

DIRECTOR-GENERAL

SUBJECT

APPLICATION FOR AN ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT NO.107 OF 1998) ("NEMA"): ENVIRONMENTAL IMPACT ASSESSMENT REGULATIONS, 2014 TO UNDERTAKE ACTIVITIES WITHIN CLUSTER 2 VIRGINIA GAS PRODUCTION PROJECT LOCATED WITHIN THE VIRGINIA GAS FIELD IN THE FREE STATE PROVINCE

1. AIM

To request the Director-General to grant an Integrated Environmental Authorisation (EA) in terms of Regulation 24 of the Environmental Impact Assessment Regulations, 2014 (EIA Regulations) and to sign the attached EA and a granting letter by virtue of the powers delegated to you.

2. BACKGROUND

2.1 Tetra 4 (Pty) Limited (hereinafter referred to as "the Holder") is the holder of a Production Right No.12/4/07 ("PR 07") in respect of various farms in the magisterial district of Virginia in the Free State Province. PR 07 was issued on the 20th of September 2012 and is due to expire on the 19th of September 2032.

2.2 The Holder intends to undertake various activities within the existing production right, ranging from drilling of up to 300 wells, construction and laying of high- and low-pressure pipelines, installation of production infrastructure such as compressor and booster stations, and construction of LNG and Helium station. The proposed activities were not authorised by the existing EA, as a result the Holder had to lodge an EA application in terms of Regulation 16 of the EIA Regulations. On 22 July 2022, Tetra 4 Pty Limited

(hereinafter referred to as “the Applicant”) lodged an application for an EA for cluster 2 production project under production right bearing reference number 12-4-07.

3. DELIBERATION

3.1 Section 24(1) of NEMA provides that the potential consequences for or impacts on environment of listed activities or specified activities must be considered, investigated, assessed and reported on to the competent authority or the Minister responsible for Mineral Resources, as the case may be, except in respect of those activities that may commence without having to obtain an environmental authorization in terms of NEMA. Furthermore, section 24F provides that no person may commence with an activity listed or specified activities in terms of section 24(2) (a) or (b) of NEMA, unless the competent authority or the Minister of Mineral Resources has granted an EA for the activity. The Minister of Forestry, Fisheries and Environment has accordingly published Listing Notices in terms of section 24(2) (a) pursuant to which any activity which requires production right as contemplated in section 83 of the Mineral and Petroleum Resources Development Act, 2002 (Act No.28 of 2002) requires an EA. As indicated above, the Applicant did apply for an EA on the 22 July 2022 and has duly complied with the requirements prescribed by NEMA and the EIA Regulations related to an application for an environmental authorisation as explained below.

3.1.1 Submission of an application for an EA and any other information

Regulation 16 of the EIA Regulations prescribes general application requirements for an EA such as the form in which it must be made, proof of payment of prescribed application fee, minimum information requirements etc. The Applicant submitted the application for an EA in accordance with the prescripts of Regulation 16.

- 3.2 Regulation 3(2) of Listing Notice 2: List of Activities and Competent Authorities Identified in terms of sections 24(2) and 24D, which is applicable for production right activity, provides that the investigation, assessment and communication of the potential impact of activities must follow the procedure as prescribed by regulations 21, 22, 23 and 24 of the EIA Regulations.**

3.2.1 Submission and consideration of Scoping Report

In accordance with Regulation 21(1) of the EIA Regulations, 2014, the Applicant submitted a scoping report on the 08th of September 2022. The scoping report was considered and evaluated in accordance with the requirements of Regulations 21 and 22, and appendix 2 of the EIA Regulations, 2014. The said report was duly accepted on the 17th of November 2022, in accordance with Regulation 22 (a) based on the following:

- The scoping report was subjected to a 30-day commenting period and incorporated comments received from the state departments administering laws relating to matters affecting the environment;
- Stakeholders were notified of the application and the availability of the draft scoping report for comments through the prescribed methods such as letters, emails, and newspaper advertisements; and
- The scoping report contained information set out in Appendix 2 of the EIA Regulations and in this regard, relevant policies and legislation were identified; the need and desirability of the proposed project motivated and asserted, alternatives assessed, environmental attributes associated with the proposed activity(s) identified and assessed, impacts and risks identified and assessed, and suitable mitigation measures proposed; and key issues to be addressed in EIA phase identified.

3.2.2 Submission and consideration of Environmental Impact Assessment Report (“EIAR”) and Environmental Management Programme (“EMPr”)

3.2.2.1 Regulation 23(1) (a) and (b) of the EIA Regulations requires the applicant to submit within 106 days of the acceptance of the scoping report to the competent authority -

(a) An Environmental Impact Assessment report inclusive of any specialist reports and an EMPr, which must have been subjected to a public participation process of at least 30 days and which reflects the incorporation of comments received, including any comments of the competent authority: or

(b) A notification in writing that the reports and an EMPr, will be submitted within 156 days of receipt of the application by the competent authority, as significant changes have been made or significant new information has been added to the environmental impact assessment report or EMPr, which changes or information was not contained in the reports consulted on during the initial public participation process contemplated in sub-regulation (1) (a), and that the revised environmental impact assessment report or EMPr will be subjected to another public participation process of at least 30 days.

The EIAR and the EMPr inclusive of the specialist reports were submitted within the prescribed submission date on the 10 of February 2023.

3.2.3 Key factors considered in the assessment of the application and conclusion.

Having taken the above information into consideration, Environmental Compliance Department concluded that;



- All fundamental and procedural requirements prescribed in the applicable legislation is satisfied.
- Most of the impacts associated with the planned operations will be of low significance before and after mitigation. Potential impacts on soil contamination and degradation, employment expectations and groundwater contamination will be of medium significance prior mitigation and of low significance after mitigation.
- The identification and assessment of potential impacts of the activity, including cumulative impacts, was adequately undertaken, and the proposed mitigation and management measures are aligned with potential impacts.
- The motivation for the need and desirability of the bulk sampling operations is in line with the requirements of the EIA Regulations, 2014 and it addressed key issues in the Need and Desirability Guideline.
- Project Alternatives: The site/location, activity, design/layout, technology, operational aspects, and no-go alternatives were considered during the EIA process. The nature of the proposed operations limits consideration of some of the alternatives, however three (3) alternates, namely, location, layout and no-go alternatives were considered preferred alternatives. As far as no-go alternative, restriction on sensitive areas were suggested and this offers a balanced approach of ensuring that environment is protected while development continues.

- The Public Participation Process (PPP) complied with chapter 6 of the EIA Regulations, 2014 and related guidelines. The PPP included the following:
 - (a) Publishing of initial notifications regarding the project, including a call to register;
 - (b) Distribution of the draft EIAR and EMPR for comments;
 - (c) Site notices were placed in several locations within and in close proximity to the project location; and
 - (d) Inclusion of all comments received in the EIAR.


Having taken into consideration environmental management principles as set out in section 2 of NEMA, this Department is satisfied that the proposed activities will not be in conflict with the objectives of the Integrated Environmental Management set out in Chapter 5 of the National Environmental Management Act, 1998 and will not result to any detrimental risks to the environment and public. Environmental Compliance Record of Decision concluded that the Environmental Authorisation be granted to the Applicant.


