

Permit

Pollution Prevention and Control (England and Wales) Regulations 2000
Landfill (England and Wales) Regulations 2002

Permit

Permit number

BP3536SB

The Environment Agency (the Agency) in exercise of its powers under Regulation 10 of the Pollution Prevention and Control (England and Wales) Regulations 2000 (SI 2000 No 1973) and Regulation 6 of the Landfill (England and Wales) Regulations 2002 (SI 2002 No.1559) hereby authorises

Bliss Sand and Gravel Company Ltd ("the Operator"),

whose Registered Office (or principal place of business) is

30a Branton Hill Lane,

Aldridge,

Walsall,

West Midlands,

WS9 0NS

Company registration number 578959

to operate an installation at

Branton Lane Quarry Landfill

30a Branton Hill Lane

Aldridge

Walsall

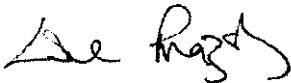
West Midlands

WS9 0NS

to the extent authorised by and subject to the conditions of this Permit.

Signed

Date

	31 March 2006
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Luke Prazsky

Authorised to sign on behalf of the Agency

Permit Number BP3536SB

Branton Lane Quarry

Branton Lane Quarry Landfill

Permit Number BP3536SB

Introductory note

This introductory note does not form a part of the Permit

The main features of the installation are as follows.

This is a permit to operate a landfill site at Branton Hill Quarry near Aldridge comprising of an area some 90,000m² (9 hectares). The operator of this landfill is the Bliss Sand and Gravel Company Limited. The landfill is a waste disposal facility for inert wastes only. The area has been and is currently also an operational quarry for the extraction of sand and gravel although no further extraction is to occur in within the installation boundary. Due to inert wastes being deposited in the landfill area, no significant landfill gas or leachate should be present. Boreholes within the waste mass monitor for the presence of these parameters. A non-technical summary can be found in the Application for a Permit in the introduction and installation details of the Environmental Setting and Installation Design.

The installation boundary is the same as covered previously by the waste management licence EAWML/40722. The site can be divided into 4 areas, 1) the office, weighbridge and wheel wash 2) the surface water pond, 3) phase 1 - the historic landfill area and 4) phase 2 - the current landfill as identified on DESID 4. The disposal of inert waste is limited to the phases 1 and 2 area only.

The annual throughput is limited to 24,999 tonnes and the total capacity of the site, including wastes already deposited, is 1,663,994.00 tonnes. The site is 1.8km from Hay Head Quarry, a Site of Special Scientific Interest (SSSI) designated for geological interest. A risk assessment has been submitted with the application and it is not envisaged that the site will have any impact on the SSSI due to the distance from the site and dust suppression measures to be implemented at the installation.

Status Log of the Permit		
Detail	Date	Response Date
Application BP3536SB	Received 09/05/2005	
Response to request for information	Request dated 18/05/05	Response date 19/05/05
Response to request for information in a Schedule 4 Notice	Request dated 30/09/05	Response date 25/11/05
Response to request for information	Request dated 22/02/06	Response date 07/03/06 Response date 07/03/06
Permit determined	31 March 2006	

Superseded or Partially Superseded Licences/Authorisations/Consents relating to this installation			
Holder	Reference Number	Date of Issue	Fully or Partially Superseded
The Bliss Sand and Gravel Co. Limited	EAWML/40722	21 June 1977	Fully superseded

End of Introductory Note

Conditions

1. Management

1.1 General management

- 1.1.1 The Activities shall be managed and operated:
- (a) in accordance with a management system, which identifies and minimises risks of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformances and those drawn to the attention of the Operator as a result of complaints; and
 - (b) by sufficient persons who are competent in respect of the responsibilities to be undertaken by them in connection with the operation of the Activities.
- 1.1.2 Records demonstrating compliance with condition 1.1.1 shall be maintained.
- 1.1.3 Any person having duties that are or may be affected by the matters set out in this Permit shall have convenient access to a copy of it kept at or near the place where those duties are carried out.

1.2 Accidents that may cause pollution

- 1.2.1 The Operator shall:
- (a) maintain and implement an accident management plan;
 - (b) review and record at least every 4 years or as soon as practicable after an accident, (whichever is the earlier) whether changes to the plan should be made;
 - (c) make any appropriate changes to the plan identified by a review.

1.3 Finance

- 1.3.1 The financial provision for meeting the obligations under this Permit set out in the Agreement made between the Operator and the Agency dated 30 March 2006, shall be maintained by the Operator throughout the subsistence of this Permit and the Operator shall produce evidence of such provision whenever required by the Agency.
- 1.3.2 The Operator shall ensure that the charges it makes for the disposal of waste in the landfill cover all of the following:
- (a) the costs of setting up and operating the landfill;
 - (b) the costs of the financial provision required by condition 1.3.1; and
 - (c) the estimated costs for the closure and aftercare of the landfill.

1.4 Energy efficiency

There are no conditions relating to energy efficiency in this Permit.

1.5 Site security

- 1.5.1 Site security measures shall prevent unauthorised access to the Site, as far as practicable.

2. Operations

2.1 Permitted activities

- 2.1.1 The Operator is authorised to carry out the activities specified in Schedule 1 Table S1.1 (the "Activities").

2.2 The site

- 2.2.1 The Activities shall not extend beyond the Site, being the land shown edged in green on the Site Plan at Schedule 2 to this Permit.

2.3 Operating techniques

- 2.3.1 The Activities shall, subject to the conditions of this Permit, be operated using the techniques and in the manner described in the documentation specified in Schedule 1 Table S1.2, unless otherwise agreed in writing by the Agency.

2.4 Off-site conditions

There are no conditions in this Permit to which Regulation 12(12) of the PPC Regulations apply.

2.5 Improvement programme

- 2.5.1 The Operator shall complete the improvements specified in Schedule 1 Table S1.3 by the date specified in that table unless otherwise agreed in writing by the Agency.
- 2.5.2 Except in the case of an improvement which consists only of a submission to the Agency, the Operator shall notify the Agency within 14 days of completion of each improvement.

