Wheeldon, Rushmere & Cole Inc.
ATTORNEYS • NOTARIES • CONVEYANCERS

The Herald
Grocott's Mail
Daily Dispatch
PER E-MAIL

Date	12 November 2018
Your ref	
Our ref	B Brody/Glyn/
Direct dial	046 603 6407
Direct fax	046 622 6556
Cell	082 657 1300
Email:	bbb@wheeldon.co.za

Dear Sir/Madam

MAKANA UNITY LEAGUE / MAKANA MUNICIPALITY

Enclosed please find a copy of a letter addressed to the mayor and the municipal manager of Grahamstown today for your approval.

Yours faithfully

Transmitted per e-mail
Original signed and retained

BRIN BRODY

Wheeldon, Rushmere & Cole

CONNAUGHT CHAMBERS, 119 HIGH STREET
PO BOX 88, GRAHAMSTOWN, 6140
DOCEX 8, GRAHAMSTOWN
VAT NUMBER: 4100270513
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Wheeldon, Rushmere & Cole Inc.
ATTORNEYS • NOTARIES • CONVEYANCERS

Makana Municipality
City Hall, Church Square
High Street
GRAHAMSTOWN
FOR THE PERSONAL ATTENTION OF THE MAYOR, MS GAGA
PER SHERIFF

Date	12 November 2018
Your ref	Ms Gaga
Our ref	B Brody/Glyn/S17874
Direct dial	046 603 6407
Direct fax	046 622 6556
Cell	082 657 1300
Email:	bbb@wheeldon.co.za

ETREMELY URGENT

Dear Madam

OUR CLIENT: MAKANA UNITY LEAGUE
BURNING DUMP AND HIGH COURT ORDER

The court orders

1. We write to advise that we act on behalf of Makana Unity League ("our client"), who was an applicant in case number 3795/2015 and we enclose herewith a court order handed down by the Honourable Mr Justice Pickering on the 8th of September 2015, marked "A". It will be noted that the conditions of the permit granted on the 10th of September 1996 to your municipality, together with the compliance notice, dated the 9th of March 2015, is attached to that court order and incorporated therein.

2. We also attach hereto a circular sent out by the Ministry of the Environment, which deals extensively, with the health and environmental effects of burning municipal solid waste, marked "B". We do not intend repeating what is stated in that circular and request that you kindly read same without delay.

3. The health risks of a burning dump are extremely serious and can cause irreparable harm to the health of any person, especially the young, and the frail.

4. The circular ("B") was the subject matter of the application in case number 3795/2015.

Contempt of court proceedings

5. On the 20th of February 2017, in case number 723/2017 an application for contempt of court was brought against your erstwhile mayor and municipal manager and after urgent intervention by your municipality, that application was withdrawn on the 5th of December 2017, with a costs order in favour of our client.

The burning dump: November 2018

6. We are instructed by our client that the municipal dump has been burning for weeks now.

7. As this letter is addressed to you the dump is burning and the following is also occurring:

   7.1 The entrance to the dump is not controlled at all;

   7.2 The entrance gate is damaged;

   7.3 Piles of rubbish lie at the entrance gate;

   7.4 There is unsupervised access to the dump;

   7.5 There are more than 40 persons picking at the dump, unsupervised;

   7.6 The security lights to not work at the dump;

   7.7 There is no water supply to the guards at the dump;

   7.8 By 8h30 this morning the municipal staff had not arrived for work at the dump;

   7.9 The front end loader is not at site;

   7.10 Approximately 20 persons (pickers) sleep over at the dump on a nightly basis.

8. The conditions at the dump are a complete disgrace and in complete violation of many of the conditions contained in the court order.

9. We strongly suggest that you, and the municipal manager, visit the dump immediately and take urgent steps to comply with the court order.

10. You are also required to comply with the other provisions contained in the court order including *inter alia*, the report that is required to be given to the high court on a monthly basis.

11. Should we not receive confirmation by close of business on **Monday**, the **21st of November 2018** that you have attended to the necessary, and that you have taken urgent steps to control access to the dump, and have ensured that the fire is put out, our client will proceed with contempt of court proceedings against yourself and will request a costs order against yourself, together with a costs order against the municipality.

Yours faithfully

BRIN BRODY

Wheeldon, Rushmere & Cole

"A"

CASE NO: 3795/2015

IN THE HIGH COURT OF SOUTH AFRICA

(EASTERN CAPE DIVISION, GRAHAMSTOWN)

8TH SEPTEMBER 2015

BEFORE THE HONOURABLE MR. JUSTICE PICKERING

IN THE MATTER BETWEEN:

MAKANA UNITY LEAGUE	**APPLICANT**
AND	
MAKANA MUNICIPALITY	**1ST RESPONDENT**
THE ADMINISTRATOR OF MAKANA MUNICIPALITY NOMINE OFFICIO	**2ND RESPONDENT**
THE EXECUTIVE MAYOR OF MAKANA MUNICIPALITY NOMINE OFFICIO	**3RD RESPONDENT**
THE MUNICIPAL MANAGER OF MAKANA MUNICIPALITY NOMINE OFFICIO	**4TH RESPONDENT**
THE MEMBER OF THE EXECUTIVE COMMITTEE FOR ECONOMIC DEVELOPMENT, ENVIRONMENTAL AFFAIRS & TOURISM, PROVINCE OF THE EASTERN CAPE, NOMINE OFFICIO	**5TH RESPONDENT**

Having heard Adv. Smuts (S.C.), Counsel for the Applicant and Mr. Nettelton, Attorney for the First, Second, Third and Fourth Respondents and having read the documents filed of record

