

## 2008 Air Quality Monitoring of Commercial Passenger Vessels Operating In Alaska Waters

### Opacity Monitoring

All marine vessels must comply with the Alaska marine vessel emission standard found at 18 ACC 50.070. The standard requires that visible emissions (opacity) from vessel smoke stacks be no greater than 20% opacity for three minutes while docked or anchored. There are limited exemptions while maneuvering to/ from anchor or port.

Staff in the Alaska Department of Environmental Conservation (ADEC) Commercial Passenger Vessel Environmental Compliance (CPVEC) Program (a.k.a. Cruise Ship Program) and an ADEC contractor monitor the visible emissions (opacity) from cruise ship and ferry vessel smoke stacks each season. CPVEC staff and the contractor performed over 200 opacity readings during 2008. Observations were conducted in Juneau, Ketchikan, Skagway, Seward, and Whittier. The independent contractor immediately reports any reading that may be a potential violation to ADEC. ADEC staff and contractors are trained and certified to measure the level of visible emissions (opacity) from vessel stacks according to EPA-approved protocols (Method 9).

In 2002, ADEC joined with the U.S. Forest Service to enable monitoring of cruise ship emissions in Tracy Arm, a popular fiord 30 miles south of Juneau. In 2008 Forest Service Kayak Rangers monitored cruise ship emissions while patrolling Tracy and Endicott Arms.

### Enforcement

For the 2008 season, ADEC issued 10 Notice of Violations (NOVs). Three were based on U.S. Forest Service readings in Tracy Arm and Endicott Arm. ADEC and Department of Law settled with the cruise lines for all of the NOVs. By entering into the settlements the cruise lines did not admit that any violations occurred.

Ship Name	# of NOVs	Penalty paid	Notes
Celebrity Mercury	1	\$32,500	
Celebrity Millennium	2	\$0	\$65,000 suspended contingent upon no violations in 2010.
Clipper Pacific- "Peace Boat"	1	\$32,500	
Island Princess	1	\$0	Signed Compliance Order by Consent with remedial measures. \$32,500 suspended contingent upon no violations in 2010. Paid \$3,462 as part of the COBC.
Norwegian Star	2	\$32,500	\$32,500 suspended contingent upon no violation in 2010.
Oosterdam	1	\$32,500	
Rhapsody of the Seas	1	\$32,500	
Serenade of the Seas	1	\$32,500	
<b>Totals</b>	<b>10</b>	<b>\$195,000</b>	<b>\$130,000 Penalties suspended</b>

The number of NOVs that DEC has issued for opacity is listed in Figure 1 on the next page.

