
EXTERNAL WASTE LICENCE COMPLIANCE AUDIT REPORT: ENVIROSERV – SHONGWENI LANDFILL SITE

August 2018

Prepared by:



Prepared for:



ENVIRONMENTAL AUDITOR

Dorean Environmental Services cc
501 Railway Street ext.
Brits
0250

P.O. Box 4643
Brits
0250

Tel: (083) 294 3422
Fax: (086) 690 4878
E-mail: monty@dorean.co.za

CLIENT

EnviroServ Waste Management (Pty) Ltd
1 Brickfield Road
Meadowdale
1401

P.O. Box 1547
Bedfordview
2008

Tel: (011) 456 5400
Fax: (086) 505 3874
Email: Greg@enviroserv.co.za

PROJECT DETAILS

Ref Numbers: 12/9/11/L1200/4

TITLE: External Environmental Audit Report: Waste Licence conditions for EnviroServ – Shongweni Landfill Site

AUTHOR: Monty van Eeden

CLIENT: EnviroServ Waste Management (Pty) Ltd

DOREAN REPORT NUMBER: 27/08/18/ES/EnvAudit1_WasteLicence



Monty van Eeden
Environmental Auditor
Managing Member

Table of Contents

1. INTRODUCTION	6
2. OUTLINE OF ENVIRONMENTAL REQUIREMENTS	7
3. AUDIT OBJECTIVE, SCOPE AND CRITERIA	7
4. AUDIT METHODOLOGY	7
5. AUDIT FINDINGS	8
5.1 Site security and access control	8
5.1.1 Requirements:	8
5.1.2 Rating:	8
Plate 1: Signage	9
Plate 2: Other signage	9
5.1.3 Requirements:	9
5.1.4 Rating:	9
5.2 General management	10
5.2.1 Requirements:	10
5.2.2 Rating:	10
5.2.3 Requirements	11
5.2.4 Rating:	11
5.2.5 Requirements	11
5.2.6 Rating:	11
5.3 Designation of a waste Management Control Officer	11
5.3.1 Requirements:	11
5.3.2 Rating:	12
5.4 Emergency preparedness plan	12
5.4.1 Requirements	12
5.4.2 Rating:	12
5.5 Permissible waste	13
5.5.1 Requirements	13
5.5.2 Rating:	13
5.6 Construction of the site	13
5.6.1 Requirements	13
5.6.2 Rating:	14
Plate 3: Mobile Micro-encapsulation plant	15
Plate 4: Plastic lining of cells to prevent ingress of rainwater	15
Plate 5: Vegetated side slopes of the cells	16
Plate 6: Empty Contaminated storm water collection pond. Valley 2	16
5.7 General Management	17
5.7.1 Requirements: Impact Management	17
5.7.2 Rating:	17
Plate 7: Lime injection process	18
5.7.3 Requirements: Operation Management	19
5.7.4 Rating:	20
Table 1: Summary of the SSGP parameters and results for Shongweni	23
Figure 1: Positions of the gas probes and samples sites	24

- 5.8 Runoff management..... 25
 - 5.8.1 Requirements: 25
 - 5.8.2 Rating: 25
 - Plate 8: Drains to collect contaminated runoff. 26
- 5.9 Leachate management 26
 - 5.9.1 Requirements 26
 - 5.9.2 Rating: 26
- 5.10 Monitoring 26
 - 5.10.1 Requirements: Monitoring methods and parameters 26
 - 5.10.2 Rating: 27
 - 5.10.3 Requirements: Water quality monitoring 27
 - 5.10.4 Rating: 27
- 5.11 Surface water monitoring network 28
 - 5.11.1 Requirements 28
 - 5.11.2 Rating: 28
- 5.12 Background monitoring 29
 - 5.12.1 Requirements 29
 - 5.12.2 Rating: 29
- 5.13 Detection Monitoring 30
 - 5.13.1 Requirements 30
 - 5.13.2 Rating: 30
- 5.14 Investigative monitoring 31
 - 5.14.1 Requirements 31
 - 5.14.2 Rating: 31
- 5.15 Investigations 31
 - 5.15.1 Requirements: 31
 - 5.15.2 Rating: 32
- 5.16 Records 32
 - 5.16.1 Requirements 32
 - 5.16.2 Rating: 33
- 5.17 Reporting 33
 - 5.17.1 Requirements 33
 - 5.17.2 Rating: 34
- 5.18 Auditing 35
 - 5.18.1 Requirements: Internal audits 35
 - 5.18.2 Rating: 35
 - 5.18.3 Requirements: External audits 35
 - 5.18.4 Rating: 36
 - 5.18.5 Requirements: Departmental audits and inspections 36
 - 5.18.6 Rating: 36
- 5.19 Monitoring committee 36
 - 5.19.1 Requirements 36
 - 5.19.2 Rating: 37
- 5.20 Leasing and alienation of the site 37
 - 5.20.1 Requirements 37
 - 5.20.2 Rating: 37
- 5.21 Transfer of the waste management licence 38

5.21.1	Requirements	38
5.21.2	Rating:	38
5.22	General	38
5.22.1	Requirements	38
5.22.2	Rating:	39
6.	AUDIT CONCLUSIONS AND RECOMMENDATIONS	39
	Table 3: Summary of Audit Findings	41
7.	APPENDICES	42
	APPENDIX A: ISO14001:2004 CERTIFICATE	42
	APPENDIX B: APPOINTMENT OF WASTE MANAGEMENT CONTROL OFFICER	43
	APPENDIX C: Annexure IV waste volumes report	44
	APPENDIX D: POD Liquid management model update (July 2018)	46
	APPENDIX E: Biomonitoring of the Mgoshongweni tributary	54
	APPENDIX F: Complaints register	76
	APPENDIX G: Incidents register	101
	APPENDIX H: Ethekwini Discharge Permit	103

1. INTRODUCTION

The Shongweni H:h Landfill Site was originally permitted in terms of section 20 (1) of the Environmental Conservation Act, 1989 (Act 73 of 1989) to accept hazardous waste of Hazard Groups 3 and 4 and delisted waste for co-disposal with domestic waste. The original permit for this site, B33/1/1920/P71, was revised and permit number 16/2/7/U602/B3/Y1/P270 was issued on the 28th August 1997. Subsequently, a major revision of this permit was issued on the 28 August 2005. In addition, amendments to condition 7.2.2.2 were made in a letter dated the 28 December 2005 and conditions 4.2.5, 4.5.3 and 11.2 in a letter dated 7th August 2007.

After the publication of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) (NEMWA), the permit originally issued the Shongweni Landfill Site was replaced with a Landfill Site Operating Licence, No 12/9/11/L1200/4, on the 4th April 2014.

In addition, the publication of regulations and standards governing the management of hazardous and other waste were promulgated on the 23rd August 2013 and replaced the Minimum Requirements. These new regulations and standards were implemented immediately on the date of publication. Among the important changes in the regulations, a new approach to both the classification of hazardous wastes and the Classes of sites were introduced. The Shongweni Landfill is now designated as a Class A Landfill and can accept Type1 to Type 4 Wastes.

Dorean Environmental Services CC was appointed by EnviroServ to conduct their annual external audit. The on-site audit was conducted on Monday 27 August 2018 at the facility at Shongweni. This document serves as a report on the audit conducted, the observations made and to provide the Department with a report of the current status of the facility, its operation and EnviroServ's compliance with the Waste Licence and amendments.

In the period under review, Shongweni Landfill site has complied with the requirements of all provisions of the Waste management licence except for the number of malodour complaints received. This was the subject of a high court interdict and a compliance notice in the previous period of review (October 2016 to October 2017). The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017. An annexure A was attached to the appeal decision and EnviroServ must ensure they comply with every condition listed therein. No waste disposal activities have been taking place on site regardless of the interdict and the directive being lifted. Shongweni was waiting for a scheduled trade permit from the Ethekewini Metro Council prior to receiving waste again.

2. OUTLINE OF ENVIRONMENTAL REQUIREMENTS

National environmental legislation, local by-laws, the requirements of EnviroServ's Environmental Management System and the conditions as set out in the waste Licence must at all times be complied with. This audit was based only on the Shongweni Landfill Site's waste Licence and subsequent amendments. The Licence number is: 12/9/11/L1200/4

3. AUDIT OBJECTIVE, SCOPE AND CRITERIA

The **objective** of the audit is to determine whether or not EnviroServ Waste Management (Pty) Ltd is managing the Shongweni Site in compliance with the conditions as set out in its Waste Licence.

The **scope** of the audit encompassed the actual Shongweni Landfill facility and its associated activities within the requirements of the Waste Licence. The audit was conducted by an independent external auditor and thus un-biased observations and findings are reported.

Criteria guiding the external audit was the Waste Licence authorised by the Department, of Environmental Affairs (DEA).

4. AUDIT METHODOLOGY

The external audit was undertaken by an auditor from Dorean Environmental Services CC. The audit approach was independent and holistic. The compliance to audit criteria – in this case the Waste Licence, was verified by a site visit, reviewing and collection of applicable documentation, records and reports as well as employee interviews.

The audit purpose was to ascertain the *status quo* of EnviroServ's compliance to the Waste Licence and not necessarily rating the company's performance. Audit findings are simply reported as either: Full compliance, Partial compliance, Non-compliance or Not Applicable where:

- **Full compliance** is allocated to aspects complying fully with the applicable requirement;

- **Partial compliance** is allocated to aspects complying partially with the applicable requirement; and
- **Non-compliance** is allocated to aspects not complying with the applicable requirement.
- **Not applicable** is allocated to requirements not / not yet activated by the Licence holder's activities for the period under review. This period for the purpose of this report is October 2017 to August 2018.

5. AUDIT FINDINGS

The audit findings are the result of the evaluation of the collected evidence against audit criteria. The audit was conducted by verifying whether EnviroServ's Shongweni Landfill Site is complying with the set conditions in the Waste Licence and that proof of this compliance is available. Audit findings and observations of general operational aspects of the facility follow in different sub-sections below.

5.1 Site security and access control

5.1.1 Requirements:

Section 1.3.1 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *"The Licence Holder must ensure effective access control of the waste management facility to prevent unauthorised entry. Weatherproof, durable and legible signs in English and Zulu must be displayed at each entrance to the Site. The signs must indicate the risks involved in entering the Site, state the hours of operation and the name, address and telephone number of the Licence Holder and the person responsible for the operation of the Site"*

5.1.2 Rating:

The site complies with the signage requirements. Durable weatherproof signs are put up at the main gate for both the landfill and the treatment plant. The site is also fenced and regular patrols are conducted to ensure any damage to site is fixed as a matter of urgency. Twenty four hour security is present at the gate. Language requirements are also complied with. Plates 1 and 2 shows the signage at the entry to the site.

Plate 1: Signage



Plate 2: Other signage



Rating: Full Compliance.

5.1.3 Requirements:

Section 1.3.2 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“The Licence Holder must prevent the disposal of waste that is not authorized at the Site”*

5.1.4 Rating:

The licence holder only disposes waste that is authorised for this site. The waste assessment process and sampling at the gate and testing in the laboratory on site prior to disposal ensures this process. No waste was received on site during the period under review due to a high court interdict that was in place. The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017. No waste disposal activities have been taking place on site regardless of the interdict and the directive being lifted. Shongweni was waiting for a scheduled trade permit from the Ethekwini Metro Council prior to receiving waste again.

Rating: Full Compliance**5.2 General management****5.2.1 Requirements:**

Section 2.1.1 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“The activities shall be managed and operated:*
- a) *In accordance with a documented Environmental Management System (EMS), that inter alia, identifies and minimises the risk of pollution, including those arising from operations, maintenance, accidents, incidents and non-conformance as well as those drawn to the attention of the Licence Holder as a result of complaints;*
 - b) *In accordance with conditions of this Licence and any other written instruction by the Director; and*
 - c) *By an adequate, competent staff complement.”*

5.2.2 Rating:

2.1.1 a) EnviroServ operates a comprehensive Safety, Health, Environmental and Quality (SHEQ) system. More specifically to environmental performance, the organisation has an ISO 14001:2015 certified environmental management system (EMS) which is audited both internally and externally on a regular basis and certified by BSI (Certificate number EMS 631298 **Appendix A**). EnviroServ has received transition to the 2015 version of ISO 14001. The current certificate is valid until 14 September 2021. As part of the EMS and operations, numerous procedures have been developed, reviewed and maintained over the years.

2.1.1 b) The landfill site is operated according to the requirements of the waste licence but a directive was issued by the DEA following malodour complaints. A court order was obtained by the complainants and no waste disposal activities have been taking place on site since April 2017. This means that EnviroServ is only partially compliant to some of these conditions. The directive has been lifted in December 2017. Currently the site is awaiting a scheduled trade permit to start receiving waste. Please see conditions 5.1 and 6.3.

2.1.1 c) An adequate and competent staff component (32 employees excluding security) subscribes to the requirements of the Licence and the EMS. These employees are all suitably trained for the various positions at the landfill including control of hazardous substances, environmental awareness and HAZOP training. Records of training was available during the audit.

Rating: Full Compliance**5.2.3 Requirements**

Section 2.1.2 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“Any persons having duties that are or may be affected by this Licence must have convenient access to a copy thereof, which copy must be kept at or near the place where those duties are carried out.”*

5.2.4 Rating:

The License is available to all those staff directly involved with the activities at the Shongweni Landfill. It is kept in the office and on notice boards at the Landfill site. The licence is also available on the intranet.

Rating: Full Compliance**5.2.5 Requirements**

Section 2.1.3 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“A copy of this Licence may be published by the Department, in its discretion on any website or other media.”*

5.2.6 Rating:

This is a function of the Department and is not applicable for the purposes of this report.

Rating: Not Applicable**5.3 Designation of a waste Management Control Officer****5.3.1 Requirements:**

Section 2.2 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“2.2.1 A Waste Management Control Officer (WMCO) must be designated to monitor and ensure compliance and correct implementation of all mitigation measures and provisions as stipulated in the licence and standard operation procedures. The WMCO must:*
 - (a) Report any non-compliance with any Licence conditions or requirements or provisions of NEM:WA to the licencing authority.*
- *2.2.2 The duties and responsibility of the WMCO should not be seen as exempting the Licence Holder from any other legal obligations in terms of the NEM:WA*

5.3.2 Rating:

Mr Bongani Zondo was appointed as the WMCO on 11-07-2018. The appointment highlights the responsibilities as set out in the Waste Management Licence. A copy is attached hereto as **Appendix B**.

Rating: Full Compliance

5.4 Emergency preparedness plan

5.4.1 Requirements

Section 2.3.1 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“The Licence Holder must maintain and implement an emergency preparedness plan and review it annually when conducting an audit, after each emergency incident and major accident. The plan must, amongst others, include measures to address:*
- a) Power failure;*
 - b) Equipment malfunction;*
 - c) Site fires;*
 - d) Spillage (on Site);*
 - e) Natural disasters such as floods; and*
 - f) The plan must include contact details of the nearest police station, ambulance services and the emergency centre.”*

5.4.2 Rating:

The holder complies with this requirement by having a certified EMS in place. As part of having an EMS, emergency preparedness and response is a major component of the system. The organisation therefore has an emergency procedure in place. The following emergencies have been catered for in one combined procedure EWM-SHONG-LF-WI-006, revision 13, dated 11-05-2018. This procedure caters for:

Power failure

Equipment malfunction

Site fires

Spillage on site

Industrial action

Natural disasters

The procedure contains the respective contact numbers for authorities dealing with specific emergencies. Emergency scenarios are also tested in the form of emergency drills on a regular basis and the results of these drills are used to refine and enhance

the existing emergency plans through the lessons learned during the drills. The emergency procedure is reviewed at least once in 12 months. No emergencies occurred on site during the period under review.

Rating: Full Compliance

5.5 Permissible waste

5.5.1 Requirements

Section 3.1 and 3.2 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“3.1 Any portion of the Site which has been constructed or developed according to condition 4 of this licence, excluding Cell 0, maybe used for the waste activities listed above.*
- *3.2 The classification, acceptance and disposal criteria as listed in the latest edition of the document "Minimum Requirements for Handling, Classification and Disposal of Hazardous Waste, Waste Management Series, Department of Water Affairs and Forestry" or its successor must be conformed to.”*

5.5.2 Rating:

The Shongweni Landfill is designated as a Class A Landfill and can accept Type 1 to Type 4 Wastes. The landfill site only accepts these types of waste. Acceptance and disposal criteria are updated. Revised classification procedures have been published by the Department on the 23rd August 2013 (GG 36784: R635) that supersede those in the Minimum Requirements. Discussions with the staff members showed that the requirements of the new regulations and standards have been implemented for the waste streams.

Rating: Full Compliance

5.6 Construction of the site

5.6.1 Requirements

Section 4 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“4.1 The construction of further development within the Site may only be undertaken by the Licence holder after Specified engineering plans have been submitted for approval and approved by the Director.*
- *4.2 The design designs must only be changed under the supervision of a registered professional engineer and upon approval by the Director*

- 4.3 *The construction of further developments within the Site must be carried out under the supervision of a Professional Registered Engineer*
- 4.4 *After construction of the disposal site or future development within the Site, the Professional Registered Engineer must submit a letter to the Director for approval, confirming that the Site has been constructed in accordance with the approved engineering designs before the disposal of waste can commence.*
- 4.6 *The slope of the sides of the Site must be constructed and maintained in such a manner that the occurrence of erosion is prevented.*
- 4.7 *The maximum height of the Site must not exceed the height as depicted in the engineering designs approved by the Director.*
- 4.8 *Contaminated storm water works must be of such a capacity as to maintain a freeboard of half a metre and to accommodate all contaminated storm-water run-off, 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 a fifty years (hereinafter referred to as the estimated maximum precipitation)."*

5.6.2 Rating:

The site plans were prepared by Jones and Wagner (Registered Professional Civil Engineers). This was done prior to the waste licence being issued so for the period under review it is not applicable.

In light of the court order and operational activities, no change have been made to the plans in the period under review.

No further construction or development of the cells and structures of the waste sites took place but a mobile Micro Encapsulation batching plant was deployed two weeks (6 August 2018) prior to the audit – this mobile encapsulation plant was deployed following the appeal decision of 9 December 2012 against the suspension of the Waste Management Licence by the minister of Environmental affairs (Hon Dr B E E Molewa) n Annexure A, paragraph 1.2 states: "The brine from the leachate treatment plant can be disposed of onto the working face provided it is microencapsulated."

Plate 3: Mobile Micro-encapsulation plant

Plastic lining of all cells took place to prevent ingress of rain water. This is a temporary measure that will be removed once waste is received again.

Plate 4: Plastic lining of cells to prevent ingress of rainwater

Jones and Wagener confirmed to the Department that the construction was carried out as specified in their designs and proof of this submission was available to the auditor during the audit. The last updated slope stability report from Jones and Wagener Report is dated 21st July 2018. The site was constructed in accordance with recognised engineering practice with special consideration to stability and to the approved plan. The slopes of the sides of the site has been constructed to prevent erosion. During the audit the successful results of hydro-seeding the slopes could be seen.

Plate 5: Vegetated side slopes of the cells

The slopes are inspected for erosion on a monthly basis by Ground Water Monitoring Services. A report is generated for each inspection.

The site has not exceeded the maximum height of 110mamsl as indicated in the design approved by the Director.

Contaminated storm water collection facilities meet the stated requirements and can handle the runoff of a one in fifty year storm event. Please see Plate 6 of the contaminated storm water pond that collects and stores all contaminated storm water generated on site.

