## Design HSE Activities Performed During the Detail Engineering Phase

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The Design HSE is a major concern throughout the all engineering phase. The plant should be engineered, constructed, commissioned with safety, health and environment as a prime consideration. The objectives of HSE activities are to ensure that the plant is developed in accordance with legislative requirements and design criteria stated in the applicable client procedures and applicable environmental standards and to ensure the effective implementation of the health, safety and environmental protection and conservation measures identified.

To achieve this, a number of HSE reviews and studies are adopted where individual hazards are identified and their impact determined, eliminated or mitigated or both. The following HSE reviews and studies are undertaken at the detail design stage: HAZID, ENVID, Plot Plan Review, Hazardous Area Classification Review, 3D Model Review, Constructability Review, HAZOP Review, SIL Review, QRA, Air Dispersion Modelling, RAM Study etc.

This presentation will review the current status of HSE activities performed during the detail engineering phase and make a suggestion for collaboration to improve Design HSE technologies.