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ALBUQUERQUE-BERNALILLO COUNTY AIR QUALITY CONTROL BOARD

State Implementation Plan for Air Quality (SIP)

To Address Infrastructure Requirements of Section 110(a)(2)(A)-(M) of the Clean Air Act (CAA) to Implement the 2010 Nitrogen Dioxide (NO_2) National Ambient Air Quality Standard (NAAQS)

~~"Infrastructure SIP"~~

~~Public Review Draft~~
~~February 26, 2013~~

Adopted
~~Month, Day, Year~~ June 12, 2013

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~~Mx. XXXX XXXXX~~ Dona Upson, MD, Chair
Albuquerque-Bernalillo County Air Quality Control Board

Executive Summary

"NO_2 is a reddish-brown, highly reactive gas that is formed in the ambient air through the oxidation of nitric oxide (NO). Nitrogen oxides (NO_X) is the term used to describe the sum of NO, NO_2, and other oxides of nitrogen. A variety of NO_X compounds and their transformation products occur both naturally and as a result of human activities. Anthropogenic (i.e. manmade) emissions of NO_X account for a large majority of all nitrogen inputs to the environment. The major sources of anthropogenic NO_X emissions are high temperature combustion processes, such as those occurring in automobiles and power plants. Most NO_X from combustion sources (about 95 percent) are emitted as NO, which is readily converted to NO_2 in the environment; the remainder is emitted largely as NO_2. Natural sources of NO_X are lightning, biological and abiological processes in soil, and stratospheric intrusion." [p. 9533 Federal Register, Vol. 77, No. 33, 2/17/12] (http://www.gpo.gov/fdsys/pkg/FR-2012-02-17/pdf/2012-3150.pdf#page=1)

On January 22, 2010, the Administrator of the U.S. Environmental Protection Agency (EPA), Lisa Jackson, promulgated a new NAAQS for NO_2, effective April 12, 2010 [FR Vol. 75, No. 26, 6474-6537, February 9, 2010]. Based on its review of the air quality criteria for oxides of nitrogen and the primary NAAQS for oxides of nitrogen as measured by NO_2, EPA has made revisions to the primary NO_2 NAAQS in order to provide requisite protection of public health. Specifically, EPA has established a new 1-hour standard at a level of 100 parts per billion (ppb), based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations, to supplement the existing annual standard of 0.053 parts per million (ppm) / 53 parts per billion (ppb). "All areas presently meet the current (1971) NO_2 NAAQS, with annual NO_2 concentrations measured at area-wide monitors well below the level of the standard (53 ppb). Annual average ambient NO_2 concentrations, as measured at area-wide monitors, have decreased by more than 40% since 1980. Currently, the annual average NO_2 concentrations range from approximately 10-20 ppb."(EPA, 2012. *Nitrogen Dioxide: Basic Information*. Accessed November 2012: http://www.epa.gov/airquality/nitrogenoxides/basic.html). On February 17, 2012, the EPA designated all areas in the United States as "unclassifiable/attainment" for the new 1-hour NO_2 NAAQS [FR Vol. 77, No. 33, 9532-88, effective 2/29/12].

Pursuant to Sections 110(a)(1) and 110(a)(2) of the CAA, each State is required to submit a plan to provide for the implementation, maintenance, and enforcement of a newly promulgated or revised NAAQS within 3 years of promulgation of a new or revised standard. Section 110(a)(1) of the CAA addresses the timing requirement for the submissions of any "Infrastructure SIP" revisions, while Section 110(a)(2) of the CAA lists the required elements that comprise the "Infrastructure SIP". Therefore, this plan or "Infrastructure SIP" addressing the requirements of Sections 110(a)(2)(A)--(M) of the CAA ~~is~~ was due February 9, 2013.

