

# CASE STUDY 4 DELTA AIR LINES



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## PURAFIL ELIMINATES ODORS 4 DELTA AIR LINES RESERVATION CENTER



### THE PROBLEM

One of the busiest airports in the world, Salt Lake City is Delta Air Lines' third largest hub, with more than 150 scheduled daily departures. Typical of any airport, are jet fumes from runway traffic and vehicular exhaust from ground transportation areas. These odors are often pulled indoors through nearby HVAC air intakes, and if not properly filtered, can trigger complaints from airport visitors and staff. Unique to Salt Lake City International Airport, however, are odors from a natural source - the Great Salt Lake. Located within the Great Basin, the Great Salt Lake has no source of outlet. As a result, brine shrimp and other tiny life forms are washed ashore where they are left to decay.

### PURAFIL PROVIDES THE SOLUTION

Al Waite with Roto Aire Filter Sales & Service met with representatives from Delta Air Lines' Reservations Center. Their first objective: to identify sources of odors and their proximity to the center's main air intakes. After a thorough inspection, it was concluded that gaseous contaminants were being pulled indoors through three main HVAC air intakes located on the roof of the facility. Not only were the intakes within close proximity to the runway, but the center itself faced the southeast border of the Great Salt Lake. On a windy day, odors from decaying brine could easily infiltrate the center.

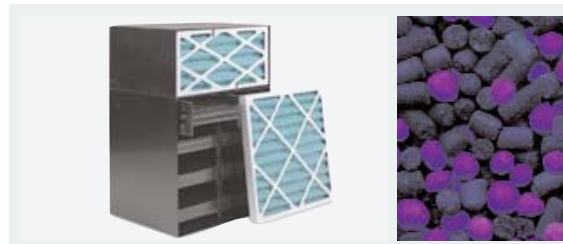
Second, Roto Aire Filter Sales & Service consulted Purafil to identify the types of gas-phase air filtration media required to meet the center's unique needs. Purafil offers a variety of media, each chemically engineered to remove a specific gas or gaseous contaminant group.

Jet fumes, for example, are composed of a variety of gaseous contaminants, including acetaldehyde, nitric

oxide, sulfur dioxide, and volatile organic compounds (VOCs). While activated carbon, or Purakol™ media, is effective at removing VOCs (e.g., toluene), it is ineffective at removing sulfur dioxide or nitric oxide. To remove these gases, an active-oxidant-impregnated media - Purafil® Select - is required. Odors from decaying brine are primarily composed of amine molecules, which require both Purakol and Purafil® Select for complete removal. Based on the unique variety of gases present, Roto Aire Filter Sales & Service recommended Purafil's Select CP Blend media, a 50/50 volume blend of both Purakol and Purafil Select media.

Lastly, Roto Aire Filter Sales & Service designed an air filtration system for each air intake utilizing Purafil's Front Access Cells. Three filter housings were built and structurally affixed over the intakes, each measuring approximately 120 inches (305 cm) square and 96 inches (245 cm) high. Inside the housing were Purafil's Front Access Cells containing Purafil Disposable Modules. The cells can be stacked horizontally or vertically allowing for flexibility in terms of size and media bed depth. Roto Aire Filter Sales & Service installed 153 Front Access Cells containing more than 500 Disposable Modules.

Since Purafil's systems were installed, there have been no complaints of odors. "Our interest in providing a clean working area for our employees, combined with Purafil's specialized knowledge resulted in a win/win situation," stated Quinn Stringham, Facilities Supervisor for Delta Air Lines' Reservations Center.



PURAFIL FRONT ACCESS SYSTEM

PURAFIL®  
SELECT CP  
BLEND MEDIA