Plate 6: Empty Contaminated storm water collection pond. Valley 2

Rating: Full Compliance

5.7 General Management

5.7.1 Requirements: Impact Management

Section 5.1 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“5.1.1 Waste, which is not permissible for disposal on Site, must be dealt with according to relevant legislation or the Department's policies and practices*
- *5.1.2 The Licence Holder must prevent spillages. Where they happen nonetheless, condition 2.3.1 above shall apply and the Licence Holder must ensure the effective and safe cleaning of such spillages.*
- *5.1.3 The leachate must not impact on a water resource or on any other person's water use, property or land and must not be detrimental to the health and safety of the public and the environment in the vicinity of the activity.*
- *5.1.4 The Licence Holder must ensure that impact of odour from emissions from the Site is minimised*
- *5.1.5 The Licence Holder must prevent the occurrence of nuisance conditions or health hazards.*
- *5.1.6 The Licence Holder must ensure that all personnel who work with hazardous waste are trained to deal with these potential hazardous situations so as to minimise the risks involved.*
- *5.1.7 The Licence Holder must ensure that all reasonable steps, such as suitable zoning or written agreements with adjacent landowners to establish and maintain an inbuilt "buffer zone between the Site and the nearest residential and/or light industrial areas during the operative life of the Site. The "buffer zone" must be maintained as follows:*
 - a) *180 metres to the North*
 - b) *600 metres to the East*
 - c) *350 metres to the East and West*
- *5.1.8 Heavy industries or industries which may create nuisance conditions may be permitted within the buffer zone in terms of the appropriate legislation.*
- *5.1.9 The Licence Holder may be required to amend the buffer zone should it be proven that there are any associated detrimental effects.”*

5.7.2 Rating:

No waste was received during the period under review. All waste arriving on site that do not make the requirements of this licence is sent back to the client and a non-conformance is raised against the specific client. A documented procedure is in place for the acceptance of waste: Acceptance of Waste Procedure Doc No: EWN-SHONG-LF-WI-001, Revision: 02, dated: 31/05/2016.

Small localised spills do occur from time to time but they are not a sufficient size to warrant reporting. Where spillages did occur they were cleaned up effectively. No significant spillages occurred in the period under review and the response to any significant spill is contained in the emergency response procedure (EWM-SHONG-LF-WI-006, revision 13, dated 11-05-2018).

Leachate (generated by valley 1 (small volume) and valley 2) gets treated by the Leachate Treatment Plant (Number **12/9/11/L467/4**) permeate from this process is used for lime injection for pH adjustment in the waste body, brine is micro-encapsulated in a mobile plant – please see plate 3 of the mobile micro-encapsulation plant. Please see plate 7 of the lime injection process. Lime is injected under hydraulic pressure to correct the pH in the waste body. Contaminated storm water from the collection pond is sent by road tanker to the eThekweni Southern Waste water treatment works. A permit to do dispose was issued on 17 June 2018 and this permit is valid from 1 August 2018 to 31 January 2019. Please see **Appendix G** of the effluent permit.

Plate 7: Lime injection process



For the period under review the site received several complaints which mostly related to odour allegedly coming from the site. The complaints register is appended as **Appendix F**. The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017. No waste disposal activities have been taking place on site regardless of the interdict and the directive being lifted. Shongweni was waiting for a scheduled trade permit from the Ethekeeni Metro Council prior to receiving waste again.

An adequate and competent staff component (32 employees excluding security) is employed on site. These employees are all suitably trained for the various positions at

the landfill including HAZOP training. Records of training was available during the audit.

Buffer zones were established around the site as specified in licence. Due to the steep topography of the area in which the site is situated no heavy industries were established in the buffer zones during the period under review. No request for an amendment of the buffer zone was received during the period under review.

Rating: *Partial compliance*

5.7.3 Requirements: Operation Management

Section 5.2 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“5.2.1 The Licence Holder must ensure that records in terms of volume/weight and nature of all wastes received and disposed are maintained and reported as per Annexure IV hereafter on annual basis.*
- *5.2.2 Waste disposed of on Site must be compacted and covered on a daily basis with a minimum of 150 millimetres of soil, ash from Mondi or any other material approved by the Director. The ash may only be used on lined cells with class H:h specifications.*
- *5.2.3 Waste disposed on Site may only be reclaimed by EnviroServ.*
- *5.2.4 Waste disposed on Site must not be allowed to burn.*
- *5.2.5 The Licence Holder must apply sufficient dust control measures to prevent wind-blown dust from causing nuisance conditions.*
- *5.2.6 The measured concentration of flammable gas, amended for Standard Temperature and Pressure, in the atmosphere inside buildings on the Site must not exceed 1% by volume in air. Should the atmospheric levels be between 0.1% and 1%, a higher frequency of monitoring must be instituted. Should levels above 1% be detected, the Licence Holder must submit a contingency plan regarding occupational safety to the Director which must be implemented on Site.*
- *5.2.7 The Licence Holder must implement adequate measures to the satisfaction of the Director to ventilate methane gas generated in the waste disposal area; and to prevent lateral migration of methane gas in order to prevent the build-up of dangerous concentrations within the Site.*
- *5.2.8 The co-disposal ratio shall be monitored by calculating the monthly ratio of the tonnage of dry solid waste to liquid waste disposed of at the Site. The co-disposal ratio shall not be less than the target ratio determined and prescribed by a professional engineer. The professional engineer shall review the target annually based on Site stability and/or the Site's ability to manage leachate.*

- 5.2.9 The Licence holder must maintain the liquid management model that must demonstrate on a monthly basis that there is enough storage capacity for the storm water and leachate.
- 5.2.10 The Licence Holder must submit the results of the liquid management model to the Director Bi-annually.
- 5.2.11 A primary layer of general solid waste must be placed up to a minimum depth of 2.5 meters on the lining of the Site, before any co-disposal may commence.
- 5.2.12 The volume of the primary layer must be kept in reserve for emergency conditions and may only be taken into account for the calculation of co-disposal rations according to condition 5.2.8, after sufficient motivation has been provided to and approved in writing by the Director.
- 5.2.13 Co-disposal must be executed by mixing general and hazardous waste (this include only Hazard Rating 3, moderate waste; Hazard Rating 4, low hazardous waste and delisted waste) at the working face, by spreading hazardous waste on deposited waste prior to covering, or by mixing in trenches excavated in in-situ waste.”

5.7.4 Rating:

Waste volumes are reported annually as required by Annexure IV. Please see **Appendix C** for a copy of the submitted Annexure IV.

Up until April 2017 waste was compacted and covered on a daily basis with soil/ash as required. Ash was not used on unlined cells. The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017. No waste disposal activities have been taking place on site regardless of the interdict and the directive being lifted. Currently the site is awaiting a scheduled trade permit to start receiving waste.

No reclamation of waste takes place or is allowed on site.

No Fires were reported on the site for the period under review.

Active dust suppression is done with watercarts using contaminated runoff water.

Monitoring for flammable gas was conducted by Geozone. No contingency plan was required regarding occupational safety with regards to flammable gas in buildings.

Geozone conducted the monitoring as part of the sub surface gas probes in the landfill site. The latest sampling of LFG within the SSGP was conducted on 20 July 2018. There are currently a total of twenty-six (26) SSGPs installed along the boundaries of the Shongweni landfill site. Probes No 7 and 4 remains damaged and these probes could not be included in the sampling regimen. Given the locations of these probes there is no urgent need to replace or repair them. Figure 1 shows the location of the probes/samples and **Table 1** shows the results for each sample.

Geozone evaluated the results as follows:

Methane (CH₄) (explosive limits: 5% - 15%; DWAF guideline limit: 1% v/v)

- Only Probe No 13B yielded a detectable concentration of methane (0.2% v/v) – i.e. well below the DWAF guideline limit.
- The remaining probes yielded no detectable concentrations of methane (<0.1% v/v).

Carbon Dioxide (CO₂) (DWAF guideline limit: 0.5% v/v)

- Probe No's 18 and 19 yielded results for carbon dioxide in excess of the DWAF guideline limit (0.5 % v/v).
- The remaining probes yielded either no detectable concentrations of carbon dioxide (<0.1% v/v) or very low results (0.1-0.4% v/v) – i.e. well below the DWAF guideline limit.

Hydrogen Sulphide (H₂S)

- None of the probes yielded any detectable concentrations of hydrogen sulphide (<0.1 part per million).

Flow Rates

All of the probes yielded very low gas flow rates (0.1 litre/hour). The minimal results obtained for Methane and Carbon dioxide in the SSGP, combined with the persistently low gas flow rates, continues to suggest that the risk of significant lateral migration of LFG along/across the site boundaries is low.

Ambient air sampling conducted by GMS at locations immediately adjacent to Probe No's 13B and 17B, yielded no detectable concentrations of Methane (<0.1% v/v). The risk of fire or explosion as a result of ambient methane concentrations at these locations is therefore low.

The co-disposal target ratio was determined as 4 tons of dry waste to 1 ton of wet waste. This gets updated on an annual basis by Jones and Wagner. Due to the site not receiving waste there is no current actual disposal ratio.

A liquid management model is also maintained by Jones and Wagner and is updated on a monthly basis. The liquid management model results are reported on a biannual basis as required. Please see appendix D for the proof of delivery of the Liquid management model for July 2018 by Jones and Wagner.

Condition 5.2.10 is not applicable for the period under review since this was done at the beginning of the construction of the site. Similarly conditions 5.2.12 and 5.2.13 is not applicable for the period under review since no emergency condition with regards to co-disposal occurred. The base layer was not used to calculate co-disposal ratios. No waste was disposed in the period under review due to the interdict preventing the site from receiving waste. The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017. No waste disposal activities have been taking place on site regardless of the interdict and the directive being lifted. Currently the site is awaiting a scheduled trade permit to start receiving waste.

Rating: Full Compliance

Table 1: Summary of the SSGP parameters and results for Shongweni

PROBE NO	PARAMETER						
	CH4 %	CO2 %	O2 %	H2S (ppm)	LEL %	Flow (l/h)	AP (mb)
Date: 2018/07/20							
1	0	0.1	21.7	0	0	0.1	906
2	0	0.2	21.6	0	0	0.1	906
3	0	0.1	21.7	0	0	0.1	906
6B	0	0.3	21.6	0	0	0.1	972
9	0	0.1	21.8	0	0	0.1	972
10	0	0.1	21.9	0	0	0.1	972
11	0	0.1	21.9	0	0	0.1	972
12	0	0.1	21.2	0	0	0.1	965
13B	0.2	0.4	21.1	0	4	0.1	965
15B	0	0.1	21.3	0	0	0.1	965
16	0	0.1	21.4	0	0	0.1	965
17B	0	0.2	21.4	0	0	0.1	965
18	0	1.9	19.4	0	0	0.1	965
19	0	2	21.1	0	0	0.1	906
20	0	0.2	21.6	0	0	0.1	906
21	0	0.2	21.7	0	0	0.1	906
22	0	0.2	21.6	0	0	0.1	906
23	0	0.2	21.8	0	0	0.1	906
24	0	0.3	21.7	0	0	0.1	906
25	0	0.1	21.9	0	0	0.1	968
26	0	0.2	21.5	0	0	0.1	968
27	0	0.1	21.5	0	0	0.1	968
28	0	0.2	21.4	0	0	0.1	968
29	0	0.2	21.6	0	0	0.1	968
30	0	0.1	21.8	0	0	0.1	968
31	0	0.1	21.6	0	0	0.1	968

Figure 1: Positions of the gas probes and samples sites



5.8 Runoff management

5.8.1 Requirements:

Section 5.3 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“5.3.1 All runoff water (storm water) arising as a result of precipitation on land adjacent to the site must be prevented from coming into contact with any substance, whether such substance is solid, liquid, vapour or gas, or a combination thereof, which is produced, used, stored, dumped or spilled in the premises, including leachate and must be diverted and drained from the site, by means of works constructed by the Licence Holder in accordance with condition 4.*
- *5.3.2 All runoff water (storm water) arising as a result of precipitation on the Site, must be prevented from coming into contact with any substance, as enumerated in condition 5.3.1 and must be diverted and drained from the Site and working face of the site, by means of works constructed by the Licence Holder in accordance with condition 4.*
- *5.3.3 In the event that runoff water referred to in condition 5.3.1 and 5.3.2 becomes contaminated, it must be regarded as leachate and must be dealt with according to condition 5.4.*
- *5.3.4 Runoff water arising from operational actions must be regarded as contaminated runoff and shall be managed according to condition 5.4.*
- *5.3.5 Uncontaminated runoff water must under no circumstances be used to dilute leachate emanating from the site but must be diverted to the Mgoshongweni River.”*

5.8.2 Rating:

Runoff management is good on the site. Cut off trenches prevent uncontaminated water from coming into contact with waste and is diverted to the Mgoshongweni river. Contaminated runoff water is directed via drains to the contaminated storm water collection dam. Clean and contaminated runoff is effectively separated. Please see plate 8 of the drains to direct contaminated runoff to the collection dam and plate 6 of the collection dam

Plate 8: Drains to collect contaminated runoff.

Rating: Full Compliance

5.9 Leachate management**5.9.1 Requirements**

Section 5.4 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *5.4.1 All leachate from the Site must be contained into approved leachate containment tanks from where it must be treated or released into the municipal sewer after receiving approval from the relevant municipality”*

5.9.2 Rating:

Leachate from the cells are collected into leachate tanks constructed for this purpose. The leachate tanks have the required freeboard to cater for large storm events. Jones and Wagner is satisfied with the levels of leachate and storm water capacity. Please see the Shongweni Liquid Management Model (LMM) of July 2018 appended as **Appendix D** to this report.

Rating: Full Compliance

5.10 Monitoring**5.10.1 Requirements: Monitoring methods and parameters**

Section 6.1 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“6.1.1 The Licence Holder must carry out all tests required in terms of this Licence in accordance with published laboratory analysis methods or those prescribed by and obtainable from the South African Bureau of Standards*

(SABS) and SANAS approved, referred to in the Standards Act, 2008 (Act 08 of 2008).

- 6.1.2 The Licence Holder may use another method of analysis if approved by the Director.”

5.10.2 Rating:

The laboratory at Shongweni is operated according to ISO17025, other tests are conducted at EnviroServ’s Rietfontein Laboratory which is SANAS accredited (certificate T0529 –valid until 12 February 2022). Specialists conducting studies on behalf of EnviroServ also ensures that any testing conducted is done at accredited laboratories. EnviroServ does not make use of any other methods that need approval from the Director.

Rating: Full Compliance

5.10.3 Requirements: Water quality monitoring

Section 6.2 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- “6.2.1 Monitoring of ground and surface water quality must be conducted according to the Water Monitoring Protocol in Jones and Wagener Report JW 136/10/B196 Rev 00 or its successor as approved by the Director.
- 6.2.2. Monitoring Borehole where the ground water in the borehole is at an expected higher hydraulic pressure level than the hydraulic pressure level of the ground water under the Site, shall be considered as background monitoring for ground water quality and must be conducted for each monitoring occasion specified in conditions 6.4, 6.5 and 6.6.
- 6.2.3 The established groundwater monitoring network for the site shall be maintained by the Licence holder to the satisfaction of the Director, so that unobstructed sampling, as required in terms of this Licence can be undertaken.
- 6.2.4 Monitoring boreholes must be equipped with lockable caps. The Department and the DWA reserves the right to take water samples at any time and to analyse these samples, or to have them analysed.

5.10.4 Rating:

These requirements were complied with. Water monitoring was conducted by Jones and Wagner according to the Water Monitoring Protocol from Jones and Wagner JW136/10/B196 Rev00. This monitoring report was still in draft at the time of the audit and could not be included into this report. The Groundwater monitoring network is maintained so that unobstructed access to the boreholes is possible for sampling.

Boreholes are equipped with a lockable cap as required. The second part of condition 6.2.4 is a departmental function and not a compliance condition for EnviroServ.

Rating: Full Compliance

5.11 Surface water monitoring network

5.11.1 Requirements

Section 6.3 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“6.3.1 Surface water monitoring shall be performed in the storm water drain adjacent to the Site and at locations selected in conjunctions with the Department of Water Affairs and at such a frequency as may be determined by the responsible authority.*
- *6.3.2 Surface water monitoring must be conducted as specified in Report No. JW136/10/B196 Rev 00 or its successor or as approved by the Director.*
- *6.3.3 Bio-monitoring of the Mgoshongweni stream below the Site, upstream of the road crossing and located before the confluence with the tributary must be conducted bi-annually.”*

5.11.2 Rating:

Conditions 6.3.1, 6.3.2 and 6.3.3 have been complied with in terms of the monitoring being carried out. Water monitoring was conducted by Jones and Wagner according to the Water Monitoring Protocol from Jones and Wagner JW136/10/B196 Rev 00. This monitoring report was still in draft at the time of the audit and could not be included into this report. Once the final report is submitted it will be available on site for perusal.

Biomonitoring of the Mgoshongweni stream was conducted by Ground Truth in May 2018 and a copy of the report is appended as **Appendix E** to this report. Ground Truth came to the following conclusion: The up- and downstream sites showed little change from the June 2017 sample event with both sites remaining in a good ecological condition. The conclusions and recommendations from the latest sampling event are:

The up- and downstream results for May 2018 showed little change from the June and September 2017 sample events with upstream site remaining in a good condition, while downstream showed a minor decline into a fair condition. The newly sampled central site was found to be in a good condition. The conclusions and recommendations from the latest sampling event are:

- The tributary of the Mgoshongweni River upstream of Shongweni Landfill site is in a good condition upstream and downstream of the currently active cell.

- The physico-chemical results show a minor increase in electrical conductivity in a downstream progression.
- More detailed water chemistry samples should be collected during the next sampling event from the downstream site to identify the cause of the generally lower health score found at the site.
- The tributary is still receiving sediments as a result of continual erosion and run-off from the landfill site.
- Sedimentation and run-off emanating from the area under the control of EnviroServ requires continued management and attention. This is owing to the negative impacts observed on the receiving river environment.
- Measures have been put in place to mitigate the sedimentation concerns, these are being managed. However, regular clearing of the sediment trap, maintenance of berms, drains and roads and control of alien invasive plants within the riparian areas needs to be continued and improved upon.

Rating: Full Compliance

5.12 Background monitoring

5.12.1 Requirements

Section 6.4 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“6.4.1 Boreholes located sufficiently up-gradient of the site with rest water levels (masl) at a higher elevation than those on the site shall be considered as background monitoring boreholes.*
- *6.4.2 Background groundwater monitoring must be conducted annually in terms of conditions 6.4 and/or 6.5 for water quality variables listed in Annexure II.”*

5.12.2 Rating:

These requirements are complied with. Boreholes above the groundwater gradient is being used as background values. Groundwater monitoring is conducted by Jones and Wagner but the monitoring report was still in draft at the time of the audit and could not be included into this report. Once the final report is submitted this report can be updated to include the data.

