

Alaska Air Compliance of Cruise Ships & State Ferries 2025 Annual Report

AIR QUALITY COMPLIANCE PROGRAM



Ships docked in Juneau Alaska 2025



Alaska Department of Environmental Conservation

TABLE OF CONTENTS

ABBREVIATIONS AND ACRONYMS	2
INTRODUCTION	3
COMPLIANCE MONITORING & ENFORCEMENT SUMMARY	4
PUBLIC COMPLAINTS RESPONSE SUMMARY	8

ABBREVIATIONS AND ACRONYMS

<i>AAC:</i>	<i>Alaska Administrative Code</i>
<i>ADEC:</i>	<i>Alaska Department of Environmental Conservation</i>
<i>AS:</i>	<i>Alaska Statute</i>
<i>CFR:</i>	<i>Code of Federal Regulations</i>
<i>COBC:</i>	<i>Compliance Order by Consent</i>
<i>EGCS:</i>	<i>Exhaust Gas Cleaning System (scrubber)</i>
<i>EPA:</i>	<i>United States Environmental Protection Agency</i>
<i>ESA:</i>	<i>Expediated Settlement Agreement</i>
<i>M9:</i>	<i>EPA Reference Method 9</i>
<i>MOU:</i>	<i>Memorandum of Understanding</i>
<i>NOV:</i>	<i>Notice of Violation</i>
<i>SA:</i>	<i>Settlement Agreement</i>
<i>USFS:</i>	<i>United States Forest Service</i>



Villa Vie Odyssey, moored in Juneau, 2025

INTRODUCTION

This is an annual report by the Alaska Department of Environmental Conservation's (ADEC) Division of Air Quality's Air Compliance Program, intended to provide information on State of Alaska monitoring, compliance, and enforcement efforts with cruise ship and state ferry air pollution.



Radiance of the Seas, Ketchikan, 2025

COMPLIANCE MONITORING & ENFORCEMENT SUMMARY

Objective. To protect the Alaskan environment and public health by ensuring that air emissions from marine vessels in the state do not create unhealthy air. This is accomplished through the monitoring of the opacity of air emissions from cruise ships and state ferries. Opacity is an indicator of air pollution by measuring the amount of light blocked by combustion exhaust from engines or burning materials.

The goal in monitoring marine vessel opacity is to conduct consistent opacity readings primarily within Alaska's busiest cruise ship ports: Juneau, Ketchikan, and Skagway. ADEC staff and readers provided by a contractor will travel to other ports during the season to conduct readings. While the primary focus is to monitor large cruise ships, reasonable efforts are made by ADEC staff and the contractor to conduct opacity readings on other vessels including small cruise ships and state ferries.

Authority. AS 46.03.020 establishes the authority of the Department to regulate air emissions. Marine vessel visible emission standards are established in 18 AAC 50.070. AS 46.03.488 allows the Department to monitor opacity from commercial passenger vessels and any direct or indirect environmental effects. AS 46.03.480 established fees for commercial passenger vessels to fund ADEC compliance and monitoring activities.

Implementation. The regulation 18 AAC 50.070 applies to visible emissions, excluding water vapor, of marine vessels within three miles of the Alaska coastline. Time and percentage exemptions to the established opacity limit of 20% are allowed for engine startup, maneuvering, and other specific operations. The Air Quality (AQ) compliance program uses the US Environmental Protection Agency (EPA) Reference Method 9 (Method 9 or M9) readings to provide data for determining compliance with the regulatory standards. This method has been approved by the EPA as part of the Federally Enforceable Air Quality Control State Implementation Plan under 40 CFR §52.70(28)(i). The AQ Program monitors environmental air compliance, as well as the direct and indirect environmental effects of cruise ships and state ferries air emissions.

Compliance Monitoring. Compliance with opacity requirements is determined through use of Method 9 observations. Observations are made by ADEC staff and contracted opacity readers trained and certified in M9. The contractor for opacity readings is FLAT LAKE Engineering LLC, based in Ketchikan, AK with additional staff in Juneau and Anchorage, AK.

Weather constrained opacity readings in 2025 early in the cruise ship season, with significant rainfall and wind in coastal Alaska. This prevented planned readings in Whittier and other communities. Even with the logistical constraints, ADEC staff and the Contractor were able to obtain a record program number of opacity readings (625).

