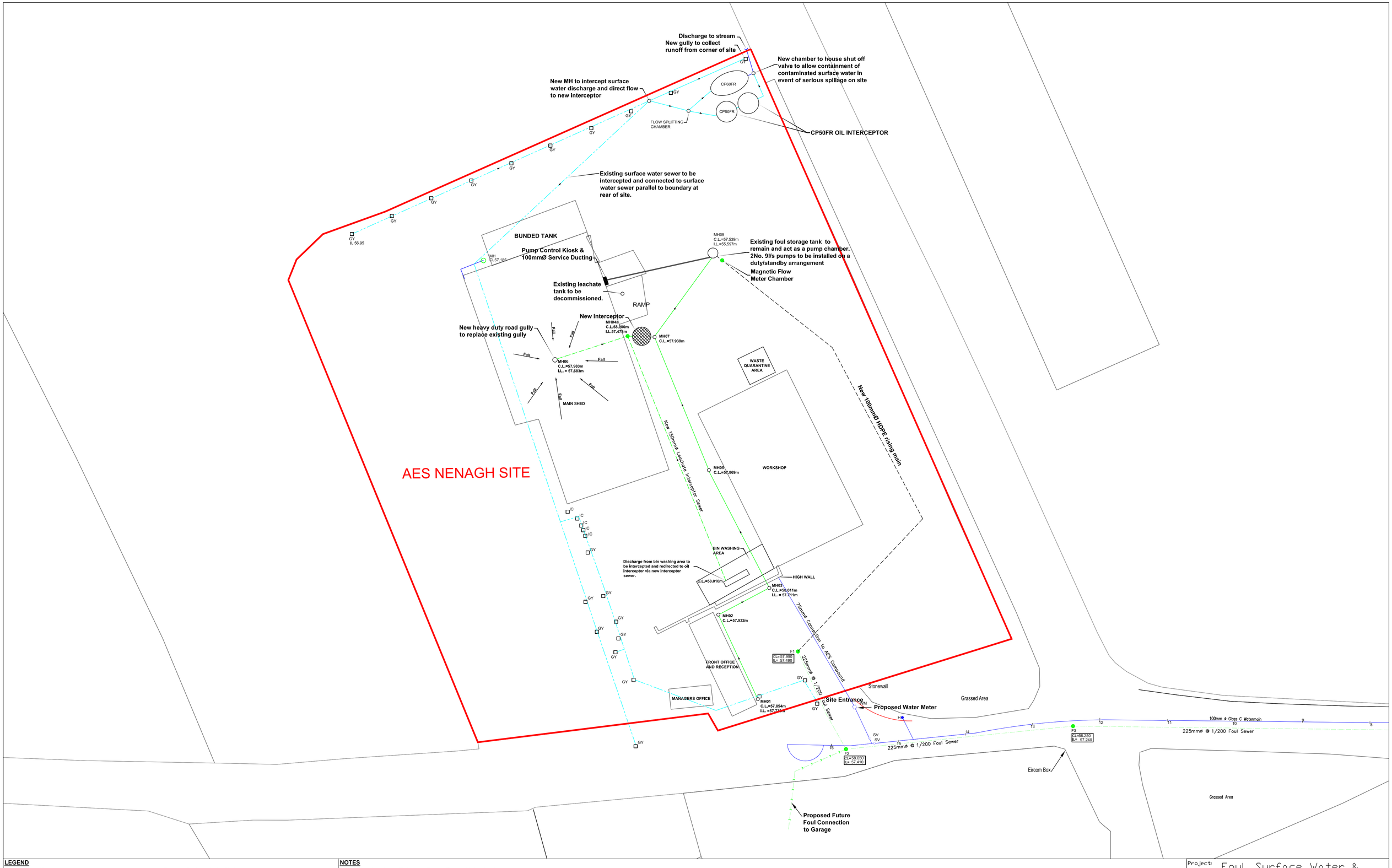
If the facility is sold as a going concern there should be no outstanding liability costs associated with decontamination or decommissioning the site as the facility will continue its current operations. If the facility is to be sold as a going concern then a name change application for waste licence W0240-01 would be submitted to the agency for its approval prior to handover.

With approval from the Agency, financial provision of €58,552 will be guaranteed under the AES (Bord na Móna) company seal. Bord na Móna is a semi state company that was established in 1946, it publishes yearly financial reports and last year had a reported turnover in excess of €400 million (see Appendix D). Bord na Móna has significant financial provision to implement any potential remedial works associated with decommissioning the Nenagh facility.

As this is a Category 2 facility no significant aftercare works should be required as the environmental risk from the facility is negligible.

# APPENDIX A

Site Layout Plan




**LEGEND**

- Existing Foul Sewer
- Proposed Sewer
- Proposed Future Foul
- Proposed Foul Rising Main
- Proposed Water Main
- Existing Water Main Connections
- Proposed Manhole F1
- Sluice Valve SV
- Water Meter WM
- Flow Meter FM
- Hydrant H
- Existing Foul Manhole MH03
- Existing Surface Water Collection
- Proposed Surface Water Collection

**NOTES**

1. All levels refer to Ordnance Survey Datum, Malin Head.
2. All dimensions in millimeters unless noted otherwise.
3. Trenches in public road and verge shall be opened and back-filled in accordance with Department of Environment and Local Government publication 'Guidelines for the Opening, Backfilling and Reinstatement of Trenches in Public Roads (April 2002)'
4. Bulk Combination Meter, grit screen and sluice valve shall be fitted to the water main at site entrance. Bulk Combination Meter shall be enclosed within a 1200mm x 600mm chamber at the site entrance. Chamber cover and frame shall be manufactured in ductile iron and in compliance with IS261 Grade A. Cover shall consist of four triangles hinged for non rock performance.
5. Provide for 2No. vent stacks on the foul sewer. 1No. at the site entrance and 1No. at the connection manhole.
6. This drawing is to be read in conjunction with CW-AES-02, CW-AES-03, CW-AES-04 & CW-AES-05

| | REVISION | By | Date | Chk'd |
|---|---|---|---|---|
| | | | | |

Project: Foul, Surface Water & Water Main Layout

Title: AES Nenagh Waste License Compliance

Dimensions in: mm

Scale: 1:250

Drawn By: M.G. 19/06/2009

Checked By:

Approved By:

BORD NA MÓNA
BORD NA MONA ENERGY LIMITED
LEABEG, TULLAMORE CO. OFFALY
Tel. 057 9345900. Fax. 057 9345160

Drawing No. CW-AES-01 | Revision. D | Sheet 2 of 2

# APPENDIX B

**Risk Category Identification**
Screening and operational risk assessment

| Environmental Attribute | Environmental Attribute score | Score |
|---|---|---|
| **Human Occupation** | | |
| < 50m | 5 | **5** |
| 50m - 250m | 3 | |
| 250m - 1000m | 1 | |
| >1km | 0 | |
| **Groundwater protection** | | |
| Regionally Important Aquifer | 2 | |
| Locally Important Aquifer | 1 | **1** |
| Poor Aquifer | 0 | |
| Vulnerability Rating - Extreme | 3 | |
| Vulnerability Rating - High | 2 | **2** |
| Vulnerability Rating - Moderate | 1 | |
| Vulnerability Rating - Low | 0 | |
| **Sensitivity of Receiving Waters** | | |
| Class A | 3 | |
| Class B | 2 | |
| Class C | 1 | |
| Class D | 0 | **0** |
| Designated Coastal & Estuarine Waters | 2 | |
| Potentially Eutrophic Coastal & Estuarine Waters | 1 | |
| | 0 | **0** |
| **Air Quality and Topography** | | |
| Complex | 2 | |
| Intermediate | 1 | |
| Simple | 0 | **0** |
| **Protected Ecological Sites and Species** | | |
| Within or Bordering species protected site | 2 | |
| <1km to protected site | 1 | |
| >1km to protected site | 0 | **0** |
| **Sensitive Agricultural Receptors** | | |
| Fruit, Vegetable or Dairy Farming <50m | 2 | |
| Fruit, Vegetable or Dairy Farming 50 - 100m | 1 | |
| Fruit, Vegetable or Dairy Farming >150m from the activity footprint | 0 | **0** |
| **Total** | | **8** |

# APPENDIX C

## AES Vehicle Register

# AES Fleet Register as of 16th November 09

| | | | | |
|---|---|---|---|---|
| **Depot** | **Nenagh** | | | |
| | | | | |
| | **Chasis** | **Body** | **Lifting Gear** | **Driver** |
| **ARTIC** | | | | |
| **08 TS 757** | **Iveco Strallis** | **Artic Unit** | | **Liam Ryan** |
| **08 WX 3805** | **Iveco Strallis** | **Artic Unit** | | **Stefan** |
| | **5 x Ejector Trailers** | | | |
| | | | | |
| **REL SKIP EATER** | | | | |
| **00 KE 4993** | **Volvo FM 10** | **Heil** | **Heil** | **unknown** |
| | | | | |
| **RCV 8 x 4** | | | | |
| **04 TN 742** | **Volvo FM9** | **Faun** | **Otto** | **Pavol** |
| **03 TN 2171** | **Volvo FM9** | **Phoenix 2** | **Otto** | **Spare** |
| **03 TN 1647** | **Volvo FM9** | **Phoenix 2** | **Otto** | **Tommy** |
| **07 TN 4015** | **Mercedes Econic** | **Faun** | **Zoller** | **Sean McKenna** |
| **08 TN 3246** | **Volvo FM9** | **Manvik** | **Otto** | **Jan Hudacek** |
| | | | | |
| **RCV 6 x 4** | | | | |
| **00 D 99016** | **Dennis** | **Phoenix** | **Otto** | **John Grace spare** |
| | | | | |
| **4 x 2** | | | | |
| **97 KE 7152** | **Daf 45** | **Box Body** | | **John Grace** |
| | | | | |
| **RCV 4 X 2** | | | | |
| **02 WW 5157** | **Dennis** | | **Otto** | **John Grace** |
| | | | | |
| **Skip - Chain** | | | | |
| **04 TN 2297** | **Volvo FL6** | | **Hyva** | **Dan Long** |
| **02 TN 3176** | **Daf** | | **Hyva** | **Mike Devaney** |
| **95 TN 2253** | **Skip Truck** | **Scania** | **Telehoist** | **Ondrei** |
| **98 MH 3139** | **Skip Truck** | **Volvo** | **FL6** | **Mike Devaney** |
| | | | | |
| **Skip - Hook** | | | | |
| **05 TN 1463** | **Scania 114** | | **Hyva** | **Noel Guest** |
| | | | | |
| | | | | |
| **Vans** | | | | |
| **09 KE 2009** | **Ford Transit** | | **Contract Hire** | **Seamus Kelly** |
| **09 KE 2008** | **Ford Transit** | | **Contract Hire** | **Tommy Butler** |
| **09 KE 2017** | **Ford Transit** | | **Contract Hire** | **Liam Gibson** |
| | | | | |
| **Trailers** | | | | |
| | **Skip x 1** | | | |
| | | | | |
| **Misc** | | | | |
| **Nissan Forklift** | | | | **Procter & Gamble Site** |
| **Cat 312C** | | | | **Yard** |
| **Bobcat 753 Skidsteer** | | | | **Yard** |
| | | | | |
| | | | | |
| **Vehicles** | **Yard use only - Shunter Duties** | | | |
| **98 KE 8183** | **Renault Premium** | **Artic** | **Shunting** | **Serghei** |

# APPENDIX D

**Financial Summary**

Full Annual Report Available from www.bnm.annualreport08-09.com

BORD NA MÓNA
Annual Report 2008/2009

# HOW DID WE PERFORM?

| Group Performance Indicators<br>Financial summary | % Change | 2008/2009<br>€'000 | 2007/2008<br>€'000 |
|---|---|---|---|
| Turnover | 8.2% | **401,567** | 371,226 |
| Earnings before interest, tax, depreciation and amortisation (EBITDA) | 9.9% | **57,256** | 52,080 |
| Operating profit before reorganisation and redundancy costs and share based payments | 39.6% | **36,743** | 26,326 |
| Operating profit | 5.8% | **23,776** | 22,482 |
| Profit before tax | -1.5% | **19,520** | 19,825 |
| Profit after tax | -7.5% | **15,522** | 16,776 |
| Shareholders' funds | -15.2% | **198,558** | 234,200 |
| Net borrowings | -41.8% | **55,964** | 96,165 |

| Ratios | 2008/2009 | 2007/2008 |
|---|---|---|
| Operating profit/turnover | **5.9%** | 6.1% |
| Gross return on net capital employed | **7.2%** | 6.9% |
| Debt/Equity | **28%** | 41% |
| EBITDA/Interest cover (times) | **14.6** | 11.4 |
| Current ratio (times) | **1.7** | 2.2 |

| | 2008/2009 | 2007/2008 |
|---|---|---|
| Payroll costs €'000 (gross of employers' pension costs) | **108,945** | 104,109 |
| Payroll costs €'000 (net of employers' pension costs) | **105,872** | 100,611 |
| Numbers employed at peak | **2,366** | 2,336 |
| Average employment numbers | **2,064** | 2,035 |

