UPDATED ENVIRONMENTAL MANAGEMENT PLAN (EMP) REPORT FOR:

Amendment of ECC (01884) for the Provision of Underwater Hull Cleaning Services, Walvis Bay, Erongo Region, Namibia

Document Type: Updated Environmental Management Plan

Document Version: 2

ECC Application Number or ECC No.: 01884

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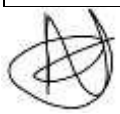

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EAP Signature Proponent

12 October 2024

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UPDATED ENVIRONMENTAL MANAGEMENT PLAN REPORT FOR THE PROPOSED UNDERWATER HULL CLEANING, WALVIS BAY, ERONGO REGION

This report is prepared

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For

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1. BACKGROUND AND INTRODUCTION

1.1. Background

Walvis Bay Diving & Salvage cc is a Namibian registered company specializing in providing diving and salvage services. The proponent would like to add to its services, hull cleaning by providing this service to ships and vessels within the port of Walvis Bay.

Since approval of ECC (ECC-01884) on 17 January 2022, the proponent was unable to operate due to financial and other challenges. ECC-01884 expires on 17 January 2025 and the proponent would like to renew it. This EMP is updated in order to support and effect renewal of ECC-01884.

The proponent appointed Envirodu Consulting & Training Solutions cc (or the "Consultants") to ensure environmental compliance. In addition to revision of this EMP, the Consultants has compiled a Compliance Assessment Report (CAR) which is attached as Appendix I.

1.2. Introduction

The EMP (Environmental Management Plan) is a commitment by the proponent to incorporate environmental protection in their daily underwater hull cleaning operations. More importantly, the proponent further undertakes to integrate this EMP into the company environmental policy statement.

The EMP provides a clear and concise baseline environmental monitoring plan detailing which environmental indicators will be monitored and the SOPs (standard operation procedures) to be used for each environmental indicators. Environmental indicators will be used to describe state of the environment including seawater quality and sediment before and after the underwater hull cleaning operations. Environmental indicators are divided into 2 categories viz. physical/chemical and biological indicators.

Within each category are parameters which will be measured using various equipment and instruments.

2. OBJECTIVES

The purpose of this EMP is to describe how the proponent intends to implement the EMP by providing a clear and concise baseline environmental monitoring plan detailing which environmental indicators will be monitored and the SOPs to be used for each indicator.

Specific objectives are to:

- List documentations (e.g. permits, method statements, SOPs, etc) required for performing underwater hull cleaning activities;
- Identify baseline environmental indicators and parametres to be measured;
- Prescribe technology and equipment required;
- Establish the MC (Environmental Management Committee) and identify human capacity requirements;
- Translate EMP and baseline mitigation plan into a company environmental policy, and
- Describe in details mitigation actions required to minimize or reduce negative impacts.

3. ENVIRONMENTAL CERTIFICATIONS AND DOCUMENTATIONS

Environmental certifications will include permits and certificates needed to authorize performance of underwater hull cleaning as required by other GRN entities including Ministry of Agriculture, Water and Land Reform, Ministry of Fisheries and Marine Resources and others. Documentations will be communicable materials that will be required to describe, explain or instruct and communicate information regarding the underwater hull cleaning operational and monitoring procedures.

Before commencement of the proposed underwater hull cleaning operation, the following environmental certifications and documentations shall be required:

Table 1: permits and authorization.

Certification and documentation	GRN entity/competent authority	Contact person/details
Environmental clearance certificate	Ministry of Environmental, Forestry and Tourism	Environmental Commissioner
Written permission to operate	Namibia Ports Authority	Harbor master
Domestic and industrial wastewater and effluent discharge permits	Ministry of Agriculture, Water and Land Reform	Department of Water Affairs
Pre-cleaning inspection report	Namibia Ports Authority	Harbor master
Method statements	Namibia Ports Authority	Harbor master
Cleaning exit operation plan	Namibia Ports Authority	Harbor master
Baseline environmental monitoring plan	Namibia Ports Authority	Harbor master
SOPs (Standard operation procedures)	Namibia Ports Authority	Harbor master

3.1. Conditions of ECC

Contents and conditions of ECC are provided in the ECC-01884. In summary, these conditions are:

- Regular environmental monitoring and evaluations on environmental performance should be conducted at the site and targets for improvements established and monitored throughout the construction and operation phases.

- This ECC is valid for a period of 3 (three) years, from the date of issue unless withdrawn by this office.

- On expiry of the ECC, the proponent is required to submit within a period not exceeding one month, and in the prescribed form and manner an application to the Office of the Environmental Commissioner of the renewal of the ECC.

- All other applicable and required permits or authorizations from relevant competent authorities mut be obtained prior to commencement of the proposed activities and must be adhered to.

- Granting of ECC constitute an approval for the implementation of mitigation measures proposed in your approved EMP, hence making the EMP a legally binding document.

- The proponent shall appoint a suitably qualified Environmental Control Officer, or site agent where appropriate, before commencement of listed activities to ensure compliance with the conditions of approval and mitigation stipulated in the approved EMP.

- The proponent is required from date of commencing implementation of the project activities, to compile and submit environmental monitoring reports (on the project progress and the management profile) on bi-annual basis to office of the EC.

- Any changes to, or deviations from the scope of project activities approved in respect to the assessment received and reviewed for the purpose of or granting this ECC number 01884 are subject to an amendment application and approval by the EC prior to adopting/implementing any such changes/deviations.

3.2. Other permits or licences

Conditions and contents in other permits such as the written permission to operate as well as domestic and industrial wastewater and effluent discharge permits will be determined by the competent authorizing entities. Details for other documentations required are proposed to be as described below.

Table 2: documentations.

