



VISION

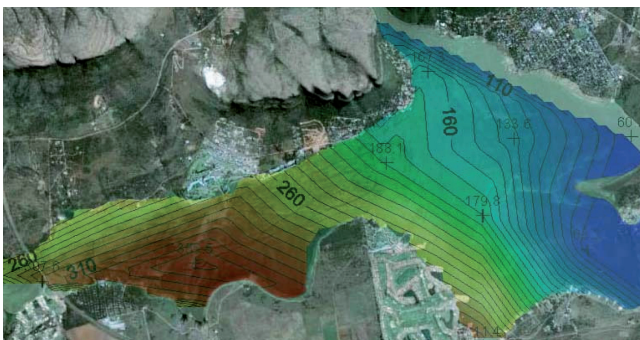
MENCO is built on the fundamental environmental principles of assisting our clients in conservation, protection, mitigation and management of natural resources when utilizing these resources in an economical sustainable manner. MENCO aims to assist business with a pro-active and transparent environmental management strategy.

WHY MENCO

- MENCO provides vision, experience, expertise, management solutions and creative thinking. With legislation focusing on integrated environmental management, our approach to this issue together with integrated process optimization and waste minimization is proving to be more economically and environmentally friendly, allowing for a definite preference to prospective customers, regulating authorities as well as surrounding stakeholders.
- MENCO has extensive experience in environmental and legislation management, as well as a practical understanding of mining and industrial requirements, and their associated problems and challenges.
- New and Existing operations with historic problems benefit from our identification and classification programs as MENCO is able to prioritise current and potential problem areas and then develop and implement a cost effective Environmental Impact Minimisation and Management Strategy. MENCO facilitates the development and approval of the requisite technical documentation to support permit and licence applications.
- MENCO is associated with various specialists in the environmental field and can provide specialist input on almost any environmental issue or concern to provide the most efficient and cost effective management strategy.

ENVIRONMENTAL SERVICES

- **Comprehensive Environmental Authorizations and License applications**
 - Compilation of license applications for section 21 water uses (National Water Act (NWA), 1998 (Act 36 of 1998)) and permit applications for landfill sites as per section 20 of the Environmental Conservation Act (ECA), 1998 (Act 73 of 1989)
 - Closure permitting of old waste disposal and landfill sites, including rehabilitation and decommissioning plans and other supporting documentation.



Representation of data from the sampling of 14 points in the Hartbeespoort dam, illustrating algal activity

- **Legislative required reporting**
 - (Annual) water management reports;
 - Bio-monitoring reports as per license conditions
 - Analysis of the adequacy of water quality monitoring programs, data analysis and data representation.
- **Impact and Resource Management**
 - Analysis and management of environmental issues;
 - Conducting Feasibility studies, Scoping, Basic Assessments and EIA studies and Development of EMPs and EIA in terms of the Mineral and



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Petroleum Resources Development Act (MPRDA), 2002 (Act 28 of 2002), the National Environmental Management Act (NEMA), 1998 (Act 107 of 1998) and Section 20 (ECA) permits.

Component 2	Plant	Opencast 1	Phase 2 opencast development	Dump reclamation	Additional Traffic
Magnitude	Medium	High	Medium	Low-medium	Low-medium
Spatial Extent	Local	Local	Local	Site	Local
Duration	Long	Medium	Short	Medium	Long
Probability	Improbable	Highly Likely	Possible	Improbable	Highly likely
Significance	Low	High	Low	Low	Medium

Typical Environmental Impact Assessment done for each phase of project, (Operational phase: Noise impact from proposed mining activity).



Clients

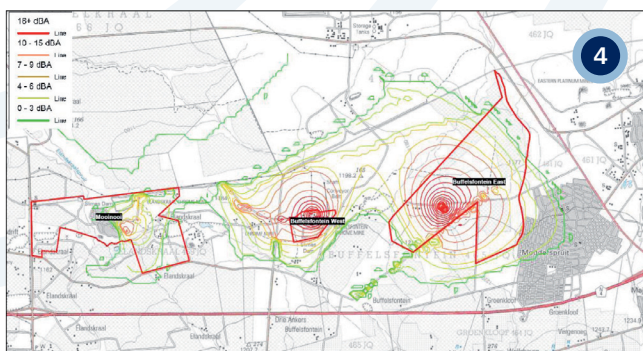
- ERPM
- DWAF: National Office
- DWAF: Gauteng
- DWAF: Limpopo
- DWAF: North-west
- De Beers
- African Cables
- Andalusite Resources
- HERNIC
- LONMIN
- Vesuvius SA
- TOTAL SA
- Highveld Steel and Vanadium
- Xanado Eco Park
- Sedibeng District Council
- Emfuleni Local Municipality
- Mittal Steel SA
- Samancor Chrome
- Sintec
- XSTRATA
- International Ferro Metals
- Khutala Colliery
- Coastal Fuels
- ESKOM
- Sky Chrome
- North West Recycling
- AFRISAM
- Salbro Holdings
- Theos Projects
- MTC Minerals
- Golder Associates

- **Compilation of Integrated Water and Waste (Resource) Management Plans (IWW(R)MP), Stormwater Management Plans, Source / resource directed water monitoring Plans, Environmental Management Plans (EMPs), Sewage treatment and disposal management Plans and Catchment Management Plans.**

Catchment 3	Size (x 10 ² m ²)	Flow (daily, m ³)	Concentration (mg/l)				Calculated Daily Load (kg, rainy season)			
			Sulphate	Iron	Manganese	Aluminium	Sulphate	Iron	Manganese	Aluminium
A	87,890	24,883	93	0.24	0.65	0.15	2,314	0.006	0.0016	0.0037
B	410,130	116,118	22,35	0.6995	0.0599	0.1261	2,595	0.081	0.00696	0.0146
C	37,030	10,484	26.04	0.77	0.11	0.29	0.27	0.008	0.00115	0.00304
Droogvallei Discharge	n/a	375	150	5.14	0.11	0.57	0.056	0.00193	0.00041	0.00002
D	461,490	130,659	19.86	0.62	0.053	0.112	2,595	0.081	0.00696	0.0146
E	10,500	3,347	196.1	0.7889	3.821	1.84	0.657	0.0026	0.0128	0.0062
F	597,800	98,787	20.37	0.5314	0.121	0.137	3.53	0.092	0.021	0.0238
Percent change			1.24%	1.75%	0.18%	0.52%	1.24%	1.75%	0.18%	0.52%

Calculations of a Waste Load Allocation as part of the Water Use Licence Application for a mine with a discharge

- **Monitoring and Performance Assessments** of EMPs in terms of the regulations of the MPRDA, surface water quality and quantity monitoring, surface water bio-monitoring as per license conditions, Seepage and discharge monitoring and management.
- **Noise Impact Assessments**



Sound level changes due to proposed activities done as part of a Noise Impact Assessment

- **Fauna and Flora Studies**
- **Soil and Land Capability Studies**
- **Hydrological Modelling (Floodlines and flows)**

