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Department:
Environment & Nature Conservation
NORTHERN CAPE PROVINCE
REPUBLIC OF SOUTH AFRICA

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Equiries :
Dipatlisilo : Ms. Onwabile Ndzumo
Navrae :
Imibuzo
Reference
Tshupelo : NC/EIA/NAM/KAM/ZAN/2012
Verwysing : NCP/EIA/0000149/2012
Isalathiso

Date :
Letlha : 06th May 2015
Datum :
Umhla :

Sedex Mineral (Pty) Ltd

Mr. Cyril Thomas
P.O. Box 8399
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8021

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Dear Sir/Madam

THE GRANTING OF THE ENVIRONMENTAL AUTHORISATION FOR GN.R544: ACTIVITIES: 2, 9, 11, 12, 13, 18, 22, 47& GN. R545: ACTIVITIES: 3, 5, 15 & GN. R546: ACTIVITY: 12: THE PROPOSED FRONTIER RARE EARTH ZANDKOPDRIFT MINE, REMAINDER AND PORTION 2 OF THE FARM ZANDKOPDRIFT 537, LOCATED 30KM SOUTH TOWN OF GARIES, KAMIESBERG LOCAL MUNICIPALITY, NAMAKWA DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE.

By virtue of the powers conferred to me by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Regulations, 2010, **THE DEPARTMENT HEREBY GRANTS THE ENVIRONMENTAL AUTHORISATION FOR GN.R544: ACTIVITIES: 2, 9, 11, 12, 13, 18, 22, 47& GN. R545: ACTIVITIES: 3, 5, 15 & GN. R546: ACTIVITY: 12: THE PROPOSED FRONTIER RARE EARTH ZANDKOPDRIFT MINE, REMAINDER AND PORTION 2 OF THE FARM ZANDKOPDRIFT 537, LOCATED 30KM SOUTH TOWN OF GARIES, KAMIESBERG LOCAL MUNICIPALITY, NAMAKWA DISTRICT MUNICIPALITY, NORTHERN CAPE PROVINCE.** A detailed description of the activity is given in the Environmental Impact Assessment Report and The Environmental Management Programme dated October 2014 subject to the conditions listed in the environmental authorisation and reasons for the decision are attached herewith. In terms of regulation 10(2) of the Environmental Impact Assessment Regulations, 2010, you are instructed to notify all registered interested and affected parties, in writing and within twelve (12) calendar days of receiving of this letter, of the Department's decision in respect of your application as well as the provisions regarding the making of appeals that are provided for in the regulations.

Permit 16/2015

Your attention is drawn to Chapter 7 of the Regulations which regulates appeal procedures. Should you / any person affected by this decision wish to appeal any aspect of the decision, you or a person affected by this decision must, *inter alia*, lodge a notice of intention to appeal, as prescribed in regulation 62 of Environmental Impact Assessment Regulations, 2010, with the Member of the Executive Council, Ministry of Environment and Nature Conservation within 20 days of receiving this letter, by means of one of the following methods:

By facsimile: (053) 832 1026;
By post: Private Bag x 6102, Kimberley, 8300 or
By hand: T-Floor, Metlife Towers, Kimberley, 8300.

Should you decide to appeal, you must serve a copy of your notice of intention to appeal on all registered interested and affected parties as well as a notice indicating where, and for what period, the appeal submission will be available for inspection.

Yours faithfully



**MR. B FISHER – ACTING DIRECTOR
ENVIRONMENTAL QUALITY MANAGEMENT
DEPARTMENT OF ENVIRONMENT AND NATURE CONSERVATION**

DATE OF DECISION: 19 June 2015

Cc: **Ages Gauteng (Pty)**
Christine Vivier
0866072406
cvivier@ages-group.com



ENVIRONMENTAL AUTHORISATION
in terms of National Environmental Management Act, 1998 (Act No. 107 of
1998) and the Environmental Impact Assessment Regulations, 2010

**Authorisation Register
Number:**

Permit 16/2015

Reference Number:

NC/EIA/NAM/KAM/ZAN/2012
NCP/EIA/0000149/2012

Last Amended:

N/A

Holder of Authorisation:

Sedex Minerals (Pty) Ltd.

Location of activity:

Remainder and Portion 2 of the farm Zandkopsdri
537, located 30 km south town of Garies, Kamiesber
Local Municipality, Namaqualand District Municipality

DEFINITIONS

Activity, means an activity identified in Government Notice No. R. 544, R. 545 and No. R. 546 of 2010 as a listed activity.

