

BASIC ASSESSMENT DRAFT REPORT



destea

department of
economic, small business development,
tourism and environmental affairs
FREE STATE PROVINCE

(For official use only)

File Reference Number:

EMB/51/15/15

Application Number:

Date Received:

Basic assessment report in terms of the Environmental Impact Assessment Regulations, 2014, promulgated in terms of the National Environmental Management Act, 1998 (Act No. 107 of 1998), as amended.

Kindly note that:

1. This **basic assessment report** is a standard report that may be required by a competent authority in terms of the EIA Regulations, 2014 and is meant to streamline applications. Please make sure that it is the report used by the particular competent authority for the activity that is being applied for.
2. This report format is current as of **08 December 2014**. It is the responsibility of the applicant to ascertain whether subsequent versions of the form have been published or produced by the competent authority
3. The report must be typed within the spaces provided in the form. The size of the spaces provided is not necessarily indicative of the amount of information to be provided. The report is in the form of a table that can extend itself as each space is filled with typing.
4. Where applicable **tick** the boxes that are applicable in the report.
5. An incomplete report may be returned to the applicant for revision.
6. The use of "not applicable" in the report must be done with circumspection because if it is used in respect of material information that is required by the competent authority for assessing the application, it may result in the rejection of the application as provided for in the regulations.
7. This report must be handed in at offices of the relevant competent authority as determined by each authority.
8. No faxed or e-mailed reports will be accepted.
9. The signature of the EAP on the report must be an original signature.
10. The report must be compiled by an independent environmental assessment practitioner.
11. Unless protected by law, all information in the report will become public information on receipt by the competent authority. Any interested and affected party should be provided with the information contained in this report on request, during any stage of the application process.
12. A competent authority may require that for specified types of activities in defined situations only parts of this report need to be completed.

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"JWALE KE NAKO YA KOTULO, RE A KUBELE TSA"

13. Should a specialist report or report on a specialised process be submitted at any stage for any part of this application, the terms of reference for such report must also be submitted.
14. Two (2) colour hard copies and one (1) electronic copy of the report must be submitted to the competent authority.
15. Shape files (.shp) for maps must be included in the electronic copy of the report submitted to the competent authority.

DRAFT

SECTION A: ACTIVITY INFORMATION

Has a specialist been consulted to assist with the completion of this section?

YES NO

If YES, please complete the form entitled "Details of specialist and declaration of interest" for the specialist appointed and attach in Appendix I.

1. PROJECT DESCRIPTION

a) Describe the project associated with the listed activities applied for

Upgrade of chemical storage facilities Senmin international (Pty) Ltd Sasolburg

b) Provide a detailed description of the listed activities associated with the project as applied for

Listed activity as described in GN 983,984 and 985	Description of project activity
Example: <i>GN 983 Item xx xx): The construction of a bridge 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.</i>	<i>A bridge measuring 5 m in height and 10m in length, no wider than 8 meters will be built over the Orange river</i>
GN 982 Listing notice number 51: The expansion of facilities for the storage, or storage and handling of dangerous goods, where the capacity of such storage facilities will be expanded by more than 80m ³ .	Upgrade of chemical storage facilities occupying area of approximately 700m ² .

2. FEASIBLE AND REASONABLE ALTERNATIVES

"**alternatives**", in relation to a proposed activity, means different means of meeting the general purpose and requirements of the activity, which may include alternatives to—

- (a) the property on which or location where it is proposed to undertake the activity;
- (b) the type of activity to be undertaken;
- (c) the design or layout of the activity;
- (d) the technology to be used in the activity;
- (e) the operational aspects of the activity; and
- (f) the option of not implementing the activity.

Describe alternatives that are considered in this application as required by Appendix 1 (3)(h) of GN 982, Regulation 2014. Alternatives should include a consideration of all possible means by which the purpose and need of the proposed activity (NOT PROJECT) could be accomplished in the specific

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instance taking account of the interest of the applicant in the activity. The no-go alternative must in all cases be included in the assessment phase as the baseline against which the impacts of the other alternatives are assessed.

The determination of whether site or activity (including different processes, etc.) or both is appropriate needs to be informed by the specific circumstances of the activity and its environment. After receipt of this report the, competent authority may also request the applicant to assess additional alternatives that could possibly accomplish the purpose and need of the proposed activity if it is clear that realistic alternatives have not been considered to a reasonable extent.

The identification of alternatives should be in line with the Integrated Environmental Assessment Guideline Series 11, published by the DEA in 2004. Should the alternatives include different locations and lay-outs, the co-ordinates of the different alternatives must be provided. The co-ordinates should be in degrees, minutes and seconds. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

a) Site alternatives

Chemical / Material	Alternative 1 (preferred alternative)		
	Description	Lat (DDMMSS)	Long (DDMMSS)
CS₂	New CS₂ storage tank (+1x 450m³) situated in close proximity to the existing production and storage site.	26°49'11.29"S	27°51'25.24"E
Caustic	Caustic storage (+2x300m³) situated on the main production site where the products that use caustic are located.	26°49'15.24"S	27°51'24.42"E
Amine	Amine storage (+2x Isotainers i.e. 44T) situated on the main production site where the products that use N-butyl amine are located. This was considered to be the <u>central point</u> of user production facilities.	26°49'18.04"S	27°51'21.85"E
Chemical / Material	Alternative 2		
	Description:		
CS₂ Caustic Amine	As the company's facilities and activities are <u>all</u> located on this site and that the three raw materials are already used (CS₂ is made on site) and stored on this site extension of the facilities on this site is the most practical.	Lat (DDMMSS) N/A	Long (DDMMSS) N/A
Chemical / Material	Alternative 3		
	As for Alternative 2	Lat (DDMMSS) N/A	Long (DDMMSS) N/A

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In the case of linear activities:

Alternative:

Alternative S1 (preferred)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Latitude (S):

Longitude (E):

Alternative S2 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

Alternative S3 (if any)

- Starting point of the activity
- Middle/Additional point of the activity
- End point of the activity

For route alternatives that are longer than 500m, please provide an addendum with co-ordinates taken every 250 meters along the route for each alternative alignment.

