Response to Comments Document

Finalizing Approval of

the PM-10 State Implementation Plan for the Clark County Serious PM-10 Nonattainment Area Annual and 24-Hour PM-10 Standards

This final approval includes

Clark County Air Quality Regulations:

Section 0 (portions only);
Sections 90, 91, 92, 93; and
Section 94 and 94 Handbook

April 23, 2004

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Air Division
U.S. Environmental Protection Agency - Region 9

I. COMMENTS RECEIVED

On January 22, 2003, we proposed approval of the "PM-10 State Implementation Plan for Clark County, June 2001" "Plan" or "2001 PM-10 Plan" with respect to the annual and 24-hour PM-10 national ambient air quality standards (NAAQS).

We received comments from the following parties on our proposed approval:

1. Jennifer B. Anderson, Sierra Club, Southern Nevada Group ("Sierra Club"). Comment letter dated February 21, 2003.

2. Robert W. Hall, Nevada Environmental Coalition, Inc. ("NEC"). Comment letter dated February 21, 2003.[1]

In this document, we respond to all of the comments. The comment letters and reference documents for these responses to comment are included in the administrative record (i.e., docket) associated with the final rulemaking.

II. SUMMARY AND ANALYSIS OF COMMENTS

A. Monitoring

Several comments challenged the adequacy of the monitoring program established by Clark County to measure ambient concentrations of PM. Section 110(a)(2)(B)(i) of the Clean Air Act (CAA or Act) requires state implementation plans (SIPs) to "provide for the establishment and operation of appropriate devices, methods, systems, and procedures necessary to . . . monitor, compile, and analyze data on ambient air quality . . . ." The Act does not specify what an "appropriate" monitoring program requires. We read the Act to require a monitoring program that provides the information necessary to support the decisions and actions required by the Act.

Data collected by these monitors ("monitoring data") serves a number of purposes, only some of which are relevant to support today's approval. For example, the Act requires monitoring data for determining attainment and nonattainment designations (CAA § 107(d)(4)(B)), for assuring compliance with Prevention of Significant Deterioration thresholds (CAA § 165(e)), for assessing interstate pollution (CAA § 184(d)), and for providing a general

[1] The commenter submitted an original letter by mail, followed by an e-mail and fax of a revised letter on the same day in place of the original letter. We have responded to comments in the latter submittal. On March 6, 2003, NEC sent another e-mail referred to as a "clarifying supplement and addendum" to NEC's comments submitted on February 21, 2003. While the March 6, 2003 email was not submitted to the EPA contact for the PM-10 notice of proposed rulemaking and was submitted after the close of the comment period, we have nonetheless included the e-mail in the administrative record for this action and reviewed it for any new issues not already raised in NEC's previously submitted comments. Finding no such new issues, we have not provided specific responses to the e-mail.

picture of the nation's air quality (CAA § 319). EPA promulgated regulations in 40 CFR Part 58 describing how States should design and implement ambient air quality surveillance (i.e., monitoring) programs to meet these various objectives. See, e.g., 51 FR 9582 (Mar. 19, 1986) (amendments describing various purposes of monitoring data). EPA's action today is not a determination that the Clark County monitoring program satisfies the requirements of 40 CFR Part 58.[2] As noted in our notice of proposed rulemaking (NPRM) and described further below, our assessment of the monitoring program is to ensure the data provided are adequate to support the finding that the Plan appropriately evaluates the PM-10 problem in the Clark County area.

Monitoring data serve two specific functions in the attainment demonstration being approved today. First, monitoring data are used to assess the contribution to ambient concentrations of particular types of sources. For example, the Desert Research Institute prepared an analysis using monitoring data and chemical mass balance techniques to estimate contributions from different types of sources to ambient concentrations.[3] Second, by correlating ambient concentrations with the area's inventory of emissions, we can use "roll-back" modeling to predict how reductions in the emissions inventory will translate into improvements in ambient concentrations.