A Memorandum of Understanding (MOU) exists between US Forest Service (USFS) and DEC Division of Air to monitor air emissions and from marine vessels operating in Holkham Bay, Tracy Arm, Endicott Arm, and/or Stephens Passage. The latest MOU was executed May 22, 2023, and is effective through May 1, 2028. In 2025, ADEC provided the necessary funding for two USFS personnel to become certified in Method 9. Federal hiring restrictions and cuts prevented monitoring in 2025.

2025 Results. Summaries of opacity readings are available in Tables 1 to 4.

Table 5 summarizes recent enforcement actions.

Compliance monitoring: 625 Method 9 readings performed

Enforcement: 3 Readings of Interest are still under investigation, though no formal determination has been made.

Table 1: 2025 Contractor Opacity Readings

Location	Readings
Juneau	185
Ketchikan	177
Skagway	24
Petersburg	6
Sitka	8
Anchorage	8
Total Opacity Readings	408

Table 2: 2025 DEC Staff Opacity Readings

Location	Readings
Juneau	168
Ketchikan	35
Sitka	14
Total Opacity Readings	217

Table 3: 2025 Opacity Reading Count by Port

Port	Readings
Juneau	353
Ketchikan	212
Skagway	24
Haines	0
Hoonah	0
Sitka	22
Anchorage	8
Petersburg	6
Whittier	*

Table 4: Summary: Opacity Readings Per Year

Year	Readings
2016	388
2017	552
2018	480
2019	447
2020	12
2021	533
2022	524
2023	425
2024	421
2025	625

*Note- a reading was attempted in Whittier, but weather prevented reading. Weather also prevented planned travel to other communities.

Figure 1: Readings per year 1992-2025

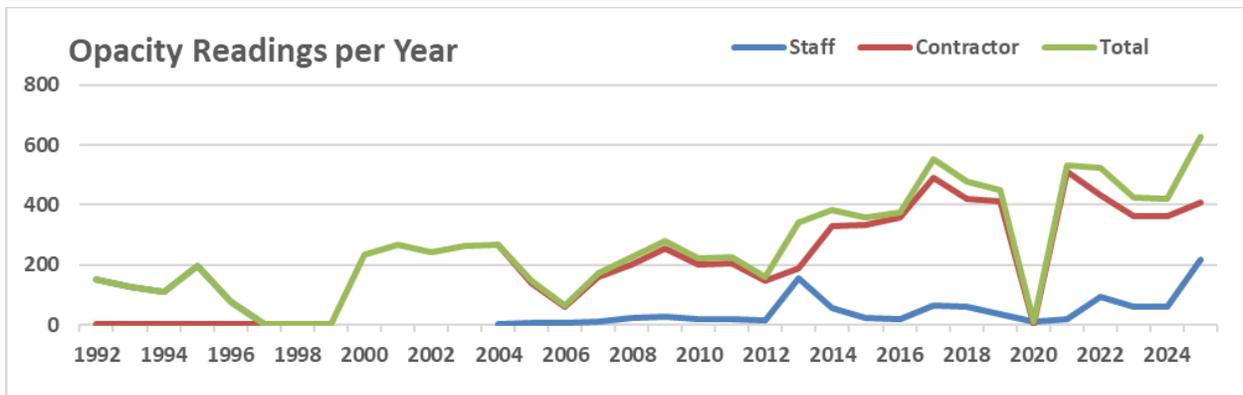
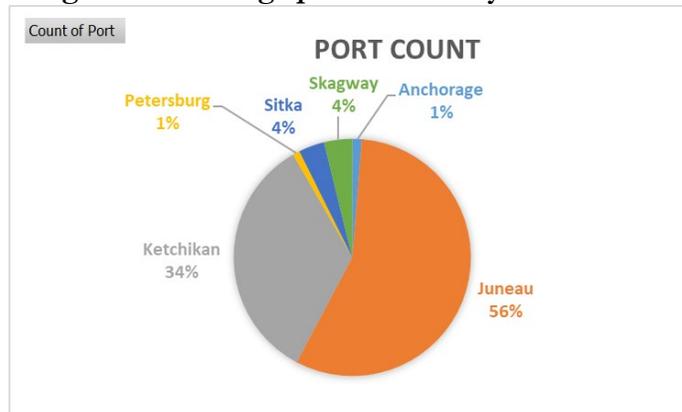


Figure 2: Readings per community in 2025



Enforcement Actions Update

1. Alaska Department of Transportation and Public Facilities, Alaska Marine Highway System (AMHS):

AMHS entered into a Compliance Order by Consent (COBC) settlement in 2022. The COBC is based on five counts of noncompliance events observed of the *M/V Kennicott* while it operated in Alaskan waters during 2019 and 2020.