In the case of an area being under application, please provide the co-ordinates of the corners of the site as indicated on the lay-out map provided in Appendix A of this form.

b) Lay-out alternatives

Chemical / Material	Alternative 1 (preferred alternative)		
	Description:	Lat (DDMMSS)	Long (DDMMSS)
CS2	New CS2 storage tank situated on NE side of the existing two tanks. All 3 will be interconnected with existing piping and water safety blanket system.	26°49'11.29"S	27°51'25.24"E
Caustic	Caustic storage is to be situated within the main multi-product production area.	26°49'15.24"S	27°51'24.42"E
Amine	Amine storage facility intend to use an existing bunded area close to the production facilities using the raw material.	26°49'18.04"S	27°51'21.85"E

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Chemical / Material	Alternative 2		
	Description: As the three raw materials are associated with specific existing production and storage facilities the actual site selection is based on options in close association with these production facilities.	Lat (DDMMSS)	Long (DDMMSS)
CS2	Only minor alignment positions are practical.	N/A	N/A
Caustic	Local alignment of the position of the tanks on site or rotating the alignment are possible but the chosen position (narrow vertical) is the most practical alternative. Other alternate positions are being left for future expansions.	N/A	N/A
Amine	An alternative location for the two amine isotainer tanks elsewhere in another position would require more construction of support facilities i.e. bunding etc.	N/A	N/A
Chemical / Material	Alternative 3		
	Description	Lat (DDMMSS)	Long (DDMMSS)
CS2	Not considered		
Caustic	Not considered		
Amine	Not considered		

c) Technology alternatives

Chemical / Material	Alternative 1 (preferred alternative)		
CS2	CS2 storage facility utilizing a copy of the existing 2 storage tanks (See sketch) - this is the current best accepted technology includes a “water blanket” cover over the material for safety reasons		
Caustic	The proposed caustic storage facility utilizes delivered liquid caustic. Note that this concentration of caustic requires heat (power, steam or condensate) tracing to maintain it in a liquid form.		
Amine	Amine storage facility utilizes an existing banded area to hold the proposed new 2 isotainers. Scrubber system included		
Chemical / Material	Alternative 2		
CS2	CS2 storage facility – Use of a normal standard storage tank instead of using the existing two tanks profile and characteristics – not seen as having adequate integrity for the nature of the material.		

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Caustic	Caustic storage facility – utilize 1x double size of each the single planned tanks (i.e. 600m³) or different shaped tanks. Limited by space and layout issues
Amine	Amine storage facility - continue utilizing the drum system or alternate tank design (i.e. Not an Isotainer design)
Chemical / Material	Alternative 3
CS2	Not considered
Caustic	Not considered
Amine	Not considered

d) Other alternatives – Design (of storage) concept
(e.g. scheduling, demand, input, scale and design alternatives)

Chemical / Material	Alternative 1 (preferred alternative)	Current status	Design concept
CS2	Storage facility upgrade	2x450m ³	To increase storage by constructing a new tank as a copy of the existing two 450m ³ tank size (i.e. have 3x450m ³ identical tanks)
Caustic	Storage facility	2x25m ³	To increase from 2x25m ³ small tanks to additional 2x300m ³
Amine	Storage Facility	40T in drums	~44 T in 2x Isotainers type tanks (i.e. bullet shaped supported within its own metal structure.
Chemical / Material	Alternative 2	Current status	Design concept
CS2	Storage facility upgrade	2x450m ³	Redesign and have an independent and free standing 3 rd system inclusive of the water safety blanket & controls
Caustic	Storage facility	2x25m ³	An alternative design concept could be to dissolve solid caustic on site, as required. Would require solid caustic storage, handling & mixing equipment.
Amine	Storage facility	40T in drums	Conventional fixed tanks
Chemical / Material	Alternative 3	Current status	Design concept
CS2	Not considered		
Caustic	Not considered		
Amine	Not considered		

e) No-go alternative

Chemical / Material	Consequence
CS2	Potential for stock-out (no product available)

Caustic	Potential for stock-out (no product available) and economic quantity savings
Amine	Potential for stock-out (no product available) and continued safety risk from drum handling

Paragraphs 3 – 13 below should be completed for each alternative.

3. PHYSICAL SIZE OF THE ACTIVITY

a) Indicate the physical size of the preferred activity/technology as well as alternative activities/technologies (footprints):

CS2		Size of the activity:
Alternative A1 ¹	Preferred activity alternative	260m²
Alternative A2 (if any)	As for Alternative 1	Greater than 260m²
Alternative A3 (if any)		m ²

Caustic		Size of the activity:
Alternative A1 ²	Preferred activity alternative	360m²
Alternative A2 (if any)	As for Alternative 1	360m²
Alternative A3 (if any)		m ²

Amine:		Size of the activity:
Alternative A1	Preferred activity alternative	43.2m²
Alternative A2 (if any)	As for Alternative 1	m ²
Alternative A3 (if any)		m ²

or, for linear activities:

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Length of the activity:

	m
	m
	m

¹ "Alternative A.." refer to activity, process, technology or other alternatives.

² "Alternative A.." refer to activity, process, technology or other alternatives.

b) Indicate the size of the alternative sites or servitudes (within which the above footprints will occur):

Alternative:

Alternative A1 (preferred activity alternative)

Alternative A2 (if any)

Alternative A3 (if any)

Size of the site/servitude:

	m ²
	m ²
	m ²

4. SITE ACCESS

Does ready access to the site exist?

If NO, what is the distance over which a new access road will be built

YES	NO
	m

Describe the type of access road planned:

Existing access road

Include the position of the access road on the site plan and required map, as well as an indication of the road in relation to the site.

5. LOCALITY MAP

An A3 locality map must be attached to the back of this document, as Appendix A. The scale of the locality map must be relevant to the size of the development (at least 1:50 000. For linear activities of more than 25 kilometres, a smaller scale e.g. 1:250 000 can be used. The scale must be indicated on the map.). The map must indicate the following:

- an accurate indication of the project site position as well as the positions of the alternative sites, if any;
- indication of all the alternatives identified;
- closest town(s);
- road access from all major roads in the area;
- road names or numbers of all major roads as well as the roads that provide access to the site(s);
- all roads within a 1km radius of the site or alternative sites; and
- a north arrow;
- a legend; and
- locality GPS co-ordinates (Indicate the position of the activity using the latitude and longitude of the centre point of the site for each alternative site. The co-ordinates should be in degrees and decimal minutes. The minutes should have at least three decimals to ensure adequate accuracy. The projection that must be used in all cases is the WGS84 spheroid in a national or local projection.