Applicant, means a person who submitted an application.

Application, means an application for an environmental authorization in terms of chapter 3 of the 2010 Environmental Impact Assessment regulations.

EIA, means a systematic process of identifying, assessing and reporting environmental impacts associated with an activity and includes basic assessment and S &EIR.

EAP, means an Environmental Assessment Practitioner as defined in section 1 of the Act.

TDF, Tailings Dam Facility

EMI, Environmental Management Inspectors

Environmental Management Plan, means an Environmental Management Plan in relation to identified or specified activities envisaged in chapter 5 of the Act and described in regulation 33 of the 2010 Environmental Impact Assessment regulations.

Environmental Authorisation, when used in Chapter 5, means the authorisation by a competent authority of a listed activity or specified activity in terms of this Act, and includes a similar authorisation contemplated in a specific environmental management Act;

Interested and Affected Parties, means an Interested and Affected Party contemplated in section 24(4)(d) of the Act, and which in terms of that section includes

- Any person, group of persons or organisation interested in or affected by an activity, and
- Any organ or state that may have jurisdiction over any aspect of the activity

Public Participation Process means the process in which potential interested and affected parties are given an opportunity to comment on, or rare issues relevant to specific activity.

Department, means the Northern Cape Department of Environment and Nature Conservation.

The Act, means the National Environmental Management Act, 1998 (Act No. 107 of 1998).

Commencement, when used in Chapter 5, means the start of any physical activity, including site preparation and any other activity on the site in

furtherance of a listed activity or specified activity, but does not include any activity required for the purposes of an investigation or feasibility study as long as such investigation or feasibility study does not constitute a listed activity or specified activity.

DECISION

The Department is satisfied, on the basis of information available to it and subject to compliance with conditions of this environmental authorisation, that the applicant should be authorised to undertake the activity specified below.

Details regarding the basis on which the Department reached this decision are set out in Annexure 1.

ACTIVITIES AUTHORISED

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) and the Environmental Impact Assessment Regulations, 2010 the Department hereby authorises –

Sedex Mineral Pty Ltd

with the following contact details –

Mr Cyril Thomas
P.O. Box 8399
Foreshore
CAPE TOWN
8021

Tel: (021) 446 6040
Fax: (021) 446 6050

E-mail: cthomas@frontierrareearths.co.za

To undertake the following activity (hereafter referred to as "the activity") in terms of the scheduled activities listed below.

Zandkopsdrift Rare Earth Mine

Activity No. 2 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure for the storage of ore or coal that requires an atmospheric emissions license in terms of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).

Activity No. 9 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water –

- (i) with an internal diameter of 0,36 metres or more; or
- (ii) with a peak throughput of 120 litres per second or more,

excluding where:

- (a) such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or
- (b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.

Activity No. 11 of GN.R.544 of 18 June 2010

The construction of:

- (xi) infrastructure or structures covering 50 square metres or more, where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

Activity No. 12 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50000 cubic metres or more, unless such storage falls within the ambit of activity 19 of Notice 545 of 2010.

Activity No. 13 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres.

Activity No. 18 of GN.R.544 of 18 June 2010

The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse

but excluding where such infilling, depositing, dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (b) occurs behind the development setback line.

Activity No. 22 of GN.R.544 of 18 June 2010

The construction of a road, outside urban areas, (i) with a reserve wider than 13,5 meters or, (ii) where no reserve exists where the road is wider than 8 metres, or (iii) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice 545 of 2010.

Activity No. 47 of GN.R.544 of 18 June 2010

The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre -

(i) where the existing reserve is wider than 13,5 meters; or (ii) where no reserve exists, where the existing road is wider than 8 metres –
excluding widening or lengthening occurring inside urban areas.

Activity No. 3 of GN.R.545 of 18 June 2010

The construction of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.

Activity No. 5 of GN.R.545 of 18 June 2010

The construction of facilities or infrastructure for any process or activity which requires a permit or license in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent and which is not identified in Notice No. 544 of 2010 or included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.

Activity No. 15 of GN.R.545 of 18 June 2010

Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more;

except where such physical alteration takes place for: (i) linear development activities; or (ii) agriculture or afforestation, where activity 16 in this Schedule will apply.

Activity No. 12 of GN.R.546 of 18 June 2010

The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.