The COBC requires the Respondent to fully and timely perform, comply with and/or complete remedial measures, corrective actions, and other requirements (e.g., conduct two M9 observations every month the vessel operates in revenue service) as required by the Order.

Suspended payment: Payment in the amount of \$187,500 was suspended, provided that the *Kennicott* complies with all conditions of this Order.

2025 Update: The *M/V Kennicott* was out of revenue service for most of 2025 with installation of replacement generators and other work. A winter resumption of service occurred and ADEC and AMHS plan opacity readings in early 2026 to determine compliance of the new generators with the COBC.

Table 5: Violations Per Year Summary

Year	2017	2018	2019	2020	2021	2022	2023	2024	2025
Violations	2	9	7	4	3	14	6	4 ¹	3 ¹

Table 6: Opacity Notice of Violations (2023)

Vessel	Date	Port	Status
Nieuw Amsterdam	7/12/23	Skagway	Settled
Norwegian Spirit	5/13/23	Juneau	Settled
Norwegian Spirit	8/19/23	Juneau	Settled
Discovery Princess	7/23/23	Skagway	Settled
Wilderness Legacy	5/12/23	Juneau	Settled
Viking Orion	5/17/23	Sitka	Settled

¹ These violations are still under investigation, and no formal determination has been made.

Table 7: Opacity Notice of Violations Issued (2022)

Vessel	Date	Port	Status
Norwegian Sun	5/23/22	Juneau	Settled
Norwegian Jewel	8/25/22	Juneau	Settled
Wilderness SS Leg.	6/4/22	Juneau	Settled
Majestic Princess	5/10/22	Juneau	Settled
Ovation of the Seas	5/15/22	Juneau	Settled
Quantum of the Seas	7/29/22	Juneau	Settled
Silver Muse	5/21/22	Juneau	Settled
Carnival Splendor	5/6/22	Juneau	Settled
Carnival Splendor	5/6/22	Juneau	Settled
Carnival Splendor	5/28/22	Juneau	Settled
Carnival Spirit	6/12/22	Juneau	Settled
Carnival Spirit	6/12/22	Juneau	Settled
Carnival Spirit	7/24	Juneau	Settled
Celebrity Solstice	5/9/22	Juneau	Settled

Table 8: Opacity Notice of Violations Issued (2021)

Vessel	Date	Port	Status
Ovation of the Seas	8/22/21	Juneau	Settled
Ovation of the Seas	10/4/21	Juneau	Settled
Ovation of the Seas	10/10/21	Ketchikan	Settled

Table 9: Opacity Violations Issued (2020)

Vessel	Date	Port	Status
AMHS Kennicott	7/08/20	Juneau	Settled
AMHS Kennicott	8/05/20	Juneau	Settled
AMHS Kennicott	8/19/20	Juneau	Settled
AMHS Kennicott	10/07/20	Whittier	Settled

PUBLIC COMPLAINTS RESPONSE SUMMARY

The Department catalogues all public complaints and responds on complainant request or if the nature of complaint warrants additional inquiry. Important details complainants can provide the Department include date, time, name of ship or source, location, duration, and a description of the emissions with photos depicting location in relation to complainant. The Department will conduct an opacity reading of the subject if timing and staff availability allows. The number of public complaints received by the Department each year over the last decade is available in Figure 3.

The Department received 19 public complaints during the 2025 cruise ship season.