6. LAYOUT

A detailed site or route plan(s) must be prepared for each alternative site or alternative activity. It must be attached as Appendix A to this document.

The site or route plans must indicate the following:

- the property boundaries and numbers of all the properties within 50 metres of the site;
- the current land use as well as the land use zoning of the site;
- the current land use as well as the land use zoning each of the properties adjoining the site or sites;
- the exact position of each listed activity applied for (including alternatives);
- servitude(s) indicating the purpose of the servitude;
- a legend; and
- a north arrow.

7. SENSITIVITY MAP

The layout/route plan as indicated above must be overlain with a sensitivity map that indicates all the sensitive areas associated with the site, including, but not limited to:

- watercourses;
- the 1:100 year flood line (where available or where it is required by DWS);
- ridges;
- cultural and historical features;
- areas with indigenous vegetation (even if it is degraded or infested with alien species); and
- Critical biodiversity areas.

The sensitivity map must also cover areas within 100m of the site and must be attached in Appendix A.

8. SITE PHOTOGRAPHS

Colour photographs from the centre of the site must be taken in at least the eight major compass directions with a description of each photograph. Photographs must be attached under Appendix B to this report. It must be supplemented with additional photographs of relevant features on the site, if applicable.

9. FACILITY ILLUSTRATION

A detailed illustration of the activity must be provided at a scale of at least 1:200 as Appendix C for activities that include structures. The illustrations must be to scale and must represent a realistic image of the planned activity. The illustration must give a representative view of the activity.

10. ACTIVITY MOTIVATION

Motivate and explain the need and desirability of the activity (including demand for the activity):

1. Is the activity permitted in terms of the property's existing land use rights?	YES	NO	Please explain
N/A			
2. Will the activity be in line with the following?			
(a) Provincial Spatial Development Framework (PSDF)	YES	NO	Please explain
The upgrade aligns with the PSDF pillar 1 Driver 3, which support the expanding and diversify manufacturing opportunities.			
(b) Urban edge / Edge of Built environment for the area	YES	NO	Please explain
Within existing industrial area			
(c) Integrated Development Plan (IDP) and Spatial Development Framework (SDF) of the Local Municipality (e.g. would the approval of this application compromise the integrity of the existing approved and credible municipal IDP and SDF?).	YES	NO	Please explain
Part of PSDF			
(d) Approved Structure Plan of the Municipality	YES	NO	Please explain
Part of PSDF			
(e) An Environmental Management Framework (EMF) adopted by the Department (e.g. Would the approval of this application compromise the integrity of the existing environmental management priorities for the area and if so, can it be justified in terms of sustainability considerations?)	YES	NO	Please explain
Part of PSDF			
(f) Any other Plans (e.g. Guide Plan)	YES	NO	Please explain
Not applicable			
3. Is the land use (associated with the activity being applied for) considered within the timeframe intended by the existing approved SDF agreed to by the relevant environmental authority (i.e. is the proposed development in line with the projects and programmes identified as priorities within the credible IDP)?	YES	NO	Please explain

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4. Does the community/area need the activity and the associated land use concerned (is it a societal priority)? (This refers to the strategic as well as local level (e.g. development is a national priority, but within a specific local context it could be inappropriate.)	YES	NO	Please explain
It will increase the economic development of the area			
5. Are the necessary services with adequate capacity currently available (at the time of application), or must additional capacity be created to cater for the development? (Confirmation by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
Proposed current demand and water demands are proportionally small compared to current usage – no issues are perceived. Current use of 3MW in total. New pumps etc. will use 67kW No further facilities are required			
6. Is this development provided for in the infrastructure planning of the municipality, and if not what will the implication be on the infrastructure planning of the municipality (priority and placement of services and opportunity costs)? (Comment by the relevant Municipality in this regard must be attached to the final Basic Assessment Report as Appendix I.)	YES	NO	Please explain
The increase on storage capacity will only have limited effect on infrastructure as there is no significant increase in production expected i.e. no significant increase in infrastructure demand.			
7. Is this project part of a national programme to address an issue of national concern or importance?	YES	NO	Please explain
Manufacture of the chemicals for the critical mining industry			
8. Do location factors favour this land use (associated with the activity applied for) at this place? (This relates to the contextualisation of the proposed land use on this site within its broader context.)	YES	NO	Please explain
Existing facilities within an existing chemical industries area			
9. Is the development the best practicable environmental option for this land/site?	YES	NO	Please explain
Yes, area is already a chemical manufacturing area			
10. Will the benefits of the proposed land use/development outweigh the negative impacts of it?	YES	NO	Please explain
Minimal negative effects			

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11. Will the proposed land use/development set a precedent for similar activities in the area (local municipality)?	YES	NO	Please explain
Not significant to existing chemical production industries			
12. Will any person's rights be negatively affected by the proposed activity/ies?	YES	NO	Please explain
Existing site – no rights affected			
13. Will the proposed activity/ies compromise the “urban edge” as defined by the local municipality?	YES	NO	Please explain
Within existing industrialised area			
14. Will the proposed activity/ies contribute to any of the 17 Strategic Integrated Projects (SIPS)?	YES	NO	Please explain
This project does not relate to any of the Strategic Integrated Projects			
15. What will the benefits be to society in general and to the local communities?			Please explain
The project is not expected to bring about any negative changes to the environment, but will increase the buffer stocks that Senmin will rely on during maintenance or shutdowns and enhance economic development of the area.			
16. Any other need and desirability considerations related to the proposed activity?			Please explain
No material change in infrastructure			
17. How does the project fit into the National Development Plan for 2030?			Please explain
Chapter 5 of the NDP 2030 ensuring environmental sustainability and an equitable transition to a low-carbon economy. The project will also fit to the vision of NDP 2030 by not changing the state of environment or bringing negative impacts on the environment.			
18. Please describe how the general objectives of Integrated Environmental Management as set out in section 23 of NEMA have been taken into account.			
Draft EMP			
19. Please describe how the principles of environmental management as set out in section 2 of NEMA have been taken into account.			
By following the principles, procedures and requirements of NEMA's Environmental Impact Assessment Regulations the development will consider people & their needs first but will do so in a socially, environmentally & economic manner by minimizing the disturbance to the biological vectors, minimizing pollution, wastes, emissions. These risks will be professionally assessed and results will be part of communicating to interested and affected parties and appropriate government departments.			