IT IS ORDERED: (BY AGREEMENT)

2. THAT the First Respondent be and is hereby ordered to comply with the conditions of the permit granted on 10th September 1996 for the development and operation of the Grahamstown waste disposal site in the district of Albany, and in pursuit of this order, to:

   (i) Comply with the requirements of the compliance notice in terms of Section 31L of the National Environmental Management Act issued by

Fifth Respondent's department to the First Respondent on 9th March 2015 and, to the extent that the said compliance notice does not include the requirements set out hereunder;

(ii) Refurbish the perimeter fence of the Makana Municipality waste disposal site ("the site") within sixty (60) days of the granting of this order, and ensure that access to the site is controlled within ten (10) days of the granting of this order;

(iii) Develop a waste screening mechanism for screening permissible waste to be disposed of on the site in accordance with Government Notice 634 of 2013 (Waste Classification and Management Regulation) and 636 of 2013 (National Norms and Standards for Disposal of Waste to Landfill) within sixty (60) days of the granting of the order;

(iv) Develop a storm water management plan to be designed and implemented for the site which should include *inter alia* the treatment and discharge, or use of water, captured in a properly designated and managed leachate containment pond within sixty (60) days of the granting of the order, and the implementation thereof within a further sixty (60) days of the granting of the order of the development of such management plan;

(v) Appoint an independent specialist within forty five (45) days of the granting of the order, to review all relevant and available environmental monitoring data and to determine whether there is scientific evidence that the facility poses a threat to human or environmental health, which review should include a review of the adequacy of the existing water (surface and sub-surface) and air quality monitoring;

(vi) Appoint a specialist to monitor the air quality of the site on a monthly basis and to report back to the council of the First Respondent in regard to the quality of air with proposals to the First Respondent within forty five (45) days of the granting of the order;

(vii) Appoint an independent service provider and specialist to sample and analyse the ground and surface water in conjunction with a laboratory certified by the South African National Accreditation System within forty five (45) days of the granting of the order;

(viii) Ensure that the mediation measures are taken immediately if the analysed samples of water are found to be contaminated by the aforesaid independent service provider within forty five (45) days of the granting of the order;

(ix) Appoint an independent service provider, an expert, to monitor and analyse gas submissions and air quality relating to gas within forty five (45) days of the granting of the order;

(x) Call a council meeting of the First Respondent, to discuss the contents of this order within thirty (3) days of the granting of the order and to develop a proper management plan of the site, and to implement such management plan immediately, (such management plan to incorporate the abovementioned orders, and to ensure sit housekeeping and general site management), and such management plan to be completed within sixty (60) days of the meeting of the council of the First Respondent;

3. THAT a report be made to this Honourable Court on or before the last day of each month on the progress made by the First Respondent in giving effect to this order.

4. THAT the First Respondent is to pay the costs of suit, such costs to include the costs of the previous postponement.

BY ORDER OF COURT

N. BIKITSHA
COURT REGISTRAR
W R & C

Received 2 ~~Copy/Copies~~
thereof this 11th day
of Sep. 2015 09h51
Netteltons

Province of the
EASTERN CAPE
DEPARTMENT OF ECONOMIC AFFAIRS, ENVIRONMENTAL AND TOURISM.

South Africa, 5605
Phone: +27 (043) 605 7188
Fax: +27 (043) 605 7300
Web: www.deaet.ecprov.gov.za
Email:div.devilliers@deaet.ecape.gov.za

Ref: ED#08/09/2013
Enq: Jan Kapp (041-508 5821)

The Municipal Manager
Makana Municipality
P.O. Box 176
Grahamstown
6140

Fax: (046) 603 6070

Attention: The Municipality Manager

Dear Sir/Madam

COMPLIANCE NOTICE IN TERMS OF SECTION 31L OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998) AS AMENDED AS A RESULT OF NON-COMPLIANCE WITH PERMIT (B33/2/1400/3/P243) ISSUED IN TERMS OF SECTION 20 OF THE ENVIRONMENTAL CONSERVATION ACT (ACT 73 OF 1989).

1. I, Deon de Villiers, in my capacity as an Environmental Management Inspector, hereby issue you the Municipal Manager of the Makana Local Municipality with a compliance notice in terms of section 31L of the National Environmental Management Act (Act107 of 1998) as amended (NEMA) and Regulation 8 of the Regulations relating to Environmental Management Inspectors (GN R.494 in *Government Gazette* 28869 of 2 June 2006) in terms of NEMA.

2. The Environmental Conservation Act, 1989 (Act 73 of 1989) is a Specific Environmental Management Act in terms of the NEMA.

3. This section 31L compliance notice in terms of NEMA relates to your non-compliance with the provisions of permit (B33/2/1400/3/P243) read with section 24F, section 1, section 24 and section 49A of the NEMA and further read with Section 250 of the Criminal Procedure Act 1977 (Act 51 of 1977) as amended.

4. I refer to the above matter following a site inspection conducted at the Makana Municipality Landfill Site in Grahamstown on 23 September 2013 and again on the 21 January 2015. The site inspection was undertaken by officials from this Department. On the first occasion the site inspection was facilitated by your Mr. J Magidisa who is known as the controller of the above mentioned site. The second site inspection was not facilitated by an employee of the local municipality as there was no local municipality official on site. The inspecting team did communicate with the driver of a front end loader (Mr. Welcome Fontein.) Please note that the second site inspection was undertaken after I informed the local municipality that I intended to issue this compliance notice (This Department is not in receipt of any representations made in respect thereof.)