Documentations	**Proposed contents**

Pre-cleaning inspection report	• Give composition of hull paint and check for presence of harmful organotoxins (e.g. TBTs (Tributyltin) and TPhTs). • Date of last painting and cleaning. • The last 3 ports visited/entered. • SOPs for MV inspection.
Method statement for underwater cleaning	• Information about the port of Walvis Bay. • Map of ecological sensitive areas in the port. • Land use planning of the Walvis Bay port including storm waters, river drainage, sewage discharge, etc. • SOPs for operation of the ROV-cart equipment.
Cleaning operation exit plan	• Housekeeping and removal of equipment from wharfs, quays, jetties and other work places in the port. • Provide details on type of drums to store/transport debris. • Waste management and water discharge procedures.
Baseline environmental monitoring plan	• Physical/chemical and biological indicators (environmental indicators). • SOPs for environmental indicators.
SOPs (Standard operation procedures)	• Detailed procedures will be provided in the SOPs for each documentation.

4. BASELINE ENVIRONMENTAL MONITORING INDICATORS

4.1. Physical/chemical environmental indicators

Some or all of the following parametres will be measured to indicate water quality:

- Free Carbon Dioxide;
- Water temperatures;
- Dissolved oxygen (DO);
- Turbidity;
- Total suspended and dissolved solids;
- Nutrients (nitrates, nitrites, total phosphate, free chlorine, etc);
- pH, conductivity/salinity metre;
- Pathogens (bacteria, virus, etc), and
- Trace metals.

Water samples for the above parametres should be collected before, during and after the underwater hull cleaning operation at each site where cleaning operations were performed. Samples could either be measured on site or transported to a laboratory for

analysis. Data will be recorded using various forms (see example **Form-1)**. Detailed data collection and laboratory procedures will be provided in the SOPs for each parameters.

Concentration levels of trace metals will be measured from water and sediment samples. Trace metals concentration levels will be used to indicate TBT (tributyltin) and TPhT (triphenyltin) compounds which may result from accidental removal of marine paints.

4.2. Baseline biological sampling

The following parametres will be used as biological indicators:

- Phytoplankton;
- Zooplankton;
- Epi-fauna, and
- Benthic fauna.

Phytoplankton and zooplankton samples for the each parametres should be collected before, during and after the underwater hull cleaning operation.

Samples for benthic fauna should be collected once a year only.

Since IAS could either occur as part of phytoplankton, zooplankton, epi-fauna and benthic fauna, it will be necessary to keep record of alien and native or endemic species. Detailed procedures are provided in the SOPs for each parameters.

5. TECHNOLOGY AND EQUIPMENT REQUIREMENTS

Equipment and technologies required for EMP implementation and baseline environmental monitoring are provided below. These equipment and technology are available from various institutions in Namibia such as NCRST (National Council on Research, Science and Technology), NUST (Namibia University of Science and Technology), MFMR (Ministry of Fisheries and Marine Resources), UNAM (University of Science and Technology), NAMWATER (Namibia Water Corporation), MAWL (Ministry of Agriculture, Water and Land Reform) and commercial laboratories. There are also other institutions like BCC (Benguela Current Convention) that may not own required equipment and technologies but whose mandate is to combat marine pollution.

With regard to technologies and equipment requirements, the local capacity for baseline environmental monitoring exist in Namibia. Therefore, it will not be necessary for the proponent to purchase these technologies and equipment. Rather it will be advisable for the proponent to collaborate with local institutions in order to invest in the local capacity for environmental baseline monitoring activities. These activities which will involve hiring of environmental consultants; training of students and in-service staffs in conducting baseline surveys; sample collection; sample processing and analysis and reporting; will positively contribute to a cleaner and safer port of Walvis Bay.

Table 2: technology and equipment requirements.

Parametre	**Equipment/method**
Free Carbon Dioxide (CO_2)	-Measure CO_2 directly using beverage carbonation metre. The recommended **OxyGuard portable CO_2 meter** is a reliable and easy-to-use instrument that measures dissolved CO_2) in water. The meter consists of a probe and a battery-powered transmitter. The meter displays CO_2 concentration and an analog signal as output. -The titration method can also be used, though not recommended.
Water temperature	-Measure using a **thermometer**. -The **Hach HQ30D** also measures temperature. -Currently there are online weather databases that provide daily water temperature data.
Dissolved oxygen	-The recommended **Hach HQ30D portable multi-parametre** gives maximum measurement flexibility and ease of operation with interchangeable probes and automatic parameter recognition. -The **Winkler's titration** method will be used for comparison.
Turbidity	-The recommended **HACH 2100Q turbidometre** is accurate and reliable in measuring turbidity. It is portable and battery powered; so measurements could be taken and recorded while in the field.

	-The **HACH HQ30D** also measures TDS (total dissolved solids) and could be ideal in case the **HACH 2100Q turbidometre** is not available. TDS could be used to indicate turbidity.
Total suspended and volatile solids	TSS and TVS could be measured either using the HACH DR 2700, DR 2800 or DR 900. The recommend **HACH DR 900** is portable, LED-sourced colorimeter and it measures at wavelengths of 420, 520, 560 nd 610 nm. Measurements could be taken and recorded while in the field; eliminating the need for sample transportation.
Nutrients (nitrates, nitrites, total phosphate, free chlorine, etc)	
pH, conductivity/salinity metre	The **Hach HQ30D** mlti-parametre is recommended.
Pathogens	Pathological samples shall be taken for analysis of total coliforms and *Streptococcus sp*. Other indicators may be selected according to the ECO's discretion and factors inherent at site.
Trace metals	It is recommended that analysis for trace metals are performed by a commercial laboratory. The proponent or the ECO should collect samples, preserve and send them to a commercial laboratory (e.g. Analytical laboratory or NAMWATER).
Phytoplankton	Use a phytoplankton net to collect the samples. The samples should be analysed under a compound microscope (recommended is the **Olympus** type).
Zooplankton	Use a zooplankton net to collect the samples. The samples should be analysed under a light microscope (recommended is the **Zeiss** type).
Epi-fauna	Sample should be collected from vessel hulls or sub-merged structures as well as from rocks and soft sediments (sandy shores). Microscopes maybe required for tiny organisms.
Benthic fauna	A **Van veen grab** will be used to collect sediment samples. The samples should be analysed either under a light or compound microscopes (recommended is the Olympus and Zeiss type).
Sediment size analysis	Part of the sediment will be used to study grain size using the **Sieving Assemblage-Wilson** instrument.