11. APPLICABLE LEGISLATION, POLICIES AND/OR GUIDELINES

List all legislation, policies and/or guidelines of any sphere of government that are applicable to the application as contemplated in the EIA regulations, if applicable:

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Title of legislation, policy or guideline	Applicability to the project	Administering authority	Date
National Environmental Management Act	NEMA Environmental Impact Assessment Regulation 2014	Department of Environmental Affairs	8th Dec 2014
National Environmental Management: Air Quality Act	Existing Air emissions license	Fezile Dabi District Municipality	31st March 2014

12. WASTE, EFFLUENT, EMISSION AND NOISE MANAGEMENT

a) Solid waste management

Will the activity produce solid construction waste during the construction/initiation phase?

YES	NO
Nil m ³	

If YES, what estimated quantity will be produced per month?

How will the construction solid waste be disposed of (describe)?

Minor cut and fill for the CS₂ Tank and for Caustic tanks. Unlikely to be more than builder's rubble but any waste requiring external disposal will be categorised according to the class and disposed to the appropriate site.

Where will the construction solid waste be disposed of (describe)?

Mainly it will be checked for any contamination and if approved will be used in cut and fill options. Any waste which will be disposed offsite will be to a registered landfill.

Will the activity produce solid waste during its operational phase?

YES	NO
Nil m ³	
Nil m ³	

If YES, what estimated quantity will be produced per month?

Used packaging (No permit required)

How will the solid waste be disposed of (describe)?

Solid packaging waste will have been reduced due to the conversion to Bulk handling. As such disposal issues are not expected. Any contaminated waste will utilize the services of Wastetech or similar organisation for disposal to an appropriately registered waste facility.

If the solid waste will be disposed of into a municipal waste stream, indicate which registered landfill site will be used.

N/A Only domestic waste will utilize municipal services.

Where will the solid waste be disposed of if it does not feed into a municipal waste stream (describe)?

N/A

If the solid waste (construction or operational phases) will not be disposed of in a registered landfill site or be taken up in a municipal waste stream, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Can any part of the solid waste be classified as hazardous in terms of the NEM:WA?

YES	NO
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 If YES, inform the competent authority and request a change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

Is the activity that is being applied for a solid waste handling or treatment facility?

YES	NO
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 If YES, then the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA. An application for a waste permit in terms of the NEM:WA must also be submitted with this application.

b) Liquid effluent

Will the activity produce effluent, other than normal sewage, that will be disposed of in a municipal sewage system?

YES	NO
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 If YES, what estimated quantity will be produced per month?

N/A or minor m ³	
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 Will the activity produce any effluent that will be treated and/or disposed of on site?

YES	NO
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The only expected effluent will be abnormal spillage (no process effluent). Currently there is an existing site spillage treatment facility shared with Karbochem. The designs are such that any spillage in the new areas will be directed to this facility via a dedicated pump system (see photograph – Appendix J).

Spillage in the plant is first contained in a bund and then washed away to a sump (2mx3m - continuous flow process). There is a flow meter that measures all the effluent going through the sump before it gets pumped to the Karbochem treatment plant (joint venture between Senmin and Karbochem). Treated water from Karbochem is pumped back for use by some parts of the plant that do not use Rand water. The water that cannot be treated up to the required standard for plant usage is sent to Sasol treatment plant. Senmin pays Sasol to treat that water. There is no effluent or treated water from Karbochem treatment plant that is discharged to the environment.

If YES, the applicant should consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

Will the activity produce effluent that will be treated and/or disposed of at another facility?

YES	NO
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If YES, provide the particulars of the facility:

Facility name:	Senmin/Karbochem Effluent Treatment facility		
Contact person:	Willhem Havenga		
Postal address:	PO Box 19, Sasolburg		
Postal code:	1947		
Telephone:	016 970 1711	Cell:	083 229 0262
E-mail:	Willhem.havenga@senmin.co.za	Fax:	016 970 1744

Describe the measures that will be taken to ensure the optimal reuse or recycling of waste water, if any:

1. None of the proposed storage facilities will generate any effluent as part of the chemical processing.

CS₂: By the nature of this chemical it is stored under a "Water blanket" which remains with in a limit of a prescribed thickness but will from time to time need to be topped up or reduced. The excess water is circulated to a 1000m³ - 1500m³ storage sump (for all three tanks) where it remains until it is re-used in the "blanket". There is no net water loss from this system.

Caustic Lye: Will be stored in two tanks in a single bund.

N Butyl amine: This product will be stored in two permanent Isotainers mounted within a bund area

2. Effluent arising as part of operational spillages

CS₂ spillages would either be pumped back into the tank or neutralised before disposal via existing site effluent treatment methods.

Caustic lye spillages arising from the tank or the loading & unloading areas will be collected via a spillage collection area and analysed in a bund and drainage sump. The contents of the drainage sump will be pumped to the site waste water treatment pond from where it is used as second grade water in various processes or pumped to the Sasol effluent treatment plant..

N Butyl amine spillages must be quickly neutralised because of offensive smell. Any spillages arising from the tank or the loading & unloading areas will be collected and analysed in a bund and drainage sump. The contents of the drainage sump will be pumped to the site waste water treatment pond from where, after treatment it is used as second grade water in various processes or pumped to the Sasol effluent treatment plant.

3. General spillage / effluent management system.

There is a dirty storm water catchment system which gathers any run offs from kerbed areas into a monitored storm water sump. Here the contents are analysed. If the effluent meets the required standards it is released, if not it is pumped to the Sasol effluent treatment plant.

4. Ancillary solid waste

Note that due to the conversion to bulk handling systems, the operational packaging waste will largely be reduced.

c) Emissions into the atmosphere

Will the activity release emissions into the atmosphere other than exhaust emissions and dust associated with construction phase activities?

YES	NO
YES	NO

If YES, is it controlled by any legislation of any sphere of government?

If YES, the applicant must consult with the competent authority to determine whether it is necessary to change to an application for scoping and EIA.

If NO, describe the emissions in terms of type and concentration:

CS₂ emissions would be hazardous from a health and safety point of view. Hence considerable effort is made to ensure the containment of the CS₂ under the water blanket.

N Butyl amine is a volatile compound with a vapour density of heavier than air and an extremely low flash point and flammability window, with a strong amine smell. As such any spillage would produce a serious health and safety risk, which would be the primary concern. The system is designed with an absorber scrubber to remove any process emissions. The volume used are only 40T/mth from two independent tanks.

d) Waste permit

Will any aspect of the activity produce waste that will require a waste permit in terms of the NEM:WA?