**TURNOVER 2008/2009 (€ MILLION)**

| | |
|---|---|
| Horticulture | 47.6 |
| Environmental & other | 23.8 |
| Fuels | 156.7 |
| Energy | 121.5 |
| Resource Recovery | 52.0 |


**VALUE OF THIRD-PARTY SALES BY PRODUCT (€ MILLION)**

| | |
|---|---|
| Milled peat | 64.8 |
| Electricity | 56.7 |
| Manufactured Horticultural Products | 47.6 |
| Briquettes | 44.7 |
| Coal | 66.1 |
| Convenience Fuels Products | 10.0 |
| Oil | 35.9 |
| Environmental | 18.6 |
| Resource Recovery | 52.0 |
| Other | 5.2 |

**PRODUCTION STATISTICS ('000)**

| | | | |
|---|---|---|---|
| Milled peat | 08/09 | 2,910 | Tonnes |
| | 07/08 | 2,536 | Tonnes |
| Horticultural peat products | 08/09 | 1,701 | Cubic Metres |
| | 07/08 | 1,889 | Cubic Metres |
| Briquettes | 08/09 | 217 | Tonnes |
| | 07/08 | 209 | Tonnes |

© Bord na Móna 2009 Site design Source Design


## NATIONAL NETWORK

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E-mail galway@tobin.ie

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Fax +353 (0)1 803 0409
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E-mail dundalk@tobin.ie

# Appendix IV

Incident & Complaints Reports

| Procedures Manual | AES Nenagh | Document: EPF 6. |
|---|---|---|
| Liz Aslin | | Revision: 0 |
| | | Page: 1 of 1 |
| | | Issued: 04/06/09 |

**Title: Environmental Incident Investigation Report Form**

| Report No. | | Date and Time Recorded | | Date and Time of Incident | |
|---|---|---|---|---|---|
| N001 | | 16/9/09 4 am/pm | | Between 10th July - 10th Aug 09 / / am/pm | |

**Nature of Incident**

Exceedance of dust limit at D3.
Report No ECS3411 - Dust

**Cause of Incident**

D3 is adjacent to an external road which could be the cause of the elevated result.

**Environmental Significance of Incident**

Minimal.

Confined to area around dust gauge. All other monitoring points were below limit. Results for D3 for May/June 09 was 87 mg/m²/day in accordance with permit.

**Personnel Involved/Affected**

None

**Statutory Bodies Informed and Details**

EPA Dermot Burke by phone & fax on 16/9/09.

**Consequences of Incident**

None

| Corrective Action Required? | ~~Yes~~ (No) | Corrective Action Report No. | N/A |
|---|---|---|---|
| Signed: Liz Aslin | | Date | 16/9/09. |

| Procedures Manual | AES Nenagh | Document: EPF 6.2 |
|---|---|---|
| Liz Adair | | Revision: 0<br>Page: 1 of 1<br>Issued: 04/06/09 |

**Title: EPF 6.2 Incident Notification Form**

| | | | |
|---|---|---|---|
| Company Name: | AES Nenagh | | |
| Location of Incident: | D3 DUST MONITORING POINT<br>REPORT NO EC53411 - DUST | Contact Person: | LIZ ADAIR |
| Date and Time of Incident: | Between 10 July & 10 Aug 09 | Duration of Incident | MONITORING PERIOD OF 1 MONTH |
| Details of Occurrence: | Exceedance of dust limit at D3 during dust monitoring in accordance with licence. | | |
| Materials Emitted: | DUST | | |
| Environmental Significance of the Incident: | MINIMAL<br>CONFINED TO AREA AROUND DUST GAUGE. ALL OTHER MONITORING POINTS WERE BELOW LIMIT. RESULTS FOR D3 MAY/JUNE 09 WAS 87mg/M²/day | | |
| Weather Conditions at time of Incident: | DRY WITH SOME RAIN | | |
| Steps taken to minimize any emissions: | NONE - NO CHANGE IN SITE ACTIVITIES SINCE LAST MONITORING EVENT WHICH WAS BELOW LIMIT. ELEVATED RESULT ATTRIBUTED TO EXTERNAL ROAD. | | |
| Emergency Services Contacted? | NO | | |
| Details of Other Bodies Contacted: | EPA - DERMOT BURKE BY PHONE & FAX ON 16/9/09 | | |
| Corrective Action Taken? | NONE | Corrective Action Ref. No.: | NA |
| Env. Incident Invest. Rep. Form Completed? | Yes | Ref. No. | N001 |
| Signed: | Liz Adair 16/9/09. | | |

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Regional Inspectorate, Seville Lodge,
Callan Road, Kilkenny, Ireland
Cigireacht Réigiúnach, Lóiste Sevilla,
Bóthar Challainn, Cill Chainnigh, Éire
T: +353 56 779 6700
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LoCall: 1890 33 55 99

Ms. Linda Cahill,
Environment Officer,
Advanced Environmental Solutions (Ireland) Ltd.,
Unit 1, Monread Commercial Park,
Monread Road,
Naas ,
Co. Kildare.

15/12/2009

Our Ref: W0240-01 /nc01db

**Notification of Non-Compliance**

Dear Ms. Cahill,

The non-compliances with Waste Licence Register No. W0240-01 as detailed in the attached site inspection report from a site inspection conducted by an Agency Inspector on 17/11/2009 have been noted by the Agency.

**ACTION REQUIRED**

In view of the above you are required to:

- Submit a schedule to the Agency within 15 working days that details how and when the corrective actions specified will be completed and the non-compliances specified within the site inspection report will be rectified.
- The observations listed in the report should be addressed by the licensee and reported back to the Agency.

The Agency is concerned at the level of non-compliance at this facility. Failure to comply with the requirements specified in this notification of non-compliance will lead to further enforcement action by the Agency. Please quote the above reference in future correspondence in relation to this matter. If you have any queries please contact Mr. Dermot Burke at (056) 7796700.

Yours sincerely

Dermot Burke, Inspector,
Office of Environmental Enforcement.

