

Report No: AM5494/1/7
Date: August 2006

~~Reviewed Aug 17~~

REVIEWED APR-21 LF
No material changes in landfill operation.

**WASTE ACCEPTANCE CRITERIA
FOR
BRYN PICA LANDFILL SITE**

**Operated by
CYNON VALLEY WASTE DISPOSAL COMPANY LIMITED
(TRADING AS AMGEN CYMRU)**

**Encia Consulting Ltd
Bryn Pica
Llwydcoed
Aberdare
Rhondda Cynon Taff
CF44 0BX**

**Tel: 01685 870770
Fax: 01685 870770**

**Project Quality Assurance
Information Sheet**

**Waste Acceptance Criteria for Bryn Pica Landfill Site
AMGEN CYMRU**

Report Number : AM5494/1/7 **Report Status** : FINAL

Report Date : August 2006

Prepared for : Amgen Cymru
Bryn Pica Landfill Site
Llwydcoed
Aberdare
Rhondda Cynon Taff
CF44 0BX

Prepared by : Encia Consulting Ltd
Bryn Pica
Llwydcoed
Aberdare
Rhondda Cynon Taff
CF44 0BX

Written by:

**K L Edwards BSc (Hons) MSc FGS
Environmental Consultant**

Approved by:

**L J Foulkes BSc (Hons) MSc
Environmental Manager**

WASTE ACCEPTANCE CRITERIA FOR BRYN PICA LANDFILL SITE

CONTENTS

SUMMARY	v
1.0 INTRODUCTION	1
1.1 Report Context	1
1.2 Installation Details	1
2.0 WASTE ACCEPTANCE CRITERIA FOR BRYN PICA LANDFILL	3
2.1 Household Waste	3
2.1.1 <i>Landfill</i>	3
2.1.2 <i>Materials Recycling Facility</i>	4
2.1.3 <i>Community Recycling Centre</i>	4
2.2 Commercial and Industrial Waste	4
2.2.1 <i>Level 1 – Basic Characterisation</i>	4
2.2.2 <i>Level 2 – Compliance Testing</i>	6
2.2.3 <i>Level 3 – On-Site Verification</i>	7
2.3 Asbestos Waste	8
2.4 Green Waste / Compost	8
3.0 SAMPLING PLANS FOR COMPLIANCE TESTING	10
4.0 WASTE ACCEPTANCE PROCEDURES FOR BRYN PICA LANDFILL	11
4.1 Landfill	11
4.2 Materials Recycling Facility	11
4.3 Community Recycling Centre	12
5.0 METHODOLOGY FOR CHECKING THE WASTE HAS BEEN TREATED BEFORE DISPOSAL	13
6.0 METHODOLOGY FOR CHECKING THE CORRECT STORAGE, HANDLING AND TRANSPORT OF THE WASTE	14
7.0 METHODOLOGY FOR REJECTED WASTE LOADS	15
7.1 Rejection of a Load at the Weighbridge	15
7.2 Rejection of a Load at the Tipping Face	15
7.3 Informing the Environment Agency about Rejected Loads	16
8.0 CONCLUSIONS AND RECOMMENDATIONS	17

List of Drawings

AM5494/1/7/001	Bryn Pica Landfill Site – Installation Boundary Location Plan
AM5494/1/7/002	Bryn Pica Landfill Site – Site Details

List of Appendices

Appendix A	Drawings
Appendix B	E.W.C. Codes
Appendix C	Amgen Cymru Waste Acceptance Criteria
Appendix D	Asbestos Acceptance Procedures
Appendix E	Template of a Sampling Plan

SUMMARY

This document represents the report requested under Item 2 of Table S1.3 in Schedule 1 to PPC Permit DP3732SQ ("the Permit"), which authorises the operation of the Bryn Pica Landfill Site ("the Installation"), wherein the following is stated:

'The operator shall submit to the Agency, a report detailing the sites waste acceptance procedures. The report shall be prepared in accordance with Agency guidance entitled "Guidance for waste destined for disposal in landfills – Interpretation of the waste acceptance requirements of the landfill (England and Wales) regulations 2002 (as amended)" and include, but not be limited to the following issues:

- *The waste acceptance criteria for the installation.*
- *Level 1 basic characterization of wastes: quality assured procedures and method of recording the results.*
- *Level 2 compliance testing of wastes: quality assured procedures and method of recording the results.*
- *Level 3 On-site Verification of wastes: quality assured procedures and method of recording the results.*
- *Sampling plan, including quality assured methods and procedures for sampling and testing of wastes and method of recording the results.*
- *Method for checking that the waste has been treated before delivery to the installation and recording the results.*
- *Method for ensuring that waste is stored and handled properly prior to final deposit.*
- *Method for ensuring that wastes that have been rejected during the acceptance procedures are removed from the installation within 24 hours of the quarantine container becoming full, and / any event within 5 days of the receipt at the installation.*
- *Method for ensuring that the Agency is notified as soon as reasonably possible if a waste delivery is rejected.*

The date for compliance with the above, which forms part of the Improvement Plan for the Installation of the said Permit, is 1st September 2006.

Waste Acceptance Criteria

1. Introduction

1.1. Report Context

Amgen Cymru (Amgen) has commissioned Encia Consulting Ltd. (ECL) to produce a report describing the waste acceptance criteria for the Bryn Pica Waste Disposal Site, Aberdare, Rhondda-Cynon-Taff. This work forms part of the improvement programme specified in the site's PPC Permit (No. DP3732SQ) formally issued to the operator (Amgen) in June 2006.

It is considered that the purpose of this report is to describe as far as practically possible the procedures in place on site for the acceptance of waste and classification of waste prior to acceptance at the installation, and shall include the following:

- Waste acceptance criteria for the site
- Level 1 basic characterisation
- Level 2 compliance testing
- Level 3 on-site verification
- Production of a sampling plan

It is the responsibility of the waste producer and landfill site operator to ensure that wastes are deposited in the correct class of landfill. Therefore it is essential that Amgen Cymru have suitable procedures in place to distinguish which wastes can be accepted at the site and how these wastes will be monitored on site.

1.2. Installation Details

The Bryn Pica landfill site is a non-hazardous landfill site, classified under the Landfill Directive 1999 and Landfill (England and Wales) Regulations 2002. Therefore waste accepted at the site must be non-hazardous or inert. Asbestos waste is also accepted at the site but under strict acceptance procedures and into a separate asbestos cell. A copy of the permitted list of wastes and their European Waste Catalogue codes for the site can be found in Appendix B.

The Bryn Pica Landfill Site is located approximately 2 km north of Aberdare, at an elevation of approximately 280 mAOD, on the northern side of the River Cynon valley. The approximate Ordnance Survey National Grid Reference (NGR) for the Installation is SO 009 049. The location of the Installation is shown on **Drawing AM5494/7/001**.

The Address of the Installation, which is also that for the Registered Office of the Operator, is:

Bryn Pica Landfill Site
Llwydcoed
Aberdare
Rhondda Cynon Taff
CF44 0BX

Amgen Cymru
Llwydcoed
Aberdare
Rhondda Cynon Taff
CF44 0BX

The Installation can readily be divided, as illustrated in **Drawing AM5494/7/002**, into the following areas:

- Site reception and offices.
- Composting Area.
- Restored Opencast areas (Colliery Spoil).
- Resorted landfill (Phase 1).
- Active landfill (Phase 2c and 3a).
- Future landfill (Phase 3b onwards).

The operator's Head Office, combined with the weighbridge and reception for the Installation, is located on a block of land to the north of the landfill, adjacent to the Civic Amenity/Household Waste Recycling Centre. This area also accommodates the following components of the site infrastructure:

- amenity block.
- fuel storage.
- garages.
- site storage buildings.
- landfill gas flare stack.
- Materials Recycling Facility (MRF).
- Sorting Shed.

2. Waste Acceptance Criteria for Bryn Pica Landfill Site

Currently there are no full waste acceptance criteria available for non-hazardous landfills in the UK. Therefore it will not be possible to test waste streams against non-hazardous waste limit values. However, it is necessary to test wastes;

- to ensure that they are not hazardous,
- if they are to be deposited in the same cell as asbestos waste,
- For any reason relevant to the site specific permit – for example, if the waste is suspected of containing high levels of leachable parameters which must be assessed in the risk assessment.