YES	NO
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If YES, please submit evidence that an application for a waste permit has been submitted to the competent authority

e) Generation of noise

Will the activity generate noise?

YES	NO
YES	NO

If YES, is it controlled by any legislation of any sphere of government?

Describe the noise in terms of type and level:

N,A – storage with no new increase in existing background noise

13. WATER USE

Please indicate the source(s) of water that will be used for the activity by ticking the appropriate box(es):

Municipal	Water board	Groundwater	River, stream, dam or lake	Other	The activity will not use water
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If water is to be extracted from groundwater, river, stream, dam, lake or any other natural feature, please indicate the volume that will be extracted per month:

N/A	litres
YES	NO

Does the activity require a water use authorisation (general authorisation or water

use license) from the Department of Water Affairs?

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If YES, please provide proof that the application has been submitted to the Department of Water Affairs.

14. ENERGY EFFICIENCY

Describe the design measures, if any, which have been taken to ensure that the activity is energy efficient:

N/A – static storage. Only new pumps but not seen as significant energy usage.

Describe how alternative energy sources have been taken into account or been built into the design of the activity, if any:

N/A – static storage. Where possible existing pumps have been connected into the new duty.

SECTION B: SITE/AREA/PROPERTY DESCRIPTION

Important notes:

- For linear activities (pipelines, etc) as well as activities that cover very large sites, it may be necessary to complete this section for each part of the site that has a significantly different environment. In such cases please complete copies of Section B and indicate the area, which is covered by each copy No. on the Site Plan.

Section B Copy No. (e.g. A):

- Paragraphs 1 - 6 below must be completed for each alternative.

- Has a specialist been consulted to assist with the completion of this section?

YES	NO
-----	----

If YES, please complete the form entitled "Details of specialist and declaration of interest" for each specialist thus appointed and attach it in Appendix I. All specialist reports must be contained in Appendix D.

Property description/physical address:

Province	Free State
District Municipality	Fezile Dabi
Local Municipality	Metsimaholo Local Municipality
Ward Number(s)	Ward 7
Farm name and number	8012
Portion number	23
SG Code	F 025 0003 00008012 00023

Where a large number of properties are involved (e.g. linear activities), please attach a full list to this application including the same information as indicated above.

Current land-use zoning as per local municipality IDP/records:

Industrial

In instances where there is more than one current land-use zoning, please attach a list of current land use zonings that also indicate which portions each use pertains to, to this application.

Is a change of land-use or a consent use application required?

YES	NO
-----	----

1. GRADIENT OF THE SITE

Indicate the general gradient of the site.

Alternative S1:

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	-------------	-------------	-------------	--------------	-------------	------------------

Alternative S2 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	-------------	-------------	-------------	--------------	-------------	------------------

Alternative S3 (if any):

Flat	1:50 – 1:20	1:20 – 1:15	1:15 – 1:10	1:10 – 1:7,5	1:7,5 – 1:5	Steeper than 1:5
------	-------------	-------------	-------------	--------------	-------------	------------------

2. LOCATION IN LANDSCAPE

Indicate the landform(s) that best describes the site:

2.1 Ridgeline		2.4 Closed valley		2.7 Undulating plain / low hills	
2.2 Plateau		2.5 Open valley		2.8 Dune	
2.3. Side slope of hill/mountain		2.6 Plain	X	2.9 Seafront	
2.10 At sea					

3. GROUNDWATER, SOIL AND GEOLOGICAL STABILITY OF THE SITE

Is the site(s) located on any of the following?

Shallow water table (less than 1.5m deep)

Note: The water table is largely 1.2 – 1.7 m deep and up to 3.5m in places but with a sandy layer above.

Dolomite, sinkhole or doline areas (as per Geotech survey Appendix 2 Trial hole profiles by Geopractica 2008)

Seasonally wet soils (often close to water bodies)

Unstable rocky slopes or steep slopes with loose soil

Dispersive soils (soils that dissolve in water)

Soils with high clay content (clay fraction more than 40%)

Alternative S1:

YES	NO
YES	NO
YES	NO
YES	NO
YES	NO
YES	NO

Alternative S2 (if any):

YES	NO
YES	NO
YES	NO
YES	NO
YES	NO
YES	NO

Alternative S3 (if any):

YES	NO
YES	NO
YES	NO
YES	NO
YES	NO
YES	NO

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Any other unstable soil or geological feature
An area sensitive to erosion

YES	NO
YES	NO

YES	NO
YES	NO

YES	NO
YES	NO

If you are unsure about any of the above or if you are concerned that any of the above aspects may be an issue of concern in the application, an appropriate specialist should be appointed to assist in the completion of this section. Information in respect of the above will often be available as part of the project information or at the planning sections of local authorities. Where it exists, the 1:50 000 scale Regional Geotechnical Maps prepared by the Council for Geo Science may also be consulted.

4. GROUNDCOVER

Indicate the types of groundcover present on the site. The location of all identified rare or endangered species or other elements should be accurately indicated on the site plan(s).

Natural veld - good condition ^E	Natural veld with scattered aliens ^E	Natural veld with heavy alien infestation ^E	Veld dominated by alien species ^E	Gardens
Sport field	Cultivated land	Paved surface	Building or other structure	Bare soil

The new plant will mainly be sited on existing hard surfaced operational areas. As such only limited ground cover is disturbed. Elsewhere on the site the grass areas are maintained in a cut state to minimize fire risk. From Municipal IDP the area is designated as GM8 Soweto Highveld grassland and GH6 Central Free State grassland. In terms of Muncina L et al The Vegetation of South Africa Lesotho & Swaziland

If any of the boxes marked with an “E” is ticked, please consult an appropriate specialist to assist in the completion of this section if the environmental assessment practitioner doesn’t have the necessary expertise. **See C.B. Williams qualifications – Appendix H**

5. SURFACE WATER

Indicate the surface water present on and or adjacent to the site and alternative sites?

Perennial River	YES	NO	UNSURE
Non-Perennial River	YES	NO	UNSURE
Permanent Wetland	YES	NO	UNSURE
Seasonal Wetland	YES	NO	UNSURE
Artificial Wetland	YES	NO	UNSURE
Estuarine / Lagoonal wetland	YES	NO	UNSURE

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If any of the boxes marked YES or UNSURE is ticked, please provide a description of the relevant watercourse.