W0240\nc01db

# Site Inspection Report

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

Regional Inspectorate, Seville Lodge,
Callan Road, Kilkenny, Ireland

Cigireacht Réigiúnach, Lóiste Sevilla,
Bóthar Challainn, Cill Chainnigh, Éire

T: +353 56 779 6700
F: +353 56 779 6798
E: info@epa.ie
W: www.epa.ie

LoCall: 1890 33 55 99

Ms. Linda Cahill,
Environmental Officer,
Advanced Environmental Solutions (Ireland) Ltd.,
Unit 1, Monread Commercial Park,
Monread Road,
Naas,
County Kildare.

**Date of issue of Inspection Report:** **15/12/2009**

| | | | |
|---|---|---|---|
| **Licence Register No:** | W0240-01 | **Inspection Reference No:** | (W0240-01)si01db |
| **Date of Inspection:** | 17/11/2009 | **Inspectors:** | Dermot Burke |
| | | **Announced:** | No |

**F.A.O: Ms. Linda Cahill, Environmental Officer.**

**This Site Inspection Report details the Agency's findings following an inspection of Advanced Environmental Solutions (Ireland) Ltd. in Nenagh, Co. Tipperary on 17/11/2009.**

**NOTIFICATION OF NON-COMPLIANCE**

**Advanced Environmental Solutions (Ireland) Ltd. has been found to be in non-compliance with the conditions of the Waste Licence as set out in this Site Inspection Report. You are required to undertake the corrective actions specified to close out the Non-Compliances and Observations raised in this Report or further enforcement action may be taken by the Agency.**

**In view of the above you are required to submit a schedule to the Agency within 15 working days of receipt of this Report detailing how the non-compliances and observations specified therein are to be rectified. Please quote the above Inspection Reference Number in any future correspondence in relation to this Report. If you have any further queries please contact Dermot Burke at 056-7796700.**

## 1. SITE INSPECTION AND ASSESSMENT

The Site Inspection commenced at 10:15am and the following were in attendance:

Representing Advanced Environmental Solutions (Ireland) Ltd.:

| | |
|---|---|
| Seamus Kelly | Sales Representative |

Representing the Environmental Protection Agency:

| | |
|---|---|
| Dermot Burke | Inspector |

An Inspection of the site was conducted, special attention was paid to waste transfer building, wheel bin wash area, site drainage system, fuel storage bund, skip storage areas and general site house keeping.

**Interview**

The following representatives were interviewed during the Inspection:

| Name | Position | Issue |
|---|---|---|
| Seamus Kelly | Sales Representative | Various Issues |
| Ann Marie Deely | Accounts Officer | Waste Records |
| Noleen Murphy | Domestic Administration | Various Documentation |

**Documentation**

The following documentation was requested for review:

| Record | Condition No. | Comment |
|---|---|---|
| Training records | 2.2.2.6 | Satisfactory |
| Records of weekly inspection of drainage system and bunds | 6.10 | See Inspection Findings |
| Records of daily inspection of storm water drainage system | 6.12 & Schedule C.2.3 | See Inspection Findings |
| Emergency Response Procedure (ERP) | 9.2 | See Inspection Findings |
| On-site monitoring records | 11.6 | See Inspection Findings |
| Waste collection permits | 11.9 | Satisfactory |
| Waste records | 11.9 | Satisfactory |

**General Comment**

The facility is well maintained and operated. There were civil works being carried out at the facility on the day of the inspection which did not interfere with the majority of operations at the facility.

The licensee was briefed on the Agency's reporting procedures and was advised that a Site Inspection Report would be issued.

Finally, the licensee was thanked for the courteous and co-operative manner of the staff, and the assistance and co-operation extended during the Inspection.

# 2. INSPECTION FINDINGS

**Inspection Non-Compliances**

*The site inspection process is a random sample on a particular day of a facility's compliance with some of its licence conditions. Where a non-compliance against a particular condition has not been reported, this should not be construed to mean that there is full compliance with that condition of the licence.*

The licensee was found to be in non-compliance with the requirements of the Licence in respect of the following on the day of the Inspection (Schedule and Condition numbers refer to the Licence):

1. **Discharge to Surface Water**

I inspected the installation of the new oil interceptors that will serve the storm water drainage system. The new interceptors were not connected to the drainage system at the time of my inspection I observed that the hole that had been dug for the interceptors had not yet been filled in and water from the facility surface water drainage system was being discharged into this hole.

The licensee stated that the water in the hole was being pumped into the surface water drain to the north of the facility at storm water emission point SW1. There was no discharge occurring at the time of my inspection. I observed that the water in the drain was grey/white in colour. See Photo No.1.

I inspected the records of monitoring of surface water discharges from the facility and the records showed that the storm water discharges were not being sampled during the period of time that the on-site works were taking place.

This is in non-compliance with **CONDITIONS 5.1** and **5.5** of the licence.

***Corrective Action Required***

The licensee shall comply with Conditions 5.1 and 5.5 of the licence and ensure there shall be no emission of environmental significance and there shall be no discharge of contaminated surface water to surface water courses.

The licensee shall inspect the surface water drain to the north of the facility after the works to the surface water drainage system have been completed. The licensee shall submit a report on the findings of this inspection to the Agency, which shall include any corrective actions required as a result of the inspection.

2. **Diesel Tank Bund**

I inspected the diesel tank bund adjacent to the waste transfer building. The bund was full of water and needed to be emptied. See Photo No.2.

I inspected the record of weekly inspection of the bund and the records for the visual inspection carried out on 13/11/2009 stated that the diesel tank bund and drainage from the diesel filling area was ok. There were no corrective actions proposed..

This is in non-compliance with **CONDITIONS 6.10** of the licence.

***Corrective Action Required***

The licensee shall comply with Condition 6.10 of the licence and ensure that all bunds are properly maintained at all times. The licensee shall ensure that appropriate corrective actions are detailed in the weekly visual inspection logs in the event that the containment capacity of bunds are compromised.

**Inspection Observations**

While these observations do not constitute non-compliances with any condition of the Licence, they should be addressed or where relevant noted by the licensee in order to ensure compliance, improve environmental performance of the facility and provide clarification on certain issues, as required. Where requested the actions taken and clarifications requested should be reported back to the Agency.

1. **Facility Manager**

The facility manager and deputy manager were not present on the facility on the day of the inspection. I was accompanied by the facility sales representative, who had a number of years experience in the operation of the facility. However, this person was not the nominated deputy manager of the facility.