6. ENVIRONMENTAL MANAGEMENT COMMITTEE

There shall be established an environmental management committee. There is no need for the proponent to recruit new employees as the committee will only meet on quarterly

basis. For specialized environmental services, the proponent may hire an Environmental Control Officer on contract basis.

Below are proposed committee members as well as required competency and responsibilities.

Table 3: composition of environmental management committee.

Personnel	**Competence**	**Responsibilities**
Environmental management representative (EMR)	Should be in employment of the proponent. Should be a senior staff member with a management position in the company.	• Represent management on environmental safety and occupational issues related to underwater hull cleaning operations. • Provide support and avail resources needed to endorse and implement the company's environmental policy. • Upon advice from the ESOR and ECO, the EMR may call off an underwater cleaning operation.
Environmental safety and occupational representative (ESOR)	Should be in employment of the proponent. A minimum of grade 12, sufficient knowledge of environment, safety and ethics at work place. Preferably, a professional diver.	• Represent employees' environmental safety and occupational concerns related to underwater hull cleaning operations. • Ensure other employees comply to conditions as required in the environmental compliance certificates or permits. • The ESOR may call off the cleaning operation if: -Vacuum suction fails to operate. -Filters or macerator/screen fails to operate. -Excessive turbidity arises from natural or other events. -Where untoward situation arises that may constitute a hazard human life or environment and the equipment or other asssets.

SHREQ officer (NAMPORT representative)	Bachelor's degree or BSc. Hons. Valid competency certificates. Registration as a helath and Safety officer. Strong communication skills.	• Represent NAMPORT on this committee. • Advise the Proponent and ECO on issues related to environmental management.
Independent Environmental Consultant (ECO)	Master's degree or MSc. in the field of environmental or natural resources management, marine biology or water science. Knowledge of environmental impact assessment, EMP implementation and baseline environmental monitoring is compulsory. More than 10 years of field survey co-ordination and laboratory analytical skills will an added advantage.	• The overall responsibility of the ECO is to assist the proponent in implementation of the EMP and baseline environmental plan; ensure environmental compliance and certification with GRN policies and legislations. • ECO will advise the committee in domestication of the EMP, scientific interpretation of results from baseline environmental surveys as well as reporting.

7. INTEGRATION OF EMP INTO COMPANY POLICY

Although companies are not required by law to have environmental policies; the proponent has opted to do this voluntarily. Below is the proponent's policy statement:

"Walvis Bay Diving & Salvage specialize in commercial diving ship maintenance and repair with our focus on rendering a top-rated quality service to all our clients in Namibia and other parts of the world while protecting the environment for future generations.

At Walvis Bay Diving & Salvage we are fully committed to continually improve and enhance our environmental performance. This will be achieved by complying to all statutory and regulatory requirements, monitoring and reviewing of our environmental performance.

This Environmental Policy Statement is applicable to all areas of Walvis Bay Diving & Salvage and has been implemented to meet the requirements of the ISO 14001:2015.

We are committed to:

- *Prevent pollution;*
- *Protect the Environment in all aspects of our business to prevent any adverse environmental effects during operation;*
- *Recycle / reuse materials wherever practical;*
- *Minimize the environmental impact, for the life cycle (including disposal) of all infrastructure, equipment, and other physical assets under our control;*
- *Comply with legislation, regulations & relevant other requirements that we subscribe to, at all times.*

Walvis Bay Diving & Salvage will monitor our environmental progress in the following ways:

- *Setting Objectives and Targets that will be reviewed by management at the required and designated intervals;*
- *Management Programs for all identified high environmental processes in our operations;*
- *In the annual management review meeting we will monitor and measure our environmental management system performance for suitability, adequacy and effectiveness.*

The management of Walvis Bay Diving & Salvage commit to employ specialists, where necessary, to assist or advise with environmental matters and to ensure adherence our Policy and Programs, and to address resulting actions identified through it.

We have included within our system measures to control abnormal and emergency situations.

This environmental policy will be communicated and made available to our employees, sub-contractors, suppliers and all persons working on our behalf at any of our areas or client areas. This will be done to promote environmental awareness and meet our environmental objectives".

8. MITIGATION ACTIONS

Mitigation actions that are required to reduce or minimize negative impacts are described in ***table 4.***

4.1. Risk preparedness and response plan

Risk is an event that may or may not happen; whereas an impact is what will happen if a risk occurs. Risks poses a significant impact on people, the environment or property. Although they may or not happen, there is a need to be prepared to response to risks at all times.

All response actions should be geared toward the following priorities in the order below:

- ***Safety*** of people (always First);
- ***Protection*** of the Environment, and
- ***Protection*** of Assets.

Emergence preparedness and response management involves 5 basic steps as follows:

- **Preventive actions** are taken to avoid an incident.
- **Mitigation measures** are actions taken to prevent an emergency, reduce the chance of an emergency happening, or reduce the damaging effects of unavoidable emergencies.
- **Preparedness** increase the proponent's ability to respond when a risk occurs. Typical preparedness measures include developing method statement and emergence exit procedures, awareness and training for both response personnel and affected parties and conducting drills to reinforce training and test capabilities.
- **Response** is an action carried out immediately before, during, and immediately after a hazard impact, which is aimed at saving lives, reducing economic losses, and alleviating suffering. Response actions may include activating the emergency operations center, evacuating threatened

employees or equipmwnt, opening shelters and providing mass care, emergency rescue and medical care, firefighting, and sea search and rescue.