As discussed in the technical support document for our proposed approval, we have reviewed the monitoring network used by Clark County to prepare this attainment demonstration and the data collected by these monitors and have concluded that they provide reasonable support for Clark County's demonstration. The network operated by Clark County provides good spatial distribution of sites, correct siting, and quality-assured and quality-controlled data, which are the key factors in determining whether an air quality monitoring network is adequate for air quality modeling.

Comment 1. Both commenters argue the monitoring network is inadequate because it fails to include monitors outside the Bureau of Land Management (BLM) Disposal Area. Sierra Club states that the Plan fails to provide for appropriate monitoring outside of the BLM Disposal Area and is drafted on an unverified assumption that there is no PM-10 problem outside of the BLM Disposal Area. This assumption is based on the observation that most of the population – and therefore most of the PM-10 generating activity – occurs within the BLM Disposal boundary. Without

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[2] As discussed further in our responses to comments below, EPA audits compliance with 40 CFR Part 58 through technical system audits (TSAs). These TSAs evaluate the adequacy of the monitoring network to achieve the various objectives outlined in the CAA. EPA conducted a TSA for the Clark County network in August 2001. See "Clark County Department of Air Quality Management Technical System Audit August 21 - August 23, 2001 Report Findings" (Feb. 2002) ("2001 TSA"). This document is attachment E of the Technical Support Document associated with EPA's proposed approval of the Clark County PM-10 Plan.

[3] Desert Research Institute, "Fugitive Dust and Other Source Contributions to the PM-10 in Nevada's Las Vegas Valley," April 18, 1997 ("DRI Study").

monitoring, however, the Plan cannot assess whether recreation or other activities outside of the BLM Disposal Area boundary produce unhealthful levels of PM-10, or whether PM-10 is transported across the boundary in concentrations that exceed the NAAQS. NEC adds that the growth areas within the nonattainment area are not necessarily within the BLM Disposal Area and the failure to include monitors outside the BLM Disposal Area makes all resulting actions based on monitoring data "legally insufficient."

Response 1. The Plan's attainment demonstration, in part, is based on readings recorded from monitors located where there is a "worst case" combination of sources.[4] Emissions reductions necessary to demonstrate attainment at these high-emitting sites should conservatively provide for attainment in other parts of the nonattainment area where PM-10 monitors are not located. Thus, the absence of monitors outside the BLM Disposal Area is not based on an assumption that there is no PM-10 problem in these outer areas. Rather it is based on the determination that the monitors within the BLM disposal area reasonably capture the highest ambient PM-10 concentrations so that compliance with the NAAQS at these locations reasonably predicts attainment throughout the nonattainment area.

In addition, because the monitors within the BLM Disposal Area reasonably predict the types of activities contributing to PM-10 pollution, the Plan demonstrates that regulation of these sources should reduce ambient PM-10 concentrations throughout the area.[5] Thus, even though monitors are not located outside of the BLM Disposal Area to measure the contribution of recreational or other activities in those areas, the monitors do provide an estimate of how these activities contribute to ambient concentrations generally. By determining the emission reductions necessary to attain the NAAQS at the worst-case monitors measuring violations of the NAAQS, the County has reasonably calculated the emissions reductions required to attain the PM-10 NAAQS, including emissions reductions from the types of sources located outside of the BLM Disposal Area (e.g., disturbed vacant land and off-roading trails).

Comment 2. Sierra Club states that the Plan's commitment to conduct a PM-10 saturation study beginning in 2004 constitutes an acknowledgment that the current monitoring network is inadequate. The commitment states that the focus of the

[4] EPA Technical Support Document Proposing Approval of the PM-10 State Implementation Plan for the Clark County Serious PM-10 Nonattainment Area Annual and 24-hour PM-10 Standards, December 19, 2002 ("EPA TSD"), at 55.

[5] We note that Clark County regulations apply the same requirements to sources of fugitive dust throughout the nonattainment area. Thus, reductions necessary for attainment at the "worst-case" monitor will be required for these sources in all areas within the nonattainment area. See, e.g., Clark County Air Quality Regulations Sections 90.1.2, 91.1.2, 92.1 and 93.1.2.

saturation study will be on neighborhood impacts of major sources, particulate concentrations in geographic locations not covered by the current monitoring network, and inter-basin and intra-basin transport during high wind events. The commenter believes Clark County has had adequate time to assess the adequacy of its network and there is no reason to delay this work until 2004, which would preclude any attempt to address the deficiencies until it is too late.