A 'SIP' identifies how the state will attain and maintain the primary and secondary NAAQS. The SIP contains regulations, source-specific requirements, non-regulatory items such as plans and inventories, and in some cases additional requirements promulgated by the EPA. The initial SIPs for states were approved by EPA on May 31, 1972 [FR Vol. 37, No. 105, pp. 10842-10906]. A state may revise its SIP with EPA approval as necessary. The federally enforceable

	and procedures necessary to- *(i) monitor, compile, and analyze data on ambient air quality; and* *(ii) upon request, make such data available to the Administrator.*	which shows a 1-hour Design Value (2008-2010) of 55 ppb, and an Annual Design Value (2008-2010) of 12 ppb. [Table 2-1: *EPA Region 6 NO_2 Monitor Sites in 2010*, TCEQ NO_2 i-SIP (http://www.tceq.texas.gov/assets/public/implementation/air/sip/no2/NO2infra_ado.pdf)] The area within the jurisdiction of the Air Board is currently in attainment for the existing annual NO_2 standard. "Based on its review of the air quality criteria for oxides of nitrogen and the primary NAAQS for oxides of nitrogen as measured by NO_2, EPA has made revisions to the primary NO_2 NAAQS in order to provide requisite protection of public health as appropriate under Section 109 of the CAA. Specifically, EPA is supplementing the existing annual standard for NO_2 of 53 ppb by establishing a new short-term standard based on the 3-year average of the 98th percentile of the yearly distribution of 1-hour daily maximum concentrations. EPA is setting the level of this new standard at 100 ppb. EPA is also establishing requirements for an NO_2 monitoring network. . .at locations where maximum NO_2 concentrations are expected to occur" [FR Vol. 75, No. 26, 6474-6537, 2/9/10]. Since EPA changed the form of the standard (i.e. "The form is the air quality statistic used to determine if an area meets the standard." *Fact Sheet Final Revisions To The National Ambient Air Quality Standards For Nitrogen Dioxide* http://www.epa.gov/apti/video/pdfs/NO2%20NAAQS%20Fact%20Sheet.pdf) and the method of data collection (i.e. near-road monitoring), no near-road 1-hour NO_2 data were collected in the past. Consequently, the EPA utilized emissions data from 2006-2008 to extrapolate design values for the new standard in order to make preliminary area designations [FR Vol. 77, No. 33, 9532-9588, 2/17/2012]. EPA calculations showed that the monitored levels of NO_2 within the jurisdiction of the Air Board had a theoretical design value of 58 ppb, which indicated 'attainment' status (see http://www.epa.gov/air/nitrogenoxides/pdfs/NO2_final_designvalues_0608_Jan22.pdf). However, actual 1-hour data, to support these calculations will be necessary before EPA officially designates this area as being in 'attainment'. Hence, this area is neither in 'attainment' nor in 'nonattainment', but rather, it is 'unclassifiable'. As a consequence of this lack of data EPA designated all areas in the United States as "unclassifiable / attainment" for the 2010 NO_2 NAAQS, effective 2/29/2012. [FR Vol. 77, No. 33, 9532-9588, 2/17/2012] "As part of the NAAQS rulemaking, the EPA promulgated revisions to requirements for minimum numbers of ambient NO_2 monitors that included new monitoring near major roads in larger urban areas. In addition, these monitoring requirements included requirements to characterize NO_2 concentrations representative of wider spatial scales in larger urban areas (area-wide monitors), and monitors intended to characterize NO_2 exposures of susceptible and vulnerable populations." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12] "Specifically, the requirements for these minimum monitoring requirements are as follows: The first tier of the ambient NO_2 monitoring network requires near-road monitoring [See 40 CFR Part 58, Appendix D, Section 4.3.2]. "NO_2 monitors must be placed in proximity to road segments with the highest-ranked AADT levels, and no more than 50 meters (164.042 feet) away from the edge of the nearest traffic lane."(*Fact Sheet Final Revisions To The National Ambient Air Quality Standards For Nitrogen Dioxide* http://www.epa.gov/apti/video/pdfs/NO2%20NAAQS%20Fact%20Sheet.pdf