(a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;

(b) Within critical biodiversity areas identified in bioregional plans;

(c) Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on erven in urban areas.

In farm Zandkopsdrift 537, situated near Garies, which falls within Kamiesberg Local Municipality of the Namakwa District Municipality, Northern Cape Province, on the following Geographical Co-ordinate: Lat: 30° 51' 52.45" S Long: 17° 58' 4.01" E referred to as "the property".

The granting of this Environmental Authorisation is subject to the conditions set out below.

CONDITIONS

Scope of authorisation:

1. Authorisation of the activity is subject to the conditions contained in this authorisation, which conditions form part of the environmental authorisation and are binding on the holder of the authorisation.
2. The holder of the authorisation must 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.
3. The activity(s) authorised must only be carried out at the property indicated above.
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 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.
5. This authorisation does not negate the holder of the authorisation's responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the activity.

General conditions:

6. A copy of this authorisation must be kept at the property where the activities will be undertaken. The authorisation must be produced to any authorised 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 authorisation who works or undertakes work at the property.
7. 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 new details become known to the applicant.

8. In all other cases, the holder of the authorisation must notify the Department, in writing within seven (7) days if a condition of this authorisation is not adhered to. Any notification in terms of this condition must be accompanied by reasons for the non-compliance.
9. Non-compliance with a condition of this authorisation will result in criminal prosecution or other actions provided for in the National Environmental Management Act, 1998 and the regulations.
10. This authorization is subject to the approval by the relevant local authorities i.e. in terms of any relevant legislation administered by those local authorities.
11. The activity must 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 (these include but are not limited to Department of Water and sanitation, Department of Environmental Affairs, Department of Cooperative Governance and Human Settlement, Department of Roads & Public Works, Department of Transport, Department of agriculture, forestry and fisheries, Department of Mineral Resource, South African Heritage Resources Agency).
12. The activity, including site preparation, must not commence before the thirty (30) day appeal period expires or until such time as the Department has considered any appeals that have been lodged.
 - a. One week's written notice must be given to the Department before commencement with the activity.
 - b. Such notice must make clear reference to the site location details and the reference number given above.
 - c. The said notice must also include proof of compliance with the following conditions described herein:
 - i. Conditions: 11 and 23
13. The applicable conditions of this authorization must form part of all contractors' and sub-contractors' conditions of contract. A performance-based requirement with regard to environmental impact management must be included in all contracts related to any aspect of this authorization.

14. The applicant must carry out regular environmental audits to establish compliance with the conditions of this authorization and contracts.
15. Records relating to the compliance/non-compliance with the conditions of the authorization and contracts must be kept in good order. Such records must be made available to the Department within 7 (seven) days of receipt of a written request by the Department for such records.
16. Any complaints regarding the said development must be brought to the attention of the Department within 24 hours after receiving the complaint. A complaints register must be kept up to date for inspection by the Department.
17. Environmental Management Inspectors (EMI) employed by the Department must be given access to the property as described above (see detailed description of the property) for the purposes of assessing and monitoring compliance with the conditions contained in this Environmental Authorisation. Where the activity is located on a third party's property the applicant must be responsible to arrange access for departmental officials.
18. This Department may add to, change and/or amend any of the conditions in this authorization if, in the opinion of the Department, the addition, change of amendment is environmentally justified. In event that such impacts exceed its significance as predicted in the independent consultant's environmental scoping report and supporting documentation, the authorization may be withdrawn after proper procedures were followed.
19. In the event of any dispute concerning the significance of a particular impact, the opinion of this department in respect of its significance will prevail.
20. This Department and any national department, provincial department, local authorities or committees appointed in terms of the conditions of this application or any other public authority or organization must not be held responsible for any damage or losses suffered by the applicant or his successor in title in any instance where construction or operation subsequent to construction be temporarily or permanently stopped for reasons of non-compliance by the applicant with the conditions of approval as set out in this document or any other subsequent document emanating from these conditions of approval.

21. The applicant must be responsible for all costs necessary to comply with the above conditions unless otherwise specified.

22. The applicant must apply the principle of best practicable environmental option for all technologies used/ implemented during decommissioning phase.

Appeal of authorisation:

23. The holder of the authorisation must notify every registered interested and affected party, in writing and within 12 (twelve) days, of receiving notice of the Department's decision to authorise the activity.