5. The above mentioned inspections emanated from public complaints received in relation to the activities and operations at the landfill site. Following the inspection this Department established that some aspects of the operation on the site are not compliant with the permit (B33/2/1400/3/P243). Detected non-compliance with the permit (B33/2/1400/3/P243) includes:

5.1 Condition 3.6 which requires 'The construction and maintenance of a diversion drain to prevent water from adjacent land entering the site'. After a thorough inspection this Department has established that 'no diversion drain was constructed on the premises'.

5.2 Condition 3.7 which requires 'the construction and maintenance of a diversion drain to channel water from the face of the site away from the leachate to prevent mixing of leachate and run off water'. After a thorough inspection, the officials from this Department have detected that the diversion drains have not been constructed.

5.3 Condition 3.10 which stipulates that 'All leachate will be diverted to sewer, or treated or be evaporated in dams or sprayed over the landfill site in which refuse is compacted.' After a thorough inspection, the officials from this Department have detected that there is leachate that is allowed to drain into a dam and there is no free board of 0.5m maintained. In addition the leachate is not diverted to sewer, treated or sprayed over the landfill site. The management of the leachate is unacceptable.

5.4 Condition 5.1 which provides that on a daily basis, 150 mm of cover material should be spread and the waste compacted. The thorough inspection by this Department has established that there is inadequate compaction of the material due to refuse trucks battling to drive over the disposal field. There is inadequate cover material available to cover the refuse as large portions of the refuse were exposed.

5.5 Condition 5.3 which requires you to "Make use of movable fences to control windblown litter". The inspection revealed that there was no movable fence. Windblown litter was observed attached to the fence line all over the site.

5.6 Condition 5.6 which requires you to provide the operator to keep track of the volume and nature of the waste.' This Departments inspection has established that a weigh bridge has been constructed on site, however it is not operational.

6. You are hereby instructed to:

6.1 Compile a work plan to address the non-compliance detected at the Makana Landfill Site (the non-compliance is stated in Paragraph 5.1. to 5.6. herein) within 15 working days of receipt hereof. The work plan must specify specific work that must be undertaken and completed against realistic time periods that can be measured from the date of commencement thereof.

6.2 Prior to the implementation of the work plan, the work plan must be provided to this Department's Senior Manager: Environmental Quality Management for her approval. (The work plan will be directed to the Senior Manager: Environmental Quality Management care of myself.)

6.3 After you have received the Senior Manager: Environmental Quality Management approval of your work plan, within 5 working days thereof you must implement the work plan at your own cost. You will have to adhere the time frames contained in your work plan.

6.4 Once complete I must be informed in writing after which I arrange for a site inspection.

6.5 If the Department is satisfied with the work undertaken then they will issue a letter indicating their satisfaction.

7. Procedure for lodging an objection to this NEMA Section 31L Compliance Notice (Section 31L and Section 31M of the NEMA):

7.1. If you would like me to vary this Compliance Notice or extend the period to which it relates, you may make written representation to me to do so.

7.2. If you wish to lodge an objection against this Compliance Notice you may do so by making a representation in writing to the Member of the Executive Council (the MEC) of Economic Development Environmental Affairs and Tourism within 30 days of receipt of this Notice.

7.3. You may also make a representation to the MEC to suspend the operation of the Compliance Notice pending finalization of your objection.

7.4. Irrespective of any representation you may make to the MEC or me, you must comply with this Compliance Notice within the time period mentioned in this Notice unless the MEC agrees to suspend the operation of the Compliance Notice.

8. Failure to comply with a NEMA Section 31L compliance notice:

8.1. The Environmental Management Inspector must report the non-compliance to the MEC who may;

8.1.1. Revoke or vary the relevant permit, authorisation or other instrument that is the subject of the Compliance Notice;

8.1.2. Take any necessary steps and recover the costs from doing so from the person who failed to comply.

8.2. If a person is convicted of an offence as a consequence of their failure to comply with a compliance notice they may be liable to a fine not exceeding ten (10) million Rand or to imprisonment for a period not exceeding ten (10) years or to both such fine and imprisonment.

9. It should be noted that a conviction in respect of this offence may also result in the following:

9.1. Payment of part of the fine recovered to an informant.

9.2. Disqualification of convicted persons from obtaining authorization for a period not exceeding five (5) years, and

9.3. Forfeiture of items used in connection with the commissioning of the offence.

9 I wish to make it clear that the instructions contained in this letter are made in the interest of responsible environmental management, and with a view to a co-operative resolution of the issue. Further, please note that this compliance notice does not negate your obligations to comply with Section 28(4) of the NEMA or the consequences of contravening any other overlapping or concurrent environmental legislation which may include the National Water Act, 1993 (Act 43 of 1993). Should you have any further queries, please contact Ast Mgr Kapp.

10 Notice is hereby given in terms of Section 31H and 31K of the NEMA that duly authorized officials from this Department may/ will enter the site at various times after issuing this notice and at reasonable intervals thereafter in order to ensure that you are complying with this notice.

Signed on this 9th day of March 2015, at King William's Town.

Environmental Management Inspector (Grade 1)

D. de Villiers

Senior Manager: Compliance and Enforcement

Department of Economic Development Environmental Affairs and Tourism

Acknowledgement of Receipt: COMPLIANCE NOTICE IN TERMS OF SECTION 31L OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT (ACT 107 OF 1998) AS AMENDED AS A RESULT OF NON-COMPLIANCE WITH PERMIT (B33/2/1400/3/P243) ISSUED IN TERMS OF SECTION 20 OF THE ENVIRONMENTAL CONSERVATION ACT (ACT 73 OF 1989) (Page 5 of 5).