		There must be one microscale near-road NO_2 monitoring station in each Core Based Statistical Area (CBSA) with a population of 500,000 or more persons to monitor a location of expected maximum hourly concentrations sited near a major road." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12]. A 'CBSA' is "a concept developed by the federal Office of Management and Budget (OMB) in order to standardize geographic and population descriptions so that data from one federal agency may be reliably related to data from another federal agency without having to recheck definitions used by each agency." (*The Complete Real Estate Encyclopedia*, Evans & Evans, page 109: http://cdn1.media.zp-cdn.com/21275/The_Complete_Real_Estate_Encyclopedia-53b767.pdf). A CBSA is thus defined by the OMB as: "A statistical geographic entity consisting of the county or counties associated with at least one core (urbanized area or urban cluster) of at least 10,000 population, plus adjacent counties having a high degree of social and economic integration with the core as measured through commuting ties with the counties containing the core. Metropolitan and Micropolitan Statistical Areas are the two categories of Core Based Statistical Areas." [FR Vol. 75, No. 123, June 28, 2010, p. 37251] (http://www.whitehouse.gov/sites/default/files/omb/assets/fedreg_2010/06282010_metro_standards-Complete.pdf) ~~"NO_2 monitors must be placed in proximity to road segments with the highest-ranked AADT levels, and no more than 50 meters (164.042 feet) away from the edge of the nearest traffic lane."(*Fact Sheet Final Revisions To The National Ambient Air Quality Standards For Nitrogen Dioxide* http://www.epa.gov/apti/video/pdfs/NO2%20NAAQS%20Fact%20Sheet.pdf~~ ~~The population within Albuquerque's CBSA reached 845,913 in 2008 therefore~~ The population within the CBSA for Albuquerque, NM (Code 10740) was estimated to be 887, 077 in the 2010 census; and encompasses Bernalillo County which has a population of 662, 564, and the City of Albuquerque, which has a population of 545, 852. Therefore the CBSA threshold of 500,000 has been exceeded and, the AQD is required to install such a new near-road monitor. (*Summary of 2010 Census Data, Mid-Region Council of Governments, July 2010.* http://www.mrcog-nm.gov/images/stories/pdf/census_dasz/2010_Census_Data/Summary_of_Census_Data_1.pdf) "An additional near-road NO_2 monitoring station is required at a second location of expected maximum hourly concentrations for any CBSA with a population of 2,500,000 or more persons, or in any CBSA with a population of 500,000 or more persons that has one or more roadway segments with 250,000 or greater Annual Average Daily Traffic (AADT)." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12] The highest AADT count within the jurisdiction of the Air Board is [~~182,700~~] 193,900, recorded on I-25 near Montgomery Boulevard (see ~~http://www.mrcog-nm.gov/images/stories/pdf/maps_and_data/traffic_flow/tfm08urban.pdf~~ http://www.mrcog-nm.gov/transportation-mainmenu-67/traffic-counts-mainmenu-263 and http://www.mrcog-nm.gov/images/stories/pdf/maps_and_data/traffic_flow/tfm11urban.pdf) therefore, a second monitor will not be required in Bernalillo County. "The second tier of the NO_2 minimum monitoring requirements is for area-wide

		NO_2 monitoring [See 40 CFR Part 58, Appendix D, Section 4.3.3]. There must be one monitoring station in each CBSA with a population of 1,000,000 or more persons to monitor a location of expected highest NO_2 concentrations representing the neighborhood or larger spatial scales. These NO_2 monitors are referred to as area-wide monitors." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12] A second tier monitor will not be required in Bernalillo County. "The third tier of the NO_2 minimum monitoring requirements is for the characterization of NO_2 exposure for susceptible and vulnerable populations [See 40 CFR Part 58, Appendix D, Section 4.3.4]. The EPA Regional Administrators, in collaboration with states, must require a minimum of 40 additional NO_2 monitoring stations nationwide in any area, inside or outside of CBSAs, above the minimum monitoring requirements for near-road and area-wide monitors, with a primary focus on siting these monitors in locations to protect susceptible and vulnerable populations." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12] A third tier monitor will not be required in Bernalillo County. "All three tiers of the NO_2 minimum monitoring requirements are to be submitted to the EPA for approval. Currently, 40 CFR 58.10 and 58.13 require states to submit a **plan** (i.e. *Annual Monitoring Network Plan*) for establishing all required NO_2 monitoring sites to the EPA Administrator by July 1, 2012." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12] ~~(~~However, EPA has [~~proposed to delay~~] delayed this deadline until **July 1, 2016**. ~~[NPR FR Vol. 77, No. 203, 64244-49, 10/19/12])~~ In addition, EPA has amended 40 CFR 58.10(a)(5) "so that state and local air monitoring agencies are required to submit their NO_2 monitoring network plans to their respective EPA Regional Administrator instead of the EPA Administrator for approval." [FR Vol. 78, No. 50, 16184-8, 3/14/13] "Further, these plans shall provide for all required monitoring stations to be **operational** by January 1, 2013." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12] ~~(~~However, EPA has [~~proposed to delay~~] delayed this deadline until **January 1, 2017** for CBSAs with a population of more than 500,00 but fewer than 1 million ~~[FR Vol. 77, No. 203, 64244-49, 10/19/12])~~ [FR Vol. 78, No. 50, 16184-8, 3/14/13] [~~The population within Albuquerque's CBSA reached 845,913 in 2008, therefore the AQD is required to install such a new near-road monitor.~~] "State and local air agencies are required to consider traffic volumes, fleet mix, roadway design, traffic congestion patterns, local terrain or topography, and meteorology in determining where a required near-road NO_2 monitor should be placed. In addition, there are other factors that affect the selection and implementation of a near-road monitoring station, including satisfying siting criteria, favorable site logistics (e.g., gaining access to property and safety), and consideration of population exposure." (*Near-Road NO_2 Monitoring Technical Assistance Document* http://www.epa.gov/ttnamti1/files/nearroad/NearRoadTAD.pdf), To address these requirements, the AQD participated in the 2011 NO_2 Roadside Pilot Project and submitted data from several candidate NO_2 monitoring sites to EPA, and ~~The AQD~~ is coordinating with EPA to determine the best monitoring site location ~~, taking into consideration: property rights, accessibility, safety, infrastructure requirements, traffic, and costs~~. ~~NO_2 monitors must be placed in proximity to road segments with the highest-~~