24. The notification referred to in 23 must –

- specify the date on which the authorisation was issued;
- inform the interested and affected party of the appeal procedure provided for in Chapter 7 of the regulations; and
- advise the interested and affected party that a copy of the authorisation and reasons for the decision will be furnished on request.

25. If the applicant should appeal against this Environmental Authorisation, the applicant/appellant must provide each person and organ of state which was a registered interested and affected party in relation to the applicant's application, within 10 days of having submitted a notice to appeal with a copy of the notice to appeal indicating that the appeal submission will be made available on the day of lodging it with the Minister or MEC, where and for what period the appeal submission will be available for inspection by such person or organ of state.

Management of activity:

26. The Environmental Management Programme ("EMPr") submitted as part of the application for environmental authorisation must be strictly implemented and changes to the EMPr, which are environmentally defensible, must be submitted to this Department for acceptance before such changes are effected.

27. Stringent erosion and dust control practices must be developed and implemented and all areas susceptible to erosion must be protected.

28. All areas damaged by erosion must be remedied as soon as possible.

29. Gravel roads must be constructed such that they are well drained in order to control soil erosion.

30. Topsoil conservation must be prioritized and stockpiles not exceed 2m in height to maintain its viability.
31. A vehicle maintenance yard must be constructed above 1:100 year flood line or within a horizontal distance of 100 meters from any watercourse, with drip trays, for vehicle emergency repairs. The contaminated soil must be transported to be disposed-off into a licenced suitable landfill site.
32. Feral cats and dogs must be eliminated on application site by humanitarian actions such as capture and transferal to the SPCA or other relevant organizations.
33. No run-off must leave the tailing dams into the river channels.
34. All the necessary permits must be obtained from all the relevant authorities prior to the commissioning of the proposed project.
35. Backfill material must not be sourced from the riparian zones of any river.
36. The Swartdoring River must be demarcated as a no-go area since it is considered to be an irreplaceable habitat.
37. Monitoring of ground water at the tailing facilities, waste rock dumps and the open pit must be done quarterly. The monitoring must start before the construction phase; thereafter continue for all phases of the mine.
38. Chemical mobile toilets must be made available for workers on site, and must be safely secured from being blown away. These toilets must be serviced on regular basis. No open space or surrounding bush must be used as toilet facility under any circumstances.
39. Concrete mixers must be used for mixing concrete and must be placed on drip trays to prevent accidental spillages.
40. Cleaning of equipment and flushing of mixers must not result in pollution of the surrounding environment. All wastewater resulting from batching of concrete must not be discharged into the river.
41. All topsoil must be checked regularly and must keep clear of any alien vegetation.

Monitoring:

42. The Department reserves the right to amend the EMPr should any impacts that were not anticipated or covered in Final EIAR dated October 2014 prevails.
43. Strict control measures must be implemented over materials brought onto site to prevent the spreading of invasive alien plants on site.
44. Proper fire breaks must be provided and maintained around the development footprint. Continuous educational and awareness programmes on fires hazards must be conducted to employees.

45. Downstream water quality monitoring must be implemented on quarterly basis, especially in an Estuary.
46. Monitoring of water quality and TDFs for leakages remains the responsibility of the holder of this authorisation for 10 years after the closure certificate has been obtained.

Recording and Reporting to the Department:

47. The holder of this authorisation must keep all records relating to monitoring and auditing on site and make it available for inspection to any relevant and competent authority in respect of this development.
48. All documentation such as audit, monitoring or compliance reports and notifications, required to be submitted to the Department in terms of this authorisation, must be submitted to the Director: Compliance Monitoring at this Department.
49. Records relating to compliance or non-compliance with any condition of this authorization must be kept in good order. Such records must be made available to any official from Compliance and Enforcement section of this Department within seven (7) days of written request by the said officer.
50. Any complaints regarding the said development must be brought to the attention of the Department within 24 hours after receiving the complaints; register must be kept up to date for inspection by the Department. 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 new details become known to the applicant.

Environmental Control Officer (ECO) duties

51. The holder of this authorisation must appoint an independent Environmental Control Officer (ECO) with experience or expertise in the field for the project and must remain employed till the project is complete. The ECO will have the responsibility to ensure that the conditions referred to in this authorisation are implemented and to ensure compliance with the provisions of the EMPr.
52. The ECO must be appointed before commencement of any authorised activity.

