



BASELINE RISK ASSESSMENT FOR THE CONSTRUCTION AND INSTALLATION OF WEIGHBRIDGE AT GEORGE WASTE DISPOSAL FACILITY

COMPANY		BASELINE RISK ASSESSMENT				HAZARD IDENTIFICATION AND RISK ASSESSMENT											
COMPILED BY		ERIC NQAMPI															
DATE OF ASSESSMENT		10 AUGUST 2023															
SCOPE OF WORK		CONSTRUCTION AND INSTALLATION OF WEIGHBRIDGE AT GEORGE WASTE DISPOSAL SITE.															
REVIEW DATE		EVERY ONE (1) year or after reportable incident or change in scope of work.															
Probability Index	5	Almost certain to inevitable	Severity index injury /disease	5	Fatal	Severity index (Production)	5	No production for at least 12 months	Severity index due to Environment	5	Permanent effects	Severity index (Financial impact)	5	Greater than R500 000.00	Frequency index	5	Hazards permanently present
	4	Probable		4	Permanently disabling injury		4	Loss of 1 month or more		4	Long term > 2 years		4	R100 000. 00 – R499 999,00		4	Hazards arises every week
	3	Improbable		3	Likely to be absent for more than 14 days		3	Loss of 1 week in production		3	Medium – 6 months to 12 months		3	R10 000.00 – R99 999.00		3	Hazards arises every month
	2	Less than even a chance		2	Medical recovery within 14 days		2	Loss of 1 day in production		2	Short term 1 day to six (6) months		2	R1 000.00 – R9 999.00		2	Hazards arises every year
	1	Highly improbable		1	First aid only		1	Loss of half day in production		1	Insignificant effect		1	R0 – R999.00		1	Hazards arises every five (5) years
	0	Not probable		0	Near misses		0	No loss of time but production affected by		0	No aspect or impact		0	No cost involved		0	No hazards exists

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		and fatal accidents.					<p>points to prevent the entry of unauthorized persons.</p> <ul style="list-style-type: none"> The principal contractor must provide a detailed site establishment methodology prior commencement of activities. 		
2.	Location, exposure, and protection of known and unknown existing underground services	<ul style="list-style-type: none"> Possible damage to existing property e.g electrical supply or water line which could lead to disruption of municipal services. Electrocution of contractor personnel through the direct contact with underground/over head powerlines which may lead to injury or, in the worst case, fatality. 	3	3	4	21	<ul style="list-style-type: none"> The principal contract must obtain the relevant details and drawings depicting existing services of all kinds from the Competent Authorities, prior to commencement of activities. Relevant risk assessments and safe working procedures or must be developed and implemented accordingly. Existing services are to be located, identified, and subsequently safeguarded. Competent supervision and adequate pre-task training and induction required prior to activities. Excavations opened overnight/non-working days to be barricaded or fenced with a fence that is at least 1m in height. 		
3.	Site access and drivers on site.	<ul style="list-style-type: none"> Possible collision of construction vehicles and/or mobile plants with Landfill personnel/property while operating 	4	3	4	28	<ul style="list-style-type: none"> A clear demarcation, and separation of working spaces between the Principal Contractor and Landfill personnel must be established and a mutual agreement must be established between the PC and Landfill personnel. Traffic movement to be observed and manually controlled where necessary. All visitors must be 	Administrative	Good