- **Recovery**. These are actions taken to return to normal or near-normal conditions, including the restoration of basic services and the repair of environmental, social and economic damages. Typical recovery actions include debris cleanup, financial assistance to individuals, rebuilding of infrastructures and key facilities, and sustained mass care for displaced marine animal populations.

9. GRIEVANCE MECHANISM

The procedure the management will apply to deal with the employees' grievances will be enforced as follows:

9.1. Timely Action

The first and foremost requisite in grievance handling shall be immediate settlement as they arise. The sooner a grievance is settled, the lesser it will affect employees' performance. This requires the first line supervisors to be trained in recognizing and handling a grievance properly and promptly.

9.2. Accepting the Grievance

The supervisor shall recognize and accept the employee grievance as and when it shall be expressed. Acceptance shall not necessarily mean agreeing with the grievance; it rather shows the supervisor's willingness to look into the complaint objectively and dispassionately.

9.3. Identifying the Problem

The grievance expressed by the employee shall be at times simply emotional, over-toned, imaginary or vague. The supervisor, therefore, shall be required to identify or diagnose the problem stated by the employee.

9.4. Collecting the Facts

Once the problem is identified as a real problem; the supervisor should, then, collect all the relevant facts and proofs relating to the grievance. The facts so collected shall be separated from the opinions and feelings to avoid distortions of the facts.

9.5. Analyzing the cause of the Grievance

Having collected all the facts and figures relating to the grievance, the next step involved in the grievance procedure shall be to establish and analyse the cause that led to grievance. The analysis of the cause shallll involve studying various aspects of the grievance such as the employees past history, frequency of the occurrence, management practices, union practices, etc. Identification of the cause of the grievance helps the management to take corrective measures to settle the grievance and also to prevent its recurrence.

9.6. Taking Decision

In order to take the best decision to handle the grievance, alternative courses of actions shall be worked out. These are, then, evaluated in view of their consequences on the aggrieved employee, the union and the management. Finally, a decision taken should best suite a given situation. Such decision should serve as a precedent both within the department and the company.

9.7. Implementing the Decision

The decision shall be immediately communicated to the employee and also implemented by the competent authority.

In case, it is not resolved, the supervisor once again needs to go back to the whole procedure step by step to find out an appropriate decision or solution to resolve the grievance.

10. EXTERNAL COMMUNICATIONS

External communications shall be handled in line with company procedures.

11. RECOMMENDATIONS

It is recommended that:

- The proponent strictly adheres to EMP and undertake baseline environmental monitoring;

- Data from baseline environmental monitoring should be kept and availed to NAMPORT and other GRN authorities when requested, and

- The technology and equipment may be hired.

12. REPORTING

Baseline monitoring and environmental monitoring should be reported to NAMPORT and other GRN authorities when requested. This should be done either by submitting quarterly or annual reports.

APPENDIX I – Compliance Assessment Report (CAR)

SECTION 1: BACKGROUND AND INTRODUCTION	
Summary: *This compliance assessment is based on the conditions of awards of ECC-01884 approved by the EC (Environmental Commissioner) and awarded to Walvis Bay Diving on 17 January 2022. The assessment method was mainly a desk-top because there are no operations currently taking place. A detailed explanation and any actions the proponent may need to take are provided in the "Detailed Assessment of Compliance (section 2). This assessment aims to identify any non-compliance with conditions of ECC-01884 and how the non-compliance may be addressed and recommend area of improvement. The main finding was the proponent was delayed in implementing the project by several factors as outlined in this report. Subsequently, no underwater cleaning operations took place since ECC-01884 was issued. In conclusion, the proponent is now ready to implement and would like to renew ECC-01884 which expire on 17 January 2025. The EAP recommends that the ECC-01884 is renewed provided the proponent provides proof that this time they are ready to implement the proposed project activities.*	
Applicable legislations	Environmental Management Act (No. 7 of 2007). Environmental Impact Assessment Regulations (Government Notice No. 4878 of 06 February 2012).
ECC No.	ECC-01884
RENEWAL APP. No.	APP-4798
Issue date:	17 January 2022
Expiry date:	17 January 2025
Proposed Activity:	Provision of underwater Hull Cleaning Services
Details of Environmental Assessment Practitioner (EAP):	The Environmental Assessment Practitioner Envirodu Consulting & Training Solutions cc P. O. Box 4120, Swakopmund Contact person: Ruth Naboth

	Email: rnaboth@ecutsnamibia.com
Proponent:	Walvis Bay Diving & Salvage cc
Has the Proponent been made aware of the Expiry Date?	Yes. **If YES Please state mode of communication:** • Email sent on **30 August 2024**. • Reminder or follow up email on **09 October 2024**.
Compliance requirement for renewal date:	**C2: Clearance Certificate Validity**. *C2(1): On expiry of the ECC, the proponent is required to submit within a period not exceeding one month, and in the prescribed form and manner an application to the Office of the Environmental Commissioner for the renewal of the ECC.*
Non-compliance:	**C2: Clearance Certificate Validity.** *C2(2): Failure to renew an expired ECC shall result in permanent termination of the ECC.*
Launch date for application for renewal:	12 October 2024
MAIN FINDING: The proponent showed interest in the proposed activity and would like to renew ECC-01884 as per email response on **9 October 2024.**	

SECTION 2: Environmental compliance assessment sheet.

