

APPENDIX C

U. S. EPA Letter Regarding Arvin Site Relocation



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

75 Hawthorne Street
San Francisco, CA 94105-3901

MAY 02 2016

Ms. Karen Magliano
Chief, Air Quality Planning and Science Division
California Air Resources Board
1001 I Street, P.O. Box 2815
Sacramento, California 95812

Dear Ms. Magliano:

This letter provides the U.S. Environmental Protection Agency's (EPA's) review and approval for the California Air Resources Board's (CARB's) relocation of the ozone (O₃) State/Local Air Monitoring Station (SLAMS) monitor at the Arvin - Bear Mountain site (Air Quality System (AQS) Site ID: 06-029-5001) to the proposed Arvin - Di Giorgio site (AQS Site ID: 06-029-5002) in Kern County, California.

On April 29, 2016, CARB sent a letter to EPA with a description of this network change. In this letter, CARB explained the need to relocate the Arvin - Bear Mountain O₃ monitor due to logistics beyond the state's control (i.e., expiration of the property lease). Per 40 CFR 58.14, monitoring agencies are required to obtain EPA approval for the relocation of SLAMS monitors. EPA has reviewed CARB's relocation request for the Arvin - Bear Mountain site against criteria contained in 40 CFR 58.14(c)(6) and approves this request as described below.

Overview of Arvin – Bear Mountain Relocation History

In July 2009, the Arvin-Edison Water Storage District notified CARB that it was letting the lease that allowed CARB to operate the Arvin - Bear Mountain site on the Water District's property expire on August 31, 2009. The Water District directed CARB to remove its equipment from the site by that date, despite efforts by both CARB and San Joaquin Valley Air Pollution Control District (SJVAPCD) to negotiate with the Water District to keep the Arvin - Bear Mountain site in operation. CARB immediately initiated a search process for potential replacement site locations that were as nearby as practical considerations allowed, which is described in detail in their request letter, but generally included: selecting the criteria that would be used to evaluate an appropriate replacement site, identifying potential sites, conducting parallel monitoring, analyzing subsequent data, and preparing the site relocation package for submittal to EPA.

In August 2009, CARB began the search for potential sites to evaluate as a suitable relocation site. As part of CARB's search process, CARB reviewed adherence to EPA relocation criteria, generated meteorological and air quality statistics, and reviewed satellite image maps to characterize the Arvin - Bear Mountain site. Several other factors were considered such as the local topography and land uses, nearby traffic counts, lack of impact from local NO_x and other urban sources, and the predominant wind direction coinciding with high 1-hour O₃ concentrations using monitoring data from the most recent complete (May through October 2008) O₃ season. Logistics were also considered, including limiting the search to public property to ensure lease longevity, general site access, existing infrastructure, and adequate power supply. The initial search resulted in 31 possible replacement sites located within five miles of the Arvin - Bear Mountain site. CARB then refined the search with more specific search criteria.

CARB's refined search concluded with two potential replacement sites that met all search criteria, both located on Di Giorgio Elementary School property.

The Di Giorgio Elementary School property at 19405 Buena Vista Blvd, Arvin, California 93203 was chosen as a potential replacement site because this location was the closest site in proximity to the Arvin - Bear Mountain site (approximately 2.2 miles northwest of the Arvin - Bear Mountain site) that met all search criteria, was minimally impacted by local NO_x sources, immediately available, and had electricity. Adjacent land uses are similar to those at the Arvin - Bear Mountain site, with vineyards to the west and north, orchards to the east and southwest, and light urban use to the southeast. Local topography is flat, with predominant wind direction and nearby traffic counts similar to the Arvin - Bear Mountain site.

Although the lease ended on August 31, 2009, SJVAPCD negotiated with the Water District to continue operation of the Arvin - Bear Mountain site through October 31, 2010. This additional time allowed CARB to conduct parallel monitoring with the potential Arvin - Di Giorgio replacement site, which began temporary operation on November 16, 2009. The Arvin - Bear Mountain and Arvin - Di Giorgio sites operated in parallel from November 16, 2009 through October 31, 2010, when the Arvin - Bear Mountain site was permanently shut down, allowing for almost a year of parallel O₃ monitoring at the two sites. As described in CARB's relocation request, O₃ concentrations between May and October were generally 6-7 ppb lower at the Arvin - Di Giorgio site compared to the Arvin - Bear Mountain site and showed a strong correlation between O₃ data at these two sites.

Prior to completion of CARB's relocation request, a potential site was identified on Tejon Ranch Conservancy property approximately 0.3 mi east of the Arvin - Bear Mountain site, which would have been closer than the Arvin - Di Giorgio site to the Arvin - Bear Mountain site. To ensure that the most suitable replacement site was selected, CARB requested access to the Tejon Ranch Conservancy land for a short-term study of O₃ concentrations and potential long-term monitoring site operation (see Attachment 1 in CARB's relocation request). Access to this location for purposes of establishing an air monitoring site was denied by the Tejon Ranch Conservancy Board (See Attachment 2 in CARB's relocation request).

Regulatory Requirements

According to certified data submitted to AQS, 8-hour and 1-hour daily maximum O₃ concentrations at the Arvin - Bear Mountain O₃ monitor were among the highest levels in the Bakersfield Metropolitan Statistical Area (MSA) at the time of its discontinuation on November 1, 2010 and the site was therefore considered to represent the maximum concentration site for the MSA. EPA regulations (40 CFR part 58) require, among other things, that at least one O₃ site for each MSA must be designated to record the maximum concentration for that area. The closure of the Arvin - Bear Mountain site without subsequent approval of a replacement site prevented the designation of a maximum concentration O₃ site for the Bakersfield MSA.

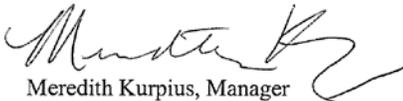
40 CFR 58.14(c)(6) describes the relocation requirements if a SLAMS monitor is not eligible for removal under the criteria in 40 CFR 58.14 (c)(1) through (c)(5) and states that, "[a] SLAMS monitor... may be moved to a nearby location with the same scale of representation if logistical problems beyond the State's control make it impossible to continue operation at its current site." As described above, the land uses and sources for O₃ near the Arvin - Di Giorgio site are similar to the Arvin - Bear Mountain site. Given the logistical constraints and factors considered by CARB, the Arvin - Di Giorgio site provides the most similar concentrations from similar sources to the original Arvin - Bear Mountain site, thus fulfilling the requirement that the replacement site is at a nearby location with the same scale of representation. Furthermore, relocation of this monitoring will not prevent SJVAPCD from meeting 40 CFR 58, Appendix D requirements, including that for a maximum concentration O₃ site in the Bakersfield MSA.

Conclusion

Based on the above assessment of O₃ concentrations, land use, and nearby sources, EPA approves CARB's relocation of the Arvin - Bear Mountain O₃ SLAMS monitor to the Arvin - Di Giorgio site. As this is a relocation, the data from the old and new sites will be combined to form one continuous data record for design value calculations. Please note this in the AQS comment field for both the old and new AQS sites. Please attach this approval letter and update the relevant monitor and site information in your next Ambient Air Quality Monitoring Network Plan.

If there are any questions regarding this letter, please feel free to contact me at (415) 947-4534 or Dena Vallano of my staff at 415-972-3134.

Sincerely,



Meredith Kurpius, Manager
Air Quality Analysis Office

cc (via email): Ravi Ramalingam, CARB
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