N/A

6. LAND USE CHARACTER OF SURROUNDING AREA

Indicate land uses and/or prominent features that currently occur within a 500m radius of the site and give description of how this influences the application or may be impacted upon by the application:

Natural area	Dam or reservoir	Polo fields
Low density residential	Hospital/medical centre	Filling station ^H
Medium density residential	School	Landfill or waste treatment site
High density residential	Tertiary education facility	Plantation
Informal residential ^A	Church	Agriculture
Retail commercial & warehousing	Old age home	River, stream or wetland
Light industrial	Sewage treatment plant ^A	Nature conservation area
Medium industrial ^{AN}	Train station or shunting yard ^N	Mountain, koppie or ridge
Heavy industrial ^{AN} X	Railway line ^N	Museum
Power station	Major road (4 lanes or more) ^N	Historical building
Office/consulting room	Airport ^N	Protected Area
Military or police base/station/compound	Harbour	Graveyard
Spoil heap or slimes dam ^A	Sport facilities	Archaeological site
Quarry, sand or borrow pit	Golf course	Other land uses (describe)

If any of the boxes marked with an “^N” are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

No impact from or on surrounding industries is expected. Note that the whole area is based on chemical manufacturing and hence there is an inherent potential hazardous gas release scenario but the individual industries and the chemical production community minimize this risk and are as a whole prepared for any incident.
The existing Karbochem (including Senmin) Sasolburg Emergency Procedure Rev 22 (13/11/2012) will be updated to a separate Senmin emergency procedure following on the restructuring of the original site during 2015 once the restructuring operations have been completed.

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If any of the boxes marked with an "An" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

No increase in the potential impact expected on or from the industrial area

If any of the boxes marked with an "H" are ticked, how will this impact / be impacted upon by the proposed activity? Specify and explain:

No change

Does the proposed site (including any alternative sites) fall within any of the following:

Critical Biodiversity Area (as per provincial conservation plan)	YES	NO
Core area of a protected area?	YES	NO
Buffer area of a protected area?	YES	NO
Planned expansion area of an existing protected area?	YES	NO
Existing offset area associated with a previous Environmental Authorisation?	YES	NO
Buffer area of the SKA?	YES	NO/ N/A

If the answer to any of these questions was YES, a map indicating the affected area must be included in Appendix A.

7. CULTURAL/HISTORICAL FEATURES

Are there any signs of culturally or historically significant elements, as defined in section 2 of the National Heritage Resources Act, 1999, (Act No. 25 of 1999), including Archaeological or paleontological sites, on or close (within 20m) to the site? If YES, explain:

YES	NO
Uncertain	

N/A

If uncertain, conduct a specialist investigation by a recognised specialist in the field (archaeology or palaeontology) to establish whether there is such a feature(s) present on or close to the site. Briefly explain the findings of the specialist:

N/A

Will any building or structure older than 60 years be affected in any way?
Is it necessary to apply for a permit in terms of the National Heritage Resources Act, 1999 (Act 25 of 1999)?

YES	NO
YES	NO

If YES, please provide proof that this permit application has been submitted to SAHRA or the relevant provincial authority.

8. SOCIO-ECONOMIC CHARACTER

a) Local Municipality

Please provide details on the socio-economic character of the local municipality in which the proposed site(s) are situated.

Level of unemployment:

No changes to the current status of the unemployment.

Note; That in terms of 2011 census poll unemployment rate is 15.32%

Economic profile of local municipality:

Metsimaholo Local Municipality is an administrative area in the Fezile Dabi District of the Free State province. Metsimaholo Local Municipality (MLM) was established in 2000 through the amalgamation of the then Sasolburg, Deneysville and the Oranje Transitional Local Councils. The dominance of Sasolburg – owing to its population density and its proximity to the economically - active Johannesburg city – provides the area with the opportunity of being declared the head office of the entire Metsimaholo Municipality. Sasolburg is located in the heart of worldly renowned coalfields. This modern and predominantly industrial town is further located in close proximity (20km) to the nationally well - known industrial areas of Vereeniging / Vanderbijlpark. Apart from the internationally known SASOL “oil from coal refinery”, a vast number of by-products including olefins, waxes, alcohols, tar products, inorganic chemicals, rubber, gases, plastics, fertilizers, etc are manufactured in the area.

From the 2011 census 69.3% of the population is in the age category of 15 – 64 with an official unemployment rate 32%. The 2013/14 unaudited municipal income is ~ R 655M with expenditures of R 581M

Level of education:

Education levels for persons over 20 years old (Statistics SA Census 2011)

- **No Schooling** **5.7%**
- **Matric** **29.8%**
- **Higher Education** **12.4%**

b) Socio-economic value of the activity

What is the expected capital value of the activity on completion?

R 30M

What is the expected yearly income that will be generated by or as a result of the activity?

R 6M

Will the activity contribute to service infrastructure?

YES

NO

Is the activity a public amenity?

YES

NO

How many new employment opportunities will be created in the development and construction phase of the activity/ies?

~30 – 40 persons

What is the expected value of the employment opportunities during the development and construction phase?	R 3 500 000
What percentage of this will accrue to previously disadvantaged individuals?	100 %
How many permanent new employment opportunities will be created during the operational phase of the activity?	~ 3
What is the expected current value of the employment opportunities during the first 10 years?	R 6M
What percentage of this will accrue to previously disadvantaged individuals?	100%

9. BIODIVERSITY

Please note: The Department may request specialist input/studies depending on the nature of the biodiversity occurring on the site and potential impact(s) of the proposed activity/ies. To assist with the identification of the biodiversity occurring on site and the ecosystem status consult <http://bgis.sanbi.org> or BGIShelp@sanbi.org. Information is also available on compact disc (cd) from the Biodiversity-GIS Unit, Ph (021) 799 8698. This information may be updated from time to time and it is the applicant/EAP's responsibility to ensure that the latest version is used. A map of the relevant biodiversity information (including an indication of the habitat conditions as per (b) below) and must be provided as an overlay map to the property/site plan as Appendix D to this report.