Received by Mr. /Ms. _____

On behalf of the company _____

on this _____ day of _____ 2015, at _____

Signature: _____

DEPARTEMENT VAN WATERWESE EN BOSBOU
DEPARTMENT OF WATER AFFAIRS AND FORESTRY

RESIDENSIEGEBOU / BUILDING, SCHOEMANSTRAAT 185 SCHOEMAN STREET, PRETORIA

Fax: (012) 326-1780
323-4472
326-2715
E-mail:

Privaat Sak
Private Bag X313
Pretoria
0001

Navrae: W. Vosloo
Enquiries:
(041) 56-4884

Verwysing:
Reference: B33/2/1400/3 S

PERMIT NUMBER: B33/2/1400/3/P243

CLASS: G:M:B+

WASTE DISPOSAL SITE: GRAHAMSTOWN MUNICIPAL DISPOSAL SITE

LOCATION: GRAHAMSTOWN COMMONAGE WEST: DIVISION OF ALBANY

PERMIT HOLDER: GRAHAMSTOWN MUNICIPALITY

ADDRESS: P.O. BOX 176, GRAHAMSTOWN, 6140

PERMIT IN TERMS OF SECTION 20 OF THE ENVIRONMENT CONSERVATION ACT, 1989 (ACT 73 OF 1989)

By virtue of the powers delegated to me by the Minister of Water Affairs and Forestry (hereinafter referred to as "the Minister"), I, Jacobus Louis Johannes van der Westhuizen, in my capacity as Acting Manager: Scientific Services in the Department of Water Affairs and Forestry (hereinafter referred to as "the Department"), hereby, in terms of section 20(1) of the Environment Conservation Act, 1989 (Act 73 of 1989), authorise the abovementioned Permit Holder to further develop and operate the abovementioned waste disposal site, subject to the conditions specified herein.

PERMIT CONDITIONS

In this Permit, "Regional Director" means the Regional Director: Eastern Cape of the Department who may be contacted at the address below:

Regional Director: Eastern Cape
Department of Water Affairs and Forestry
Private Bag X68
CRADOCK
5880

1. **LOCATION**

1.1 This Permit authorises the further development and operation of a waste disposal site on Grahamstown Commonage West, Division of Albany (hereinafter referred to as "the Site") according to the report dated May 1994 (hereinafter referred to as "the Report"), submitted by the Permit Holder.

The boundaries of the Site shall be as indicated as beacon descriptions A,B,C,D,E,F on the plan with scale 1:2500 and the permit application submitted by the Permit Holder.

2. PERMISSIBLE WASTE

2.1 The Site may be used for the disposal of all waste types, excluding those listed in Annexure I and excluding those where specific control has been established in terms of the Nuclear Energy Act, 1993 (Act 131 of 1993). Waste types controlled in terms of the Minerals Act, 1991 (Act 50 of 1991) and the Electricity Act, 1987 (Act 41 of 1987) are also excluded from disposal on the Site unless written permission has been obtained from the Regional Director.

2.2 The Permit Holder shall take all reasonable steps to ensure that –

2.2.1 no organic or inorganic element or compound which may have a definite acute or chronic negative effect on human health and/or the environment, due to it's toxic, physical, chemical or persistent characteristics and which corresponds with the UNEP definition of hazardous waste be disposed of on the Site;

2.2.2 no medical waste be disposed of on the Site unless it has been incinerated at 800°C or higher for at least 1 second; and

2.2.3 no scheduled pharmaceutical products registered in terms of the Medicines and Related Substances Control Act, 1965 (Act 101 of 1965) or associated containers be disposed of on the Site.

3. CONSTRUCTION

3.1 The Site or any portion thereof may only be used for the disposal of permissible waste if the Site or any such portion has been constructed or developed according to condition 3 of this Permit.

3.2 Further development within the Site shall be in accordance with approved plan number S1/6 dated May 1994 to be submitted by the applicant.

3.3 Any further development within the Site which may require construction can only be undertaken by the Permit Holder after specified engineering plans have been provided to and approved by the Regional Director.

3.4 Further development within the Site shall be carried out under the supervision of a suitably qualified person proposed by the Permit Holder and approved by the Regional Director.

3.5 Should a portion of the Site be further developed, the Permit Holder shall notify the Regional Director of such a development within the Site before disposal may commence on that portion within the Site. The completed construction

works of the development within the Site shall be inspected by an official of the Department and the person referred to in condition 3.4. If the Regional Director is satisfied with the construction of that further development within the Site and has given written permission, the Permit Holder may use that portion of the Site for the further disposal of waste.

3.6 Works shall be constructed and maintained on a continuous basis by the Permit Holder to divert and drain from the Site in a legal manner, all runoff water arising on land adjacent to the Site, which could be expected as a result of the estimated maximum precipitation during a period of 24 hours with an average frequency of once in fifty years (hereinafter referred to as the "estimated maximum precipitation"). Such works shall, under the said rainfall event, maintain a freeboard of half a metre.

3.7 Works shall be constructed and maintained on a continuous basis by the Permit Holder to divert and drain from the working face of the Site, all runoff water arising on the Site, which could be expected as a result of the estimated maximum precipitation and to prevent such runoff water from coming into contact with leachate from the Site. Such works shall, under the said rainfall event, maintain a freeboard of half a metre.

3.8 Runoff water referred to in condition 3.7 shall comply with the quality requirements of the General Standard, prescribed in terms of section 21(1)(a) of the Water Act, 1956 as published in Government Notice 991 of 18 May 1984, or with such quality requirements as may from time to time be determined by the Minister and shall be drained from the Site in a legal manner.

