UPDATED ENVIRONMENTAL MANAGEMENT PLAN (UEMP): CONSTRUCTION AND OPERATION OF AN ANIMAL RENDERING AND HIDES PROCESSING PLANT, BRAKWATER-KHOMAS REGION: NAMIBIA

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Abbreviations

TERMS	DEFINITION
BID	Background Information Document
EAP	Environmental Assessment Practitioner
ECC	Environmental Clearance Certificate
ECO	Environmental Control Officer
EIA	Environmental Impact Assessment
ESIA	Environmental and Social Impact Assessment
EMP	Environmental Management Plan
EMR	Environmental Monitoring Report
GHG	Greenhouse Gasses
ISO	International Organization for Standardization
I&APs	Interested and Affected Parties
MET: DEA	Ministry of Environment and Tourism's Directorate of Environmental Affairs
NHC	National Heritage Council
NEMA	Namibia Environmental Management Act
PRP	Pit Rehabilitation Plan
ToR	Terms of Reference
UNFCCC	United Nations Framework Convention on Climate Change

1. Introduction

1.1 Background

The purpose of this document, the Environmental Management Plan (EMP) is to list the actions required to mitigate the environmental and social impacts arising from the operation of the meat rendering plant established in Windhoek by Anpro Hides and Skins. Once approved by the Ministry of Environment, Tourism and Forestry: Directorate of Environmental Affairs, this EMP will guide all activities and aims to promote sound Environmental Management during the lifespan of this plant. The EMP should be taken as a dynamic document which is subject to review and should be updated in response to changes over time. It should be kept onsite and be referred to as and when it's required

Anpro Hides and Skins herein referred to as the "proponent" is a local business operating an Animal rendering plant in Brakwater; Windhoek -Namibia. The proponent plans to maintain the current operations on its operating site in Brakwater and extend them to include the processing of hides and an abattoir, all while maintaining a commitment to environmental responsibility. The processing of animal skins is being proposed because the facility was not using its full potential because the existing activities and equipment were not being used due to a lack of customers.

Thus, in accordance with the requirements of the Environmental Management Act, No. 7 of 2007 Section 40 the companies' environmental clearance certificate granted on 27 April 2020 has come to its lapse period as section 40 of the Act states that:

- (1) An environmental clearance certificate becomes effective and operates from the date endorsed on the certificate.

-(2) An environmental clearance certificate remains effective for a period not exceeding three years, subject to cancellation or suspension under section 42.

In light of the foregoing, the proponent requested that the consultant (Kahorere Engineering Services CC) conduct an environmental audit and create an environmental management plan to be submitted with the application for the renewal of the expired Environmental Clearance Certificate to the MET: DEA. The document provides a thorough understanding of the types of environmental, occupational health and safety, and social (EOHS&S) risks connected to the

currently operational animal rendering plant. It then provides mitigation and prevention strategies to handle environmental risks as well as non-compliance problems involving the venture's operations**. Most of the information was referenced to previous work done for the Client and reviewed to include any changes observed during on-site inspections contacted.**

1.2 Objectives of the EMP

This EMP informs all relevant parties, all authorities, the Contractor, the Environmental Control Officer (ECO) and all other staff employed for the project as to their duties in the fulfilment of the legal requirements for the construction, operation and decommissioning phases of the project with particular reference to the prevention and mitigation of anticipated potential environmental impacts.

The objectives include the following actions:

• Identifying construction activities that might have detrimental impacts on the environment;

• To outline mitigation measures and environmental specifications which are required to be implemented for all phases of the project in order to minimise the extent of environmental impacts, and to manage environmental impacts associated with the proposed project;

• Detail specific actions deemed necessary to assist in mitigating the environmental impact of the project;

• To create management structures that addresses the concerns and complaints of the Interested and Affected Parties with regards to the development;

• To establish a method of monitoring and auditing environmental management practices during all phases of the development;

• Ensure that safety recommendations are complied with;

• Provide an outline of the legal requirements;

• To assign roles and responsibilities to parties involved regarding the implementation of this EMP;

1.2 Project Location

The proposed facility is located about 25 kilometres from the city of Windhoek on the way to Okahandja, on Portion 16 of Portion 13 of the Farm Emmarentia No. 380, Windhoek. The City of Windhoek is directly in charge of managing this area of land. Although the site is managed by the City of Windhoek's Town Planning Scheme, 1995, it is normally and now semi-rural in

nature and is bordered by other small holding establishments, many of which have recently undergone industrial rezones. Specifically, on August 13, 2012, the Environmental Commissioner issued a Clearance Certificate for the rezoning of this area of land from "residential" to "industrial." The proposed development area is roughly 2.6 hectares in size is covered by industrial shells, parking lots, and waste disposal facilities for the projected development. A geographic overview of the project location is shown in the map below (Fig. 1).

