

## Measuring and modelling of ambient air quality at Barcadera

Aruba, 2015-2016

### Client info:



Name: Water en Energie Bedrijf Aruba (WEB)

Sector: Power/Utility

Location: Aruba

WEB is the Aruban production company for electricity and drinking water.



Name: Aruba Stevedoring Company (Astec)

Sector: Transportation

Location: Aruba

Astec is responsible for upgrading and modernizing the port of Aruba to accommodate the containerization of cargo.



**Rationale:** At the Barcadera area, located westward of the WEB power plant, a new container terminal has been constructed. During the construction phase, a number of employees working at this new container terminal have been complaining about the presence of flue gases at the site, causing respiratory irritation. Astec contacted WEB about this situation and together they decided to investigate whether the air quality at the site of the new terminal complies to international standards

**Approach:** The objective of this study was to determine the ambient air quality at the new container terminal at Barcadera and to check whether the air quality at the new container terminal is in compliance with international Ambient Air Quality Standards (AAQS). This was done by calculating the air emission by WEB power plant, based on fuel use and by using these emission figures as basis for modelling the air quality at the terminal location. In addition, the air quality was measured with passive samplers and these results were used to verify the modeled results. Finally, the modelled results were checked for compliance to AAQS and to occupational standards.