4. RECOMMENDATION

- 4.1 In light of the above, it is recommended that the Director-General:
 - 4.1.1 approves the Environmental Authorisation; and
 - 4.1.2 signs Reasons for Decision, Letter of Authorisation and an Environmental Authorisation attached hereto as **Annexure A, B and C**.

RECOMMENDATION APPROVED	RECOMMENDATION NOT APPROVED
<p>PARAGRAPH 4.1.1: APPROVED PARAGRAPH 4.1.2: ENVIRONMENTAL AUTHORISATION SIGNED</p>  <p>MR. JACOB MBELE DIRECTOR-GENERAL DATE: 10/5/2023</p>	<p>PARAGRAPH 4.1.1: NOT APPROVED PARAGRAPH 4.1.2: ENVIRONMENTAL AUTHORISATION NOT SIGNED</p> <p>MR. JACOB MBELE DIRECTOR-GENERAL DATE:</p>
RECOMMENDATION SUPPORTED	RECOMMENDATION NOT SUPPORTED
<p> MS. M. C. ROBE MR. TSELISO MAQUBELA ACT DEPUTY DIRECTOR-GENERAL MINERAL AND PETROLEUM REGULATION DATE: 04/05/2023</p>	<p>MR. TSELISO MAQUBELA DEPUTY DIRECTOR-GENERAL MINERAL AND PETROLEUM REGULATION DATE:</p>

RECOMMENDATION BY:


DR. PHINDILE MASANGANE
CHIEF EXECUTIVE OFFICER
DATE: 1 May 2023

for 
MS. SIBONGILE MALIE
MANAGER: LICENSING AND REGULATION
DATE: 1 May 2023



MR AZWIFARWI THOVHAKALE
SENIOR OFFICER: LICENSING AND
REGULATION
DATE:28/04/2023



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Enquiries: Ms Sinazo Mnyaka

EAP Reg No.: 2022/5486

Email Address: mnyakas@petroleumagencysa.com

By E-MAIL

TETRA 4 (PTY) LTD

1 Bompas Road

Johannesburg

South Africa

2196

Attention : Mr Khalid Patel
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ENVIRONMENTAL AUTHORISATION IN TERMS OF SECTION 24 OF THE NATIONAL ENVIRONMENTAL MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AS AMENDED, READ WITH THE ENVIRONMENTAL IMPACT ASSESSMENT (EIA) REGULATIONS, 2014 AS AMENDED, FOR THE TETRA 4 CLUSTER 2 VIRGINIA GAS PRODUCTION PROJECT LOCATED WITHIN THE VIRGINIA GAS FIELD IN THE FREE STATE PROVINCE, SOUTH AFRICA

I, Mr Jacob Mbele, in terms of the powers delegated to me, in terms of regulation 24 of the National Environmental Management Act, 1998 (Act 107 of 1998): Environmental Impact Assessment Regulations, 2014 (hereafter referred to as 'EIA Regulations') decided to grant an environmental authorisation (hereafter referred to as the authorisation) in respect of the application lodged on 23 May 2022. Herewith attached, is the copy of the authorisation and reasons for the decision to grant.

You are instructed in terms of regulation 4(2) of the EIA Regulations to notify all interested and affected parties (I&APs), in writing within fourteen (14) days of the date of the decision, regarding the outcomes of your application. You are also required to inform all I&APs of the procedure to submit appeals against the decision as contained in the National Environmental Management Act, 1998 (Act 107 of 1998): National Appeals Regulations, 2014 (hereafter referred to as 'Appeals Regulations').

Should you wish to appeal the decision or any aspect thereof, you must submit an appeal in the prescribed form and in accordance with Chapter 2 of the Appeals Regulation, within twenty (20) days from the date of notification of the decision. The said must be submitted to the Minister of Forestry, Fisheries, and the Environment, and copies sent to the Department of Mineral Resources and Energy (Head Office) and the Petroleum Agency SA by one of the following means:

1) Department of Forestry, Fisheries, and the Environment

Appeals and Legal Review Directorate

Attention : Director: Appeals and Legal Review

Email : appeal@dfre.gov.za

Post : Private Bag x 447, Pretoria, 0001

By Hand : Environmental House, Corner Steve Biko and Soutspansberg Street, Arcadia, Pretoria, 0083

2) Copy(s) of the lodged appeal(s) to the Petroleum Agency SA

Attention : The Chief Executive Officer

Email : EAappeals@petroleumagency.co.za

Post : Private Bag x 5111, Tygervalley, 7536

By Hand : Heron Place, Second Floor, Heron Close, Century City, Cape Town, South Africa

3) Copy(s) of the lodged appeal(s) to the Department of Mineral Resources and Energy

Legal Services Directorate

Attention : Director: Legal Services

Email : Pieter.Alberts@dmre.gov.za

Facsimile : 086 710 0877

Post : Private Bag x 59, Arcadia, 0007

By Hand : Trevenna Campus, Building 2C, c/o Meintjes and Francis Baard Street, Sunnyside

The authorised activities shall not commence within twenty (20) days from the date the notification of the decision of this authorisation was sent to all I&APs. Please note that should the Minister of Forestry, Fisheries, and the Environment receive appeals against this authorisation or conditions thereof, this authorisation will be suspended in accordance with section 43(7) of National Environmental Management Act, 1998 (Act 107 of 1998) (NEMA) pending the decision on such appeals.

Yours sincerely,



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MR JACOB MBELE

DIRECTOR-GENERAL

DATE: 13/7/2023



mineral resources

Department:
Mineral Resources
REPUBLIC OF SOUTH AFRICA

Enquiries: Ms Sinazo Mnyaka

EAP Reg No.: 2022/5486

Email Address: mnyakas@petroleumagencyssa.com

ENVIRONMENTAL AUTHORISATION IN TERMS OF THE NATIONAL ENVIRONMENTAL
MANAGEMENT ACT, 1998 (ACT 107 OF 1998) AS AMENDED ("NEMA") AND ENVIRONMENTAL
IMPACT ASSESSMENT REGULATIONS, 2014 AS AMENDED

IN RESPECT OF
THE PROPOSED TETRA 4 CLUSTER 2 VIRGINIA GAS PRODUCTION PROJECT
ACTIVITIES SITUATED WITHIN THE VIRGINIA GAS FIELD WITHIN THE TETRA 4
PRODUCTION RIGHT AREA IN THE FREE STATE PROVINCE

APPLICATION DETAILS

Application Reference Number	12/4/007
Holder of Environmental Authorisation	Tetra 4 (Pty) Limited
Location of the Activity	Various farm portions located within the Masilonyana and Matjhabeng Local Municipalities in the Lejweleputswa District Municipality, Free State Province.
Size of the Environmental Authorisation application area	Approximately 27 500 Hectares

This authorisation does not negate the holder of the authorisation of the responsibility to comply with any other statutory requirements that may be applicable to the undertaking of the proposed activity.

