ETHEKWINI MUNICIPALITY
COMMUNITY SERVICES CLUSTER
HEALTH UNIT

9 Archie Gumede Place
Durban 4001
P O Box 2443
Durban 4001
Tel: (031) 311 6834/30
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Website: http://www.durban.org.za

CERTIFICATE OF REGISTRATION

In terms of Section 1 of the Schedule Trades and Occupations Bylaws for the eThekwini Municipality

ENVIROSERV WASTE MANAGEMENT (PTY) LTD

(Registration No. 2008/021152/07)

Is hereby authorised to undertake the undermentioned trade, business, occupation or calling, issued in accordance with the specified conditions relative to this permit.

1.	Premises	: 1 Shongweni Dam Road, Shongweni.
2.	Registered Description	: Portion of Farm Kirkfall 14227, Shongweni.
3.	Nature of Trade/Occupation	: Waste material salvaging, collecting, sorting, storing, treating, processing, or recycling or reclaiming.
4.	Period of validity	: 24 Months
5.	Expiry date	: 30 June 2021
6.	Particulars of raw material	: 6.1Waste streams as permitted by the National Minister (DEFF); 6.2 Existing body of waste; 6.3 Effluent treatment chemicals; 6.4 PH treatment materials.
7.	Process to be carried out	: Transportation, treatment and disposal of waste and associated by products including leachate, landfill gas extraction and the operation of pollution abatement systems
8.	Product of such processes	: Treated and appropriately disposed waste.
9.	Particulars of plant	: Transportation fleet and material handling equipment, Effluent Treatment Plant. Landfill Gas Extraction and Flaring System, Bio Filter Plants, Emergency Standby Generator.

PERMIT NO. ST 3064

NOTE

1. This certificate must be displayed in a prominent place within the premises, at all times and must be read together with the permit conditions attached hereto.
2. This permission will not relieve you of any obligation to comply with any other law, regulation or authorisations.
3. This permit may be suspended or withdrawn if the terms hereof are not complied with.
4. This permit will cease to be in effect on change of ownership or name of the Permit Holder.
5. The Municipality may call on you to conduct specialist studies, provide information, report or documentation in connection with the activities undertaken in terms of this Permit at any time, should a need arise.

P.P.

Dr N.I Gxagxisa
Head: Health eThekwini Health Unit

PERMIT CONDITIONS

SCHEDULE TRADES AND OCCUPATIONS BYLAWS

1. GENERAL CONDITIONS

1.1 Non-compliance with the requirements of this permit constitutes an offence. This permit may be suspended or withdrawn or legal action may be instituted against the Permit Holder if the conditions specified herein are not complied with.

1.2 The site is to be constructed, operated and managed in accordance with relevant National, Provincial and Municipal Legislation and any authorisations or special consent issued thereof.

1.3 No building, plant or works used by the Permit Holder shall be materially extended, altered or added to and no changes in process, procedures or significant production increases/throughputs that will significantly alter impacts may be undertaken without the prior approval of the eThekwini Municipality (Permitting Authority). This permit will cease to be of effect on change of ownership or name of the Permit Holder.

1.4 No gases, liquids, odours, vapours, dust, smoke, particulates, glare, noise or vibration shall be emitted which in the opinion of the Permitting Authority could cause a significant environmental impact, health risk or significant nuisance to the general public or employees of the licensee.

1.5 Where adverse health, environmental impacts or nuisance are created, urgent corrective measures must be taken to contain or minimise the impacts through operational or engineering interventions. Remediation, if required shall be carried out to the satisfaction of the Permitting Authority and/or any other authorised governmental agencies.

1.6 Any incident which has the potential to create significant health, nuisance, safety or environmental risk needs to be reported immediately to all relevant authorities.

1.7 The Permitting Authority reserves the right to set and amend the permit conditions, emission limit values or standards after consultation with the Permit Holder and taking into consideration information submitted, what is technically achievable, and justifiable on health and environmental grounds.

1.8 The licence holder is required to identify and prioritise environmental projects and formulate a 2 - year environmental improvement plan in line with the philosophy of continuous improvement and the optimisation of EnviroServ's operations. The environmental improvement project plan with associated timeframes must be submitted to the Permitting Authority by **1 June 2020.**

1.9 Quarterly Performance review meetings shall be held with the Permitting Authority. The permit may be revoked if significant under-performance is noted.

1.10 On cessation of operations, the Permitting Authority is to be notified and decommissioning of the site and associated plant must be conducted in terms of a rehabilitation plan submitted to and approved by various relevant government agencies.

1.11 The Permit Holder indemnifies the Permitting Authority from any claim, loss or damage arising from the Permit Holder's operations in relation to this permit.