Response 2. Clark County's commitment to conduct a PM-10 saturation study (Section 4.8.2.2 of the Plan) indicates that the study is needed to measure the impacts of future year growth. This explains why the study is scheduled for the 2004 to 2006 timeframe. It is not an acknowledgment that the current monitoring network is inadequate, but rather that the monitoring network should be re-evaluated as growth occurs to ensure it continues to be representative. Far from identifying a defect in the monitoring program, this commitment elevates Clark County's monitoring program over many others and EPA encourages these commitments to be included in SIPs.

Comment 3. Sierra Club states that EPA acknowledges in its proposed rulemaking that the PM-10 monitoring network is not "appropriate" as required by the Act. Sierra Club notes that EPA's regulations in 40 CFR Part 58 establish specific regulatory requirements for operating air quality surveillance networks to measure ambient concentrations of PM-10. 68 FR 2957. Sierra Club also notes that an EPA audit of the Las Vegas Valley monitoring network found the network to be deficient in terms of (1) how Clark County characterizes the site objectives of its monitoring network, (2) the number of National Air Monitoring Station (NAMS) sites, and (3) the quality assurance program. Id. at 2958. Sierra Club asserts the purpose of the regulations at 40 CFR Part 58 is to describe the requirements for an "appropriate" air quality surveillance system for purposes of a state implementation plan pursuant to CAA section 110(a)(2)(B)(i). See 40 CFR § 58.2. Sierra Club concludes EPA cannot approve a plan with a monitoring network that fails to meet these regulations.

Response 3. As described above, our evaluation of Clark County's monitoring network under 40 CFR Part 58 is not necessarily relevant to the adequacy of the monitoring results used to support the Plan's conclusions. The provisions cited by the commenter in 40 CFR § 58.2 show that the purposes of these monitoring regulations go beyond attainment planning.

The deficiencies noted in EPA's audit of the Clark County network (the 2001 TSA) do not undercut the reasonableness of the data used in this Plan. The issues cited in the 2001 TSA were logistical in nature (e.g., mislabeling of monitoring sites and poor integration of the quality assurance program into the day-to-day functioning of the air monitoring program) rather than substantive concerns. In the course of conducting the 2001 TSA, EPA staff reviewed all aspects of the

County's monitoring program including network design, field operations, laboratory operations, data handling and management, and quality assurance and quality control activities. None of these issues were significant enough for us to conclude that the monitoring network was inadequate under CAA section 110(a)(2)(B)(i).

Regarding the network design and management issues made in the TSA, the County has begun to address most of the findings regarding the PM-10 monitoring network. All of the PM-10 monitors operated by the County have been redesignated from special purpose monitors (SPM) to State and Local Air Monitoring Stations (SLAMS). The County's official network description is available to the public on the County's website and includes descriptions of the sampling and analysis methods used to collect ambient air pollutant data. The PM-10 saturation monitoring study mentioned previously will assist the County in evaluating the current PM-10 monitoring network, however we still believe the current network design is adequate for the purposes of this Plan. We base this belief on the fact that the County operates a dense network of 16 monitoring sites and the network has recorded numerous exceedences that are substantially higher than the 24-hour PM-10 NAAQS. Based on our knowledge of PM-10 emission sources in the Las Vegas valley, if the network was not capturing these types of high values it would indicate that the monitors were not sited properly. Nowhere in our TSA report did we state that the County needed to add additional monitoring sites for PM-10 or that we believed the existing sites were inadequate.

The findings made on the field operations were mostly directed towards the gaseous monitoring network. There were no problems with how the air quality technicians operated the PM-10 monitors.

Regarding the laboratory issues, the County now conditions and weighs PM-10 filters in the PM-2.5 weighing laboratory, which meets all of the laboratory requirements in EPA regulations.