DECISION ON THE AUTHORISATION

ACRONYMS

AGENCY	: Petroleum Agency SA
DEPARTMENT	: Department of Mineral Resources and Energy
ECO	: Environmental Control Officer
EA	: Environmental Authorisation
EIAR	: Environmental Impact Assessment Report
EIA REGULATIONS	: National Environmental Management Act, 1998 (Act 107 of 1998): Environmental Impact Assessment Regulations, 2014
EMPr	: Environmental Management Programme
I&APs	: Interested and Affected Parties
MPRDA	: Mineral and Petroleum Resources Development Act, 2002 (Act 28 of 2002), as amended
NEMA	: National Environmental Management Act, 1998 (Act 107 of 1998), as amended

The Department is satisfied with the information made available to it, subject to compliance with the conditions of this authorisation, and therefore the applicant should be authorised to undertake the NEMA EIA listed activities specified below. Details regarding the basis, on which the Department reached this decision are set out in Annexure 1 of this authorisation.

ACTIVITY(S) AUTHORISED

By virtue of the powers conferred on it by the National Environmental Management Act, 1998 (Act No. 107 of 1998) ("NEMA") and the Environmental Impact Assessment Regulations, 2014 ("EIA Regulations") the Department hereby **grants** the authorisation to **TETRA 4 (PTY) Limited** to undertake NEMA EIA listed activities specified in section 3 below and as described in the EIAR and EMPr submitted on **10 February 2023**.

The granting of this authorisation is subject to compliance with conditions specified under section 5 below.

1. DETAILS OF THE HOLDER OF THIS ENVIRONMENTAL AUTHORISATION

Tetra 4 (Pty) Limited

1 Bompas Road
Johannesburg
South Africa
2196

Attention : Mr Khalid Patel
Cell : +27(0) 83 656 2355
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2. DETAILS OF THE ENVIRONMENTAL ASSESSMENT PRACTITIONER

Environmental Impact Management Services (Pty) Ltd
PO Box 2083
Pinegowrie
2123

Contact Person : Mr Brian Whitfield
Tel : +27(0) 11 789 7170
Cell : +27(0) 82 688 9850
Email : brian@eims.co.za

3. LIST OF ACTIVITIES AUTHORISED

The following activities listed and specified in table 1 are authorised.

Table 1: Authorised listed and specified activities.

Activity No.	Activity Description	Description of Activity in relation to the Proposed Activities
GN No. R983: Listing Notice 1 (as amended by GN No. R327 of 2017, R706 of 2018 and R517 of 2021)		
12	<p>The development of-</p> <p>(i) dams or weirs, where the dam or weir, including infrastructure and water surface area, exceeds 100 square metres; or</p> <p>(ii) infrastructure or structures with a physical footprint of 100 square metres or more;</p> <p>where such development occurs-</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;-</p> <p>excluding-</p> <p>(aa) the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;(bb) where such development activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 14 in</p>	<p>This project comprises linear activities such as pipelines (with associated low point drains, pigging, booster and compressor stations) and access roads which will impact on watercourses or within 32 m of a watercourse when in proximity to these areas.</p>

	<p>Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such development occurs within an urban area;</p> <p>(ee) where such development occurs within existing roads, road reserves or railway line reserves; or</p> <p>(ff) the development of temporary infrastructure or structures where such infrastructure or structures will be removed within 6 weeks of the commencement of development and where indigenous vegetation will not be cleared.</p>	
16	<p>The development and related operation of facilities for the desalination of water with a design capacity to produce more than 100 cubic metres of treated water per day.</p>	<p>The reverse osmosis plant (RO Plant) will remove salts from the wastewater in the evaporation pond and therefore fulfils the function of 'desalination' of water. The RO plant will produce ~100 m³/day of treated water which shall be reused within the production processes. The treated water will be stored in the service/fire water tanks.</p>
19	<p>The infilling or depositing of any material of more than 10 cubic metres into, or the dredging, excavation, removal or moving of soil, sand, shells, shell grit, pebbles or rock of more than 10 cubic metres from a watercourse;</p> <p>but excluding where such infilling, depositing, dredging, excavation, removal or moving-</p> <p>(a) will occur behind a development setback;</p>	<p>This project comprises extensive linear activities such as pipelines (with associated low point drains, pigging, booster and compressor stations) and access roads which will require infilling or depositing of more than 10 m³ of material to or from a watercourse when in proximity to these areas.</p>

	<p>(b) is for maintenance purposes undertaken in accordance with a maintenance management plan;</p> <p>(c) falls within the ambit of activity 21 in this Notice, in which case that activity applies;</p> <p>(d) occurs within existing ports or harbours that will not increase the development footprint of the port or harbour; or</p> <p>(e) where such development is related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies.</p>	
21D	Any activity including the operation of that activity which requires an amendment or variation to a right or permit in terms of section 102 of the Mineral and Petroleum Resources Development Act, as well as any other applicable activity contained in this Listing Notice or in Listing Notice 3 of 2014, required for such amendment.	In terms of the MPRDA, a Section 102 EMPr amendment will be required to include the Cluster 2 activities and any specific mitigation measures into the approved Cluster 1 EMPr.
27	<p>The clearance of an area of 1 hectare or more, but less than 20 hectares of indigenous vegetation, except where such clearance of indigenous vegetation is required for-</p> <ul style="list-style-type: none"> (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan. 	Pipelines and access roads are linear activities and therefore excluded from this listed activity and the calculation of vegetation clearance.

28	<p>Residential, mixed, retail, commercial, industrial or institutional developments where such land was used for agriculture, game farming, equestrian purposes or afforestation on or after 01 April 1998 and where such development:</p> <p>(i) will occur inside an urban area, where the total land to be developed is bigger than 5 hectares; or</p> <p>(ii) will occur outside an urban area, where the total land to be developed is bigger than 1 hectare;</p> <p>excluding where such land has already been developed for residential, mixed, retail, commercial, industrial or institutional purposes.</p>	<p>The LNG/LHe Plant expansion is on land previously used for agricultural activities (grazing) and covers an area greater than 1 hectare (outside urban area).</p>
34	<p>The expansion of existing facilities or infrastructure for any process or activity where such expansion will result in the need for a permit or licence or an amended permit or licence in terms of national or provincial legislation governing the release of emissions, effluent or pollution, excluding-</p> <p>(i) where the facility, infrastructure, process or activity is 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 the National Environmental Management: Waste Act, 2008 applies;</p>	<p>The relevant AEL application will be submitted for the Cluster 2 specific emissions and scheduled processes.</p>

	<p>(ii) the expansion of existing facilities or infrastructure for the treatment of effluent, wastewater, polluted water or sewage where the capacity will be increased by less than 15 000 cubic metres per day; or</p> <p>(iii) the expansion is directly related to aquaculture facilities or infrastructure where the wastewater discharge capacity will be increased by 50 cubic meters or less per day.</p>	
48	<p>The expansion of-</p> <p>(i) infrastructure or structures where the physical footprint is expanded by 100 square metres or more; or</p> <p>(ii) dams or weirs, where the dam or weir, including infrastructure and water surface area, is expanded by 100 square metres or more;</p> <p>where such expansion occurs-</p> <p>(a) within a watercourse;</p> <p>(b) in front of a development setback; or</p> <p>(c) if no development setback exists, within 32 metres of a watercourse, measured from the edge of a watercourse;</p> <p>excluding-</p> <p>(aa) the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour;</p>	<p>The expansion to gas production activities under the Production Right from Cluster 1 to Cluster 2 will result in infrastructure such as wells, booster stations, compressor stations, pipelines, roads etc. being located within the regulated area of a watercourse.</p>