1.12 The Permit Holder is obliged to ensure that its employees, agents, contractors/ sub-contractors act in compliance with the relevant terms of this permit and should there be any contravention by such sub-contractors, then the Permit Holder would be held accountable.

1.13 The Permit Holder must adhere to the duty of care obligations as set out in Section 28 of the National Environmental Management Act 107 of 1998 (NEMA) and failure to comply therewith constitutes a breach.

1.14 Security measures are to be in-place to ensure no unauthorised entry to the site is permitted and no scavenging is permitted.

1.15 An emergency standby generator is to be provided to ensure the continuity of electrical supply to all "essential services". The generator is to be maintained according to manufacturer's specifications.

1.16 Temperature within the waste body must be continually monitored and any abnormal escalation in temperature is to be brought to the attention of the authorities immediately.

1.17 Regarding the decision made on the 5 March 2019 by the Minister of Environmental Affairs approving the acceptance of additional waste streams and further amendments which may be made, the following is required:

1.17.1 A precautionary approach must be adopted during commissioning so as to limit risks and impacts which may arise.

1.17.2 When the liner is pierced/ removed, all applicable occupational health and safety processes and procedures must be in place so as to ensure the safeguarding of the health of workers engaged with this task.

1.17.3 As far as is possible, the temporary plastic liner must be removed incrementally and the working area be kept as small as possible.

1.17.4 All personnel engaged with liner removal must be provided with appropriate personal protective equipment (PPE) and any personal exposed must be health monitored.

1.17.5 Should the removal of the temporary cover increase off-site nuisance, health or environmental impacts significantly, the Permitting Authority may suspend this permit with immediate effect.

1.17.6 Should the acceptance of additional waste streams increase impacts on communities, in respect of health and nuisance, this permit may be suspended or withdrawn.

2. SPECIFIC REQUIREMENTS

2.1. ENVIRONMENTAL CONTROL /PERFORMANCE

2.1.1. AIR QUALITY

2.1.1.1 The Permit Holder must implement best practicable means to minimise H_2S (or other gaseous pollutants which may be found to be at levels of concern) emissions arising from operations on site.

2.1.1.2 An updated monitoring protocol for all emissions and taking into account the permanent flare should be submitted to the Permitting Authority for consideration by 30 August 2019.

2.1.1.3 SO_2 emissions from the premises should not lead to exceedances of limits stipulated in the NEM: AQA. This is with specific reference to the contribution made by the flare to ambient SO_2 concentrations.

2.1.1.4 Passive monitoring measurements taken from and within surrounding communities must be analysed and the analysis thereof reported to the Permitting Authority on a quarterly basis.

2.1.1.5 A reviewed Air Quality Specialist report must be carried out by a suitably qualified person and submitted to the Permitting Authority within 2 months of commissioning of the flare. This report must include a full emission inventory, modelling and include a review and recommendations pertaining to all abatement systems. The above must include, but not be limited to, consideration of the pollutants noted below:

2.1.1.5.1 Volatile Organic Carbon material viz Benzene, Formaldehyde, Dioxins and Furans;

2.1.1.5.2 Mercury both organic and inorganic;

2.1.1.5.3 Reduced sulphur compounds viz H_2S, Methyl mercaptans, ethyl mercaptans and dimethyl disulphide.

Any recommendations flowing from this report must be implemented within appropriate time frames, as agreed with the Permitting Authority.

2.1.2 **AIR QUALITY ABATEMENT SYSTEMS (BIO-FILTERS AND FLARE EXISTING INSTALLATION)**

2.1.2.1 Monthly reports must be submitted including, but not limited to, the consideration of system component downtime and contingency measures during such periods and the effects and control of the following variables:

2.1.2.1.1. Pressure drop;

2.1.2.1.2. Waste gas pre-treatment;

2.1.2.1.3. Reduced Sulphur loading rate;

2.1.2.1.4. Water quality and content of the bio-filter media;

2.1.2.1.5. pH of the bio-filter media;

2.1.2.1.6. Temperature of bio filter bed;

2.1.2.1.7. Sulphate Content;

2.1.2.1.8. Oxygen Content.

This reporting shall continue until the decommissioning phase.

2.1.3 The Permit Holder must:

2.1.3.1 Submit a daily report on Land Fill Gas (LFG) H_2S concentrations values before the bio filters, after the bio filter and before the flare to the Permitting Authority.

2.1.3.2 The calculations of SO_2 emission concentrations, including the calculation methodology used to derive the value, must also be included. The sampling for the H_2S should occur twice a day with samples taken in the morning and another sampling in the afternoon e.g. at 06H00 and 18H00.

