

NEM: WA WASTE LICENCE APPLICATION

KWV UPINGTON

**APPLICATION FOR THE UPGRADE AND LICENSING OF THE EXISTING KWV UPINGTON
EFFLUENT MANAGEMENT FACILITY AND ASSOCIATED INFRASTRUCTURE
ON ERF 5410, UPINGTON (NORTHERN CAPE PROVINCE)**

FINAL BASIC ASSESSMENT REPORT FOR COMMENT



DEA REF NO.: 12/9/11/L1096/8

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EXECUTIVE SUMMARY

INTRODUCTION AND BACKGROUND

This is an application for the licensing and upgrade of an existing effluent management facility on Erf 5410, Upington, Northern Cape Province (Siyanda Municipality). The KWV Upington Distillery is situated on Erf 5412 (Upington), right next to OWK Wines. Note that OWK Wines bought the KWV grape juice concentrate facility in 2009, which is still located on a portion of Erf 5412. The KWV / OWK complex in Upington now comprises a brandy distillery owned by KWV and a modern wine cellar and grape juice concentrate plant owned by OWK.

All effluent from both KWV and OWK (hereafter referred to as the KWV / OWK Complex) are treated / disposed (through evaporation) at the Effluent facility on Erf 5410.

PROJECT DESCRIPTION

During 1980's KWV made a capital investment and purchased a piece of land (Erf 5410) from the local authority with the aim of providing evaporation ponds for the treatment of effluent. This was required, as the local authority declined to accept their effluent into the municipal sewage system as it could be detrimental to the activated sludge process at the municipal wastewater treatment plant. Since 1981 KWV and OWK has been disposing their industrial effluent into large evaporation ponds on Erf 5410 in accordance with the conditions set out in Exemption 838 B, issued by the Department of Water Affairs in terms of section 21(4)(e) of the Water Act (Act 54 of 1956). Recently the volumes of industrial effluent that are disposed at Erf 5410 had increased significantly. These ponds were never formally lined and the possibility exists that it might have led to soil contamination. In addition, solid waste (e.g. coal ash) is also now temporarily stored on this site, before final reuse/disposal. KWV / OWK therefore committed themselves to the upgrade of the treatment system.

In accordance with the NEM: WA (Act 59 of 2008) and the "List of Waste Management activities that have, or are likely to have, a detrimental effect on the environment", it was determined that any upgrade to the facility will trigger activities listed under category A of the listed activities (Please note that in the original application it was still believed that this will be a Category B application. However, it has since been determined that because the facility is an existing facility which was operated under an existing Authorisation from the Department of Water Affairs it will trigger Activity 19 of Category A).

The Applicant had appointed BVi Engineers to investigate options for effluent treatment with the aim of future treatment of the effluent to beneficial irrigation standards (as opposed to evaporation). BVi Engineers looked at various scenarios to upgrade the treatment system and proposed the following as the most viable and cost effective upgrade:

Pre-treatment (solid separation and pH correction)

- The existing pre-treatment (solid separation) system will be improved.
- Please note that pre-treatment is already done at Erf 5412 and will remain on Erf 5412 (not located on Erf 5410), since it needs constant monitoring and management.

Reed bed Effluent Treatment

- The evaporation pond system will be de-commissioned and replaced by a reed bed treatment system (note that the reed bed treatment system is expected to have a much smaller footprint (<10ha) than the current evaporation pond system (>22ha);
- The reed bed system will be placed within the footprint of the current evaporation pond system (the exact size and location to be advised by the results from the results of the pilot treatment project currently being conducted);
- The remaining evaporation pond system will decommissioned and remediated;
- The reed bed treatment system will be lined (prevention of soil contamination);
- Treated effluent from the reed bed treatment will be available for re-use (which is a significant improvement from evaporation).

Treated effluent (re-use)

- Treated effluent from the reed bed will be used for wash water or garden irrigation in the OWK / KWV complex, with overflow (if any) going into the Upington Sewage system – thus conserving water).
- The possibility for re-using this water for other irrigation purposes (e.g. small farming projects) also remains.

SUMMARY OF PPP

A copy of the DBAR was send to all registered I&AP's for comment. Only one comment was received from the !!Khara Hais Municipality (Dept. of Health Services).

- The Department of Health services mentioned that numerous complaints have been received with regards to odour from the treatment facility in the past, and request that during the upgrade special attention is given to ensure better odour control. The EAP commented that apart from the legal compliance issue, other main objectives includes water conservation and better odour control (being aware of the above complaints).

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APPENDIXES

Appendix A: Locality Maps

- A1: National Locality Map
- A2: Location map
- A3: Google Overview
- A4: Layout Plans (to be included once they are finalised)
- A5: Sensitivity Map

Appendix B: Site Photographs

- B1: Terrain overview photos

Appendix C: Facility Illustrations

- C1: Facility illustrations (to be included once they are finalised)

Appendix D: Biodiversity overlay maps

- D1: Vegetation Map
- D4: Summary of Biodiversity Recommendations (Map)

Appendix E: Permits/Licenses from other organs of state

- E1: Water registration confirmation report

Appendix F: Public participation information

Appendix F1 – 1st round of PPP

- F1.1: Acknowledgement of Application (DEA&DP)
- F1.2: Register of I&AP's (1st round PPP)
- F1.3: Proof of letters send to I&AP's
- F1.4: Copy of hand-outs
- F1.5: Proof of Advert

- F1.6: Proof of posters
- F1.7: Comments received on initial PPP
- F1.8: Comments & Response report

Appendix F2 – PPP on DBAR

- F1.1: Acknowledgement of DBAR (DEA&DP)
- F1.2: Revised exemption application and acknowledgement
- F1.3: Register of I&AP's (DBAR)
- F1.4: Proof of letters send to I&AP's (DBAR)
- F1.5: Comments received on DBAR
- F1.6: Comments & Response report (DBAR)

Appendix G: Specialist reports

- G1: Botanical Assessment

Appendix H: EMP

- H1: EnviroAfrica Environmental Management Plan

Appendix I: Additional Information related to listed Waste Management Activities

- N/A

Appendix J: Any other

- J1: WC Department of Education – transfer of ownership
- J2: Cape Agulhas Municipal SDF, Dec 2009 (Paragraph 2.2.1)
- J3: Cape Agulhas Municipal IDP – (Page 59)
- J4: Letter of support – Cape Agulhas Municipality
- J5: Application for funding