Rating: Full Compliance

5.13 Detection Monitoring

5.13.1 Requirements

Section 6.5 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“6.5.1 Monitoring for surface water and groundwater quality must be conducted quarterly for the variables listed in Annexure III at locations specified in conditions 6.2.2 and 6.2.3.*
- *6.5.2 Monitoring of leachate and contaminated runoff water must be conducted quarterly for the water quality variables listed in Annexure II and annually for water quality variables listed in Annexure III.*
- **6.5.3 No such number in the licence**
- **6.5.4 Leak and Failure Detection Monitoring**
 - 6.5.4.1 The leachate detection system must be monitored quarterly for the occurrence of leakages, and a higher frequency of monitoring, as approved by the Director, must be initiated should a leak be suspected and/or identified.*
 - 6.5.4.2 All pipes exposed to the leachate shall be subjected to annual pressure testing for leaks where practical. A record must be made available on request by the Director.*
 - 6.5.4.3 Inspections of liners where liners are accessible must be conducted monthly.*
 - 6.5.4.4 Should a leak or failure be suspected or detected during monitoring, inspections or tests conducted in accordance with conditions or at any other time, it must be regarded as an incident according to condition 9.1 and addressed according to condition 6.5.4.5.*
 - 6.5.4.5 Liners must be repaired when possible, or replaced when necessary under the supervision of the Professional Registered Engineer.”*

5.13.2 Rating:

Ground- and surface water monitoring is conducted by Jones and Wagner as required by this licence, but the monitoring report was still in draft at the time of the audit and could not be included into this report. Once the final report is submitted this report can be updated to include the data.

Pressure testing of leachate the pipes that can be tested have been carried out in August 2017. Proof of these inspections were available for the auditor to review. The result included calibration certificates of the pressure gauges.

Liners are inspected on a monthly basis by the supervisor on site and no reportable issues were noted in the period under review. No leak or failure were suspected or detected during the period under review. Repairs of liner will be done as it becomes necessary but this was not required in the period under review.

Rating: Full Compliance

5.14 Investigative monitoring

5.14.1 Requirements

Section 6.6 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“6.6.1 If, in the opinion of the Director: RPW, a water quality variable at any monitoring point listed under the detection monitoring programme, as referred to in condition 6.5.1, shows a significant increasing trend, the licence holder shall initiate a monthly monitoring programme for the water quality variables listed in Annexure II”*

5.14.2 Rating:

For the period under review, no such directive were received from the director and is therefore currently not applicable.

Rating: Not Applicable

5.15 Investigations

5.15.1 Requirements:

Section 7 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“7.1 If, in the opinion of the Director, environmental pollution, nuisances or health risks may be occurring or is occurring on the Site, the Licence Holder must initiate an investigation into the cause of the problem or suspected problem.*
- *7.2 If, in the opinion of the Director and/or Director: RPW, water pollution may be occurring or is occurring the Licence Holder must initiate an investigation into the cause of the problem or suspected problem. Such investigation must include the monitoring of the water quality variables, at those monitoring points and at such frequency as maybe specified by Director: RPW.*
- *7.3 Should the investigation carried out as per conditions 7.1 and 7.2 above reveal any unacceptable levels of pollution, the Licence Holder must submit mitigation measures to the satisfaction of the Director.”*

5.15.2 Rating:

A compliance notice was issued by the DEA regarding malodour complaints on 21 October 2016. EnviroServ prepared and submitted an 11 point action plan to the Director to address the compliance notice. This matter is still ongoing and at the time of the audit waste reception and landfill operations has been suspended while mitigation measures are put in place. No water related incident occurred on site during the period under review. The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017. No waste disposal activities have been taking place on site regardless of the interdict and the directive being lifted. Currently the site is awaiting a scheduled trade permit to start receiving waste.

Rating: Full Compliance

5.16 Records

5.16.1 Requirements

Section 8 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“8.1 The Licence Holder must keep records and update all the information referred to in Annexure IV and submit this information to the Director on an annual basis.*
- *8.2 All records required or resulting from activities required by this licence must:*
 - a) *Be legible;*
 - b) *Be made as soon as reasonably practicable and should form part of the external audit report;*
 - c) *If amended, be amended in such a way that the original and any subsequent amendments remain legible and are easily retrievable; and*
 - d) *Be retained in accordance with documented procedures.*
- *8.3 The Permit Holder must keep records of the following for all hazardous waste (this include only Hazard Rating 3, moderate waste; Hazard 4, low hazardous waste and delisted waste) deposited on the Site and must update all the information referred to in Annexure III on an annual basis.*
- *8.4 Records of training and verification of competence must be kept by the Licence Holder.*
- *8.5 Records demonstrating compliance with condition 2.1.1 must be kept and maintained for a period of five (5) years.”*

5.16.2 Rating:

Records are kept as part of element 7.5 (Documented information) of the EnviroServ EMS. There is a very good record keeping procedure (SHEQ-NAT-COP-005, revision 7, dated 30-04-2018) that addresses the receipt storage and dispossession of records. This procedure also states a five year retention period. The procedure also spells out responsibilities for keeping records and record retention times. Waste volumes are reported annually as required by Annexure IV. Please see **Appendix C** for a copy of the submitted Annexure IV. Training records are available at the site for all personnel working at the site.

Rating: Full Compliance

5.17 Reporting

5.17.1 Requirements

Section 9 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“9.1 The Licence Holder must, within 24 hours notify the Director of the occurrence or detection of any incident on the Site, or incidental to the operation of the site, which has the potential to cause, or has caused pollution of the environment, health risks, nuisance conditions or water pollution.*
- *9.2 The Licence Holder must, within 14 days, or a shorter period of time, if specified by the Director from the occurrence or detection of any incident referred to in condition 9.1, submit an action plan, which must include a detailed time schedule, and resource allocation signed off by top management, to the satisfaction of the Director and/or the Director: RPW of measures taken to-*
 - a) correct the impact resulting from the incident;*
 - b) prevent the incident from causing any further impact; and*
 - c) prevent a recurrence of a similar incident.*
- *9.3 In the event that measures have not been implemented within 21 days of the incident to address impacts caused by the incident referred to in condition 9.1, of measures which have been implemented are inadequate, the Director may implement the necessary measures at the cost and risk of the Licence Holder.*
- *9.4 The Licence Holder must keep an incident and complaints register, which must be attached to the external audit report, as well as made available to the Department and DWA for audit purposes.*
- *9.5 The Department must be notified without delay in the case of the following:*

- 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 this Licence; and*
 - c) *Any significant adverse environmental and health effects.*
- *9.6 The Department must be notified within 14 days of the following changes:*
- a) *Licence Holder's trading name, registered name or registered office address;*
 - b) *Particulars of the licence Holder's ultimate holding company (including details of an ultimate holding where a licence holder has become a subsidiary;*
 - c) *Steps taken with a view to the Licence Holder, or anyone of them, going into bankruptcy, entering into composition or arrangement with creditors, or, in the case of them being in a partnership, dissolving the partnership.*
- *9.7 The water quality monitoring reports must be submitted annually to the Director. All monitoring results must be presented graphically as per minimum requirements for monitoring second edition 1998.*
- *9.8 Each external audit report referred to in condition 10.2 below must be submitted to the Director within 30 days from the date on which the external auditor finalised the audit report.”*

5.17.2 Rating:

No sudden incident or malfunction occurred on site that warranted reporting but the large amount of complaints about malodour prompted a long (from 2016) open dialogue and compliance notice, suspension notice and high court interdict that is actively being investigated and corrective actions proposed and taken. The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017.

Please see a copy of the complaints register appended as **Appendix F** as well as an Incident register appended as **Appendix G**.

EnviroServ has received 125 complaints for the period under review September 2017 to end of August 2018. The complaints reported on, are those recorded on the formal Shongweni complaints system.

No changes occurred to the licence holder or its holding company in the period under review that warranted reporting to the Department.

Water monitoring reports are submitted to the Director as required. Monitoring data is shown graphically as required and no correspondence have been received regarding the contents of the monitoring reports.

The 2017 external audit report was submitted to the Department as required.

Rating: Full Compliance

5.18 Auditing

5.18.1 Requirements: Internal audits

Section 10.1 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“10.1.1 Internal audits must be conducted biannually by the Licence Holder and on each audit occasion an official report must be compiled by the relevant auditor to report the findings of the audits, which must be made available to the external auditor specified in condition 10.2.1.”*

5.18.2 Rating:

The Licence holder has conducted the biannual internal audits as required. Copies of these audit reports were made available to the external auditor for review and verification. These audits also looked at the requirements of the documented SHEQ system.

Rating: Full Compliance

5.18.3 Requirements: External audits

Section 10.2 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“10.2.1 The Licence Holder must appoint an independent external auditor to audit the site annually and the auditor must compile an audit report documenting the findings of the audit, which must be submitted by the licence holder according to condition 9.7 above.*
- *10.2.2 The audit report must:*
 - a) *Specifically state whether conditions of this licence are adhered to;*
 - b) *Include an interpretation of all available data and test results regarding the operation of the site and all its impacts on the environment;*
 - c) *Specify target dates for the implementation of the recommendations by the Licence Holder to achieve compliance;*

- d) *Contain recommendations regarding non-compliance or potential non-compliance and must specify target dates or the implementation of the recommendations by the Licence Holder and whether corrective action taken for the previous audit non conformities was adequate; and*
- e) *Show monitoring results graphically and conduct trend analysis.”*

5.18.4 Rating:

The previous audit was conducted in 2017 by Dorean Environmental Services. The report was sent to the DEA as required in condition 9.8.

One partial compliance to the Operating Licence was raised that related to conditions 5.1.4 and 5.1.5 due to the odour complaints directed at the Site.

Recommendations were made regarding the partial compliance to the conditions of the licence. Available monitoring results for the landfill site was shown graphically and data interpreted. The same partial compliance was recorded during this external audit and corrective actions on these partial compliance are still ongoing. The high court interdict was lifted on 21 June 2018, and the directive modified and suspension notice relaxed on 9 December 2017.

Rating: Full Compliance

5.18.5 Requirements: Departmental audits and inspections

Section 10.3 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“10.3.1 The Department reserves the right to audit and/or inspect the Site without prior notification at any time and frequency as may be determined by the Director.*
- *10.3.2 The Licence Holder must make any records or documentation available to the Director upon request as well as any other information he/she may require.”*

5.18.6 Rating:

Section 10.3.1 relates to Department actions and is therefore not applicable for the purposes to this report. Records has been made available as and when required during the period under review.

Rating: Not applicable

5.19 Monitoring committee

5.19.1 Requirements

Section 11 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“11.1 The Licence Holder must maintain and ensure continued functioning of a Monitoring Committee for the normal operative lifetime of the Site and for a period of at least two years after the closure of the Site, or such longer period as may be determined by the Director.*
- *11.2 The Monitoring Committee must formulate terms of reference and code of conduct, according to the Minimum Requirements, Second Edition 1998 by the Department of Water Affairs and Forestry or its successor.*
- *11.3 The Monitoring Committee must be comprised of relevant interested and affected persons.*
- *11.4 The Monitoring Committee must meet at least once every six months. The latest external audit report must be presented in the meetings.*
- *11.5 The Licence Holder must keep minutes of the Monitoring Committee and distribute these minutes to all members of the Monitoring Committee within 14 days after the meeting.”*

5.19.2 Rating:

A very active Monitoring committee is maintained and chaired by Mr Linda Mlotshwa. The committee established a code of conduct and terms of reference as required. The last meeting was held on 12th of July 2018 and minutes distributed accordingly as required. The frequency of meetings is currently exceeding the required one meeting every six months.

Rating: Full Compliance

5.20 Leasing and alienation of the site

5.20.1 Requirements

Section 12 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“12.1 Should the Licence Holder want to alienate or lease the site, he/she must notify the Director in writing of such an intention at least 120 days prior to the said transaction*
- *12.2 Should the approval be granted, the subsequent Licence Holder shall remain liable for compliance with all licence conditions.”*

5.20.2 Rating:

Currently there are no plans to alienate or lease the site and therefore the condition do not apply for the period under review so for the purpose of this report is not auditable.

Rating: Not Applicable

5.21 Transfer of the waste management licence

5.21.1 Requirements

Section 13 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- 13.1 *Should the Licence Holder want to transfer the Licence, he/she must apply in terms of Section 52 of the National Environmental Management: Waste Act, 2008 (Act No 59 of 2008).*
- 13.2 *Any subsequent Licence Holder shall be bound by conditions of the licence.”*

5.21.2 Rating:

Currently there are no plans to transfer the licence and therefore the condition do not apply for the period under review so for the purpose of this report is not auditable.

Rating: Not Applicable

5.22 General

5.22.1 Requirements

Section 14 of the Waste Licence (Ref No. 12/9/11/L1200/4), dated 08-04-2014:

- *“14.1 This Licence shall not be transferable unless such transfer is subject to condition 13.1.*
- *14.2 This Licence shall not be construed as exempting the Licence Holder from compliance with the provisions of the National and Provincial Legislation and any relevant Ordinance, Regulation, By-laws or relevant National Standards and norms.*
- *14.3 Transgression of any condition of this Licence could result in the validity of the Licence being terminated by the Department.*
- *14.4 Non-compliance with a condition of this Licence may result in criminal prosecution or other actions provided for in Section 67(1) of the National Environmental Management: Waste Act, 2008.*
- *14.5 Any committees appointed in terms of the application or any other public authority or organisation shall not be held responsible for any damages or losses suffered by the Licence Holder or his/her successor in title in any instance where construction or operation are to be temporarily or permanently stopped for reasons of non-compliance.*
- *14.6 In terms of section 28 and 30 of the National Environmental Management Act No.107 of 1998, and section 19 and 20 of the National Water Act No. 36 of*

1998, any costs incurred to remedy environmental damage must be borne by the person responsible for the damage. It is therefore imperative that the Licence Holder reads through and understand the legislative requirements pertaining to the project. It is the Applicant's responsibility to take reasonable measures which include informing and educating contractors and employees about environmental risks of their work and training them to operate in an environmental acceptable manner.

- 14.7 This Licence is valid for a period of ten (10) years and shall be reviewed every five (5) years from the date of issue or at any time before or after that date. Based on the results of the review, especially compliance to Licence conditions or recommendations from the audit reports and or changing legislation, the Licence could be amended or withdrawn or validity thereof extended.”

5.22.2 Rating:

Section 14 is a number of statements and not conditions to which EnviroServ can comply and is therefore not auditable.

Rating: Not applicable

6. AUDIT CONCLUSIONS AND RECOMMENDATIONS

RECOMENDATIONS

- 1) From an examination of the evidence collected during this audit, the external auditor is satisfied that EnviroServ, as the licence holder for the Shongweni Landfill Site, have conformed to the requirements of the licence. The requirements of the scheduled trade permit must be complied with as well as the Annexure A of the Appeal decision dated 9 December 2017.
- 2) More detailed water chemistry samples should be collected during the next sampling event from the downstream site to identify the cause of the generally lower health score found at the site. Sedimentation and run-off emanating from the area under the control of EnviroServ requires continued management and attention. This is owing to the negative impacts observed on the receiving river environment.
- 3) Based on the latest SSGP sampling results there is little evidence of significant lateral migration of landfill gas along or across the boundaries of the Shongweni landfill site.

- The current SSGP network is adequate and does not require any expansion, modification or repair at this stage.
- Should elevated Methane and/or Carbon dioxide concentrations be consistently recorded in any of the SSGP on the boundaries of the site, additional remedial actions may be recommended.
- Repeat sampling of LFG in SSGP on the site boundaries should be performed in 3 months.

CONCLUSION

The audit shows that the landfill is meeting most of the specific licence conditions, in terms of possible surface, ground water or air pollution. In addition, the site is continually showing improvement in its design, construction and operation, in line with its licence requirements and the SHEQ policy of the company.

A summary of the audit findings can be seen in **Table 3** below:

Table 3: Summary of Audit Findings

PARAGRAPH IN REPORT	SPECIFIC CONDITIONS AUDITED	RATINGS		
		Full Compliance	Partial Compliance	Non Compliance
5.1.2	1.3.1	X		
5.1.4	1.3.2	X		
5.2.2	2.1.1	X		
5.2.4	2.1.2	X		
5.2.6	2.1.3	NA		
5.3.2	2.2.	X		
5.4.2	2.3.1	X		
5.5.2	3.1 & 3.2	X		
5.6.2	4			
5.7.2	5.1		X	
5.7.4	5.2	X		
5.8.2	5.3	X		
5.9.4	5.4	X		
5.10.2	6.1	X		
5.10.4	6.2	X		
5.11.2	6.3	X		
5.12.2	6.4	X		
5.13.2	6.5	X		
5.14.2	6.6	NA		
5.15.2	7	X		
5.16.2	8	X		
5.17.2	9	X		
5.18.2	10.1	X		
5.18.4	10.2	X		
5.18.6	10.3	NA		
5.19.2	11	X		
5.20.2	12	NA		
5.21.2	13	NA		
5.22.2	14	NA		

7. APPENDICES

APPENDIX A: ISO14001:2004 CERTIFICATE



By Royal Charter

Certificate of Registration

ENVIRONMENTAL MANAGEMENT SYSTEM - ISO 14001:2015

This is to certify that:

EnviroServ Waste Management (Pty) Ltd.
Brickfield Road, Meadowdale,
Meadowdale,
Gauteng, South Africa.
1401
South Africa

Holds Certificate No:

EMS 631298

and operates an Environmental Management System which complies with the requirements of ISO 14001:2015 for the following scope:

The receipt, storage, treatment and disposal of general and hazardous wastes in terms of Category A and B listed activities at landfill sites and treatment facilities in line with the individual licences and permits for the Shongweni, Holfontein, Chloorkop, Aloes landfill and the Roodepoort healthcare risk waste incinerator. The scope excludes the transportation of waste outside of these sites.

For and on behalf of BSI:

Andrew Launn, EMEA Systems Certification Director

Original Registration Date: 2004-07-09

Latest Revision Date: 2018-08-31

Effective Date: 2018-08-31

Expiry Date: 2021-08-30

Page: 1 of 3



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BSI Assurance UK Limited, registered in England under number 7805321 at 389 Chiswick High Road, London W4 4AL, UK.

APPENDIX B: APPOINTMENT OF WASTE MANAGEMENT CONTROL OFFICER

	Title	Document No.	Revision No.
	NATIONAL ENVIRONMENTAL MANAGEMENT WASTE ACT (2008) SECTION 49(1)(a) – WMCO APPOINTMENT	EWM-COMPL-AF- AAA	00

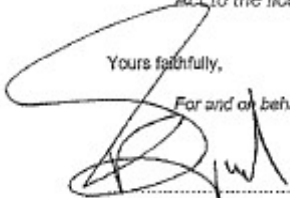
BONGANI ZONDO

I, (Nico Vermeulen), the (16.2) appointee and Operations Director of (TDS), hereby appoint you, (BONGANI ZONDO), as the Waste Management Control Officer (WMCO) for (Shongweni Landfill) as per NEMWA Sec 49 (1)(a).

Your duties as WMCO are to:

- a) Take all reasonable steps to ensure compliance by the holder of the waste management licence conditions and requirements and the provisions of the Act and
- b) Promptly report any non-compliance with any licence conditions or requirements or provisions of this Act to the licensing authority through the most effective means reasonably available.

Yours faithfully,



For and on behalf of EnviroServ Waste Management (PTY) Ltd

NICO VERMEULEN
OPERATIONS DIRECTOR

10 / 07 / 2018
Date

Kindly confirm your acceptance of this appointment by completing the following:

ACCEPTANCE

I, BONGANI P. ZONDO understand the implications of the appointment as detailed above and confirm my acceptance thereof.



Signature (Bongani Zondo)

11 / 07 / 2018
Date

APPENDIX C: Annexure IV waste volumes report



environmental affairs
 Department:
 Environmental Affairs
 REPUBLIC OF SOUTH AFRICA

H:h Licence- Shongweni Waste Disposal Site Waste Management Licence

ANNEXURE IV

INFORMATION WHICH SHALL BE SUBMITTED ON AN ANNUAL BASIS: CONDITIONS 5.2.1 AND 8.1

* = Indicate with an X. Please print legibly.