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		<p>at the Landfill facility.</p> <ul style="list-style-type: none"> Unroadworthy vehicles/plants, drunk drivers, poor road, and weather conditions causing collisions leading to personnel injuries and fatality. 					<p>warned of the current heavy construction traffic at the entrance/exit point of the site.</p> <ul style="list-style-type: none"> All vehicles and mobile plants are to be checked for roadworthiness and safety before they are allowed onsite. All construction vehicle drivers and operators are to be tested for alcohol on a regular basis. 		
4.	Hazardous Chemical Substances	Exposure to hazardous chemical substances such as cement, paint etc., resulting skin and eye irritation	4	2	3	20	<ul style="list-style-type: none"> Before any employee is allowed to use HCS, they must be trained and made aware of possible hazards as per MSDS. Correct and relevant PPE should be issued and worn to mitigate any possible risk of exposure. 	Administrative and the use of PPE	Good
5.	Electricity	Electrical shock due to contact with live electrical wire	3	5	3	24	<ul style="list-style-type: none"> Develop detailed method statement and ensure that it is implemented. Exclusion zones to be created with rigid barriers and warning signs No machine to be operated in an area where any part of machine or equipment can contact electrical wire. All persons to be provided with training in the hazards associated with live electrical wire. Provide employees with relevant PPE 	Combination of Administrative process and PPE	Satisfactory
	Electricity	Electrical shock or electrocution due to the use of unsafe electrical equipment (including generators)	3	5	3	24	<ul style="list-style-type: none"> Electrical equipment to be inspected by an authorised operator or inspector on a daily basis prior to use. Details of these inspections to be recorded in a register which will be kept on site at all times. 	Administrative	Satisfactory

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	Electricity	Electrical shock or electrocution due to contact with live overhead power lines	3	5	3	24	<ul style="list-style-type: none"> Electrical artisans need to be mindful of existing electrical wires. Before any equipment is used on a work site, an assessment should be carried out and reports of such assessments kept in the Contractor's SHE file. 	Administrative	Satisfactory
6.	Ladders: to gain access to elevated working positions.	Falling from the ladder leading to injuries.	3	3	3	18	<ul style="list-style-type: none"> Must be inspected by a qualified person Principal contractor to appoint such qualified person and must ensure that no worker uses a scaffolding that is not approved for use by a competent person. Provide personal protective equipment 	Administrative	Good
7.	Erecting working platforms	Poor manual handling leading to sprains, strains and fractures.	4	3	5	32	<ul style="list-style-type: none"> Train employees on good lifting techniques. Providing suitable working platforms for working conditions. 	Administrative	Good
8.	Moving materials for employees	Poor terrain Incorrect type of trolley to lift materials Repetitive lifting of materials Damage to existing office equipment.	4	3	5	32	<ul style="list-style-type: none"> Train employees on good lifting techniques Introduce the lifting machinery to avoid accidents to employees Existing office equipment must be protected throughout the construction activities. 	Administrative	Good
9.	Drilling and grinding	Flying particles that can cause respiratory ailments.	4	3	5	32	Machine guard to be fitted and ensure that the machine is working properly. Inspection and pre checks to be conducted before using any driven machine. Employees to be issued with relevant PPE.	Engineering and administrative	Satisfactory
10.	Excavation work	Excavations left open resulting in employees and members of the	4	3	5	32	<ul style="list-style-type: none"> All excavation work must be supervised by a competent person who is appointed in writing as an excavation's supervisor. 	Administrative Engineering solution	Good

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		public tripping and falling causing injuries.					<ul style="list-style-type: none"> All excavations must inspect, and a register must be kept in the contractor's OHS file. All open excavations must be fenced off with a fence or net that is not shorter than 1 meter. Signs warning of open excavations must be installed 		
11.	Improper stacking and storage	Material falls due to improper stacking causing injuries to persons.	3	4	4	24	Stacking should be supervised by competent person. Best stacking practices should be applied. Training for those responsible for discharging this duty should be provided.	Administrative	Good
12.	Loading and offloading	Loading and offloading of material by hand causing back injuries	3	3	6	27	Train employees on safe lifting techniques, reduce the weight of items to be lifted and use the mechanical to lift heavy items.	Administrative	satisfactory
13.	Portable Electrical Equipment	Noise will be generated by portable electrical equipment which will lead to noise induced hearing loss	2	2	3	10	<ul style="list-style-type: none"> Principal Contractor to provide PPE (Ear Protection). Workers should be rotated to reduce exposure. Noise must be measured and if found to be more than 85 decibels, the contractor must provide means to mitigate the impact. 	Administrative	Satisfactory
14.	Decommissioning and dismantling of old Weighbridge	Unsafe dismantling of old fence resulting in injuries	4	5	4	36	<ul style="list-style-type: none"> The Principal Contractor must ensure that the process for decommissioning and dismantling the old weighbridge is accounted for in the health and safety plan. A detailed method statement must be submitted for review and approval before any dismantling work can be carried out. Such plans must be communicated with the employees once approved. Employees must be provided with the relevant PPE such as gloves and goggles. 	Administrative	Good
15.	Mistakes in operation by employees	Lack of training leads to mistakes, use of equipment incorrectly	4	5	4	36	<ul style="list-style-type: none"> All employees on site to be properly inducted. Competent supervision to be provided on site 	Administrative	Good

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	and operators								
16.	Mixing of concrete	Hand mixing of concrete done on the ground resulting in environmental pollution and back pains and hand injuries on personnel.	4	5	4	36	<ul style="list-style-type: none"> No mixing of concrete is to be done on the ground. The principal contractor must provide damkos and mixing of concrete must be done on top it to protect the environment. Employees must be trained on safe working procedures for working with concrete. Relevant PPE such as gloves and goggles must be provided to employees. 	Engineering and administrative controls	Good
17.	Housekeeping	Housekeeping not being maintained daily. Generated waste, scrap and debris not removed from site at reasonably appropriate intervals. Construction areas near occupied offices not sufficiently hoarded.	4	3	4	28	<ul style="list-style-type: none"> Housekeeping to be maintained daily. Hoarding must be set up and maintained on a regular basis. 	Administrative	Good
18.	Working at elevated position / heights	Falling objects Employees working at heights not having necessary competency to work at heights.	4	5	5	40	<ul style="list-style-type: none"> Tools to be secured while working at heights to prevent falling from heights. Adequate training and awareness to be provided to employees on working in elevated/fall position. 	Engineering and administration	Good

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19.	Fall protection	<p>Employees not working according to approved fall protection plan.</p> <p>Employees not trained on fall protection plan</p> <p>Lack of supervision to ensure that workers are implementing the approved fall protection plan.</p>	4	5	5	40	<ul style="list-style-type: none"> • Fall Protection plan to be communicated among all employees by means of induction training and toolbox talks. • Employees to have the necessary competency to qualify to work at heights. • Fall protection plan to be updated throughout the project life span. • Fall protection plan to address all site-specific conditions. 	Engineering and administration	Good
20.	Painting and attributed tools and equipment.	<p>Paint spillage</p> <p>Paint being flushed down drains</p>	3	4	3	21	<ul style="list-style-type: none"> • All cleaning of paint brushes to be conducted in a controlled manner and working area.' • No paint to be disposed of down drains or into the stormwater systems. • Empty paint containers to be removed from site and disposed of as per regulations on disposal of hazardous chemical waste. 	Administrative	Good

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1. A risk level is attributed to each circumstance in the following manner

- Low Risk = 1 – 15
- Medium Risk = 16 – 30
- High Risk = 31 – 50

2. Risk Ranking calculation

2.1 Consequence

- Medical Treatment only or less (minor injury) = 2
- Average Lost Time Injury = 4
- Major Injury = 6
- Fatality or Permanent disabling injury = 8

2.2 Probability

- Not likely to occur in our lifetime = A
- Could occur = B
- Has happened = C
- Common Occurrence = D

2.3 Calculation of Risk

- Consequence = probability x frequency

3. Evaluation of results

Activities listed in the high-risk zones must be seen as tasks requiring immediate attention. Administration will in most instances solve some of the problems satisfactory, administration would involve training and awareness programmes to educate employees about the hazards and risks associated with their tasks.

An implementation plan must be devised to address the outstanding issues which may need engineering solution or PPE if all attempts fail. The action plan must be cognisance of the specific hazards that need to be eliminated.

4. Assessment Team

The following professionals were involved in the design of this baseline risk assessment for the Construction and Installation of a Weighbridge at George Waste Disposal Facility:

Eric Nqampi – Pr. CHSA
Dunyiswa Nosana: Pr. CHSO
Siwapiwe Bekebu: Pr. CHSO

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5. Task Specific Risk Assessment

Should the baseline risk assessment indicate tasks in high-risk zone, a specific task risk assessment must be conducted. The assessment will then target the specific tasks and hazards attached to the identified activity.

6. Required and Existing Control Measures

- Safe Work Procedures
- Training
- Medical Examination
- Supervision
- Risk assessment
- Mitigation measures
- Consequence management