- a) **Indicate the applicable biodiversity planning categories of all areas on site and indicate the reason(s) provided in the biodiversity plan for the selection of the specific area as part of the specific category)**

Systematic Biodiversity Planning Category				If CBA or ESA, indicate the reason(s) for its selection in biodiversity plan
Critical Biodiversity Area (CBA)	Ecological Support Area (ESA)	Other Natural Area (ONA)	No Natural Area Remaining (NNR)	

- b) **Indicate and describe the habitat condition on site**

Habitat Condition	Percentage of habitat condition class (adding up to 100%)	Description and additional Comments and Observations (including additional insight into condition, e.g. poor land management practises, presence of quarries, grazing, harvesting regimes etc).
Natural	%	
Near Natural (includes areas with low to moderate level of alien invasive plants)	20%	A percentage of the total Senmin site still remains under mown grass (Fire protection management). At the time of the site visit it was late autumn and winter and clarification of the Grassland vegetation type was not possible.

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Degraded (includes areas heavily invaded by alien plants)	%	
Transformed (includes cultivation, dams, urban, plantation, roads, etc)	80%	The bulk of the site has been transformed into industrial chemical plants including the areas where the proposed storage developments will take place with the exception of a relatively small open area where the new CS ₂ tank will be installed adjacent to the existing CS ₂ systems.

c) Complete the table to indicate:

- (i) the type of vegetation, including its ecosystem status, present on the site; and
- (ii) whether an aquatic ecosystem is present on site.

Terrestrial Ecosystems		Aquatic Ecosystems								
Ecosystem threat status as per the National Environmental Management: Biodiversity Act (Act No. 10 of 2004)	Critical	Wetland (including rivers, depressions, channelled and unchannelled wetlands, flats, seeps pans, and artificial wetlands)			Estuary		Coastline			
	Endangered									
	Vulnerable									
	Least Threatened	YES	NO	UNSURE	YES	NO	YES	NO		

d) Please provide a description of the vegetation type and/or aquatic ecosystem present on site, including any important biodiversity features/information identified on site (e.g. threatened species and special habitats)

The Municipal IDP indicates that the area would most probably be Gm8 Soweto High Veld grassland or Gh6 Central Free State grassland

SECTION C: PUBLIC PARTICIPATION

1. ADVERTISEMENT AND NOTICE

Publication name	Sasolburg Ster	
Date published	14 April 2015	
Publication name	Vaalweekblad	
Date published	15 April 2015	
Site notice position (New Senmin gate)	Latitude	Longitude
	-26° 49.4140'	27° 50.9193
Date placed	15 April 2015	
Site notice position (Karbochem Gate)	Latitude	Longitude
	-26° 49.5128'	27° 51.4897'
Date placed	15 April 2015	
Other Notice positions – Sasolburg Library	Latitude	Longitude
	-26° 49.0510'	27.49.6218'
Date Placed	15 April 2015	
Other Notice positions – Zamdela Library	Latitude	Longitude
	-26° 50.3345'	27° 50.6948
Date Placed	15 April 2015	
Other Notices positions – Willchem Web site	www.willchem.co.za	
Date Placed	April 2015	

Include proof of the placement of the relevant advertisements and notices in Appendix E1.

2. DETERMINATION OF APPROPRIATE MEASURES

Provide details of the measures taken to include all potential I&APs as required by Regulation 41(2)(e) and 41(6) of GN 982

<i>Regulation 41 (2) (e) states.... using reasonable alternate methods, as agreed to by the competent authority. In those instances where a person is desirous of but unable to participate in the process due to (i) illiteracy, (ii) disability, (iii) any other disadvantage (Regulation statement Included by Willchem for clarity)</i>
<i>Regulation 41 (6) statesWhen complying with this regulation, the person conducting the public participation application process must ensure that –</i>

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- (a) *information containing all relative facts in respect of the application or proposed application is made available to potential interested and affected parties,*
 (b) *participation by potential or registered interested and affected parties is facilitated in such a manner that all potential or registered interested and affected parties are provided with opportunity to comment on the application or proposed application*

(Regulation statement Included by Willchem for clarity)

41 (2) (e)	Disabilities	No indications that this aspect is specifically applicable. Normal notifications – Press (x2), library (x2), site etc. notices
41 (6)	Information integrity & communication	Standard practice

Key stakeholders (other than organs of state) identified in terms of Regulation 41(2)(b) of GN 982

Regulation 41 (2)(b) states ... give written notice...

(i) *occupiers of the site if the proponent is not the owner or person in control of the site where the activity is or is to be undertaken ... N/A*

(ii) *owners, persons in control....* ✓

(iii) *Municipal councillor of the ward ...* ✓

(iv) *Municipality which has jurisdiction* ✓

(v) *Any other party required by the competent authority* N/A

(Regulation statement Included by Willchem for clarity)

Title, Name and Surname	Affiliation/ key stakeholder status	Contact details (tel number or e-mail address)
Mr Thabo Emmanuel Mosia	Municipal councillor - Ward 7	083 480 5005
Senmin International (Pty) Limited	Owner / Operator	On going

Include proof that the key stakeholder received written notification of the proposed activities as Appendix E2. This proof may include any of the following:

- e-mail delivery reports;
- registered mail receipts;
- courier waybills;
- signed acknowledgements of receipt; and/or
- or any other proof as agreed upon by the competent authority.

3. ISSUES RAISED BY INTERESTED AND AFFECTED PARTIES

Summary of main issues raised by I&APs	Summary of response from EAP
Nil	Nil

-	-
---	---

4. COMMENTS AND RESPONSE REPORT

The practitioner must record all comments received from I&APs and respond to each comment before the Draft BAR is submitted. The comments and responses must be captured in a comments and response report as prescribed in the EIA regulations and be attached to the Final BAR as Appendix E3.

5. AUTHORITY PARTICIPATION

Authorities and organs of state identified as key stakeholders:

Authority/Organ of State	Contact person (Title, Name and Surname)	Tel No	Fax No	e-mail	Postal address
Fezile Dabi	Alex Makateng	016 9708835	016 731582	alexm@feziledabi.gov.za	P.O. Box 10 Sasolburg, 1947
Metsimaholo	Ms Thokozile Mathunzi (Maria)	016 738301	0169732191	Thokozile.mathunzi@metsimaholo.gov.za	P.O. Box 60 Sasolburg 1947
-	-	-	-	-	-

Include proof that the **Authorities and Organs of State** received written notification of the proposed activities as **appendix E4**.

In the case of renewable energy projects, Eskom and the SKA Project Office must be included in the list of Organs of State.

6. CONSULTATION WITH OTHER STAKEHOLDERS

Note that, for any activities (linear or other) where deviation from the public participation requirements may be appropriate, the person conducting the public participation process may deviate from the requirements of that sub-regulation to the extent and in the manner as may be agreed to by the competent authority.