The findings we made on the data management practices and quality assurance and quality control were focused on the documentation and management review of these program elements. As we stated in the 2001 TSA, the audit team made it clear that data were being collected in an appropriate manner and all required quality checks of the instruments were being made on an appropriate schedule.

Comment 4. NEC states that the Plan does not discuss the assumptions and reasons for Clark County's selection of two 1998 J.D. Smith monitoring station emissions inventories. Nor does it explain why the J.D. Smith station was the most appropriate and sufficient choice for the attainment demonstration.

Response 4. The Plan does include a discussion of the selection of the J.D. Smith micro-

inventory area for demonstrating attainment of the annual PM-10 standard.[6] This site was selected because it was the only site that measured a violation of the annual NAAQS. The J.D. Smith site is one of five microscale sites used to demonstrate attainment of the 24-hour standard.[7]

B. Inventories

Section 172(c)(3) requires SIPs to include "a comprehensive, accurate, current inventory of actual emissions from all sources of the relevant pollutant or pollutants in such area . . . ." In our Addendum to the General Preamble, we reiterated that "all anthropogenic sources of PM-10 emissions and PM-10 precursors (if applicable) and nonanthropogenic sources in a nonattainment area must be included in the emissions inventory." 59 FR 41998, 42012 (Aug. 16, 1994). We recommended breaking the inventory into the following groups: (1) major point sources, (2) minor point sources, (3) area sources (e.g., fugitive dust from anthropogenic sources, prescribed burning, residential wood combustion), and (4) nonanthropogenic sources. Id.

Emissions contributing to PM-10 pollution can also be divided according to the way they contribute to PM-10 concentrations. "Primary PM-10" emissions enter the atmosphere directly as particulate matter. PM-10 from these emissions is not formed due to further reactions occurring after the matter is emitted. "Condensible PM-10" is material that is not particulate matter at the point it is emitted (i.e., at "stack conditions") but that condenses upon cooling and dilution to form particulate matter immediately (within seconds) after discharge. Inventories must, at a minimum, include primary PM-10 and condensible PM-10.

PM-10 concentrations can also be affected by secondary formation. This "secondary PM-10" or "PM-10 precursors," is not always required to be included in an area's emissions inventory. These particulate emissions are the product of chemical reactions in the ambient air well after dilution and condensation have occurred. Emissions of NOx and SO2, for example, under certain conditions can react to form particulate matter in the form of nitrates and sulfates. CAA section 189(e) requires SIPs to include control measures for sources of PM-10 precursors "except where the Administrator determines that such sources do not contribute significantly to PM-10 levels which exceed the standard in the area." Consistent with this statutory exemption from controls, EPA does not require SIPs to include these emissions in inventories where they are found not to significantly contribute to nonattainment. See Addendum 59 FR at 42012 n.37; see also OAQPS, "PM-10 Emission Inventory Requirements" (Sept. 1994) (noting "Precursor emissions contributing to secondary particulate matter should not be included in the PM-10 inventory except where EPA and the State determines [sic] that the sources of PM-10 precursors contribute significantly to PM-10 levels which exceed the PM-10 NAAQS in the area.").

Comment 5. Sierra Club states that the Plan should be disapproved because the emissions

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[6] 2001 PM-10 Plan at 3-12.

[7] Id. at 3-13 to 3-16.

inventory fails to include all sources of PM-10 in the nonattainment area per section 172(c)(3) of the Act. Sierra Club points out that EPA admits the Plan only includes sources of primary PM-10 and excludes sources of secondary and condensible particulate formation.

Response 5. EPA acknowledges that there is some confusion in the Plan and in EPA's TSD regarding the types of emissions included in the inventory. The Plan states that the inventories include only primary PM-10 because chemical mass balance receptor modeling showed that secondary and condensible particulate formation contribute less than significant amounts to ambient concentrations.[8] This statement is not correct with respect to condensible emissions.[9] While PM contribution due to secondary formation is not included in the inventories except as background (discussed below), condensible PM-10 emissions along with primary PM-10 emissions are both included.