2.1.3.3 Ensure correct and optimum operation and maintenance of the flaring system. The availability and efficiency of the flare must be reported weekly.

2.2 PLAN FOR TRANSITIONAL PHASE OF THE AIR QUALITY ABATEMENT EQUIPMENT FROM TRIAL TO PERMANENT

2.2.1 A transition plan from trial flare to permanent flare is to be submitted to this department 30 days before this activity occurs. This plan is to include but not be limited to:

2.2.1.1 Length of the transition and a detailed project plan for this period. The plan is to comprehensively cover all aspects of the project including, but not limited to,

2.2.1.1.1 Possible risks;

2.2.1.1.2 Contingency plan; and

2.2.1.1.3 Risk mitigation.

2.3 The permanent air quality abatement system which incorporates a continuous monitoring system must include, but not be limited to, the parameters mentioned below:

2.3.1 On commencement of the operation of the permanent flare, the monitoring results therefrom must be submitted to the Permitting Authority on a weekly basis. This report must include but not be limited to the parameters noted below:

2.3.1.1 Flow rate;

2.3.1.2 Oxygen concentration;

2.3.1.3 Combustion temperature and retention time;

2.3.1.4 Methane %; or Total VOC

2.3.1.5 Carbon dioxide;

2.3.1.6 Continuous burn run time;

2.3.1.7 Hydrogen sulphide.

2.4 Any deviation from normal operational conditions must be reported immediately to the Permitting Authority

2.5 Permit Holder to conduct an emissions monitoring survey from the flare, annually and submit a report to the Permitting Authority. This report must include, but not be limited to:

2.5.1 Emission rate for pollutants mentioned in 2.1.1.5 above;

2.5.2 Flow rate;

2.5.3 Temperature;

2.5.4 Pressure;

2.5.5 Moisture content;

2.5.6 Oxygen content; and

2.5.7 Any other relevant data.

2.6 The operating Flare's full records should be available for inspection.

2.7 All results obtained should be formally interpreted and the interpretation and copy of the flare maintenance log must be submitted to the Permitting Authority.

2.8 Monitoring and analysis equipment must be operated and maintained in accordance with the manufacturer's guidelines, to ensure that all monitoring results accurately reflect any emission, discharging and environmental parameters.

2.9 All monitoring and analysis must be conducted in accordance with a documented protocol devised by a suitably qualified specialist. This protocol must be submitted to the Permitting Authority for approval prior to the commissioning of the flare. It is also necessary that all design drawings, operational manuals, maintenance schedules and the like must be submitted as a comprehensive package.

2.10 A maintenance log for the standby Bio filter must be available for inspection.

2.11 GAS EXTRACTION WELLS AND ASSOCIATED PIPEWORK.

2.11.1 All gas extraction wells and associated pipework must be maintained so as to ensure optimal efficiency as per design specifications. In this regard, such systems must be inspected daily and any defects detected must be immediately corrected and also reported to the Permitting Authority. The operability of the system must be included in the quarterly report back meetings.

2.12 AIR QUALITY MONITORING AND REPORTING REQUIREMENTS

2.12.1 AMBIENT AIR QUALITY MONITORING AND METEOROLOGICAL REPORTING

2.12.1.1 The existing ambient air quality instruments must be operated and maintained in accordance with recognised and documented quality assurance procedures, such as the draft Norms and Standards for air quality monitoring as well as the SANAS TR-07-03. In this regard, an ambient monitoring protocol is to be developed and submitted to the Permitting Authority, which should highlight how QA/QC will be embedded into the monitoring process.

2.12.1.2 A full quality assurance report for all monitoring equipment must be submitted to the Permitting Authority on a quarterly basis. This would include but not be limited to copies of calibration certificates as well as maintenance schedules and records, span and zero checks and the like.

2.12.1.3 Continuous ambient air quality monitoring (on and off site) must be maintained. Real time access to data from these instruments must continue to be made available to Permitting Authority.

2.12.1.4 Non-continuous ambient air quality monitoring (off-site) must be maintained. The Permit Holder must report to the Health Unit on a quarterly basis.

2.12.1.5 The Permit Holder is to ensure adequate quality control and assurance of data. Reasonable data availability must be achieved as per requirements of Draft Norms and Standards for air quality monitoring.

2.12.1.6 The Permit Holder must register as a data provider for the premises in terms of the National Emission Inventory Reporting Regulations.

2.12.1.7 Greenhouse Gas emission reporting must be conducted in accordance with the National Greenhouse Gas Emission Reporting Regulations.