Figure 1:: Anpro Hides and Skins Locality: Brakwater-Namibia

1.3 Project Description

1.3.1 Process Flow Design

Anpro hides and skins animal rendering facility involves the following process:

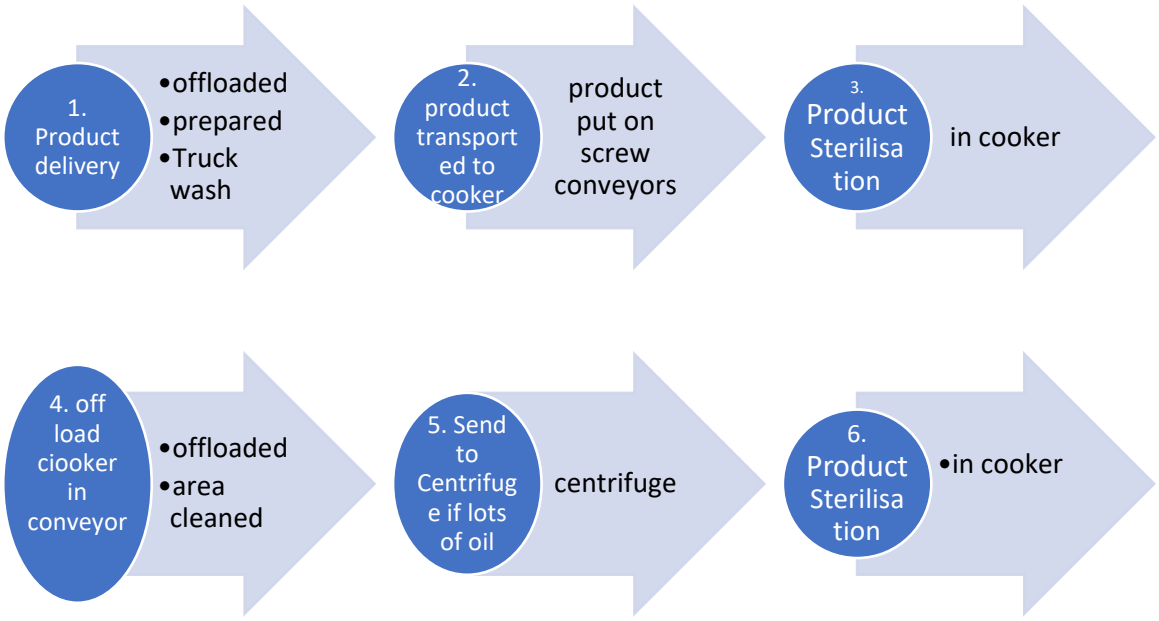

Figure 2: Animal Rendering Process Flow

a) Product Delivery (1)

The raw material arrives in a designated vehicle, which has been constructed in a safe manner to transport raw material from the abattoir or any supplier of the raw material. The content is then tipped onto a conveyer belt, which transfers it to the by-product receiving bin.

b) Dirty yard

After offloading the truck is taken to the wash-bay in the Dirty yard where it is washed with hot and cold water and disinfected.

c) By-product receiving bin

From the by-products receiving bin the raw material could in future be transferred to

the pre-breakerwith a screw conveyer. The receiving bin is open at the top and is provided with a valve at the lowestpoint for effective cleaning and disinfection after the day's work.

d) Bone crusher

A double anvil pre-breaker breaks the material into 20 mm pieces in order to allow effective heat penetration during cooking.

e) Screw conveyers

The mild steal screw conveyer conveys the crushed raw material to the holding bin where it lies for 1to 2 hours as it is being processed (transferred to the cooker).

f) Holding bin

The screw conveyer takes the raw material to the holding bin.