***Corrective Action Required***

The licensee shall ensure that a nominated, suitably qualified and experienced deputy shall be present on the facility in the absence of the facility manager at all times during its operation

2. **Chemical Storage Bund in Garage**

I inspected the chemical storage bund in the garage and I observed that the outlet point for the Intermediate Bunded Container (IBC) that contained Ad Blue was outside the perimeter of the bund. See Photo No.3.

***Corrective Action Required***

The licensee shall ensure that all inlets, outlets, vent pipes, valves and gauges of containers stored in bunded areas are within the bunded area.

3. **Civic Amenity Site**

I observed a skip containing black refuse sacks outside the facility reception area. The licensee confirmed that the skip was there for members of the public to leave their refuse. There was also a clothes bank situated in this area. The licensee stated that the full civic amenity site was not in operation and they were waiting for the works to be completed on-site before establishing a full civic amenity site beside the facility reception.

***Corrective Action Required***

The licensee shall submit proposals for opening a civic waste amenity at the facility to the EPA for its agreement at least two months in advance of the intended date of commencement of the activity. No such act shall be carried out without the prior agreement of the Agency.

4. **Oily Rags**

I inspected the facility garage and I observed that oily rags were being stored in a wheel bin with items of non-hazardous waste, including cardboard and plastic bags.

***Corrective Action Required***

The licensee shall ensure that all hazardous and non-hazardous waste types generated on-site are separated and stored appropriately, prior to removal off-site for recovery or disposal.

5. **Up-to-date Copies of Waste Licence for Off-site Waste Management Facilities**

I inspected the copies of the waste licences and waste permits for off-site waste management facilities and I observed that the copy of waste licence for the Advanced Environmental Solutions (Ireland) Ltd. facility in Tullamore, Co. Offaly needed to be updated.

***Corrective Action Required***

The licensee shall update the copy of the waste licence for Advanced Environmental Solutions (Ireland) Ltd. facility in Tullamore, Co. Offaly and ensure that up-to-date copies of licences and permits for all waste collectors and off-site waste management facilities are available on-site.

6. **EPA Contact Details in Emergency Response Procedure (ERP)**

I inspected the ERP for the facility and I noted that the contact for the EPA was the EPA headquarters in Wexford.

***Corrective Action Required***

The licensee shall update the ERP to ensure that the contact details for the EPA are as follows:

Office of Environmental Enforcement, EPA Regional Inspectorate, Seville Lodge, Callan Road, Kilkenny. Telephone: 056-7796700, Fax: 056-7796798.

## 3. FOLLOW-UP ACTIONS

The licensee shall take the actions required to close out the non-compliances and observations raised in this Site Inspection Report. These actions will be verified during subsequent Inspections.

**Please quote the above Inspection Reference Number in any future correspondence in relation to this Report.**

**Report prepared by Inspector:** Dermot Burke, Inspector **Date:** 15/12/09

## APPENDIX 1- PHOTOS


**Photo No.1 View of drain at storm water discharge point SW1.**

**Photo No.2** **View of diesel oil tank bund full of water.**


**Photo No.3** **View of outlet point for Ad Blue chemical disinfectant outside perimeter of bund.**

Dermot Burke
Office of Environmental Enforcement
EPA Regional Inspectorate
Seville Lodge
Callan Road
Co. Kilkenny

21st December 2009

**Your Ref: W0240-01/nc01db**
**Re: Notification of Non-Compliance**

Dear Mr. Burke,

Further to your notification of non-compliance dated 15/12/09, please see below details of corrective actions to be implemented;

**Inspection Non-Compliances:**

1. **Discharge to Surface Water:**
   On the day of the inspection, the Civil Contractor was in the process of installing the new interceptor/attenuation tank (Please see SEW 10.11.2009). As these installations were below ground, it was necessary to excavate to a considerable depth so as to accommodate these large installations. The deposits that were encountered during the excavations were that of a glacial till with a fine clay matrix but also containing veins of granular gravel type material. The gravel veins behaved as a conduit for the ingress of groundwater. As excavations proceeded, it was noted that the volume of groundwater entering the excavation was significant

and the contractor considered the only reasonable and practical option to de-water the hole was to over-pump this groundwater into the adjacent surface water feature. Due to the nature of the clay matrix of the till (fine colloidal clay), particles of this clay matrix came into suspension with the groundwater that was discharged. This explains the white/grey colour observed in the water feature on the day of inspection. This material is of an inorganic nature and is not considered to be damaging to the water quality. It is conceivable that the deposition of material of this nature in significant quantities could interfere with micro-invertebrate populations. However, we would point out to the Agency that this is a seasonal surface water feature and can be dry much of the summer, therefore unlikely to host micro-invertebrate populations.

When the issue of the disposal of this groundwater became apparent in terms of the large volumes to be managed, pumping to surface water was considered to be most pragmatic solution.

A surface water sample was obtained shortly after the installations were commissioned; no contamination was noted in the results. Please find attached. There was no evidence of white/grey deposits in the surface water feature at the time of sampling.

2. **Diesel Tank Bund:**

AES Nenagh respectively contest the non-compliance issued in relation to water in the Diesel Tank Bund. In compliance with Condition 6.9, the Diesel Tank Bund was in the process of being integrity tested with requires the bund to be filled with water for a period of 7 days. Once the integrity test was completed, the bund was drained of water. The report will be furnished to the Agency as soon as practical.

**Inspection Observations:**

1. **Facility Manager:**

   AES Nenagh shall ensure that either the Site Manager or Deputy Site Manager shall be present on-site at all times during operation.

2. **Chemical Storage Bund in Garage:**

   The outlet point for the Ad-Blue IBC has been moved to within the perimeter of bund. AES Nenagh shall ensure that all inlets, outlets, vent pipes, valves and gauges of containers stored in bunded areas are within the bunded area.

3. **Civic Amenity Site:**

   Please note that the operation of a limited Civic Amenity was a legacy of the earlier permitted site. AES Nenagh will revert to the Agency with a more detailed proposal for a Civic Amenity.

4. **Oily Rags:**

   The oily rags have now been segregated from the general waste. AES Nenagh will ensure that all hazardous and non-hazardous waste types generated on-site are separated and stored appropriately, prior to removal off-site for disposal or recovery.

5. **Up-to-date Copies of Waste Licence for Off-site Waste Management Facilities:**

   The recently reviewed Waste Licence for AES Tullamore (104-2) has now replaced the previous waste licence (104-1) on file. AES Nenagh ensures that up-to-date copies of licences and permits for all waste collectors and off-site waste management facilities are available on-site.

