

# SAPREF - MHI Feedback

The SAPREF Refinery (including the STF) which is located on Refinery Drive in Prospecton, Durban, Kwa-Zulu Natal Province in an area characterised by industrial and commercial land use. The SAPREF Island View Fuel Terminal Sites (Site 1, Site 2, Site 3 and Bayhead) located within the Island View complex which can be accessed from Trinidad Road in Island View, Durban, Kwa-Zulu Natal Province is in an area characterised by industrial and residential land use.

The aim of the project was to undertake a Quantified MHI Risk Assessment of the SAPREF Refinery, the STF, the SAPREF Island View Fuel Terminal Sites, the SAPREF Island View Transfer pipelines, the SBM as well as ship bunkering facility in the Island View complex and associated equipment with the objective to assess the risk to people off-site and on-site via the approach outlined in the SANS 1461:2018 Edition 1 Major Hazard Installation – Risk Assessments. The need to review the Quantitative Risk Assessment (QRA) arose due to the fact that the current MHI legislation requires that the MHI Risk Assessment must be carried out at a maximum of five yearly intervals.

The previous risk assessment was undertaken in February 2017 which was done according to British Standards.

# SAPREF - MHI Findings

- ◆ The Emergency Response Plans (ERP) and evacuation plan should be updated with the results of this risk assessment.
- ◆ All personnel should be trained in the event of a loss of containment of a hazardous substance and subsequent emergency response and trial emergencies should be exercised on a regular basis.
- ◆ All plant operators should be trained to all hazardous substances releases as well as, where necessary safely shut down the plants and where possible isolate areas of release.
- ◆ SAPREF should utilise the extensive consequence and risk modelling results generated during this risk assessment to advise and guide any Refinery developments and studies that could affect or be affected by a major hazard event.
- ◆ SAPREF should consider carrying out more detailed risk assessments (including taking into account occupancy factors) on the Refinery units with the largest potential consequences. This will allow the true risk of the units to be understood and allow more informed risk reduction projects to be carried out. (NOTE, SAPREF is currently undertaking a facility siting study which will provide further detail on the risks posed to on-site populations and will incorporate occupancy factors.)
- ◆ SAPREF should document future additional risk reduction measures and other process changes, where practical, that could affect the results of the MHI Risk Assessment.
- ◆ Ensure that there is regular inspection of the pipelines and that the cathodic protection is adequate.

# SAPREF - MHI Findings continued

- ◆ Trial emergency drills (on pipeline failures) should be undertaken in conjunction with the Local Fire and Disaster Services and should be undertaken as per SANS 1541.
- ◆ In addition, SAPREF should consider alignment of the ERPs to SANS 1514, specifically:
  - ◆ The ERPs should be reviewed to ensure that all credible incidents (as per the MHI risk assessment) have been included.
  - ◆ The description of the site and operations should be included in the ERP.
  - ◆ ERP annexes of site layout, sensitivity maps, tank/ vessel/ bund locations (for the Island View Terminal sites as an example), and map of firefighting equipment locations should be included within the electronic document of the ERP or referenced.
  - ◆ Provide an indication of readiness and availability of various types of emergency equipment and supplies.

# SAPREF - MHI Findings Feedback



# Questions