3.9 Runoff water referred to in condition 3.7 which does not comply with the quality requirements applicable in terms of condition 3.8 and all leachate from the Site shall, by means of works which shall be constructed and maintained on a continuous basis by the Permit Holder -

3.9.1 be discharged into any convenient sewer if accepted by the authority in control of that sewer; and/or,

3.9.2 be treated to comply with the aforementioned standard and discharged in a legal manner; and/or,

3.9.3 with the written approval of the Regional Director be evaporated in dams and/or be evaporated by spraying over those portions of the Site which comply with the requirements set in terms of condition 3.1.

3.10 Works constructed in compliance with condition 3.9 shall be of such a capacity as to accommodate all runoff and leachate which could be expected as a result of the estimated maximum precipitation. Such works shall, under the said rainfall event, maintain a freeboard of half a metre.

3.11 The Site shall be constructed in accordance with recognised civil engineering practice to ensure that it remains stable.

3.12 The slope of the sides of the Site shall be constructed in such a manner that little or no erosion occurs.

3.13 The Permit Holder shall make provision for adequate sanitation facilities on the Site.

4. ACCESS CONTROL

4.1 Weatherproof, durable and legible notices in three official languages applicable in the area, shall be displayed at each entrance to the Site. These notices shall prohibit unauthorised entry and state the hours of operation, the name, address and telephone number of the Permit Holder and the person responsible for the operation of the Site.

4.2 The Site shall be fenced to a minimum height of 1,8 metres, with gates of the same height at all entrances, to reasonably prevent unauthorised entry and curtail the spreading of wind-blown paper and plastic materials.

4.3 The Permit Holder shall take all reasonable steps to maintain service roads in a condition which ensures unimpeded access to the Site for vehicles transporting waste and to keep the roads free of waste.

4.4 The Permit Holder shall ensure that all entrance gates are manned during the hours of operation and locked outside the hours of operation.

4.5 The Permit Holder shall ensure effective access control.

4.6 The Permit Holder shall take all reasonable steps to prevent the disposal of waste on the Site for which the Site has not been approved.

5. OPERATION

5.1 Waste disposed of on the Site shall be compacted and covered on a daily basis with a minimum of 150 millimetres of soil or other material approved by the Regional Director.

5.2 The Permit Holder shall take all reasonable steps to ensure that the Site is operated in a manner which shall prevent the creation of nuisance conditions or health hazards.

5.3 The Permit Holder shall make use of moveable fences to control wind-blown waste.

5.4 The Permit Holder shall apply sufficient dust control measures to prevent wind-blown dust from causing nuisance conditions or health hazards.

5.5 Waste disposed of on the Site may be reclaimed. The

reclamation activity shall not interfere with the daily operational activities of the Site.

5.6 The Permit Holder shall keep a record of the volume and nature of the waste materials which are reclaimed and report this on an annual basis to the Regional Director.

6. MONITORING

6.1 Gas monitoring

6.1.1 The Permit Holder shall implement adequate measures to the satisfaction of the Regional Director, to ventilate or to prevent lateral migration of methane gas generated in the waste disposal area within the Site so that the build-up of dangerous concentrations is prevented.

6.1.2 The concentration, by volume in air at Standard Temperature and Pressure, of flammable gas and carbon dioxide shall not exceed 1% and 0.5% respectively in gas monitoring boreholes or other monitoring devices surrounding the waste body within the Site.

6.1.3 The measurements for condition 6.1.2 shall be taken on a three-monthly basis from gas monitoring boreholes or any other monitoring devices approved by the Regional Director which shall be at least one metre deeper than the deepest point of the waste body.

6.1.4 Should measurements at these boreholes or devices transgress the limits set in condition 6.1.2, the Permit Holder shall immediately notify the Regional Director and initiate a more frequent gas monitoring programme as prescribed by the Regional Director.

6.1.5 The concentration of flammable gas in the atmosphere inside buildings on the Site shall not exceed 1% by volume in air, at Standard Temperature and Pressure. If the atmospheric levels are found to be between 0.1% and 1%, regular monitoring shall be instituted. If levels above 1% are detected, the buildings shall be evacuated or trained personnel shall be consulted.

6.2 Post-closure gas monitoring

6.2.1 Gas monitoring by the Permit Holder as described in condition 6.1 shall continue after closure for a period of two years, or such longer period as may be determined by the Regional Director.

6.2.2 The Permit Holder shall also initiate a six-monthly gas monitoring programme where measurements are taken from gas monitoring boreholes or any other monitoring devices approved by the Regional Director, situated within the waste body, until the limits set in condition 6.1.2 are met over a two year period.

6.3 Water monitoring

6.3.1 The Permit Holder shall within the next financial year starting 1 April 1997, construct a borehole (where the ground water in the borehole is at an expected lower hydraulic pressure level than the hydraulic pressure level of the ground water under the Site) to be used as a monitoring point. The location of this borehole shall be determined in consultation with the Regional Director.

6.3.2 The monitoring borehole shall be equipped with a lockable cap. The Department reserves the right to take water samples at any time and to analyse these samples or have them analysed.

6.3.3 The monitoring borehole shall be maintained by the Permit Holder to the satisfaction of the Regional Director so that unobstructed sampling, as required in terms of this Permit can be undertaken.

6.3.4 Surface water monitoring shall be performed in all stormwater drains on and adjacent to the Site at locations selected in conjunction with the Regional Director and at a frequency as determined by the Regional Director.

6.3.5 Treated leachate discharged into a water course shall be monitored and the standards and parameters shall be as determined from time to time by the Manager: Scientific Services.

