SHONGWENI WASTE MANAGEMENT FACILITY

MONITORING COMMITTEE

Chairman: Mr. Linda Mlotshwa **Secretary:** Ms. Siphelelisiwe G. Sithole
Email: shongwenimc@ziphelele.co.za

Minutes of the Meeting of the Shongweni Waste Management Facility Monitoring Committee, held on Thursday, 20 November 2025
Time: 12:30–13:30 (Site Visit), followed by the meeting at 14:00
Venue: KwaLinda Hall, KwaNdengezi, Shongweni, KwaZulu- Natal

Agenda

1. Welcome, Introduction & Apologies
2. Minutes of the Previous Meeting: 22 May 2025
3. Matters Arising from the Previous Meeting: 22 May 2025
4. Site Operator's report
5. Ambient Air Quality Monitoring Report
6. Auditor's Report
7. Date of the next meeting: TBC

SHONGWENI WASTE MANAGEMENT FACILITY MC MEETING ATTENDANCE LIST: 20 NOVEMBER 2025 (THURSDAY)		
	NAME	**ORGANISATION**
1.	Oosthuizen, Martin	Geozone Environmental
2.	Kidd, Clive	Enviroserv
3.	Thwala, Mandla	Enviroserv
4.	Zuma, Sbongile	Ward 04

SHONGWENI WASTE MANAGEMENT FACILITY MC MEETING ATTENDANCE LIST: 20 NOVEMBER 2025 (THURSDAY)		
	NAME	**ORGANISATION**
5.	Shozi, Zwelintani	Ward 04
6.	Dlamini, Ntombifuthi	Ward 4
7.	Nkosi, Jerome	Ward 1
8.	Ramsaywok, Avi	Enviroserv
9.	Van Niekerk, Makgabo	Enviroserv
10.	Van, Monty	Ethekwini Health
11.	Motsoane, Nthabiseng	Enviroserv
12.	Tlhaole, Boitumelo	Enviroserv
13.	Narandas, Sanjay	Ethekwini Health
14.	Schiya, Sue	-
15.	Hadding, Brenda	-
16.	Linda, Mbongeni	Amaphisi Emvelo
17.	Mkhize, Nkosi	-
18.	Ngcobo, Khulani	Masogenge Business
19.	Kunene,	-
20.	Ndlovu, Bethwell	-
21.	Gumede, Nonpumelelo	Ethekwini Health
22.	Cele, Nomusa	Outer West
23.	Mkhize, Melusi	Outer West
24.	Hlope, Thandeka	Baby Bear
25.	Phakathi, Muzi	Ukuphumula
26.	Ndlovu, Nosipho	SNYC
27.	Cele, Andisiwe	EWS

SHONGWENI WASTE MANAGEMENT FACILITY MC MEETING APOLOGIES LIST: 20 NOVEMBER 2025 (THURSDAY)		
	NAME	**ORGANISATION**
1.	Esme Gombault	Enviroserv
2.	Mishelle Govender	DFFE
3.	Nico Vermeulen	Enviroserv

No.	KEY ISSUES & DISCUSSIONS	RESPONSIBILITY
	1. Welcome, Introduction & Apologies	
1.	The Chairperson, Mr Mbongeni Linda, introduced himself and welcomed all present. The Chair apologised for the absence of a translator and promised to assist with translations when needed. He then invited attendees to introduce themselves. Apologies were noted.	
2.	Mrs Makgobo Van Niekerk (EnviroServ) shared the news of the formal resignation of current CEO Mr Dean Thompson who has accepted a new role elsewhere and confirmed that Esmé Gombault will serve as Acting-CEO in the interim.	
	2. Minutes of the Previous Meeting Held on: 22 May 2025	
3.	The Chairperson reviewed the minutes of the last Monitoring Committee meeting and enquired whether there were any amendments. None were noted.	
4.	The minutes were accepted as a true reflection of the previous meeting, with no further comments or amendments recorded. The minutes were then adopted by Mr. Nkosi Mkhize and seconded by Mr. Khulani Ngcobo.	
	3. Matters Arising from the Previous Minutes: 22 May 2025	
5.	The chairperson inquired whether there were any matters arising from the previous meeting minutes. None were raised.	
	4. Correspondence	
6.	None received.	
	5. ReportsSite Operators Report	
7.	Mr Clive Kidd (EnviroServ) and Mr Avi Ramsaywok (EnviroServ) provided a detailed review of critical site operations, ongoing improvements, and compliance activities.	