2.6 Pre-operational conditions

- 2.6.1 The operations specified in Schedule 1 Table S1.4 shall not commence until the measures specified in that table have been completed.

2.7 Engineering

- 2.7.1 No construction of any New Cell shall commence until the Operator has submitted Construction Proposals and the Agency has confirmed that it is satisfied with the Construction Proposals.
- 2.7.2 The construction of a New Cell shall take place only in accordance with the approved Construction Proposals unless:

- (a) any change to the approved Construction Proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.3 No disposal of waste shall take place in a New Cell until the Operator has submitted a CQA Validation Report and the Agency has confirmed that it is satisfied with the CQA Validation Report.
- 2.7.4 No construction of Landfill Infrastructure shall commence until the Operator has submitted relevant Construction Proposals or a written request to use previous Construction Proposals and the Agency has confirmed that it is satisfied with the Construction Proposals.
- 2.7.5 The construction of the Landfill Infrastructure shall take place only in accordance with the approved Construction Proposals unless:
 - (a) any change to the approved Construction Proposals would have no impact on the performance of any element of the design; or
 - (b) a change has otherwise been agreed in writing by the Agency.
- 2.7.6 The Operator shall submit a CQA Validation Report as soon as practicable following the construction of the relevant Landfill Infrastructure.
- 2.7.7 Where pollution controls are immediately necessary to prevent an incident or accident, then conditions 2.7.4 and 2.7.5 do not apply and the relevant Landfill Infrastructure may be constructed, provided that the Construction Proposals are submitted to the Agency as soon as practicable.
- 2.7.8 For the purposes of conditions 2.7.1, 2.7.3 and 2.7.4, the Agency shall be deemed to be satisfied where it has not, within the period of 4 weeks from the date of receipt of the relevant Construction Proposals or CQA Validation Report, either:
 - (a) confirmed whether or not it is satisfied; or
 - (b) informed the Operator that it requires further information.

2.8 Waste acceptance

- 2.8.1 Wastes shall only be accepted for disposal if:
 - (a) they are listed in Schedule 3, and
 - (b) they are inert waste, and
 - (c) from 30th October 2007 they are not liquid waste (including waste waters but excluding sludge), and
 - (d) all the relevant waste acceptance procedures set out in Schedule 1 of the Landfill Regulations have been completed, and
 - (e) they fulfil the relevant waste acceptance criteria, and
 - (f) they have not been diluted or mixed solely to meet the relevant waste acceptance criteria, and
 - (g) from 30th October 2007 they are wastes which have been treated, except for wastes for which treatment is not technically feasible.

2.8.2 The Operator shall visually inspect:

- (a) without unloading it, waste that is not in an enclosed container or enclosed vehicle on arrival at the landfill; and
- (b) waste at the point of deposit;

and shall satisfy itself that it conforms to the basic characterisation documentation submitted by the holder.

2.8.3 Where the Operator has taken samples to establish that the waste is in conformity with the documentation submitted by the holder then the samples taken shall be retained for at least one month and results of any analysis for at least two years.

2.8.4 The Operator on accepting each delivery of waste shall provide a receipt to the person delivering it.

2.8.5 The total quantity of waste that shall be deposited in the landfill shall be limited by the pre-settlement levels shown on drawing DESID4.

2.8.6 The quantity of waste that is deposited in the landfill in any year shall not exceed the limits in Schedule 1 Table S1.5.

2.8.7 The Operator shall maintain and implement a system which ensures that a record is made of the quantity, characteristics, date of delivery and, where practicable, origin of any waste that is received for disposal or recovery and of the identity of the producer, or in the case of municipal waste and multiple collection vehicles, of the collector of such waste. Any information regarded by the Operator as commercially confidential shall be clearly identified in the record.

2.9 Leachate levels

2.9.1 The limits for the level of leachate listed in Table S4.1 of Schedule 4 shall not be exceeded.

2.10 Closure, aftercare and decommissioning

2.10.1 The Operator shall maintain and operate the Activities so as to prevent or where that is not practicable, to minimise, any pollution risk on closure and decommissioning.

2.11 Site protection and monitoring programme

2.11.1 The Operator shall, within 2 months of the issue of this Permit, submit a Site Protection and Monitoring Programme.

2.11.2 The Operator shall implement and maintain the Site Protection and Monitoring Programme in relation to all areas which will not comprise permanent deposits of waste and shall carry out and record a review of it at least every 4 years commencing from the date the Site Protection and Monitoring Programme was received.

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3. Emissions and monitoring

3.1 Emissions to water, air or land

- 3.1.1 There shall be no point source emissions to water, air or land.

3.2 Emissions to groundwater

- 3.2.1 There shall be no emission from the Activities into groundwater of any substance in List I (as defined by the Groundwater Regulations) contrary to those Regulations.
- 3.2.2 There shall be no emission from the Activities into groundwater of any substance in List II (as defined in the Groundwater Regulations) so as to cause pollution (as defined in those Regulations).
- 3.2.3 The trigger levels for emissions into groundwater for the parameter(s) and monitoring point(s) set out in Table S4.2 of Schedule 4 shall not be exceeded.
- 3.2.4 The Operator shall submit to the Agency a review of the Hydrogeological Risk Assessment:
- (a) between 9 and 6 months prior to the fourth anniversary of the granting of the Permit, and
 - (b) between 9 and 6 months prior to every subsequent 4 years after the fourth anniversary of the granting of the Permit.

3.3 Fugitive emissions of substances

- 3.3.1 Fugitive emissions of substances (excluding odour, noise and vibration) shall not cause pollution. The Operator shall not be taken to have breached this condition if appropriate measures have been taken to prevent or where that is not practicable, to minimise, those emissions.
- 3.3.2 Litter or mud arising from the Activities shall not cause pollution. The Operator shall not be taken to have breached this condition if appropriate measures have been used to prevent or where that is not practicable to minimise, the litter and mud.
- 3.3.3 Litter or mud arising from the Activities shall be cleared from affected areas outside the Site as soon as practicable.
- 3.3.4 All liquids, whose emission to water or land could cause pollution, shall be provided with secondary containment, unless the Operator has used other appropriate measures to prevent or where that is not practicable, to minimise, leakage and spillage from the primary container.
- 3.3.5 The measured values from the monitoring specified in Tables S4.3 and S4.8 of Schedule 4 shall not exceed the limits for the parameter(s) at the monitoring point(s) listed in that schedule.