CONDITIONS	COMPLIED?		
C1: Conditions of Approval	**Y**	**N**	**REMARKS/COMMENTS**
1.1. Does issuance of this certificate in any way hold the MEFT and its officials accountable due to misleading information provided by the proponent or their EAP?		**X**	
1.2. Are there any known adverse environmental impacts that may arise from the proposed activities?		**X**	**No cleaning operations were undertaken since ECC was approved.**
1.3. Are regular environmental monitoring and evaluations on environmental performance conducted at the site?	**X**		**Partially conducted by MFMR, NSI, Ministry of Works and Transport and UNAM under various program including:** • MFMR mariculture water monitoring program. • NSI Shellfish monitoring program. • Port Pollution Biological Surveys. • UNAM port pollution monitoring and assessment program.
1.4. Are targets for improvements established and monitored throughout the operation phases?		**X**	**No cleaning operations were undertaken since ECC was approved.**

1.5. MEFT reserves the right to attach further legislative and regulatory conditions during the operational phase of the project. *Was the Proponent made aware of further legislative and regulatory permits or licences that were required to undertake in-water cleaning operations?*		**X**	
C2: Clearance Certificate Validity			
2.1. This ECC is valid from 17 January 2022 to 17 January 2025, unless withdrawn by this office. *Was the Proponent made aware of the expiry date of ECC?*	**X**		**See ANNEXURE I.**
2.2. On expiry of the ECC, the proponent is required to submit within a period not exceeding one month, and in the prescribed form and manner an application to the Office of the Environmental Commissioner of the renewal of the ECC. *Was the proponent made aware of this condition when ECC was first issued?*	**X**		**See ANNEXURE III**
2.3. Failure to renew an expired ECC shall result in the permanent termination of the ECC. *Was the proponent made aware of this condition when ECC was first issued?*	**X**		

2.4. In terms of Section 3(2) conditions of the ECC, *were all the IAPs informed about issuance or approval of ECC when it was approved on 17 January 2022?*	**X**		**See ANNEXURE II**
C3: Compliance with authorization under other laws			
3.1. All other applicable and required permits or authorizations from relevant competent authorities must be obtained prior to commencement of the proposed activities and must be adhered to. *Were all relevant permits or licence such as the water abstraction permits or effluent discharge licence awarded or was the proponent at least made aware of such?*		**X**	
C4: Implementation and monitoring			
3.2. The granting of ECC, constitute an approval for the implementation of mitigation measures proposed in your approved EMP, hence making the EMP a legally binding document. *What efforts were made to implement the EMP?*			**Not applicable.**
3.3. The proponent shall appoint a suitably qualified Environmental Control Officer (ECO), or site agent where appropriate, before commencement of listed activities to ensure compliance with the conditions of approval and		**X**	

mitigation stipulated in the approved EMP. *Was the ECO appointed and is the CV available for assessment?*			
3.4. Were the copies of the ECC, EMP, Environmental audit and monitoring Reports kept at the site of the authorized activity and made readily available for inspection by officials of the MEFT and registered IAPs as well as municipal health inspectors on request?		**X**	
3.12. The proponent is required from date of commencing of implementation of the project activities, to compile and submit environmental monitoring reports (on the project progress and the management profile) on bi-annual basis to office of the EC. *Were all the bi-annual Reports compiled and submitted to Office of EC six month after issuance of ECC to-date?*		**X**	
3.19. Was the proponent made aware that non-compliance with a condition of this ECC or EMP may lender the proponent liable to criminal prosecution?	**X**		
MAIN FINDING: The proponent was unable to operate since issuance of the ECC due to various constraints. Therefore, the EMP was not implemented and no bi-monthly reports were compiled and submitted to the office of the EC as there were no cleaning operations to report on. Furthermore, there was no funds available to appoint the ECO due to unavailability of funds.			

KEY FINDINGS

The ECC was approved was approved (on 17 January 2022) just after the COVID-19 period (January 2020-December 2021). Although no restrictions were in force, economic growth *post* COVID-19 was sluggish and this affected hull cleaning operations. Other contributed to no cleaning operations were:

- Unforeseen financial viability by the proponent to implement underwater cleaning in the as new project *post* the COVID-19 period.
- Operation constraints including the foreseen logistic challenges in the procurement of underwater equipment.
- Updated sworn statement of accountability to investors by the Proponent.
- Revised implementation plan and underwater cleaning operation strategies.

CONCLUSIONS

The proponent showed interest in the proposed activity and would like to renew the ECC as per email response on **9 October 2024** (ANNEXURE I attached).

RECOMMENDATIONS

It is recommended that the ECC is renewed provided that the proponent shows commitment that they are ready to implement the proposed underwater cleaning operations within the next three years.

ANNEXURE I

7:39 AM (7 hours ago)

From: Walvis Bay Diving Operations <wbdiving@iafrica.com.na>
Sent: Wednesday, October 9, 2024 5:34 AM
To: 'Erna van der Merwe' <ernawbds@gmail.com>
Subject: FW: Environmental Clearance Certificate -ECC01884

Erna van der Merwe <ernawbds@gmail.com>
to Walvis, me

Good morning

Thank you for below mail.

Yes, we would like to renew our certificate.

Please proivde necessary documents and process so that we can start.

Kind regards,

Erna van der Merwe
WALVIS BAY DIVING & SALVAGE

Number 41, 6th Street
Walvis Bay
Namibia
Tel: +264 64 205047
Fax: +264 64 205189
Email: ernawbds@gmail.com
Web: www.walvisbaydiving.com

Kind Regards

Alicia Visagie
Administrative
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Web: www.walvisbaydiving.com

From: ENVIRODU-CONS ECUTS <ecutscc@gmail.com>
Sent: Wednesday, 9 October 2024 7:18 am
To: Paul van der Merwe <wbdiving@iafrica.com.na>
Cc: wbdiving@iafrica.com
Subject: Fwd: Environmental Clearance Certificate -ECC01884

Dear Sir or Madam,

We consult on behalf of Envirodu Consulting & Training Solutions (ECUTS) cc.
Kindly, this is a reminder that your ECC (Ref. ECC01884) which was issued on 17 January 2022 expires (in 4 months) on 17 January 2025.
If you wish to continue with in-water cleaning activities we advise you to renew your ECC 2-3 months before the expiry date to avoid the EIA approval process.

Should you wish ECUTS to make the renewal application on your behalf please let us know in advance.