		~~ranked AADT levels, and no more than 50 meters (164.042 feet) away from the edge of the nearest traffic lane. Additional consideration must be given to fleet mix, congestion patterns, terrain, geographic location, and meteorology."(*Fact Sheet Final Revisions To The National Ambient Air Quality Standards For Nitrogen Dioxide* http://www.epa.gov/apti/video/pdfs/NO2%20NAAQS%20Fact%20Sheet.pdf)~~ EPA anticipates that it will take three years to install a new monitoring network, plus an additional three years of monitoring thereafter in order to determine compliance with the revised standard. When EPA funding is designated for 3rd Tier sites the AQD will procure equipment and construct the near-road monitor site. Once three years of data have been collected at the site, AQD will request that EPA redesignate Bernalillo County from 'unclassifiable / attainment' to 'attainment'.
§ 110(a)(2)(C)	*include a program to provide for enforcement of the measures in § 110(a)(2)(A), and regulation of the modification and construction of any stationary source within the areas covered by the plan as necessary to assure that NAAQS are achieved, including a permit program as required in Parts C and D of this Subchapter.*	AQD has established regulations governing the enforcement of control measures, including attainment plans and permitting programs that regulate construction and modification of stationary sources. See 20.11.41 NMAC, *Operating Permits*, 20.11.60 NMAC, *Permitting in Nonattainment Areas*, and 20.11.61 NMAC, *Prevention of Significant Deterioration.* AQD's Prevention of Significant Deterioration (PSD) program applies to sources that emit greenhouse gases in accordance with EPA's tailoring rule. See 20.11.61.7.CCC NMAC. EPA requires that any i-SIP submittal should address any new or revised PSD program requirements. On October 20, 2010, the EPA promulgated "PSD for $PM_{2.5}$ - Increments, Significant Impact Levels (SILs) and Significant Monitoring Concentration (SMC)", effective 12/20/10 [Federal Register Vol. 75, No. 202, 64864-907]. To address this federal rulemaking, the AQD is proposing to amend the PSD regulation for Albuquerque - Bernalillo County to incorporate the $PM_{2.5}$ PSD increment requirements. On January 29, 2013 filed Air Quality Control Board Petition No. 2013-1, Petition to Amend 20.11.60 NMAC, *Permitting In Nonattainment Areas*; 20.11.61 NMAC, *Prevention Of Significant Deterioration*; and 20.11.42 NMAC, *Operating Permits*. The Amendments to 20.11.42 NMAC are proposed as a revision to the Title V Operating Permit Program, and the amendments to 20.11.60 NMAC and 20.11.61 NMAC are proposed as a revision to the New Mexico State Implementation Plan for Air Quality (SIP). EPA's 10/20/10 rule specifically affects 40 CFR 51.165, and has been incorporated into AQD's proposed draft of 20.11.60 NMAC. The 10/20/10 rule amendments also affect 40 CFR 51.166 and 52.21 and have been incorporated into AQD's proposed draft of 20.11.61 NMAC. One exception is for an amendment that would have been inserted at 20.11.61.15.B.(2) NMAC, regarding "SILs" [see 40 CFR 51.166.(k)(2) & 52.21(k)(2)], but which EPA has conceded to be vacated and remanded to EPA, in response to *Sierra Club v. EPA*. Another exception is the proposed SMC for $PM_{2.5}$ at 20.11.61.28 NMAC which was also vacated by the US Court of Appeals [Case No . 10-1413, decided January 22, 2013]. The Bernalillo County Ordinance 88-45 provides the AQD with authority to enforce permitting provisions, and provides for assessment of administrative enforcement actions and administrative penalties for violations of those permit terms and conditions. The EPA approved incorporation of Ordinance 88-45 into the Albuquerque - Bernalillo County SIP in a June 1, 1999 rulemaking [64 FR 29235]. Bernalillo County has since amended this ordinance and recodified it as Bernalillo County Ordinance, Chapter 30, *Environment*; Article II, *Air Pollution*; Sec. 30-31 to 30-47 [Ordinance No. 94-5, Revised 2/2/1994]. AQD has proposed a revision to the State Boards SIP to incorporate all of the currently effective applicable ordinances in order to update their authority to enforce said