53. The ECO must meet with the contractors to discuss the conditions of the EA and the contents of the EMPr prior to any site clearing occurring.
54. Once appointed, the name and contact details of the ECO must be submitted to the Director: Compliance and Enforcement of the Department.
55. The ECO must:
- Keep record of all activities on site, problems identified, transgressions noted and schedule of tasks undertaken by the ECO.
 - Keep and maintain a detailed incident (including spillage of bitumen, fuels, chemicals or any other material) and complaint register on site indicating how these issues were addressed, what rehabilitation measures were taken and what preventative measures were implemented to avoid re-occurrence of incidents/complaints.
 - Keep and maintain a daily site diary
 - Keep copies of all reports submitted to the Department
 - Keep and maintain a schedule of current site activities including the monitoring of such activities.
 - Obtain and keep record of all documentation, permits, licences and authorisations such as waste disposal certificates, hazardous waste landfill site licences.
 - Compile monthly monitoring reports.

Environmental Audit Report

56. The holder of this Authorisation must submit an environmental audit report to the Department within 30 days of completion of the decommissioning phase and within 30 days of completion of rehabilitation activities.
57. The Environmental audit report must:
- Be compiled by an independent environmental auditor;
 - Indicate the date of the audit, the name of the auditor and the outcome of the audit in terms of compliance with the environmental authorisation conditions as well as the requirements of the EMPr.
 - Include measures to be implemented to attend to any non-compliance.
 - Include copies of any approvals granted by other authorities relevant to the department for the reporting period.

- Highlight any outstanding environmental issues that must be addressed, along with recommendations for ensuring that they are appropriately addressed.
- Include evidence of adherence to the conditions of this authorisation and the EMPr where relevant.

Commencement of the activity:

58. 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.
59. The authorised activity must not commence within fifty (50) days of the date of signature of the authorisation.
60. Should you be notified by the minister of a suspension of the authorisation pending appeal procedures, you shall not commence with the activity unless authorised by the minister in writing.
61. The holder of the authorisation must apply for flora harvesting permits from DENC before any clearing commences.

Operation of the activity

62. The location of the proposed mine on the remaining extent measuring 2 075,4935ha in extent, as described in the title deed and portion 2 of farm Zandkopsdrift no 537 measuring 3,340.49ha in extent, as described in the title deed. It is situated near Garies in the Northern Cape Province and border with the Western Cape Province to the East and South must remain at the co-ordinates Lat: 30° 51' 52,45" S and Long: 17° 58' 4,01" E.
63. The proposed activity must conform to the design layout in figure 3: Base Case Preliminary Site Layout dated 23-04-2014 in the Final EIA Report submitted in October 2014.
64. Above ground pipelines must be raised on pedestals such that there will be space between the grounds. The pipe must allow small animals such as tortoise to move through it unhindered.

65. All structures for drainage such as gutters, drains, sumps, ditches must be designed such that they do not act as pitfall trap for small creatures.
66. No feeding of wild animals is permitted.
67. The Department of Environment and Nature Conservation must be informed if there is problematic animal on site that poses danger to human life.
68. The TDF's must be shaped so that the side slopes are articulated to form natural shapes and blend with the environment as far as possible.
69. No indigenous faunal species must be removed from site without the necessary permits from DENC, as all indigenous faunal species are protected under Northern Cape Nature Conservation Act, 2009 (Act 09 of 2009).
70. No animals (including snakes) must be hunted, trapped, injured or removed (transported) in any way without the necessary permits. In all phases, animals must only be collected to save the animal and place it out of the way of construction activities and the incidents must be reported immediately to DENC.
71. Nesting sites must not be disturbed in any way.
72. Sealed light fittings must be used to prevent insects from reaching the light source.
73. Design and material for fencing and walls must be appropriate to allow movement of fauna.
74. All the mounts and tunnels of endangered species that were observed on site must be conserved and protected.
75. The Kori Bustard (*Ardeotis kori*) and Ludwig's Bustard (*Neotis ludwigii*) must in no way be disturbed by activities onsite.
76. Rescued plants must only be transported and transplanted to an adjacent site of similar ecological character nearest to the site from where plants have been removed. A suitable qualified ECO or specialist must oversee this process to guide on the proper extraction of plants to limit excessive damage to plants and implement proper transplants.
77. No biological material must be transferred to a third party.
78. No indigenous vegetation must be removed without the necessary permits from DENC and vegetation clearing must be limited to the authorized footprint.