3.4 Odour

- 3.4.1 Emissions from the Activities shall be free from odour at levels likely to cause annoyance outside the Site, as perceived by an Authorised Officer of the Agency, unless the Operator has used appropriate measures to prevent or where that is not practicable to minimise the odour.

3.5 Noise and vibration

- 3.5.1 Emissions from the Activities shall be free from noise and vibration at levels likely to cause annoyance outside the Site, as perceived by an Authorised Officer of the Agency, unless the Operator has used appropriate measures to prevent or where that is not practicable to minimise the noise and vibration.

3.6 Monitoring

- 3.6.1 The Operator shall, unless otherwise agreed in writing by the Agency, undertake monitoring for the parameters, at the locations and at not less than the frequencies specified in the following tables in Schedule 4 to this Permit:
- (a) Leachate specified in Tables S4.1 and S4.5;
 - (b) Groundwater specified in Tables S4.2 and S4.6;
 - (c) Landfill gas specified in Tables S4.3 and S4.4;
 - (d) Particulate matter specified in Table S4.7.
- 3.6.2 The Operator shall maintain records of all monitoring required by this permit including records of the taking and analysis of samples, instrument measurements (periodic and continual), calibrations, examinations, tests and surveys and any assessment or evaluation made on the basis of such data.
- 3.6.3 A topographical survey of the Site referenced to Ordnance Datum shall be carried out:
- (a) annually, and
 - (b) prior to the disposal of waste in any new cell or new development area of the landfill, and
 - (c) following closure of the landfill or part of the landfill.
- The topographical survey shall be used to produce a plan of a scale adequate to show the surveyed features of the Site.
- 3.6.4 Within 6 months of the issue of this Permit (unless otherwise agreed in writing by the Agency) the site reference data identified in the Site Protection and Monitoring Programme shall be collected and submitted to the Agency.

4. Information

4.1 Records

- 4.1.1 All records required to be made by this Permit shall:
- (a) be legible;

- (b) be made as soon as reasonably practicable;
- (c) if amended, be amended in such a way that the original and any subsequent amendments remain legible, or are capable of retrieval; and
- (d) be retained, unless otherwise agreed in writing by the Agency, for at least 6 years from the date when the records were made, or in the case of the following records until Permit surrender:
 - (i) the results of groundwater monitoring;
 - (ii) the Site Protection and Monitoring Programme;
 - (iii) ambient air monitoring for particulate matter;
 - (iv) sub-surface landfill gas monitoring;
 - (v) leachate levels, quality and quantities;
 - (vi) landfill gas generation and collection;
 - (vii) waste types and quantities;
 - (viii) topographical surveys;
 - (ix) the specification and as built drawings of the basal, sidewall and capping engineering systems

4.2 Reporting

- 4.2.1 A report or reports on the performance of the Activities over the previous year shall be submitted to the Agency by 31 January (or other date agreed in writing by the Agency) each year. The report(s) shall include as a minimum:
- (a) a review of the results of the monitoring and assessment carried out in accordance with this Permit against the relevant assumptions, parameters and results in the risk assessments submitted with the Application;
 - (b) where the Operator's management system encompasses annual improvement targets, a summary report of the previous year's progress against such targets;
 - (c) the energy consumed at the Site, reported in the format set out in Schedule 5 Table S5.2
 - (d) the water consumed at the Site, reported in the format set out in Schedule 5 Table S5.2;
 - (e) details of any contamination or decontamination of the Site which has occurred;
 - (f) the topographical surveys required by condition 3.6.3 other than those submitted as part of a CQA validation report;
 - (g) the volumetric difference (reported in cubic metres) between the most recent topographical survey and the previous annual topographical survey i.e. the additional volume of the landfill void that is occupied by waste;
 - (h) an assessment of the settlement behavior of the landfill body based on the difference between the most recent topographical survey and previous annual topographical survey for the areas of the landfill which did not receive waste between the surveys;

- (i) a calculation of the remaining capacity (reported in cubic metres) derived from the pre-settlement contours and the most recent topographical survey;
 - (j) the compliance testing undertaken in the period;
- 4.2.2 Within 28 days of the end of the reporting period the Operator shall, unless otherwise agreed in writing by the Agency, submit reports of the monitoring and assessment carried out in accordance with the conditions of this permit, as follows:
- (a) in respect of the parameters and emission points specified in Table S5.1 of Schedule 5;
 - (b) for the reporting periods specified in Table S5.1 of Schedule 5 and using the forms specified in Table S5.3 of Schedule 5; and
 - (c) giving the information from such results and assessments as may be required by the forms specified in those tables.
- 4.2.3 A summary report of the waste types and quantities accepted and removed from the site shall be made for each quarter. It shall be submitted to the Agency within one month of the end of the quarter and shall be in the format required by the Agency.
- 4.2.4 The Operator shall, unless notice under this condition has been served within the preceding 4 years, submit to the Agency, within 6 months of receipt of a written notice, a report assessing whether there are other appropriate measures that could be taken to prevent, or where that is not practicable, to minimise pollution.
- 4.2.5 The results of reviews and any changes made to the Site Protection and Monitoring Programme shall be reported to the Agency, within 1 month of the review or change.

4.3 Notifications

- 4.3.1 The Agency shall be notified without delay following the detection of:
- (a) any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution;
 - (b) the breach of a limit specified in the Permit;
 - (c) any significant adverse environmental effects.
- 4.3.2 Any information provided under condition 4.3.1 shall be confirmed by sending the information listed in Schedule 6 to this Permit within the time period specified in that schedule.
- 4.3.3. Prior written notification shall be given to the Agency of the following events and in the specified timescales:
- (a) as soon as practicable prior to the permanent cessation of any of the permitted activities;
 - (b) as soon as practicable prior to the cessation of the landfill disposal activities, for a period likely to exceed 1 month; and
 - (c) at least 7 days prior to the resumption of the landfill disposal activities after a cessation notified under (b) above.