6. **EPA Contact Details in Emergency Response Procedure (ERP):**
   The ERP were draft prior to an Inspectorate being assigned to AES Nenagh. The ERP have now been updated with contact details for the EPA Regional Inspectorate in Kilkenny.

If you have any questions or need additional information, please do not hesitate to contact me.

Yours sincerely,

_____

Linda Cahill

**Environmental Officer**

**Bord na Móna Resource Recovery**

# Appendix V

## Accident Prevention and Emergency Response

**Title** **General Emergency Preparedness & Response**

**Purpose:** To identify the potential for, and to respond to, accidents and emergency situations, and to prevent and mitigate the environmental impacts that may be associated with them.

**Scope:** The Scope of this procedure is the application of the Environmental Emergency Plan

**References:**
EP 5.0 Emergency Preparedness and Response
EPL 5.1 Emergency Contact List
EP 6.0 Environmental Incident Investigation and Reporting
EP 7.0 Non Conformance Procedure
EP 8.0 Corrective and Preventive Action Procedure
Emergency Plan
Safety Statement
Material Safety Data Sheets

**Incident Contact List:**

| **Emergency Contact List for AES Nenagh** | | | |
|---|---|---|---|
| **Service / Agency** | **Address** | **Telephone Numbers** | **Fax / e-mail** |
| EPA Regional Inspectorate | Seville Lodge, Callan Road, Co. Kilkenny | 056 779 6700<br>1890 335599 | 056 779 6798<br>info@epa.ie |
| North Tipperary County Council | Civic Offices, Limerick Road, Nenagh, Co. Tipperary | 067-31771 or 44500 | secretary@northtippcoco.ie |
| Southern Regional Fisheries Board | Anglesea Street Clonmel, Co. Tipperary | 052-80055 | 052-23971<br>enquiries@srfb.ie |
| Eastern Regional Fisheries Board | 15a Main Street, Blackrock, Co. Dublin | 01-2787022 | 01-2787025<br>info@erfb.ie |

**Title** **General Emergency Preparedness & Response**

**Procedure:**

1. An Emergency Plan is prepared and maintained by AES Nenagh. This Plan details any emergency situation which could occur on site and the proposed response should this emergency occur. The Emergency Plan details procedures for the following occurrences:

| Reference | Description |
|---|---|
| ERP 02 | Spill Clean-up Procedure |
| ERP 03 | Fire / Explosion Procedure |
| ERP 04 | Malicious Damage Procedure |
| ERP 05 | Unforeseen Emergencies |

2. Should an emergency situation occur, the relevant response procedure documented within the Emergency Plan is implemented. Each procedure details the emergency situation, the proposed response should this emergency occur and the potential environmental impacts of this occurrence.

3. The Site Manager shall assume the role of Site Incident Controller, with responsibility for
   (i) assessing the scale of the incident
   (ii) informing emergency services
   (iii) directing rescue and fire-fighting operations.

   In the absence of the Site Manager, the Deputy Site Manager shall assume the role of Site Incident Controller.

4. Following an emergency, the Site Manager (or in his/her absence Deputy Site Manager) shall record the details of the incident. Environmental Incident Investigation Form EPF 6.1 or Environmental Incident Notification Form EPF 6.2 shall be completed as per Environmental Incident Investigation and Reporting Procedure (EMS Environmental Procedure EP 6.0). Following the environmental incident, appropriate procedures shall be implemented accordingly i.e. Environmental Incident Investigation and Reporting Procedures EP 6.0, Environmental Non-Conformance Procedures EP 7.0 and Environmental Corrective and Preventative Action Procedure EP 8.0.

5. This procedure shall be reviewed by the Environmental Management team, annually or after the occurrence of an emergency situation. Additional procedures may be prepared as identified by environmental reviews/audits, environmental compliance monitoring reports, personnel during routine working hours or other communications which bring potential emergency situations to the attention of the Environmental Management Team.

6. The Site Manager shall notify the Environmental Protection Agency as soon as possible after the occurrence of an incident as per procedure EP 15.0 Reporting

7. In the case of any incident which relates to discharges to water, the Site Manager shall notify the Local Authorities and the Southern Regional Fisheries Board as soon as practicable after the incident

8. On a weekly basis, all emergency response equipment shall be checked to ensure it is provided in agreed quantities and in suitable working order.

9. In the case that an emergency situation arises outside the hours of operation, the contact details for the designated person on call are displayed on the Facility Notice Board at the entrance to the site.

# Title Spill Clean up procedure

**Purpose:** This procedure details the steps to be taken when dealing with a spillage of a hazardous substance on site. It is required in order to:

- Protect Employees
- Protect the Environment
- Prevent Fugitive Emissions

**Scope:** This procedure applies to AES Nenagh.

**Procedure:**

***Note:***

This procedure should be followed for all small, large and massive spills, which may occur.

*Definitions:*

Small Spill: Less than 5 litres

Large Spill: Greater than 5 litres and less than 250 litres.

Massive Spill: Greater than 250 litres

1. Hazardous materials shall be handled (loaded, unloaded and moved) by a competent person using the correct equipment and appropriate protective clothing. Appropriate precautions should be taken at all times to minimise the risk of accidental spillage.

2. In the event of a spillage occurring, the Site Manager or the Deputy Site Manager shall initially investigate the following issues:

   - How long it has been since the incident occurred.

   - Consult the relevant data sheets (Material Safety Data Sheets or otherwise) for the method of spill containment and fire control of the affected material.

   - Contact the relevant emergency response number (local fire service, police, hospital and Environmental Protection Agency telephone numbers which are detailed on the Emergency Contact List.

- Locate the nearest fire suppression system as appropriate; Dry powder extinguishers for ABC fires [wood, paper, textiles, liquid fuels and gases] Foam extinguishers for AB fires [wood, paper, textiles and liquid fuels] Carbon Dioxide [liquid fuel fires and electrical equipment].

- Note the wind direction and any possible sources of ignition i.e. naked lights, machinery, electrical fittings, and combustible material and remove them from the area.

3. Evacuate the area (for large spills if necessary)

   - The Facility Manger or any other designated person from the Emergency Response Team shall ensure that all personnel are evacuated in a calm, efficient manner. Staff should be instructed to walk briskly to their designated evacuation locations.

   - If flammable material is involved in the spill, isolate equipment and materials that may be affected.

   - If deemed necessary, the Site Manager or any other designated person from the Emergency Response Team shall instruct for the appropriate emergency services to be contacted.