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8.	Mr Kidd presented that transport of contaminated stormwater to the Southern Wastewater Treatment Works (SWWTW) continues in accordance with the discharge permit issued in January 2025, valid for 12 months.	
9.	Current dam levels illustrate effective water management and sufficient reserve capacity prior to the rainy season, with Valley 1 Dam at 3 236 m³ (21% capacity), Valley 2 Dam at 223 m³ (2% capacity), and a combined total of 3 459 m³ (13% of the combined design capacity).	
10.	These figures demonstrate proactive control of stormwater accumulation and appropriate utilisation of available storage infrastructure.	
11.	Mr Ramsaywok reported that recent leachate quality results continue to demonstrate improved methanogenesis within the waste body. Stabilised methane concentrations indicate that biological decomposition is progressing in a steady and predictable manner, supporting improvements in leachate quality and the performance of the gas extraction systems.	
12.	The effluent treatment plant monthly treated volumes were presented. The results indicate that the treatment plant continues to perform effectively as part of the onsite leachate management system. Plant performance remains stable and is supported by consistent influent characteristics and methane stability. No operational disruptions or exceedances were reported during the period under review.	
13.	Mr Ramsaywok provided a detailed update on the facility's gas extraction network. Daily monitoring and maintenance are conducted by the onsite team, supplemented by weekly inspections carried out by *Energy* under contract. The design of the gas collection network continues to undergo review to improve efficiency and gas capture rates.	
14.	A proposal for the installation of additional gas extraction wells is in progress, with implementation planned for 2026/2027 if viable. Flare efficiency and methane destruction data continue to indicate stable performance, with regular maintenance ensuring ongoing compliance with air quality standards.	

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15.	Mr Kidd presented the seven-year waste volume trend was presented graphically, showing fluctuations linked to operational capacity, economic cycles, and seasonal variations. Overall waste volumes remain within the permitted limits of the Waste Management Licence.	
16.	Mr Kidd reported an increase of waste volumes from June 2023 to February 2024 due to the increase of municipal waste intake caused by the operational downtime of municipal landfill sites.	
17.	Photographs and visual evidence included in the presentation showcased the active tipping platform, daily waste placement activities, and the general standard of housekeeping across operational zones. Effective application of temporary geomembrane capping on inactive areas was also highlighted, which helps minimize generation of leachate and contaminated stormwater whilst also assisting in the control of odours.	
18.	Progress on Valley 3 construction continues steadily. Leakage detection systems have been installed and commissioned, and Phase 1 of Valley 3 is officially complete. The Valley 3 expansion ensures future airspace capacity and sustained compliance with engineering and environmental requirements.	
19.	The installation of a pedestrian walkway was also noted, offering improved safe movement of pedestrians onsite.	
20.	Mr Ramsaywok reported on the ambient monitoring. He stated that that offsite hydrogen sulphide (H_2S) measurements for several locations, including KwaNdengezi, Plantations, Summerveld, Winston Park, Kassier Road, Dassenhoek, and Gillitts were taken.	
21.	All readings remained well within the Minimum Risk Level (MRL) of 27.88 µg/m³, confirming that no exceedances or persistent odour emissions were recorded from the facility.	
22.	Data from the US EPA continuous monitors were reviewed to assess the correlation between hydrogen sulphide levels and pH. Results remained within expected ranges, and no anomalies requiring corrective action were identified.	