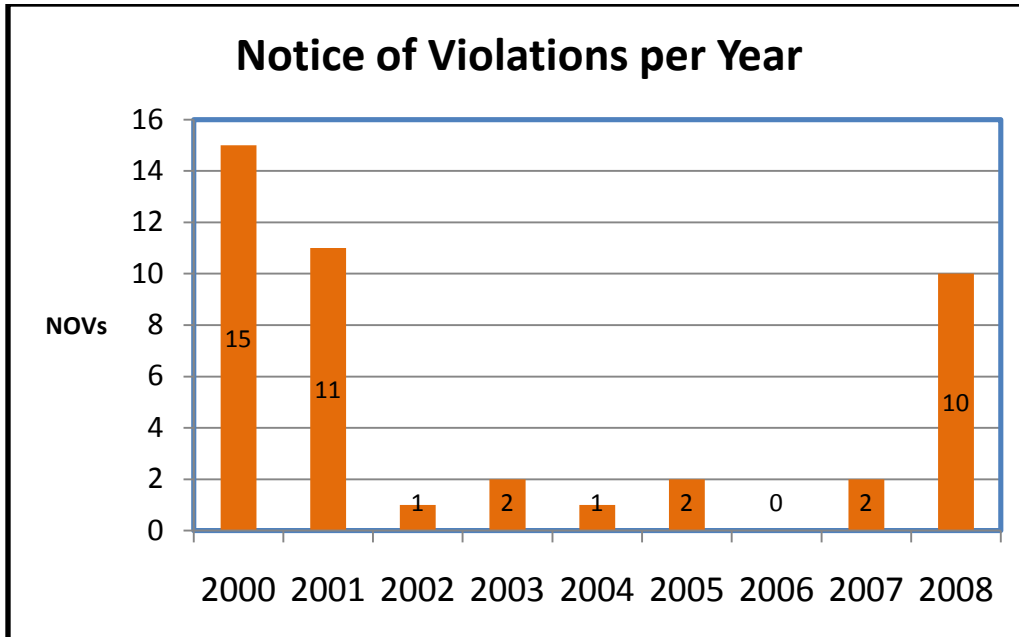


Figure 1

### Public Complaints

Over the past several years, the ADEC Cruise Ship Program has received public complaints about cruise ship smokestack visible emissions (Figure 2). Staff responds to these public complaints by doing opacity readings in accordance with EPA approved protocols (Method 9). There were 36 complaints received by the Cruise Program in 2008. Additional complaints were received by ADEC's Office of the Commissioner and Division of Air. Approximately 1/3 of the complaints involved the Clipper Pacific, also known as the "Peace Boat." Many complaints did not mention a particular vessel, but were concerning the overall air quality in Juneau.

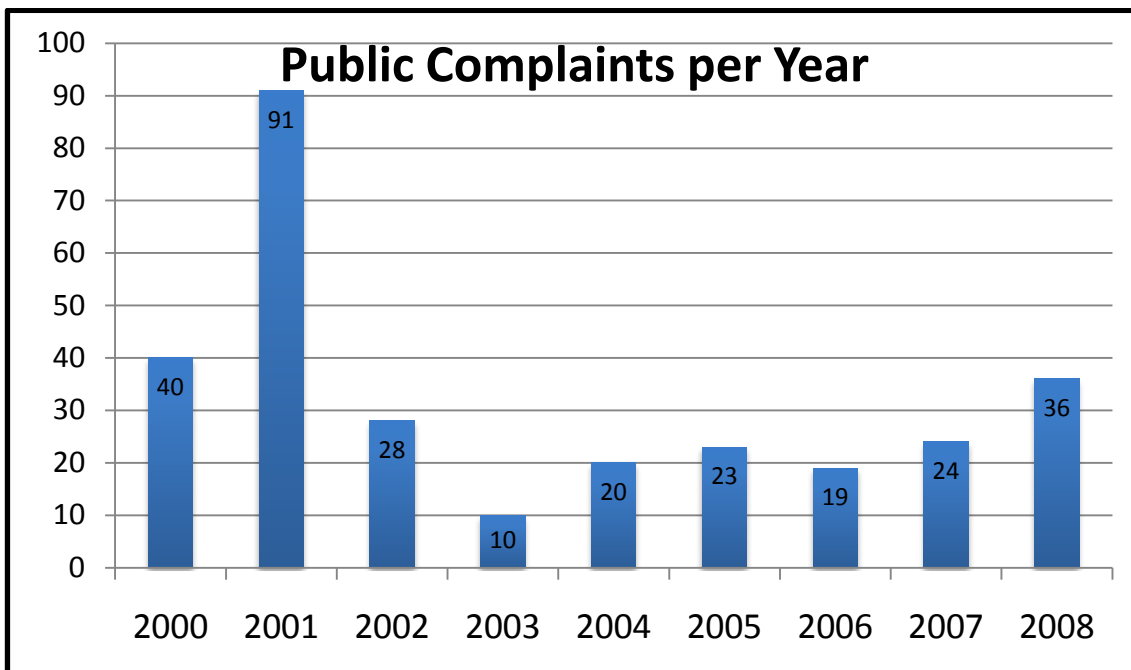


Figure 2