ENVIROSERV WASTE MANAGEMENT.
 NAME OF SITE: SHONGWENI LANDFILL DATE OF REPORT: 06/02/2018 FOR PERIOD 2017 -
 (yy/mm/dd)

1. Registered owner(s) of property on which waste management facility are situated:

Name	ENVIROSERV WASTE MANAGEMENT	Telephone	011 4565400
Postal Address	P.O. BOX 1547	Fax	011 4546016
	BEDFORDVIEW	Postal Code	2008

2. Operator in control of waste management facility:

Name	CLIVE KIDD	Telephone	031 769 1134
Identity number	6405245048082	After hours	082 777 6218
Educational Qualifications (*)	ND: CIVIL ENGINEERING, MBA COASTAL OPERATIONS MANAGER		

3. Latest estimated lifetime of the waste management facility: 8 yr.

4. Indicate the approximate quantities of waste deposited on site during the year:

Type of waste	Quantity (m ³ annum ⁻¹)	Compacted (C)	Uncompacted (U)
Non-hazardous waste		27	8617
Household			
Garden refuse			
Building rubble			
Industrial (not hazardous)-specify			
TOTAL			8617
Hazardous waste			
Flammable solids			5261
Flammable liquids			399
Oxidising agents			0
Toxic wastes			23585
Corrosive wastes			162
Hospital and infectious wastes (specify)			2613
TOTAL			32020

Batho pele- putting people first

[Signature]

Page 22 of 25
 12/9/11/L1200/4



environmental affairs

Department:
Environmental Affairs
REPUBLIC OF SOUTH AFRICA

H:h Licence- Shongweni Waste Disposal Site Waste Management Licence

5. (a) Indicate the method of disposal of waste (*)

Land building _____ Landfilling X

(b) Indicate the present dimension of the site (metre)

Height/depth	± 33m
Length	± 319m
Breadth	± 186m

6. Indicate the applicable waste types and quantities salvaged during the year

Salvaging undertaken?		Yes	No <u> X </u>
Type	Quantity (m³)	Type	Quantity (m³)
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	-

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

Type	Sources	Quantity (m³)
Soil	-	-
Sand	ONSITE & IMPORTED	24 650 TONS
<u> X </u> Ash	SAPPI	429.70 TONS
Gravel	-	-
Clay	-	-
Building rubble	-	-
Other (Specify)	-	-

I, the undersigned, declare that the information stated above is to my knowledge a true reflection of the status at the Shongweni waste disposal facility.

Signature: Shimal Hanuvanth

Name: SHIMAL HANUVANTH

Capacity: SENIOR STENO. OFFICER

Place: DURBAN

Date 06/02/2018

Powder

Batho pele- putting people first

APPENDIX D: POD Liquid management model update (July 2018)



Ref no: 12/9/11/L1200/4

10 September 2018

The Director Licensing
Department of Environmental Affairs
Cnr. Soutpansberg and Steve Biko Road
Arcadia, Pretoria

Attention: The Director

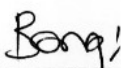
RE: SHONGWENI LANDFILL SITE: LIQUID MANAGEMENT MODEL END JULY 2018

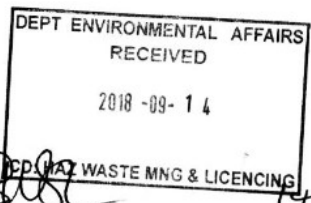
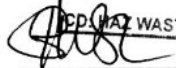
Kindly find attached the above-mentioned Liquid Management Model for your attention.

Yours faithfully,


Marelize Muller
Compliance Administrator
Tel: 011 456 5400

Acknowledgement of Receipt:


Print Name


Signature  Date 14/09/18



Ref no: 12/9/11/L1200/4

10 September 2018

The Director Licensing
Department of Environmental Affairs
Cnr. Soutpansberg and Steve Biko Road
Arcadia, Pretoria

Attention: The Director

RE: SHONGWENI LANDFILL SITE: LIQUID MANAGEMENT MODEL END JULY 2018

Kindly find attached the above-mentioned Liquid Management Model for your attention.

Yours faithfully,

Neil Brink
National Compliance Manager
Tel: 011 456 5400
neilb@enviroserv.co.za

WE ARE NOW A PROUD B-BBEE LEVEL 2 CONTRIBUTOR



RAISING THE WASTE GAME

Customer Care Line 0800 192 783
clientservices@enviroserv.co.za
Registered Address EnviroServ Waste Management (Pty) Ltd
Brickfield Road, Meadowdale, Germiston, PO Box 1547, Bedfordview, 2008
Tel +27(11) 456 5660, Fax +27(11) 454 6016, www.enviroserv.co.za
Gauteng Regional Office +27(11) 456 5400, KwaZulu Natal Regional Office +27(31) 902 1526,
Western Cape Regional Office +27(21) 951 8420, Eastern Cape Regional Office +27(41) 466 2741
Directors C.L.A. Coppings, E. Gombault, S. Jwili, D.F.N. Krugel, D. Lavarinhas,
A. McLean, T. Taaka, D.L. Thompson (CEO), N.S. Vermeulen,
C.L.A. Coppings (Company Secretary)
Reg No 2008/021152/07



Jones & Wagener

Engineering & Environmental Consultants
 59 Bevan Road PO Box 1434 Rivonia 2128 South Africa
 tel: 00 27 11 519 0200 www.jaws.co.za email: post@jaws.co.za

EnviroServ Waste Management Pty (Ltd)
 TDS
 P.O.Box 9385
 Edenglen
 1613

23 August, 2018

Our Ref: **8358/00**
 Your Ref:
 8358-00_LMM_r0_dmJM_Summary_201807

Attention: Mr Clive Kidd

Dear Sir

SHONGWENI LANDFILL SITE – LIQUID MANAGEMENT MODEL UPDATE – END JULY 2018

1. INTRODUCTION

The Shongweni Liquid Management Model (LMM) was set up to allow EnviroServ Waste Management to quantify the available leachate storage on site as well as to predict the rate of use of storage capacity. The LMM uses the measured leachate and stormwater stored on site, the climatic variables (rainfall and evaporation) and measured pump rates to calculate the nett liquid balance for the storage system. Historic trends are then used to generate a predictive model to assess the capacity of future leachate storage requirements. The main inputs and results are summarised under the headings below.

2. RAINFALL

Refer to Graph 1 – Shongweni Landfill Rainfall Record. This curve plots the cumulative measured rainfall from May 1999 to present against the average expected rainfall based on historical hydrological data. It also summarises the annual rainfall from May 1999 to December 2017. Quality of data is assured by the fact that the data is compared to historic annual averages. For the current hydrological year starting in October 2017 there has been 835 mm rain measured on site.

JONES & WAGENER (PTY) LTD REG NO. 1993/002655/07 VAT No. 4410136685

DIRECTORS: GR Wardle (Chairman) PrEng MSc(Eng) FSAICE JP van der Berg (CEO) PrEng PhD MEng FSAICE JE Glendinning PrSciNat MSc(Env Geochem) MSAIEG M Rust PrEng PhD MSAICE TM Ramabulana BA(Social Sciences) A Oosthuizen (Alternate) PrEng BEng(Hons) MSAICE
TECHNICAL DIRECTORS: D Brink PrEng BEng(Hons) FSAICE NJ Vermeulen PrEng PhD MEng MSAICE HR Aschenborn PrEng BEng(Hons) MSAICE H van Zyl PrSciNat BSc(Hons) MIMWISA HW Palmer PrEng MSc(Eng) MSAICE TG le Roux PrEng MEng FSAICE AJ Bain PrEng BEng MSAICE GB Simpson PrEng PrEng FSAIAE JS Matiza PrEng BEng(Hons) MSAICE MIMWISA G Harri PrEng MEng MSAICE JS Hex PrSciNat MSc(Env Man) ICB-EAPSA PJJ Smit PrEng BEng(Hons) MSAICE C Cilliers PrEng BEng(Hons) MSAICE NW Nxumalo PrEng MSc(Eng) MSAICE F HSrikorn PrEng Dr.-Ing MSAICE TAL Green PrEng BSc(Eng) MSAICE H Davis PrEng BSc(Hons) GDE FSAICE
ASSOCIATES: RA Nortjé PrEng MSc(Eng) MSAICE MIMWISA J Breyli PrEng BEng(Hons) MSAICE N Malepfana PrEng BSc(Eng) GDE MSAICE
CONSULTANTS: PW Day PrEng DEng HonFSAICE JA Kempe PrEng BSc(Eng) GDE MSAICE AStructE BR Antrobus PrSciNat BSc(Hons) MSAIEG PG Gage PrEng CEng BSc(Eng) GDE MSAICE AStructE
FINANCIAL MANAGER: CJ Ford BCompt ACMA CGMA



3. STORMWATER

Refer to Graph 2 – Shongweni Stormwater Dam Val 1: Total Volume Stored; and Graph 3 – Shongweni Stormwater Dam Val 2: Total Volume Stored. This curve plots the measured volume of stormwater stored against the available stormwater storage capacity. Quality of data is assured by the fact that a surveyor measures the water level on each of the dams on a monthly basis. Stormwater stored at the end of July 2018 for the Stormwater Dam Valley 1 was 3 175 m³ (Figure 2) and for the Stormwater Dam Valley 2 was 19 m³ (Figure 3). The stormwater volumes on site are under control and sufficient capacity is available for further rain.

4. LEACHATE

Refer to Graph 4 – Shongweni Leachate Tanks Total Volume Stored. This curve plots the historic leachate stored volume vs the leachate storage capacity. Quality of data is assured by the fact that a surveyor measures the leachate level on each of the dams on a monthly basis. Leachate stored at the end of July 2018 was 6 039 m³.

5. RECOMMENDATION

Stormwater and Leachate levels measured on site are under control and with sufficient capacity. The LMM data should continue to be collected and the predictive model continually calibrated.

Yours faithfully

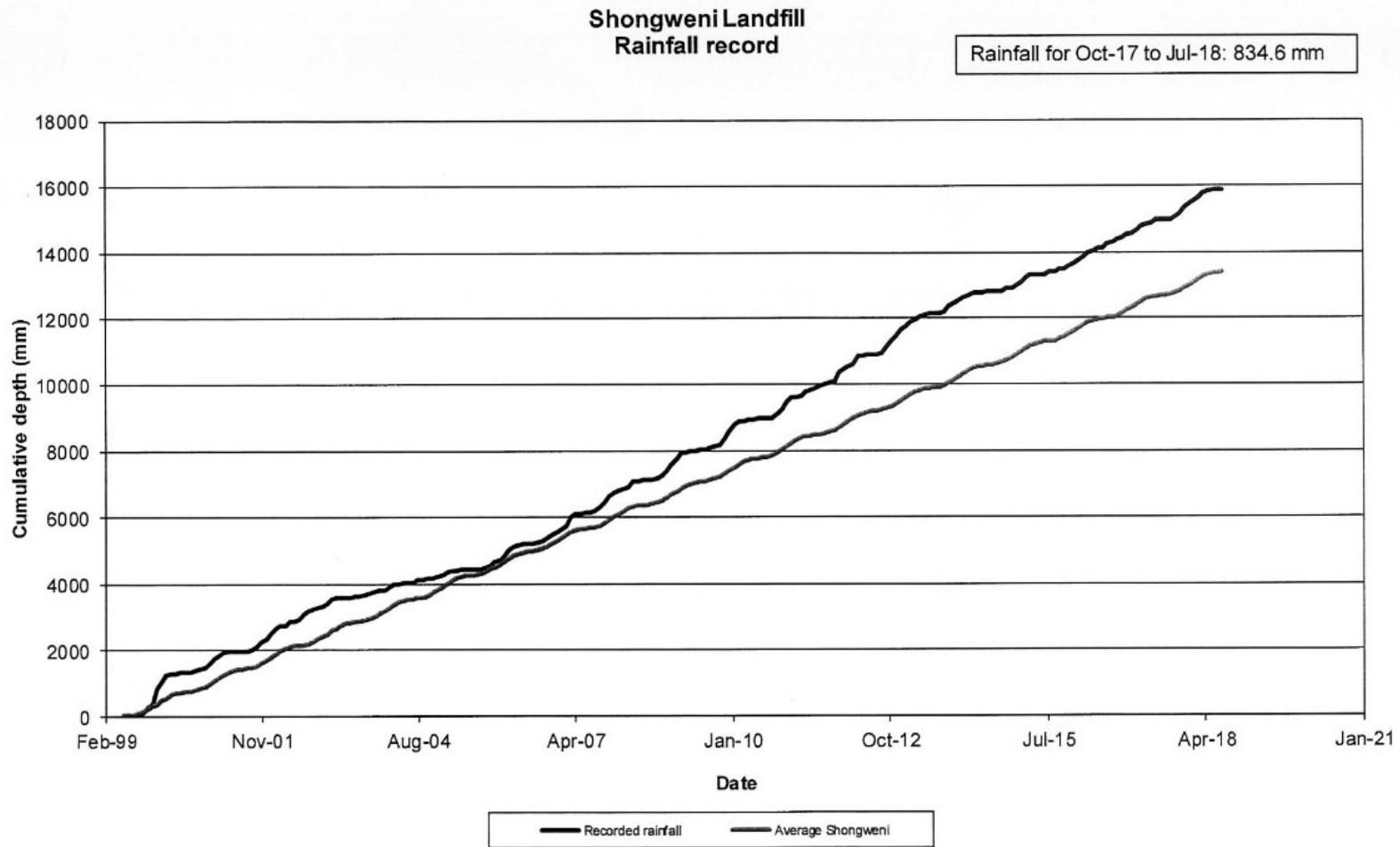


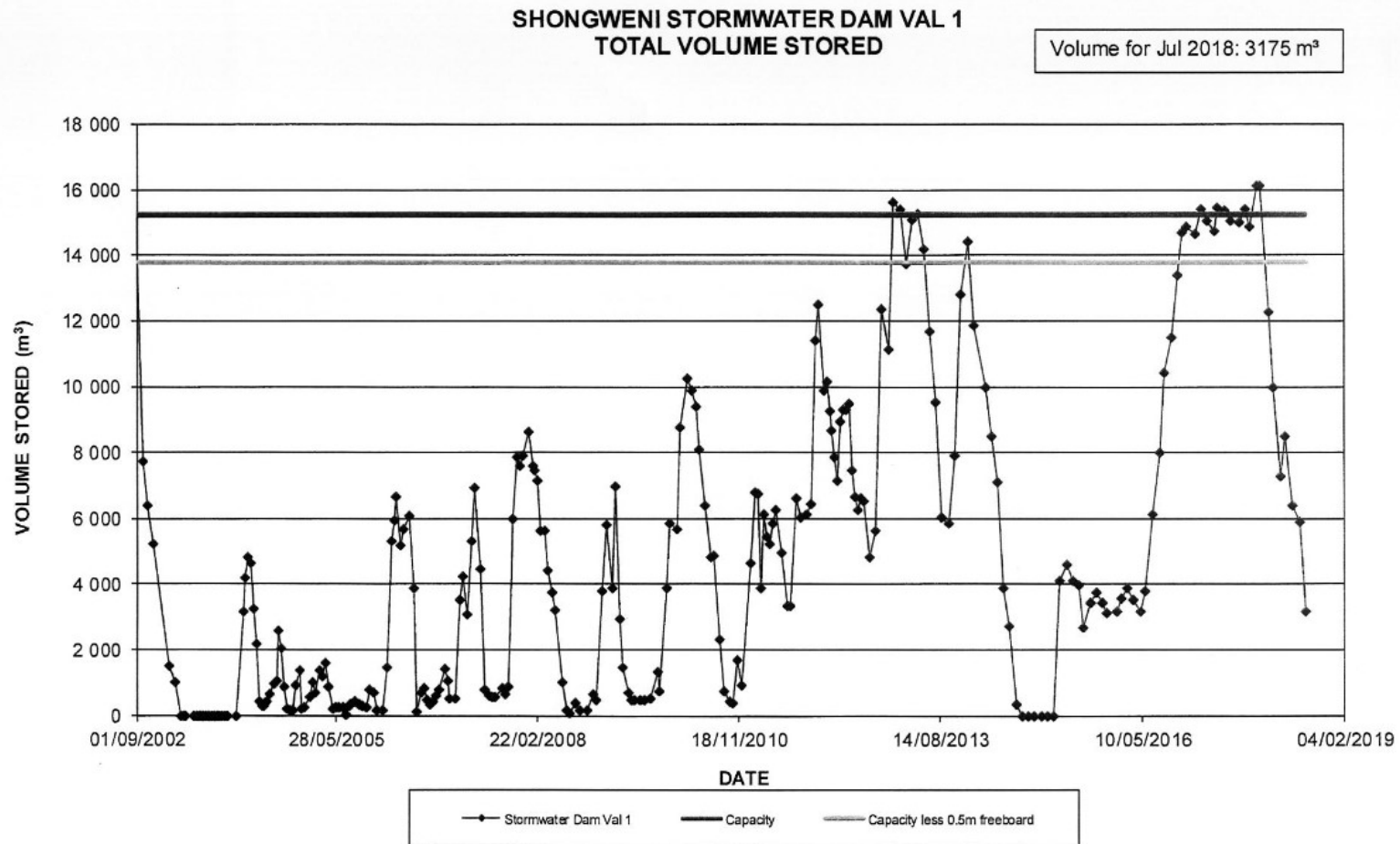
Jabulile Msiza PrEng
for Jones & Wagener