6.4 Detection monitoring

6.4.1 Monitoring shall be conducted within 3 days of 15 January and 15 July of each year for the water quality variables listed in paragraph (a) of Annexure III and annually within 3 days of 15 July for the variables listed in paragraph (b) of Annexure III.

6.5 Investigative monitoring

6.5.1 If, in the opinion of the Regional Director, a water quality variable listed under the detection monitoring programme, as referred to in condition 6.4, shows an increasing trend, the Permit Holder shall initiate a monthly monitoring programme for the water quality variables listed in Annexure II.

6.6 Post-closure monitoring

6.6.1 Ground water monitoring by the Permit Holder, in accordance with condition 6.4 or 6.5, shall commence immediately upon closure of the Site and be maintained for a period of 30 years, or such lesser period as may be determined by the Regional Director.

6.7 Further investigations

If, in the opinion of the Regional Director, ground water, surface water and/or air pollution occur or are suspected to

occur, the Permit Holder shall conduct the necessary investigations as may be required by the Regional Director.

7. METHODS OF ANALYSIS

7.1 The Permit Holder shall carry out all tests in accordance with methods prescribed by and obtainable from the South African Bureau of Standards (SABS), referred to in the Standards Act, 1982 (Act 30 of 1982), to analyze the samples taken under the monitoring programmes specified in condition 6.

7.2 The Permit Holder shall only use another method of analysis if written proof that the method is equivalent to the SABS method, is submitted to the Regional Director.

8. RECORDING

8.1 The Permit Holder shall keep a record of and update all the information referred to in Annexure IV on an annual basis.

8.2 The Permit Holder shall record all borehole data and chemical analysis in the format depicted in Annexure V.

9. REPORTING

9.1 The information required in terms of conditions 6.1 to 6.6 shall be submitted to the Regional Director within a period of 30 days following the analysis of the said samples. The information required in terms of condition 8.1 shall be submitted to the Regional Director within a period of one year from the date of issuing of this Permit and annually thereafter.

10. REHABILITATION AND CLOSURE OF THE SITE

10.1 The Permit Holder shall, at least 60 days prior to the intended closure of the Site, notify the Regional Director by registered mail of such closure and submit final rehabilitation plans for his approval.

10.2 Immediately following the cessation of operations with the intention to close the Site, the surface of the Site shall be covered in such a way that -

10.2.1 the formation of pools due to rain is prevented;

10.2.2 free surface runoff of rain-water is ensured; and

10.2.3 no objects or materials which may hamper the rehabilitation of the Site are present.

10.3 The Permit Holder shall rehabilitate the Site in accordance with a rehabilitation plan which shall be submitted by the

Permit Holder and which shall be to the satisfaction of the Regional Director.

11. LEASING AND ALIENATION OF THE SITE

11.1 Should the Permit Holder want to alienate or lease the Site, he shall notify the Regional Director in writing of such an intention at least 60 days prior to the said transaction.

12. GENERAL

12.1 This Permit shall not be transferable.

12.2 This Permit shall not be construed as exempting the Permit Holder from compliance with the provisions of the Health Act, 1977 (Act 63 of 1977), the Water Act, 1956 (Act 54 of 1956) or any other applicable act, ordinance, regulation or by-law.

ACTING MANAGER: SCIENTIFIC SERVICES
P.P. MINISTER OF WATER AFFAIRS AND FORESTRY
DATE: 10/9/96

ANNEXURE I

WASTE WHICH SHALL NOT BE ACCEPTED ON THE SITE

1. Waste considered to be dangerous by virtue of their fire hazard. That is all waste with a closed cup flashpoint < 61°C.

2. Any waste with a substance which is a Group A and/or Group B carcinogen. Group A carcinogens has been clinically and epidemiologically proven in humans. Group B carcinogens have been proven without doubt in laboratory animals.

3. Any waste with a substance at a concentration greater than 1% which is a Group C and/or Group D carcinogen. Group C carcinogens have shown limited evidence in animals. Group D carcinogens – only inadequate and doubtfull data is available.

4. Any waste with a substance which is a Mutagen.

5. Any infectious waste, unless it has been incinerated at 800° C or higher for at least 1 second. Infectious waste is waste which is generated during the diagnosis, treatment or immunisation of humans or animals; in the research pertaining to this; in the manufacturing or testing of biological agents –including blood, blood products and contaminated blood products, cultures, pathalogical wastes, sharps, human and animal anatomical wastes and isolation waste that contain or may contain infectious substances.

6. Any waste with a substance with a LD_{50} for acute oral toxicity smaller and equals to 5000 mg/kg. The LD_{50} for acute oral toxicity shall be as defined in SABS 0228:1995.

6. Any waste with a substance with a LD_{50} for acute dermal toxicity smaller and equals to 2000 mg/kg. The LD_{50} for acute dermal toxicity shall be as defined in SABS 0228:1995.

7. Any waste with a substance with a LC_{50} for acute toxicity on inhalation smaller and equal to 10mg/l. The LC_{50} for acute toxicity on inhalation shall be as defined in SABS 0228:1995.

8. All waste with a pH less than 6 or greater than 12.

9. All materials which fall in Class 1 (explosives), Class 2 (compressed gases) and Class 7 (radioactive materials), as specified in SABS 0228:1995.

10. Any waste containing a substance listed in SABS 0228:1995, or is difficult to analyse and classify, unless written approval has been granted by the Regional Director.