Regards
Ruth Naboth
Project Administrator/Environmental Assessment Practitioner
Envirodu Consulting & Training Solutions cc
P. O. Box 4120
Swakopmund
Email: ecutscc@gmail.com
Website: www.ecutsnamibia.com

ENVIRODU-CONS ECUTS <ecutscc@gmail.com> Fri, Aug 30, 11:47 AM

to Paul

Dear Sir or Madam,

We consult on behalf of Envirodu Consulting & Training Solutions (ECUTS) cc.

Kindly, this is a reminder that your ECC (Ref. ECC01884) which was issued on 17 January 2022 expires (in 4 months) on 17 January 2025.

If you wish to continue with in-water cleaning activities we advise you to renew your ECC 2-3 months before the expiry date to avoid the EIA approval process.

Should you wish ECUTS to make the renewal application on your behalf please let us know in advance.

Regards

Ruth Naboth

Project Administrator/Environmental Assessment Practitioner

Envirodu Consulting & Training Solutions cc

P. O. Box 4120

Swakopmund

Email: ecutscc@gmail.com

Website: www.ecutsnamibia.com

ANNEXURE I

Re: PUBLIC MEETING: EIA underwater cleaning for Walvis Bay Diving & Salvage

From rnaboth@ecutsnamibia.com

Bcc Ferdinand Hamukwaya, Lukas Kufuna (Namport), Shaheed Saban (Namport), Victor Libuku, brendon@kwintnamibia.com, Pinehas Auene, S Gariseb, Johan Laubscher (Namport), Geas Shatika (Namport), ecutscc@gmail.com

Date 2022-01-24 00:06

Summary Headers

Dear IAPs
We thank you for participating in the EIA public participation process.
Please note that application (application no. 2820) launched in July 2021 for the ECC (environmental clearance certificate) was approved. This approval was granted by EC (environmental commissioner) by his decision (decision no. ECC1884) on 17 January 2022.

This means permission to undertake cleaning operations by the proponent (Walvis Bay Diving and Salvage cc) has been granted and the proponent could commence provided that EMP is fully implemented.
Furthermore, as provided by the law (see below) you are hereby informed that, as registered IAPs, you have the right to object this decision by the EC. Kindly please all objections should be send to rnaboth@ecutsnamibia.com

"In terms of section 3(2) of the environmental impact assessment you are instructed to within 14 days of notice issuance date, ensure that all registered IAPs are notified that ECC has been issued in respect of your application and of their rights to appeal".

Kindest regards,
Rosa Naboth

On 2021-09-14 03:26, rnaboth@ecutsnamibia.com wrote:

Dear Stakeholders,
Hope you are well. Thanks you for participating in the public participation; whether through exchange via email, telephonically and by electronic meetings.
Kindly please note that the EIA and EMP report had been finalized and uploaded on the MEFT's EIA portal and is available for final comments

and inputs.
Please feel free to comment directly on the portal:
http://www.eia.met.gov.na/web/projects/2820

Regards
Rosa

APPENDIX II – EMP and mitigations.

Table 1: EMP and mitigation.

Receiving environment	**Valued environmental component**	**Issue**	**Mitigation actions**	**Performance indicator**	**Responsible institution/ personnel**
Air and climate	Technosphere	Poor ambient air quality and health implications to residents due to emissions of GHGs (greenhouse gases).	Avoid higher consumption of heavy diesel by MVs in order to reduce emissions of GHGs. It is anticipated that environmental regulations will at some point see fuel oils displaced in favor of supposedly cleaner fuels. Encourage MVs to use fuels with low carbon such as ULSD. Regular hull cleaning of MVs. Reduce vessel drag and increase fuel efficiency by regular hull cleaning.	Regulations to use cleaner marine fuels.	MWTC/DMA (Ministry of works, transport and communication/Directorate of maritime Affairs). Vessel owners.
		Release of dust and metals particles into the air	Grit blasting with glass beads or metal particles such as aluminum oxide, steel grit, cast iron shot, garnet and slag should be done only upon approved method statement by NAMPORT.	Method statement. This method statement should provide SOPs, equipment used and mitigation measures to reduce environmental impacts.	NAMPORT

	Air composition	Ocean acidification due to increased atmospheric Carbon Dioxide.	Reduce emission of Carbon Dioxide.	Regulations to use cleaner marine fuels.	MWTC
	Biosphere	Effects of acidification on flora and fauna	The Proponent should regularly measure pH, carbon dioxide and other indicators of acidification as may be determined by NAMPORT or authorizing entity.	Baseline Environment Monitoring Plan and SOPs.	ECO (Environmental Control Officer)
	Cryosphere	Melting of ice and sea level rise due to global warming.	Avoid higher consumption of heavy diesels by MVs and reduce emission of GHGs.	Regulations to use cleaner marine fuels. Regular hull cleaning of MVs.	MWTC. Vessel owners.
Ocean and seas	Sediment modification	Hydrodynamic vortices generated by the ROV-cart equipment.	Hull cleaning operations maybe be temporarily terminated if it is observed that the equipment used generate hydrodynamic vortices with a significant impact on sediment transport.	Notice to terminate port activity.	NAMPORT
	Seawater quality	Increased turbidity.	The Proponent should measure turbidity before, during and after the hull cleaning operation and such data should be availed to NAMPORT or other authorized entity upon request.	Baseline Environment Monitoring Plan and SOPs.	ECO (Environmental Control Officer)
		Release of IAS and harmful pathogens.	The Proponent should demonstrate that the hull cleaning equipment could reclaim debris removed from MVs' hull and that such equipment efficiently minimizes the release of IAS and harmful pathogens into port waters.	Baseline Environment Monitoring Plan and SOPs. .	Proponent