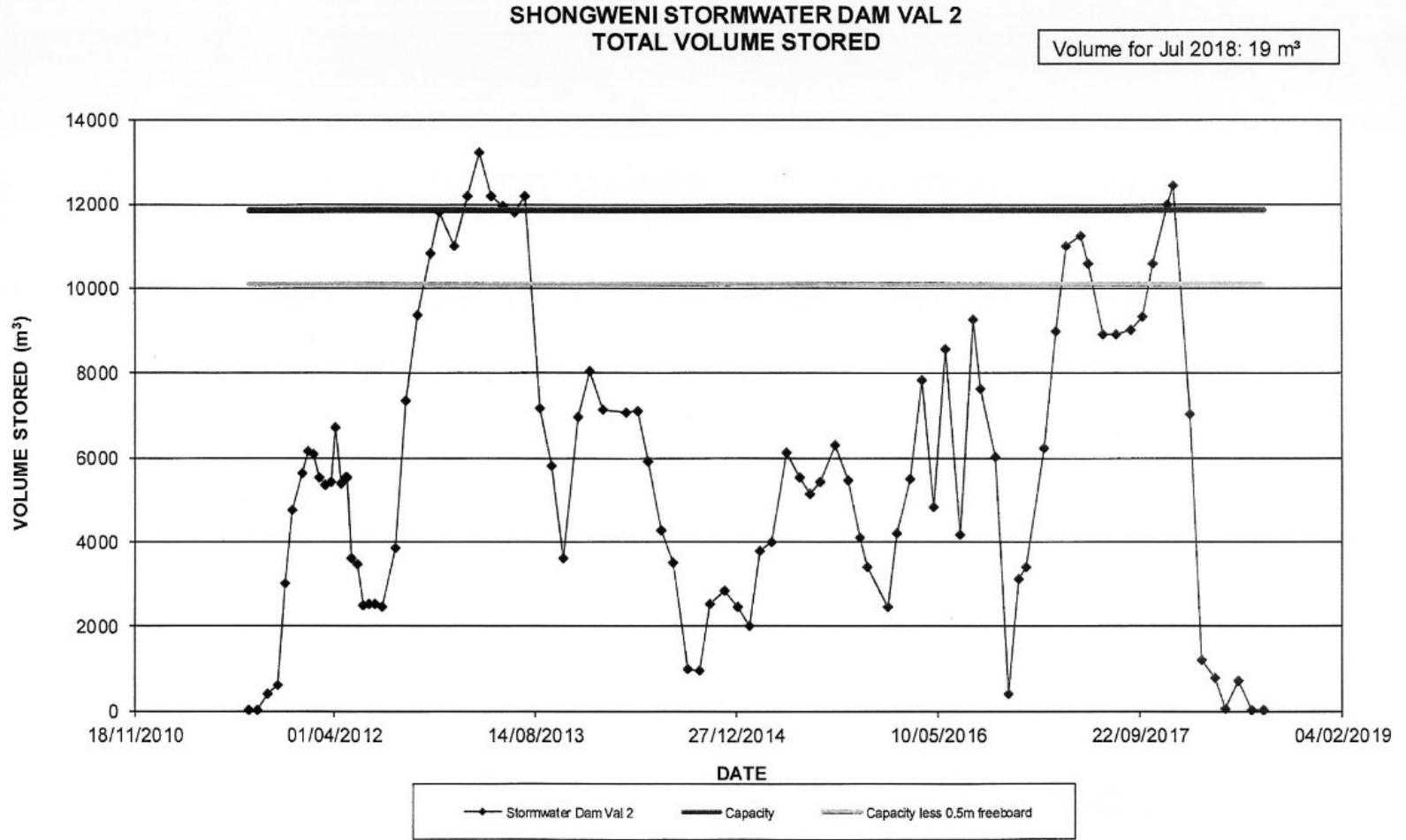
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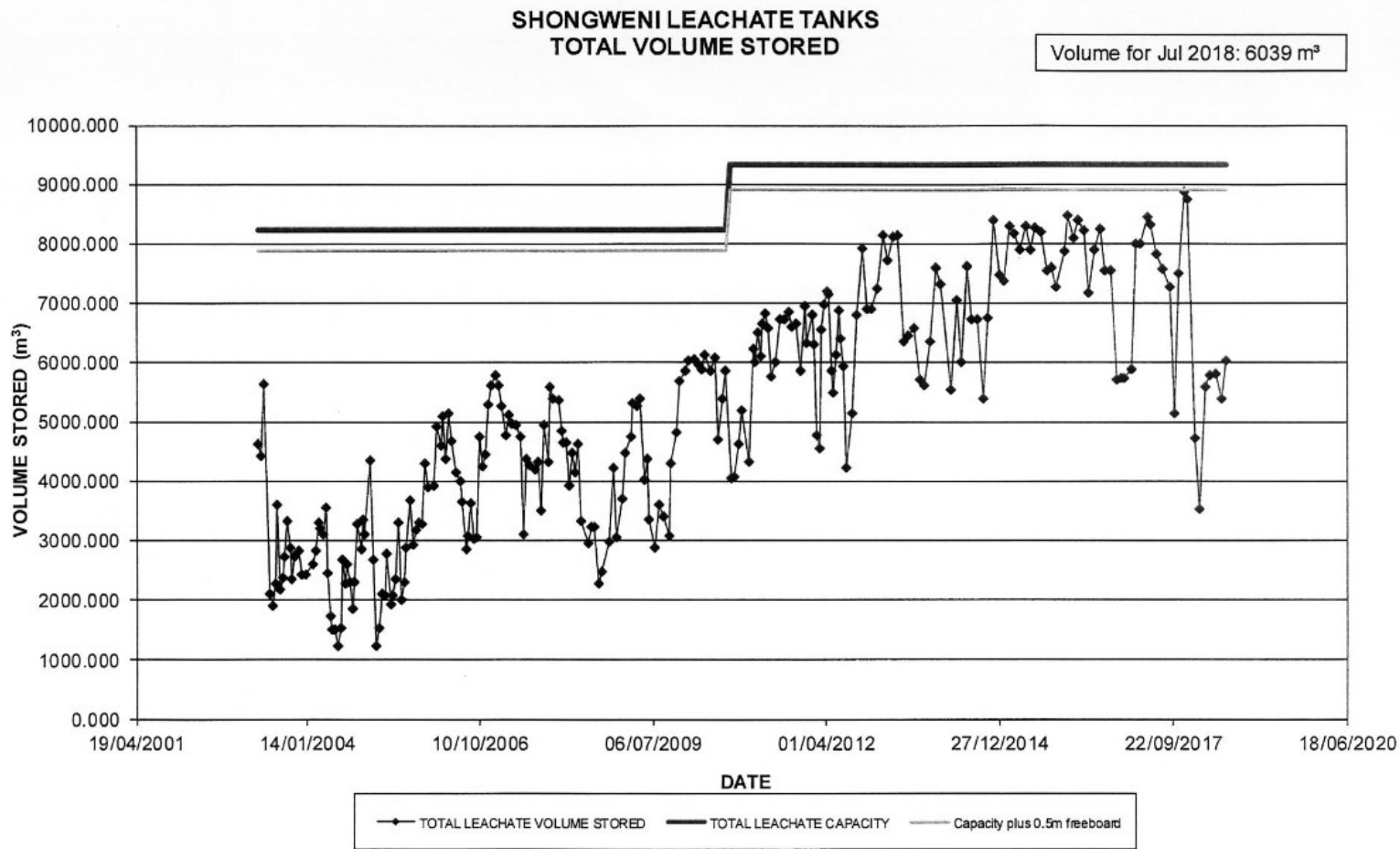
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Jones & Wagener (Pty) Ltd 
Engineering & Environmental Consultants










APPENDIX E: Biomonitoring of the Mgoshongweni tributary

ENVIROSERV
SHONGWENI LANDFILL SITE:

ROUTINE AQUATIC
BIOMONITORING OF THE
MGOSHONGWENI
TRIBUTARY



May 2018

PROJECT REF: GT0168_May_2018



GroundTruth
Water, Wetlands and Environmental Engineering

Head Office KwaZulu-Natal
P.O. Box 916, Hilton 3245, South Africa
Tel: +27 33 343 2229 - Fax: +27 86 599 2300
admin@groundtruth.co.za
www.groundtruth.co.za

Routine Biomonitoring
 EnviroServ - Shongweni Landfill Site

2018

Report Issue	Report Version 1		
Consultant Ref Number	GT0168_May_2018		
Title	EnviroServ Shongweni Landfill Site: Routine Aquatic Biomonitoring of the Mgoshongweni Tributary		
Prepared by:			
Consultant sign-off	Name / Prof. Reg.	Signature	Date
Author(s)	Juan Tedder Cert Soi Nat		
	Ayanda Lepheana		
Document Reviewer	Dr Vere Ross-Gillespie Pr Soi Nat		
Prepared for:			
Client sign-off	Name	Signature	Date
Document Reviewer			
Approved by			
Reference No			

Copyright

All intellectual property rights and copyright associated with GroundTruth's services are reserved and project deliverables¹ may not be modified or incorporated into subsequent reports, in any form or by any means, without the written consent of the author/s. Similarly, reference should be made to this report should the results, recommendations or conclusions stated in this report be used in subsequent documentation. Should this report form a component of an overarching study, it is GroundTruth's preference that this report be included in its entirety as a separate section or annexure/appendix to the main report.

Indemnity

The project deliverables, including the reported results, comments, recommendations and conclusions, are based on the author's professional knowledge as well as available information. The study is based on assessment techniques and investigations that are limited by time and budgetary constraints applicable to the type and level of survey undertaken. GroundTruth therefore reserves the right to modify aspects of the project deliverables if and when new/additional information may become available from research or further work in the applicable field of practice, or pertaining to this study.

GroundTruth exercises reasonable skill, care and diligence in the provision of services, however, GroundTruth accepts no liability or consequential liability for the use of the supplied project deliverables (in part or in whole) and any information or material contained therein. The client, including their agents, by receiving these deliverables indemnifies GroundTruth (including its members, employees and sub-consultants) against any actions, claims, demands, losses, liabilities, costs, damages and expenses arising directly or indirectly from or in connection with services rendered, directly or indirectly by GroundTruth.

¹ Project deliverables (including electronic copies) comprise *inter alia*: reports, maps, assessment and monitoring data, ESRI ArcView shapefiles, and photographs.

Executive summary

EnviroServ Waste Management contracted GroundTruth Water Wetlands and Environmental Engineering consultants (GroundTruth) to undertake the routine aquatic biological monitoring (biomonitoring) of the Mgoshongweni Tributary adjacent to the Shongweni Landfill site. The biomonitoring assessments analysed aquatic macroinvertebrates and benthic diatoms to assist in determining the impact of the landfill site on the neighbouring aquatic ecosystem.

The results from these assessments show that the sites upstream of the landfill and between the old and new cells (central site) are in a good condition. The main impact at these sites can be attributed to sedimentation and alien invasive plants. The site downstream of the landfill was found to be in fair condition, with the main impacts being sedimentation and limited indications of pollution (both physical and chemical).

Trend analyses from previous sampling events indicate that the downstream site generally remains in a condition worse than that of the upstream site. Water chemistry sample collection is recommended at the downstream site to identify what is polluting the water. Continual management of the sediment and run-off from the site is required, including the regular clearing of the sediment trap, maintenance of berms and roads and clearing of alien invasive plants from within the riparian areas.

Table of contents

Copyright.....	i
Indemnity.....	i
Executive summary.....	ii
Table of contents.....	iii
List of figures.....	iv
List of tables.....	iv
1 Introduction.....	1
2 Methods.....	2
3 Results.....	4
3.1 Summarised river health status of the upstream site.....	5
3.2 Summarised river health status of the central site.....	7
3.3 Summarised river health status of the downstream site.....	8
4 General site observations.....	11
5 Conclusions.....	12
6 References.....	13
7 Appendices.....	14

List of figures

Figure 1-1: Aerial view of the routine biomonitoring sites on the Mgoshongweni Tributary in relation to the EnviroServ Shongweni Landfill site..... 1

Figure 3-1: Biological monitoring summary of up and downstream river health.10

List of tables

Table 1: Biomonitoring site co-ordinates (decimal degrees) for routine biomonitoring of the Mgoshongweni Tributary 1

Table 2: SASS Score and ASPT used to define river health class boundaries for the North Eastern Coastal Belt (upper) Ecoregion level 1 (derived from Dallas, 2007) and diatom index scores for relevant health classes (derived from Harding and Taylor, 2011). 3

Table 3: River health classes and their attendant ecological and management perspectives (derived from Graham, 2007) 3

Table 4: Summary of the *in-situ* water physico-chemistry results recorded at up-, central and downstream sites of the EnviroServ Shongweni Landfill site on the 9th of May 2018 4

1 Introduction

At the request of EnviroServ, GroundTruth undertook an aquatic assessment of the Mgoshongweni Tributary, which runs adjacent to the Shongweni Landfill site, to determine if the landfill site is having a negative impact on the surrounding water resources and associated aquatic environment. Such an assessment is in line with the requirements of EnviroServ's landfill permit, which stipulates that potential impacts are routinely monitored. The Shongweni site is classified as a Class: H:h waste site meaning the site can accept hazardous waste.

Biomonitoring is routinely (biannually) undertaken on the Mgoshongweni Tributary up- and downstream of the landfill; the site details are reported in Table 1 and displayed graphically in Figure 1-1. The most recent sampling took place on the 09th of May 2018 and was the first sample for 2018. As of May 2018, an additional site has been included, the central site, the location of this site allows for the differentiation of impacts between the old and new cells.

Table 1: Biomonitoring site co-ordinates (decimal degrees) for routine biomonitoring of the Mgoshongweni Tributary

Site	South	East
Site upstream of landfill	29.82448	30.75250
Site central to landfill	29.82955	30.75398
Site downstream of landfill	29.83528	30.75768



Figure 1-1: Aerial view of the routine biomonitoring sites on the Mgoshongweni Tributary in relation to the EnviroServ Shongweni Landfill site.

2 Methods

Three sites on the Mgoshongweni Tributary were assessed, one upstream and another downstream of the landfill site and a third between the old and new cells (Table 1 and Figure 1). The downstream site is located approximately 1 km from the landfill site (Figure 1).

The water quality assessments consisted of water physico-chemical samples and biological monitoring (biomonitoring). Various bioindicators were used for the biological monitoring in order to assess the condition of the Mgoshongweni Tributary including macro-invertebrates and diatoms. Quantification of the status of the aquatic invertebrate biota at monitoring sites was performed using the SASS5 method (Dickens & Graham, 2002), accredited to ISO 17025, with ancillary measures of habitat availability for aquatic biota generated by the Integrated Habitat Assessment System (IHAS) version 2 of MacMillan (1998). Due to their lower dependence on diverse aquatic habitats, benthic diatoms (algae) can provide additional information with respect to the specific impacts associated with modified water quality (De La Rey *et al.*, 2004). In addition to the SASS5 indices, benthic diatom samples were therefore collected and analysed to provide an indication of the present water quality status in the river. Data from the diatom samples are interpreted according to the Specific Pollution Sensitivity Index (SPI, Taylor *et al.*, 2007; Harding and Taylor, 2011) to assess the "health status" of the river at each of the sites. The Percentage Pollution Tolerant Valves (% PTV) and percentage deformed cells were also determined for each of the samples. The percentages of pollution tolerant valves are the proportion of diatoms within a sample that tolerate organic pollution and the deformed cells provide a measure of inorganic pollution impacts, these measurements give a further indication of water quality within a river system.

Depending on the occurrence of different aquatic taxa which have different pollution tolerance ratings, each bioindicator assessment provides an indication of the state of health of the river. Generally, the higher the index (e.g. SASS score, ASPT, or SPI) the better the health, or condition, of a river (Table 2). Reference sites for respective Ecoregions as well as those data available from the University of the North West and the South African Diatom Collection, were used to establish the benchmark against which to measure the current "state" or "river health" of monitored sites. The two SASS5 sites on the Mgoshongweni Tributary fell within the North Eastern Coastal Belt Ecoregion according to the SASS interpretation guidelines (Dallas, 2007) the SASS and ASPT scores for each Ecstatus category are presented in Table 2 for comparison with the data collected from the up- and downstream sites. The Percentage Pollution Tolerant Valves (% PTV) were also determined for each of the samples.

To assist in the interpretation of the biological surveys, *in-situ* water physico-chemical readings were collected at each site for pH, conductivity, dissolved oxygen and temperature. Water clarity, a surrogate indicator of turbidity, was measured using a water clarity tube.

Table 2: SASS Score and ASPT used to define river health class boundaries for the North Eastern Coastal Belt (upper) Ecoregion level 1 (derived from Dallas, 2007) and diatom index scores for relevant health classes (derived from Harding and Taylor, 2011).

River health class		Indices		
		SASS	ASPT	SPI
Natural	≥	180	7.3	17
Good	≥	158	6.8	13
Fair	≥	118	6.3	9
Poor	≥	95	5.5	5
Seriously Modified	<	95	5.5	5

A more detailed description of the various river health classes and their ecological and management perspectives is provided in Table 3.

Table 3: River health classes and their attendant ecological and management perspectives (derived from Graham, 2007)

Ecological category	River health classes	Ecological perspective	Management perspective
A	Natural	No or negligible modification of instream and riparian habitats and biota.	Protected rivers; relatively untouched by human hands; no discharges or impoundments allowed.
B	Good	Ecosystems essentially in good state; biodiversity largely intact.	Some human-related disturbance but mostly of low impact potential.
C	Fair	A few sensitive species may be lost; lower abundances of biological populations may occur.	Zones of competing uses; developmental pressures are dominant feature.
D	Poor	Habitat diversity and availability have declined; mostly only tolerant species present; species present are often diseased; population dynamics have been disrupted (e.g. biota can no longer breed or alien species have invaded the ecosystem).	Often characterised by high human densities or extensive resource exploitation. Management intervention is needed to improve river health – e.g. to restore flow patterns, river habitats or water quality.
E	Seriously Modified	Loss of habitat availability and high levels of pollution, result in few families being present due to the loss on most intolerant forms.	Often characterised by high human densities, pollution or extensive resource exploitation and modification. Management intervention is needed for improvement to occur.

The biomonitoring was undertaken on the 09th of May 2018 by a Department of Water and Sanitation accredited SASS5 practitioner (Appendix A).

3 Results

In-situ water physico-chemistry results are summarized in Table 4. Detailed site assessments (including site photographs) and biomonitoring results are presented below.

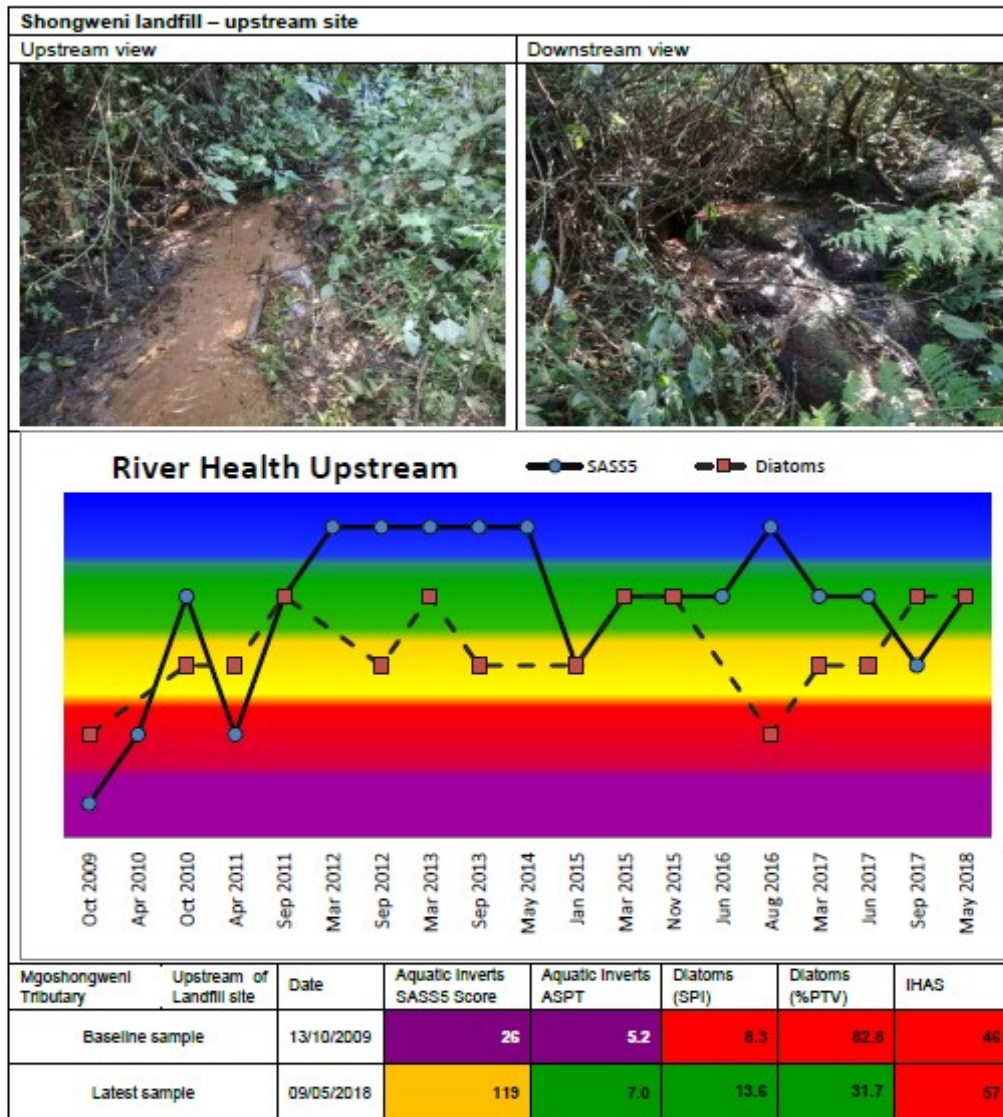
Table 4: Summary of the *in-situ* water physico-chemistry results recorded at up-, central and downstream sites of the EnviroServ Shongweni Landfill site on the 9th of May 2018

Determinant	Upstream site	Central	Downstream site
pH (pH units)	7.45	7.48	7.62
Conductivity (mS/m)	23.2	26.6	28.4
Dissolved oxygen (%)	9.1*	8.4*	9.0*
Dissolved oxygen (mg O ₂ /L)	1.12*	1.06*	1.16*
Temperature (°C)	6.42	5.44	5.76
Clarity (cm)	53	73	>100

*sensor fault results not accurate

Water quality parameters sampled at up and downstream of landfill sites including the new site during the May 2018 sampling, fall within the guideline target water quality ranges for aquatic ecosystems (DWAF, 1996). There was an increase in pH, conductivity and clarity at each site consecutively with increasing downstream distance from the landfill. This indicates an increase in dissolved salts but a decrease in the suspended solids as the stream passes the landfill. The clarity at the downstream site was almost double that of the upstream site, this is likely due to the dam and some dense vegetation located between the sites helping to settle out the suspended solids. There was a small decrease in the conductivity at the up- and downstream sites compared to the September 2017 sample.