Therefore, Amgen Cymru will request and conduct waste characterisation and testing in accordance with those requirements specified in the Environment Agency's Guidance for Waste Destined for Disposal in Landfills. This will include basic characterisation for all new waste streams accepted at the site, compliance testing for all waste accepted at the site and on-site verification of all waste loads tipped at the site.

Waste from producers providing annual waste transfer notes will be classified as wastes regularly generated from the same process. This is because the annual transfer note describes all the waste received on site from that waste producer. An initial basic characterisation of these wastes will be required by the waste producer. This is to be followed by compliance testing (to a suitable scale and period) to be conducted by the operator.

Waste from producers that have individual waste transfer notes (i.e. demolition waste from a single site) will be classed as individual waste streams. Therefore basic characterisation and compliance testing will have to be carried out for each waste stream.

Both local authority and commercial and industrial wastes are accepted at Bryn Pica. Under the requirements of the Landfill Regulations 2002 (as amended) waste characterisation and testing is required for all commercial and industrial wastes but municipal, household waste is exempt from analysis and is classified as acceptable for non-hazardous landfills.

2.1. Household Waste

Household waste is accepted at Bryn Pica in three ways. As part of the landfill destined household waste collected throughout the borough council as black bag waste. As separately collected household recyclates in clear bags, these are taken to the Materials Recycling Facility and separated into various recyclate streams. As household waste brought to the Community Recycling Centre by members of the public.

There are separate waste acceptance criteria / procedures for each of these areas of the site. The various acceptance criteria are detailed below.

2.1.1. Landfill

Municipal household waste accepted at the site does not require waste characterisation or testing as it is one of the waste types listed in the landfill Regulations as not requiring testing.

Household waste is collected by a weekly collection service, provided by Rhondda-Cynon-Taff County Borough Council. The waste is brought to the

Bryn Pica landfill site where it is accepted on site under an annual Waste Transfer Note.

2.1.2. Materials Recycling Facility (MRF)

Waste accepted into the MRF is separately collected, household waste. It consists of waste that has been separated in the home for recycling. Clear bags are provided to residents to place their recyclables in.

The MRF accepts only kerbside collection in clear plastic bags. The waste is sorted in the MRF into the individual waste streams and then sent for recycling / re-use.

Kerbside collection waste does not require basic characterisation because it is household waste and as such is one of the waste types listed as not requiring testing.

2.1.3. Community Recycling Centre

The CRC accepts waste from householders who live within the Rhondda-Cynon-Taff Borough Council. Householders bring waste to the CRC that either cannot be collected through the weekly waste collections or that they wish to dispose of immediately.

As long as a waste has come from a household, it should be accepted at the CRC (there are some cases where wastes cannot be accepted at the CRC, these are where items are classified as hazardous waste and Amgen Cymru do not have the facilities to deal with the waste stream).

Waste accepted at the CRC does not require any form of analysis because it is coming direct from the public; therefore it is classed as household waste and listed as not requiring testing.

2.2. Commercial and Industrial Wastes

All commercial and industrial waste accepted at Bryn Pica is now subject to waste characterisation and testing. Basic characterisation will be carried out by waste producers and passed to the operator for analysis and to determine if the waste is suitable for disposal at the site.

Following this, if the waste is accepted at the site a sampling plan will be produced for the waste stream and compliance testing carried out by the operator. The results of any compliance testing are to be passed to the waste producer and retained for reporting to the Environment Agency on an annual basis.

Further details on the basic characterisation and compliance testing to be done are given below. On site verification of waste is described in greater detail below in Section 2.2.3.

2.2.1. Level 1 – Basic Characterisation of Waste

All commercial and industrial waste accepted at Bryn Pica will require basic characterisation of the waste prior to approval for disposal. Basic characterisation is the responsibility of the waste producer.

The purpose of basic characterisation is to determine the class of landfill that can accept the waste and to allow a sampling plan to be produced for the waste, to ensure compliance with the sites permit. Therefore basic

characterisation must identify any potential variability's in the waste and so how much compliance testing is needed.