- 4.3.5 Where the Agency has requested in writing that it shall be notified when the Operator is to undertake monitoring and/or spot sampling, the Operator shall inform the Agency when the relevant monitoring is to take place. The Operator shall provide this information to the Agency at least 14 days before the date the monitoring is to be undertaken.
- 4.3.6 The Agency shall be notified within 7 days of any changes in technically competent management and the name of any incoming person together with evidence that such person has the required technical competence.
- 4.3.7 The Agency shall be provided, within 14 days of the Operator or any relevant person being convicted of a relevant offence, (unless such information has already been notified to the Agency), with details of the nature of the offence, the place and date of conviction, and the sentence imposed.
- 4.3.8 The Agency shall be notified within 14 days of the Operator and/or any relevant person lodging an appeal against a conviction for any relevant offence and of the outcome when the appeal is decided.
- 4.3.9 The Agency shall be notified within 14 days of the occurrence of the following matters, except where such disclosure is prohibited by Stock Exchange rules:
- (a) any change in the Operator's trading name, registered name or registered office address;
 - (b) any change to particulars of the Operator's ultimate holding company (including details of an ultimate holding company where an Operator has become a subsidiary); and
 - (c) any steps taken with a view to the Operator going into administration, entering into a company voluntary arrangement or being wound up.

4.4 Interpretation

- 4.4.1 In this Permit the expressions listed in Schedule 7 shall have the meaning given in that schedule.

Schedule 1 - Operations

Table S1.1 Activities

Activity listed in Schedule 1 of the PPC Regulations	Description of specified activity	Limits of specified activity
Section 5.2 Part A(1) (b), The disposal of waste in a landfill.	Landfill for inert waste (landfill classification under the Landfill Regulations 2002)	Receipt, handling, storage and disposal of wastes, consisting of the types and quantities specified in conditions 2.8, as an integral part of landfilling.
Directly Associated Activity		
Fuel storage.	Storage of fuel for operation of plant and equipment.	Fuel storage tank.

Table 2.1.1: Operating techniques

Description	Parts	Date Received
Application	The response to questions B2.5.1, B2.9, B2.2.64 to B2.2.74, B2.3.2, B2.3.3 and B2.3.4 of the Application Form. Environment Management Plan 1/Bliss	09 th May 2005
Further information	e-mail with revised front page of ESID, planning permission area clarified, revised EOPRA and CROW Assesment carried out	19 th May 2005
Detailed response to Schedule 4 Notice	All, although there are parts of the HRA that we do not agree with see decision document with regard to ground water monitoring	25 th November 2005
Further information	Revised drawings DESID 2, 4 & 7, Revised ESID 1.1, 1.2, 2.1.2, 2.4.3, and 2.6	07 th March 2006

Table S1.3 Improvement Programme Requirements

Reference	Requirement	Date
1	The Operator shall submit to the Agency, for approval, a plan showing the proposed location, design and installation of two additional groundwater monitoring points along the eastern site boundary and the replacement of groundwater monitoring point BH6/01. The proposals shall be in accordance with Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02). Submit to the Environment Agency for agreement the proposed method of installation and well completion details for the boreholes identified in plan required above.	31/05/06
2	For the new wells proposed in improvement condition 1 the operator shall devise borehole specific groundwater control and trigger levels and control charts and submit these to the Agency for approval in writing. These will be derived in accordance with Agency guidance document 'Hydrogeological Risk Assessment for Landfills' (LFTGN01). The control charts shall show trend lines as well as control and trigger levels for each borehole.	31/03/07
3	For existing groundwater boreholes the operator shall devise borehole specific groundwater control levels for ammonia, chloride and sulphate and both control and trigger levels for sodium and potassium. These will be derived in accordance with Agency guidance document 'Hydrogeological Risk Assessment for Landfills' (LFTGN01). Control charts that show trend lines as well as the control and trigger levels for each borehole shall be submitted to the Agency for approval in writing.	31/05/06

-
- 4 The Operator shall submit to the Agency monitoring proposals for gas monitoring in accordance with Agency guidance accordance with the guidance provided in Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02). 30/05/06
-

Compliance levels shall be submitted to the Environment Agency for approval with all the supporting monitoring data in a format specified by the Agency.

The Operator shall implement any improvements or measures as agreed in writing by the Environment Agency.

-
- 5 The Operator shall submit to the Agency revised groundwater monitoring detection limits. Monitoring proposals shall be in accordance with Agency guidance accordance with the guidance provided in Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02) and Agency document 'Hydrogeological Risk Assessments for Landfills' (LFTGN 01). 30/06/06
-

Revised groundwater monitoring detection limits shall be incorporated into the site monitoring plan and monitored in accordance with the requirements of Table S4.2 and Schedule 5 of this permit.

-
- 6 The operator shall submit for prior approval a design specification and Construction Quality Assurance Plan detailing the construction and surfacing for containment of the quarantine area, and fuel tanks present at the site. 30/09/06
- The Operator shall implement any improvements or measures as agreed in writing by the Environment Agency.
-

-
- 7 The operator shall submit to the Agency for prior approval a CQA plan for the installation of boreholes LM1 and LM2 at the points shown on drawing DESID 6. 30/09/06
-

The boreholes shall be installed in accordance with the written approval of the Agency.

The operator shall provide to the Agency a CQA report that includes details of the following:

- As built drawings for and CQA of the monitoring boreholes LM1 and LM2;
- As built location plan of monitoring boreholes LM1 and LM2.

The Operator shall implement any improvements or measures as agreed in writing by the Environment Agency.

Boreholes LM1 and LM2 shall be incorporated into the site monitoring plan and monitored in accordance with the requirements of Table S4.5 and Schedule 5 of this permit.

The operator shall include a maintenance programme and deadlines for repair and replacement.