3.1 Summarised river health status of the upstream site



Present health status



This site is located upstream of the landfill and is surrounded by a mixture of natural and invasive exotic vegetation (e.g. bugweed, castor oil bush and bramble). Due to the dense vegetation and shallow water level at the site, sampling was difficult. However, the biological indicators revealed the site to be in a good condition. There were few taxa found during the SASS5 sampling but several sensitive taxa were present (i.e. Perlidae, Platycnemidae, Philopotamidae and Helodidae) and indicate that the water quality is in a good condition at the

site. There was little change in the overall macroinvertebrate scores compared to the June and September 2017 samples. The diatom SPI results show the site to be in a good condition. The overall condition for the site is considered to be good.

Impacts and threats

- Erosion from the platform to the west of the sampling point. Leading to sedimentation and loss of habitat
- Alien invasive plants in the riparian areas reducing overall natural diversity and ground cover.

3.2 Summarised river health status of the central site

1. Shongweni landfill –site 3							
Upstream view				downstream view			
							
Mgoshongweni Tributary	Downstream of Landfill site	Date	Aquatic Inverts SASS5 Score	Aquatic Inverts ASPT	Diatoms (SPI)	Diatoms (%PTV)	IHAS
Baseline sample		09/05/2018	75	5.36	13.5	2.8	60

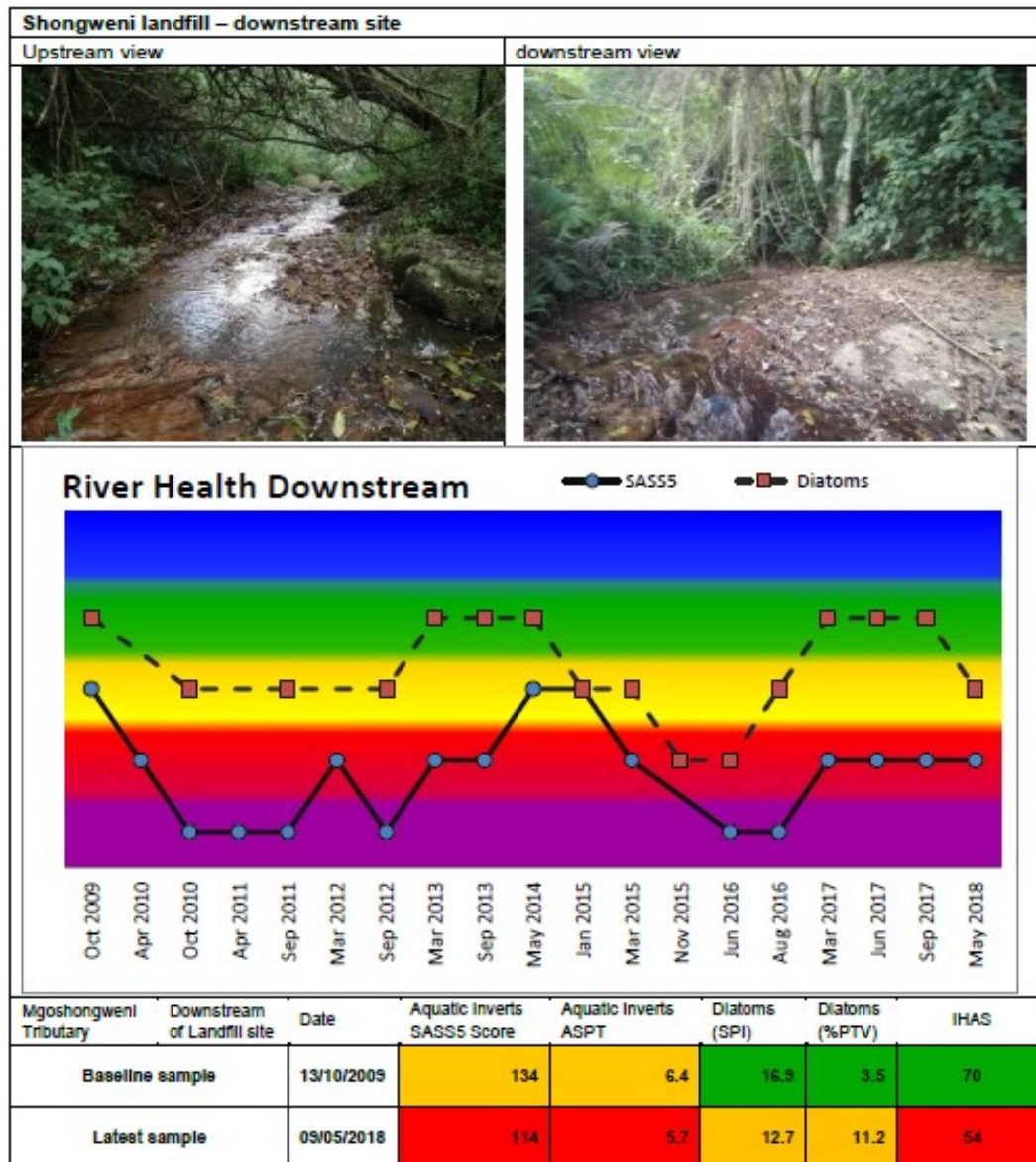
Present health status

This is the first time the central site has been assessed as part of the routine monitoring. The site is located downstream of the currently active cells but upstream of the confluence with the neighbouring valley where the previously active cell is located. The habitat was very limiting and the habitat that was present is preferred by taxa that are generally hardier e.g. Oligochaete, Potamonautidae, Chironomidae and Simuliidae. Due to the limited habitat the SASS results showed the site to be seriously modified. However, of the few taxa found during the SASS5 sampling, two were moderately sensitive taxa namely, Philopotamidae and Athericidae, both of which have a preference for the habitat found at the site. This suggests that habitat more than water quality is driving the low scores. The diatom SPI results which are less influenced by habitat, show the site to be in a good condition. The overall condition for the site is considered to be good.

Impacts and threats

- Sedimentation from upstream and the surrounding valley.
- Potential pollution from the landfill site (including solid waste).
- Alien invasive plants in the riparian areas reducing overall natural diversity and ground cover.

3.3 Summarised river health status of the downstream site



Present health status

The downstream SASS score was similar to that of the upstream site but with far fewer sensitive taxa present. The SASS results indicate the site is in a poor condition a trend which has continued since March 2017. There was a minor decline in the diatom results compared to the upstream and central sites with the downstream site diatom score being classed as fair. Overall the condition of this site is considered to be fair.

Impacts and threats

- Sedimentation from upstream and the surrounding valley.
- Potential pollution from the landfill site (including solid waste).

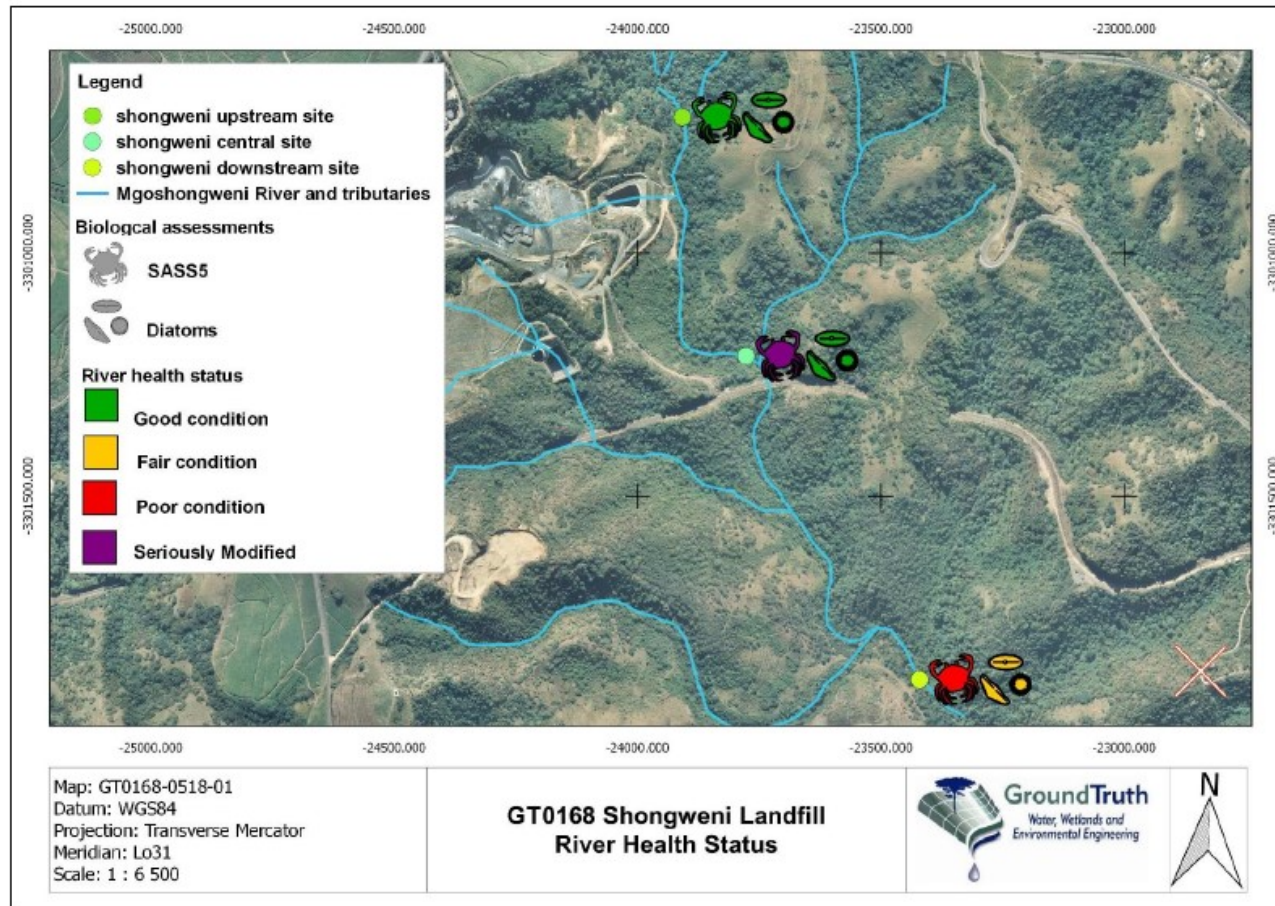





Figure 3-1 Biological monitoring summary of up to downstream river health.

4 General site observations

		
<p>A) Sand trap has been increased in size and is being maintained. Additional gravel berm in place to reduce run-off</p>	<p>B) New gabion baskets adjacent to sand trap, completed and functioning.</p>	<p>C) Cleaner water entering sand trap. Note no discoloration of concrete drain.</p>

5 Conclusions

The up- and downstream results for May 2018 showed little change from the June and September 2017 sample events with upstream site remaining in a good condition, while downstream showed a minor decline into a fair condition. The newly sampled central site was found to be in a good condition. The conclusions and recommendations from the latest sampling event are:

- The tributary of the Mgoshongweni River upstream of Shongweni Landfill site is in a good condition upstream and downstream of the currently active cell.
- The physico-chemical results show a minor increase in electrical conductivity in a downstream progression.
- More detailed water chemistry samples should be collected during the next sampling event from the downstream site to identify the cause of the generally lower health score found at the site.
- The tributary is still receiving sediments as a result of continual erosion and run-off from the landfill site.
- Sedimentation and run-off emanating from the area under the control of EnviroServ requires continued management and attention. This is owing to the negative impacts observed on the receiving river environment.
- Measures have been put in place to mitigate the sedimentation concerns, these are being managed. However, regular clearing of the sediment trap, maintenance of berms, drains and roads and control of alien invasive plants within the riparian areas needs to be continued and improved upon.

6 References

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7 Appendices

Appendix A – SASS5 Accreditation Certificate



Routine Biomonitoring
EnviroServ Shongweni Landfill Site

2018

Appendix B – Upstream Biological data 2009 to September 2017

River	Site Description	Date	Aquatic Inverts SASS5 Score	Aquatic Inverts ASPT	Diatoms (SPI)	Diatoms (%PTV)	IHAS	River Health Status
Mgoshongweni Tributary	Upstream of Landfill site	10/13/2009	26	5.2	8.3	82.8	46	Poor
		4/8/2010	61	6.1	Contaminated by sediment		47	Poor
		10/5/2010	135	7.1	10.8	57.4	60	Good
		4/29/2011	86	6.1	12	31	57	Fair
		9/22/2011	102	6.8	13.3	21.5	63	Good
		3/20/2012	96	8.0	Insufficient cells to generate score		63	Natural
		9/21/2012	113	7.5	9.2	72.5	63	Natural
		3/7/2013	134	7.4	13.7	17	63	Natural
		9/10/2013	130	7.7	9.2	61.9	68	Natural
		5/9/2014	123	7.7	Insufficient cells to generate score		56	Natural
		1/8/2015	112	6.6	12.3	26.6	60	Fair
		3/20/2015	121	7.1	13.4	26.6	59	Good
		11/24/2015	156	7.1	13.9	39.2	65	Good
		6/21/2016	105	7.0	Insufficient cells to generate score		50	Good
		8/23/2016	125	7.4	8.3	51	50	Natural
		3/24/2017	101	7.2	9.3	45.2	55	Good
		21/06/2017	102	7.3	12.7	53.3	54	Good
		11/09/2017	133	6.7	13.7	17.7	54	Good

Routine Biomonitoring
 EnviroServ Shongweni Landfill Site 2018

Appendix C – Downstream Biological data 2009 to September 2017

River	Site Description	Date	Aquatic Inverts SASS5 Score	Aquatic Inverts ASPT	Diatoms (SPI)	Diatoms (%PTV)	IHAS	River Health Status
Mgoshongweni Tributary	Downstream of Landfill site	10/13/2009	134	6.4	16.9	3.5	70	Good
		4/8/2010	60	6.0	Contaminated by sediment		48	Poor
		10/5/2010	75	5.0	10.6	38.9	48	Fair
		4/29/2011	51	5.1	Contaminated by sediment		47	Seriously Modified
		9/22/2011	67	4.8	11.2	37.6	58	Fair
		3/20/2012	41	5.9	Insufficient cells to generate score		57	Poor
		9/21/2012	44	4.0	10.2	40.9	57	Fair
		3/7/2013	73	5.6	13.4	4.7	66	Good
		9/10/2013	94	5.9	16.3	1.5	69	Good
		5/9/2014	112	6.6	13.3	4.6	53	Good
		1/8/2015	45	6.4	12.3	12.2	51	Fair
		3/20/2015	76	5.9	9.3	56.9	56	Fair
		11/24/2015	NA	NA	8.2	50.9	NA	Poor
		6/21/2016	29	4.1	3.9	93.6	53	Seriously modified
		8/23/2016	28	3.6	10	32	53	Seriously modified
		3/24/2017	79	5.6	14.7	1.6	54	Good
		06/21/2017	64	5.8	13.2	11.7	56	Good
		09/11/2017	113	6.3	14.0	0.5	54	Good

APPENDIX F: Complaints register

COMPLAINTS: JUNE 2018								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
Stop poisoning our homes your end will come. Your remediation didn't fix the problem. That the DEA minister is a criminal. This is seems like a government agenda to make us leave or die. We're suffering every day, every night. You people are devils. The air is unbearable, my skin burns, my lungs hurts, I'm sick you are guilty of never ending torture and destruction. You may think you will get away with these acts of abomination thanks to your freemasonic gods and your father the devil, but you're in for a surprise when your shit vapour of a life is over and then the judgement.	-	27-Jun-18	5h55	Shongweni contact Us request - No reply email	OM			

COMPLAINTS: MAY 2018								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
Enough is enough??? You never stop, my air is unbearable, you have destroyed my life. You are destroying thousands of lives. Murderers. Years of agony , years of torment and torture. Stop releasing chemicals into the air. Toxic odourless gasses consume the air 24/7 you may have the majority fooled but i'm dying here. what is your agenda? I highly suspect that this is a Government sponsored soft kill conspiracy. Wicked, Evil the devil eats his own. If you are flaring, stop . I bealive that flaring is releasing poison into the air. Many chemicals engineers had warned against flaring , but you went ahead with it and intensified the poison. If one of you has a touch of morality, help us! You have no idea how extreme this has been, we are doomed & it never end.	00000000@000000.000	05-May-18	18h01	CAS-245169-S6N8N7	OM			Message from global call centre

<p>Stop polluting our air. Air is bitter, acidic, Deadly, AHHHHHHH! STOP! What are you doing to us? You murderous trash. Fix this mess, stop destroying us, I can't live like this! We have to endure this wrath every minute of every day and every night. This abuse is the most inhumane, cruelty I've ever been afflicted. The most unjust situation the most evil thing that has ever come over the upper highway area. This war you're waging has to end, chemical, warfare is a crime that calls for military intervention and a death penalty! Your day will come! We are dying here! And you never stop. Lying denying postponing, What the hell are you? Stop poisoning us. How can you ever get away with this? Your time will end . Fix it now!</p>	<p>enviroservwillpa.y@enoughofthiswar.com</p>	<p>07-May-18</p>	<p>10h34</p>	<p>CAS-245204-J3Q6Z3</p>	<p>OM</p>			<p>Message from global call centre</p>
<p>The air was extreme this morning. Acidic, bitter, brain eating air. This is what you serve us every day, every night. Enough, Fix this problem, stop destroying our lives! I wish you could experience what you have forced us to experience.</p>								
<p>Hi, once again I've been woken up by the chemical smell which is no doubt coming from your site. I love sleeping with my window open with a fresh breeze blowing in, but it's now no longer possible these days. I usually sleep through anything but this is bad! It's mother's day, I was hoping to sleep in a bit but now this has ruined it. I will be taking this further Sanet Hoyle Kloof</p>	<p>-</p>							