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23.	Monthly average readings regarding the Total Reduced Sulphur (TRS) and H_2S emissions, were evaluated. All averages remained significantly below applicable health-based thresholds and odour limits.	
24.	Sulphur dioxide (SO_2) results from the Valley 2 USEPA TRS monitor and the Winston Park USEPA monitor were reported to be stable. No exceedances of ambient air quality standards were recorded.	
25.	Calibration and quality assurance records confirmed that monitor calibrations for 2023, 2024, and 2025 are up to date. These documented procedures confirm the accuracy, reliability, and integrity of the monitoring data presented to the committee.	
26.	Mr Kidd then provided a community engagement update and reported that EnviroServ continues to maintain regular engagement with stakeholders and local communities through structured communication channels and ongoing meetings. The logging and management of community complaints remain an essential component of the site's environmental management system.	
27.	A noticeable decrease in complaint frequency indicates a return to normal operational conditions. Historically, most complaints related to odour; however, the downward trend suggests that mitigation measures and operational improvements have been effective.	
28.	Several regulatory engagements and compliance milestones were presented. The Valley 3 Construction Completion Report was submitted to the Department of Forestry, Fisheries and the Environment (DFFE) and the Department of Water and Sanitation (DWS) on 25 July 2025.	
29.	The DWS conducted a formal inspection of the Valley 3 construction works on 29 July 2025. Monitoring Committee meetings continue as scheduled, with the previous session held on 22 May 2025 and the next taking place on 20 November 2025 as part of this gathering.	

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30.	A routine oversight visit by the Conservation and Environmental Affairs Portfolio Committee was conducted on 17 October 2025, to various sites in the region.. The Schedule Activity Permit (SAP) Review Meetings were held on 5 June 2025 and 5 November 2025, focusing permit compliance which included system improvements and ensuring alignment with regulatory expectations.	
31.	The Chairperson invited questions.	
32.	Ms. Schimper inquired about the percentage of DSW waste that was accepted. Mr. Kidd replied that it was around 80%.	
33.	Ms. Harding Inquired whether the NH3 was arising from another source. Mr. Ramsaywok replied that sewage works is also a source of NH3.	
	Ambient Air Quality Monitoring Report	
34.	Mr Martin Oosthuizen (Geozone Environmental) provided an overview of the passive ambient air quality monitoring programme implemented at the Shongweni Landfill Site for the 2024/2025 period.	
35.	The monitoring aimed to assess whether emissions from the landfill posed any measurable risk to on-site workers or surrounding communities, using a scientifically established source–pathway–receptor model in line with NEM: AQA and the Department of Employment and Labour AIA certification (OH0036CI04).	
36.	Mr Oosthuizen explained that the source–pathway–receptor framework was introduced to emphasise that risk only exists when all three elements meaningfully connect. At a landfill, sources typically include working faces, leachate dams, landfill gas emissions, dust generation, and hazardous waste streams. Pathways include air, wind, or disturbed waste material, while receptors include workers, nearby residents, ecosystems, and infrastructure vulnerable to exposure.	

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37.	Three major monitoring concepts were described: subsurface gas probe sampling, ambient air sampling, and worker exposure sampling. Their combined purpose is to evaluate the range of airborne contaminants that may be released during landfill operations and assess potential health or nuisance impacts. Ambient monitoring specifically targets compounds with known health and odour significance, such as non-methane volatile organic compounds (NMOCs), aldehydes, hydrogen sulphide (H_2S), and ammonia (NH_3).	
38.	The monitoring uses the Radiello passive ambient air monitoring system, deployed continuously over 28-day intervals across a full year. This system measures key pollutants including benzene, formaldehyde, hydrogen sulphide, and ammonia. These were selected from a Priority Substance Inventory (PSI) originally developed by the UK Environment Agency and later verified at the Shongweni site through grab sampling using Markes tubes and Tedlar bags.	
39.	Monitoring stations were set up both onsite at strategic operational points and off-site within surrounding communities. Their placement accounts for local wind patterns, informed by historical metorogical data, ensuring that sampling accurately captures conditions both upwind and downwind of the landfill.	
40.	The presentation outlined the applicable standards used to interpret the data. These include South Africa's NAAQS for benzene (annual average of 5 µg/m³), as well as international benchmarks such as ATSDR Minimum Risk Levels (MRLs), UK Environmental Assessment Levels (EALs), and WHO air quality guidelines. These standards cover both chronic and intermediate duration exposures to safeguard public and occupational health.	
41.	The annual average benzene concentrations at all onsite monitoring points remained below the NAAQS limit of 5 µg/m³, indicating no chronic health risk. This pollutant typically originates from incomplete combustion, vehicle emissions, and solvent-based products, but measured levels suggest minimal contribution from landfill operations.	