-
- 8 The operator shall install the new water sprays and bowser as detailed in the application B2.2.64 or the equivalent as agreed in writing with the Agency. 30/06/06
- The operator shall incorporate use of the water sprays and bowser into management and control procedures for fugitive emissions to ensure that dust/particulate emissions are minimised.
-

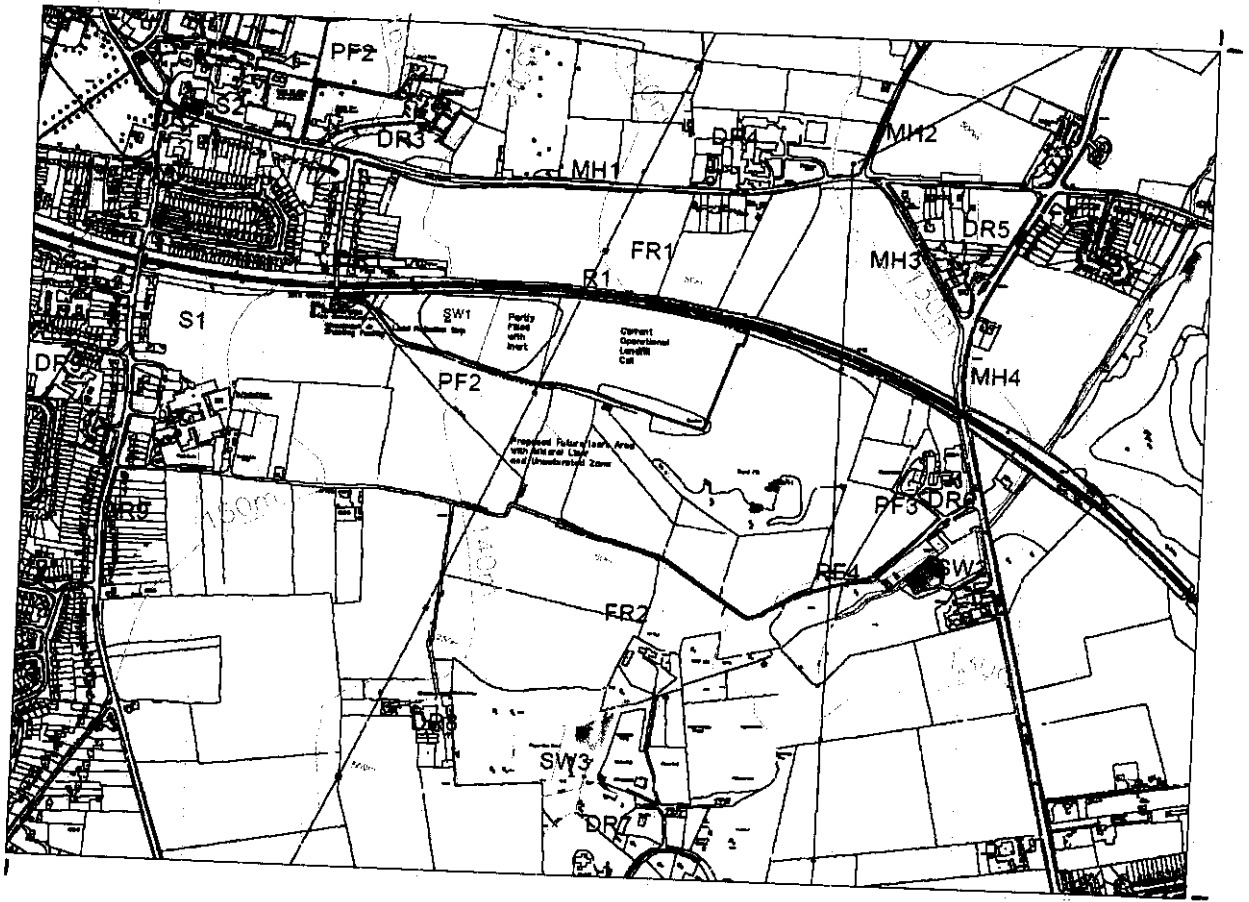
Table S1.4 Pre-operational Measures for Future Development

Reference	Operation	Pre-operational Measures
1	Disposal of waste along the southern edge of the installation boundary in 'Phase 2 current operational area' as identified on drawing DESID 7 i.e. Branton Hill	<p>The operator shall install an artificially enhanced mineral liner with a permeability equivalent to (1m at) 1×10^{-7} m/s for the side wall which is exposed above the waste and:</p> <p>at least 4 weeks prior to the commencement of construction the operator shall submit to the Agency for approval in writing the detailed design, material specifications, and the construction quality assurance (CQA) programme for the pre-operational engineering of the artificially enhanced mineral liner. Once approved this shall be incorporated in to the sites operational / management plans. Any changes to the design or CQA plan for the side wall lining shall be notified to the Agency at least 4 weeks before proposed works commenced.</p> <p>On completion of each lift of the side wall lining the operator shall submit a validation report in writing to the Agency within 4 weeks of completion. The Agency shall inspect the relevant part to ensure that it complies with the relevant conditions of the landfill permit, and shall confirmed in writing that it has no objection to that part becoming operational.</p>

