

ABSTRACT

Engineering Solutions for Non-compliant Environmental Releases from an Ammonia Producing Plant in Trinidad and Tobago

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This project report presents non-compliant environmental releases from an ammonia producing plant and engineering solutions for the attainment of compliance with local legislation. The subject Plant herein after referred to as the Tringen I Plant, is located in Central Trinidad.

Information presented is specific to process wastewater discharges, air emission releases and noise levels from the said Plant when operating under steady-state conditions. The primary objective of this project is to provide information for the attainment of compliance. It will also contribute to the design and implementation processes of a site-wide Environmental Management System.

Non-compliant releases are identified via environmental sampling and testing at locations identified in qualitative studies. Engineering solutions are determined mainly by the use of technical documentation such as the Tringen I Plant

Operation Manual, Mechanical Inspection Reports and Engineering Design Documentation.

Wastewater discharged from two of the three main effluent drains identified, is non-compliant with the Draft Water Pollution Rules, 2001. Non-compliant parameters are temperature, pH and ammoniacal nitrogen.

The NO_x stack release concentration from one of the seventeen air emission sample points within the subject Plant is identified to be non-compliant with the Draft Air Pollution Control Rules 2004.

Noise levels at nine test locations at the perimeter of the Tringen I Plant and at the northern property line of the Complex are identified to be one hundred percent compliant with the Noise Pollution Control Rules, 2000.

The onus for effective implementation of the solutions identified in this report now lies with the Organization's management.

Keywords: Shabnam Rambaran; Solutions for non-compliant releases from an ammonia plant; Compliance with local legislation.