g) Cooker 1

The cooker receives the raw material via the closed screw conveyer. Hydrolyses then takes about 45 minutes. After this the condensate follows that releases into the condenser which takes about 30 minutes. After this cooking takes another 4 hours.

h) Cooker 2

The second cooker is used as a standby cooker.

i) Transfer screw

The hot meal exits the cooker from the front through a door. From here it is transferred to thecentrifuge for fat removal by a transfer screw.

j) Centrifuge

The steam in the centrifuge mantle heats up the meal for a second time and is then turned at a highspeed of 2500 r.p.m. The fat drains out of the meal after 5 minutes and drains from the centrifuge, while running to a sunken fat bin close-by. After 5 minutes of centrifugal pressure on the meal, the lid is opened, and the content is transferred with a transfer screw to the hammer mill.

k) Fat holding bin

The fat bin is relatively large to cope with a breakdown of 48 hours. In other words, it can keep its content for 48 hours should there be a breakdown further down the line such as the fat transfer pump.

l) Fat transfer pump

From the fat bin the liquid fat is pumped to the tallow tank

m) Tallow (liquid oil) hopper

The steam is switched on a day before delivery so that the fat becomes liquid for easy flow from thehopper to the sub-contractor's tanker. The steam in the coil must reach 45 ºC to allow the liquefyingof stalled fat. After release, steam is pumped into the container to clean the container. The outflow from the hopper during cleaning runs through a downward pipe into a movable container, which is placed below it for the purpose of cleaning.

n) Hammer mill

From the centrifuge the meal is transferred to the hammer mill by way of a transfer screw (this facilityis not planned for now but may be an option to take place in the future). At this point the meal is milled into dust, but it retains 12% moisture, which is required by pet food manufacturers.

o) Screen drums

The hammer mill outlet is provided with a screen drum in which the contents fall as it leaves the mill.The screens remove the final particles and solids, which are recycled to the cooker daily. The screen drums can accommodate 500 kg of meal per hour. These drums are also provided with anoutlet valve at the lower bottom so that washing and cleaning can be done once per week with waterand disinfectants. Prescribed bags are filled below the screen drums through a trap door in the samearea.

p) Bone meal packaging

Every day, in the afternoons, all filled bags are cartwheeled to a separate bone meal packaging area. The bags are stacked onto stainless steel racks, which do not encounter the floor. This room is independent and completely closed with lockable doors. This area is washed once per week and disinfected. The sub-contractors load their cargo at this store.

1.3.2 Proposed Skin Processing Facility

The addition of a facility to treat animal skins, or a tannery, is proposed in addition to the current animal rendering factory. Most of the machinery from the animal rendering factory will be used for the proposed animal skin processing, with a few additions as listed below:

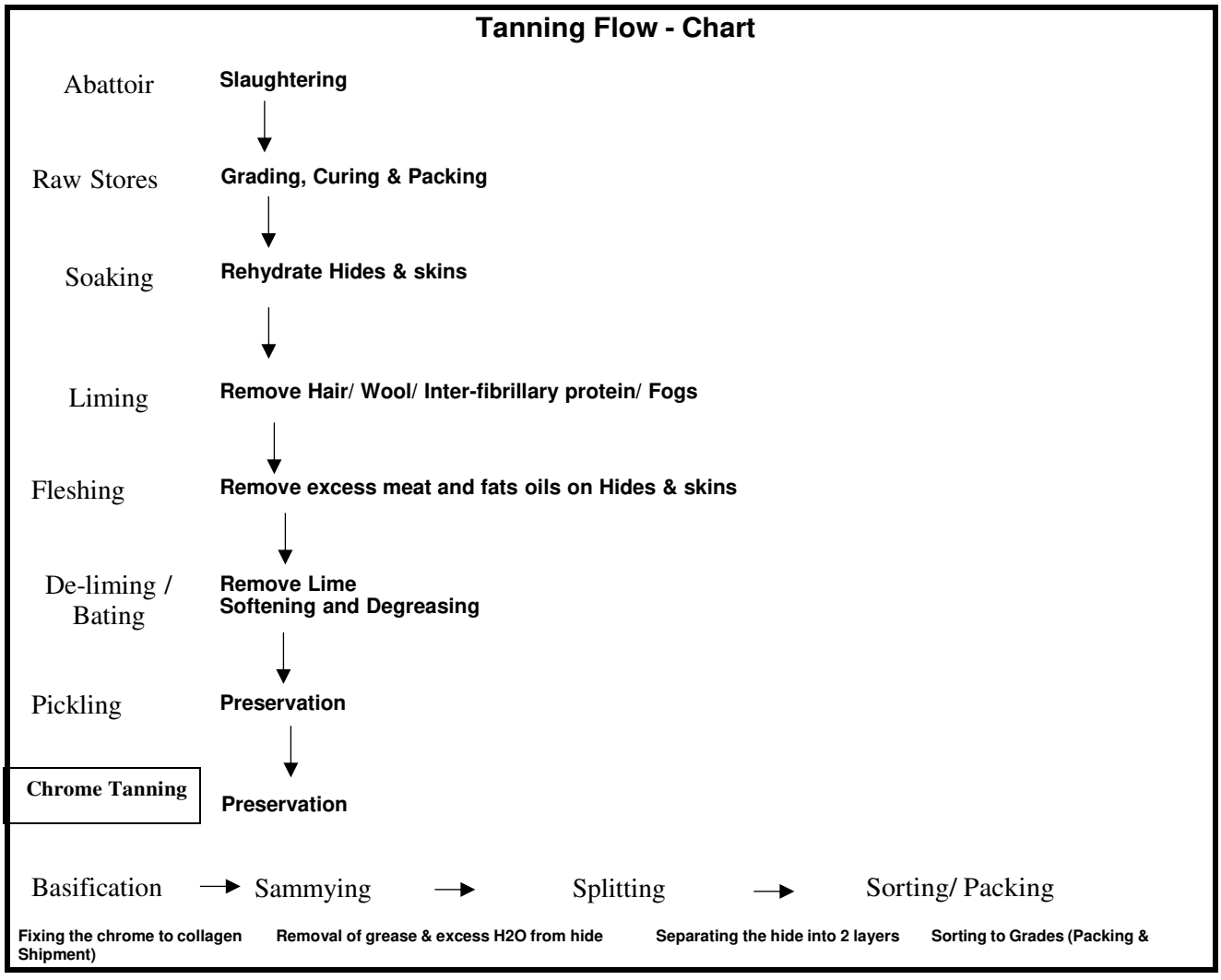

Figure 3: Animal skins Processing

1.3.3 Animal Skin Process Flow

1. **Raw Hide & Skin Stores:** This is the most important part of the tannery as wrong procurement leads to huge loss. Hides & Skins are counted upon arrival, sorted according to grades, salted, and packed for a period till processing time. The raw stores must be a cool place always to avoid hot temperatures leading to high bacterial growth.
2. **Soaking:** This is the first stage of processing of hides & skins. It is a process whereby skins are re-hydrated as they have been de-hydrated by salting or drying. Skins are soaked in paddles or drums and a biocide is added to prevent bacteria growth during processing.
3. **Liming**: Hides & Skins are limed to remove hair, unwanted fats and oils and greases and inter-fibrillary proteins. This is done by addition of lime and sulphides into the drum which causes alkaline swelling and split fibres creating binding sites for other chemicals later.
4. **Fleshing:** When and after skinning at the slaughterhouse, the hide & skin appears to contain excessive meat and fats. The removal of the excessive meat and fat on the hide & skin is done by a fleshing machine. Fleshing can be done after soaking or liming
5. **De-Liming / Degreasing / Bating:** The pH of the collagen is brought down to a lower level so that enzymes may act on it. De-liming is removal of lime out of the skin. Depending on the end use of the leather skins may be treated with enzymes to soften them, a process called bating. Bating enzymes react in certain pH levels and temperatures
6. **Pickling:** The treatment of semi-finished leather and fur products with a solution containing acid and salt. It is a method of preservation, loosens the fine structure of

collagen, separates the microstructure of the derma, and endows the semi-finished product (without swelling) with the acidity needed before chrome tonnage.

7. **Chrome Tanning:** Tanning is the process of treating skins and hides of animals to produce leather. It involves a process which permanently alters the protein structure of skin, making it more durable and less susceptible to decomposition, and also possibly coloring it.