Basic characterisation is designed to provide a thorough determination, according to standardised analysis and behaviour testing methods, of the short and long term leachate behaviour and / or characteristic properties of the waste. Preferably basic characterisation will consist of the following:

- The source and origin of the waste
- Details of the process that produced the waste (description, SIC codes, characteristics of raw materials and products)
- Details of any waste treatment applied / statement of why no treatment has been applied (From 30/10/07 onwards)
- Composition of the waste (where relevant / possible assessment against limit values and any other characteristic properties)
- Appearance of the waste
- EWC Code
- A demonstration that it is not prohibited under Regulation 9
- Landfill classes that may accept the waste
- Likely behaviour of the waste in a landfill and any additional precautions to be taken
- Whether the waste can be recycled / recovered
- Identification of the key variables for compliance testing and options for simplification of compliance testing

In addition to this for wastes that are regularly generated from the same process (i.e. wastes from a single process factory) the initial basic characterisation will be required to be more detailed, including information on:

- Compositional range for the individual wastes
- Range and variability of characteristic properties
- Leachability of waste – batch leaching test, percolation test or pH dependence (if appropriate)

By providing this information in an initial basic characterisation the waste producer will remove the need for each individual batch of waste to have basic characterisation carried out. A detailed compliance testing schedule will then be drawn up for the waste by the operator. The compliance testing schedule will be produced with reference to the variation in inputs to the process as well as the process controls adopted and the class of landfill receiving the waste.

For wastes from a single waste producer that are not regularly generated (i.e. demolition waste from a contractor) each individual waste batch produced will require formal basic characterisation.

The need for basic characterisation can only be waived in the following cases:

1. Wastes are on the list of wastes not requiring testing
2. All the necessary information is already known
3. Certain waste types where testing is impractical or where appropriate testing procedures and acceptance criteria are unavailable

Once the results of the basic characterisation have been passed to the operator they will be assessed against the site's own waste acceptance

criteria, these can be found in Appendix C. The results of this comparison will be recorded and kept on file.

Following this the waste producer will be informed of the decision to accept / reject the waste stream. If the waste stream is accepted a Sampling Plan will be produced by Amgen Cymru based on the basic characterisation and compliance testing commissioned (details of sampling plans are given in Section 3).

2.2.2. Level 2 – Compliance Testing of Waste

The sampling plan will establish the amount of compliance testing to be carried out and when it will be done. The period over which any sampling will be carried out and to what scale (i.e. one in forty skips or one sample per 10m³ stockpile) the sampling will be carried out.

All sampling undertaken by Amgen Cymru will be analysed at a suitably accredited laboratory.

It is noted that the Environment Agency recommends a sampling period of one year and that compliance testing shall be carried out by the landfill operator no less than once a year, and preferably six times a year (per waste stream).

Once a waste has been deemed acceptable for disposal at Bryn Pica as a result of the basic characterisation, it is essential that the waste be checked for compliance before being accepted on site for the first time.

Compliance testing is the periodical testing by similar standardised analysis and behaviour testing methods to determine whether a waste complies with permit conditions and / or specific reference criteria. The tests focus on key variables and behaviour identified by basic characterisation.

It is the intention that compliance testing will show that the waste was correctly defined by basic characterisation and that the waste still complies with the basic characterisation carried out. Compliance testing should consist of one or more of the following:

- Testing of the key variables established under basic characterisation to demonstrate that the waste meets the limit value for those variables
- Batch leaching tests using the same method as was used for the basic characterisation
- Tests which demonstrate that the waste complies with the results of the basic characterisation and relevant acceptance criteria

The selection of parameters for compliance testing will be fully justified and documented by the operator.

The Environment Agency Guidance for waste destined for disposal in landfill recommends a targeted worst-case sampling approach.

“The operator should deliberately focus sampling efforts on occasions when the waste is expected to have the greatest risk of failing the limit.”

Where practical this approach will be adopted on site, however it is anticipated that the operator will not always be in a position to impose such a sampling strategy. In which case a random or representative sampling approach will be used.

The results of all compliance testing carried out on site will be recorded and maintained in the site offices for reference and audit purposes, and reviewed by Amgen Cymru staff each time a new sample is taken.

In the instance that a sample fails its compliance testing, the entire years waste received from that producer will be deemed to have failed its compliance. In these instances the operator will inform the waste producer that their waste has failed its compliance testing and request a report into the failure. The report will explain the reasons for the failure and how the waste producer intends to prevent a compliance failure in the future.