To confirm this, EPA reviewed the emission factors used in Appendix B of the Plan to generate the emissions inventories for combustion sources (i.e., the potential sources of condensible PM-10). The AP-42 factors used by Clark County consistently represent both the "filterable" primary PM-10 fraction as well as the condensible fraction. In addition, Clark County confirmed that the condensible fractions were included in the source tests results used to estimate emissions from stationary sources and in the meat cooking emission factors developed for the South Coast Air Quality Management District, upon which Clark County relied.[10]

As explained above, secondary PM-10 emissions are not always required for inventories where, as here, PM-10 precursors have been documented to be

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[8] 2001 PM-10 Plan at 3-7 (citing Chow, J.C., et al., "Middle- and Neighborhood-Scale Variations of PM10 Source Contributions in Las Vegas, Nevada," 44 Journal of the Air and Waste Management Association, 641 (1999)); see also EPA TSD at 44.

[9] We can only speculate as to the source of the confusion. The CMB modeling study conducted by Chow et al. did not differentiate primary from condensible PM-10 emissions. Instead, the study grouped emissions into crustal emissions (e.g., fugitive dust), combustion emissions (e.g., PM emissions from motor vehicles and residential wood burning), and secondary emissions (e.g., NO2 and SO2). The Plan cites this study to support the conclusion that the crustal emissions, which would be composed solely of primary PM-10, represent the overwhelming majority of PM-10 emissions. Combustion-related emissions, which may include both primary and condensible PM fractions, were found to be smaller contributors to ambient concentrations, but these sources were nonetheless included in the Plan's inventories.

[10] See letter from John Koswan, Assistant Planning Manager, DAQM, to Karen Irwin, Planning Office, U.S. EPA Region IX (Dec. 2, 2003).

insignificant contributors to nonattainment.[11] The 2001 PM-10 Plan nonetheless does include sources of secondary PM-10 as irreducible background emissions. Clark County found that secondary aerosols accounted for only 4% of the average PM-10 mass at sites such as Craig Road and East Charleston.[12] The Craig Road micro-inventory area included the emissions impacts of nine stationary sources[13] and the East Charleston site is near heavily traveled roadways with motor vehicle exhaust emissions.[14] Based on these findings, Clark County included secondary precursor emissions only in the inventory's irreducible background emissions levels.[15] Thus, they have been accounted for in the Plan's inventory as an unchanging background level of emissions.

Comment 6. Sierra Club states that the Plan excludes agricultural source emissions from the inventory, which does not meet the requirements of CAA section 172(c)(3) even though these sources are not significant.

Response 6. Clark County indicates agricultural sources are not present in the nonattainment area to any measurable degree. We confirmed that Clark County is aware of only two farms within the nonattainment area.[16] Thus, the contribution of agricultural sources in the Valley is so small relative even to the identified de minimis source categories, the County's conclusion that the emissions for this category are effectively zero is reasonable for purposes of meeting CAA section 172(c)(3).

Comment 7. Sierra Club states that the Plan acknowledges that "significant uncertainty" remains with respect to the emissions inventory. The commenter believes that since the Plan includes four additional studies to improve existing emissions inventories, this indicates the inventory is inadequate. With so much uncertainty, the Plan does not meet the CAA section 172(c)(3) requirement for a "comprehensive, accurate, current inventory," sufficient to make valid assessments about the relative contributions of the various sources of PM-10, or to make attainment demonstrations with any degree of confidence.

Response 7. The purpose of the additional emissions inventory studies Clark County commits

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[11] 2001 PM-10 Plan at 4-7 to 4-8.

[12] 2001 PM-10 Plan at 4-7.

[13] 2001 PM-10 Plan, Appendix D at 13.

[14] 2001 PM-10 Plan at 4-7.

[15] Id. at 3-7.