COMPLAINTS: APRIL 2018								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
Firenze estate absolutely stinks of your EnviroServ smell. You are a disgrace to our beautiful community.	S. Commons contact no. '0845109795	02-Apr-18	23h34	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	NW	Plantations 61 Firenze
Bad smell at Shongweni landfill site.	Mrs Haddon-0836537075	03-Apr-18	10h51	CAS-234999-M2B0L1 Message from global call centre	OM	2.2	SSW	74 Ashley DR Gillits
Bad toxic smell. Consistent with the EnviroServ dump, smell always experienced.	0837089157 Sharon VD Westhuizen.	04-Apr-18	17h05	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.3	NE	9 Bowles Road Assagay
I'm in Hillcrest this dump is ridiculous. It stinks and is making us sick. Why put a dump here? Our eyes are sore and we have sinus problems. This is ridiculous. Everyone's health is getting worse. Not just my family but everyone in Hillcrest. Disgusting.	HUDSON.MONLOU@gmail.com	10-Apr-18	10h08	CAS-236723-Z0C9G9 CRM:0001551 Message from global call centre	OM		SOUTHERLY	Hillcrest
You have been waging war upon us. Fix the air, we are suffering 24/7. The toxicity have been unbearably since the Easter weekend 2018. You are destroying us you have no idea how much destruction you have caused our lives! What have you changed? The air is bitter, acidic, the chemicals are attacking my veins, fogging my mind! The air has been very bad 24/7 since August 2017. You people are evil, your judgemental Day will come.	governmentenviro.servagenda@weknowthetruth.wvky	15-Apr-18		CAS-239443-V3R5Z9	OM			Message from global call centre

<p>Hello I detected the odour which is related to the landfill....both while here in St Helier yesterday and today during the southerly breeze and rain, and also while in Shongweni road earlier today. It has affected our sinuses negatively and is extremely unpleasent. Please continue in your efforts to eradicate this problem. Regards Lynda</p>	<p>mosslynda7@gmail.com</p>	<p>16-Apr-18</p>		<p>CAS-238739-D3B0G0</p>	<p>OM</p>			<p>Message from global call centre</p>
<p>Please call Edwards complaining about the odour coming from the landfill .</p>	<p>Edwards 083 407 3174</p>	<p>19-Apr-18</p>	<p>10h00</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>			<p>Bothashill Durban</p>
<p>Stop releasing poison into our air! The air is toxic all day every day. My insides are burning from your murderous activity. You have made us suffer for a very long time. You never stop poisoning us. Just STOP!</p>	<p>tes2321@hotmail.com</p>	<p>26-Apr-18</p>		<p>CAS-241647-S3G3B7</p>	<p>OM</p>			<p>Message from global call centre</p>
<p>Stop torturing Us! Your authority will come to an end and you will forever regret your wicked actions. Wehave suffered at your foolish hands for too long. Stop poisoning us, you have caused infinite destruction . Denial, lies, delay you all have your true judgement. Enough with this evil! the air is never clean , we suffer day and night . Shut down, clean the landfill , cap it how much more torment do we have to endure? Your judgement day will come and you will all regret your wicked deeds.</p>	<p>enoughtorture@youwillregret.com</p>	<p>30-Apr-18</p>	<p>09h22</p>	<p>CAS-241696-F0V7Y9</p>	<p>OM</p>			<p>Message from global call centre</p>

<p>To Dean Thompson the most unethical non caring person. All of the staff that work here are no better than the people that assisted in the Nazi camps. The Shongweni site in KZN is making people ill, making their lives unhappy, yet this company and its leaders and staff put profit before the health of its workers or the surrounding community. All of you are in denial, the dump is making people ill-plain and simple. The leaders in this company should hand their heads in shame, how can you be doing this to people for so long and trying to hide behind lawyers to defend this injustice? Just remember the wheel always turns in some form or another and what goes around comes arronds. Do the right thing close this site, rehabilitate the site and assist the surrounding communities whose health has been affected.</p>	<p>Anonymous</p>	<p>30-Apr-18</p>	<p>16h18</p>	<p>CAS-242725-Q9P2R1</p>	<p>OM</p>			<p>Message from global call centre</p>
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COMPLAINTS: MARCH 2018								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
Bad smell back Springdale Road	0832392368 L.King	01-Mar-18	6h40	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.8	SW	Kloof Durban
Bad smell back Springdale Road again. Please, please stop the stink.	0832392368 L.King	04-Mar-18	7h50	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	WSW	Sprindale RD Kloof
Bad smell back in Hillcrest Hospital area again. Please, please stop.	0832392368 L. King	05-Mar-18	8h55	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	ESE	Hillcrest Hospital
Your smell is here. Get your act together. You are a despicable company.	S. Commons contact no. '0845109795	08-Mar-18	20h58	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.2	SW	Plantations 61 Firenze
Firenze estate absolutely stinks of your EnviroServ smell.	S. Commons contact no. '0845109795	22-Mar-18	18h14	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.4	SW	Plantations 61 Firenze
Firenze estate absolutely stinks of your EnviroServ smell. Your time will come.	S. Commons contact no. '0845109795	22-Mar-18	19h10	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SW	Plantations 61 Firenze

COMPLAINTS: FEBRUARY 2018								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
Awoke to My house stinking of your EnviroServ smell. What a disgrace.	S. Commons contact no. '0845109795	05-Feb-18	7h08	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	NNE	61 Firenze Plantations
The odour from Shongweni Dump is too awful this morning.	0829268312 Pauline Cres	13-Feb-18	6h40	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	SSE	Summerveld
Terrible smell Summerveld Road	0824038470	13-Feb-18	07h45	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	NW	Summerhill Road
More odour coming EnviroServ 14,15,16 Feb 2018 lasting most of the day . Drove down to the EnviroServ property to check and it is definitely coming from there. Particular bad at around 12 noon today. From D Lindsay Pauline Crescent.	0829268312 Pauline Cres	16-Feb-18	15h31	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	3.1	ENE	Summerveld
Any idea when you people are going to get rid of the stench in the upper highway. I'll take you a bet I don't hear back from you people..... DISGUSTING!!	0825509438 Scotts Gamley	19-Feb-18	8h25	Message from global call centre CAS-223287-V1Y3J8	OM	2.2	SSW	Gillits

<p>Odour from EnviroServ Shongweni dump is extremely strong. No wind but slightly misty. Horrific strong chemical smell causing burning eyes, nose and coughing. Everyone is complaining about a nauseous feeling. My cat has refused his food this morning. Obviously affecting animals too. I wonder what affect it is having on the horses galloping on the track at Summerveld this morning.</p>	<p>0829268312 D.Lidsay</p>	<p>20-Feb-18</p>	<p>07h55</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>0</p>	<p>NE</p>	<p>47 Pauline Crescent Summerveld</p>
<p>Smell prevailed all day yesterday in Summerveld resulted in coughing, sneezing, burning eyes and nausea.</p>	<p>0829268312 D.Lidsay</p>	<p>21-Feb-18</p>	<p>10h02</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>0.4</p>	<p>E</p>	<p>47 Pauline Crescent Summerveld</p>

COMPLAINTS: JANUARY 2018								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
South wind blowing your disgusting smell into our home.	S. Commons contact no. '0845109795	01-Jan-18	17h08	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	4.9	SSW	61 Firenze Plantations
I have lived in 2 Millar place for almost 10 years this is the first time that the stench from? Shongweni waste has hit us it even seems to have effected our dogs who were reluctant to leave the house . They usually rush out barking at all and sundry . This contaminated air can only be harmful to all living beings.	0827700009 Mrs J. Davey	08-Jan-18	15h37	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.2	SW	2 Millar place
The air in the upper highway is rotten this morning . You are killing us and making us sick . I wanted to hang my washing out this morning and go for a run but I can do neither due to foul stinking air from your Shongweni landfill.	CRM Notification	08-Jan-18	15h46	Message from global call centre. CAS-206692-M9T6H0	OM			Upper highway
Plantations stinks of your EnviroServ smell. Almost 2000 complaints in one day. You are despicable .	S. Commons contact no. '0845109795	08-Jan-18	18h54	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.7	S	61 Firenze Plantations
Bad smell back spring dale road Kloof.	0832392368	09-Jan-18	7h37	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	3.1	WSW	Springdale road Kloof

Bad smell back spring dale road Kloof .it is not fair that we have to put up with this just so that some people can make money. They have made sure they do not live in the area. Please stop the stink.	0832392368 Louis King	09-Jan-18	10h18	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.3	WSW	Springdale road Kloof
Plantation estates absolutely stinks because of your EnviroServ smell. When will you stop doing this?	S. Commons contact no. '0845109795	11-Jan-18	20h09	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	6.7	ENE	61 Firenze Plantations
Plantations stinks of your EnviroServ smell. You are the most atrocious company. There are no words to describe your actions.	S. Commons contact no. '0845109795	14-Jan-18	8h52	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	SE	61 Firenze Plantations
Firenze plantations absolutely stinks of your EnviroServ smell.	S. Commons contact no. '0845109795	14-Jan-18	11am	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.8	E	61 Firenze Plantations
Mythos restaurant Hillcrest. You ruined our evening there with the smell and now we come home to the smell. You are just the pits. I am furious .	S. Commons contact no. '0845109795	20-Jan-18	22h50	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	NNW	61 Firenze Plantations
I would like to formally lodge the following complaint with you as all our previous complaints have been lodged via Upper highway air which in turn are as I understand distributed to yourselves and the DEA . We live in Kloof KZN and been negatively affected by the stench emanating from your landfill site for a long time now however the problem is getting worse and NOT better as may be portrayed in some media. As I'm sure you are well aware, this has been going on for far too long. I for one (there are too many of us) I'm sick and tired of having to put my children to sleep with all windows	0828271200 email:jon@fine metals.co.za	24-Jan-18	13h56	Message from global call centre. CAS--215527-H4Y2V2	OM	0.4	W	Kloof KZN

<p>tightly shut in anticipation of the usual nightly onslaught emanating from your site not to mention having to foot family medical bills to the tune of many thousands of rands and the sheer unpleasantness of the stench itself. Even if you don't want to fix the problem for the right reasons, surely by now you realise your reputational damage cannot go unnoticed? I mean any half responsible. CEO would see this and take the necessary action without trying to shift blame or attempts at dividing the community. Rest assured, while we may be only one family, we will do everything in our power to see that this issue is resolved, no matter what it takes. The greater community are as charged as ever to see this fight through to the end. I trust this will be forwarded to senior management for response. DO THE RIGHT THING!</p>								
<p>Estate absolutely stinks of your EnviroServ smell. Woke up to your disgusting smell into our home</p>	<p>S. Commons contact no. '0845109795</p>	<p>25-Jan-18</p>	<p>6h31</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>0.9</p>	<p>W</p>	<p>61 Firenze Plantations</p>
<p>Started approx midnight .Still this morning. Blocked sinus .Disgusting smell.</p>	<p>0834175039</p>	<p>25-Jan-18</p>	<p>15h12</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>0.9</p>	<p>NE</p>	<p>7 Springdale road Kloof</p>
<p>Dreadful smell rom the dump. Very unpleasant</p>	<p>0834175039</p>	<p>25-Jan-18</p>	<p>20h44</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>2.2</p>	<p>W</p>	<p>7 Springdale road Kloof</p>
<p>Estate absolutely stinks of your EnviroServ smell. Shocking company but no problem you will face your judgement.</p>	<p>S. Commons contact no. '0845109795</p>	<p>25-Jan-18</p>	<p>17h10</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>2.7</p>	<p>SW</p>	<p>61 Firenze Plantations</p>

Estate absolutely stinks of your EnviroServ smell .Why must we be subjected to this.It is totally unacceptable. You are shocking company.	S. Commons contact no. '0845109795	28-Jan-18	18h30	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	E	61 Firenze Plantations
Estate absolutely stinks of your EnviroServ smell . You are the most despicable company you and your directors should be ashamed of your actions.	S. Commons contact no. '0845109795	30-Jan-18	19h40	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	W	61 Firenze Plantations
Estate absolutely stinks of your EnviroServ smell. Your onslaught is relentless. God sees your actions . Don't worry -he will judge your disgraceful actions.	S. Commons contact no. '0845109795	30-Jan-18	21h35	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.2	WSW	61 Firenze Plantations
Firenze plantations absolutely stinks of your EnviroServ smell.	S. Commons contact no. '0845109795	31-Jan-18	7h37	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.8	SW	61 Firenze Plantations

COMPLAINTS: DECEMBER 2017								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
Estate absolutely stinks of your EnviroServ smell.	S. Commons contact no. '0845109795	01-Dec-17	17h39	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	E	61 Firenze Plantations
Terrible smell from the landfill site again. He is really upset and state that nothing gets done . He also says he has EnviroServ equipment in his property measuring the smell.	Gordon Jarvis '0823231189	04-Dec-17	9h50	Message from global call centre. CAS-186186-W3B5J2	OM	0.4	SE	1B Mount Batten Place , Winston Park Gilletts
Very bad sulpher smell like odour causing pain in the chest.	Errol Van Wyk '0834603947 or 0317652184	04-Dec-17	9h46	Message from global call centre. CAS-15273-M8W0Y7	OM	0.4	ESE	17 Angus Drive, Hillcrest
Please call Charmaine Eastment Southerly wind blowing and there is a very bad smell in the area.	Charmaine Eastment '0824599575	04-Dec-17	9h44	Message from global call centre. CAS-185004-T3M1H1 CAS -184974-N1G6K3	OM	0.4	ESE	Kearsney college Road Hillcrest
This is a second call - please call Chaimaine Eastment Southerly wind blowing and ther is a very bad smell in the area	Charmaine Eastment '0824599575	04-Dec-17	9h46	Message from global call centre. CAS-185294-Q6H4Z8	OM	0.4	ESE	Kearsney college Road Hillcrest
Plantation estate absolutely stinks of your EnviroServ smell. Absolutely disgraceful.	S. Commons contact no. '0845109795	05-Dec-17	21h02	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.2	SW	61 Firenze Plantations

Terrible odour in Summerveld hill Road worse through the night and early mornings. Cannot breath properly and feeling sick.	0824038470 Forder	06-Dec-17	7h28	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	SE	Summerveld hill Road , Summerveld
Complained about very strong sulphur smell in the area coming from the landfill.	Errol Van Wyk '0834603947 or 0317652184	06-Dec-17	10h50	Message from global call centre. CAS-186994-K5M3B8	OM	0.4	SE	17 Angus Drive, Hillcrest
Bad toxic smell.	0837089157 Sharon VD Westhuizen	06-Dec-17	13h08	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.4	ESE	9 Bowles Road Assagay
Plantation estate absolutely stinks of your EnviroServ smell.	S. Commons contact no. '0845109795	09-Dec-17	22h05	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	3.1	SW	61 Firenze Plantations
Plantation estate absolutely stinks of your EnviroServ smell. Absolutely disgraceful.	S. Commons contact no. '0845109795	11-Dec-17	20h47	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.3	WSW	61 Firenze Plantations
Very bad sulphur smell like odour coming from the landfill site.	Errol Van Wyk '0834603947	11-Dec-17	15h36	Message from global call centre. CAS-187486-G7H4B4	OM		SW	17 Angus Drive, Hillcrest
Is the Shongweni landill open and accepting any waste from sewer pipelines.	031-3118647 Ethekwini Municipality	11-Dec-17	15h34	Message from global call centre. CAS-187981-Y3N8G0	OM	0.4	ENE	Pls phone Rudie Nel at Ethekwini Municipality
Toxic fumes and bad smell coming from the dump.	Mr A.L. Immerman '0824501707	12-Dec-17	10h43	Message from global call centre. CAS-190630-H7G4G2	OM	2.7	ENE	Wiston park
In connection with bad odour	Mr Spencer '0835559996	12-Dec-17	10h45	Message from global call centre. CAS-19764-L4J7B0	OM	1.3	ENE	Wiston park

Terrible sharp smell last night , making the whole family ill. We have bad headaches , trouble breathing,eyes burning etc.	Sally Steyn	12-Dec-17	21H00	Message from global call centre. CAS-190176-B4B9Y9	OM	0	SSW	Hillcrest
Fumes and smell too strong .Want to know what is the plan to deal with this issue which is being going on for years.	Barbara Hanecen '0825700530	12-Dec-17	10h49	Message from global call centre. CAS-190922-G6T3D8	OM	0.4	SW	Augasta country estate Ashley Dr Gillits
EnviroServ landfill heavy rotten smell in the air .	Errol Van Wyk '0834603947 or 0317652184	12-Dec-17	11h23	Message from global call centre. CAS-190945-M3G1Q0	OM		S	17 Angus Drive, Hillcrest
There is a terrible smell. Have burning watery eyes & coughing . This is just shocking. How long must we live with this problem.	Joan Buchanan '0824496482	12-Dec-17	11h33	Message from global call centre. CAS-191098-Q1B5X6	OM	0.4	SSW	Hillcrest country retirement estate
The stench coming from Shongweni landfill .This is disgusting someone come and check this out . Prepare to take legal action will make sure that Judge Kruger who reside at the court gets EnviroServ equipment standing on my land as proof . Need an answer to this disgusting problem.	Gordon Jarvis '0823231189	12-Dec-17	12h09	Message from global call centre. CAS-189348-L5G4C4	OM	2.2	W	1B Mount Batten Place , Winston Park Gillets
Forest hill stinking from your landfill site again tonight making us all ill.	No contact number	12-Dec-17	12h15	Message from global call centre. CAS-189934-R2L3L2	OM	1.8	WSW	Forest hill
This morning when I open my back door KZN yet again enveloped in stench from Shongweni landfill site. I know the smell is from that site because I have been to the site and the obnoxious odour is instantly recognisable.	Val Adkin '0823551283	12-Dec-17	6h00	Message from global call centre. CAS-189923-N9V7Q1	OM			41 Krantzview Rd Kloof
Terrible toxic smell the usual one that we have.	S vd Westhuizen '0837089157	13-Dec-17	16h04	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SE	9 Bowles Road Assagay

Just got home and our entire home stinks of you.	S. Commons contact no. '0845109795	14-Dec-17	21h46	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	WSW	61 Firenze Plantations
Firenze plantations absolutely stinks of your EnviroServ smell. Absolutely disgraceful .	S. Commons contact no. '0845109795	14-Dec-17	6h51	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.8	SW	61 Firenze Plantations
Are you receiving my complaints? If so please have the decency to acknowledge them.	S. Commons contact no. '0845109795	14-Dec-17	15h03	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SSW	61 Firenze Plantations
Estate absolutely stinks of your EnviroServ smell. Absolutely despicable.	S. Commons contact no. '0845109795	14-Dec-17	18h39	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SW	61 Firenze Plantations
Bad smell in Summerhill	Forder '0824038470	14-Dec-17	12h30	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SE	Summerveld hill Road , Summerveld
Once again !! Terrible odour . Burning skin	Forder '0824038470	14-Dec-17	16h00	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	S	Summerveld hill Road , Summerveld
Plantations stinks of your EnviroServ smell. Shocking that you still won't accept that the smell is coming from your dump.	S. Commons contact no. '0845109795	18-Dec-17	20h35	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.3	S	61 Firenze Plantations
Plantations still stinking of your smell.	S. Commons contact no. '0845109795	18-Dec-17	21h18	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.3	SW	61 Firenze Plantations

Awoke to your putrid stench.	S. Commons contact no. '0845109795	19-Dec-17	4h37	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SSE	61 Firenze Plantations
Plantations estates absolutely stinks of your EnviroServ smell. Nothing has changed. You are despicable.	S. Commons contact no. '0845109795	19-Dec-17	20h08	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	WSW	61 Firenze Plantations
Horrid smell oozing in. Quite toxic closed doors and windows.	0833208960	19-Dec-17	21h52	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.3	WNW	8 Uplands Drive kloof
Bad bad stink Hillcrest hospital area and Hillcrest not again!!!	0832392368	19-Dec-17	9h41	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.3	WSW	Hillcrest hospital area
25 December at 7am there is no wind terrible smell. Very strong odour	0833208960	29-Dec-17	7h00	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	WSW	8 Uplands Drive kloof
28 December 2017 Smell lurking in and stinky Closing windows and doors.	0833208960	28-Dec-17	19h22	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.7	W	8 Uplands Drive kloof
Plantation estates stinks of your EnviroServ smell. You are despicable company. Absolutely unacceptable.	S. Commons contact no. '0845109795	29-Dec-17	19h22	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	ENE	61 Firenze Plantations