	<p>(bb) where such expansion activities are related to the development of a port or harbour, in which case activity 26 in Listing Notice 2 of 2014 applies;</p> <p>(cc) activities listed in activity 14 in Listing Notice 2 of 2014 or activity 23 in Listing Notice 3 of 2014, in which case that activity applies;</p> <p>(dd) where such expansion occurs within an urban area; or</p> <p>(ee) where such expansion occurs within existing roads, road reserves or railway line reserves.</p>	
51	<p>The expansion and related operation of facilities for the storage, or storage and handling, of a dangerous good, where the capacity of such storage facility will be expanded by more than 80 cubic metres.</p>	<p>Expansion to storage of LNG at the LNG/LHe Plant complex from Cluster 1 to Cluster 2 activities. The Cluster 2 plant will include 3300 m³ of storage of LNG.</p> <p>Liquid Helium is not a listed dangerous good and therefore does not apply to this listed activity.</p>
56	<p>The widening of a road by more than 6 metres, or the lengthening of a road by more than 1 kilometre-</p> <p>(i) where the existing reserve is wider than 13,5 meters; or</p> <p>(ii) where no reserve exists, where the existing road is wider than 8 metres; excluding where widening or lengthening occur inside urban areas.</p>	<p>Existing roads may require lengthening by more than 1km however this is dependent on the location of the exploration wells which cannot be specifically located at this point.</p>

59	The expansion and related operation of facilities or infrastructure for the refining, extraction or processing of gas, oil or petroleum products where the installed capacity of the facility will be increased by 50 cubic metres or more per day, excluding facilities for the refining, extraction or processing of gas from landfill sites.	The Cluster 2 Gas Production Project will add an additional 3300 m ³ of LNG and 200 m ³ of Helium to the Cluster 1 production volumes.
60	The expansion and related operation of facilities or infrastructure for the bulk transportation of dangerous goods- (i) in gas form, outside an industrial complex, by an increased throughput capacity of 700 tons or more per day; (ii) in liquid form, outside an industrial complex or zone, by an increased throughput capacity of 50 cubic metres or more per day; or (iii) in solid form, outside an industrial complex or zone, by an increased throughput capacity of 50 tons or more per day.	Cluster 2 will expand upon the existing approved Cluster 1 gas production by adding an additional 45 MMSCFD to the overall gas production under the Production Right.
67	Phased activities for all activities- (i) listed in this Notice, which commenced on or after the effective date of this Notice or similarly listed in any of the previous NEMA notices, which commenced on or after the effective date of such previous NEMA Notices; excluding the following activities listed in this Notice-	The Cluster 2 project (up to 300 production wells, pipelines, compressor and booster stations) will be constructed in a phased manner which may on their own not trigger a listed activity but when combined, exceed the threshold for clearance of vegetation.

	<p>17(i)(a-d); 17(ii)(a-d); 17(iii)(a-d); 17(iv)(a-d); 17(v)(a-d); 20; 21; 24(i); 29; 30; 31; 32; 34; 54(i)(a-d); 54(ii)(a-d); 54(iii)(a-d); 4(iv)(a-d); 54(v)(a-d); 55; 61; 64; and 65; or</p> <p>(ii) listed as activities 5, 7, 8(ii), 11, 13, 16, 27(i) or 27(ii) in Listing Notice 2 of 2014 or similarly listed in any of the previous NEMA notices, which commenced on or after the effective date of such previous NEMA Notices; where any phase of the activity was below a threshold but where a combination of the phases, including expansions or extensions, will exceed a specified threshold.</p>	
GN No. R984: Listing Notice 2 (as amended by GN No. 325 of 2017 and R517 of 2021)		
4	The development and related operation 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.	The LNG/LHe Plant will store 3300 m ³ of LNG which is classified as a dangerous good. Note that LHe is not classified as a dangerous good.
5	The development and related operation of facilities or infrastructure for the processing of a petroleum resource, including the beneficiation or refining of gas, oil or petroleum products with an installed capacity of 50 cubic metres or more per day, excluding activities which are included in the list of waste management activities published in terms of section 19 of the National	The LNG/LHe Plant will be constructed for Cluster 2 which serves the purpose of beneficiation/refining of gas with an installed capacity of more than 50 m ³ /day.

	Environmental Management: Waste Act, 2008 (Act No. 59 of 2008) in which case the National Environmental Management: Waste Act, 2008 applies.	
7	The development and related operation of facilities or infrastructure for the bulk transportation of dangerous goods- (i) in gas form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 700 tons per day; (ii) in liquid form, outside an industrial complex, using pipelines, exceeding 1 000 metres in length, with a throughput capacity of more than 50 cubic metres per day; or (iii) in solid form, outside an industrial complex, using funiculars or conveyors with a throughput capacity of more than 50 tons per day.	Cluster 2 will include the development and operation of gas pipelines exceeding 1 000 metres in length, with a throughput capacity of more than 700 tons per day.
15	The clearance of an area of 20 hectares or more of indigenous vegetation, excluding where such clearance of indigenous vegetation is required for- (i) the undertaking of a linear activity; or (ii) maintenance purposes undertaken in accordance with a maintenance management plan.	<p>The LNG/LHe Plant and laydown area is ~25.4 ha and the cumulative clearance for wells, compressor stations, blower stations, etc are ~100-150 ha.</p> <p>Pipelines are linear activities and therefore excluded from this listed activity.</p>
GN No. R985: Listing Notice 3 (as amended by GN No. R327 of 2017, R706 of 2018 and R517 of 2021)		

10	<p>The development and related operation 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 30 but not exceeding 80 cubic metres.</p> <p>b. Free State</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(dd) Sites or areas identified in terms of an international convention;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(ff) Core areas in biosphere reserves;</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core areas of a biosphere reserve; or</p> <p>(hh) Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland; or</p>	<p>The Cluster 2 LNG/LHe Plant will store ~3300 m³ of LNG which is defined as a dangerous good and the facility is located in an ESA defined area.</p>
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	<p>ii. Inside urban areas:</p> <p>(aa) Areas zoned for use as public open space; or</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.</p>	
12	<p>The clearance of an area of 300 square metres or more of indigenous vegetation except where such clearance of indigenous vegetation is required for maintenance purposes undertaken in accordance with a maintenance management plan.</p> <p>b. Free State</p> <p>i. 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;</p> <p>ii. Within critical biodiversity areas identified in bioregional plans;</p> <p>iii. On land, where, at the time of the coming into effect of this Notice or thereafter such land was zoned open space, conservation or had an equivalent zoning; or</p> <p>iv. Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland.</p>	<p>Sections of the project footprint (pipelines, wells, booster stations and/or compressor stations fall within CBA areas and watercourses where more than 300 m² will be cleared of vegetation.</p>