Figure 3: Complaints per year over the last decade

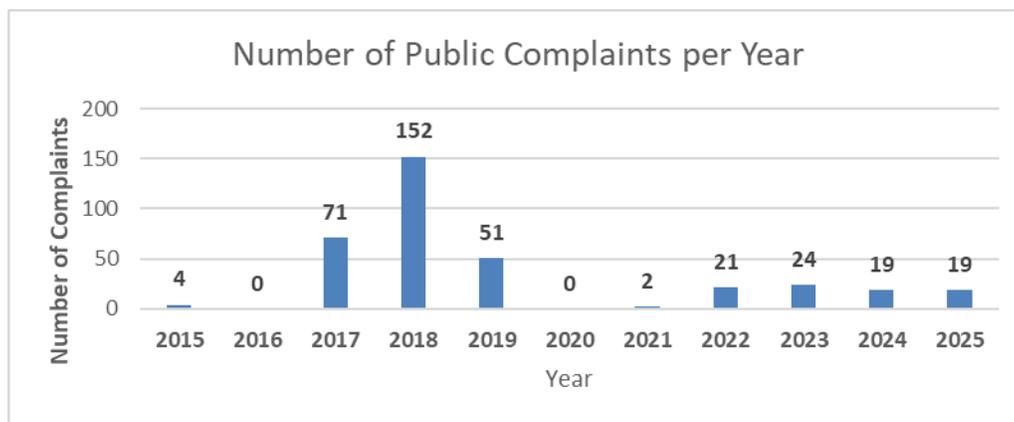


Table 10: 2025 CPVEC Public Complaints

Vessel	Date	Location	M9?	Description
Norwegian Bliss	4/14/2025	Juneau	Yes	Web complaint: large amount of smoke.
Norwegian Jade	4/25/2025	Juneau	Yes	Web complaint: dark smoke when coming into port
Norwegian Jade	4/30/2025	Juneau	Yes	Web complaint: smoke when ship arrived
Unknown	5/9/25	Juneau	No	Web complaint: ship not named, identified as Princess CL. Grand Princess was scheduled for shore power tests.
Anthem of the Seas	5/11/25	Juneau	Yes	Web complaint: heavy smoke on arrival
Anthem of the Seas	5/11/25	Juneau	Yes	Forwarded complaint by email: smoke from ship at dock
Anthem of the Seas	5/11/25	Juneau	Yes	Web complaint: black smoke until it tied up
Grand Princess	6/8/25	Ketchikan	Yes	Email complaint: photo of ship submitted with no other information.

Table 10: 2025 CPVEC Public Complaints (Cont'd)

Vessel	Date	Location	M9?	Description
Unknown	6/14/25	Juneau	Yes	Phone call: general complaint on ships and air quality.
Unknown	7/7/25	Juneau	Yes	Web complaint: smell and smoke. Staff took readings but no excessive smoke observed from ships at the time.
Unknown	7/8/25	Juneau	Yes	Multiple complaints by phone regarding smoke and strong smell of fuel in the air, several asked if ships were source. Federal and State office buildings had people who had to work from home due to smell. Source was identified by staff as non-ship, a shoreside source was identified and contacted.
Norwegian Jade	7/31/25	Juneau	Yes	Phone complaint: smoke all day from ship.
Anthem of the Seas	8/3/25	Juneau	No	Email complaint: smoke while ship maneuvering in harbor.
Viking Venus	8/14/25	Juneau	Yes	Web complaint: smoke at arrival.
General	8/22/25	Juneau	Yes	Multiple complaints regarding smoke and haze from ships and shore, staff identified non ship source associated with clearing and burning. Staff conducted readings of ships
General	8/28/25	Juneau	Yes	Web complaint: no ship named. General smoke.
Norwegian Jade	8/28/25	Juneau	Yes	Phone call: smoke at ship arrival, causing headaches.
Norwegian Jade	8/28/25	Juneau	Yes	Web complaint: smoke from Norwegian Jade
Norwegian Jade	9/4/25	Juneau	Yes	Email complaint: submitted photos, smoke from Jade

Photos from public complaints submitted to DEC



Figure 3: *Norwegian Bliss* April 14th, 2025, in Juneau, AK



Figure 4: *Norwegian Jade* April 25, 2025, in Juneau, AK



Figure 5: *Norwegian Jade* April 30, 2025, in Juneau, AK



Figure 6 The first complaint on the Anthem of the Seas May 11, 2025, in Juneau, AK



Figure 7 The second complaint on the Anthem of the Seas May 11, 2025, in Juneau, AK



Figure 8: Grand Princess June 8, 2025 in Ketchikan, AK



Figure 9: Viking Venus, August 14, 2025 in Juneau, AK



Figure 10: Anthem of the Seas complaint August 3, 2025

The following photos are from sources generating complaints identified as not related to the ships:



Figure 11: Smoke from lot clearing burn near DOT building in Juneau (8/14/25 SnowCloud webcams)



Figure 12: Hotel boiler in Juneau from a state building