No.	KEY ISSUES & DISCUSSIONS	RESPONSIBILITY
42.	Formaldehyde concentrations remained below the ATSDR chronic MRL of 9.99 µg/m³ at all sites over the assessment period. Monthly averages fluctuated seasonally as expected but continued to remain well within acceptable health-based thresholds. This indicates a low risk of chronic exposure for both onsite workers and nearby communities.	
43.	Hydrogen sulphide, an important odour and health indicator, was compared against the WHO 24-hour and 30-minute guidelines, as well as ATSDR MRLs. All monitored communities—including KwaNdengezi, Summerveld, Winston Park, Kassier Road, Dassenhoek and Gillitts—recorded averages well below the 27.88 µg/m³ MRL. This suggests that landfill emissions are not significantly influencing ambient H_2S levels.	
44.	Ammonia concentrations across the monitoring period remained below the chronic MRL of 69.66 µg/m³. Observed fluctuations were generally consistent with background agricultural and environmental sources. On-site levels also remained compliant, indicating minimal impact from landfill waste decomposition or leachate processes.	
45.	The presentation concluded that benzene, NMOCs, aldehydes, hydrogen sulphide, and ammonia are all present at concentrations below relevant chronic or intermediate health benchmarks. As a result, both cancer and non-cancer health risks associated with the measured pollutants are considered low. Importantly, current evidence indicates that emissions from the Shongweni Landfill Site are not measurably influencing ambient concentrations at either the site boundary or off-site receptors.	
46.	The monitoring team recommended continued passive ambient air sampling for all priority contaminants to maintain ongoing compliance and early detection of potential issues.	

No.	KEY ISSUES & DISCUSSIONS	RESPONSIBILITY
47.	A minimum of four on-site sampling locations should be maintained, with placements adjusted to reflect prevailing wind directions. Off-site monitoring should also continue to ensure community protection. Worker exposure monitoring remains essential as part of the occupational hygiene programme to ensure early identification of any workplace risks.	
48.	The presentation ended with a summary of the purpose and precautionary nature of MRLs, which are set conservatively to protect even the most sensitive individuals.	
49.	The Chairperson invited questions.	
50.	The following Q & A were recorded: **Q1** – What testing methods are used?	
51.	**Answer from Mr Oosthuizen** – The primary Health testing method used at the Shongweni site is a passive ambient air monitoring test which involves attaching a sampling cartridge to the uniform of a randomly selected field employee from each operational section, with samples then taken for testing at an independent lab and the results interpreted by Geozone.	
52.	**Q2** – There has been a spate of reports of severe, chronic coughing around the area, could ammonia cause this?	
53.	**Answer from Mr Oosthuizen** – Yes but the exact cause and source of the ammonia would need to be thoroughly researched. A report/complaint would need to be made to the relevant Municipal department who would then have to conduct formal testing to locate the source of the ammonia.	
	Auditors Report	
54.	Mr Monty van Eeden (Dorean Environmental Services CC) presented the 2025 external waste licence audit for the Shongweni Landfill Site. The audit was undertaken to fulfil the requirements stipulated under Condition 12.2 of the facility's Waste Management Licence (WML).	