2.12.1.8 The reporting of criteria pollutants, reduced sulphur compounds, formaldehyde, dioxins and furans as well as mercury should be done on the National Atmospheric Emission Inventory System annually before the end of March.

3 DISPOSAL OF WASTE

3.1 Only waste which complies with the Minister of Environmental Affairs Appeal decision dated 5 March 2019 may be accepted on site for treatment and disposal and any further decisions taken by the Minister.

3.2 Maintain a correct CDR (Co-disposal ratio) as stipulated on Waste Management License.

3.3 No trenching of waste during landfilling must occur.

3.4 Chemical pre-treatment of waste must be done prior to landfilling (where required), to adjust pH (as per the Minister's Appeal Decision) and reduce odour. Caution must be exercised to ensure that treatment is not above accepted pH levels.

3.5 Odour from landfilling must be reduced by daily compacting and covering of waste. In addition the working face must be similarly covered at the end of each work day.

3.6 The Permit Holder must submit to the Permitting Authority the daily inventories of all waste accepted at the landfill, this must include, but not limited to, source of waste, tonnage, treatment method and the like. This report is to be submitted monthly.

3.7 Brine from the Effluent Treatment Plant must be disposed of only after microencapsulation has been done and tested for moisture content.

3.8 Microencapsulation is to be conducted as per the Shongweni Management Plan. Should there be any changes the Permitting Authority should be notified.

3.9 Dust emission mitigation measures from the microencapsulation stockpiling must be maintained.

3.10 No contaminated storm water is to be recirculated into the waste body.

3.11 No leachate is to be recirculated into the waste body.

3.12 Any treated contaminated storm water disposed of at the Southern Waste Water Treatment Works (SWWTW) must comply with conditions as stipulated by the eThekwini Water and Sanitation Unit.

4 WATER QUALITY MONITORING

4.1 Water Quality Monitoring as per the Waste Management Licence must be conducted and the Permitting Authority must receive copies of these reports.

5 LEACHATE MANAGEMENT

5.1 Liquid Management Systems must be designed, managed and operated such that no negative impact is created to the environment.

5.2 Leachate must be disposed of at an approved disposal site and safe disposal certificates must be submitted to the Permit Authority on a monthly basis.

5.3 Storage of leachate on site must be limited to prevent odour build-up.

5.4 An integrity review of all leachate storage tanks and associated infrastructure must be undertaken by an approved authority by 30 July 2019 and recommendations implemented immediately thereafter.

5.5 A safety data sheet of all chemicals used for the treatment of leachate must be kept on site and updated regularly. The hard copy must be easily accessible to all employees.

5.6 Any requirements set out by relevant State departments as they pertain to leachate must be complied with in full.

5.7 Effluent treatment plant operations must ensure that noise levels do not exceed the applicable noise standards.

5.8 Effluent treatment and disposal are to be such that adequate freeboard is maintained in dams and tanks to comply with the Waste Management Licence.

5.9 The Permit Holder must report on a monthly basis the leachate generated (volumes) and must include temperature, pH, BOD, COD, phenols, total sulphur, sulphates, sulphites, sulphides and thiosulphates.

5.10 The Permit Holder must have in place a contingency plan to cater for periods of high precipitation so as to ensure no uncontrolled leachate discharges into the environment occur.

5.11 The Permit Holder is required to submit a Monthly report to the Permitting Authority regarding the volumes of leachate generated onsite and the management and disposal thereof including the certificates of safe disposal.

6. COMPLAINTS MANAGEMENT

6.1. Any complaints logged to the Permit Holder's complaints line must be submitted to the Permitting Authority within 24 hours of receipt.

The Permit Holder must furthermore:

6.2. Consolidate all complaints into a monthly report which is to be submitted to the Permit Authority.

6.3. Investigate operations at the time of receiving the complaint, prevailing meteorological conditions and where possible investigate the complaint received. The findings of these investigations must be captured on the complaints log.

6.4. The Permit Holder must furthermore interrogate and report to the Permitting Authority on the complaints logged via the Upper Highway Air website.

7. OCCUPATIONAL HEALTH AND SAFETY

7.1. A full Occupational Health and Safety Program must be maintained in terms of the Occupational Health and Safety Act and Regulations. This report must be submitted to the Permitting Authority on a biennial basis.

7.2. Any adverse OHS issues must be notified to the Department of Labour as well as the Permitting Authority immediately.