14	<p>The development of-</p> <ul style="list-style-type: none"> (i) dams or weirs, where the dam or weir, including infrastructure and water surface area exceeds 10 square metres; or (ii) infrastructure or structures with a physical footprint of 10 square metres or more; <p>where such development occurs-</p> <ul style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; <p>excluding the development of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p> <p>Free State</p> <ul style="list-style-type: none"> i. Outside urban areas: <ul style="list-style-type: none"> (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) World Heritage Sites; (dd) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (ee) Sites or areas identified in terms of an international convention; (ff) Critical biodiversity areas or ecosystem service areas as identified in systematic 	<p>Sections of the project footprint (pipelines, wells, booster stations and/or compressor stations fall within CBA areas and watercourses and infrastructure in these areas will exceed the 10 m² threshold.</p>
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	<p>biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(gg) Core areas in biosphere reserves; or</p> <p>(hh) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; or</p> <p>ii. Inside urban areas:</p> <p>(aa) Areas zoned for use as public open space; or</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority, zoned for a conservation purpose.</p>	
18	<p>The widening of a road by more than 4 metres, or the lengthening of a road by more than 1 kilometre.</p> <p>b. Free State</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(dd) Sites or areas identified in terms of an international convention;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted</p>	<p>There are CBA areas overlapping with certain well and pipeline transects, and existing roads may require lengthening by more than 1 km however this is dependent on the location of the exploration wells which cannot be specifically located at this point.</p>

	<p>by the competent authority or in bioregional plans;</p> <p>(ff) Core areas in biosphere reserves;</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; or</p> <p>(hh) Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland; or</p> <p>ii. Inside urban areas:</p> <p>(aa) Areas zoned for use as public open space; or</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.</p>	
22	<p>The expansion and related operation of facilities or infrastructure for the storage, or storage and handling of a dangerous good, where such storage facilities or infrastructure will be expanded by 30 cubic metres or more but no more than 80 cubic metres.</p> <p>b. Free State</p> <p>i. Outside urban areas:</p> <p>(aa) A protected area identified in terms of NEMPAA, excluding conservancies;</p> <p>(bb) National Protected Area Expansion Strategy Focus areas;</p> <p>(cc) Sensitive areas as identified in an environmental management framework as</p>	<p>The Cluster 2 LNG/LHe Plant will store ~3300 m³ of LNG which is defined as a dangerous good and the facility is located in an ESA defined area.</p>

	<p>contemplated in chapter 5 of the Act and as adopted by the competent authority;</p> <p>(dd) Sites or areas identified in terms of an international convention;</p> <p>(ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans;</p> <p>(ff) Core areas in biosphere reserves;</p> <p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; or</p> <p>(hh) Areas within a watercourse or wetland; or within 100 metres from the edge of a watercourse or wetland; or</p> <p>ii. Inside urban areas:</p> <p>(aa) Areas zoned for use as public open space;</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose; or</p> <p>(cc) Areas on the watercourse side of the development setback line or within 100 metres from the edge of a watercourse where no such setback line has been determined.</p>	
23	<p>The expansion of-</p> <p>(i) dams or weirs where the dam or weir is expanded by 10 square metres or more; or</p>	<p>Expansion of the gas production pipeline network for Cluster 2 will result in some sections of the pipeline being located within CBA areas and watercourses and will exceed the 10 m² threshold.</p>

	<p>(ii) infrastructure or structures where the physical footprint is expanded by 10 square metres or more; where such expansion occurs-</p> <ul style="list-style-type: none"> (a) within a watercourse; (b) in front of a development setback adopted in the prescribed manner; or (c) if no development setback has been adopted, within 32 metres of a watercourse, measured from the edge of a watercourse; <p>excluding the expansion of infrastructure or structures within existing ports or harbours that will not increase the development footprint of the port or harbour.</p> <p>b. Free State</p> <p>i. Outside urban areas:</p> <ul style="list-style-type: none"> (aa) A protected area identified in terms of NEMPAA, excluding conservancies; (bb) National Protected Area Expansion Strategy Focus areas; (cc) Sensitive areas as identified in an environmental management framework as contemplated in chapter 5 of the Act and as adopted by the competent authority; (dd) Sites or areas identified in terms of an international convention; (ee) Critical biodiversity areas as identified in systematic biodiversity plans adopted by the competent authority or in bioregional plans; (ff) Core areas in biosphere reserves; or 	
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	<p>(gg) Areas within 10 kilometres from national parks or world heritage sites or 5 kilometres from any other protected area identified in terms of NEMPAA or from the core area of a biosphere reserve; or</p> <p>ii. Inside urban areas:</p> <p>(aa) Areas zoned for use as public open space; or</p> <p>(bb) Areas designated for conservation use in Spatial Development Frameworks adopted by the competent authority or zoned for a conservation purpose.</p>	
NEMWA LISTED ACTIVITIES		
Category A1	The storage of general waste in lagoons	Drilling waste (drill mud) will be stored in lagoons at each of the exploration drill sites. Although previous samples of drill mud were classified as hazardous waste, there remains the possibility that certain exploration wells will be drilled through rock strata that does not result in a hazardous classification.
Category A6	The treatment of general waste using any form of treatment at a facility that has the capacity to process in excess of 10 tons but less than 100 tons per day calculated as a monthly average, excluding the treatment of organic waste using composting and any other organic waste treatment.	Drilling waste (drill mud) will be stored in lagoons and the liquid fraction (water) removed from the solid fraction (drill cuttings or mud) which constitutes "treatment". Although previous samples of drill mud were classified as hazardous waste, there remains the possibility that certain exploration wells will be drilled through rock strata that does not result in a hazardous classification.
Category A7	The treatment of hazardous waste using any form of treatment at a facility that has the capacity to process in excess of	Drilling waste (drill mud) will be stored in lagoons and the liquid fraction (water) removed from the solid fraction (drill