No.	KEY ISSUES & DISCUSSIONS	RESPONSIBILITY
55.	The audit was conducted on 07 July 2025, covering the operational and compliance period from July 2024 to June 2025. The audit process included a detailed review of documentation, external specialist reports, and onsite operations. Overall, the audit confirmed that the facility is operating in full compliance with the conditions of its Waste Management Licence, with no partial compliances or non-compliances identified; a strong indicator of robust environmental and operational management.	
56.	The audit approach combined physical site inspections with comprehensive assessments of supporting systems, reports, and operational records. The site, its stormwater management infrastructure, the leachate tanks, and the leachate treatment plant were all assessed against the licence requirements.	
57.	The methodology also incorporated the review of external specialist reports from reputable organisations such as Jones & Wagener, GroundTruth, and Geozone Environmental, ensuring an objective and expert-validated evaluation of the facility's environmental management performance.	
58.	The audit criteria were strictly guided by the Waste Management Licence issued by the Department of Environmental Affairs, under Reference Number 12/9/11/L191016090639/4/R. The audit scope focused exclusively on the permitted activities authorised under this licence, including landfill operations, waste disposal activities, stormwater and leachate management, and associated environmental monitoring and reporting requirements.	
59.	Discussions with operational personnel provided additional context and confirmed that the site continues to follow structured procedures aligned with the WML and the company’s SHEQ policy framework.	
60.	The Shongweni Landfill remains designated as a Class A facility, authorised to accept Type 1 through Type 4 wastes. The current Waste Management Licence was issued on 26 March 2020, consolidating authorisation for both landfill operations and effluent treatment activities under a single regulatory instrument. This integrated approach enables more cohesive oversight of waste disposal, liquid waste handling, and leachate management processes.	

No.	KEY ISSUES & DISCUSSIONS	RESPONSIBILITY
61.	General observations during the audit confirmed that waste treatment and disposal activities are currently being undertaken in Cell 2. The landfill continues to manage contaminated stormwater responsibly, with stormwater from the onsite collection ponds directed to an appropriate wastewater treatment works for off-site treatment.	
62.	At the time of the audit, the contaminated stormwater ponds were in the process of being emptied in preparation for the upcoming rainy season; a proactive step to maintain capacity and prevent overflow. The site also makes use of temporary geomembrane capping over inactive waste cells to prevent rainwater ingress and reduce leachate generation.	
63.	Operationally, the site maintains a strong focus on infrastructure integrity and environmental protection. Cell slopes are inspected monthly for signs of erosion, ensuring early detection of any potential stability or drainage issues.	
64.	All leachate generated from the waste cells is collected in dedicated leachate tanks before being treated at the onsite leachate treatment plant.	
65.	The facility continues to report waste volumes accurately within the South African Waste Information System (SAWIS), as required by national regulations. ~~Importantly.~~ The audit confirmed that no reportable incidents relating to waste disposal occurred during the review period.	
66.	Environmental monitoring forms a critical component of the site's compliance programme. Biomonitoring of the Mgoshongweni tributary was conducted by GroundTruth in December 2024, with the report subsequently submitted to Jones & Wagener and the Department for review.	

No.	KEY ISSUES & DISCUSSIONS	RESPONSIBILITY
67.	The Annual Water Quality Monitoring Report for 2025, prepared by Jones & Wagener, was reviewed as part of the audit. The findings confirm continued compliance with water quality standards and the WML. Additionally, the landfill's liquid management model is reviewed monthly and submitted biannually to the Department, providing transparent ongoing oversight of leachate behaviour and water balance trends.	
68.	The audit also considered community feedback mechanisms. EnviroServ's official complaints system recorded several complaints during the review period, the majority relating to odour.	
69.	These complaints were logged and responded to according to internal procedures. This demonstrates an ongoing commitment to addressing community concerns, even though odour levels were not found to breach regulatory limits. No inspections or audits from national authorities occurred during this period; however, local authority inspections were conducted as part of routine municipal oversight.	
70.	In conclusion, the 2025 external waste licence audit found that the Shongweni Landfill continues to operate in full compliance with the conditions of its Waste Management Licence. The facility demonstrates consistent improvement in its operational systems, engineering controls, and environmental monitoring programmes.	
71.	These improvements align fully with the company's SHEQ commitments, and the operational requirements set out in the Waste Management Licence. The audit results reaffirm the site's responsible management of waste, liquids, and environmental risks, with no deviations identified during the period under review.	
72.	The Chairperson invited questions. **Q1 –** What are your qualifications? Mr van Eeden stated that he is a qualified scientist and auditor.	

No.	KEY ISSUES & DISCUSSIONS	RESPONSIBILITY
73.	**6. Date of Next Meeting** The date of the next meeting TBC	