11. Any complexes of heavy metal cations, paints and paint sludges, laboratory chemicals.

ANNEXURE II

WATER QUALITY VARIABLES REQUIRED FOR INVESTIGATIVE MONITORING : CONDITION 6.5

Alkalinity (P.Alk)
Calcium (Ca)
Chromium (hexavalent) (Cr^{6+})
Chromium (Total) (Cr)
Chemical oxygen demand (COD)
Cyanide (CN)
Lead (Pb)
Nitrate (as N) (NO_3–N)
Phenolic compounds (Phen)
Potassium (K)
Total dissolved solids (TDS)

Free & saline ammonia as N (NH_4–N)
Boron (B)
Magnesium (Mg)
Cadmium (Cd)
Chloride (Cl)
Mercury (Hg)
pH
Sodium (Na)
Electrical conductivity (EC)
Sulphate (SO_4)

ANNEXURE III

WATER QUALITY VARIABLES REQUIRED FOR DETECTION MONITORING: CONDITION 6.4

(a) Alkalinity (P.Alk)
Chemical oxygen demand (COD)
pH
Total dissolved solids (TDS)
Chlorides (Cl)
Nitrate (NO_3–N)
Potassium (K)

(b) Annually for electrical conductivity (EC), calcium (Ca), magnesium (Mg), sodium (Na), sulphate (SO_4) and fluoride (F).

ANNEXURE IV

INFORMATION WHICH SHALL BE SUBMITTED ON AN ANNUAL BASIS: CONDITION 8.1

NAME OF SITE: _____ DATE OF REPORT Y Y Y Y M M D D

1. Registered owner(s) of property on which disposal site is situated:

Name.....

Postal Address..... Telephone Code & No .....

..... Fax Code &No.....

..... Postal Code..... Telex No.....

2. Name of Operator in control of disposal site:

.....

Telephone code & number .....After hours .....

Identity number.....

Educational qualifications (*). std 6 ☐ diploma ☐

std 8 ☐ higher diploma ☐

matric ☐ degree ☐

other (specify).....

3. (a) Latest estimated lifetime of the disposal site .....yrs

(b) Indicate the type of waste and approximate quantities of waste disposed during the year.

Type of waste	Quantity (m^3 $annum^{-1}$)	Compacted (C)	Uncompacted (U)
Non-hazardous waste			
Household	.....		
Garden refuse	.....		
Building rubble	.....		
Industrial (not hazardous)	.....		
- (specify)	.....		
-	.....		
TOTAL	.....		
Hazardous waste			
- Flammable solids	.....		
- Flammable liquids	.....		
- Oxidising agents	.....		
- Toxic wastes	.....		
- Corrosive wastes	.....		
- Hospital and infectious wastes	.....		
- (specify)	.....		
-	.....		
TOTAL	.....		

* *Indicate with an X*

4.(a) Indicate the method of disposal of waste (*). Landbuilding ☐ Landfilling ☐

(b) Indicate the present dimensions of the site in metres.

Height/depth	.....
Length	.....
Breadth	.....

5. Indicate the applicable waste types and quantities salvaged during the year (*)

No salvaging undertaken ☐

Type	Quantity (m^3)	Type	Quantity (m^3)
☐ Paper/wood fibre	.....	☐ Rubber	.....
☐ Plastics	.....	☐ Textiles	.....
☐ Glass	.....	☐ Iron	.....
☐ Copper	.....	☐ Aluminium	.....
☐ Zinc	.....	☐ Lead	.....
☐ Phosphogypsum	.....	☐ Fly-ash	.....
☐ Waste for composting	.....	☐ Food residues	.....
☐ Flammable gases	.....	Other	.....
Other	.....	Other	.....
Other	.....	Other	.....

6. Indicate the types, sources and approximate quantities of available covering material (*).

Type	Sources	Quantity m^3
☐ Soil	.....	.....
☐ Sand	.....	.....
☐ Ash	.....	.....
☐ Gravel	.....	.....
☐ Clay	.....	.....
☐ Building rubble	.....	.....
Other (specify)	.....	.....
.....	.....	.....
.....	.....	.....
.....	.....	.....

** Indicate with an X*

Signature .....

Capacity.....

Place..... Date.....

ANNEXURE V: FORM TO BE USED FOR CHEMICAL INFORMATION: CONDITIONS 6 AND 8

Name of site : _____ Borehole/observation-point name/number _____

Sampling date [y y y y m m d d] Time [h] Method : Bail [ ] Pump [ ]

Time after start of pump [h] Depth of sample [.] m

Date of analysis [y y y y m m d d] Laboratory [ ]

General chemistry

pH	[.]	EC	[ ] mS/m	TDS	[ ] mg/l
Ca	[ ] mg/l	Mg	[ ] mg/l	Na	[ ] mg/l
K	[ ] mg/l	P.Alk	[ ] mg/l	Cl	[ ] mg/l
SO4	[ ] mg/l	NO3-N	[.] mg/l	F	[.] mg/l
As	[.] mg/l	B	[.] mg/l	Cd	[.] mg/l
CN	[.] mg/l	Cr	[.] mg/l	Cu	[.] mg/l
Mn	[.] mg/l	Pb	[.] mg/l	COD	[ ] mg/l
Phen.	[.] mg/l	PO4	[.] mg/l	TOC	[.] mg/l
S-	[.] mg/l	NH4-N	[.] mg/l	TOX	[ ] µg/l
Ba	[.] mg/l	Hg	[.] mg/l	Cr6+	[.] mg/l

"B"

Health and Environmental Effects of Burning Municipal Solid Waste

The burning of municipal waste at a waste disposal site, except for a limited number of specific materials, is prohibited under *The Environmental Management and Protection Act, 2002* (EMPA 2002) and *The Clean Air Act*. The municipality and the operator of a waste disposal site shall ensure that no municipal waste is burned at the site as part of the waste disposal operation. Segregated clean wood and brush may be burned at certain sites only with permission/permit, and are subject to certain requirements. These requirements are provided in *The Municipal Refuse Management Regulations, 1986* (MRMR 1986) and *The Clean Air Regulations*.

