



ZIBULO COLLIERY (UNDERGROUND)

Environmental External Audit Report 2022/ 2023

Submitted as contemplated in section 24N(7)(d) of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and Regulation 34 under Part 3 of Chapter 5 of the amended Environmental Impact Assessment Regulations, 2014 (Government Notice No. 982) (EIA Regulations, 2014)

**DMRE Reference No: MP 30/5/1/2/2/305 MR
DMRE Reference No: MP 30/5/1/1/2/305 MR
DMRE Reference No: 17/2/2/2-NK-7**

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Document Control**Version Control**

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0.1	October 2023	Create report	Konanani Nelushi
0.2	October 2023	Internal review	Tebogo Mapinga
0.3	October 2023	Legal Review	Sarah Burford Adam Gunn
0.4	November 2023	Authorise	Kenneth Mokoena Luyanda Mthethwa

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ACRONYMS

AMD	Acid mine drainage
Anglo	Anglo American Thermal Coal
AOPL	Anglo Operations Proprietary Limited
BECSA	BHP Billiton Energy Coal South Africa (Pty) Ltd
CE	Consulting Engineer
DMR	Department of Mineral Resources and Energy
DWS	Department of Water and Sanitation
EAP	Environmental Assessment Practitioner
EA	Environmental Authorisation
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMPr	Environmental Management Programme
EO	Environmental Officer
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
EMC	Environmental Management/Monitoring Committee
HDPE	High Density Polyethylene
IWULA	Integrated Water Use License Application
MDEDET	Mpumalanga Department of Economic Development, Environment and Tourism
ML/day	Megalitre per Day
WUL	Water Use License
NWA	National Water Act
UG	Underground
OC	Opencast
SABS	South African Bureau of Standards
SLP	Social Labour Plan

1. Introduction

1.1. Background

The Zibulo Colliery Underground (UG) consists of a portal from where a decline shaft is used to extract the underground coal reserves. Access to the reserves is obtained by a vertical man and materials shaft located on the farm Rietvlei 64 IS. The incline shaft is located near the vertical shaft. The mining of the No. 2 select coal horizon is done via bord-and-pillar mining method. The reserves are located at depths of between 80 and 130 metres below surface. A number of vent shafts have and will be constructed at various locations over the reserves as mining progresses.

Coal is transported via a ± 15 km conveyor system to the Phola Coal Processing Plant. At the time of the feasibility study and Mining Right Application ("MRA"), the project was referred to as the Zondagsfontein Mine or Zondagsfontein Colliery, but more recently referred to as Zibulo Colliery.

The Run of Mine ("ROM") reserves for the Zibulo Colliery UG mining area are estimated at 150 million tons for the No. 2 select coal seam. The production rate for the Zibulo Colliery UG is planned to be 7 million tons of coal per annum and the life of mine is about 22 years.

Zibulo Coal Mining (Pty) Ltd appointed Geovicon Environmental (Pty) Limited to assess the compliance of Zibulo Colliery UG mining operation against conditions/commitments of the Environmental Authorisation (EA) for the development of the Zondagsfontein Coal Mine; the Environmental Management Program (EMPr) that formed part of the mining right application for; as well as EMPr that formed part of the environmental assessment and authorisation application for the Ventilation Shaft No. 3 issued and approved in terms of the NEMA.

As part of the environmental legal requirements stated in Section 24N(7)(d) of the National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) and Regulation 34 under Part 3 of Chapter 5 of the amended Environmental Impact Assessment Regulations, 2014 (Government Notice No. 982) (EIA Regulations, 2014 as amended) the components of Zibulo to commence are authorized as follows:

- Integrated Environmental Authorisation (EA) and Environmental Management Programme (EMPr) issued in terms of the National Environmental Management Act, 1998 (NEMA) as amended for the underground Mining (board and pillar) and associated infrastructure that has been granted.

NTC Group (Pty) Ltd was appointed by Thungela as the independent Environmental Auditor to undertake the 2022/2023 annual environmental authorisations and environmental management programmes compliance assessment and this report presents the methodologies and findings thereof. This report fulfils the compliance assessment requirement for June 2022 – June 2023 audit period.

1.1. Terms of Reference

Section 24N(7)(d) of NEMA requires that the holder and any person issued with an environmental authorisation (EA) must monitor and audit compliance with the requirements of the EMPr or environmental management plan. Furthermore, Regulation 34 of the NEMA EIA Government Notice Regulation (GNR) 982 effected 2014 (as amended) states amongst others, that the holder of an EA must, for the period during which the EA, EMPr and the closure plan, in the case of a closure activity remain valid must: a) ensure that the compliance with the conditions of the Environmental Authorisation, the EMPr, and the closure plan is audited; and b) submit the environmental audit report to the relevant Competent Authority. Additionally, the audit findings must be verifiable, in a structured and systematic manner on the level of performance against and compliance of the organisation's EA, it further states that the recommendations to amend the EMPr for rectification of the shortcomings must be subjected to Public Participation for approval by the Competent Authority.

As a result of the above, the Environmental Authorisation and Environmental Management Plan is required to undergo regular auditing in accordance with NEMA EIA Regulations as stated and Appendix 7 as amended in the current EIA Regulation. The frequency is stipulated in the EA, specifically annually. Following from the above, compliance assessments on the approved Environmental Management Programmes for Zibulo Colliery Underground were assessed and include:

As a result of the above, the Environmental Authorisation and Environmental Management Plan is required to undergo regular auditing in accordance with NEMA EIA Regulations as stated and Appendix 7 as amended in the current EIA Regulation. Following from the above, compliance assessments on the approved Environmental Management Programmes for Zibulo were assessed and include:

- Environmental Authorisation (EA) issued in terms of the National Environmental Management Act, 1998 (NEMA) as amended for the proposed underground Mining (bord and pillar) and associated infrastructure that has been granted on 08th of March 2010 by Mpumalanga Department of Agriculture and Land Administration Ref No: 17/2/2/2 NK-7.
- Environmental Management Programme issued in terms of the National Environmental Management Act, 1998 (NEMA) as amended for the proposed underground Mining (bord and pillar) and associated infrastructure that has been granted.

The compliance assessments on the approved EA and EMPr as stated above for Zibulo Colliery were assessed and findings are detailed in Section 5.

1.2. Assumptions and Limitations

The scope of the compliance assessment was to assess the environmental management practices being implemented during operation of the Zibulo Colliery, in accordance with the approved environmental authorisation and other authorisations/license/permits issued.

The objective of the audit included the review of documents, reports etc stated under Section 3 and interview persons, to determine if the operation phase of Zibulo Colliery is compliant with approved EA and other permits.

The following assumptions and/or limitations will be applicable to the audit process and findings:

- This audit is a snap-shot representation of the Zibulo Colliery operation, and the audit period assessed includes June 2022 – June 2023. Anything occurring prior to this period is assumed to have been audited previously and was thus not included herein. Therefore, such items were determined to be “Not Applicable”;
- Due to the nature and extent of the operation, not all areas were visited during the site assessment. Instead, specific areas representative of the operation and assessment period were selected to provide a demonstration of site operations.
- Zibulo Colliery is under operational phase, however, activities relating to construction, decommissioning, and/or closure and rehabilitation, that may have occurred on site during the audit period will be deemed applicable.
- Procedures developed by Zibulo Colliery specifically, are deemed to be appropriately implemented by site personnel as part of the Integrated Management System by site personnel.
- Outdated/repealed legislation or referenced guideline documents in the EA and EMPr will be substituted for current/relevant legislation and referenced guideline documents.

2. Auditors

NTC was established in 2005. It is 100% female black owned with a Level 1 Broad Based Black Economic Empowerment (BBBEE) Rating. We undertake our services with professional integrity and have built good reputations with stakeholders in the environmental management field including regulatory authorities and government departments. We undertake all our services within the requirements of applicable South African legislation, as well as acceptable international best practices, norms and standards. The details of the specific environmental consultants who completed and/or assisted with the Compliance Assessment is provided in Table 1 (Curriculum Vitae and Declaration of Independence attached in Appendix B).

TABLE 1: AUDIT TEAM CONTACT DETAILS

Role	Responsible Person	Contact Details
Quality Control	Tebogo Mapinga (Pr. Sci. Nat) is an Environmental Auditor (Peer Reviewer) at NTC Group (Pty) Ltd. She has over 16 years' experience in the Environmental Management field including extensive experience within the mining sector. Goodness provided quality assurance during the audit preparations and report compilations.	Tel: +27 11 462 2022
		Fax: +27 86 665 1864
		Email: tebogo@ntcgroup.co.za
Auditor	Babalwa holds an MSc (Cum Laude) and has over 23 years' extensive experience in the Environmental Management field inclusive of performance assessment audits and compliance monitoring.	Tel: +27 11 462 2022
		Fax: +27 86 665 1864
		Email: admin@ntcgroup.co.za
Auditor	Konanani Nelushi is the Environmental Compliance Manager at NTC Group (Pty) Ltd. He has over 8 years' experience in the Environmental Management field including experience within the mining sector. Konanani was the Auditor who undertook the audit preparations, site assessment and audit report compilation.	Tel: +27 11 462 2022
		Fax: +27 86 665 1864
		Email: konanani@ntcgroup.co.za
Auditor	Lyn Mudziwanzira is the Environmental Scientist at NTC Group (Pty) Ltd. She has over 5 years' experience in the Environmental Management field including extensive experience within the mining sector. Authorisations and undertook the audit preparations,	Tel: +27 11 462 2022
		Fax: +27 86 665 1864
		Email: admin@ntcgroup.co.za

Role	Responsible Person	Contact Details
	site assessment, as well as compilation of the audit report.	

3. Audit Methodology

3.1. Information Collation and Review

NTC reviewed the Final Environmental Impact Assessment & Environmental Management Programme Report, Environmental Authorisation as well as other relevant permits, and compiled a checklist that contained the conditions that required compliance assessment. The audit evidence will be made available to the respective authorities by Thungela. The information verified during the audit includes *inter alia*:

3.2. Site Verification

The site assessment and document review were completed on 28th of June 2023 to 03rd of July 2023 by Konanani Nelushi (NTC), Babalwa Fatyi (NTC), Lyn Mudziwanzira (NTC), Rozwi Magoba (NTC), Kenneth Mokoena (Thungela), Luyanda Mthethwa (Thungela), Sarah Burford (Pinset), and Iman Damons (Pinsent Masons); Nico Joubert (Thungela) and others (refer to Appendix B: Attendance Register for a detailed list). During the site assessment, additional documents were collated, and information was verified, Zibulo Colliery personnel were interviewed and selected areas were visited i.e., verified using photographic evidence presented in Appendix C: Photographic Evidence.

3.3. Assessment Methodology

NTC assessed each of the EA and EMPr conditions per the criteria provided in Table 2. Only conditions in the non-compliance category were given recommendations for rectification. The audit approach was guided by the requirements of the ISO 19011:2018 Guidelines for Auditing Management Systems. The audit scope was based on Section 34 and Appendix 7 of the EIA Regulations, 2014 as amended, which defines the key objectives of an audit as follows:

- Report on the level of compliance with the conditions of the EAs and the EMPr s and the extent to which the avoidance, management and mitigation measures provided for in the EMPrs.
- To identify and assess any new impacts and risks as a result of undertaking the activity;
- To evaluate the effectiveness of the EMPrs;
- To identify shortcomings in the EMPrs; and
- To identify the need for any changes to the avoidance, management and mitigation measures provided for in the EMPrs.

TABLE 2: ASSESSMENT CRITERIA

Criteria	Acc	Description
Compliant	C	Full Compliance is when the construction or operational activities comply with the EA/EMPr conditions. No mitigation measures are required where operations comply and are adequate.
Non-Compliant	NC	Non-Compliance is when construction or operational activities are in contravention with the EA/EMPr conditions and have the potential to impact on the environment in a detrimental manner. Non-compliance may also be associated with activities breaching legislation. Non-Compliance findings have a high priority and mitigation measures are mandatory.
Not Applicable	N/A	Not Applicable is assigned to EA/EMPr conditions which no longer occur, that do not apply to current activities that may be incorrect and require amendment, fall outside the audit period and/or are duplicates of existing conditions.

4. Audit Findings

This section is aimed at highlighting the identified non-compliances in order that Zibulo Colliery can prioritise implementation of recommendations and rectification actions. The full audit details are included in Table 3,4,5&6. The overall findings of this audit of the EMPr are indication of Zibulo Colliery to its EA/EMPr authorised conditions, and no mitigation measures are required where conditions comply and are adequate for current activities. The summary of EA and EMPr findings will be summarised in the final report.

TABLE 3: ENVIRONMENTAL AUTHORISATION FOR THE DEVELOPMENT OF AN ACTIVITY, INCLUDING STRUCTURES AND INFRASTRUCTURE AT ZONDAGFONTEIN COAL MINE, OGIES, MPUMALANGA, APPROVED ON 8TH OF MARCH 2010, WITH REFERENCE NUMBER 17/2/2/2 NK-7

EA Ref No'	Condition	Compl	Finding
3. Scope of Authorisation			
3.1	Authorisation of the activity is subject to the conditions contained in the authorization, which forms part of the environmental authorisation and are binding to the holder of the authorisation.	C	The condition has been noted by the holder of the authorisation (Thungela). The authorisation was issued in accordance with the requirements of NEMA and applicable regulations thereto.
3.2	The holder of the authorisation is responsible for ensuring compliance with the conditions contained in this environmental authorization. This includes any person acting on the holder's behalf including but not limited to an agent, servant, contractor, sub-contractor, employee, consultant or any person rendering a service to the holder of the authorisation.	C	Kenneth Mokoena is the appointed Environmental Superintendent responsible for ensuring compliance with environmental legislation and licenses/permits issued to Thungela for Zibulo Colliery. Zibulo Colliery undertake regular monitoring and auditing to ensure compliance to environmental legislation, including: - Anglo Zibulo Colliery: Biomonitoring and Ecotoxicity Assessment Programme dated January 2022 Prepared by Cean Stream Biological Services. - External audit Report (EMPr, EA, WUL) compiled by Geovicon Environmental (Pty) Ltd dated November 2022. - Zibulo Colliery Annual water quality Assessment Report dated January 2022 to December 2022 prepared by Aquatico Laboratories. NTC Group (Pty) Ltd was appointed as the independent external auditor for the June 2022 – June 2023 period, to verify compliance against conditions of the licence and permits issued for Zibulo Colliery.
3.3	The activities authorised may only be carried out at the property indicated above.	C	No non-compliance was observed. The authorised activities under this authorisation are undertaken on portion 5 of the farm Boschpoort 211 IR, Portion 1 and 3 of the farm Cologne 34 IS; Portion 2, 3, 4, 6, 7, 8, 11, 12, 13, 14, 15, 18, 19, 20, 21, 23, 24, 25, 26, 28, 33 and 34 of the farm Leeuwfontein 219 IR; Portion 35 of the farm Olga 35 IS; Portion 1 and 3 of the farm Onverwacht 66 IS; Remainder, Portion 1, 2, 4, 6, 7, 8, 9, 10 and 11 of the farm Rietvlei 64 IS; Portion 2, 3 and 5 Smithfield 44 IS; Portion 1, 2, 3, 5, 6, 7, 8, 9, 11, 12, 15, 16, 17, 18, 19, 21, 22, 23, 24, 25, 26, 27, 28, 29, 30, 21, 32 and 33 of the farm Straffontein 252IR; Portion 2, 4, 5, 7, 11 and 14 of the farm Strehla 261 IR; Portion on the farm Uitvlugt 255 IR, Portion 7 and 8 Vlakvarkfontein 213 IR; Remainder, Portion 1, 4, 7, 9, 10, 11, 16, 17, 18, 20, 21, 22 and 198 of the farm Welgelegen 221 IR; Remainder, Portion 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11 of the farm Zondagsfontein 253 IR, Ogies: Item 2 as identified in terms of Chapter 5 of the National Environmental Management Act, 1998 and Government Notice R 387 of 21 April 2006
3.4	Any changes to, or deviations from, the project description set out in this authorisation must be approved, in writing, by the Department before such changes or deviations may be affected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the authorisation to apply for further authorisation in terms of the regulations.	N/A	No changes in project description were undertaken within audit period.
3.5	The activity must commence within a period of two (2) years from the date of Issue. If commencement of the activity does not occur within that period, the authorisation lapses and a new application for environmental authorisation must be made in order for the activity to be undertaken.	N/A	The auditors noted that the EA was only granted on 08 th of March 2010. Therefore, this condition falls outside the audit period.
3.6	This authorisation does not negate the holder of the authorisation, responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.	C	The condition has been noted by the holder of the authorisation (Thungela) and complies to the necessary approvals/ permits received from other authority. Zibulo Colliery underground operations are in possession of the EA, EMPr and Integrated Water Use Licence.
Appeal of Authorisation			

EA Ref No'	Condition	Compl	Finding
3.7	After an appeal period has been expired and no good course to extent the appeal period has been submitted in accordance with Chapter 2 of the National Appeal Regulations of 2014, a thirty (30) day-written notice must be given to the department that the activity will commence. Commencement for purpose for the purpose of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence.	N/A	The auditors noted that the EA was only granted on 08 th of March 2010. Therefore, this condition falls outside the audit period.
3.8	The notification referred to in 3.7 must-		
3.8.1	specify the date on which the authorisation was issued;	N/A	Condition 3.7 above refers.
3.8.2	inform the interested and affected party of the appeal procedure provided for in Chapter 8 of the regulations; and	N/A	Condition 3.7 above refers.
3.8.3	advise the interested and affected party that a copy of the authorisation and reasons for the decision will be furnished on request.	N/A	Condition 3.7 above refers.
Management Activity			
3.9	The Environmental Management Plan ("EMP"), which fulfils the requirements of this authorization, must be compiled and submitted to the Department for approval. The EMP must:		
3.9.1	contain all the information specified in regulation 34 of the regulation;		The 2014 EIA Regulations, as amended, prescribe that: Regulation 34 (1) The holder of an environmental authorisation must, for the period during which the environmental authorisation and EMPr, and where applicable the closure plan, remain valid— (a) ensure that the compliance with the conditions of the environmental authorisation and the EMPr, and where applicable the closure plan, is audited; and (b) submit an environmental audit report to the relevant competent authority.
3.9.2	be approved by the Department before the commencement of any construction activities and	C	It was noted that the EMPr for the Zibulo Colliery UG titled Environmental Management Programme including EIA Report and I&AP Comments, Mining Right Application, Zondagsfontein Colliery, MP 30/5/1/2/2/305 MR, dated July 2008, was submitted in support of the EA application and was subsequently approved on 17 July 2010.
3.9.3	be adhered to during the commencement, operation and closure of the activity.	C	Zibulo Colliery is in operational phase and conditions applicable to operation are adhered to through various mechanisms such as auditing, monitoring and impact assessment.
Commissioning and Operation of the Activity			
3.10	Fourteen (14) days written notice must be given to the Department that the activity will commence. Commencement for the purposes of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence.	N/A	The auditors noted that the EA was granted on 08 th of March 2010. Therefore, this condition falls outside the audit period.
3.11	All construction activities must be limited to the said site. No activities must be allowed on adjacent agricultural land.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.12	Chemical toilets must be provided to be used by construction workers. These must be serviced on a regular basis and no pit latrines are allowed.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.13	Potable water must be made available for the site workers.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.

EA Ref No'	Condition	Compl	Finding
3.14	Proper waste management facilities must be provided as part of the construction camp. No dumping of any kind of waste (domestic, general, building rubble, etc) must take place on the adjacent agricultural land.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.15	Best waste management practices must be emphasized during the induction phase and on an on-going basis.	C	The induction manual titled Zibulo Environmental Induction does emphasise on waste management at the Colliery. The induction details the waste types and handling thereof. The auditors also noted the Waste Management Procedure: Doc No ZIB-ENV-PRO-083.
3.16	Waste must be removed by a licensed waste disposal company and should chemical toilets be utilized, the sewage must be removed by a licensed company.	C	Zibulo Colliery reported a registered waste manager was appointed and waste is collected as and when required. No chemical toilets were observed within the Colliery and sewage are treated in-house.
3.17	Once the designated areas for waste skips and the planned amounts have been finalized, the mine has to obtain a section 20 applications from the DWAF in terms of the Environmental Conservation Act (Act No. 73 of 1989).	NA	The auditors noted that Section 20 of the Environment Conservation Act 73 of 1989 ("ECA") was repealed with the commencement of the National Environmental Management: Waste Act 59 of 2008 ("NEMWA") with effect from 1 June 2009, i.e. prior to the granting of the EA on 8 March 2010.
3.18	No activities associated with hydrocarbons and or chemicals (i.e. wash bays etc.) must be undertaken outside of an effectively designed contained area.	NC	During the inspection, the auditors observed cloth and empty plastic containers contaminated by hydrocarbon thrown in a wetland. All hydrocarbon waste must be stored in a designated hazardous waste storage area. Storage and handling of hazardous waste must be in demarcated impervious and bunded areas.
3.19	The applicant is responsible for the removal and appropriate disposal at a landfill site of all maintenance waste produced during the operational phase.	C	All waste streams ready to be discarded are collected by the waste manager and disposed of at registered landfill
3.20	The contractor doing civil work must ensure that construction waste must be disposed of at the relevant registered municipal waste site and for the hazardous waste at Holfontein Hazardous waste disposal site.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.21	No servicing of vehicle must take place on site.	C	There is a designated vehicle area which complies with all required environmental requirements such impervious surface, sump for draining oily water and bins for collection of waste.
3.22	The contractors must ensure that the construction vehicles are in a good condition and do not leak oil or transmission fluid onto the site.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.23	Soil contaminated by oil from leaking vehicles must be collected and disposed of at a hazardous waste disposal site.	NC	The auditors observed massive soil contamination at the laydown area where oily scraps were being stored. It was noted that the hard park area was not lined with impervious material to contain oil or any hydrocarbons not to pollute underground water. Zibulo Colliery indicated that plans are underway to undertake bioremediation at hard park. All contaminated soil must be cleaned and disposed of at a registered landfill. Safe disposal certificate must be filed for audit purposes.
3.24	The area to be cleared of vegetation must be limited in order to reduce the potential for dust generation especially during the windy months and erosion during the rainy season.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.25	Dust suppression measures must be implemented during very dry and windy periods.	C	The auditors noted that dust suppression by means of wetting exposed and high use surfaces is undertaken not only in dry and windy periods, but throughout the year.
3.26	The excavation of soil must be done carefully and appropriate drainage systems incorporated.	N/A	Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.

EA Ref No'	Condition	Compl	Finding
3.27	Once the heavy machinery has cleared the bulk of these material stockpiles, the disturbed areas must be levelled and cleared of any foreign material.	N/A	No material stockpile was observed at the Zibulo Colliery. Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.28	Noise must be well within the environmental noise limits as prescribed by Environment Conservation Act and other regulations.	C	Zibulo Colliery to provide noise monitoring reports and auditors will do the assessment.
3.29	A noise survey must be conducted and approved by the Inspection Authority and Occupational Hygienist once construction of the plant is complete.	C	A baseline noise assessment survey was undertaken in 2006 and an Environmental Noise Assessment undertaken in respect of the underground mining operations and conveyor during 2012.
3.30	Other relevant approval from legislations, policies and or guidelines of any sphere of the government that are applicable must be considered before the construction of the proposed activity.	C	Condition has been noted by the holder of the permits. Zibulo Colliery is in operational phase and no construction activities were conducted within the audit period.
3.31	The Applicant must ensure that the material generated during the decommissioning phase is cleared from the site and disposed of at a registered landfill site.	N/A	Zibulo Colliery is in operational phase and no decommissioning activities were conducted within the audit period.
3.32	Stockpiling of these soils must be done separately from the different layers of the soils, and greater care is needed with the management of erosion problems during storage.	N/A	Zibulo Colliery is in operational phase and no stockpiling of soils activities were conducted within the audit period. No stockpiles were observed during the audit inspection.
3.33	Prior to the removal of the soils for stockpiling additional sampling and analysis of the soils must be undertaken, to determine their suitability for use during rehabilitation.	N/A	Zibulo Colliery is in operational phase and no soil removal activities were conducted within the audit period. No rehabilitation activities were undertaken within the audit period.
3.34	Topsoil and subsoil must be sprayed with dust allaying agent immediately after being stockpiled.	N/A	Zibulo Colliery is in operational phase and no topsoil and subsoil removal activities were conducted within the audit period.
3.35	Stockpiles greater than 1.5m must be equipped with engineered erosion control measures.	N/A	Zibulo Colliery is in operational phase and no stockpiling of soils activities were conducted within the audit period. No stockpiles were observed during the audit inspection.
3.36	Rapid growth of vegetation on stockpiles must be promoted by means of watering.	N/A	Same as above
3.37	The mine must ensure that all erosion controls measures are included in the designs of all linear infrastructures (railway lines, power lines, conveyors, pipelines etc.) and points of water discharge.	C	Designs of all linear inf infrastructures (railway lines, power lines, conveyors, pipelines etc,) were not verified during the audit. However, erosion measures such as stormwater drains and concrete pre-cast channel to separate dirty and clean around the Zibulo Colliery underground operations were observed.
3.38	Areas where erosion control measures have been implemented must be inspected on a weekly basis to determine their effectiveness.	C	Zibulo Colliery underground operations reported that inspections/monitoring is conducted daily to determine if there are environmental issues around the colliery. During the audit, there was no ineffectiveness observed around the erosion control measures. There was no debris or silt observed around the erosion control measure. It was also reported that any issues identified during the inspection/monitoring are recorded on Enablon System for investigation, actioning, and close-out.

EA Ref No'	Condition	Compl	Finding
3.39	There must be an incident management system including procedures and training for dealing with incidents.	C	The auditors noted the Zibulo Incident and Non-Conformance Reporting Procedure (DOC No: ZIB-ENV-PRO-0814) approved 28th of August 2022 by the General Manager was in place. The Zibulo Incident and Non-Conformance Reporting Procedure defines incident as “any unintended event that has or has a potential negative impact on the physical or biological environment (air, land, water or habitats); AND/OR; an inconvenience/disturbance/disruption/annoyance (including odour, dust, noise, loss of water supply etc.) AND/OR; a release of material (gas, liquid, solid) or energy which has the potential to cause illness, injury or property damage”. Zibulo Colliery underground operations reported that there was no incident recorded within this audit period (June 2022 – June 2023). All incidents are recorded on the Enablon System. No applicable recommendation.
3.40	Major spillage incidents must be reported to the DME, DWAF, MDALA and the National Department of Agriculture (NDA).	C	Process flow on how environmental incident should be reported and handled is clearly defined in the Zibulo Incident and Non-Conformance Reporting Procedure (DOC No: ZIB-ENV-PRO-0814). Zibulo Colliery underground operations is conversant on how major spillage are reported to the authority. Further, the above-mentioned procedure details the severity levels of incidents. No reportable incident was recorded within the audit period.
3.41	If spills do occur and soils become contaminated, appropriate remedial measures must be identified in consultation with appropriate qualified specialists.	NC	The auditors observed massive soil contamination at laydown area where oily scraps were being stored. It was noted that the hard park area was not lined with impervious material to contain oil or any hydrocarbons not to pollute underground water. Zibulo Colliery indicated that plans are underway to undertake bioremediation at hard park.-All contaminated soil must be cleaned and disposed of at a registered landfill. Safe disposal certificate must be filed for audit purposes.
3.42	Contractor Lay Down Area needs to be established within designated mining areas, or where the footprint of the area will become part of the mining infrastructure.	N/A	Zibulo Colliery is in operational phase and no establishment of contractor's laydown area was established.
3.43	Should any rare or endangered species be found within the Expansion Project area must be relocated under the guidance of relevant authorities.	N/A	Zibulo Colliery is in operational phase and no construction activities were undertaken within the audit period.
3.44	Dust must be suppressed by using the same dust suppression method as for topsoil stockpiles.	C	There were no topsoil, subsoil or rock stockpiles observed at the Zibulo Colliery underground operations. Dust suppression is conducted as and when required within the colliery.
3.45	Ongoing ambient and PM10 monitoring must be implemented with dust monitors concentrated of the west of the site.	C	The Zibulo Colliery reported that Eco Elemental is the appointed air quality specialist conducting air quality monitoring.
3.46	All employees must be made aware of all environmental issues during induction and must continuously be updated of all new issues.	C	Environmental induction is conducted continuously, and all employees undergo this training.

EA Ref No'	Condition	Compl	Finding
3.47	Clean and dirty water systems must be implemented prior to the commencement of construction activities.	C	No construction activities were undertaken during within the audit period. The auditors clean and dirty water trenches for water management systems.
3.48	All pollution control dams, and other dirty water infrastructure must be lined with a HDPE liner.	C	Zibulo Colliery reported that all PCD are lined, and all dams are audited annually.
3.49	All pollution control dams must be maintained regularly to maintain their effectiveness.	C	Zibulo Colliery underground operation reported that PCD's are maintained regularly. Maintenance measures such as desilting is ongoing and dam safety inspection is conducted by an external engineer (Zibulo to provide inspection reports).
3.50	Spillages clean up kits must be made available at each area where hydrocarbons are being utilized.	C	Spill kits were available on site and are used for cleaning any accidental spills.
3.51	During an induction and ongoing all employees must be trained on how to rehabilitate contaminated spill areas.	C	All new employees are trained on spill handling during inductions. All employees and contractors to Zibulo Colliery are also required to undertake mandatory induction. Induction applies to all new employees to the mine, visitors and to all employees that have been away from the site for two weeks duration or longer. Refresher induction course is also conducted.
3.52	The construction of borrow pits, stockpiles and pollution control dams must be within the mining rights area and be within designated areas.	C	No construction activities were observed during the audit. However, the pollution control dams inspected were within the Zibulo Colliery mining right.
3.53	Around the operational area, dirty water and clean water systems must be implemented to mitigate and reduce impact on groundwater.	C	Dirty and clean water channels were observed during the audit inspection.
3.54	All vehicles must use the limited speed of 40km per hour, especially during the high-risk periods of high winds; high temperature and low humidity must be enforced.	C	The maximum speed limit signage observed onsite was 40km/h.
3.55	There must be a consultation and cooperation with local law enforcement agencies to ensure legal and regulatory compliance on the road.	C	Zibulo Colliery reported consultation and cooperation with local enforcement is on-going.
3.56	Gravel roads, topsoils and subsoils must be sprayed with a dust allaying agent.	C	The auditors observed some of the gravel roads within the mining right was sprayed with dust allaying agent.
3.57	Graveyards must be preserved <i>in situ</i> , they must be demarcated with brick walls or with fences and the mine must remain responsible for their future unaffected existence.	N/A	No graveyard was observed during audit inspection.
3.58	A forensic archaeologist or reputed undertaker who is acquainted with the administrative procedures and relevant legislation must be involved whenever human remains are exhumed and relocated.	N/A	No human remains were exhumed within the audit period. Condition has noted by the holder.

EA Ref No'	Condition	Compl	Finding
	If there are any land claims submitted to the Department of Land Affairs, in terms of the Restitution Act, commencement of the mine activities must be delayed until the claim is resolved or finalized, and proper procedures and processes of the legislation must be followed about the claim.	N/A	Zibulo Colliery reported that they are not aware of on-going land claims within the mining right.
3.59	Surrounding property owners must be informed of the blasting procedures and schedules and blasting times must be planned in advance and must be clearly indicated on the mining area.	N/A	The Zibulo Colliery reported that no landowners reside in proximity of the operations. In addition, it was reported that blasting was not undertaken at the underground operation unless they intercept dykes during mining.
3.60	During an induction and ongoing all employees must be trained on how to rehabilitate contaminated spill areas.	C	Perusal of Zibulo Environmental Induction led to the conclusion that spill clean is part of the topic that is communicated to employees.
3.61	Employees and outside contractors must be informed of the blasting procedures and the associated safety measures to be taken during their induction.	C	Condition 3.59 above refers.
3.62	During construction and operation, haulage roads must be treated with Dust-aside or a similar product to reduce water usage and dust creation.	C	Condition 3.56 above refers.
3.63	Construction workers must be easily identified as part of the construction team by wearing the specific clothing and/or name tags.	N/A	No construction activities were undertaken within the audit period.
3.64	Pro-active measures must be put in place by the Emalahleni Local Municipality and DCM to minimize negative impacts associated with the influx of construction workers and potential job seekers to the area.	N/A	No construction activities were undertaken within the audit period.
3.65	The Applicant must pro-actively inform the local municipality and local residents of roads closure and diversions.	N/A	No diversion was undertaken within the audit period.
3.66	The Expansion Project must link with the Integrated Development Plan (IDP) of the Emalahleni Local Municipality especially with regards to the planning processes to ensure adequate water supply and other programmes.	N/A	Zibulo Colliery reported that there was no expansion project undertaken within the audit period.
3.67	Local SMME must be allowed the opportunity to become involved in maintenance, security services, garden services, cleaning and catering services and transport services.	C	The Zibulo Colliery Social Labour Plan dated February 2022 was verified during the audit period and implementation of condition parameters was also verified. The Zibulo Colliery Social Labour Plan commitment to allow local SMME to participate in the mining business was verified.
3.68	A skills development programme must be embarked upon before the mine is fully operation to ensure that locals are "employed".	C	The Zibulo Colliery Social Labour Plan dated February 2022 details the skills programme which the locals undergo within the 2022 period.
3.69	Take care to implement the aspects indicated in the EMP, with specific focus on water (surface and ground) and dust management.	C	Inspection and monitoring are conducted to ensure aspects indicated in the EMP are implemented.

EA Ref No'	Condition	Compl	Finding
3.70	Access roads and entrances to the mining area must be carefully planned to limit any intrusions, noise and dust pollution, as well as to limit any risks of accidents.	C	Zibulo Colliery underground operations are exposed to the least number of receptors to limit intrusion. Speed limits sign is erected to along the roads to limit risks of accidents.
3.71	Ensure access points comply with approved standards and are well marked and indicated.	C	Clearly marked notice boards at the mine entrance was observed.
3.72	Construction vehicles and those transporting materials and goods must be inspected to ensure that these are in good working conditions and not overloaded not to spill any coal or product on the road.	C	Condition has been noted by the holders. During the audit week there was no offloading of material witnessed.
3.73	An Environmental Committee must be established and used as a forum to keep interested and affected parties informed of the significant environmental aspects identified through the Environmental Impact Report and Environmental Management Plans.	C	Zibulo Colliery reported that there is no established Environmental Committee to keep interested and affected parties informed of the significant environmental aspects identified through the Environmental Impact Report and Environmental Management Plans. However, there is a consultation process known as the "Farmer's Day meetings" to keep interested and affected parties informed of the significant environmental impacts arising from the mining activity. (Zibulo to provide minutes of the previous meeting held).
3.74	Employees and outside contractors must be informed of the blasting procedures and the associated safety measures to be taken during their induction.	N/A	Condition 3.59 above refers.
General			
3.75	A copy of this authorization must be kept at the property where the activity will be undertaken. The authorization must be produced to any authorized official of the Department who requests to see it and must be made available for inspection by any employee or agent of the holder of the authorization who works or undertakes work at the property.	C	A copy of the Environmental Authorisation was verified at the Colliery.
3.76	Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, the applicant must notify the Department as soon as the applicant knows the new details.	C	The Zibulo Colliery sent a communication to DWS on 7 th of June 2021 regarding the demerger from Anglo Operations (Pty). Acknowledgement from DWS dated 23 rd of June 2021 was verified (Ref no: 04/B11E/CI/3886).
3.77	The holder of the authorization must notify the Department, in writing and within 24 (twenty-four) hours, if conditions of this authorization are not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.	N/A	This condition falls outside the audit period. The EA was issued on 08 th of March 2010.
3.78	Non-compliance with a condition of this authorization may result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.	C	Condition has been noted by the holder. Zibulo Colliery reported that there are no criminal charges issued for contravening National Environmental Management Act, 1998 and the regulations against the colliery.

TABLE 4: AMENDED ENVIRONMENTAL AUTHORISATION FOR CONSTRUCTION OF UNCAST VENTILATION, DOWNCAST VENTILATION SHAFT AND ELECTRICAL POWERLINE (MP) 30/5/1/2/3/2/1 (305) EM DATED 26 JULY 2022.

EA Ref No'	Condition	Compl	Finding
8. Conditions			
8.1 STANDARD CONDITIONS			
8.1.1	Authorisation of the activity is subject to the conditions contained in this Authorisation, which forms part of the Environmental Authorisation and are binding on the holder of the Authorisation.	C	The condition has been noted by the holder of the authorisation (Thungela). The authorisation was issued in accordance with the requirements of NEMA and applicable regulations thereto.
8.1.2	The holder of the Authorisation shall be responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee or person rendering a service to the holder of the Authorisation.	C	The condition has been noted by the holder of the authorisation (Thungela; Zibulo Colliery). The Zibulo Colliery Environmental Department is responsible for ensuring compliance with the conditions by any person acting on his or her behalf, including but not limited to, an agent, sub-contractor, employee, or person rendering a service to the holder of the Authorisation.
8.1.3	Any changes to, or deviations from, the project description set out in this Authorisation must be approved, in writing, by the Department before such changes or deviations may be effected. In assessing whether to grant such approval or not, the Department may request such information as it deems necessary to evaluate the significance and impacts of such changes or deviations and it may be necessary for the holder of the Authorisation to apply for further Authorisation in terms of the Regulations.	N/A	No changes or deviation from the project description has been submitted to the department since the project inception.
8.1.4	Where any of the applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, including the transfer of this authorization, the applicant must in writing notify the Regional Manager of this Department, within fourteen (14) days of the above specified change.	C	The auditors noted that there was a demerger from Anglo American to Thungela in 2022. However, there was no change in applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, including the transfer of this authorization.
8.1.5	A copy of this authorisation must be kept on site. The Authorisation must be produced to any Governmental official I(s) who may requests to see it for inspection purposes and must be made available to the contractors) /subcontractors) authorised to undertake lo undertake work at the property.	C	A copy of authorisation for the construction of uncast ventilation shaft, downcast ventilation shaft, four fan units, mcc building, transfer bays, electrical infrastructure and cable support, remaining platform area, contractors' yard, gravel access road (existing to be upgrade) storm water berms and electrical powerline was verified on site.
8.1.6	This authorisation does not negate the holder of the Authorisation's responsible to comply with any other statutory requirements that may be applicable to the undertaking of the activity.	N/A	Condition has been noted by holder.
8.1.7	After an appeal period has expired and no good course to extent the appeal period has been submitted in accordance with Chapter 2 of the National Appeal Regulations of 2014, a thirty (30) day-written notice must be given to the Department that the activity will commence. Commencement for purpose of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence.	NC	A thirty (30) day-written notice must be given to the Department that the activity will commence. Commencement for purpose of this condition includes site preparation. The notice must include a date on which it is anticipated that the activity will commence. The auditors were not provided with the thirty (30) day notification of commencement that was submitted to the Department.
8.2 SPECIFIC CONDITIONS			
8.2.1 COMMISSIONING OF THE ACTIVITY			
8.2.1.1	This Authorisation is hereby solely granted to Anglo American Inyosi Coal (Pty) Ltd: Zibulo Colliery applied to construct uncast ventilation shaft, downcast ventilation shaft, four fan units mcc building. transformer bays, electrical skids, electrical infrastructure and cable support, remaining platform area, contractor yard, gravel access road (existing to be upgraded) storm water berms and electrical power line.	C	Although the auditors noted that there was a demerger from Anglo American to Thungela in 2022. However, there was no change in applicant's contact details change, including the name of the responsible person, the physical or postal address and/or telephonic details, including the transfer of this authorization.

EA Ref No'	Condition	Compl	Finding
8.2.1.2	The activity may not commence without the necessary permits/licenses/approvals and/or service agreements, where it is relevant, from or with the relevant regulatory authorities whether national, provincial or local.	C	The auditors noted the other permits such as WUL & GA issued for Zibulo Colliery.
8.2.1.3	The applicant must apply the principle of best practicable environmental option for all technologies used implemented during mining.	C	It was reported that water conservation technologies such as SCADA are utilised at Zibulo Underground Colliery.
8.2.1.4	Pre-construction Phase		
a)	The applicant must appoint an independent Environmental Control Officer (ECO) who will monitor contractors, compliance with EMP and EA (see 8.2.2. Management of the activity for more details).	C	The auditors verified that Geovicon Environmental (Pty) Ltd was appointed as the independent ECO for the Zibulo Colliery's Ventilation Shaft 3 Complex Project to undertake the monitoring and reporting on compliance with the conditions of the EA, Specialist Reports, EMP and all relevant legislation.
b)	The applicant must provide all contractors and sub-contractors with a copy of Environmental Management Programme and Environmental Authorisation prior to the mining activities.	N/A	During the audit period, there was no contractors or sub-contractors observed on-site. In essence, no construction activities were audited.
c)	All pre-construction phase mitigation measures as outlined in the Environmental Management Programme attached in Environmental Impact Assessment report must be adhered to at all times.	C	Condition has been noted by the holder and compliance with the Environmental Management Programme and Environmental Impact Assessment report is compulsory.
d)	In order to ensure safety, all employees must be given the necessary personnel protective equipment (PPE).	C	It was reported that, no employees are allowed to access working areas without proper personnel protective equipment (PPE). The necessary personnel protective equipment (PPE) such as hard hat, googles, earmuffs, reflective etc are required to access site.
e)	Appropriate notification sign must be erected at the construction site, warning the public (residents, visitors etc.) about the hazard around the construction site and presence of heavy vehicles and machinery.	N/A	During the audit, no construction site was observed at the underground operations.
f)	Construction must include design measures that allow surface and subsurface movement of water along the drainage lines so as not to impede natural surface and subsurface water flow, and drainage measures must promote the dissipation of storm water runoff.	N/A	During the audit, no construction site was observed at the underground operations.
g)	If any soil contamination is noted at any phase of the proposed activity (ies), the contaminated soil must be removed to a licensed waste disposal facility and the site must be rehabilitated to the satisfaction of the Department and Department of Water and Sanitation. The opportunity for the onsite remediation and re-use of contaminated soil must be investigated prior to the disposal and this Department must be informed in this regard.	N/A	Condition has been noted by the holder.
8.2.1.5	Access roads and traffic impact		
a)	Necessary signage and traffic measures must be implemented for safe and convenient access to the site from adjacent roads;	C	Necessary signage and traffic measures were observed along the road leading to the underground shaft.
b)	Access roads must be well maintained throughout the mining operation.	C	No damaged roads were observed at the colliery.
8.2.1.6	Air quality management		
a)	Proper measures must be put in place to suppress dust in order to minimize nuisance conditions;	C	Dust suppression is on-going.
b)	Stockpiles must be at an acceptable height at all time;	N/A	No stockpiles were observed at Zibulo underground colliery.

EA Ref No'	Condition	Compl	Finding
c)	A speed restriction of 40km/h must be enforced and monitored on site for all mine vehicles.	C	A signage with speed restriction of 40km/h was observed.
8.2.1.7	Proliferation of alien species		
a)	All construction/mining equipment and vehicles must be cleaned before entering and leaving the site to reduce the chances of spreading weeds and invasive species,	NC	The auditors noted, the implementation of this condition at Zibulo Underground Colliery was not being undertaken. The holder of authorisation (Thungela) indicated that the cleaning of mining equipment and vehicles before entering and leaving the site to reduce the chances of spreading weeds and invasive species was not practiced at Zibulo Underground Colliery. Further, the auditors noted that an Identification Guide for NEM:BA/CARA Categorized Alien Invasive Plant Species Found on Zibulo Colliery, Ogies, dated April 2023, compiled by Shobie Arnoldi. The holder of the authorisation sited that the procedure for cleaning mining equipment and vehicles before entering and leaving the site to reduce the chances of spreading weeds and invasive species was expensive and require a lot of water for implementation.
b)	Alien species must be managed in terms of National Environmental Management: Biodiversity Act.	NC	The auditors noted that an Identification Guide for NEM:BA/CARA Categorized Alien Invasive Plant Species Found on Zibulo Colliery, Ogies, dated April 2023, compiled by Shobie Arnoldi. However, there was no procedure/plan on how the alien species at Zibulo Underground Colliery is managed. The auditors could not verify whether alien species is being controlled at the colliery.
8.2.1.8	Noise		
a)	Construction/ mining activities must be limited to normal working hours	C	No noise complaint was recorded within this audit period.
b)	Mine vehicles must services as per the manufacture's specifications and be fitted with standard silencers prior to beginning of construction;	N/A	The auditors could not verify whether mine vehicles were fitted with the silencers during construction phase. No construction activities were observed during the audit.
8.2.1.9	Erosion control measures		
a)	All soil surfaces compacted as a result of mining/construction activities must be ripped, and imported materials must be removed;	N/A	No construction activities were observed during the audit. No compacted areas were noted.
b)	Any erosion channel developed during mining/construction period or during vegetation establishment must be restored to a proper condition;	C	No erosion gullies were observed during the site inspection.
c)	All surfaces must be managed to minimize and or avoid erosion.	C	Condition above refers.
8.2.1.10	Excavation activities		
a)	Topsoil must be stripped and stockpiled prior to excavation in a designated area.	N/A	No topsoil stockpile was observed on site.
b)	Under no circumstances should material stockpiles be disposed of outside the boundary of the EA area.	N/A	Condition above refers.
8.2.1.11	Waste management		
a)	General waste must be kept in containers which are wind, water and scavenger proof, and disposed of at a permitted landfill site. No temporary dumping and littering of waste are allowed on site.	C	The auditors observed general waste containers at Zibulo Underground Colliery. However, the container was not windproof, and litter was blown by wind. The auditors noted that Zibulo Colliery has an existing Waste Management Procedure: Doc No ZIB-ENV-PRO-083, detailing the way waste is to be disposed. The auditors observed that Zibulo Colliery appointed TL Ideas as the waste manager (hazardous waste). All hazardous waste is disposed of at Holfontein Landfill.
b)	No waste must be disposed of through burying and burning	C	No proof of waste burying and burning was observed during the inspection.

EA Ref No'	Condition	Compl	Finding
c)	All hazardous waste must be disposed of at an official registered site or be removed by registered hazardous waste contractors.	C	The auditors observed that Zibulo Colliery appointed TL Ideas as the waste manager (hazardous waste). All hazardous waste is disposed of at Holfontein Landfill.
d)	An emergency preparedness plan to address any pollution incidents (e.i such as oil spillage etc) that may occur on site must be developed.	C	According to the Zibulo Colliery Emergency Preparedness Procedure (ZIB-ENV-PRO-0808) reviewed by the Auditors details the process to be followed during accidental spills and firefighting.
8.2.1.12	Surface and groundwater contamination must be prevented and/or mitigated by implementation of the following conditions:		
a)	Specific area must be demarcated for fuelling and workshop services. And such area must be bunded to reduce the possibility of soil and water contamination.	C	The holder of the authorisation has established appropriately bunded areas for storage of hazardous materials. Bund was constructed to accommodate 110% of the volume of the substance stored.
b)	Irrespective of the nature of a spillage (whether major or minor), all spillages must be cleaned up as soon as they occur.	C	Condition has been noted by the holder. No spillage was observed during the inspection.
c	Spillage of petrochemical products must be avoided. In the case of accidental spillage, contaminated soil must be removed for bioremediation or disposed of at a facility for the substance concerned. Disturbed land must be rehabilitated and seeded with native vegetation seed naturally occurring on site.	C	Condition has been noted by the holder. No spillage was observed during the inspection.
8.2.1.13	Fire prevention and management		
a)	Maintain fire breaks at all times;	C	The auditor observed that access roads were used as fire breaks. A firebreak can be defined as a gap in vegetation or other combustible material that acts as a barrier to slow or stop the progress of a bushfire or wildfire
b)	Fire extinguishers that are in good working conditions must be made available at all times for their usage during the occurrence of accidental fires;	C	Fire extinguishers that are in good working condition were observed onsite during a site inspection.
c)	Workers must be adequately trained in the handling of firefighting equipment;	C	According to the Zibulo Colliery Emergency Preparedness Procedure (ZIB-ENV-PRO-0808), the mine has contracted an emergency team (fire and proto) which is responsible for handling relevant emergencies. These contractors are trained to handle fire equipment. Proof of training certificates provided conducted by mine rescue services south Africa.
	Open fires must strictly be prohibited;	C	It was reported that during the environmental induction, workers were cautioned about the danger fire can pose to the environment. Unauthorised fires are prohibited on site. Workers are only allowed to smoke in designated areas. Internal access roads are also used as firebreaks. Serviced fire extinguishers were also observed on site.
e)	Smoking must be prohibited in the vicinity of flammable substances	C	The auditors observed that there was designated smoking area at Zibulo Underground Colliery.
f)	Cooking and heating fires must be permitted only in designated areas with appropriate safety measures.	N/A	No open fires are allowed.
8.2.1.14	Storm water management		
a)	Storm water management plan must be developed in terms of the applicable regulations and implemented on site.	C	Thungela confirmed that Zibulo Colliery is in possession of a Surface Water Flood Risk Management Plan and Storm Water Management Plan. The document was verified by the Auditors. The verified copy was updated in January 2021.
8.2.1.15	Safety		

EA Ref No'	Condition	Compl	Finding
a)	Potentially hazardous area must be demarcated with danger tape or cones;	C	All potentially hazardous areas were demarcated with danger tape.
b)	Appropriate signage must be placed to caution employees and contractors not to attempt to enter certain structures without being authorised.	C	Warning signs are erected to different areas to caution employees not to attempt to enter certain structures without being authorised.
8.2.1.16	Emergency Response Plan		
a)	An Emergency Response Plan should be available for accidental spills and firefighting during both construction and operation of the project;	C	Zibulo Opencast Colliery has a spill management procedure, and all spills are also implemented as detailed in the Incident and Non-conformance Procedure (ZIB-ENV-PRO-0814). Spill management equipment was observed by the auditors during the site inspection.
b)	In the event of emergency, the holder must notify the department within 24hrs, and contact relevant emergency services in the area;	N/A	Condition has been noted by the holder. No reportable emergency occurred within the audit period.
c)	All significant pollution incidents must be reported to this Department within forty-eight (48) hours of occurrences	N/A	Condition has been noted by the holder. No reportable emergency occurred within the audit period.
8.2.1.18	Compliance with other legislation		
a)	The National Environmental Management Act, 1998 (Act 107 of 1998), with particular reference to the principles in chapter 2 of the said Act.	C	The EA being audited was conducted in terms of the NEMA and monitoring is done as provisioned within this Act.
b)	The National Water Act, 1998 (Act 36 of 1998), with particular reference to the sections pertaining to mining in the proximity of dams and their catchments areas, rivers, marshes, streams, pans and other water courses.	C	The auditors noted that Zibulo underground Colliery has a water use licences with Reference No. 04/B11E/CGIJ/692.
c)	The National Environmental Management Air Quality Act (Act 36 of 2004), with particular reference to the sections pertaining to the liberation of dust, and other emissions, created by prospecting activities, into the atmosphere	C	Dust suppression is undertaken as and when required.
d)	The Conservation of Agriculture Resources Act, 1983 (Act 43 of 1983), with particular references to the sections pertaining to soil conservation.	C	Zibulo Colliery complies with the relevant provisions Conservation of Agriculture Resources Act, 1983 (Act 43 of 1983),
e)	The National Heritage Resources Act, 1989 (Act No 25 of 1999), with particular reference to the protection of all historical and pre-historical cultural remains.	N/A	No heritage or archeological artefacts have been recorded within the audit period. No issue with archaeological/heritage sites/objects for this reporting period. Should any such sites be discovered during construction activities, the ECO or other relevant person on site will note the location and activity will be ceased immediately. The SAHRA (The South African Heritage Resource Association) will be informed immediately. Section 35(3) of the National Heritage Resources Act No.25 of 1999 states, "Any person who discovers archaeological or paleontological objects or material or a meteorite in the course of development or agricultural activity must immediately report the find to the responsible heritage resource authority, or to the nearest local authority offices or museum, which must immediately notify such heritage resources authority". Employees are encouraged to be on the lookout for any archaeological or heritages objects during construction activities.
f)	The Mine Health and Safety Act, 1996 (Act 29 of 1996) in conjunction with the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002), with particular reference to those sections and regulations pertaining to health and safety at mines; mining within 100 m from structures that must be protected; as well as those sections pertaining to rehabilitation of the surface.	C	Thungela has a mining right issued by the Department of Mineral Resources and Energy (DMRE) as such complies with the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002). The Mining Right requires that Zibulo Colliery operations comply with the Mine Health and Safety Act and the mine adheres to the requirement.
g)	All provisions of the Occupational Health and Safety Act, 1993 (Act No.85 of 1993) and any other applicable legislation must be adhered to by the holder of this Authorisation.	C	Zibulo Colliery complies with the relevant provisions of the Occupational Health and Safety Act (Act No.85 of 1993).

EA Ref No'	Condition	Compl	Finding
h)	The National Environmental Management: Waste Act (Act No. 59 of 2008)	C	Zibulo Colliery complies with the requirements of the National Environmental Management: Waste Act (Act No. 59 of 2008).
i)	All other legislation, regulations, guidelines or by-laws applicable.	C	The holder of authorisation is aware that compliance to all applicable legislation, regulations, guidelines or by-laws is compulsory.
8.2.1.19	Liability of the holder of this Authorisation		
a)	The competent authority shall not be held responsible for any damages or losses suffered by the holder or his/her successor in title in any instance where mining/ construction or operation subsequent to construction are to be temporarily or permanently stopped for reasons of non-compliance by the holder with conditions of approval as set out in the document or any other subsequent document emanating from this Authorisation. The holder shall be responsible for all the costs necessary to comply with the above condition unless otherwise specified.	N/A	Condition has been noted by the holder.
b)	Any complaint from the public during the life of mine must be attended to by the holder of this Authorisation as soon as possible to the satisfaction of parties concerned.	NC	The Zibulo Colliery Complaints and Grievance Procedure (ZIB-INV-PRO-0804) details the steps that can be followed in lodging complaints with the mine and the responsible portfolios who should respond to such complaints. Thungela mentioned that there were no formal complaints received for the current audit period. The Auditors could not verify the complaints submitted during the current audit period because these results were not availed to the Auditors.
c)	The contractor must ensure that serviceable ablution facilities are available for employees. It is the responsibility of the holder of the Authorisation to see to it that this condition is adhered to.	C	During the audit period, there was no chemical toilets at Zibulo Underground Colliery. Only flushed toilets were observed.
8.2.2	MANAGEMENT OF THE ACTIVITY		
a)	A copy of an Environmental Authorisation and Environmental Management Programme must always be available on site so as to monitor compliance with conditions outlined in both the documents. Both documents must be used as on-site reference document during the life of mine.	C	A copy of an Environmental Authorisation and Environmental Management Programme was verified during the audit.
b)	The approved Environmental Management Programme (attached to the BAR) must be adhered to during the life of the mine.	C	Condition has been noted by the holder.
c)	All duties and responsibilities as outlined in the Environmental Management Programme attached are binding throughout the life of the mine.	C	Condition has been noted by the holder.
d)	Any proposed amendments to the Environmental Management Programme (as a result of this authorisation or otherwise) must be submitted in writing to this Department for approval prior to the amendment being implemented. On approval of the proposed amendment the EMP must be accordingly amended and adhered to.	N/A	Condition has been noted by the holder. No amendments were undertaken during this audit period.
8.2.3	Appointment of Environment Control Officer		
a)	An Environmental Control Officer must be appointed, who will monitor and ensure compliance and correct implementation of all mitigation measures and provisions as stipulated in the Environmental Authorisation and Environmental Management Programme, prior to any commencement of mining activities on site.	C	Geovicon Environmental (Pty) Ltd was appointed as the independent ECO for the Zibulo Colliery Ventilation Shaft 3 Complex Project to undertake the monitoring and reporting on compliance with the conditions of the EA, Specialist Reports, EMPr and all relevant legislation.
b)	The Environment Control Officer appointed must monitor the construction of the infrastructure to ensure that the layout plans are in accordance with the designs and record important findings of the site inspection.	C	Condition above refers.

EA Ref No'	Condition	Compl	Finding
c)	The Environment Control Officer must also monitor the implementation of specific elements of the Environmental Management Programme by contractors.	C	Conditions above refers.
d)	All duties and responsibilities as outlined in the Environmental Management Programme attached are binding throughout the life of project mine.	C	Conditions above refers.
8.2.4	Site Closure and Decommissioning		
a)	The commissioning and decommissioning of individual activity within the overall listed mining activity must take place within the phases and timeframes as set out in the EMPr.	N/A	This condition falls outside the audit period. The Zibulo Underground Colliery is still in operational phase.
b)	The application for closure indicated above must be submitted together with all relevant documents as indicated in Section 43 of Mineral and Petroleum Resources Development Act (Act 28 of 2002), as amended.	N/A	This condition falls outside the audit period. The Zibulo Underground Colliery is still in operational phase.
c)	All mitigation measures for the decommissioning phase, as outlined in the EA. The holder of EA must apply for a closure certificate in terms of Section 43 of Mineral and Petroleum Resources Development Act (Act 28 of 2002), as amended within 180 days of occurrence of lapsing, abandonment, cancellation, cessation, relinquishment and completion of the operation.	N/A	This condition falls outside the audit period. The Zibulo Underground Colliery is still in operational phase.
8.3	MONITORING		
a)	This Department reserves the right to monitor and audit the activity to ensure compliance legislation and the conditions stipulated in this authorisation.	C	Condition has been noted by the holder.
b)	It is the holder of this Authorisation's responsibility to ensure that an ongoing management and monitoring of the impacts of the activity on the environment throughout the life of the mine is put into practice.	C	Condition has been noted by the holder. NTC Group (Pty) Ltd was appointed as the independent external auditor for the June 2022 – June 2023 period, to verify compliance against conditions of the licence, permits issued for Zibulo Colliery.
8.4	RECORDING AND REPORTING TO THE DEPARTMENT		
a)	The authorization holder must submit annual an environmental audit report during the operation of the activity, unless otherwise requested by the department. The audit report must convey the following:	C	NTC Group (Pty) Ltd was appointed as the independent external auditor for the June 2022 – June 2023 period, to verify compliance against conditions of the licence, permits issued for Zibulo Colliery. This audit report will be submitted to the Department in fulfilment of the annual environmental audit.
b)	The date in which the audit was carried out,	C	The audit report reflects the date in which the audit was carried out and the details of auditors who compiled the report.
c)	The outcome of the audit, in relation to the conditions stipulated in the environmental authorization and the EMPr as well as the actions taken to mitigate environmental impacts on site.	C	Audit outcomes and recommendations are recorded in the report.
d)	Records of monitoring and auditing must be made available for inspection to this Department and any other relevant authority inspecting the development activities.	C	Condition has been noted by the holder. Proof of annual submission to the Department was verified.
e)	Records relating to compliance and non-compliance with the conditions of this authorisation must be kept in good order. Such records shall be made available to this Department within seven (7) days of receipt of a written request by the Department. Environmental compliance will further be monitored through complaints received from the public.	C	Condition has been noted. Proof that records relating to compliance and non-compliance with the conditions of this authorisation was kept in good order was verified and provided to the auditor.
f)	All records relating to the implementation of the Environmental Management Programme must be kept in the office where it is safe and can be retrievable.	C	Condition above refers.

EA Ref No'	Condition	Compl	Finding
8.5	NON-COMPLIANCE		
a)	In the event of non-compliance by any contractor during the mining/construction the authorised activity, the holder of this Authorisation will be liable.	N/A	Condition has been noted by the holder. No major non-compliance was the holder needs to account was recorded within the audit period.
b)	The holder shall be responsible for all costs necessary to comply with the above conditions unless otherwise specified.	C	Condition has been noted by the holder.
c)	The holder must in the event of non-compliance with any condition of this Authorisation inform the Regional Manager of Mpumalanga region of this Department, in writing, within forty-eight (48) hours.	C	Condition has been noted by the holder.
d)	Non-compliance to this authorisation is an offence as provided for in terms of the National Environmental Management Act, 1998, Section 49(a) and Regulation 48. Any conviction of such offence may result in Section 49(a) being enforced.	N/A	Condition has been noted by the holder. No offence has been issued against the holder of the authorisation within this audit period.
9	APPEAL OF AUTHORISATION		
a)	The holder of the authorisation must notify every registered interested and affected party, in writing and within fourteen (14) days of receiving the Department's decision. The notification must – Specify the date on which the Authorisation was issued.	NC	The auditors noted that the EA was granted on 26 th of July 2022. Proof that registered interested and affected party, were informed in writing and within fourteen (14) days of receiving the Department's decision must be provided for audit verification.
b)	Inform the registered interested and affected parties of the appeal procedure provided for Chapter 2 of the National Appeal Regulations of 2014.	NC	Proof that registered interested and affected parties were informed of the appeal procedure provided for in Chapter 2 of the National Appeal Regulations of 2014 were not verified during the audit.
c)	Advise the interested and affected parties that a copy of the Authorisation and reasons for the decision will be furnished on request.	NC	Condition above refers.
d)	An appeal against the decision must be lodged in terms of Chapter 2 of the National Appeal Regulations of 2014.	NC	Condition above refers.

TABLE 5: BASIC ASSESSMENT REPORT AND ENVIRONMENTAL MANAGEMENT PROGRAMME REPORT FOR CONSTRUCTION SHAFT NO.3 COMPLEX AT ZIBULO UNDERGROUND COLLIERY (MP) 30/5/1/2/2/305 MR DATED 14 JULY 2008.

No	Management Measures (Objective)	Mitigation Measures (Action)	Compl	Finding
Operational Phase				
6.2.1	Geology			
	To keep a record of geological structures encountered with respect to the groundwater characteristics.	Accurate notation of geological features encountered in the mining sections.	C	It was reported that records related to geological information are recorded by the geology division.
		The application of stone dust on underground coal pillars is an industry standard. No additional mitigation measures are proposed.	C	The auditors did not inspect the underground operations. However, it was reported that stone dusting is undertaken on coal pillars to control coal dust explosions. Silo containing stone dust was observed on site.
6.2.2	Topography			
	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	N/A	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.
6.2.3	Soils			
	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	N/A	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.
6.2.4	Land Capability			
	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	N/A	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.
6.2.5	Land Use			
	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.	N/A	There will definitely be no further impact on topography during the operational phase, consequently no specific measures are required.
6.2.6	Vegetation			
	To prevent the spread of alien invasive plant species.	All surface infrastructure areas will be monitored for alien species and the appropriate method of control applied to such species as are identified on an annual basis during the growing season.	NC	No alien species were observed at the Zibulo Colliery underground operation surface infrastructure (e.g offices). It was reported that there is an Alien Invasive Management Plan in place. However, the auditors observed Invasive alien plants such as scotch thistle and blackjack along wetland at the conveyor crossing. Alien vegetation along the conveyor crossing should be managed according to the Zibulo Colliery alien vegetation management plan.
6.2.7	Animal Life			
	To minimise the impact of operation on animal life.	The perimeter of the construction area will be secured and poaching or laying of snares on adjacent property prohibited.	N/A	Zibulo Colliery is in operational phase and no construction activities were undertaken within the audit period.

No	Management Measures (Objective)	Mitigation Measures (Action)	Compl	Finding
6.2.8	Surface Water			
	To minimise the impact on catchment yield.	Re-use of dirty water to the extent that no positive balance is predicted for the life of mine	C	Zibulo Colliery reported that dirty underground water is pumped to vaal dam and piped to PCD 1 & 2 and then pumped to Phola Processing Plant Balancing Dam. Some of the waters are used for coal washing. Zibulo Colliery also receive the water back from Phola Processing Plant Balancing Dam. It was also reported that the Zibulo opencast operations also receive water from the underground operation through a water exchange program. Excess water ultimately ends up being piped to the eMalahleni Water Reclamation Plant ("EWRP") for treatment. Zibulo Colliery make use of the Scada system which is linked to the electronic flow meters around the mine.
	To identify and control surface water runoff that may be affected by mining, as well as the water balance associated with the mining operations, and to ensure the risk of spilling of this water to the clean catchment is: ▪ In line with licensing requirements ▪ In line with legislative requirements; and ▪ Commensurate with the risks to downstream users associated with this spillage. This is taken currently at a 2% risk in any one year, or the 1:50year rainfall occurrence.	Construction of water management containment facilities sized to ensure a lower than 2% risk of spilling in any one year, based on the water re-use volumes given in the water balance. The combination of limited above ground storage (15MI) and storage underground (4300MI from year 8) has been shown to be adequate to ensure a 2% or lower risk in any one year.	N/A	No construction of water management containment facilities was undertaken within the audit period. However, there are PCD's that was observed around the colliery. It was reported that there was no over spilling incident recorded with the audit period. The auditors observed that all PCD's have sufficient capacity. Zibulo Colliery reported that all dams are maintained with a freeboard of 0.8 meters.
	To ensure the downstream water quality criteria are both understood and complied with in terms of the mine's potential impact on the environment.	Provision for monitoring of both the water balances and management of the water balance, as well as upstream and downstream river qualities to ensure that the above is achieved.		Zibulo Colliery make use of the Scada system which is linked to the electronic flow meters around the mine to monitor water used. The auditors noted the Anglocoal Zibulo Colliery:Biomonitoring and Ecotoxicity Assessment Programme which assess the upstream and downstream river qualities. The biomonitoring reports concludes the following regarding Zibulo underground operation, "
	To ensure adequate monitoring so that the extent to which the objectives of the water management system are met can be validated.	Ongoing calibration of the water balance supplied as part of the EMPr assessment is required to ensure the predictions in terms of water make, water shortages, and storage requirements are evaluated during the life of mining.	C	The auditors verified a water flow meter (Underground to 40 Meg dam) maintenance report dated 31 st of May 2022, prepared by Endress + Hauser.
6.2.9	Groundwater			
	The objective of ground water management will be to restrict the impact of polluted ground water to the mining area and mitigate the loss of ground water experienced as a result of mining activities.	Any increased influx of ground water into the underground sections during the operational phase, will be managed as part of the total water balance.	C	Any increased influx of groundwater is managed as part of the part of the total water balance.
6.2.10	Air Quality			
	To minimise dust during the operational phase.	The cover on the silo and all dust suppression systems on the crusher and conveyor system must be regularly maintained.	C	The auditors observed a silo with a roof to prevent dust dispersion. No maintenance issues were discussed during the audit.

No	Management Measures (Objective)	Mitigation Measures (Action)	Compl	Finding
		All disturbed areas that are not paved or constructed on within the shaft perimeter will be grassed to prevent dust.	C	The auditors observed that most of the disturbed areas that was disturbed during construction were covered with vegetation.
6.2.1	Vibration and Noise			
1	To keep noise levels below the maximum recommended level of 45 dBA at night and 55 dBA during the day and the increase in noise level to 7 dBA for both instances.	Doghouse enclosure on the eastern side of the conveyor and a wall adjacent to Mr Allen's house will be implemented during construction. A noise barrier will be constructed to be 2m above the vent shaft fans at Rietvlei to mitigate the impact on Mr Koos Boshoff's house.	N/A	No construction activities were undertaken during this reporting period.
		Once the conveyor is operational the ambient noise levels will be re-assessed at various receptor sites identified in the noise specialist report to determine if noise levels are as predicted. If necessary, additional mitigation measures will be implemented (e.g. machined rollers) over sections where particular problems are encountered. This approach is deemed suitable because some sensitive receptors may be relocated as part of land purchases for mining in the area.	C	A baseline noise assessment survey was undertaken in 2006 and an Environmental Noise Assessment undertaken in respect of the underground mining operations and conveyor during 2012.
6.2.1	Archaeological & Cultural Historical Sites			
2				
	There will definitely be no further impact on archaeological and cultural historical sites during the operational phase; consequently, no specific measures are required.	There will definitely be no further impact on archaeological and cultural historical sites during the operational phase; consequently, no specific measures are required.	N/A	There will be no further impact on archaeological and cultural historical sites during the operational phase; consequently, no specific measures are required.
6.2.1	Sensitive Landscapes			
3				
	There will definitely be no further impact on archaeological and cultural historical sites during the operational phase; consequently, no specific measures are required.	There will definitely be no further impact on archaeological and cultural historical sites during the operational phase; consequently, no specific measures are required.	N/A	There will definitely be no further impact on archaeological and cultural historical sites during the operational phase; consequently, no specific measures are required.
6.2.1	Visual Aspects			
4				
	No further mitigation is possible.	No further mitigation is possible.	N/A	No further mitigation is possible.
6.2.1	Socio-economic Aspects			
5				
	To enhance potential positive social impacts and minimise any potential negative social impacts.	Undertake recruitment in the local communities through a well-advertised, transparent, off-site employment process to avoid attracting squatters to the site and to reduce tensions around employment in the local community.	C	The auditors observed Zibulo Colliery Social Labour Plan dated February 2022. The SLP deals with how the recruitment of local communities are undertaken.

No	Management Measures (Objective)	Mitigation Measures (Action)	Compl	Finding
		Integrate the Social and Labour Plan and Corporate Social Investment activities with Integrated Development Plan for Leandra.	C	Zibulo Colliery reported that local municipality Integrated Development Plan are considered when developing Social and Labour Plan.
		Develop a database of local service providers.	C	It was reported that the database for local service providers is consolidated by the social labour office. (Zibulo to provide database of local service providers to auditors)
		Work with surrounding landowners and the local authority to prevent the establishment of informal settlements in the vicinity of the mine.	C	The auditors noted that there is an initiative called farmers day held by Zibulo Colliery annually to interact with interested and affected parties.
		Ensure that all construction workers are housed in surrounding towns and not onsite.	N/A	Zibulo Colliery is in operational phase and no construction activities were undertaken within the audit period.
		Ensure that contractors are made aware of Anglo Coal employment policy and other policies i.e. HIV Aids.	C	Zibulo Colliery reported that contractors are made aware of Thungela employment policy and other policies i.e. HIV Aids during on-boarding.

TABLE 6: ENVIRONMENTAL MANAGEMENT PROGRAMME INCLUDING EIA REPORT AND I&AP COMMENTS, MINING RIGHT APPLICATION ZONDANGSFONTEIN (MP) 30/5/1/2/2/305 MR DATED 14 JULY 2008.

Ref No	Management Measures	Mitigation Measures	Compl	Finding
1.1	Keep a record of geological structures encountered with respect to the groundwater characteristics.	The application of stone dust on underground coal pillars. No additional mitigation measures are proposed.	C	It was reported that the stone dust is undertaken on underground pcoal pillars to control coal dust emanation. This is done daily and forms part of the control of safety and ventilation (ensuring clean air and reducing explosion potentials) of underground mining operations. Evidence of the coal dust silo adjacent to the ventilation fans was verified during the site visit.
1.2	The control of declared weeds and invaders within the areas associated with the infrastructure should be maintained.	The control of declared weeds and invaders within the areas associated with the infrastructure will be maintained.	NC	The auditors noted that an Identification Guide for NEM:BA/CARA Categorized Alien Invasive Plant Species Found on Zibulo Colliery, Ogies, dated April 2023, compiled by Shobie Arnoldi. However, there was no procedure/plan on how the alien species at Zibulo Underground Colliery is managed. The auditors could not verify whether alien species is being controlled at the colliery.
1.3	To minimise the impact on catchment yield.	The use of berms to keep clean water out of the shaft areas is considered the primary mitigation measure for reducing the impact on catchment yield.	C	The auditors observed berms and cut-off trenches are utilised at the incline shaft to prevent the surface water runoff from entering the shaft area. Furthermore, storm water channels are in place at the Man-Materials (vertical) Shaft to direct the contaminated surface water runoff towards the 7.5 MI Dam.
1.4	To identify and control surface water runoff that may be affected by mining, as well as the water balance associated with the mining operations, and to ensure the risk of spilling of this water to the clean catchment is: - In line with licensing requirements; - In line with legislative requirements; and - Commensurate with the risks to downstream users associated with this spillage. This is taken currently at a 2% risk in any one year, or the 1:50 year rainfall occurrence.	Re-use of dirty water to the extent that no positive balance is predicted for the life of mine.	C	The ECO noted that there is a re-use of dirty water at Zibulo Underground Colliery. The Zibulo Underground Colliery maintains its water balance through the implementation and monitoring of a water management system, known as SCADA. Underground water is piped to the PCDs from where it is pumped to the Phola Processing Plant's Balancing Dam, situated 32 km away. From here coal washing is undertaken and some of the used water is pumped back to Zibulo, whilst the rest is pumped to the Opencast mine of Zibulo through a water exchange program. Excess water ultimately ends up being piped to the eMalahleni Water Reclamation Plant ("EWRP") south of Witbank for further treatment.
1.5		Construction of water management containment facilities sized to ensure a lower than 2% risk of spilling in any one year, based on the water reuse volumes given in the water balance. The combination of limited above ground storage (15 ML) and storage underground (4300 ML from Year 8) has been shown to be adequate to ensure a 2% or lower risk in any one year.	C	With a freeboard of 0.8 m, both the 7.5 MI and the 20 MI Dams are intended to have adequate capacity. The operation of the dams with a freeboard higher than 0.8 meters was validated by site observations. The reason for this is that a pipeline is set up to transfer contaminated water from the 20 MI Dam to the Phola Plant, which is the opencast coal mine known as Zibulo Colliery OC. According to the terms of the agreement between Phola Plant and Zibulo Colliery, water can either be taken off the line and used directly in the process at Phola Plant, or mine-affected water from the 40 MI Dam at Zibulo Colliery OC can be piped to the EWRP for treatment. A real-time system is also used to monitor the dam levels.

Ref No	Management Measures	Mitigation Measures	Compl	Finding
1.6		Provision for monitoring of both the water balances and management of the water balance, as well as upstream and downstream river qualities to ensure that the above is achieved.	C	As previously mentioned, a SCADA system is used to monitor and control the mine's water reticulation system. Data from flow meters and level sensors—which are installed at the 7.5 and 20 milliliter dams—are fed into the SCADA system, which enables continuous and instantaneous monitoring of the mine's water balance. The mine-affected water between the two dams may be balanced to preserve their different capacities thanks to a system that has been put in place to control the balancing between the 7.5 MI Dam and the 20 MI Dam. As previously mentioned, and in compliance with the mine's water balance, mine-affected water from the 20 MI Dam is also pumped to the Zibulo Colliery through the Phola Plant.
1.7	Over the LoM any discharge from the mine would be in accordance with any licence that may be issued by the mine by the Department of Water and Sanitation and managed by them. The only situation for which mine discharge is currently envisaged would be in the event of extreme rainfall in excess of the 1:50 year recurrence interval flood, and even in these circumstances, it is unlikely that the mine would have to discharge.	Based on the successful implementation of the water management containment facilities, it is assessed that there will be no greater than a 2% risk of spilling to the river at any time during the LoM.	C	No incident was recorded regarding the spillage at the containment facilities.
1.8	To prevent impacts on water quality.	All of the coal will be contained with structures such as bunkers, or areas with concrete bunding. There will therefore be no coal stored on unprotected soil, although the potential for windblown coal dust cannot be excluded and is in fact highly likely.	C	It was reported that the 6,000-ton cement silo is used for on-site coal storage. This acts as a buffer for coal that is extracted underground and transported to the Phola Plant via a conveyor and crusher. There is a designated emergency product stockpile space on an impermeable concrete surface next to the silo. According to Zibulo, this facility has never been used.
1.9		The workshops will be provided with their own oil skimming and containment facilities, including concrete sumps and associated measures. The expectation is that there will be little to no spillage from these areas.	C	The auditors observed that hydrocarbon containment facilities, including sumps were provided at Zibulo Underground Colliery.
1.10		All of the above areas will also be contained within the dirty water area, comprising bunding around the facilities to keep clean water off the site, as well as a dirty water dam to collect runoff from the shaft areas.	C	Zibulo Colliery Underground's storm water management has been carried out in compliance with Golder Associates' Surface Water Flood Risk Management Plan for Zibulo Opencast and Underground Collieries. Clean water is intended to be released to a wetland in the south, while dirty water is moved to the 20MI Dam and then carried to the Erikson Dam, or Phola Processing Plant. However, due of its large silt loads, the 7.5 ML facility has recently needed to be desilted.
1.11		Conveyors will be fully enclosed where they cross streams.	C	The auditors observed that the conveyors are fully enclosed with the doghouse sheeting.
1.12		The conveyor belts will be kept gentle over the river crossings to minimise potential collection of water at the low point of the conveyor, should wet coal be placed on the conveyor belt.	C	The auditors noted that all wetland crossings are enclosed to prevent coal spills into the water courses.

Ref No	Management Measures	Mitigation Measures	Compl	Finding
1.13		Regular inspections of stream crossings and the remainder of the conveyor servitude will be undertaken, and any coal spillages cleaned up.	C	Zibulo Colliery team is responsible of regular inspection of the stream crossings or any coal spillages.
1.14		All shafts will be located outside of the 1:100-year floodline.	C	According to the Surface Water Flood Risk Management Plan for Zibulo Opencast and Underground Collieries, which was first created by Golder Associates in 2015, shaft areas are located outside of the 1:100-year floodlines.
1.15		Shafts will be protected against extreme events by means of flood protection berms.	C	An essential part of the design of the incline shaft are berms and cut-off trenches. In order to redirect the contaminated surface water runoff towards the 7.5 MI Dam, stormwater channels have also been installed at the vertical shaft. In order to channel all clean runoff into the environment, drainage channels are also located upslope of the vertical shaft and workshop area.
1.16		Over the life of the mine, any discharge from the mine would be in accordance with any licence that may be issued to the mine by the Department of Water and Sanitation and managed by them.	C	The auditors verified that the Zibulo Colliery is in possession of the WUL (Ref No: 04/B11E/CGIJ/692).
1.17		The incline shaft and overburden stockpile will be located on high ground well away from watercourses.	C	The auditors observed that the most recent Surface Water Flood Risk Management Plan update from Golder Associates indicate that the incline shaft and overburden stockpile (rock dump) are situated well away from watercourses and the 1:100-year floodlines.
1.18		Influxes encountered during the intersection of the graben and dykes in the underground workings will be used as part of the operations.	C	Underground mine-affected water is transferred to the 20 MI Dam ("PCD") and then pumped to the 7.5 MI Dam. This water is used to suppress dust. The water impacted by the mine is subsequently moved to the 40 MI Dam of the Zibulo Colliery OC and pumped to the EWRP. According to the terms of the agreement between Phola Plant and Zibulo Colliery, Phola Plant is able to take additional affected water from the transfer pipeline. The Phola Plant then provides treated EWRP water for use as potable water.
1.19		Excess water will be pumped to the dirty water dams.	C	Same as above.
1.20		Barrier pillars of 100m should be left between all adjacent mining sections to prevent the migration of groundwater to low lying areas, during the operational phase.	N/A	The Mine Occupational Health & Safety Act, according to the mine, mandates that a distance of 31 meters be maintained from the inside of the mine boundary. This means that even if they are "off" with one cutting cycle—a cutting cycle is 16 meters wide—the mine can still be within the 15-meter range. As a result, adjacent mining sections are not separated by barrier pillars measuring 100 meters in width, and this commitment cannot be fulfilled. The 31-meter gap is maintained as a geotechnical and safety precaution. In addition, Zibulo Colliery UG has created and put into effect the following guidelines and standards of conduct for pillar design:
1.21		Continuous communication with other mine owners is encouraged to qualify and quantify all water make/water flow, not only during the Life of mine of adjacent sections, but for defunct operations as well.	C	Zibulo Colliery reported that it attends meetings at the DWS's invitation and is a member of the Upper Olifants River Catchment Management Forum, which is made up of various Olifants catchment stakeholders. The mine participates in the Rietspruit Water Management Forum and attends its meetings.
1.22	Reduce the quantity impact on surrounding water users.	Continuous monitoring of external user's boreholes and monitoring boreholes at the graben structure will	C	The Zibulo Water Monitoring Procedure (AATC016632) is followed when monitoring the water at Zibulo Colliery UG. Groundwater level monitoring is carried out quarterly in compliance with the water monitoring procedure, and the results are included in the reports on water quality assessments.

Ref No	Management Measures	Mitigation Measures	Compl	Finding
		indicate whether a loss in yield has taken place due to mining activities.		
1.23		Alternative supplies of water to replace impacted borehole yields will be negotiated with affected groundwater users, based on a structured compensation protocol.	C	No complaint regarding borehole drying of the neighbouring water users.
1.24	Reduce impact on stream baseflow.	Maintain adequate pillar safety factors to prevent surface subsidence.	C	Zibulo Underground Colliery uses the underground bord and pillar mining method, which has a minimal chance of wall collapse.
1.25	Reduce impact on surrounding groundwater quality.	Remove mine water make to the dirty water dams as soon as possible to prevent contact with mine surfaces that will cause deterioration of quality. Use mine water for mining purposes.	C	For the safety of mining to continue and to stop additional water contamination, mine dewatering is done continuously. Underground mine-affected water is transferred to the 20 MI Dam ("PCD") and then pumped to the 7.5 MI Dam. Along with the Erikson Dam, water from the 7.5 ML dam is stored and used to suppress dust. The water impacted by the mine is subsequently moved to the 40 MI Dam of the Zibulo Colliery OC and pumped to the EWRP. According to the terms of the agreement between Phola Plant and Zibulo Colliery, Phola Plant can take additional affected water from the transfer pipeline.
1.26		Ensure continuous recycling of water from the dirty water dams to prevent an accumulation of very poor-quality water.	C	Same as above.
1.27		Install toe drains at the dirty water dams to intercept most of the seepage and monitor groundwater quality down-gradient of the dirty water dams.	N/A	No toe drains were observed during audit inspection. However, all water containment structures are lined.
1.28		Line the silos, crushing facilities and workshops. Capture any surface run-off from these facilities and manage as polluted water.	C	The auditors observed that the workshops and silo is lined with impermeable surface.
1.29	To minimise dust during the operational phase.	The coal silo design will include a cover to prevent coal dust dispersion.	C	The coal silo is a cement structure with cover to prevent coal dust dispersion
1.30	To keep noise levels below the maximum recommended level of 45 dBA at night and 55 dBA during the day and the increase in noise level to 7 dBA for both instances.	The eastern side of the conveyor will be enclosed with a Doghouse enclosure.	C	As observed the conveyor is enclosed with a Doghouse enclosure to prevent noise. There were no records of noise measuring at the Zibulo Underground Colliery.
1.31		A wall adjacent to Mr Allen's house will be implemented during construction. A noise barrier will be constructed to be 2m above the vent shaft fans at Rietvlei to mitigate the impact on Mr Koos Boshoff's house.	N/A	It was reported that no wall was constructed.
1.32		Once the conveyor is operational, the ambient noise levels will be re-assessed and machined rollers implemented over sections where particular problems are encountered. This approach is deemed suitable	C	The National Air Pollution Assessment Services ("NAPAS") carried out a noise assessment study in 2005 and again in 2013. The conveyor system underwent the introduction of machined rollers. This section of the mine has not had any noise complaints filed.

Ref No	Management Measures	Mitigation Measures	Compl	Finding
		because some sensitive receptors may be relocated as part of land purchases for mining in the area.		
1.33	To reduce the visual impacts from the mining infrastructure.	Visual impacts will be mitigated by revegetating disturbed areas once construction is completed and by using a light or cool khaki-coloured paint on structures except the silo will remain a concrete colour since the painting will have little impact.	C	It was observed that while the conveyor, silo, and shaft are painted in natural colours to blend in with the surroundings, the rock dump at the incline is covered in vegetation.
1.34	To enhance potential positive social impacts and minimise any potential negative social impacts.	Undertake recruitment in the local communities through a well-advertised, transparent, off-site employment process to avoid attracting squatters to the site and to reduce tensions around employment in the local community.	C	The auditors observed Zibulo Colliery Social Labour Plan dated February 2022. The SLP deals with how the recruitment of local communities are undertaken.
1.35		The SLP and Corporate Social Investment policies followed by the mine could further boost local communities and local economy by assisting communities to make most use of the additional money coming into the community through wages.	C	The auditors observed Zibulo Colliery Social Labour Plan dated February 2022. The SLP deals with how the recruitment of local communities are undertaken.
1.36		A database of local service providers should be drawn up as a part of the SLP and Corporate Social Investment strategies. This database can be used by mine employees and contractors to work on the mine but can also be made more widespread to cover other existing and planned developments.	C	The auditors observed Zibulo Colliery Social Labour Plan dated February 2022. The SLP deals with how the recruitment of local communities are undertaken.
1.37		It is the responsibility of Anglo Inyosi Coal (Pty) Limited to ensure that their employees and contractors are made aware of the issues surrounding the spread of HIV and Aids in the area. This awareness can be promoted by initiatives such as training and development, peer education, community interventions and visual awareness campaigns, to name but a few.	C	Zibulo Colliery reported that contractors are made aware of Thungela employment policy and other policies i.e. HIV Aids during on-boarding.
1.38	To prevent the deterioration of roads and promote the safety on users thereof.	Warning signs indicating to other road users that large vehicles may be on the road should be erected where appropriate. Consideration should be given to constructing dedicated deceleration lanes.	C	Warning signs are erected to different areas to caution employees not to attempt to enter certain structures without being authorised.

5 Deliberations

5.1. Adequacy and compliance of the proposed Zibulo Colliery Environmental Management Programmes

Zibulo Colliery Environmental Management Plans were assessed not only for the Zibulo Colliery compliance towards the commitments of the respective EMPr, but also assessed for the ability of the measures contained in the EMPr to sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the undertaking of the project activities.

5.2. Adequacy and compliance of the Zibulo Colliery Environmental Authorisations

Based on the assessment of the Zibulo Colliery EA stated herein, we are of the opinion that the EA does fully sufficiently provide for the avoidance, management and mitigation of environmental impacts associated with the operation of Zibulo Colliery. All identified areas for improvement noted, have been provided with recommendations that may facilitate future compliance with the EA commitments and improve on site environmental management.

5 Conclusion

According to Regulation 34 under Part 3 of Chapter 5 of the amended Environmental Impact Assessment Regulations, 2014 (Government Notice No. 982) (EIA Regulations, 2014 as amended) state the following i.e.: *“Where the findings of the environmental audit report contemplated in subregulation 1 indicate- (a) insufficient mitigation of environmental impacts associated with the undertaking of the activity; or (b) insufficient levels of compliance with the environmental authorisation, EMPr or closure plan; the holder must, when submitting the environmental audit report to the competent authority in terms of subregulation (1), submit recommendations to amend the EMPr or closure plan in order to rectify the shortcomings identified in the environmental audit report.*

This external audit was undertaken in accordance with the requirements of Regulations 34 and 54A of the amended 2014 EIA Regulations. This audit report meets the regulatory content requirements. The audit did not identify any impacts or risks associated with the facility that were not considered in the EIA.

APPENDIX A: DECLARATION OF INDEPENDENCE

The Environmental Assessment Practitioner General declaration:

I, Konanani Nelushi, declare that –

- I act as the independent environmental practitioner in this Audit;
- I will perform the work relating to the audit in an objective manner, even if this results in views and findings that are not favourable to the auditee;
- I declare that there are no circumstances that may compromise my objectivity in performing such work;
- I have expertise in conducting environmental compliance audits, including knowledge of the Act, regulations and any guidelines that have relevance to the proposed activity;
- I will comply with the Act, Regulations and all other applicable legislation;
- I have not and will not engage in, conflicting interests in the undertaking of the activity;
- I will provide the competent authority with access to all information at my disposal regarding the audit, whether such information is favourable to the auditee or not; will perform all other obligations as expected from an environmental assessment practitioner in terms of the Regulations; and
- I realise that a false declaration is an offence in terms of regulation 48 and is punishable in terms of section 24F of the Act.

Disclosure of Vested Interest:

I do not have and will not have any vested interest (either business, financial, personal or other) in the activity other than remuneration for work performed in terms of the Environmental Impact Assessment Regulations, 2014.

Signature: 
Company: NTC Group (Pty) Ltd
Date: December 2023

APPENDIX B: Attendance Register

NTC Group (Pty) Ltd AMP Building, 17 Eaton Avenue, Bryanston 2191		
Tel: 011 462 2022 Fax: 0866 928 639 Email: konanani@ntcgroup.co.za	Enquiries:	Konanani Nelushi
	Date of Meeting:	28 June-03 July 2023 (08:00am)
	Venue:	Zibulo Colliery Site

MEETING: ZIBULO COLLIERY ENVIRONMENTAL COMPLIANCE AUDIT

ATTENDANCE REGISTER

Person	Organisation	E-mail Address	Cell phone
Konanani Nelushi	NTC Group		
Babalwa Fatyi	NTC Group		
Lyn Mudziwanzira	NTC Group		
Rozwivhona Magoba	NTC Group		
Sarah Burford	Pinsent Masons		
Iman Damons	Pinsent Masons		
Luyanda Mthethwa	Zibulo Colliery UG		
Kenneth Mokoena	Zibulo Colliery UG		

APPENDIX C: PHOTOGRAPHIC EVIDENCE



Photo 1: Dust aside tank in a bunded.



Photo 2: Emergency ambulance at Zibulo.

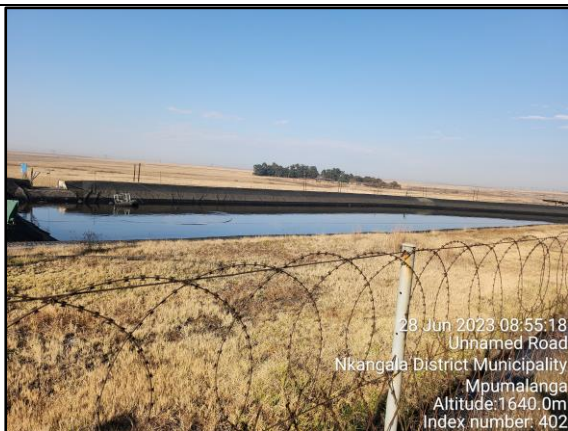


Photo 3:Lined dirty water containment.

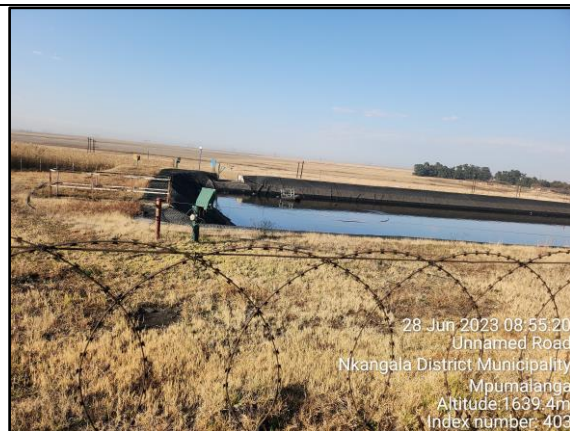


Photo 4: Pollution Control Dam.



Photo 5: Stop sign erected along the road.



Photo 6: General waste bin full.



Photo 7: Littering observed at mine.



Photo 8: Conveyor belt covered with doghouse sheet.



Photo 9: Wetland observed along the conveyor belt.



Photo 10: Wetland crossing under the conveyor belt.



Photo 11: Wetland crossing observed.