You are the most despicable company ever.	S. Commons contact no. '0845109795	29-Dec-17	9h12	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	WSW	61 Firenze Plantations
Can smell your disgusting odour in my home.	S. Commons contact no. '0845109795	30-Dec-17	19h03	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.7	WSW	61 Firenze Plantations
Stink setting in. Raining and now smelling very bad.	0833208960	30-Dec-17	19h08	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	3.1	WSW	1 Galloway Road Hillcrest
Bad bad stink Shongweni market area Very strong????	0832392368 Louis King	30-Dec-17	13h03	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	3.1	E	Shongweni market area

COMPLAINTS: NOVEMBER 2017								
DETAILS OF COMPLAINT / QUERY	COMPLAINANT NAME/ CONTACT NUMBER	DATE	TIME	ADDITIONAL COMMENTS	LOGGED BY	WIND SPEED m/s	WIND DIRECTION	Address
Plantations absolutely stinks of your putrid EnviroServ odour. Get your act together. Its disgraceful.	S. Commons contact no. '0845109795	01-Nov-17	22h34	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	NW	61 Firenze Plantations
Refinery smell. Awful.	S. Commons contact no. '0845109795	02-Nov-17	20h29	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	E	61 Firenze Plantations
Very bad odour at Summerveld . Burning skin nauseous with sore chest worse than ever.	0824038470	05-Nov-70	11H00	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.4	NE	Woodville Summerveld
The dump smell at Summerridge. Summerveld is unbearable at the moment .	0761259182 Melanie Jansen	05-Nov-17	20h58	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	E	Summerridge Road Summerveld
Bad smell today at Assagay.	0837089157	06-Nov-17	17h20	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.4	SSE	9 Bowles Road Assagay
Plantations abolutely stinks of your putrid EnviroServ odour. Its disgraceful.	S. Commons contact no. '0845109795	06-Nov-17	20h40	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	SSE	61 Firenze Plantations

Plantations absolutely stinks of your putrid EnviroServ odour yet again. It's a disgrace.	S. Commons contact no. '0845109795	06-Nov-17	22h26	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	NNE	61 Firenze Plantations
Your disgusting smell again. My eyes are burning and my chest is tight. Get your act together. Your 11 point plan isn't working	S. Commons contact no. '0845109795	08-Nov-17	21h28	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	WSW	61 Firenze Plantations
Very bad landfill smell in Summerveld.	0844484447	12-Nov-17	19h59	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	E	Summer ridge Road Summerveld
Very bad odour feeling sick through the night.	0824038470	12-Nov-17	20H30	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	E	Woodville lane Summerveld
Very bad odour again at present	0824038470	13-Nov-17	10h20	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	S	Woodville lane Summerveld
Please call Luca Bad smell in Shongweni site DBN, his face had chemical burns and he was shaking. His heart was pounding, he felt like he was going to die. They are being poisen, he lives about 5km from the landfill site. He can't live like this . He has a bitter taste in his mouth. 24/7 this smell is going on Spoke to Dheena . Thobani is not answering.	Luca 0793790552	14-Nov-17		CASE NO.-176581-M0G3X3	OM			Message from Global call centre

Stop whatever you have change on site. The flaring or whatever else has changed. It is extreme, we are in pain here you are poisoning us non-stop day and night. Mid October was the worst , you know this, my face had chemical burns you gave us small break 3rd-5th November .You have been emitting poison 24/7 again since Monday 13th November 2017. We are heavily sick our brains are dying. We are dying. STOP THIS NOW!!!!!!! IT IS BAD TODAY (11-11-2017) STOP FLARING!!!!!!!!!!	Luca 0793790552 email:loose2win @openmailbox. org	14-Nov-17		CASE NO.-176577- C2R4Y3	OM			Message from Global callcentre
Bad odour at Summer hills Road.	0824038470	14-Nov-17	18H39	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.4	NE	Summerridge Road Summerveld
Bad toxic smell again.	0837089157	14-Nov-17	17H50	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	NNE	9 Bowles Road Assagay
House stinks of your odour	S. Commons contact no. '0845109795	14-Nov-17	16H03	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	E	61 Firenze Plantations
The toxic smell has been bad again yesterday a.m. and again this morning. We had rain shower this a.m. and a light wind from SSW direction.	0833203562 Wendy Derr	15-Nov-17	8h37	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	SSE	Pomona Gardens , Margaret RD Hillcrest
Please phone Errol Van Wyk. There is a very rotten sulpher smell coming from the landfill . It is causing all kinds of medical problems to the residents in that area e.g. eyes watering , struggling to breathe , & more spoke to Dheena	Errol Van Wyk '0834603947	15-Nov-17	9h19	Message received CRM- Notification - CAS-179229- Z8W6H7	OM	1.3	SSW	Message from Global callcentre

Very bad toxic smell intersection of N3 and Kassier RD.	Sharon Van der Westhuizen '0837089157	15-Nov-17	10h30	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.2	WSW	9 Bowles Road Assagay
Plantation estates stinks of your EnviroServ. Absolutely disgraceful.	S. Commons contact no. '0845109795	15-Nov-17	19h58	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.2	WSW	61 Firenze Plantations
Smell is absolutely disgraceful . You should be ashamed of yourself	S. Commons contact no. '0845109795	17-Nov-17	21h33	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	SW	61 Firenze Plantations
Your disgusting smell is invading my home.	S. Commons contact no. '0845109795	21-Nov-17	22h32	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	4.5	W	61 Firenze Plantations
Please phone Errol Van Wyk . Bad sulphur smell this morning	Errol Van Wyk '0834603947	22-Nov-17	7h00	Message received CRM-Notification - CAS-181406-P6D0B5	OM	0.4	SW	17 Angus DR, Hillcrest
Terrible usual toxic smell.	Sheron Van der Westhuizen '0837089157	22-Nov-17	16h46	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SSE	9 Bowles Road Assagay
Estate stinks of your EnviroServ smell . Your 11 point plan ain't working. Sort this out now.	S. Commons contact no. '0845109795	23-Nov-17	00h19	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.8	WSW	61 Firenze Plantations
04 Pls phone Errol Van Wyk. Bad sulphar smell . No one came back to him after his call this morning.	Errol Van Wyk '0834603947	23-Nov-17	7h00	Message received CRM-Notification - CAS-181500-G4Z9N6	OM	0.4	ENE	17 Angus DR, Hillcrest

Plantations stinks of you EnviroServ. Get your act together. You are a disgrace. No other words to describe you.	S. Commons contact no. '0845109795	24-Nov-17	20h56	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SSW	61 Firenze Plantations
Bad smell Polopony engine garage Assagay.	Sheron Van der Westhuizen '0837089157	24-Nov-17	14h56	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0	E	9 Bowles Road Assagay
Please call Errol Van Wyk. Bad smell in the air like rotten eggs , Bad smell coming in from the landfill site . Itching eyes , dry mouth and his sinus is starting up.	Errol Van Wyk '0834603947	25-Nov-17	11h38	Message from global call centre. CAS-182570-S7H5M8	OM	0	E	17 Angus DR, Hillcrest
Plantation estate absolutely stinks of you EnviroServ smell.	S. Commons contact no. '0845109795	26-Nov-17	20h31	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.7	WSW	61 Firenze Plantations
Your EnviroServ smell absolutely disgraceful.	S. Commons contact no. '0845109795	26-Nov-17	21h17	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.8	SW	61 Firenze Plantations
Stinking badly not sure what direction the wind is blowing at.	0833208960	28-Nov-17	20h40	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	2.2	N	8 Uplands Drive Kloof
Just got back from taking my dogs for a walk in our beautiful estate which was ruined by your disgraceful smell. Do you actually even care? I nearly vomited your time is coming for you to apologise for what you have done to this community. It's appalling	S. Commons contact no. '0845109795	28-Nov-17	20h44	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	1.8	N	61 Firenze Plantations
Disgusting smell at Kassier Road and Cliffdale.	Sharon Van der Westhuizen '0837089157	29-Nov-17	12h40	Complaint acknowledged and reference, (date and time of complaint), provided to complainant.	OM	0.9	SE	9 Bowles Road Assagay

<p>Plantations estate absolutely stinks of you EnviroServ smell. Get your act together you are shocking!!!</p>	<p>S. Commons contact no. '0845109795</p>	<p>29-Nov-17</p>	<p>21h13</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>1.8</p>	<p>WSW</p>	<p>61 Firenze Plantations</p>
<p>Plantations estate absolutely stinks of your EnviroServ smell , your 11 point plant isn't working. Absolutely criminal.</p>	<p>S. Commons contact no. '0845109795</p>	<p>29-Nov-17</p>	<p>22h13</p>	<p>Complaint acknowledged and reference, (date and time of complaint), provided to complainant.</p>	<p>OM</p>	<p>1.8</p>	<p>WSW</p>	<p>61 Firenze Plantations</p>

APPENDIX G: Incidents register

Incident Status Report

Record Number	Department Responsible	Describe what happened	Estimated incident severity	Date of the incident	Date Created	Incident Status
5248	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni	Fire equipment checklist indicates that most fire extinguishers are obstructed and the others insecure for the past 6 months and there has been no remedial action taken.	Level 1 – Negligible	2018-07-17	2018-07-17	Under investigation
5247	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni	First aid inspection register was checked. The register for June was not completed.	Level 1 – Negligible	2018-07-17	2018-07-17	Under investigation
5164	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Logistics	Driver Bethuel Bhengu driving Roro C3119 and was pulling trailer 964. He was on his way back from Holfontein and he pulled off to rest at Lions Park (Ashburton). Two tyres were stolen from the trailer.	Level 1 – Negligible	2018-05-09	2018-05-17	Incident signed off
5149	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni	Shimal was assisting PR team with using the gilotene. she cut her thumb on the right hand.	Level 1 – Negligible	2018-05-10	2018-05-10	Incident signed off
5093	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Landfill	Loader was being used to transfer sludge from SW dam from excavator to tipper trucks. the steep and sludgy terrain resulted in the loader loosing traction and sliding into the bucket of the excavator breaking the windscreen and side windows of the loader.	Level 2 – Marginal	2018-04-05	2018-04-05	Under investigation
5092	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Laboratory	Heavy winds blew the roof of the shelter outside the lab, smashing into the solar panel	Level 2 – Marginal	2018-03-25	2018-04-04	Incident signed off

4972	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Landfill	the fiber glass roof of tank 2 at the leachate tank farm blew off due to heavy winds.	Level 3 – Serious	2018-02-02	2018-02-05	Incident signed off
4796	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Logistics	Driver Wiseman was driving C2119 and was on his way to service a customer in New Germany when he bumped into a 3rd party vehicle.	Level 1 – Negligible	2017-11-03	2017-11-06	Incident signed off
4778	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Landfill	Paolo Belloti contractor stepped on a needle whilst monitoring the gas wells. No puncture.	Level 1 – Negligible	2017-10-25	2017-10-27	Incident signed off
4767	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Landfill	Sub contractor Women in Logistics arrived on site to load leachate. Whilst loading it was noticed that the tank was leaking.	Level 2 – Marginal	2017-10-17	2017-10-23	Incident signed off
4766	EnviroServ -> EWM South Africa -> KwaZulu-Natal -> Shongweni -> Landfill	Bakers Truck came to load leachate to be transported to JHB. After loading the vehicle there was an emission of fumes.	Level 2 – Marginal	2017-10-17	2017-10-23	Incident signed off

APPENDIX H: Ethekwini Discharge Permit



TRADING SERVICES Water & Sanitation Unit

3 Prior Road, Durban 4001
P O Box 1038, Durban, 4000
Tel: 031 311 8685, Fax: 031 311 8747
www.durban.gov.za

Enviroserv Waste Management (Pty) Ltd (Shongweni)
P.O. Box 15005
Ashwood
3608

PROVISIONAL PERMIT TO DISCHARGE TREATED CONTAMINATED STORM WATER DELIVERED BY ROAD HAULAGE TO AN APPROVED MUNICIPAL FACILITY

Name of Company : EnviroServ Waste Management (Pty) Ltd

Physical Address : 8 Main Road 461 (Shongweni Dam Road)

- A. EnviroServ Waste Management (Pty) Ltd is hereby permitted in terms of Section 25/1 of the eThekwini Municipal Sewage Disposal Bylaws to discharge treated contaminated storm water resulting from EnviroServ's Semi Hazardous Landfill Site delivered by Women in Logistics SA (Pty) Ltd and Abusanele, to the trade effluent tanker disposal facility at Southern Wastewater Treatment Works at a total monthly discharge volume not exceeding 6 000 kℓ/month subject to the conditions of this permit.
- B. Number of tanker loads permitted for the period of permit: 200 loads per month.
- C. This permit is valid for the period from 01 August 2018 to 31 January 2019.
- D. The permitted vehicles are as per the tankers and volumes registered with eThekwini Water & Sanitation Pollution and Environment Branch.
- E. Special Limits : None
- F. Relaxations : None
- G. Special Conditions : The conditions embodied in the attached schedule require certain actions to be completed. The Professional Technologist: Mobile Effluent Division of the Municipality reserves the right to carry forward any outstanding actions required in these conditions into any future permits.

Permit subject to signed indemnity agreement by both hauler and the source company that is acceptable to the Municipality. Permit subject to compliance with Regulations for the Operation of Road Haulage (Attached).



SIOBHAN JACKSON

DEPUTY HEAD: SCIENTIFIC SERVICES

Date : 17 June 2018
Enquiries : Andisiwe Cele
Telephone : 031 322 6988
Reference : 9064

ANNEXURE TO SECTION G OF THE ENVIROSERV WASTE MANAGEMENT (PTY) LTD PERMIT TO DISPOSE OF LANDFILL SITE TREATED CONTAMINATED STORM WATER BY AN APPROVED ROAD HAULIER TO THE SOUTHERN WASTEWATER TREATMENT WORKS (SWWTW) SEA OUTFALL

- G.1 This permit is subject to compliance with the regulations and/or procedures for the operation of road haulage vehicles within eThekweni Municipal facilities as may be amended from time to time.
- G.2 The permit holder shall ensure that pH, Temperature, sulphides, conductivity and toxicity tests (per batch sent) are carried out on the landfill site’s treated contaminated storm water by a suitably qualified laboratory acceptable to the Municipality in order to ascertain compliance with the parameters listed below. The results shall be forwarded in a signed Certificate of Analysis to the Professional Technologist – Mobile Effluent Division, Pollution and Environment Branch prior to acceptance of the batch by the Municipality. Any changes to the volume and/or composition of the batch which was the subject of the tests, must be approved by the Professional Technologist for the Mobile Effluent Division prior to discharge.
- G.3 The permit holder shall analyse water quality variables at a frequency detailed in Table 1 below. The highlighted determinands/limits are adopted from the Coastal Water Discharge Permit (CWDP) for SWWTW and Schedule B Limits from eThekweni Municipal Sewage Disposal Bylaws.

Table 1: Parameters to be monitored and their frequency

ITEM	WATER QUALITY VARIABLE	FREQUENCY	Limits from Schedule B	Limits from CWDP	UNIT
1	pH	Per Load	5.5<pH<9.5		-
2	EC	Per Load		5,000	mS/m
3	Chemical Oxygen Demand	Weekly		9,139	mgO ₂ /ℓ
4	Suspended Solids	Weekly		1,866	mg/ℓ
5	Sulphides	Per Batch	1		mg/ℓ
6	Heavy Metals (Cr, Mn, Co, Cu, Ni, Zn, Pb, As, Cd)	Monthly	As per attached Schedule B limits		mg/ℓ
7	Free & Saline Ammonia as N	Weekly		57.9	mgN/ℓ
8	Sulphates	Weekly	250		mg/ℓ
9	Phenol	Weekly		3	mg/ℓ

10	Total Cyanide	Weekly	10		mg/l
11	Soap, Oil and Grease	Weekly	50		mg/l
12	BTEX	Quarterly	4		mg/l
13	Toxicity	Per Batch	200		MATD
14	Temperature	Per Load	44		°C
15	Orthophosphate	Weekly		13.3	mg/l
16	Mercury (Hg)	Weekly	0.05		mg/l
17	Settleable Solids	Per Batch	2		mg/l

The permit holder shall ensure that all sampling techniques and analytical methods are performed in agreement with the Professional Technologist – Mobile Effluent Division, Pollution and Environment Branch, and P O Box 1038, Durban 4000.

- G.4 The permit holder shall ensure that no leachate or untreated contaminated storm water is discharged via the SWWTW. This includes provision of certificate of cleanliness for each tanker before commencing with hauling of treated contaminated storm water.
- G.5 The results of water resource monitoring in the vicinity of the site, as performed for the requirements of the Department of Environmental Affairs’ Landfill Site Licence, shall be submitted to the Professional Technologist – Mobile Effluent Division, Pollution and Environment Branch by 30 December each year.
- G.6 EnviroServ Waste Management (Pty) Ltd is to commission an appropriately qualified independent consultant to assess the liquid management site plan every six months, to formulate a report and an action plan to deal with the recommendations thereof.
- G.7 The permit holder shall ensure that the treated contaminated storm water fully complies with Schedule B of the Sewage Disposal Bylaws (annexed hereto) and does not compromise the Coastal Water Discharge Permit (CWDP) issued to SWWTW by the Department of Environmental Affairs.
- G.8 The permit is subject to a signed indemnity agreement acceptable to the Municipality by both hauler and the permit holder.
- G.9 No treated contaminated storm water shall be accepted for discharge into the sea outfall unless it complies with the conditions stated in this permit. The treated contaminated storm water shall not contain concentrations of substances in excess of those stated above. Failure to comply with the stated requirements will result in the **REVOCATION OF DISCHARGE PERMIT** with immediate effect.

SCHEDULE B
ACCEPTANCE OF TRADE EFFLUENT FOR DISCHARGE EITHER DIRECTLY OR
INDIRECTLY INTO SEA OUTFALLS

No trade effluent shall be accepted for discharge into the sea outfall unless it complies with the following conditions. The effluent shall not contain concentrations of substances in excess of those stated below—

SEA OUTFALL QUALITY LIMIT			UNIT
1.	Temperature	44	°C
2.	pH	5,5 < pH < 9,5	
3.	Settleable solids	2	mg/l
4.	Oils, greases and waxes of mineral origin	50	mg/l
5.	Arsenic (expressed as As)	5	mg/l
6.	Cadmium (expressed as Cd)	1,5	mg/l
7.	Total chromium (expressed as Cr)	3	mg/l
8.	Copper (expressed as Cu)	3	mg/l
9.	Lead (expressed as Pb)	5	mg/l
10.	Mercury (expressed as Hg)	0,05	mg/l
11.	Cyanides (expressed as CN)	10	mg/l
12.	Nickel (expressed as Ni)	10	mg/l
13.	Zinc (expressed as Zn)	20	mg/l
14.	Sulphide (expressed as S ²⁻)	1	mg/l
15.	Sulphates in solution (expressed as SO ₄)	250	mg/l
16.	Toxicity as Minimum Acceptable Toxicant Dilution	200	Number of dilutions
17.	Benzene, Toluene, Ethyl Benzene and Xylene	4	mg/l