	500kg but less than 1 ton per day calculated as a monthly average, excluding the treatment of effluent, wastewater, sewage or organic waste using composting or any other organic waste treatment.	cuttings or mud) which constitutes "treatment". Previous samples of drill cuttings (drill mud) were classified as hazardous and therefore it can be expected that this may represent a similar situation for the new exploration wells (albeit this may not apply in all exploration wells).
Category A12	The construction of a facility for a waste management activity listed in Category A of this Schedule (not in isolation to associated waste management activity).	The construction of lagoons for the storage of drilling muds.
Category A13	The expansion of a waste management activity listed in Category A or B of this Schedule which does not trigger an additional waste management activity in terms of this Schedule.	The Cluster 2 Plant and laydown areas will be located directly adjacent to the Cluster 1 plant and will share waste management facilities which will require expansion to the storage areas for general and hazardous waste.
Category A14	The decommissioning of a facility for a waste management activity listed in Category A or B of this Schedule.	On completion of exploration drilling at each drill site, the lagoons will be decommissioned and rehabilitated.
Category B1	The storage of hazardous waste in lagoons excluding storage of effluent, wastewater or sewage.	Drilling mud will be stored in lagoons at each exploration well and this drill waste falls within the hazardous class of wastes due to the chemical properties of the underlying rock strata.
Category B10	The construction of a facility for a waste management activity listed in Category B of this Schedule (not in isolation to associated waste management activity).	The construction of lagoons for the storage of drilling muds.
Category B11	The establishment or reclamation of a residue stockpile or residue deposit resulting from activities which require a	Drilling mud is classified as a residue deposit or residue stockpile in terms of the

	mining right, exploration right or production right in terms of the Mineral and Petroleum Resources Development Act, 2002 (Act No. 28 of 2002).	NEMWA. This activity will therefore be triggered.
Category C1	The storage of general waste at a facility that has the capacity to store in excess of 100m ³ of general waste at any one time, excluding the storage of waste in lagoons or temporary storage of such waste.	<p>During construction, general waste will be stored by various contractors in the laydown area/camp and will store more than 100 m³ when combined.</p> <p>Note: This NEMWA trigger does not require a waste management licence but rather requires registration and compliance with the Norms and Standards.</p>
Category C2	The storage of hazardous waste at a facility that has the capacity to store in excess of 80m ³ of hazardous waste at any one time, excluding the storage of hazardous waste in lagoons or temporary storage of such waste.	<p>During construction, hazardous waste will be stored by various contractors in the laydown area/camp and will store more than 80 m³ when combined.</p> <p>Note: This NEMWA trigger does not require a waste management licence but rather requires registration and compliance with the Norms and Standards.</p>
Category C6	The sorting, shredding, grinding, crushing, screening or baling of general waste at a waste facility that has an operational area that is 1000m ² and more.	<p>The waste storage and separation area during construction will be greater than 1000 m² (33 m X 33 m).</p> <p>Note: This NEMWA trigger does not require a waste management licence but rather requires registration and compliance with the Norms and Standards.</p>
NWA Section 21 Activities		

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21 (c) & (i)	impeding or diverting the flow of water in a watercourse and/or altering the bed, banks, course or characteristics of a watercourse.	Pipelines and associated infrastructure (due to their linear nature) will be constructed within the regulated area of a watercourse. An amendment to the existing Cluster 1 WUL will be undertaken to include the relevant Cluster 2 water uses.
21 (g)	Disposing of waste in a manner which may detrimentally impact on a water resource.	A general authorisation (GA) will be registered for the evaporation pond as the volumes of this pond fall within the ambit of a GA. A similar GA registration has already been obtained for the Cluster 1 evaporation pond at the LNG/LHe Plant.
NEMAQA Scheduled Activities		
Sub-category 2.4	Storage and Handling of Petroleum Products	The relevant AEL application will be submitted for the Cluster 2 scheduled processes under the NEMAQA.

The holder of this authorisation is authorised to conduct the following activities within the area described in section 4 below:

3.1 Drilling

- Drilling (percussion or diamond drilling) of up to 400 new exploration wells in order to achieve up to 300 production wells for inclusion in the Cluster 2 Gas Production Project. The surface footprint of each well is approximately 50m x 50m in extent.

3.2 Pipelines

- Construction of approximately 480 kms of underground gas pipelines to link the new production wells to the compressor stations and LNG/LHe Plant.
- Pipelines will be a combination of high-pressure steel and low-pressure high-density polyethylene (HDPE) installed at a minimum depth of 1.5m below surface level.

- Pipelines will be installed using a back-actor and TLB. Pipeline servitude corridors (10m wide) will be maintained free of woody plants to prevent disturbance of the pipeline by root growth and to ensure access for regular inspection and infrequent maintenance.
- Pipelines will be marked with concrete markers and adhere to industry standards, and will have low-point drains at strategic locations for testing and pipeline maintenance.

3.3 Gas Inline Stations

- Installation of inline infrastructure for the transportation of gas via pipelines from the production wells to the LNG/LHe Plant. Inline infrastructure will be utilized to monitor, measure and control gas flow through the pipelines, booster stations, pigging stations, low-point drains and compressor stations.
- Construction of up to 28 booster stations occupying an area of 10 m x 14 m each.
- Installation of up to 14 pigging stations (pig launcher/receiver pairs) for regular cleaning and inspection of pipelines at river crossings.
- Construction of three (3) compressor stations with a footprint of approximately 60 m x 60 m per compressor station.

3.4 LNG and Helium Plant

- Construction of the Cluster 2 LNG/LHe Plant directly adjacent to the existing Cluster 1 Plant. The area to be occupied by the LNG/LHe Plant in the operational phase is approximately 9.6 hectares in extent.
- Clearance of an additional area of approximately 15.8 hectares during the construction phase for various contractor laydown areas, offices, parking and waste storage.
- The cleared area will be rehabilitated on completion of construction.

4. LOCATION OF THE APPLICATION AREA

The application area covers several farm portions and whilst not all portions of parent farms are necessarily included in this application a summary of the parent farm names is presented below for ease of reference, with a detailed list provided in **Appendix 2** of this authorisation:

Adamsons Vley No. 655, Annex Glen Ross No. 562, Annex Grusde No. 474, Annex Mooivlakte No. 208, Blaauwdrift No. 188, Bloemhoek No. 509, Boschluis Spruit No. 278, Braklaagte No. 41, Brakspruit No. 121, Bruintjies Hoogte No. 367, Bryan No. 561, Cabriere No. 215, Carlo No. 596,

Damplaats No. 341, Dankbaarheid No. 16, De Klerks Kraal No. 231, Die Mond No. 479, Digito No. 642, Doorn River No. 330, Doorndeel No. 236, Enkeldoorn No. 360, Frisgewaag No. 550, Glen Ross No. 734, Grusde No. 229, Hakkies No. 695, Hakkies No. 742, Harmonie No. 579, Helpmekaar No. 47, Jonkers Rust No. 72, Jordaan No. 1, Jordaans Rust No. 59, Kaalpan No. 65, Kalkoenkrans No. 225, Klein Palmiet Kuil No. 407, Klein Pan No. 320, Kleinbegin No. 134, Kovno No. 235, Langlaagte No. 110, Leeuwaarden No. 171, Leeuwbult No. 52, Leeuwbult No. 580, Lekkerlewe No. 643, Middelpaas No. 583, Mond Van Doornrivier No. 38, Mooifontein No. 639, Mooivlakte No. 199, Mooivlei No. 357, Nortier No. 361, Palmietkuil No. 548, Palmietkuil No. 328, Paulina No. 470, Richelieu No. 135, Rondehoek No. 200, Siberia No. 464, Spoorleggerswoning 54 No. 167, Stille Woning No. 703, Terra Blanda No. 155, Toulon No. 368, Vaalbank No. 190, Vlakpan No. 358, Welgelegen No. 382, Weltevrede No. 638, Weltevreden No. 443, Zoetendal No. 243, Zonderzorg No. 342, Zonderzorg No. 640

The proposed project falls within the Masilonyana and Matjhabeng Local Municipalities, in the Lejweleputswa District Municipality, Free State Province.