Table S1.5 Annual Waste Input Limits

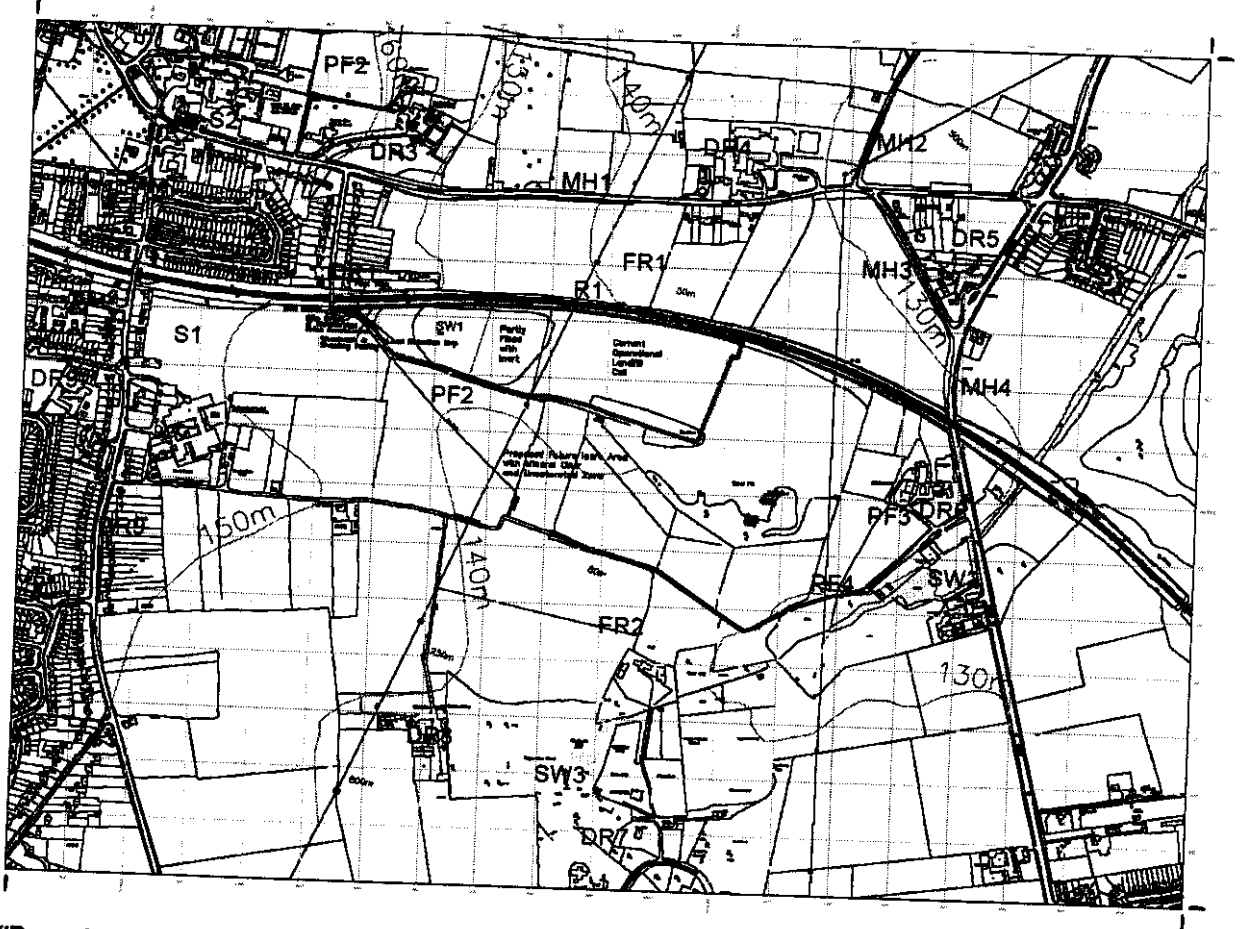
Category	Limit Tonnes/ Year
Inert Waste	24,999

Schedule 2 - Site plan



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Schedule 2 - Site plan



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Schedule 3 - List of permitted wastes

1. Wastes that do not require testing providing they meet the criteria contained in the Agency Guidance for Landfill Sites for Inert Waste' 257_05

17 Construction and demolition wastes (including excavated soil from contaminated sites)

17 01 concrete, bricks, tiles and ceramics

17 01 01 concrete

17 01 02 bricks

17 01 03 tiles and ceramics

17 01 07 mixtures of concrete, bricks, tiles and ceramics other than those mentioned in 17 01 06

17 05 soil (including excavated soil from contaminated sites) stones, and dredging spoil

17 05 04 soil and stones other than those mentioned in 17 05 03

20 Municipal wastes (Household waste and similar commercial, industrial and institutional wastes) including separately collected fractions

20 02 garden and park wastes (including cemetery waste)

20 02 02 soil and stones

2. Wastes that require testing so as not to exceed the limit values for leaching described in Table 2, or total content of organic parameters described in Table 3, of the Agency 'Guidance for Landfill Sites for Inert Waste' 257_05

01 Wastes resulting from exploration, mining, quarrying and physical and chemical treatment of minerals

01 01 wastes from mineral extraction

01 01 01 wastes from mineral metalliferous excavation

01 01 02 wastes from mineral non-metalliferous excavation

01 04 wastes from physical and chemical processing of non-metalliferous minerals

01 04 08 waste gravel and crushed rocks other than those mentioned in 01 04 07

01 04 09 waste sand and clays

10 Wastes from Thermal Processes

10 12 wastes from manufacture of ceramic goods, bricks, tiles and construction products

10 12 08 waste ceramics, bricks, tiles and construction products (after thermal processing)

17 Construction and demolition wastes (including excavated soil from contaminated sites)

17 09 other construction and demolition wastes

17 09 04 mixed construction and demolition wastes other than those mentioned in 17 09 01, 17 09 02 and 17 09 03.

19 Wastes from waste management facilities, off-sitewaste water treatment plants and the preparation of water intended for human consumption and water intended for industrial use

19 12 wastes from the mechanical treatment of wastes not otherwise specified

19 12 09 minerals (for example sand, stones)

Schedule 4 – Emissions and monitoring

Table S4.1 Leachate level limits and monitoring requirements

Monitoring point reference/ Description	Limit	Monitoring frequency	Monitoring method
LM1, LM2	1 m AOD	Monthly	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02)

Table S4.2 Trigger levels for emissions into groundwater and monitoring requirements

Monitoring point reference	Parameter	Limit (including unit)	Reference Period	Monitoring frequency	Monitoring standard or method
BH05/01, BH4/01, BHA, BHB (Drawing reference DESID 10) All new boreholes installed in accordance with Improvement Programme Table S1.3 reference 1	Ammonia	0.1425 mg/l	Spot Sample	Quarterly	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02)
	Chloride	15.10 mg/l	Spot Sample	Quarterly	
	Sulphate	18.09 mg/l	Spot Sample	Six monthly	
	Sodium	To be agreed in accordance with Improvement Programme Table S1.3 reference 3	Spot Sample	Six monthly	
	Potassium		Spot Sample	Six monthly	

Table S4.3 Landfill gas in external monitoring boreholes – limits and monitoring requirements