79. Before the clearing of the site, the appropriate permits must be obtained from the Department of Agriculture, Forestry and Fisheries for the removal of plants listed in the National Forest Act.
80. Establish and maintain ecological corridors and buffer zones (50 meters around rocky outcrops and drainages outside the development footprint).
81. Quarterly monitoring of water resources must be conducted.
82. Seepage capturing boreholes must be drilled around the TDF's facilities to capture seepage.
83. TDF must be lined to mitigate groundwater impacts during operations and they must be correctly installed and maintained.
84. Storm water management plan must be implemented to effectively mitigate potential surface water pollution.
85. An integral wetland management plan with effective mitigation and management actions must be drafted by a wetland specialist to ensure the protection of aquatic critical biodiversity area's and Ecological Support Area's that occur within the project area.
86. The water bodies that are heavily utilized by amphibians for breeding must not be disturbed.
87. Corridor buffer of 500 meters must be established along the course of Swartdoring River.
88. Kinetic (rock drainage/flow) tests must be conducted quarterly to assess the potential risks of acid discharge onto the water resources from the tailing dam and waste rock dump site.
89. No activity must be allowed to encroach into a water resource without a water use license being in place from the Department of Water and Sanitation.

90. A noise survey must be carried out after commissioning of the plant, with opencast mining in progress and while the plant is running.
91. Monitoring locations and procedures for annual surveys must be revised prior to each survey and findings of the previous surveys must be used as baseline.
92. Equipment, calibration and measurement procedures must comply with the requirements of SANS 10103.
93. The holder of this authorisation must ensure that the construction staff working in areas where the 8-hour bent noise levels exceed 75dBA must wear ear protection equipment.
94. The holder of this authorisation must ensure that all equipment and machinery are well maintained and equipped with silencers.

95. A prior warning must be given to the surrounding communities when a noisy activity such as blasting is going to take place.
96. Demolition of infrastructure must have water sprays.
97. At night, travelling must be avoided or limited to minimum.
98. Light sources must be directed inward and not have bright sources directed outward into the natural environment.
99. Internal lighting must be shielded to prevent light spillage to the surrounding environment.
100. Sodium vapour lights must be used as far as possible.

101. Drop height from excavator into haul trucks must be kept at minimum for ore and waste rock.
102. Regular environmental training must be provided for workers.
103. Monitoring of radiological aspects must be conducted to ensure that no radio-active materials are removed from the site.
104. Trenches must be adequately cordoned off to prevent animals falling in and getting trapped /injured.
105. No overnight open trenches must be left
106. No firearms must be permitted onsite.
107. An environmental forum must be established to give feedback to affected communities four times a year regarding environmental aspects.
108. The applicant must ensure that the Occupational Health and Safety Act (Act no. 85 of 1993) is implemented by an independent Health and Safety Officer.

109. Hazardous substances must be stored on an impervious surface protected from rainfall and storm-water run-off.
110. Storage Facilities for harmful substances must be constructed so as to prevent spillage on the soil and must be in compliance with the applicable regulations and safety instructions.
111. Accidental spillage must be contained and cleaned up promptly.
112. Spill kits must be on hand to deal with spills immediately.
113. All vehicles must be inspected weekly for oil and fuel leaks.
114. Adequate scavenger proof dust bins must be provided and be visible.
115. An integrated waste management approach must be implemented that is based on waste minimization and must incorporate reduction, recycling and re-use options where appropriate.

116. Controlled blasting techniques must ensure that there is minimum dust generation
117. Constant excavation and backfilling of trenches must be done.
118. In sensitive areas manual excavation must be used.
119. Borrow material must be obtained only from authorized and permitted sites. Permits must be kept on site by the ECO.
120. Loud sound emissions from machinery must be damped.

121. Wet suppressors must be used regularly on stockpiles, unpaved roads and material handling activities and no chemical stabilizers must be used.
122. Dust suppressants must be used for all dust causing activities/processes and results must be supplied to the department quarterly to the: Air Quality Unit.
123. Fugitive emission reductions must be implemented where such emissions arise.
124. Abatement equipment must be used to effectively clean emissions as to comply with the new plant standards as set out in the National Environmental Management Air Quality Act, No. 39 of 2004
125. The waste arising from the abatement equipment must be disposed of in an environmentally safe manner in a registered landfill site.
126. In stack monitoring must be done on a bi-annual basis and the results must be supplied to the department (Air Quality Unit).
127. Haul trucks must be restricted to specified haul roads.
128. Early re-vegetation and stabilization of disturbed soils must be practiced.
129. Speed limit must not exceed 40 km/h on haul roads.

