

## Project brief

Reliance Industries Ltd (RIL), Vadodara Manufacturing Division (VMD) is manufacturing variety of petrochemicals and downstream products *viz* ethylene, propylene, EO/EG, poly propylene, butadiene, poly butadiene rubber VCM, PVC etc. RIL-VMD is located within the declared PCC industrial area of GIDC, notified by Govt. of Gujarat in Vadodara District in the state of Gujarat. The nearest rail station is at Ranoli situated ~1 km from VMD & the nearest airport is Vadodara Airport which is at a distance of ~11.6 km.

Vadodara petrochemical manufacturing facility is proposing to debottleneck its existing units which includes NCP, EG, EO, VCM, PVC, PP-II & IV, Butadiene, PBR-I & II, Benzene, LAB, CPP. This proposal also includes setting up of new units Chlorinated Poly Vinyl Chloride (CPVC) and a 500 TPH (2x250) petcoke based boiler to be used as a stand-by to existing steam & power generation by creating flexibility in the existing fuel mix of NG, Cracker off gas, FO, LSHS. These plants will be located within the existing RIL VMD spread over 350 hectares. Hence, no additional land is required for the proposed project.

Naphtha Cracker plant is the mother plant of RIL-VMD which produces Ethylene and Propylene as a product and the same is used as a raw material in downstream plants. The feedstock for the cracker is from nearby refinery as well as from RIL Jamnagar. VMD facility is an aging plant and certain modifications are planned within the existing facility, by implementing certain efficiency improvement modification, in the process, the production capacity shall be increased.

The VMD petrochemical manufacturing facility has an integrated utilities system which includes plants for the treatment and distribution of raw water, steam/condensate, cooling water, DM water, fire water, compressed air, nitrogen & CPP. Whereas offsite facilities includes the storage, receipts & transfer, loading and unloading of chemicals, products and by-products including a rail gantry. The proposed project shall utilise the existing utilities during its operation.

The proposed expansion & debottlenecking at VMD shall not have any significant adverse impact on the environment setting of the region. In the proposed project, natural gas is predominant fuel used for combustion, which is a clean fuel along FO, LSHS in the CPP. The emission such as of SO<sub>2</sub> NO<sub>x</sub> generated shall be controlled and will be within stipulated standards. PM emission is envisaged from the process plants, although negligible, adequate measures shall be in place to control such emissions within stipulated standards. Adequate systems shall be in place to control fugitive emissions in the form of VOCs envisaged from proposed project. CFBC boiler is planned as a stand-by to existing steam & power generation by using petcoke as fuel. SO<sub>2</sub> emissions envisaged from this boiler operation shall be controlled within stipulated standards by in-situ lime injection. The new CPVC plant as well as the CFBC boilers shall be equipped with stacks to disperse the emissions adequately. At the newly proposed CPVC plant, Chlorine scrubbing system will be installed to prevent accidental release of chlorine into atmosphere. No adverse environmental impact is envisaged due to withdrawal of water by VMD. The additional water requirement of ~ 9300 m<sup>3</sup>/d for the proposed project will be met by Vadodara Irrigation Division, Govt. of Gujarat which has sanctioned 40915 m<sup>3</sup>/d (9 MGD) of water to VMD. The wastewater generated from the proposed project will be treated at the existing wastewater treatment plant. All Hazardous

material are handled as per MSIHC and HWM rules. The existing green belt spread in an area of ~105 Ha shall be strengthen during this proposed project.

The existing manpower at VMD is ~ 3000. Existing manpower would be used, as most of the projects are DBN/expansion of existing plants. Thus, there is no additional employment generation due to this project. The Capex for the proposed project is ~ Rs. 2270 crores & scheduled to be commissioned in stages starting within one year after EC is granted.