The Environment Agency Guidance for waste destined for disposal in landfills states that;

"The response to a compliance failure will, nevertheless, vary. It depends on factors such as the severity of the failure, the potential impact of the waste, and the operators' previous experience of the waste producer. The landfill operator must inform the waste producer, who will need to explain the reason for the failure and how they are going to prevent compliance failure in the future. The available options are:

- 1. The waste producer must carry out a full Level 1 re-characterisation exercise, with greater emphasis on identifying factors leading to 'hot spots'. The producer must then demonstrate that they could identify and separate out these problems wastes, which could then be treated and / or sent to a different class of site; and that the remaining bulk of the waste would be acceptable.*
- 2. The waste would be permanently banned from the site."*

Following this it will be necessary for the operator to produce a report establishing an action plan for how to deal with the waste. The report must consider the potential for pollution or harm from the waste already deposited. This will be done by looking at the severity of the failure, significance of the waste in the overall waste mix, tonnages accepted on site and likely effect on the risk assessment for the site.

If necessary removal of the waste or further engineering works to segregate waste may need to be considered. However, the implementation of any such procedures will only be considered after an assessment of the risks associated with the works has been carried out.

At all times the Environment Agency will be updated with regard to compliance testing and what is being done should any failures occur. It is the intention of Amgen Cymru to provide the Environment Agency with an annual report reviewing the compliance testing carried out on site during that year, provided no failures occur between annual reports.

2.2.3. Level 3 – On-site Verification of Wastes

On site verification of waste must be done for every load of waste that comes to the site, preferably before and after deposition. Where possible waste will be checked at the weighbridge by the attendant to confirm that it is the waste on the consignment note and then checked again at the tipping face during unloading.

Wastes should only be accepted to the landfill site once they have been through basic characterisation and compliance testing. Once the waste has been accepted on site it will be subject to at least one visual inspection per

load. Appearance, odour and any other readily determined properties must be checked as part of the on site verification.

On site verification of waste loads at the tipping face is the responsibility of the site operational staff working in the area. As it is too time consuming to record verification of each individual waste load tipped comments are to be recorded in the site diary. If staff discover waste streams that appear unacceptable the waste rejection procedures outlined in Section 7 are to be followed. In this instance the Site Manager will be informed and a comment made in the site diary.

2.3. Asbestos Waste

Asbestos Waste can only be accepted at Bryn Pica in the form of bonded asbestos waste, under the conditions of the sites PPC Permit. Asbestos waste is only accepted at the site from the local authority (household collection service), members of the public (at the CRC) and occasionally from commercial clients.

Asbestos from householders accepted at the CRC will be double bagged and fully sealed and placed in a dedicated, sealed skip in the CRC with the assistance of the CRC attendant. This waste has no requirement for basic characterisation as it comes from householders.

Asbestos waste accepted from the local authority and commercial clients will not have undergone basic characterisation. This is because the waste will previously have been assessed to contain asbestos and therefore is classified for acceptance at Bryn Pica within the asbestos 'monocell'.

The specific waste disposal procedures for asbestos waste at Bryn Pica are available in Appendix D to this report.

In the case of asbestos waste from commercial clients the operator will require evidence of the presence of asbestos within the waste prior to acceptance on site. This can be in the form of an asbestos surveyor's report or a qualified asbestos removers report.

Evidence for asbestos content from commercial clients will be filed and kept on site for inspection.

2.4. Green Waste / Compost

The composting of green waste on site is carried out under strict protocol in order to achieve PAS 100 accreditation. Therefore, it is very important for all the green waste going to compost to be non-contaminated.

Green waste collected as part of the kerbside collection is requested in separate bags to the other recyclable materials. These bags are then separated from the general recyclates in the MRF and sent to the composting area to be debagged. When the green waste is de-bagged it is checked for contamination, any found is removed.

Green waste collected at the CRC is also transferred to the composting sheds. The operator also accepts green waste from Rhondda Cynon Taff County Borough Council's parks and highways department. This is also sent straight to the composting sheds and checked for contamination.

Green waste accepted on site does not require any testing because it is solely from municipal waste sources and does not go to landfill. The waste is also checked on arrival at the site and undergoes regular screening throughout the composting process.

Amgen Cymru does not accept green waste from any commercial or industrial clients or processes.

3. Sampling Plans for Compliance Testing

As part of the waste acceptance criteria for Bryn Pica, a sampling plan must be produced for each new waste stream accepted at the site. The sampling plan should be devised from the results of the basic characterisation analysis completed. It should make reference to the scale at which testing is to be conducted and the period over which testing will be carried out and reviewed.