			Samples of bio-fouling organisms removed from MVs should be taken in order to identify potential IAS and harmful pathogens.		Proponent and ECO
		Release of pollutants from biocide antifouling paint.	The Proponent should measure trace elements before, during and after the hull cleaning operation and such data should be availed to NAMPORT or other authorized entity upon request.	Baseline Environment Monitoring Plan and SOPs.	Proponent and ECO
		Water pollution	Where needed permit to extract or discharge water will be needed.	Domestic and industrial waste and effluent discharge permits.	Proponent
			Appoint ECO to co-ordinate water pollution and monitoring activities.	ECO	Proponent
			No sanding, stripping and chipping of antifouling paints may be carried out in and or during hull cleaning operations in the port's waters.	Method statement	Proponent and NAMPORT
			The proponent shall not perform any hull cleaning activity on vessels or movable structures that have reached or exceeded their planned in-service period.		
			When the anti-fouling coating has reached the end of its service life the vessel or movable structure should be removed from the water and a new antifouling coating applied. Should the vessel require new anti-fouling coating, the		

			activity should be carried out in a dry or floating dock facility. No chemicals or detergents shall be released into the water, port, air and sea during the hull cleaning operations. This includes the release of Tributyltin (TBT), which is a common constituent of ship paints. Only vessels which are certificated of TBT-free paint will be allowed to undergo under-water hull cleaning in ports.		
Land and seabed	Sediment transport and morphology	Sediment modification will negatively affect the environment.	Monitor sediment characteristics and benthic fauna before and after underwater hull cleaning operations.	Baseline Environment Monitoring Plan and SOPs.	Proponent and ECO
	Waste pollution	Disposal of waste	Waste generated may only be disposed in a manner as prescribed in relevant policies and legislations. The proponent should submit to NAMPORT a method statement detailing on how waste will be managed.	Method statement.	Proponent
	Land use	Port Authority	Hull cleaning operations should not be performed without written authorization from NAMPORT. This authorization should be granted on a vessel to be cleaned and per quay berth where the vessel is docked. NAMPORT will do this in strict compliance and adherence to conditions in the ECC and any conditions imposed by other relevant authorities. The Proponent may not enter the port without this authorization.	Written permission to undertake hull cleaning.	NAMPORT

				Port entry register.	
		Potential conflict use	The proposed areas where cleaning will take place include fishing factories, main harbour, tanker jetties and anchorage 1-4. Hull cleaning operations may not be undertaken at the expense of other users.	Port map.	NAMPORT
Ecology and biodiversity	Effect on local biodiversity	Bio-fouling organisms	The Proponent shall submit the monitoring plan and SOPs (as per IMO Resolution MEPC. 207(62)) to NAMPOT detailing how bio-fouling organisms will be treated.	Baseline Environment Monitoring Plan and SOPs.	Proponent
		IAS and pathogens	The proponent should submit a monitoring plan and SOPs detailing how IAS and pathogens will be monitored and mitigated.	Biosecurity Risk Assessment Plan and EMP	
	Ecosystem diversity	Ecologically sensitive areas	Hull cleaning operations should only be permitted in certain port areas for which permission is not granted; these areas specifically exclude ecologically sensitive areas.	Map of ecologically sensitive areas	Vessel
Human environment	Safety of life at sea	Occupational safety and public health.	Prior to cleaning operations, the Proponent shall submit occupational safety plan detailing how safety and occupational issues will be dealt with while working at sea. Among other, occupational safety plan should provide details on how CVDs (cardio-vascular diseases) and communicable diseases (including COVID-19) will be dealt with among different employees.	Occupational health safety plan and EMP	Proponent

		Diving	Terms and conditions of the underwater hull cleaning permit should be read in conjunction with the Diving License conditions.	Diving license	Proponent
		Vessel preparation	Ensure the main engine and any relevant auxiliary engines must be isolated and not be operated for the duration of the hull cleaning activity. All costs related to the activity and any movement of vessel shall be for the account of the vessel.	Method statement	Vessel owner and Proponent.
		Injury on duty (IOD)	Any IOD or fatality to employees or third party, shall be reported to NAMPORT without delay and to any applicable statutory body within the required time-frame.	Accident report	Proponent
		Reporting of incidents	The proponent shall: a) Report to competent authorities any incidents that result or could result, any environmental impact and any activity that may remotely affect the operations of the port. b) Not undertake any modification of the authorized equipment, of whatsoever nature, unless approved in writing by all relevant Authorities and such approvals provided to NAMPORT.		
		Termination of hull cleaning	NAMPORT, DMA, EC/DEA, DWA or any other duly authorised entity may terminate hull cleaning operations immediately upon receipt of notification to do so.	Notice to terminate hull cleaning.	NAMPORT, MWTC/DMA, EC/DEA, DWA, MFMR
Hull cleaning technology		Removal of macro-fouling organisms of domestic or international origin	Underwater cleaning technologies should aim to, at least, capture debris greater than 50 micrometres (µm) in diameter in order to minimise release of viable adult, juvenile and larval stages of bio-fouling organisms.	SOPs for underwater cleaning using ROV-cart	Proponent

		Release into water of macro-fouling organisms of domestic or international origin	The Proponent should avoid accidental removal of anti-fouling paint that may contain TBT (tributyltin) and TPhT (triphenyltin). The following vessels may not be cleaned while underwater: o MVs that were painted 10 years ago as there is a higher risk of removing painting materials; o MVs that frequently visit/enter ports known to be 'hotspots' of IAS and pathogens, and o Vessels that had been denied entry into other ports for environmental violations. • The proponent may only be allowed to clean aged MVs while on dry dock where old paint could be removed and properly disposed.	Pre-cleaning inspection report and SOPs.	Proponent
		Hull cleaning equipment	The proponent is limited to the use of equipment that are: a) The same technology as demonstrated when applying for the hull cleaning authorisation and permit, b) Where the equipment efficacy is proven and approved by relevant/competent authority and are marked with a safe working load and or is capable of being recovered in case of remote failure; c) In good operating and maintenance conditions in accordance with statutory standards and duly licensed by the appropriate regulatory body, operated by	SOPs for underwater cleaning using ROV-cart	Proponent

			competent and adequately trained and certified staff.		
		Calibration and servicing of the equipment	Calibration and servicing of the equipment should be done as prescribed by equipment manufacturers.	Equipment calibration certificate and service plan	Proponent
		House keeping	All equipment used during the performance of hull cleaning activities should be removed from wharfs, quays, jetties and other work places in the Port without delay immediately after the hull cleaning activities are completed on a particular vessel, or within such extended time as the Authority may allow, on good cause shown.	Cleaning operation exit plan.	Proponent
		Inspection and compliance	The proponent shall have written safety, health and occupational plan as well as environmental certifications, SOPs and method statements in place at all times and shall make these available to NAMPORT or relevant Authority for inspection upon request.	Baseline environmental monitoring plan	Proponent

Table 2: baseline environmental monitoring plan.