130. Should any archaeological remains be found on site, the South African Heritage Agency (SAHRA) must be contacted and all works must cease immediately in that area, failure to do so constitute an offence in terms of the National Heritage Resource Act, Act 25 of 1999 as amended.

Decommissioning of the Activity

131. Should the proposed activity ever cease or become redundant, the applicant shall undertake the required actions as prescribed by legislation at the time and comply with all relevant legal requirements administered by any relevant and competent authority at that time.

132. The site must be restored as close as possible to pre-mining conditions.

133. Upon completion of mining all possible areas must be rehabilitated and restored for suitable use.

134. Permits for seed harvesting to be used during rehabilitation must be applied for and obtained from DENC.

DURATION AND PERIOD OF VALIDITY

This activity(s) must commence within a period of three (3) years from the date of issue. If commencement of the activity (s) does not occur within that period and the intention is to extend the validity period of the authorization, an application for amendment to extend the validity period must be launched at least six (6) months before the validity period lapses. 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.

APPEAL

In terms of Chapter 7 of Environmental Impact Assessment Regulations, 2010, if the applicant or a person affected by this Decision wishes to appeal this decision, a notice of intention to appeal must be lodged within Twenty (20) days after date of the decision, and an appeal must **be lodged within thirty (30) days after lapsing of 20 days contemplated in regulation 60 (1)** of lodging of the notice to appeal to:

The Member of the Executive Council
Ministry of Environment & Nature Conservation
Private Bag X6102
Kimberley
8300
Fax: (053) 832 1026

Appeals must comply with the provisions of Chapter 7 of Environmental Impact Assessment Regulations, 2010 Government Notice No. R. 543 of 18 June 2010.



MR. B. FISHER

ACTING DIRECTOR: ENVIRONMENTAL MANAGEMENT

DEPARTMENT OF ENVIRONMENT & NATURE CONSERVATION

DATE OF ENVIRONMENTAL AUTHORISATION:

19 June 2012

ANNEXURE 1: REASONS FOR DECISION

1. Background

The applicant, **Sedex Minerals Pty Ltd** applied for authorization to carry on the following activities –

Zandkopsdrift Rare Earth Mine

Activity No. 2 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure for the storage of ore or coal that requires an atmospheric emissions license in terms of the National Environmental Management: Air Quality Act (Act No. 39 of 2004).

Activity No. 9 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure exceeding 1000 metres in length for the bulk transportation of water, sewage or storm water –

- (i) with an internal diameter of 0,36 metres or more; or
- (ii) with a peak throughput of 120 litres per second or more,

excluding where:

- (a) such facilities or infrastructure are for bulk transportation of water, sewage or storm water or storm water drainage inside a road reserve; or
- (b) where such construction will occur within urban areas but further than 32 metres from a watercourse, measured from the edge of the watercourse.

Activity No. 11 of GN.R.544 of 18 June 2010

The construction of:

- (xi) infrastructure or structures covering 50 square metres or more, where such construction occurs within a watercourse or within 32 metres of a watercourse, measured from the edge of a watercourse, excluding where such construction will occur behind the development setback line.

Activity No. 12 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure for the off-stream storage of water, including dams and reservoirs, with a combined capacity of 50000 cubic metres or more, unless such storage falls within the ambit of activity 19 of Notice 545 of 2010.

Activity No. 13 of GN.R.544 of 18 June 2010

The construction of facilities or infrastructure for the storage, or for the storage and handling, of a dangerous good, where such storage occurs in containers with a combined capacity of 80 but not exceeding 500 cubic metres.

Activity No. 18 of GN.R.544 of 18 June 2010

The infilling or depositing of any material of more than 5 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 5 cubic metres from: (i) a watercourse

but excluding where such infilling, depositing, dredging, excavation, removal or moving; (a) is for maintenance purposes undertaken in accordance with a management plan agreed to by the relevant environmental authority; or (b) occurs behind the development setback line.

Activity No. 22 of GN.R.544 of 18 June 2010

The construction of a road, outside urban areas, (i) with a reserve wider than 13,5 meters or, (ii) where no reserve exists where the road is wider than 8 metres, or (iii) for which an environmental authorisation was obtained for the route determination in terms of activity 5 in Government Notice 387 of 2006 or activity 18 in Notice 545 of 2010.

