

STATE OF ALASKA

**DEPT. OF ENVIRONMENTAL CONSERVATION
OFFICE OF THE COMMISSIONER**

FRANK H. MURKOWSKI, GOVERNOR

410 Willoughby Ave., Ste 303

Juneau, AK 99801-1795

PHONE: (907) 465-5066

FAX: (907) 465-5070

<http://www.state.ak.us/dec/>

February 12, 2004

CTS 04.004

John Iani, Regional Administrator
Environmental Protection Agency, Region 10
1200 Sixth Avenue
Seattle, WA 98101

FAXED
2/13/04

Re: Governor's Recommendation for PM 2.5 Area Designation

Dear Mr Iani:

On behalf of Governor Murkowski, I am pleased to recommend that all areas of Alaska be designated in attainment with the fine particle air quality standard (PM_{2.5}). Please accept this letter as an initial designation in accordance with the requirements of Section 107(d)(A) of the Clean Air Act.

Air quality measurement data collected for the past three or more years at various sites around the state indicates that Alaska air quality is cleaner than the health based 24 hour exposure limit of 65 micrograms per cubic meter (ug/m³) of air and cleaner than the annual exposure limit of 15 ug/m³. Alaska conducted monitoring in nine locations: 2 sites in Anchorage, 2 sites in Juneau and 1 site each in Fairbanks, Butte, Big Lake, Denali and Ketchikan. Monitoring locations in Alaska were selected using the professional knowledge of Department of Environmental Conservation (DEC) staff to choose locations where man-made or natural pollution sources may result in maximum concentrations.

Monitors were placed in Fairbanks, Denali and Big Lake to measure smoke from seasonal wildland fires in interior Alaska. We located monitors in Anchorage and Fairbanks to measure combustion related emissions in urbanized Alaska. Monitoring sites in Ketchikan and Juneau were selected to measure fine particle exposure from residential wood fuel heating. Seasonal windstorms can result in very high coarse size particulate pollution adjacent to glacial river systems. We thought it would be wise to examine the glacial dust contribution toward fine particle exposures near Palmer (Butte site) to better understand the impacts of this natural phenomena for health risks. And finally, we chose to perform sampling in the coastal community of Juneau where cruise ship port calls are high to examine a combined impact for marine vessels and community sources. Overall, we believe this monitoring strategy has led us to quantify the maximum PM 2.5 exposure profiles that may exist in any location of the state.

While wildland fires did occur during our sampling period and did result in some high PM 2.5 values in Fairbanks, Alaska air quality still met the new health standards. None-the-less fire smoke is a serious threat to public health and we intend to continue a strong air quality advisory program to help citizens take protective actions.

John Jani

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Winter season monitoring in our largest urban centers of Anchorage and Fairbanks indicate a parallel trend between carbon monoxide concentrations and fine particle pollution. While exposures are less than the 24 hour standard, the frequency of moderate pollution days during the winter season has a strong influence upon the annual average exposure.

The tables below present the data for the past several years in a manner that is directly comparable with the two ambient standards (exceptional event data is not removed from the data sets). I trust the data summary is helpful in providing a greater context to air quality conditions in Alaska.

Table 1. Alaska's Compliance with PM_{2.5} 24-Hour Standard 3 year average of the (98% percentile in $\mu\text{g}/\text{m}^3$)

	1999	2000	2001	2002	2003	Average
Anchorage	44	23	24	18	12 ^a	27 (4 yrs)
Fairbanks	16 ^b	64	43	43	33 ^a	50 (3 yrs)
Butte	39	28	29	35	40 ^a	31 (3 yrs)

^a only data from first three quarters available as 4th quarter data not yet submitted to AQS

^b incomplete data capture due to sampler problems

Table 2. Alaska's Compliance with PM_{2.5} Annual Standard (3 yr avg. in $\mu\text{g}/\text{m}^3$)

	1999	2000	2001	2002	2003	Highest 3 year average
Anchorage Garden	7.24	5.29	6.06	5.98	5.44 ^a	6.43
Anchorage Tudor	6.63	6.05	6.19	6.95	6.34 ^a	6.59
Fairbanks	6.34 ^b	14.87	13.33	13.03	9.24 ^a	13.74
Butte	8.01	6.07	6.35	5.54	6.75 ^a	6.81
Juneau	4.68	6.54	5.63	6.27	7.72 ^c	6.31

^a only data from first three quarters available as 4th quarter data not yet submitted to AQS

^b incomplete data capture due to sampler problems

^c incomplete data capture, site was temporary shut down for building reroofing

Please call Tom Chapple at (907) 269-7634 if you or your staff have any questions about my recommendation to designate Alaska as compliant with the fine particle, PM 2.5 air quality standards.

Sincerely,



Ernesta Ballard
Commissioner

cc: The Honorable Frank H. Murkowski, Governor