Activity	Description	Frequency	Responsible
PRE-CLEANING INSPECTION REPORT	Upon booking of ship for in water hull cleaning the following information should be obtained: • Make and composition of paint on hull and date when painted. • Age of ship. • Route to port and names of last three ports visited. • Date of last hull cleaning. • Copy of vessel bio-fouling management plan.	All ship cleaning operations.	Proponent/ECO.
	Upon arrival at cleaning berth, manual inspection of hull is to be undertaken and the following is to be evaluated: • Nature of biofouling: heavy, moderate or limited. • Dominant bio-fouling species (e.g. mussel; barnacle; algal). • Nature of paint hull - degraded; some peeling and sound state. • Presence of cathodic protection devices. • State of propeller/ prop shaft **DECISION:** where biofouling is considered excessive, alternative cleaning methods or rejection will be considered. **ALTERNATIVE:** alternative is to clean MV at dry dock. **ACCEPTANCE:** upon acceptance the proponent should: • Submit pre-inspection report to NAMPORT for approval so that underwater cleaning could commence. • Conduct a general inspection of the berth.	All ship cleaning operations.	Proponent/ECO.
OPERATIONAL MANAGEMENT			
Check operations of generator and containment of spillage	Ascertain that all aspects of ROV-cart are operating appropriately and that the generator and fuel spillage is addressed/contained.	All MV cleaning operations.	Proponent - land based crew
Emergency response equipment	Ensure all emergency response equipment are mobilized and in working conditions including the following:	All MV cleaning operations.	Proponent - land based crew

	1. Turbidity curtains. 2. Spill booms. 3. Sample probe.		
Pre-operation check of cart	Oversee brushes/skirt and rectify any anomalies. Check hoses and hose connection. Ensure outlet pipe is down drift of MV.	All MV cleaning operations.	Proponent - land based crew.
Review surface water turbidity / variation	Identify state of water around MV: turbid/clear? Any solid waste?	All MV cleaning operations.	Proponent - land based crew.
Check intake of brush cart during operations	Any evidence of plumes?	All MV cleaning operations.	Diver.
Check intake of filter system	During operations camera review of intake, ensuring that no plumes arise from cart.	All MV cleaning operations.	Diver.
Establish probe and collection process	Where applicable – ascribe position and placement of probe.	All MV cleaning operations.	Proponent/ECO.
CLOSURE OF CLEANING OPERATIONS			
Solid waste debris	Ensure that all solid waste is contained within containment drum: • Add probiotic if required. • Ensure labelling is completed and in order. • Seal drum. • Ensure collection by registered waste operator and transfer to H : H approved landfill site.	All MV cleaning operations.	Proponent - land based crew.
Removal and cleaning of cart	Cart is to be removed from the water once all cleaning has been completed. The following actions are required: • Cart is to be inspected for debris and any damage. • Cart is to be removed from the berth and cleaned at point with freshwater. • No washing down of the cart is to take place on the quayside or on the barge.	All MV cleaning operations.	Proponent - land based crew.
BASELINE ENVIRONMENTAL MONITORING	Specific analysis of water quality and operations is to be undertaken on individual MV using the multi parameter probe as well as taking samples for further analysis as per SOPs. This data is to be recorded as per vessel and will act as a record of findings on that vessel.	Every 3 months	ECO

	More specific monitoring of underwater hull cleaning by the Pure Ballast 3.1 barge mounted system is to take place on a selected MV once every 3 months as advised by the ECO.		
Pre-cleaning	Measure and record weather parameters such as tide level, air temperature, humidity, etc.	Every 3 months	ECO
	Collect surface water samples from bow and stern of MV for analysis.	Every 3 months	ECO
	Collect sediment samples.	Every 3 months	ECO
	Phytoplankton and zooplankton samples should be collected before, during and after the underwater hull cleaning operation. Samples for benthic fauna should be collected twice a year only.	Every 3 months	ECO
Operations	Collect 2 x samples from intake pipeline of cart and at intake of Pure Ballast system using sterilized sampling bottles.	Every 3 months	ECO
	Collect 2 x samples from intake pipeline of cart and at outfall of Pure Ballast system using sterilized sampling bottles.	Every 3 months	ECO
Closure of cleaning procedure	Collect sediment samples from centerline of MV.	Every 3 months	ECO
	Collect surface water sample from fore and aft of MV for analysis.	Every 3 months	ECO
	Collect sample of solid careened materials for preservation in dry form and formaldehyde.	Every 3 months	ECO
	All sampling requiring laboratory analysis should be transferred to commercial/accredited laboratory under instruction of ECO.	Every 3 months	ECO
MONITORING REPORTS	Present/submit report on analysis on 7th day of every quarter after analysis to Harbour Master.	Every 3 months	Proponent

APPENDIX III - FORMS

FORM-1

Site/station name	**GPS position**	**Temperature** ^{0}C	**pH**	**Salinity** $‰_0$	**Dissolved Oxygen** mg/L	**Conductivity** Ms/cm	**TSS** mg/L	**Total dissolved solids** mg/L

FORM-2

Hour	Air pressure	Air temperature	Cloud cover	Precipitation	Humidity	Wind direction	Wave direction	Wind speed	Tide