4. The spillage must be contained using absorbent material, socks, booms or absorbent granules to create a secure dike. The Site Manager or any other designated person from the Emergency Response Team shall ensure that all appropriate personal protective equipment is worn [as detailed in the Material Safety Data Sheet for the spilled material(s)].

5. If the spillage emanated from a drum, position the drum so that the ruptured section is in an upwards direction, thereby preventing a further leakage.

6. If the spillage flows into or is likely to flow into the surface water drainage network, the manual shut-off valve shall be shut off to contain the spillage and prevent release to surface water.

7. Once the spill has been contained the liquid shall either be pumped, or removed into a container using non-spark shovels and labelled appropriately (contents, name and date).

8. Clean up Operation.

   - Use non-sparking shovels and brushes to sweep the spilled material into containers.
   - Start on the outside and work in towards the centre of the spill.
   - Do not mix different types of waste.
   - Drum the waste and seal the container or bag and double bag.
   - Label the waste with the destination name, appropriate hazard label and name of waste giving as much information as possible on contents, plus concentrations of constituents, etc.
   - If the spill occurred due to a damaged drum, place the ruptured drum into a salvage drum container, until disposal is arranged.
   - Decontaminate personnel by using the washing facilities.

9. Any waste material resulting from a spillage clean-up shall be dispatched to an appropriate facility for disposal and/or recovery. If the affected material is considered hazardous, it is stored in a container and collected as soon as possible by a certified hazardous waste disposal contractor.

10. Following an emergency, the Site Manager shall record details of the incident. Following a comprehensive investigation into the source of the emergency situation, a corrective action shall be formulated as per EP 8.0

11. North Tipperary County Council and the EPA shall be informed if hazardous chemical or firewater infiltrates the drainage network.

12. Spill kits are located as follows:

| Number | Location | Description |
|---|---|---|
| 1. | Diesel Tank | Labelled Wheelie Bin |
| 2. | Garage | Labelled Wheelie Bin |

13. The Site Manager must ensure that the resultant depleted spill kit (s) is /are replenished without delay. He must also ensure that replenishment stock is re-ordered straightaway.

14. On a weekly basis all spill response equipment shall be checked to ensure it is provided in agreed quantities and in suitable working condition.

# Title Fire / Explosion Procedure

**Purpose:** A procedure to deal with fire/explosion emergencies is required for the following reasons:

- To protect Employees.
- To protect the Environment.
- To prevent fugitive emissions.

**Scope:** This procedure applies to AES Nenagh.

**Procedure:**

1. Employees shall only attempt to fight a fire if safe to do so. If an employee feels that they cannot tackle a fire safely and effectively, **EVACUATION OF ALL PERSONNEL IS THE PRIMARY PRIORITY**.

2. The Site Manager or Deputy Site Manager shall evacuate the area in a calm, efficient manner. All staff and contractors shall be instructed to walk briskly to the designated evacuation point.

3. In the event of a fire/explosion occurring, the Site Manager shall complete a roll call to account for all employees and contractors that may be present on-site.

4. The Site Manager shall identify the location of the fire/explosion risk through dialogue with the individual who discovered the fire and shall take one of the following actions:

5. Determine whether the fire can be **SAFELY** isolated utilising the available fire fighting equipment.

**6.** If the fire is not controlled with the fire fighting equipment available, the local fire brigade shall be notified immediately. Local fire, police and hospital telephone numbers are detailed on the Emergency Contact List. These details are displayed within the Main Site Office, the Weighbridge Office and the Site Managers Office. The Site Manager or any other designated person from the Emergency Response Team should;

   a. Dial 112 for emergency services
   b. Request emergency service
   c. Give details of type of emergency and phone number in case call is inadvertently disconnected

d. Provide information requested by call recipient
e. Determine estimated time of arrival to site and communicate this information to the relevant member of ERT.
f. Hang up only when told to do so by call recipient
g. Fill out details required by emergency contact log as soon as it safe to do so.

7. If the fire can be safely isolated, locate the nearest fire suppression system as appropriate; Dry powder extinguishers for ABC fires [wood, paper, textiles, liquid fuels and gases] Foam extinguishers for AB fires [wood, paper, textiles and liquid fuels] Carbon Dioxide [liquid fuel fires and electrical equipment]. Only small localised fires should be extinguished in this manner.

8. Note the wind direction and any possible sources of ignition i.e. naked lights, machinery, electrical fittings, and combustible material and remove them from the area.

9. Personnel shall not re-enter buildings unless the Site Manager/Fire Officer deems it safe to do so.

10. Once the fire has been extinguished or the explosion controlled on site, personnel shall complete a clean-up operation as per EP05-ERP-02 using the available resources.

11. Effected areas shall be checked thoroughly in order to ensure that the fire is quenched. If the affected material is considered hazardous, it is stored in a container and collected as soon as possible by a certified hazardous waste disposal contractor.

12. Following an emergency, the Site Manager, or other designated responsible person shall record details of the incident as per EP 6.0 Incident Investigation Procedure

# Title Malicious Damage Procedure

**Purpose:** This procedure is required in order to monitor and prevent malicious damage.

**Scope:** This procedure applies to AES Nenagh.

**Procedure:**

1. Where any occurrence of malicious damage is noted or where persons are observed causing malicious damage, the Site Manager shall be informed as soon as is practical.

2. Where malicious damage results in a significant environmental impact, or a potentially significant environmental impact, the Site Manager shall be advised who then undertakes to minimise and repair the damage caused.

3. Persons observed causing malicious damage shall be subjected to internal disciplinary action. The Site Manager, will report external persons to the Gardaí.

4. Following an emergency, the Site Manager, or other designated responsible person shall record details of the incident as per EP 6.0 Incident Investigation and Reporting.

# Title Unforeseen Emergencies and Fugitive emissions

**Purpose:** The purpose of this procedure is to outline the procedure to be adhered to in the event of an unforeseen emergency.

**Scope:** This procedure applies to the AES Nenagh.

**Procedure:**

1. Following the occurrence of an incident requiring emergency action, the observant shall contact the Site Manager or in his absence most senior representative of management on-site.
2. Access situation and severity. Request emergency services where necessary. If calling for the emergency services, local Fire, police and hospital telephone numbers are detailed on the Emergency Contact List displayed within the Main Site Office, the Weighbridge Office and the Site Managers Office.

    a. Dial 112 for emergency services
    b. Request emergency service
    c. Give details of type of emergency and phone number in case call is inadvertently disconnected
    d. Provide information requested by call recipient
    e. Determine estimated time of arrival to site and communicate this information to the relevant member of ERT.
    f. Hang up only when told to do so by call recipient
    g. Fill out details required by emergency contact log as soon as it safe to do so.

