

CASE STUDY 4

WANCHAI WEST



PURAFIL ESD REMOVES UNPLEASANT ODORS 4 WANCHAI WEST PRELIMINARY SCREENING PLANT



ABOUT THE WANCHAI WEST PRELIMINARY SCREENING PLANT

Operated by the Drainage Services Department of the Hong Kong government, Wanchai West Preliminary Screening Plant traps solid waste in the first stage of the wastewater treatment process.

THE PROBLEM

Several buildings within one kilometer of Wanchai West were affected by unpleasant smells and hydrogen sulfide (H₂S) from the plant. The district court and the departments of immigration, inland revenue, and lands tribunal complained about odors, as did the five-star deluxe Grand Hyatt Hotel and the Hong Kong Convention Center.

Engineers from the plant unsuccessfully tried to remove the odors with a wet scrubber. When this attempt failed, they decided to test the abilities of a dry scrubber despite their lack of experience with this kind of system. The engineers knew of third-party tests comparing the removal capacities of a competitor's dry scrubber to the capabilities of a Purafil system. Whereas the competitor's scrubber removed between 64 and 95.5 percent of the odorous gases in the test scenario, Purafil's scrubber eliminated 99.97 percent of the gases.

With these results in mind, plant engineers chose Purafil for their first dry-scrubbing project.

PURAFIL PROVIDES THE SOLUTION

Local Purafil representative Virendra Anand (Air Control Engineering Ltd.) recommended an ESD Drum Scrubber-100 (DS-100) and a VS12 vessel scrubber to remove odors and H₂S from the environment. The DS-100 was placed in the wet well preceding the main plant. Contractors installed the customized VS12, which contained Puracarb™ dry-scrubbing media, at an inlet with H₂S concentrations of 15 parts per million. Through an irreversible chemical reaction, the Puracarb eliminated the gases by transforming them into harmless solids. A dehumidifier was used along with the scrubber to fill the air stream with dry air.

After 60 days, results from third-party lab tests indicated that Purafil's system removed more than 99.97 percent of H₂S, which exceeded the target removal rate of 99.5 percent. Plant engineers were very pleased with the project and more readily embraced the idea of using dry scrubbers.

PURAFIL ESD DRY-SCRUBBING MEDIA

- System media are UL Class 2 listed as non-flammable.
- System media are immediately available for instantaneous reaction.
- Spent media are landfill acceptable before and after use.

ABOUT PURAFIL ESD

For more than 15 years, Purafil ESD has been the premier single-source provider of clean air to over 100 North American and European clients. A division of Purafil, Inc., Purafil ESD manufactures a broad range of dry-scrubbing chemical media and scrubbers that remove odors, prevent toxic gas releases, and prevent corrosion of electronics.

Call Purafil ESD at 1-800-222-6367 for assistance with your air quality concerns or visit our Web site at www.purafil.com.



PURAFIL® DRUM SCRUBBER 100
INSTALLED AT THE WANCHAI WEST
PRELIMINARY SCREENING PLANT

PURAFIL® PURACARB™ DRY-SCRUBBING
MEDIA

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