8. EMERGENCY PREPAREDNESS AND ABNORMAL OPERATING CONDITIONS

Permit Holders Actions Required in Event of an Incident

Section 30 of the National Environmental Management Act 107 of 1998 (as amended by the National Environmental Management Amendment Act 30 of 2013) defines an incident as

"*an unexpected sudden and uncontrolled release of a hazardous substance, including from a major emission, fire or explosion, that causes, has caused or may cause significant harm to the environment, human life or property.*"

8.1. In the event of an incident, Section 30(3) of the National Environmental Management Act requires the Permit Holder forthwith, after knowledge of the incident, to report such incident to the Emergency Call Centre (031-361 0000). Should such incidences pose a significant health risk or nuisance, notification of the incident is to be immediate. The report must include:

8.1.1. The nature of the incident;

8.1.2. Any risks posed by the incident to public health, safety and property;

8.1.3. The toxicity of substances released;

8.1.4. Any steps that should be taken in order to minimise the effects of the pollution on the public health and the environment.

8.2. Furthermore, the Permit Holder must:

8.2.1. Take all reasonable measures to contain and minimise the effects of the incident on the environment, and manage risks to health, safety and property;

8.2.2. Undertake clean up procedures;

8.2.3. Remedy the effects of the pollution;

8.2.4. Assess the immediate and long-term effects of the incident on the environment and public health.

8.2. **INCIDENT REPORTING**

Within 14 days of an incident, the Permit Holder must submit a further detailed report with the following information:

8.2.1 The nature of the incident;

8.2.2 Substances involved, quantities released, toxicity data;

8.2.3 Initial measures taken to minimize impacts;

8.2.4 Detailed description of causes of the incident;

8.2.5 Measures taken and proposed to prevent a recurrence

8.3. The Permit Holder shall formulate and maintain an internal emergency preparedness plan for acute pollution. All risks identified in the plan must be systematically managed using one of the following approaches:

8.3.1 Environmental Management procedures; and

8.3.2 A contingency plan to reduce the probability of an incident or minimise the impact of the incident through an efficient and effective emergency response plan. This should include,

as a minimum, a description of responsible personnel, their expertise, contact numbers, response procedures, staff training programmes and personal protective equipment. A list of material and equipment used in the event of acute pollution for containment, clean-up, response or prevention must be available for inspection.

8.4. Exercise drills to train staff in their response to acute pollution scenarios shall be conducted at least on an annual basis. The Permit Authority shall be informed of the date and time of such exercise drills.

9. WASTE TRANSPORTATION

9.1. All vehicles used for transporting waste/ leachate must be road worthy, purpose designed and approved in terms of relevant legislation.

9.2. The vehicle or containers used for conveying waste shall be so constructed as to obviate any spillages or negative impact during transportation.

9.3. All vehicles, skips, hoppers etc., to clearly display the Permit Holder's name.

9.4. Approved pre-planned procedures must be implemented in the event of transportation accidents and spillages. Documentation in this regard must be readily available on site.

9.5. All vehicle washing/ cleansing must be undertaken at the approved/ dedicated wash bay and the wash bay is to be maintained in a clean condition at all times.

9.6. Ensure full compliance with the National Road Traffic Act, 1996 (Act 93 of 1996) and SANS 10231, 10232, 10228 and 10229 where applicable.

10. ENVIRONMENTAL NOISE

10.1. The Permit Holder's local contribution in terms of environmental noise shall not exceed the noise levels as detailed in SANS 10103; 2008 measured at the nearest residential dwelling.

10.2. The Permit Holder may be required to undertake environmental noise measurements in terms of the relevant legislation and codes of practices – SANS 10103:2008 and report thereon to the Permitting Authority.

10.3. Acute noise complaints are to be investigated and reported to the Permitting Authority on a monthly basis.

11. REPORTING SYSTEMS

11.1. The Permit Holder is required to submit reports as detailed in the above paragraphs:-

a) 1.6; 1.8;

b) 2.1.1.4; 2.1.1.5; 2.1.2.1; 2.1.3;

c) 2.4; 2.5;

d) 2.11;

e) 2.12.1;

f) 3.6; 3.8;

g) 4.1;

h) 5.2; 5.4; 5.9; 5.11;

i) 6;

j) 7.1

k) 8;

l) 10.2; 10.3.

12. SPECIFIC REQUIREMENTS OF HEAD: FIRE & EMERGENCY SERVICES

12.1. Ensure fire and emergency equipment is serviced annually and all requirements of the Fire Department are complied with.

13. SPECIFIC REQUIREMENTS OF THE HEAD: WATER AND SANITATION

13.1. Complying with standards applicable for the disposal of treated contaminated storm water to an approved municipal facility;

13.2. Meeting the requirements and conditions of the Trade Effluent Permit as issued to EnviroServ by the eThekwini Municipality.

P.P.

Head: Health

Dr N.I. Gxagxisa

29/06/2019

Date: