

Curriculum Vitae

Peter Roux

Profession: Environmental Management

Current Specialisation

Peter specialises in the mining sector, undertaking the management and conduct of large multi-disciplinary environmental and social impact assessments. His tasks include the undertaking of environmental audits, environmental compliance and risk analysis, compilation and amendments to environmental management plans, closure and rehabilitation plans, and compliance and liability assessments. He also has significant experience in ecotourism and wildlife management.

Education

- MBA (Luton University – United Kingdom)
- Masters Environmental Management (University of Free State). On-going, completing thesis. "Comparison of the requirements of the Equator Principles and SA Legislation."

Employment

- 2007 to date: Independent contractor to Turgis Consulting (Pty) Ltd.
- 1990 – 2007: Director, Envirosec Consulting (Pty) Ltd.
- 1987 – 1989: Big 5 professional hunter and game ranger Mala Mala Game Reserve.

Key experience

The following work has been undertaken in the past two years in the environmental field:

- AREVA – NAMIBIA: Project Manager of multi-disciplinary project team. Full environmental impact assessment for a new mine access road from Arandis to Trekkopje Uranium mine. Equator Principles compliant.
- AREVA – NAMIBIA: Project Manager of multi-disciplinary project team. Trade-off study / screening assessment of three mine access road routes.
- PAN REEF MINING – ZIMBABWE: Project manager of multi-disciplinary project team. Full Equator Principles compliant environmental and social impact assessment for Indarama Gold Mine expansion.
- AREVA – NAMIBIA: Multi-disciplinary project team member for full Equator Principles environmental and social impact assessment for Trekkopje Uranium Mine.
- AREVA – NAMIBIA: Multi-disciplinary project team member. Equator Principles environmental and social impact assessment for Trekkopje Uranium Mines seawater intake, desalination plant and 50 km mine water supply pipeline. Equator principles compliant.
- AREVA – NAMIBIA: Lead consultant – Environmental audit for Trekkopje Uranium mine.
- AREVA – NAMIBIA: Lead consultant – Environmental audit for the seawater intake, desalination plant and mine water supply pipeline construction projects.
- METOREX – SOUTH AFRICA: Project Manager – Environmental liability and closure cost assessment for Cons Murch Gold & Antimony Mine.

- DCM CHROME – SOUTH AFRICA: Project Manager – Environmental liability audit and closure cost assessment for Rooderand Chrome Mine.
- AQUARIUS (PLATINUM) – SOUTH AFRICA: Environmental liability assessment.
- ERGO JV – SOUTH AFRICA: Project Manager and environmental consultant for a multi-disciplinary due diligence technical team.
- DE BEERS – SOUTH AFRICA: Project Manager, lead consultant. Environmental impact assessment for closure of historical waste sites.
- HARMONY GOLD – SOUTH AFRICA: Project Manager of a multi-disciplinary team. Evander South Gold Mine environmental impact assessment.
- HARMONY GOLD – SOUTH AFRICA: Project Manager of a multi-disciplinary team. Alternatives assessment & trade-off study for a tailings storage facility.
- HARMONY GOLD – SOUTH AFRICA: Project Manager of a multi-disciplinary team. Environmental management plan amendment for the re-treatment of tailings – Evander.
- HARMONY GOLD – SOUTH AFRICA: Project Manager of a multi-disciplinary team. Trade-off study for a gold extraction plant – Evander.
- EREMET MINING – SOUTH AFRICA: Lead environmental consultant for a full manganese mine due diligence.

Current tasks

1. Management and conduct of large multi-disciplinary environmental and social impact assessments

The principle tasks involve the management and coordination of investigative studies, authority and public consultation required to produce an Environmental and Social Impact Assessment Report and Management Plan. Obtain the necessary regulatory required permits and licenses to continue through each step of the project from concept level to the commencement of mining and continued operations to closure.

The major project tasks are:

- Manage and conduct detailed Environmental & Social Impact Assessments (ESIA) and Environmental & Social Management Plans (ESMP) in full compliance with International Best Practice and the Equator Principles. The work specifically complies with:
 - Equator Principles Performance Standards 1 to 8.
 - The International Finance Corporation Mining Environmental, Health, and Safety Guidelines.
 - General EHS Guidelines.
- Manage and design culturally appropriate community consultation processes.
- Undertake the required authority consultation in order to obtain the necessary permits and licenses.
- Appoint and manage specialists to qualitatively and quantitatively assess the environmental and social risks associated with the projects.
- Identify and design the required project specific mitigation measures.
- Provide detailed management plans commensurate to the predicted impacts.
- Prepare environmental reports and documents in accordance the requirements of host country legislation. Prepare, collate and proof edit all final documentation and reports including the EMP, the EIA findings and recommendations from the specialist studies.

The general sequence of specific tasks associated include:

- Appoint the determined specialists.
- Compile detailed Terms of Reference specific to the project components.

- Arrange specialist & client meetings to validate the Terms of Reference and project schedules.
- Arrange specialist initial site visit.
- Compile an Authority, Public and Key Stakeholder Consultation Plan.
- Manage the various specialist studies.
- Manage the consultation process.
- Validate and update the engineering design parameters influencing the environmental and social issues and communicate to specialists and authorities.
- Determine and assess the various project alternatives and provide a preferred alternative based on scientific data.
- Manage and complete a draft impact assessment report.
- Provide a final impact assessment report.
- Compile a draft Management Plan with details of Action Plans.
- Ensure compliance with Equator Principles requirements and Performance Standards including host country laws and regulations.
- Compile a final Management Plan.
- Compile a Closure Plan.
- Collate documents to include a non-technical summary and full report including scoping assessment and specialist studies.

Key outputs of the work:

- Obtain a clear understanding of the environmental impacts predicted for the project components.
- Provide appropriate project alternatives, taking into account environmental, social, technical and economic parameters.
- Provide details of management measures required for avoidance and mitigation.
- Provide a detailed document to assist with final mine designs.
- Provide a document and process to satisfy international funding requirements in compliance with the Equator Principles and host country Law and Regulations.
- Provide all necessary permits and licenses to commence mining operations

Typically the projects require the following technical and specialist studies including:

- Geotechnical investigation- tailings storage facility (TSF)
- Geohydrological/ground water assessment
- Surface water impact assessment
- Heritage site assessment
- Social impact assessment
- Air quality impact assessment
- Biodiversity impact assessment
- Visual impact assessment
- Noise and vibration impact assessment
- Traffic impact assessment
- Radiation assessment

2. Environmental auditing, compliance and risk assessments

The first part of the work requires the preparation of an audit protocol based on legislation and the commitments stated in the Environmental Management Plan. The protocol is used in the assessment of systems and documentation pertaining to the specific mine. This part of the work requires a full and detailed analysis and understanding of the EMP. The second part of the work entails on-site assessment of operations and verification of the systems and

documentation. On completion of the work a detailed audit report documenting the performance assessment and gap analysis is presented to the client and authorities. The work is conducted according to internationally accepted HSE regulatory audit practice.

3. Closure and rehabilitation plans

The work involves the following general tasks:

- Performing a review of the EMP and EIA as submitted to authorities.
- Discuss and query any other relevant documentation with mine management.
- Undertake a physical site inspection of affected areas of the operation including historical mining areas.
- Examine and query the basis of the rehabilitation quantum as provided and form an opinion regarding the correct base.
- Undertake a gap analysis regarding omissions in the process/costing.
- Undertake a risk assessment regarding the process/omissions at the material level.
- Provide a detailed report including required quantum and rehabilitation plans.