5. CONDITIONS OF THE AUTHORISATION

5.1 SCOPE OF AUTHORISATION

- 5.1.1 The holder is authorised to undertake activities specified in section 3 above.
- 5.1.2 The authorised activities must only be carried out within the application area specified in section 4.
- 5.1.3 The holder of this authorisation is responsible for ensuring compliance with the conditions of this authorisation.
- 5.1.4 Any person(s) acting on behalf of the holder, inclusive of contractor(s), subcontractor(s), consultant(s), and employee(s) are also subject to the conditions of this authorisation. This condition, however, does not exonerate the holder from its accountability and responsibility to ensure compliance with the conditions of this authorisation.
- 5.1.5 Any changes to, or deviations from, and amendments to the proposed activities and conditions of this authorisation must be approved in writing by this Department before such changes, deviations or amendments are effected. The Department reserves the right to request the submission of information deemed necessary to assess and evaluate the significance and

impacts of such changes, deviations, and amendments. Any changes, deviations and amendments may be subject to the provisions of Chapter 5 of the EIA Regulations, 2014 pertaining to the amendments of this authorisation.

5.2 NOTIFICATION AND APPEAL OF AUTHORISATION

- 5.2.1 The holder must, in writing, within fourteen (14) days of the date of this authorisation, notify all I&APs of the outcome of the application.
- 5.2.2 The notification contemplated above must, amongst other issues:
 - 5.2.2.1 Stipulate the date of the decision, and the date of issue of the authorisation.
 - 5.2.2.2 Provide reasons for the decision.
 - 5.2.2.3 Inform all I&APs of the appeals procedure in terms of the National Environmental Management Act, 1998: National Appeals Regulations (GN R 993 of 08 December 2014).
 - 5.2.2.4 Draw the attention of all I&APs to the manner in which they may access the decision, including obtaining the copy of the authorisation.

5.3 COMMENCEMENT OF THE ACTIVITY(S)

- 5.3.1 The authorised activities shall not commence within twenty (20) days from the date that the notification of the decision of this authorisation was sent to all I&APs, pending potential lodgement of appeal(s).
- 5.3.2 Where an appeal is lodged against the decision by any party, this authorisation or any provision or condition thereof will be suspended in accordance with section 43(7) of the National Environmental Management Act, 1998; and as such you may not commence with any activity, until a decision on the appeal(s) is taken.
- 5.3.3 The authorised activities must commence within a period of three (3) years from the date of issue of this authorisation. If commencement of the authorised activities does not occur within the said period, the authorisation lapses, unless an extension is granted in terms of regulation 30 of the EIA Regulations, 2014. If the authorisation lapses and the holder intends undertaking the authorised activity(s), a new authorisation in terms of the EIA Regulations, 2014 must be obtained.

5.4 MANAGEMENT, MONITORING AND AUDITING OF OPERATIONS INCLUDING REPORTING REQUIREMENTS

- 5.4.1 The Environmental Management Programme (EMPr) submitted with the Environmental Impact Assessment Report (EIAR) is hereby approved. It is hence mandatory for the holder to implement all the recommendations and management measures stipulated in the EMPr throughout the undertaking of the proposed activities.
- 5.4.2 Any non-compliance with the EMPr constitutes non-compliance with this authorisation, and any non-compliance with this authorisation may result in its suspension and may render the holder guilty of an offence in terms of section 49A of the NEMA and may, if convicted, be liable for penalty as contemplated in terms of section 49B (1).
- 5.4.3 Should there be changes in the operation and management of the authorised activities, the EMPr must be amended to accommodate those changes and be submitted to the competent authority for approval before implementation commences.
- 5.4.4 The holder of this authorisation must undertake the necessary measures, to ensure that operator(s), contractor(s), subcontractor(s), employee(s) and any person(s) acting on behalf of the holder, has full awareness of the recommendations of the EMPr before commencing with any authorised activity.
- 5.4.5 The EMPr must be included in all contractual documentation entered thereto between the holder and contractor(s).
- 5.4.6 A copy of the EMPr must always be kept on site.
- 5.4.7 The holder must, before the commencement of the authorised activity, appoint an independent and experienced Environmental Control Officer (ECO) who will ensure that the conditions of this authorisation and recommendations of the EMPr are implemented and adhered to.
- 5.4.8 The holder of this authorisation must submit monthly environmental monitoring reports and an environmental audit report in terms of regulation 34 of the EIA Regulations annually during operations.

5.5 SPECIFIC CONDITIONS

- 5.5.1 The holder or appointed ECO must, within thirty (30) days before the commencement of the Cluster 2 Gas Production Projection activities, distribute notifications to all I&APs including the Agency informing them of the operational plans. The said notifications must include amongst other things, commencement and anticipated completion dates, details of contractor(s) and

subcontractor (s), sketch plan showing the operational area and a procedure to lodge complaints and report any environmental and safety matters arising from the operations.

- 5.5.2 The final positions of the new wells must remain within the identified 600m well transects and will be guided by the sensitivities identified by the specialist assessments as well as concerns raised by landowners so that environmentally sensitive areas, including areas of historical/cultural/heritage significance are avoided.
- 5.5.3 The final locations of the compressor stations, as described in the EIR are approved. Should the location of compressor station CS3 need to be moved, the proposed alternative locations for such are also approved.
- 5.5.4 Drilling fluids and muds must be strictly water-based and environmentally friendly. In this regard, the holder is required to submit Material Safety Data Sheets for drilling fluids to the Petroleum Agency SA at least 60 days prior to commencement of drilling operations.
- 5.5.5 The holder must obtain land use and access agreements and submit copies of such to the Agency at least 30 days prior to the commencement of the proposed activities. Additionally, the holder must consult on an on-going basis with affected surface landowners and keep them informed of the project development.
- 5.5.6 The holder must develop a grievance mechanism and claims procedure and share the contents thereof with affected landowners before authorized activities commence. A copy of the grievance mechanism and claims procedure must be submitted to the Petroleum Agency SA at least 30 days prior to the commencement of authorized activities.
- 5.5.7 A competent Environmental Control Officer (ECO) must oversee the construction activities and associated concurrent rehabilitation measures.
- 5.5.8 Mitigation and management measures presented in the geohydrological specialist assessment must be incorporated into the existing groundwater management plan and implemented during operations.
- 5.5.9 All groundwater flow pathways which are in direct connection with surface topography such as decommissioned Cluster 2 gas production boreholes as well as historical mining exploration boreholes which Tetra4 converts into production wells, should be sealed off and rehabilitated according to best practice guidelines.
- 5.5.10 The holder must develop a chance find procedure to be implemented if palaeontological heritage is uncovered during surface clearing and excavations. It is noted that the Adelaide Subgroup (Beaufort Group, Karoo Supergroup) has a very high palaeontological sensitivity.
- 5.5.11 All recommended mitigation measures included in the EIAR and EMPr dated 10 February 2023 are deemed to be conditions of this authorisation and must therefore be adhered to.

