



EXECUTIVE CHAMBERS
HONOLULU

LINDA LINGLE
GOVERNOR

November 15, 2010

Mr. Jared Blumenfeld
Regional Administrator
U.S. EPA, Region IX
75 Hawthorne Street
San Francisco, California 94105

Dear Mr. Blumenfeld:

Jared,

SUBJECT: Recommended Designation for the Newly Promulgated 1-Hour Federal Nitrogen Dioxide (NO₂) National Ambient Air Quality Standard (NAAQS)

Pursuant to Section 107(d)(1) of the Clean Air Act, I am recommending that the City and County of Honolulu (island of Oahu) be designated in attainment of the 1-hour NO₂ NAAQS, and all other counties in the state be designated as unclassifiable. The Department of Health (DOH), which manages the ambient air monitoring network, has determined that the quality-assured NO₂ data for the calendar years 2007 through 2009 is in attainment with the new federal NO₂ standard.

The state has two air monitoring stations located in the City and County of Honolulu using Federal Reference Method samplers for the collection of NO₂ data. Attachment I contains data summaries from these stations for the 3-year 1-hour standard design value. The Kapolei station was shut down in April 2008 for needed station repairs and therefore has an incomplete 1-hour NO₂ design value for the year 2008. However, Kapolei was determined to be in attainment of the 1-hour NO₂ NAAQS when the 3-year design value was calculated using the data substitution method in accordance with 40 CFR Part 50, Appendix S.

Additionally, the DOH will comply with the requirements of 40 CFR Part 58, Appendix D, and establish one near-road NO₂ monitoring station by January 1, 2013.

Based on continuous compliance with all criteria pollutant NAAQS and ongoing monitoring of air pollution sources, the DOH has determined that there are no anticipated changes or activities that would cause a significant variation from the currently measured NO₂ values. We therefore ask for EPA's consideration of our recommendation for attainment of the NO₂ standards for the City and County of Honolulu.

We look forward to working with EPA Region IX on the final NO₂ designation. If you have any questions, please contact Mr. Wilfred Nagamine at the DOH, Clean Air Branch, at (808) 586-4200.

I hope all is well with you.

Sincerely,

Linda Lingle
LINDA LINGLE

Attachment

c: Deborah Jordan, Director, Air Division (AIR-1), U.S. EPA, Region IX
Gwen M. Yoshimura, Air Quality Analysis Office (AIR-7), U.S. EPA, Region IX

ATTACHMENT I

State of Hawaii Attainment Recommendation of the 1-Hour Nitrogen Dioxide (NO₂) National Ambient Air Quality Standard (NAAQS)

I. Introduction

The EPA supplemented the existing primary health-based annual standard with a new 1-hour NO₂ standard effective January 22, 2010.

Pursuant to the Clean Air Act 107(d) (1), states are required to make attainment, nonattainment or unclassifiable recommendations one year after promulgation of a new standard.

The state's two NO₂ monitors are located in the City and County of Honolulu, which encompasses the island of Oahu. Currently, there is no NO₂ monitoring in the counties of Kauai (islands of Kauai and Niihau), Maui (islands of Maui, Molokai, and Lanai), Kalawao (Kalaupapa settlement) or Hawaii (island of Hawaii).

This document provides NO₂ data collected at the Kapolei and West Beach air monitoring stations supporting attainment of the new 1-hour NO₂ standard for the City and County of Honolulu.

II. Attainment of the 1-Hour NO₂ NAAQS

A. NO₂ Air Monitoring Stations and Sampling Method

Table 1. Summary of NO₂ Sampling in the State of Hawaii

Station	AIRS ID	Location	MSA	NO ₂ Method
Kapolei	150030010	Kapolei, Oahu	Honolulu	FRM Chemiluminescent Analyzer
West Beach	150030011	Ko Olina, Oahu	Honolulu	FRM Chemiluminescent Analyzer

B. Data Computation

All data handling conventions and computations were according to 40 CFR 50 Appendix S: *Interpretation of the Primary National Ambient Air Quality Standards for Oxides of Nitrogen (Nitrogen Dioxide)*.

Quality assured and certified NO₂ data collected in the most recent three years (2007 to 2009) were used to determine attainment of the NO₂ standards.

In April 2008, the Kapolei station was shut-down for necessary repairs and maintenance. As a result, the second quarter of 2008 did not meet the 75% completeness requirement. However, after using the data substitution test for incomplete data year (Appendix S 3.2(c)(ii)(B)), the 1-hour primary standard design value for 2008 was determined to be valid.

1. 1-Hour NO₂ Design Values and Completeness

Attainment of the 1-hour NO₂ NAAQS is calculated per 40 CFR part 50 Appendix S, as follows:

- The 1-hour primary standard design value is the 3-year average of the annual 98th percentile daily maximum 1-hour values for a monitoring site;
- The 1-hour primary NO₂ NAAQS is met at a site when the valid 1-hour primary standard design value is less than or equal to 100 ppb (Table 1); and,
- An NO₂ 1-hour primary standard design value is valid if it encompasses three consecutive calendar years of complete data (Table 2);
 - A year is complete when all 4 quarters have at least 75% data capture;
 - If any of the years do not meet completeness requirements, the standard design value will be considered valid if the “test design value” as calculated in 3.2(c)(ii)(B) is below the level of the NAAQS (Table 3).

Table 1. 1-Hour Design Value: 2007 to 2009

	2007	2008	2009	3-year average
Kapolei	26 ppb	26 ppb	26 ppb	26 ppb
West Beach	24 ppb	18 ppb	26 ppb	23 ppb

Table 2. Quarterly Data Capture Rate (percent): 2007 to 2009

	2007				2008				2009			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Kapolei	100	100	96	97	87	74 ¹	96	89	98	93	100	100
West Beach	88	96	97	100	100	100	100	96	94	79	99	88

¹ Does not meet completeness requirement of greater than or equal to 75%

The data substitution test was applied to the second quarter of 2008 for the Kapolei station. Since the 1-hour primary standard design value was below the level of the NAAQS, it was validated using method 3.2(c)(ii)(B) and resulted in a test design value below the level of the NAAQS. Therefore, the actual design value is valid. Table 3 summarizes the results of the data substitution test.

Table 3. Calculation of Test Design Value for Second Quarter 2008 at the Kapolei Air Monitoring Station (150030010)

Max 1-hour value: Q2 2008	Max 1-hour value: Q2 2007-2009	Value used in substitution	Recalculated 98 th percentile value	Test design value <100 ppb?
17 ppb	30 ppb	30 ppb	30 ppb	Yes, therefore actual design value is valid

The City and County of Honolulu (island of Oahu) is in attainment of the 1-hour NO₂ NAAQS. Kauai, Maui, Kalawao, and Hawaii counties are unclassifiable.