8. **Basification:** Basification is a process that increases the reaction of chrome to fix to the collagen fiber. Uniform basification is achieved by means of a smooth 'titration curve' from the acid pH range of the original tanning liquor to the pH where tanning linkages with the collagen occur.

9. **Sammying:** Is a process whereby the sammying machine absorbs excess moisture & grease from the hide during the wet process in tanneries, either wet blue or wet white. The hides are conveyed on felts through the sammying machine which absorbs the fats and as well the pressure by the rollers. For Good absorption of the grease, the felts need to be always working wet.

10. **Sorting and Packing**

11. **Splitting:** All leather hides & skins must be split because a hide is too thick to upholster or use in any type of manufacturing. The hide & skins goes into a machine where a blade ‘splits’ the hides into two layers.

2. LEGAL REQUIREMENTS

This section presents the treaties, policies and legislations that were reviewed in line with this project. The various compliance requirements are also presented.

2.1. Relevant Treaties, International agreements and Protocols, policies and legislation.

2.1.1. Namibia's Environmental Assessment Policy of 1994.

The policy contains a list of prescribed projects that may have significant negative impacts on the environment. Such projects require authorisation from the Ministry of Environment, Tourism and Forestry (METF) - Directorate of Environmental Assessment (DEA). Construction and operation of an abattoir are listed activities that warrant an EIA. Accordingly, the project requires authorisation from METF: DEA.

2.1.2. Environmental Management Act (2007)

The Namibian Environmental Management Act of (2007) guided the EIA study and made reference to the principles contained in the Act. This is the very Act that binds all the responsible parties against their respective environmental obligations against which the EIA clearance is issued. Failure to comply attracts fines and / or prosecution depending on the severity of the matter. The Proponent should meet environmental conditions upon which the Environmental Clearance Certificate will be issued.

2.1.3. Water Resources Management Act (1956)

Water Act 54 of 1956 and the Water Resources Management Act 24 of 2004, provides the general protection against surface and ground water pollution. It prohibits the pollution of ground and surface water bodies including liability of clean-up costs after closure / abandonment of an activity. It also regulates the drilling of boreholes for groundwater abstraction. The proponent should comply with the requirements of the Ministry of Agriculture, Water & Land Reform (MAWLR).

2.1.4. Hazardous Substances Ordinance 14 of 1974

The hazardous substances ordinance 14 of 1974 controls substances with potential to cause injury or illhealth or death of human beings because of their toxic, corrosive, irritant, strongly sensitizing or flammable nature. Petroleum fuels are covered under this Act. Care should be taken

throughout the product lifecycle right from receiving, storage, product use and disposal. In cases were special storage facilities are required the Proponent should provide as such.

3.1.5. Pollution Control and Waste Management Bill

This bill aims to prevent and regulate the discharge of pollutants to air, water, and land. It further aims to promote the establishment of a system of waste management, and enable Namibia to meet its international obligations. Waste management should be guided by the 3R principle, Reduce, Reuse and Recycle. Only unrecyclable and unusable materials will be disposed of at a designated disposal site.

3.1.6. Atmospheric Pollution Prevention Ordinance 11 of 1976

This regulation sets the principles for the prevention of atmospheric pollution and associated matters arising thereto. Part IV and Part V prevents atmospheric pollution by dust and gaseous emissions respectively.

3.1.7. Labour Act (1992)

The Labour Act governs the employer to employee relationship including issues pertaining to occupational health and safety, remuneration, provision of appropriate protective clothing, grant of leave etc. It is important to refer to the Act and ensure compliance with fair labour practices at all project phases, (Schlichting, 2013).

3. Environmental Management Plan (EMP)

3.1 Overview

In accordance with the project's operational standards, substantial residual effects from the previous chapter are minimized to the greatest extent feasible while considering the size of activities of each microbusiness.

This plan outlines the actions to be taken to lessen or manage the environmental effects of each process activity, and it designates the stakeholder best suited to handle implementation, monitoring, and reporting duties. To ensure and enhance plan implementation, further independent monitoring should be used. Kahorere Engineering Services CC suggests the proposed ECC renewal be granted to the proponent, provided that the complete implementation of this EMP is carried out properly and strictly.