	assurances that the State (or, except where the administrator deems inappropriate, the general purpose local government or governments, or a regional agency designated by the State or general purpose local governments for such purpose) will have adequate personnel, funding, and authority under State (and, as appropriate, local) law to carry out such implementation plan (and is not prohibited by any provision of Federal or State law from carrying out such implementation plan or portion thereof),	enforce the SIP. § 74-2-5 also provides the Air Board adequate legal authority to adopt emission standards and compliance schedules applicable to regulated entities, and to adopt emission standards and limitations and any other measures necessary for attainment and maintenance of national standards. In addition, § 74-2-5 provides the Air Board adequate legal authority to enforce applicable laws, regulations, standards, and compliance schedules, and seek injunctive relief. Specifically, § 74-2-5.1 provides the department legal authority to enforce applicable laws, regulations, standards, and compliance schedules. The funding necessary to carry out the ambient air monitoring required by this implementation plan (e.g. purchase of new equipment, installation of new site, additional staff and increased operating and maintenance costs) will be provided through the CAA § 103 grant process, thereby removing "the state burden of providing matching funds." [NPR FR Vol. 77, No. 203, 64244-49, 10/19/12] No organizations outside of AQD will participate in implementing or enforcing this SIP. AQD has adequate personnel to implement the SIP with respect to NO_2 requirements. Should EPA determine that AQD lacks adequate personnel to carry out the SIP, EPA may issue a finding with respect to that deficiency, which AQD would have a legal obligation to correct. The Bernalillo County Ordinance 88-45 provides the AQD with authority to enforce permitting provisions, and provides for assessment of administrative enforcement actions and administrative penalties for violations of those permit terms and conditions. The EPA approved incorporation of Ordinance 88-45 into the Albuquerque - Bernalillo County SIP in a June 1, 1999 rulemaking [64 FR 29235]. Bernalillo County has since amended this ordinance and recodified it as Bernalillo County Ordinance, Chapter 30, *Environment*; Article II, *Air Pollution*; Sec. 30-31 to 30-47 [Ordinance No. 94-5, Revised 2/2/1994]. AQD has proposed a revision to the State Boards SIP to incorporate all of the currently effective applicable ordinances in order to update their authority to enforce said provisions.
§ 110(a)(2)(E)(ii)	*(ii) requirements that the State comply with the requirements respecting State boards under CAA Section 128 [Section 7428 of this Title], and*	NMSA 1978 § 74-1-4 provides that the Air Board be comprised of at least a majority of members who represent the public interest and do not derive any significant portion of their income from persons subject to or who appear before the board on issues related to the CAA or Air Act. Board members are required to recuse themselves from rule-makings in which their impartiality may reasonably be questioned [20.11.82.14 NMAC].
§ 110(a)(2)(E)(iii)	*(iii) necessary assurances that, where the State has relied on a local or regional government, agency, or instrumentality for the implementation of any plan provision, the State has responsibility for*	Albuquerque-Bernalillo County is authorized to carry out all portions of New Mexico's SIP within Bernalillo County [See § 74-2-4]. NMED and the state Environmental Improvement Board retain oversight authority in the event the local authority fails to act [See § 74-2-4 (D)].