[16] A pig farm and a small orchard per a phone conversation between Karen Irwin, EPA Region 9 and Carrie McDougall, Clark County DAQM, August 21, 2003.

to undertake is either to refine inventory factors for some sources, e.g., unpaved roads and disturbed vacant land, or to ensure that future changes to sources resulting from control measure implementation are reflected in an updated inventory. The fact that Clark County acknowledges some uncertainty in the emissions estimates and commits to further refining of emissions factors does not lead to the conclusion that the emissions factors relied on in the Plan are inadequate. Some degree of uncertainty in emissions estimates is unavoidable. The County's efforts to collect specific information to develop and support the emissions factors relied on in the Plan are well documented in the Plan's appendices. The Plan's emissions inventory relies on either EPA's AP-42 methodology or source-specific studies that better characterize local emissions relative to EPA's methodology. Future improvements to the inventory to lessen uncertainty do not conflict with our finding that the baseline inventory provides a reasonable basis for acting on the Plan.

Comment 8. Sierra Club states that the disturbed vacant land inventory in the Las Vegas Valley nonattainment area has too high a degree of uncertainty to meet CAA section 172(c)(3). The Plan does not appear to include a list of the exposed, disturbed areas that are contributing to the fugitive dust problem. Without such a list, the portion of the inventory attributed to these lands is necessarily inadequate per CAA section 172(c)(3), and the fugitive dust problem from these areas cannot be addressed. The list should contain the exact location of the exposed area, the size of the area, an estimate of the soil type and soil moisture, and its potential for blowing dust (i.e., how active the area is, whether a surface crust has had a chance to develop, whether that crust has been broken and how often, etc.).

Response 8. We disagree that CAA Section 172(c)(3) requires this level of detail to support emissions estimates. Clark County relies on EPA's AP-42 methodology for estimating emissions from disturbed vacant land, which does not require specific information on location, exposed area, size and soil type of all vacant lots in PM-10 nonattainment areas. Aggregate estimates are acceptable under the Act. Similarly, the area-specific emissions factors developed for disturbed vacant land in the Las Vegas Valley using wind tunnel studies do not need to be specific to each vacant lot to meet CAA section 172(c)(3). The fugitive dust potential of any given vacant lot is subject to change. Even if Clark County were to collect the information specified by the commenter for inclusion in the baseline emissions inventory, it would quickly be outdated as parcels of disturbed vacant land are stabilized or developed, while other vacant parcels may be newly disturbed and subject to control. Therefore, we believe the requirements of CAA section 172(c)(3) have been met. We do note that identifying the specific location of disturbed vacant lots is important for successful implementation of the Section 90 requirements. As described in the Technical Support Document associated with our proposed rulemaking, Clark County's enforcement staff uses the County Geographic Information System Management Office (GISMO) to obtain detailed

aerial photos to locate and identify vacant land parcels for inspection.[17] The County also maintains a list -- by parcel number and owner -- of the vacant lots for which a notice to comply and/or corrective action order have been issued since March 2001.[18] Thus Clark County is taking the necessary steps to identify and address fugitive dust from disturbed vacant land.

Comment 9. Sierra Club states that the emissions inventory is inadequate because it does not include emissions from outside the BLM Disposal Area. CAA section 172(c)(3) requires that all sources in the nonattainment area be included in the inventory.

Response 9. Clark County developed an emissions inventory for the entire nonattainment area, including the area outside the BLM Disposal Area. See 2001 PM-10 Plan at 3-5 and 3-6, Tables 3-1 and 3-2.

Comment 10. NEC states that Clark County does not discuss existing sources of air pollution outside of the BLM Disposal Area and there are no PM-10 monitors outside of the BLM Disposal Area. There is insufficient data to justify Clark County's assertion that nearly all anthropogenic sources within the nonattainment area occur within the BLM Disposal Area and to base the attainment demonstration only on the BLM Disposal Area inventory. Therefore, the Plan does not adequately demonstrate that the area attained the annual standard by December 2001 and that attainment of the 24-hour standard by December 2001 is impracticable.