3.2 Environmental Impact Summary

The main environmental consequences and non-conformances related to environmental management are as follows, as determined by the discussion above:

- Environmental Quality (pollution control)
- Waste Management (treatment)
- Health and Safety
- Social responsibility
- Construction Activities

3.3 Content of the Environmental Management Plan

The EMP was created to reduce any remaining effects from Anpro Hides and Skins' animal rendering plant and the intended facility for processing animal skins, in particular to:

- Prevent environmental pollution
- Improve the health and safety of employees

In the subsequent pages, the activity wise detailed EMP is presented, which includes

- description of the agreed measures, responsibilities, and instruments for the environmentalmanagement
- Guidelines for auditing and monitoring the EMP.

Table 1: Fauna and Flora Management Plan

Impacts	Potential Impact	Mitigation Measures	Project Phase	Responsibility
Operation phase				
Vegetation	-Indiscriminate cutting down of trees -Cutting down of protected tree species	• Employees will be educated on protected tree species in the area • Emphasis will be given on preserving trees that are more than 18cm in width on site. • The operation phase of the project will not result in any further vegetation removal.	Operation phase	ECO
Flora	-Driving away of local animals from noise -Habitat destruction -Hunting and setting up traps	• Operations should only be done during the day to minimise noise disturbance to animals • Limit the destruction of mature tree species and seemingly habitat hotspots. • Use existing tracks where possible • Apply speed restrictions (<30km/hr) • Avoid off-road driving	Operation	Site Manager, ECO

Measures already in place:

- Employees received information and warnings about hunting and indiscriminate tree cutting.

Table 2: Environmental Quality Management Plan

Impacts	Potential Impacts	Mitigation measures	Project phase	Responsibility
Operation phase				
Odour generation	-Animal rendering and hides processing may result in foul odour smells.	• Ensuring collection of waste on time • General maintenance of waste ponds	Operation	ECO
Noise pollution	-Truck and machinery operating on site	• Machinery operation and truck movements should only be done during the day between 8:am to 5pm	Operation	Site Manager ECO
Surface water pollution	-Hydrocarbons from stationery vehicles -Workshop oil spillages -Wastewater from ponds	• All stationery vehicles and trucks on site to be provided with drip trays. • Workshop area should be bunded and surfaced with waterproof cement • The wastewater ponds should be regular maintained and lining repaired if any leakages are detected. • Water quality testing of a nearby spring.	Operation	ECO

Soil contaminationand erosion	-Hydrocarbons from stationery vehicles -Workshop oil spillages	• All stationery vehicles and trucks on site to be provided with drip trays. • Workshop area should be bunded and surfaced with waterproof cement • Emergency spillagecontainment kits should be available on site • In areas where the risk of erosion is evident, measures may be necessary to prevent erosion • Minimize the disturbance and removal of topsoil	Operation	ECO

Measures already in place:

To avoid soil and groundwater pollution, industrial shells' floors need to be fixed.

Table 3: Waste Management Plan

Impacts	Potential Impacts	Mitigation Measures	Project Phase	Responsibility
Generation ofwaste	-During the operation phase, litter in the form of papers and plastics is likelyto be produced. -In addition, effluent waste from skin processing is anticipated. -Generated effluent waste is manged by ponds on site, an additional pond will be added if necessary. -It was however, observed that there isa considerable high volume of solid waste from the site as well.	• Strictly, no burning of waste on the site • There are five skip containers on site for general waste, hazardous waste, and animalremnants such as hides, bones, fats, etc. Once the containers are full, rent a drum collects them for disposal.	Operational phase	Site manager, ECO

Measures already in place:

- Regular inspection of the site
- Employees conduct the cleaning works
- Skip Containers
- Environmental Audits
- Waste handling contractor

Table 4: Risk of Occupational Health and Safety

Impacts	Potential Impact	Mitigation Measures	Project Phase	Responsibility
Risk of OHS	-Occupational exposures are normally related to noise effects, Electrocution, Slip and Falls, Occupational dermatitis, and psychological pressure	• Frequent distribution of protective equipment to employees (helmets, gloves, respirators, work suits, goggles, and safety shoes where applicable). • Train workers how to use adequately the equipment • Trainings on occupational health and safety • Safety talks to be done every day before commencement of work • Formulation of a safety health and environment workers committee • Implementation of Behaviour Based Safety System • Regular (once a year) medical check-ups • First Aid kits to be available at the site • There is need to install safety signs on site • Provision of firefighting equipment on site • There is need to install safety signs in relation to risks associated with operations • Safety performance board should also be erected ton ensure that safety records are kept every day.	Operation phase	Site manager, ECO