Monitoring point Ref. /description	Parameter	Limit (including units)	Monitoring frequency	Monitoring standard or method
Borehole A, Borehole B, BH1/01, BH1/02, BH1/03, BH1/04, BH1/05, BH2/01, BH2/02, BH2/03 as identified on the revised drawing DESID 7 dated 7 March 2006.	Methane	1 %v/v	Monthly	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on the management of landfill gas' (LFTGN03)
	Carbon Dioxide	1.5 %v/v		
	Oxygen	no limit		
	Atmospheric pressure	no limit		
	Differential Pressure	no limit		
	Temperature	no limit		
	Meteorological data	no limit		

Table S4.4 Landfill Gas – other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
in waste monitoring boreholes GV1, 2 and 3 and boreholes GVA – GVJ inclusive	Methane Carbon Dioxide Oxygen Carbon Monoxide Atmospheric pressure Differential pressure Temperature Meteorological Data	Monthly	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on the management of landfill gas' (LFTGN03)	

Table S4.5 Leachate– other monitoring requirements

Emission point reference or source or description of point of measurement	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
Leachate monitoring points LM1, LM2 as identified on plan DESID 6 subject to IC 1.3.6	pH, EC, NH4-N, Cl, SO4, ALKALINITY, TON, TOC, BOD, COD, Na, K, Ca, Mg	Quarterly	Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02)	
Leachate monitoring points LM1, LM2 as identified on plan DESID 6 subject to IC 1.3.6	List 1 screen*	Annually		
Depth to base of monitoring well	mAoD	Annually		

*List 1 substances and MRV (minimum reporting value) as published in the Agency's technical guidance document LFTGN01, "Hydrogeological risk assessment for landfills and the derivation of groundwater control and trigger levels", Appendix 6

Table S4.6 Groundwater – other monitoring requirements

Emission point reference or source or description of point of measurement as shown on revised DESID 4	Parameter	Monitoring frequency	Monitoring standard or method	Other specifications
BHA, BHB, BH01/01 BH01/02, BH01/03, BH01/04, BH01/05, BH01/02, BH02/02 and BH03/02	Groundwater elevation (mAOD)	Quarterly		
All new boreholes installed in accordance with Improvement Programme Table S1.3 reference 1			Unless otherwise agreed in writing with the Environment Agency, monitoring methods used shall be in accordance with Environment Agency document 'Guidance on monitoring of landfill leachate, groundwater and surface water' (LFTGN02)	
BHA, BHB, BH01/01 BH01/02, BH01/03, BH01/04, BH01/05, BH01/02, BH02/02 and BH03/02	pH, temperature, EC, DO, NH4-N, Cl	Quarterly		
All new boreholes installed in accordance with Improvement Programme Table S1.3 reference 1				
BHA, BHB, BH01/01 BH01/02, BH01/03, BH01/04, BH01/05, BH01/02, BH02/02 and BH03/02	DO, Eh, pH, EC, NH4-N, TON(oxidised-N), TOC, BOD, COD, Ca, Mg, Na, K, Alk, SO ⁴ , Cl, Fe, Mn, Cd, Cr, Cu, Ni, Pb and Zn.	Six monthly		
All new boreholes installed in accordance with Improvement Programme Table S1.3 reference 1				
BH1/01	List I/II Scan	Annually		Subject to review
All new boreholes installed in accordance with Improvement Programme Table S1.3 reference 1 excluding BH01/06				

Table S4.7 Particulate matter in ambient air - limits and monitoring requirements

Monitoring Point Ref. /Description	Parameter	Limit (Including Unit)	Reference Period	Monitoring Frequency	Monitoring Standard or Method
DMP1, DMP2, DMP3	Particulate matter	200mg/m ² /day	1 month	Annually	

Schedule 5 - Reporting

Parameters, for which reports shall be made, in accordance with conditions of this Permit, are listed below.

Table S5.1 Reporting of monitoring data			
Parameter	Emission or monitoring point/reference	Reporting period	Period begins
Leachate levels (S4.1) As required by condition 3.6.1	LM1 & LM2	Every 3 months	01/04/06
Groundwater (S4.2 and S4.6) Parameters as required by condition 3.6.1	BHA, BHB, BH01/01 BH01/02, BH01/03, BH01/04, BH01/05, BH01/02, BH02/02 and BH03/02 All new boreholes installed in accordance with Improvement Programme Table S1.3 reference 1	Every 6 Months	01/04/06
Particulate matter (S4.7) Parameters as required by condition 3.6.1	DMP1, DMP2, DMP3	Every 12 months	01/04/06
Landfill gas monitoring (S4.3 and 4.4) Parameters as required by condition 3.6.1	GV1-3, GVA-J, BHA & BHB, BH1/01 to BH1/05 and BH2/01 to BH2/03 inclusive	Every 3 months	01/04/06
Other leachate monitoring (S4.5) Parameters as required by condition 3.6.1	LM1 & LM2	Every 3 months	01/04/06
List 1 Screen	LM1 & LM2	Every 12 months	

Table S5.2 Performance Parameters			
Parameter	Frequency of assessment	Annual total	Unit
Potable water use	Annually		Cubic metres
Energy used	Annually		MW of electricity
Non potable water use	Annually		Cubic metres

Table S5.3 Reporting Forms		
Media/parameter	Reporting Format	Date of Form
Controlled water	Reporting format to be agreed in writing with the Agency	
Surface water	Reporting format to be agreed in writing with the Agency	
Groundwater	Reporting format to be agreed in writing with the Agency	
Landfill gas	Reporting format to be agreed in writing with the Agency	
Waste summary	Reporting format to be agreed in writing with the Agency	
Landfill topographical surveys and interpretation	Reporting format to be agreed in writing with the Agency	

Schedule 6 - Notification

This page outlines the information that the Operator must provide.

Units of measurement used in information supplied under Part A and B requirements shall be appropriate to the circumstances of the emission. Where appropriate, a comparison should be made of actual emissions and authorised emission limits.

If any information is considered commercially confidential, it should be separated from non-confidential information, supplied on a separate sheet and accompanied by an application for commercial confidentiality under the provisions of the PPC Regulations.