Proof of any such agreement must be provided, where applicable. Application for any deviation from the regulations relating to the public participation process must be submitted prior to the commencement of the public participation process.

A list of **registered I&APs** must be included as **appendix E5**.

Copies of any correspondence and minutes of any meetings held must be included in **Appendix E6**.

SECTION D: IMPACT ASSESSMENT

The assessment of impacts must adhere to the minimum requirements in the EIA Regulations, 2014 and should take applicable official guidelines into account. The issues raised by interested and affected parties should also be addressed in the assessment of impacts.

1. IMPACTS THAT MAY RESULT FROM THE PLANNING AND DESIGN, CONSTRUCTION, OPERATIONAL, DECOMMISSIONING AND CLOSURE PHASES AS WELL AS PROPOSED MANAGEMENT OF IDENTIFIED IMPACTS AND PROPOSED MITIGATION MEASURES

Provide a summary and anticipated significance of the potential direct, indirect and cumulative impacts that are likely to occur as a result of the planning and design phase, construction phase, operational phase, decommissioning and closure phase, including impacts relating to the choice of site/activity/technology alternatives as well as the mitigation measures that may eliminate or reduce the potential impacts listed. This impact assessment must be applied to all the identified alternatives to the activities identified in Section A(2) of this report. **See Appendix F**

See Appendix F

Activity	Impact summary	Significance	Proposed mitigation
Alternative 1 (preferred alternative)			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
Alternative 2			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		

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Activity	Impact summary	Significance	Proposed mitigation
	<i>Cumulative impacts:</i>		
Alternative 3			
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
	<i>Direct impacts:</i>		
	<i>Indirect impacts:</i>		
	<i>Cumulative impacts:</i>		
No-go option			
	<i>Direct impacts:</i> <i>Stock-outs</i>		
	<i>Indirect impacts:</i> Reduced output by clients e.g. Mining		
	<i>Cumulative impacts:</i> Ongoing hand to mouth scenarios / bare essentials / precarious supply		

A complete impact assessment in terms of Regulation 19(3) of GN 982 must be included **as Appendix F**.

2. ENVIRONMENTAL IMPACT STATEMENT

Taking the assessment of potential impacts into account, please provide an environmental impact statement that summarises the impact that the proposed activity and its alternatives may have on the environment after the management and mitigation of impacts have been taken into account, with specific reference to types of impact, duration of impacts, likelihood of potential impacts actually occurring and the significance of impacts.

Alternative A (preferred alternative)

As this is an existing chemical production site and the chemicals that will be in the new storage areas are already used on site the impacts will only relate to the increased chemical volume holdings.

The design incorporates the historic experience of the facility and the site already has existing physical, procedural and operating skills to manage the potential impacts.

No significant Environmental impacts are expected.

Alternative B

As indicated in the discussions of the alternatives and variation from the existing design will not change the environmental impact significance. It could however have economic implications.

Alternative C

No-go alternative (compulsory)

The objective of the Chemical storage upgrade is to minimize the risk of stock outs (various causes) and to ensure reliable production of key products, particularly those critical to the local mining industry.

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SECTION E. RECOMMENDATION OF PRACTITIONER

Is the information contained in this report and the documentation attached hereto sufficient to make a decision in respect of the activity applied for (in the view of the environmental assessment practitioner)?

YES	NO
-----	----

If "NO", indicate the aspects that should be assessed further as part of a Scoping and EIA process before a decision can be made (list the aspects that require further assessment).

N/A

If "YES", please list any recommended conditions, including mitigation measures that should be considered for inclusion in any authorisation that may be granted by the competent authority in respect of the application.

In general the environmental risks posed by the chemical storage upgrade are well known to the Senmin Sasolburg operation. Significant changes are only likely to occur as a result of volume increases.

1. By the nature of the chemicals used on this facility a local and community safety risk is of importance (Inherent in the Sasolburg chemical industry). Although well-established emergency systems are in place to control gas emissions existing emergency systems must be upgraded to manage the implications of the change in storage capacity. Note that although such an emergency is of primary risk to people there is also a significant environmental consequence.
2. Due to the proposed increase in storage the capacity of both normal effluent treatment facility and the management of catastrophic failure / release need to be reviewed.
3. There is no impact on solid waste generation or on surface water runoff

Is an EMPr attached?

YES	NO
-----	----

The EMPr must be attached as Appendix G (to follow).

The details of the EAP who compiled the BAR and the expertise of the EAP to perform the Basic Assessment process must be included as **Appendix H**.

If any specialist reports were used during the compilation of this BAR, please attach the declaration of interest for each specialist in **Appendix I**.

Any other information relevant to this application and not previously included must be attached in **Appendix J**.

BASIC ASSESSMENT DRAFT REPORT

NAME OF EAP

SIGNATURE OF EAP

DATE

DRAFT

SECTION F: APPENDIXES

The following appendixes must be attached:

Appendix A: Maps

- A1: Google Overview of the site
- A2: Topographic map
- A3: Sensitivity map
- A4: Neighbouring land owners

Appendix B: Photographs

- B1: CS₂ Panorama
- B2: Caustic Panorama
- B3: N Butyl amine Panorama

Appendix C: Facility illustration(s)

- C1: CS₂ (x1) adjacent to existing tanks
- C2: Caustic lye Storage tank (x2)
- C3: N Butyl amine Isotainers (x2)
- C3.1: Position of scrubber

Appendix D: Specialist reports (including terms of reference)

- D1: Site and grassland
- D1.1:GH6 - Central Free State grassland
- D1.2:GM8 - Soweto Highveld grassland

Appendix E: Public Participation

- E1: Proof of site notice
- E2: Key Stakeholders Written notices
- E3: Proof of Newspaper advertisement & Internet site
- E4: Record of communication with authorities
- E5: List of Registered I&APs
- E6: Copies of minutes of meetings

Appendix F: Impact Assessment

- F1: Matrix of Impact assessments
- F2: Detailed Impact Analysis

Appendix G: Environmental Management Programme (EMPr)

Appendix H: Details of EAP and expertise

“JWALE KE NAKO YA KOTULO, RE A KUBELE TSA”

www.edtea.fs.gov.za

H1: C.B. T. Williams CV

Appendix I: Specialist's declaration of interest
N/A

Appendix J: Additional Information
J1: Liquid effluent pump station