Amgen Cymru will record and file all sampling plans produced and maintain them accordingly. These will be made available for audit. No waste streams will be accepted on site without a valid Sampling Plan.

Environment Agency guidance recommends a sampling period of a year and that a minimum of six samples should be taken during this period. However, if a waste stream is only due to be delivered to site for a six month period then it may be more appropriate to reduce the sampling period over which that particular waste stream is sampled.

Alternatively, some wastes may show, through basic characterisation, that they are closer to the sites waste acceptance limits than others. For these types of wastes it may be more appropriate to carry out compliance testing more regularly or at a reduced scale.

The scale to which the sampling plan is carried out is also integral to the successful operation of a sampling plan. If the scale is too large for the waste, i.e. scale is set at one sample in every forty loads and the waste stream is highly variable then there is a greater potential to miss non-compliant wastes.

Therefore, it is essential that the basic characterisation analysis be reviewed in detail prior to preparing a sampling plan. It is anticipated that each sampling plan that is produced will be waste stream specific, therefore the following has been produced as guidance with regard to sampling plans:

A Waste that is non-variable and will only be accepted over a short period of time

- Reduced period of sampling
- General scale for sampling related to tonnage to be accepted
- Recommended number of samples taken (six)

A waste that is non-variable but will be accepted for at least one year

- Annual sampling period
- General scale for sampling related to tonnage to be accepted
- Recommended number of samples taken (six)

A waste that is highly variable and will only be accepted over a short period of time

- Reduced period of sampling
- Reduced scale for sampling
- Potentially increased number of samples

A waste that is highly variable but will be accepted for at least a year

- Annual sampling period
- Reduced scale for sampling
- Increased number of samples

An example of a potential sampling plan is provided in Appendix E.

4. Waste Acceptance Procedures for Bryn Pica Landfill Site

4.1. Landfill

The weighbridge attendant is responsible for the reception and initial inspection of all waste to the landfill. This will be undertaken following the procedure below:

- On arrival, the waste carrying vehicle will pull onto the weighbridge. The driver will provide, with the exception of community recycling centre waste, a waste transfer note and if a new customer, a copy of the Companies waste carriers licence.
- The weighbridge operator will hand the Landfill Site safety rules to any new drivers.
- Check the load against the transfer note (either a yearly note or one that accompanies the load).
- The weighbridge operator will establish, in so far as he / she is able to, that the description of the waste given to them by the carrier is accurate and that the waste material is authorised by the licence. Loads considered suitable will be directed to the tipping face.
- For loads requiring segregation or special placement procedures the weighbridge operator will call the Site Manager and inform him of the loads arrival. The load will be directed to the holding area outside the site offices until the tipping face is ready to accept the load.
- The weighbridge operator is in communication with the working face via mobile phone communication. He will inform the site operatives of any vehicles that have closed bins that require checking, of any vehicles containing inert materials and of any other matter relating to the reception and control of waste.
- If the weighbridge operator has concerns regarding a load then the driver will be instructed to pull up and park. The attendant will then inform the Site Manager who will inspect the waste carrier. Should there be any doubt to the suitability of a load, or the load is not within the licence conditions, or if the consignment documents are incorrect or cannot be produced, then tipping will not be permitted.
- If considered necessary, the Company may require a sample of the wastes to be taken for chemical analysis. Sampling should be carried out in the presence of a Company representative and a split-sample given to the Company by the Customer. The load will be removed from the site and no further loads accepted from this consignment until the results of the chemical analysis have been received and shown to conform to the site licence.
- If the Company is in doubt over the results of the chemical analysis advice will be sought from the Environment Agency.

When a sample is taken in these circumstances the following information must be attached to the sample container:

- Date and time
- Site name and address
- Description of the waste

4.2. Materials Recycling Facility

Waste destined for the Materials Recycling Facility is subject to the same waste acceptance procedures as landfill waste (it also has to pass over the weighbridge on site). However, waste destined for the MRF will consist of

household, kerbside collection in clear plastic bags only. Once this waste has passed over the weighbridge it is diverted into the MRF where it is directed into the waste reception area by the MRF attendants.