Issues

In some cases community growth shas resulted in waste disposal grounds being closer to communities. Burning activities create potential adverse effects to the surrounding environment; employees and users of the waste disposal ground; local area residents; businesses; landowners and children playing outdoors.

Changes in waste composition has occurred with the introduction of products and packaging manufactured from hydrocarbon and chlorinated compounds such as plastic, solvents, or pesticides. Although regulations prohibit hazardous substances and waste dangerous goods from entering the landfill, toxic materials and packaging still make their way to landfills as components of commercial and household waste. Disposal of household cleaning products, pesticides and other materials pose a danger to public health and the environment. Incomplete combustion of waste during open burning contributes to air pollution and climate change.

Air Pollutants

Worldwide scientific research has conclusively demonstrated that burning of waste at landfills produces air ntoxins. Typically, burning occurs at low temperatures (250 °C to 700 °C) in oxygen starved conditions. Hydrocarbons, chlorinated materials and pesticide compounds under these conditions produce a wide range toxic gases harmful to the environment and public health. These gases contain dioxins / furans, volatile organic compounds, particulate matter (PM), hydrogen chloride (HCl), carbon monoxide (CO) and oxides of sulfur and nitrogen and liberate metals including antimony, arsenic, barium, beryllium, cadmium, chromium, lead, manganese, mercury, phosphorus and titanium.

Studies have demonstrated that two to forty households burning their trash daily can produce average dioxin / furan levels equivalent to emissions from a modern municipal waste combustor equipped with high efficiency flue gas cleaning technology burning 182,000 kg/day of the same type of waste. The United States Environmental Protection Agency estimates that mixed garbage burning is a larger source of dioxins than coal combustion, ferrous metal smelting, hazardous waste incineration or bleached pulp mill operations.

In addition, the burning of municipal waste produces large amounts of ash and debris and amounts to a 40 - 60% reduction in volume of the original waste. With proper cover and compaction similar volume reductions can be achieved. Typically, compacted waste occupies 40 - 50% of the original volume. The burning of waste produces two types of ash, bottom and fly ash. Fly ash is made of light particles which is carried out by combustion gas and is laden with toxic metals, dioxin / furan and other products of incomplete combustion which can travel thousands of kilometers before they drop out where enter the human food chain. In other words burning of waste is not an environmentally sound solution for extending the life of a landfill or the lack of appropriate landfill sites and management practices.

Pollutant	Health Effects	Environmental Effects
Aldehydes	Causes eye and respiratory illness, headaches. Is an animal carcinogen.	Increased toxic loading on environment; leads to contaminated water/land, affects animals health.
Carbon Monoxides	Causes dizziness, headaches and slowed reflexes. Affect mental function, visual acuity and alertness.	Oxidized to carbon dioxide (which is a green house gas) in the atmosphere.
Chlorofluorocarbons (CFCs)	Causes dizziness, headaches and slowed reflexes.	The primary contributors to stratospheric ozone level depletion and are involved in the global warming effect.
Dioxins and Furans	May cause cancer; causes growth defects; affects DNA; affects immune and reproductive systems. Very toxic.	Increased toxic loading on environment; leads to contaminated water/land, affects animal health. Very toxic and bioaccumulate in the food chain.
Heavy Metals (such as Mercury)	Highly toxic; heavy metals collect in the human system until a lethal dosage is reached. Non-lethal effects can include chronic respiratory or intestinal distress, poisoning of the central nervous system, disruption of effects of the body's hormone system, inhibition of growth and development of children.	Increase toxic loading on environment; leads to contaminated water/land, affects animal health
Hydrochloric Acid	Irritation of respiratory tract, causes respiratory illness; dulls the body's senses.	Increased toxic loading on environment; leads to contaminated water/land, affects animal health.
Hydrogen Sulfide (H_2S)	Toxic, causes respiratory disease. Healthy people experience shortness of breath, sore throats, breath difficulties, irritated eyes.	Contributes to acid rain; may damage vegetation; causes offensive odors.
Ozone (O_3)	Exposure to ozone can injure biological tissues and cells. Reduce lung function, including tightness of the chest, coughing pain and breathing difficulty.	Ground-level ozone damages vegetation and ecosystem, affects animal health.
Nitrogen Oxides	Causes respiratory illness, fluid collection in the lungs and fibrotic changes.	Contributes to acid rain and ozone formation.
Particulate Matter (PM)	Irritation of respiratory tract, aggravated asthma, contributes to chronic obstructive pulmonary diseases.	Increased toxic loading on the environment; leads to contaminated Water/land and affects animal health.
Polynuclear Aromatic Hydrocarbon (PAH's)	Cancer causing agent in most animal species including mammals, fish & birds.	Increased toxic loading on environment; leads to contaminated water/land, affects animal health.
Volatile Organic Compounds (VOCs)	Directly toxic including problems ranging from cancer risks to nervous disorders. Causes respiratory irritation/illness, chronic lung disease.	Contributes to low level ozone (smog), causes vegetative damage. Leads to contaminated water/land, affect animals health.
Sulphur Oxides (SO_2)	Increase in heart/lung disease, acute/chronic respiratory diseases. Health people experience shortness of breath, sore throats, breathing difficulties.	Causes vegetative damage; corrodes many materials; contributes to acid rain (forests, aquatic and urban environments i.e. structures).