Measures already in place:

- Personal Protective clothing

Economic Benefits

Table 5: Employment Creation

Impacts	Potential Impact	Enhancement Required	Monitoring	Project Phase	Responsibility
Employment creation	Fifteen employees are permanently working on site.It is also essential to note that other companies work as contractors and subcontractors hencecreating employment.	• When recruiting, gender equality must be ensured • Equity, transparency, to be put into account when hiring and recruiting • Implementation of training programs to train the unskilled workers for them to enhance their performances and to gain more knowledge that they might demonstrate at other levels in future.	Number of locals employed	Operation phase	Anpro Admin

Table 6: Government revenue

Impacts	Potential Impact	Enhancement Required	Monitoring	Project Phase	Responsibility
Payment of taxes	The proponent pays tax to the government which indirectly benefits the whole country.	• The proponent should pay tax as stipulated by the law of Namibia.	Checking tax payment end of year	Operation	Anpro Admin

Heritage and archaeology

Table 7: Heritage

Impacts	Potential Impact	Enhancement Required	Monitoring	Project Phase	Responsibility
Heritage	Disruption of heritage sites	Discovery of unearthed archaeological remains to be uncovered, the following measures (chance find procedure) shall be applied: • inform the Environmental Manager who will get in touch with an archaeologist who will provide advice • Environment and Social Manager / Archaeological Specialist to evaluate the significance of the remains and identify appropriate action, for example, record and remove; relocate or leave in situ (depending on the nature and value of the remains).	Daily inspection	Operation	Project Management

4. Environmental Monitoring and Control

4.1 Overview

The following management strategies must be implemented during operation and decommissioning of the facility's associated infrastructure for animal rendering and skin processing. The environmental management plan (EMP) should be adhered to at all levels during design, planning, construction, operation and decommissioning stages of the project. Given that this facility is in existence and we do not see any reason for possible decommissioning in the near future, this EMP will only cover the operation phase in detail. It is important to note that there are different people responsible for the work during operations. While the people doing the work must follow the instructions laid in this EMP, it remains the responsibility of the Proponent to ensure that the EMP is made available to the people doing the work, that they understand the contents and comply.

4.2 Waste Management

- Skip containers will be used for short-term storage of rubbish from plant upgrades and regular operational activities.
- Domestic waste will be isolated from hazardous waste, which will be stored in designated bins.
- The subcontractor chosen to remove the hazardous waste will provide a safe disposal certificate that complies with the EMA Act.
- In the best interest of Anpro Hides and Skins, the contractor shall take reasonable steps to control access over land, the integrity of fences, the closing of gates, the control of veld fires, littering, dust control, noise abatement, harassing of animals, sedimentation and contamination of surface and ground water, damage to landscape and vegetation, and all other such environmental matters.

4.3 Complaint Register

- The proponent is required to create and maintain a record that tracks all grievances made by I&APs regarding the construction and operating activities for periodic evaluation by the Project Management Team.
- The register must be kept current and contain information on the complainant's name, address, and phone number as well as the type of complaint made and whether any

corrective action was taken.

4.4 Rehabilitation Plan

- When upgrading a facility, the contractor must, as much as is practicable, return the construction footprint to the ground's natural contours and permit regular surface drainage.
- The contractor must modify the land, plant vegetation, and take other necessary steps to absorb and spread stormwater to prevent concentrated runoff along or near to the construction footprint.
- The contractor must build diversion banks across the construction footprint in areas where erosion management is necessary, such as gullies, watercourses, significant depressions, and steep slopes, to redirect water flow away from the building area and into the natural drainage courses.