Part A

Permit Number	
Name of Operator	
Location of Installation	
Time and date of the detection	

(a) Notification requirements for any malfunction, breakdown or failure of equipment or techniques, accident, or fugitive emission which has caused, is causing or may cause significant pollution	
To be notified within 24 hours of detection	
Date and Time of the event	
Reference or description of the location of the event	
Description of where any release into the environment took place	
Substances(s) potentially released	
Best estimate of the quantity or rate of release of substances	
Measures taken, or intended to be taken, to stop any emission	
Description of the failure or accident.	

(b) Notification requirements for the breach of a limit	
To be notified within 24 hours of detection unless otherwise specified below	
Emission point reference/ source	
Parameter(s)	
Limit	
Measured value and uncertainty	
Date and time of monitoring	
Measures taken, or intended to be taken, to stop the emission	

Time periods for notification following detection of a breach of a limit	
Parameter	Notification period
Carbon Dioxide in external boreholes.BHA, BHB, BH1/01 to BH1/05, BH2/01 to BH2/03 inclusive >3% v/v	48 hours
Leachate level limit	5 working days

(c) Notification requirements for the detection of any significant adverse environmental effect	
To be notified within 24 hours of detection	
Description of where the effect on the environment was detected	
Substances(s) detected	
Concentrations of substances detected	
Date of monitoring/sampling	

Part B to be supplied as soon as practicable

Any more accurate information on the matters for notification under Part A.	
Measures taken, or intended to be taken, to prevent a recurrence of the incident	
Measures taken, or intended to be taken, to rectify, limit or prevent any pollution of the environment which has been or may be caused by the emission	
The dates of any unauthorised emissions from the installation in the preceding 24 months.	

Name*	
Post	
Signature	
Date	

* authorised to sign on behalf of Bliss Sand and Gravel Company Limited

Schedule 7 - Interpretation

"Accident" means an accident that may result in pollution.

"Annually" means once every Year.

"Application" means the application for this Permit, together with any additional information supplied by the Operator as part of the application and any response to a notice served under Schedule 4 to the PPC Regulations

"Authorised Officer" means any person authorised by the Agency under section 108(1) of The Environment Act 1995 to exercise, in accordance with the terms of any such authorisation, any power specified in Section 108(4) of that Act.

"Construction Proposals" means written information, at a level of detail appropriate to the complexity and pollution risk, on the design, specifications of materials selected, stability assessment (where relevant) and the construction quality assurance (CQA) programme in relation to the New Cell or Landfill Infrastructure.

"CQA Validation Report" means the final "as built" construction and engineering details of the New Cell or of the Landfill Infrastructure. It must provide a comprehensive record of the construction and must include, where relevant:

- The results of all testing required by the CQA programme - this must include the records of any failed tests with a written explanation, details of the remedial action taken, referenced to the appropriate secondary testing;
- Plans showing the location of all tests;
- "As-built" plans and sections of the works;
- Copies of the site engineer's daily records;
- Records of any problems or non-compliances and the solution applied;
- Any other site specific information considered relevant to proving the integrity of the New Cell or Landfill Infrastructure;
- Validation by a qualified person that all of the construction has been carried out in accordance with the Construction Proposals.

"Fugitive emission" means an emission to air, water or land from the Activities which is not controlled by an emission limit.

"Groundwater Regulations" means the Groundwater Regulations SI 1998 No. 2746, and words and expressions used in this Permit which are also used in the Regulations shall have the same meanings as in those Regulations.

"Landfill Infrastructure" means any specified element of the:

- permanent capping;
- temporary capping (i.e. engineered temporary caps not cover materials);
- leachate abstraction systems;
- leachate transfer, treatment and storage systems;
- surface water drainage systems;
- leachate monitoring wells;
- groundwater monitoring boreholes;
- landfill gas monitoring boreholes;
- landfill gas management systems;

within the Site.

"Landfill Regulations" means the Landfill (England and Wales) Regulations SI 2002 No. 1559, and words and expressions used in this Permit which are also used in the Regulations shall have the same meanings as in those Regulations.

"Liquids" means any liquid other than leachate within the engineered landfill containment system.

"LFTGN 05" means Environment Agency Guidance for monitoring enclosed landfill gas flares, September 2004.

"LFTGN 08" means Environment Agency Guidance for monitoring landfill gas engines, September 2004.

"New Cell" means any new cell, part of a cell or other similar new area of the Site where waste deposit is to commence after issue of this Permit and can comprise:

- groundwater under-drainage system;
- permanent geophysical leak location system;
- leak detection layer;
- sub-grade;
- barriers;
- liners;
- leachate collection system;
- leachate abstraction system;
- separation bund/layer;
- cell or area surface water drainage system;
- side wall subgrade and containment systems;

for the New Cell.

"No impact" means that the change made to the construction process will not alter the agreed design criteria, specification or performance.

"PPC Regulations" means the Pollution, Prevention and Control (England and Wales) Regulations SI 2000

No.1973 and words and expressions used in this Permit which are also used in the Regulations have the same meanings as in those Regulations.

"Quarter" means a calendar year quarter commencing on 1 January.

"Relevant person" and "relevant conviction" shall have the meanings given to them in the Environmental Protection Act 1990

"Review of the Hydrogeological Risk Assessment" means a written review of the hydrogeological risk assessment included in the Application, together with any other parts of the Application that addressed the requirements of the Groundwater Regulations. The review shall assess whether the activities of disposal or tipping for the purpose of disposal of waste authorised by the Permit continue to meet the requirements of the Groundwater Regulations

"Site Protection and Monitoring Programme" means a document which meets the requirements for Site Protection and Monitoring Programmes described in the Land Protection Guidance.

"Technically competent management" and "technical competence" shall have the meanings given to them in the Environmental Protection Act 1990.

"Year" means calendar year ending 31 December.

Where a minimum limit is set for any emission parameter, for example pH, reference to exceeding the limit shall mean that the parameter shall not be less than that limit.

Unless otherwise stated, any references in this Permit to concentrations of substances in emissions into air means the standards included in Environment Agency Guidance for Monitoring Enclosed Landfill Gas Flares LFTGN 05 or Guidance for Monitoring Landfill Gas Engine Emissions LFTGN 08.

END OF PERMIT