3. Should the incident be determined to be capable of being addressed in-house under the guidance of the most senior representative of management on-site, the Environmental Emergency Response Team shall be mobilised paying due regard to the appropriate emergency response procedure (EP 05-ERP-1-5).

4. In the event the situation involves a Man Down, do not move the casualty until First Aid or Emergency Services give instruction.

5. Once ERT arrive at the incident, all contractors and visitors must be directed to the assembly point.

6. In the event the Emergency Services are called, ERT will cordon off the area and ensure emergency services access is clear to the incident site.

7. Move all machinery not involved clear of the incident and switch engines off.

8. Once the situation is under control and has been deemed safe by the Site Manager or most senior member of management on site then the relevant report forms must be completed and the HSA informed where relevant.

9. In the event that the incident gives rise to an emission the Site Manager and the Emergency Response Team shall immediately
    - Isolate the source of any such emission
    - Carry out an immediate investigation to identify the nature, source and cause of the incident and any emission arising there from
    - Evaluate the environmental pollution if any caused by the incident
    - Identify and execute measures to minimise the emissions or malfunction and the effects thereof

6. Following an emergency, the Site Manager, or other designated responsible person shall record details of the incident as per procedure EP 6.0 Environmental Incident Investigation and Reporting. The Site Manger shall also identify and put in place measures to avoid reoccurrence and put in place any other appropriate remedial action. These corrective actions shall be documented as per procedure EP 8.0 Corrective and Preventive Action Procedure.

7. The Site Manager shall provide a proposal to the Agency for its agreement within one month of the incident occurring or as otherwise agreed by the Agency.

| Procedures Manual | | Document: EPL 5.1 |
|---|---|---|
| Approved by:<br><br>Site Manager | **AES Nenagh**<br>Emergency Contact List | Revision: 0<br>Issue Date: 04/06/09<br>Page: Page 1 of 1 |

**Title: Emergency Contact List**

| Company | Name / Title | **Phone Number/s** |
|---|---|---|
| **FIRE BRIGADE / AMBULANCE / POLICE** | | **999 / 112** |
| **NENAGH HOSPITAL** | | **067 31491** |
| **EMERGENCY RESPONSE TEAM:** | | |
| Emergency Controller | Liz Adair | **087-6291889** |
| Deputy Emergency Controller | Liam Gibson | **087-9802605** |
| News/Media Controller | Garrett Leech | **086-6738102** |
| First Aider | Breda Hogan | **067-31226** |
| Safety Representative | Seamus Kelly | **087-2468168** |
| Health & Safety Manager | Michael Whelan | **087 9868290** |
| Environmental Manager | Garrett Leech | **086 6738102** |
| Environmental Officer | Linda Cahill<br>Elaine Murray | **087 7697465**<br>**045 439464** |
| | | |
| | | |
| | | |

# Appendix VI

Public Information Program

# Title Programme for Public Information

**Purpose:** To define how AES Nenagh manages the communication of environmental information concerning the facility with external parties.

**Scope:** This procedure applies to AES Nenagh.

**References:** Data Protection Act 1988 with 2003 amendment

**Procedure**

1. All external, out-going communication of environmental issues, unless specifically outlined below, must be approved by the Site Manager. If the Site Manager is unavailable, then the Environmental Manager may approve the communication.

2. Certain environmental information, as detailed below, will be available to external parties. Only 1 copy of each document is available for view at any time.

3. It is recommended that visitors should phone or write in advance, as this will facilitate the company to arrange for the necessary staff and documents to be available. However, a prior appointment by any member of the public is not necessary.

4. Viewing time is restricted to normal office hours (9.30 to 12.50, 14.00 to 16.30).
   No more than 1 hour of staff time is available for assistance of queries per day.

5. Visitors may ask for the Site Manager. They are requested to sign in at reception, giving their name, address, and reason for their visit.

6. Access is restricted to the Meeting Room, and the information will be brought to this designated room for viewing. The original documents are not to be removed, altered or damaged in any way.

7. A copy of the following files will be kept in Document Control and are available to the public as outlined above:

- Waste licence
- Annual Environmental Reports
- Environmental Monitoring Reports
- Environmental Management System
- EPA Correspondence

8. Every effort shall be made to keep the files up-to-date. The information provided will comply with legal requirements and the requirements of the Waste licence, but confidential and commercially sensitive information will be restricted and AES Nenagh must comply with the Data Protection Act 1988 with 2003 amendment.

# Appendix VII

Nuisance Control

# Title Vermin Control

**Purpose:** To define the procedure of Vermin Control at AES Nenagh.

**Scope:** All methods of vermin control in place on-site at AES Nenagh.

**References:** WI 2.0 Site Inspection Procedure
EWIF 2.2 Daily Environmental Nuisance Inspection Form
Rodent Control Contractor Site File

## Procedure

1. Condition 5.4 of Waste Licence 240-01 states that Vermin, Birds and Flies associated with the waste activities on-site do not result in an impairment of, or an interference with, amenities or the environment at the facility or beyond the facility boundary or any other legitimate uses of the environment beyond the facility boundary.

2. On a daily basis, the site and its immediate surrounds shall be inspected for nuisances caused by Vermin, Birds and Flies as part of the Daily Nuisance Monitoring Procedure outlined in WI 2.0 Site Inspection Procedure. A record of inspections shall be maintained on EWIF 2.2 Daily Environmental Nuisance Inspection Form.

3. AES Nenagh uses the services of a specialist pest control contractor to provide a pest prevention service for rodents.

   The pest control contractor has bated the site and has set up a an inspection schedule to visit the site approximately once a month, and carry out inspections, and servicing of poison bait boxes which are installed around the site.

   The Pest Control Contractors Site File will include details of the following –

   - Site visits and inspection findings.
   - MSDS sheets for rodenticides used.
   - Details of operator training.
   - A map showing the locations of all external bait stations on site.

   Precautions in order to minimise secondary poisoning of other species will be as follows –

## Title Vermin Control

- The use of first generation warfarin based anti-coagulant poisons which reduce the risk of secondary poisoning to other species.
- Rodenticides will be housed in specialised tamperproof and clearly marked bait stations which will be checked regularly and replaced if damaged.
- Removal of any dead rodents preventing scavengers from ingesting them.
- Proper disposal of empty rodenticide containers and storage of rodenticides in accordance with legislation.