4.5 Operational Management Plan

- The operation must be monitored frequently to make sure that rehabilitation efforts have been successful and to see if any unstable cut and fill areas need to be stabilized, particularly after rainstorms.
- A routine cleanup operation will be carried out to guarantee that litter, oil spills, etc. are picked up promptly and the pollution of the watercourse is kept to a minimum.
- If determined required, the installation of an earth berm or the planting of absorbent vegetation along the route will be done to reduce noise pollution caused by the operation of the facility that is impacting sensitive receptors.
- To reduce erosion, which can result in the silting of aquatic systems, storm water management structures must be regularly cleaned and maintained. To ensure that the storm water infrastructure is operating properly, regular inspections will be needed.
- To make sure there is no groundwater and surface water pollution, wastewater will be frequently monitored for quality.
- Workplace health and safety programs are essential, thus Anpro Hides and Skins will select a safety officer to implement and oversee the program.

4.6 External Auditing

The key to a functional EMP is appropriate monitoring and assessment to verify its proper operation and to quickly identify and execute remedial measures. In the event that disparities

are found, the issue needs to be looked into and fixed. For auditing purposes, all findings from environmental monitoring must be documented.

An assigned consultant will also conduct audits during operation and starting with the issuance of the Environmental Clearance Certificate, a report on environmental performance will be compiled every three months. Reports to MET: DEA on project operations during the construction and operational stages will come after this. It is crucial to note that a clearance certificate is only good for three years before needing to be renewed together with a performance report for the prior years on environmental law compliance with current regulations and this EMP.

Table 8: Environmental Monitoring Schedule

IMPACT	RECEPTORS	TYPE OF MONITORING	FREQUENCY
Ground water contamination	Underground aquifers	Groundwater monitoring sampling for pollution from borehole water and a nearby spring	Quarterly
Fire and explosion	Environment	Regular inspections should be carried out to inspect and test firefighting equipment.	Quarterly
		Fire drills	Twice a year
O.H.S	Employees	Site inspection Conducting Hazard and RiskIdentification Safety procedures evaluation. Health and safety incident monitoring	Weekly
Noise	Employees	Observation of on-site noise levels by the Site manager and reporting to the ECO Quarterly.	Weekly
Air quality (Dust andOdour)	Employees	Regular visual inspection A complaint register regarding emissions/smell should be kept and acted on if it becomes a regular complaint.	Weekly

Generation of waste	Land	Site inspection on housekeeping	Weekly
Cumulative impact	Environment	Regular inspection	Weekly

5. Conclusion and Recommendations

5.1 Conclusion

If properly executed, the aforementioned Environmental Management Plan for the continuing operation of the current animal rendering factory and the installation of a skin processing facility helps to minimize negative environmental effects. Action must be made right once to stop the effects of impacts from escalating where they occur. During operation and perhaps decommissioning, the Environmental Management Plan should be consulted on-site. Any necessary repair efforts should be paid for by the parties accountable for violating the EMP.

5.2 Recommendations

The primary suggestions listed below may be considered for implementation once the projected skin-processing and animal-rendering processes go into full swing.

- Anpro Hides and Skins must appoint ECO to monitor the site quarterly/year
- Anpro Hides and Skins should appoint SHE consultant to train employees on HSE and come up with a SHE policy for the company.
- Environmental rehabilitation and securing obsolete pits are recommended.
- To ensure that the operations won't pose environmental concerns to surrounding farm owners, the site should be kept generally clean and subject to a tight environmental monitoring program.

6. References

Government of Namibia. 2008, Government Gazzette of the Republic of Namibia. Government notice No.1: Regulations for Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA)-Windhoek

Government of Namibia.2008, Government Gazette of the Republic of Namibia. Government notice No.1: Regulations for Strategic Environmental Assessment (SEA) and Environmental Impact Assessment (EIA)-Windhoek

IFC.2007. Stakeholder Engagement: A good practice handbook for companies doing business in emerging markets. IFC, Washington D.C

IFC.2007. Stakeholder Engagement: A good practice handbook for companies doing business in emerging markets. IFC, Washington D.C

Mendelsohn,J., el Obeid, S.2003.A digest of information on key aspects of Namibia's geography and sustainable development prospects. Research and Information Services of Namibia

MET (Ministry of Environment and Tourism). 2012. Environmental Management Act no. 7 of 2007. Windhoek: Directorate of Environmental Affairs, Ministry of Environment and Tourism

NHUD,2013. Environmental Impact Report Animal Rendering/Reduction Plant on Portion 16 of Portion 13 of the Farm Emmarentia No. 380, Windhoek. MET, Windhoek