Once inside the MRF the waste is deposited onto the floor where it is initially manually sorted to remove all bulky recyclates such as cardboard and any green waste present. The waste then passes through the picking line where the individual recyclate streams are removed from the waste (i.e. glass, plastic etc). Any remaining waste at the end of the process falls into a final waste bin and is later removed to the landfill for disposal.

4.3. Community Recycling Centre

Members of the public are directed to the CRC from the access road where the site attendants will direct the unloading of all waste.

General waste will be placed in one of the two general waste bins on the site; all other wastes will be placed in the appropriate containers. Separate containers shall be maintained on site for the collection of the following:

- Scrap metal (ferrous and non-ferrous)
- Glass banks (green and clear)
- Paper (newspaper, magazines etc)
- Cardboard
- Can bank
- Shoes
- Textiles
- Green waste
- Inert waste
- Dense plastics

Separate containers shall be maintained on site for the separate collection of the following hazardous wastes:

- Batteries
- Cables / WEEE
- Waste Oil
- Fluorescent Tubes
- Gas Bottles
- Paint
- Fridges / Freezers

The site attendants will ensure that no unauthorised wastes are accepted at the site and that the wastes are efficiently sorted in accordance with the identified procedures. The site attendants will also carry out daily inspections on the waste reception area and bins on site.

5. Methodology for Checking the Waste has been Treated before Disposal

The Landfill (England and Wales) Regulations 2002 state that the operator of a landfill shall ensure that the landfill is only used for landfilling waste which is subject to prior treatment, unless:

1. It is inert,
2. It is waste other than inert but treatment will not reduce its quantity or its hazardousness to humans or the environment.

Condition 2.8(j) of the PPC Permit for Bryn Pica states that;
'from the 30th of October 2007 (wastes shall only be accepted for disposal if) they are wastes which have been treated, except for: inert wastes for which treatment is not technically feasible; or it is waste other than inert waste and treatment would not reduce its quantity or the hazards which it poses to human health or the environment.'

Therefore, as of the 30th of October 2007 it shall be necessary for Amgen Cymru to check that all waste being accepted into the landfill site have previously been treated. Treatment is defined as;

'Physical, thermal, chemical or biological processes (including sorting) that change the characteristics of waste in order to reduce its volume or hazardous nature, facilitate its handling or enhance recovery.'

It is the Government's view that in order to meet this definition, a treatment must fulfil one of the following 3 criteria:

1. Physical, thermal, chemical or biological process (including sorting)
2. Change the characteristics of the waste
3. Do so in order to;
 reduce the volume,
 reduce the hazardous nature,
 facilitate handling
 enhance recovery.

In the case of the first of the three criteria, when a waste is analysed for basic characterisation a SIC code must be provided, identifying the process that has produced the waste. In the case of a physical, thermal, chemical or biological process the SIC code will identify that treatment has occurred to the waste.

For the remaining two criteria Amgen Cymru will request that as part of the basic characterisation analysis report a section be added titled 'Waste Treatment' in which the details of any treatment carried out on the waste be detailed and a statement made explaining why if no treatment has been carried out.

6. Methodology for Checking the Correct Storage and Handling of the Waste

It is necessary to ensure that waste accepted on site has not been contaminated during storage; handling or transport to the site and after basic characterisation was completed. Evidence of this should be recorded and maintained for inspection.

Upon arrival on site skips will be subject to a visual inspection by the weighbridge operator. If the weighbridge operator has concerns regarding a vehicle or container then the driver will be asked to park the vehicle and the Site Manager will be contacted. The Site Manager will inspect the vehicle and container to ensure that both are in a suitable condition for carriage.

In particular staff will be looking for evidence of potential non-compliance such as liquid coming from any containers or damage to any containers etc.

Once the Site Manager is satisfied that the load is compliant the driver will be directed to the tipping face. Should evidence of non-compliance be established then compliance samples will be taken and the waste removed from site until the results of any analysis have been obtained.

Any vehicles or containers found not to be in optimum working condition will be noted and the waste producer informed. Follow up inspections of these vehicles and containers will be carried out on future visits to the site.

Waste will also be checked at the tipping face for evidence of non-compliance as part of the verification process.

7. Methodology for Rejected Waste Loads

Unauthorised wastes may be identified at either the weighbridge, site office, or after deposit at the landfill face. Such wastes are to be removed from the site in a manner that ensures their satisfactory disposal, unless otherwise approved by the Environment Agency.