Activity No. 47 of GN.R.544 of 18 June 2010

The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre -

(i) where the existing reserve is wider than 13,5 meters; or (ii) where no reserve exists, where the existing road is wider than 8 metres –
excluding widening or lengthening occurring inside urban areas.

Activity No. 3 of GN.R.545 of 18 June 2010

The construction of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage occurs in containers with a combined capacity of more than 500 cubic metres.

Activity No. 5 of GN.R.545 of 18 June 2010

The construction of facilities or infrastructure for any process or activity which requires a permit or license in terms of national or provincial legislation governing the generation or release of emissions, pollution or effluent and which is not identified in Notice No. 544 of 2010 or included in the list of waste management activities published in terms of section 19 of the National Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case that Act will apply.

Activity No. 15 of GN.R.545 of 18 June 2010

Physical alteration of undeveloped, vacant or derelict land for residential, retail, commercial, recreational, industrial or institutional use where the total area to be transformed is 20 hectares or more;

except where such physical alteration takes place for: (i) linear development activities; or (ii) agriculture or afforestation, where activity 16 in this Schedule will apply.

Activity No. 12 of GN.R.546 of 18 June 2010

The clearance of an area of 300 square metres or more of vegetation where 75% or more of the vegetative cover constitutes indigenous vegetation.

(a) Within any critically endangered or endangered ecosystem listed in terms of section 52 of the NEMBA or prior to the publication of such a list, within an area that has been identified as critically endangered in the National Spatial Biodiversity Assessment 2004;

(b) Within critical biodiversity areas identified in bioregional plans;

(c) Within the littoral active zone or 100 metres inland from high water mark of the sea or an estuary, whichever distance is the greater, excluding where such removal will occur behind the development setback line on even in urban areas.

In farm Zandkopsdrift 537, situated near Garies, which falls within Kamiesberg Local Municipality of the Namakwa District Municipality, Northern Cape Province, on the following Geographical Co-ordinate: Lat: 30° 51' 52.45" S Long: 17° 58' 4.01" E referred to as "the property".

The applicant appointed Africa Geo-Environmental Services Gauteng Pty Ltd (AGES) to undertake a Scoping and Environmental Impact Assessment process in terms of the EIA Regulations of 2010.

The Environmental Assessment Practitioner complied with Regulation 22 of 18 June, 2010. Public participation followed complied with Regulation 54 of 18 June, 2010 and proof was submitted together with the Final EIA Report in October 2015.

2. Information considered in making the decision

In reaching its decision, the Department took, *inter alia*, the following into consideration -

- a) The information contained in the final Environmental Impact Assessment Report and EMPr dated October 2014.
- b) The objectives and requirements of relevant legislation, policies and guidelines, including section 2 of the National Environmental Management Act, 1998 (Act No. 107 of 1998).
- c) The findings of the site visit undertaken by Ms. O. Ndzumo and Mr. P Cloete on the 13th May 2014.

3. Key factors considered in making the decision

All information presented to the Department was taken into account in the Department's consideration of the application. A summary of the issues which, in the Department's view, were of the most significance is set out below.

- a) The legal and procedural requirements have been complied with and the information contained in the final Environmental Impact Assessment, represents the information on the ground.
- b) Final comments received from DENC scientific services unit.

- c) The Environmental Assessment Practitioner who prepared the Environmental Impact Assessment Report has demonstrated the relevant expertise to carry out the Environmental Impact Assessment procedures.
- d) Findings of the comments and response table in the final EIAr.
- e) Comments received from DENC Air Quality Unit.
- f) Comments received from SANParks in Namaqua National Park.
- g) Comments from the Department of Water and Sanitation.
- h) Findings of all the specialist studies conducted.

4. Findings

After consideration of the information and factors listed above, the Department made the following findings -

- a) The environmental impacts associated with the proposed project can be reduced to acceptable levels if properly managed with the conditions of this Authorisation and mitigation measures of the EMPr.
- b) The information contained in the EIAr dated October 2014 is deemed to be accurate and credible.
- c) An adequate public participation process was undertaken and the application has met the minimum requirements as prescribed in the EIA regulations, 2010.

In view of the above, the Department is satisfied that, subject to compliance with the conditions contained in the environmental authorization, the proposed activity will not conflict with the general objectives of integrated environmental management laid down in Chapter 5 of the National Environmental Management Act, 1998 and that any potentially detrimental environmental impacts resulting from the proposed activity can be mitigated to acceptable levels. The application is accordingly granted.