6. GENERAL

A copy of this authorisation and the EMPr must be kept on site and be made available to all contractor(s) and subcontractor(s) to ensure appropriate implementation of the mitigation measures.

7. DISCLAIMER

The Department shall not be responsible for any damages or losses suffered by the holder in an instance where the operation is temporarily or permanently stopped for reasons of non-compliance with the conditions as set out herein or any other subsequent document or legal action emanating from this decision.

8. RECOMMENDATION

In view of the above, and having taken into consideration environmental management principles as set out in section 2 of the NEMA, and information presented in the environmental authorisation application and EIAR report, and subject to compliance with conditions of this authorisation, this Department is satisfied that the proposed activities will not be in conflict with the objectives of the Integrated Environmental Management set out in Chapter 5 of the NEMA and will not result to any detrimental risks to the environment and public. **The authorisation is accordingly granted.**



MR JACOB MBELE

DIRECTOR-GENERAL

DATE OF THE EA: 13/7/2023

APPENDIX 1: REASONS FOR DECISION

1. Information Considered in Making the Decision

All the information presented to the Department was considered in making this decision. The said information includes amongst others:

- 1.1 The provisions of Chapter 5 of the NEMA which relates to the Integrated Environmental Management and section 2 NEMA principles; the EIA Regulations, 2014 and other relevant NEMA regulations and guidelines.
- 1.2 Authorisation application dated 22 July 2022.
- 1.3 Final scoping report submitted, evaluated and accepted in accordance with regulations 21 and 22 and appendix 2 of the EIA Regulations.
- 1.4 The information contained in the final EIAR and EMPr, compiled by an independent Environmental Assessment Practitioner (EAP) registered with the Environmental Assessment Practitioner Association of South Africa (EAPASA) from Environmental Impact Management Services (EIMS), submitted to the Department on 10 February 2023.
- 1.5 The information contained in the following specialist reports received by the Department on 10 February 2023:
 - 1.5.1 Air Quality Impact Assessment Report prepared by Airshed Planning Professionals.
 - 1.5.2 Aquatic Baseline and Risk Assessment prepared by the Biodiversity Company.
 - 1.5.3 Climate Change Assessment Report prepared by Airshed Planning Professionals.
 - 1.5.4 Economic Impact Assessment prepared by S4G Consulting.
 - 1.5.5 Hydrogeological Baseline Investigation and Groundwater Impact Assessment prepared by Gradient Groundwater Consulting.
 - 1.5.6 Heritage Impact Assessment prepared by PGS Heritage.
 - 1.5.7 Hydrological Assessment prepared by SMEC South Africa.
 - 1.5.8 Environmental Noise Impact Assessment prepared by Airshed Planning Professionals.
 - 1.5.9 Social Impact Assessment prepared by Equispectives Research & Consulting Services.
 - 1.5.10 Soil Pedology Assessment prepared by the Biodiversity Company.

- 1.5.11 Terrestrial Ecology Assessment prepared by the Biodiversity Company.
- 1.5.12 Landscape and Visual Impact Assessment prepared by Environmental Planning and Design.
- 1.5.13 Wetland Baseline and Impact Assessment prepared by the Biodiversity Company.

1.6 The results of the public participation process submitted with the EIAR, which highlighted issues, concerns, and comments raised by various I&APs and responses by the EAP.

2. Submission and Consideration the EIAR and EMPr

2.1 Regulation 23(1) (a) and (b) of the EIA Regulations requires the applicant to submit within 106 days of the acceptance of the scoping report to the competent authority -

- (a) An environmental impact assessment report (EIAR) inclusive of any specialist reports and an EMPr, which must be subjected to a public participation process of at least thirty (30) days and which reflects the incorporation of comments received, including any comments of the competent authority; or
- (b) A notification in writing that the reports and an EMPr, will be submitted within 156 days of receipt of the application by the competent authority, as significant changes have been made or significant new information was added to the EIAR or EMPr, which changes or information was not contained in the reports consulted on during the initial public participation process contemplated in sub-regulation (1) (a), and that the revised EIAR or EMPr will be subjected to another public participation process of at least thirty (30) days.

2.2 The EIAR and the EMPr, inclusive of the specialist studies, were submitted to the Agency within the prescribed submission date i.e., 10 February 2023.

3. Key Findings

Careful consideration of information submitted to the Department, thus resulted in the following conclusions:

- 3.1 All fundamental and procedural requirements prescribed in the applicable legislation is satisfied.

- 3.2 Most of the potential impacts associated with the planned operations will be of low significance before and after mitigation. Potential impacts on soil contamination and degradation, employment expectations and groundwater contamination will be of medium significance before mitigation and low significance after mitigation.
- 3.3 The identification and assessment of potential impacts of the activity, including cumulative impacts, was adequately undertaken, and the proposed mitigation and management measures are aligned with potential impacts.
- 3.4 The motivation for the need and desirability of the proposed bulk sampling operations is in line with the requirements of the EIA Regulations, 2014 and it addressed key issues in the Need and Desirability Guideline.
- 3.5 Project Alternatives: The site/location, activity, design/layout, technology, operational aspects, and no-go alternatives were considered during the EIA phase. The nature of the proposed operations limits consideration of some of the alternatives, however three (3) alternatives, namely location, layout and no-go alternatives were considered preferred alternatives. As far as the no-go alternative, restrictions on sensitive areas were suggested and this offers a balanced approach of ensuring that environment is protected while development continues.
- 3.6 The Public Participation Process (PPP) complied with chapter 6 of the EIA Regulations, 2014 and related guidelines. The following is to be noted:
- 3.6.1 The PPP commenced on 20 May 2022 with an initial notification and call to register for a minimum period of 30 days.
- 3.6.2 The notification was undertaken in English, Afrikaans and Sesotho through registered letters, faxes and emails; advertisements describing the proposed project and EIA process were published in the local newspaper with circulation in the vicinity of the study area. The initial advertisements were placed on 19 May 2022 with a government gazette published on 1 July 2022.
- 3.6.3 Site notices in English, Afrikaans and Sesotho were placed at 78 locations within and around the application area from 16 May 2022 to 19 May 2022.
- 3.6.4 A3 posters in English, Afrikaans and Sesotho were placed at local public gathering places in Welkom, Theunissen and Virginia and were in English, Afrikaans and Sesotho.
- 3.6.5 The scoping report was made available for public review for a period of at least 30 days. During the Scoping Report public review period open days and meetings were held with I&AP's between 23 August 2022 and 25 August 2022

3.6.6 Open days, meetings and distribution of reports for comments provided an opportunity to address comments and issues raised by I&APs.

4. Conclusion

In view of the above and having taken into consideration environmental management principles as set out in section 2 of NEMA, this Department is satisfied that the proposed activities will not conflict with the objectives of the Integrated Environmental Management set out in Chapter 5 of the National Environmental Management Act, 1998 and will not result to any detrimental risks to the environment and public. This environmental authorisation is accordingly granted.



MS SINAZO MNYAKA

EAP REG NO.: 2022/5486

DATE: 26-06-2023



MR JACOB MBHELE

DIRECTOR-GENERAL

DATE OF THE EA: 13/7/2023