Prior to the Company agreeing to accept waste, carriers will be notified of the waste types authorised by the Site Licence and reminded of their duty of care to ensure that non-conforming waste is not delivered to the site.

In the event of unknown carriers arriving at the site, they will be refused entry and turned away.

7.1. Rejection of a Load at the Weighbridge

A member of the site staff will conduct a visual inspection of the loaded vehicle for any visible non-conforming material.

If there is, the vehicle will be turned away from the site. If none is visible, the load checking in procedure described above will be carried out.

The compactor driver will be contacted by the weighbridge operator and a further inspection will be carried out once the vehicle has unloaded.

7.2. Rejection of a Load at the Tipping Face

If unauthorised waste is discovered after unloading, instructions to site staff are:

- The machine operator and / or another member of staff must request verification of non-conformity from the delivery vehicle driver.
- If reasonably practicable and safe to do so, non-conforming material must be reloaded onto the delivery vehicle and the driver advised that it must be delivered to a site licensed to accept such material.
- If non-conforming waste cannot be reloaded, it must be moved away from the immediate operational area or isolated, pending alternative arrangements for removal to appropriately authorised facility.
- On discovery of unauthorised material, the Site Manager must be contacted at once.
- Should it become apparent or suspected that the unauthorised material is dangerous, the area in which it was deposited, must be isolated. Other delivery vehicles must be directed to off load in another area, until the dangerous material has been removed (or an alternative approved with the Environment Agency).

On being contacted the Site Manager will complete the following procedure:

- Contact a member of senior management (preferably Operations Manager / Director)
- Inform the waste producer by telephone
- Inform the Environment Agency by telephone as soon as reasonably practicable, but immediately, if the material is considered to be of a dangerous nature.

- Record the incident and any subsequent actions in the Site Diary. The record is to include; time of rejection, drivers name, carriers name, vehicle registration, reason for rejection.

7.3. Informing the Environment Agency about Rejected Load

A record of all rejected loads will be maintained by the operator, this record will be made available for inspection by the Environment Agency at their discretion.

If a rejected load has been tipped off and it is deemed to be causing environmental harm or potentially causing environmental harm then the Environment Agency will be contacted immediately for advise and to report the incident and if required a Schedule 6 Notification will also be completed and forwarded to the Environment Agency.

8. Conclusions and Recommendations

Waste acceptance procedures employed by Amgen Cymru ('the operator') at the Bryn Pica Landfill Site have been reviewed in accordance with the Environment Agency' guidance "*Guidance for waste destined for disposal in landfills – Interpretation of the Waste Acceptance requirements of the Landfill (England and Wales) Regulations 2002 (as amended)*".

Existing waste acceptance procedures at the site are considered to be appropriate, with the addition of waste compliance testing as recommended by the above guidance.

Waste compliance testing is not required for waste classified as household (municipal), due to its inclusion on the list of wastes types exempt from waste compliance testing. Commercial and Industrial (non-hazardous) waste types will require appropriate compliance testing and it is recommended that the operator updates its waste acceptance procedures as follows:

- Produce a methodology for the sampling of commercial and industrial waste deposited at the Bryn Pica Landfill Site.
- Review existing commercial and industrial (non-hazardous) waste types accepted for disposal at the site and produce an appropriate compliance testing regime for each individual waste stream, with justification of the scale / frequency of waste sampling.
- With regards to potential future (new) waste streams, a waste sampling plan should be drawn up prior to the confirmed acceptance of the waste.
- Records will be kept of basic characterisation analysis provided to the operator by the waste producer, sampling plans, compliance testing results undertaken by the operator (analysed at a suitably accredited laboratory), on-site verification in the form of daily site diary entries should any problems arise. A record of any waste rejections from the site (whole or partial loads) will also be maintained.
- When determining when to sample for compliance testing the Environment Agency Guidance for waste destined for disposal in landfill recommends a targeted worst-case sampling approach.

"The operator should deliberately focus sampling efforts on occasions when the waste is expected to have the greatest risk of failing the limit."

Where practical this approach will be adopted on site, however it is anticipated that the operator will not always be in a position to impose such a sampling strategy. In which case a random or representative sampling approach will be used.