Response 10. Clark County has prepared an emissions inventory that includes sources throughout the nonattainment area. The County's assessment that nearly all anthropogenic sources are located within the BLM Disposal Area is based on the fact that there is very low population outside the BLM Disposal boundary and that growth outside the boundary is prohibited. The emissions inventory for the entire nonattainment area is greater than that of the BLM Disposal Area because it incorporates emissions from additional acreage of disturbed vacant land, native desert and stabilized vacant land.[19] Thus the Plan does include an assessment of existing sources of PM-10 located outside of the BLM Disposal Area.

The County's decision to use monitored concentrations within the BLM Disposal Area to support the Plan's attainment demonstration is reasonable because these sites will provide conservative measurements of ambient concentrations. By planning to attain the PM-10 NAAQS at these points where ambient

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[17] EPA TSD at 126.

[18] "Vacant Land CAO Tracking Sheet" (Feb. 25, 2003).

[19] Id. at 3-5.

concentrations are highest due to the dense collection of emission sources, the Plan reasonably ensures other parts of the nonattainment area where PM-10 monitors are not located will also attain the NAAQS. Moreover, it is important to note that the Plan provides for the implementation of best available control measures (BACM) throughout the entire PM-10 nonattainment area.(see footnote 5). Therefore, excluding the area outside of the BLM Disposal Area from the attainment demonstration does not preclude the Plan from meeting CAA requirements with respect to demonstrating attainment of the PM-10 standards.

Comment 11. NEC questions Clark County's determination that disturbed vacant land and construction sites are the largest contributors to the PM-10 emissions inventory on the premise that the emissions inventory should have decreased as a result of construction activity (approximately 20,000 acres per year) which reduced the amount of vacant land acreage. The commenter notes that Clark County's emissions inventory for vacant land has instead increased two or three times in magnitude from the previously submitted moderate nonattainment area plan. The commenter believes this shows that the problem is not natural but anthropogenic[20] and also suggests that the Plan needs to include stationary sources in the SIP.

Response 11. When Clark County developed the 2001 PM-10 Plan, it greatly improved the emissions inventory for disturbed vacant land with respect to previous plans' emissions inventories for this category. The latest vacant land inventory is supported by a specific study conducted by UNLV.[21] The fact that the vacant land emissions estimates in the 2001 PM-10 Plan are much larger than those in a previously adopted plan (which EPA did not approve) does not invalidate the 2001 PM-10 Plan's inventory estimates. To the contrary, it demonstrates that previous emission inventories underestimated the contribution of these sources to the area's PM-10 problems. With respect to stationary source contributions, see our Response to Comment 17.

Comment 12. NEC states that the growth areas of the PM-10 nonattainment area may not be limited to the BLM Disposal Area, in light of Congressional legislative bills put forth to dispose of Valley land, and the fact that the only lands available are those outside the BLM Disposal Area boundaries. In addition, NEC notes the BLM is capable of leasing land.

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[20] Commenter uses the term "natural" to describe fugitive dust emissions. For purposes of clarification, and to avoid confusion regarding EPA's terminology, we note that in this action we identify emissions from disturbed vacant lands and construction activities as "anthropogenic" because they are the product of human activity and not natural occurrences. Thus, while the material being added to the air is geologic material, we nonetheless consider the emissions man-made because the bulk of these emissions would not occur but for human activities.

[21] 2001 PM-10 Plan, Appendix C.

Response 12. We are aware that the 2002 Clark County Conservation of Public Land and Natural Resources Act, Public Law 107-282, has resulted in changes to the BLM Disposal Area that could result in the allowance of additional land for development. The Plan assumed the boundaries of the BLM Disposal Area were those established in the Southern Nevada Public Lands Management Act of 1998, Public Law 105-263. It is not clear whether changes to the total acreage or boundaries of the BLM disposal area will significantly affect the total inventory or projected emissions for the area, which do not appear to be limited by these assumptions. See PM-10 Plan, Appendices B and E (providing inventories and projected emissions). Likewise, because the Plan relies on rollback modeling to demonstrate attainment, it is unclear whether changes to the BLM Disposal Area that affect the location of emissions would alter the modeling analysis. See PM-10 Plan, Appendix K. BLM has announced it will prepare an Environmental Impact Statement that will consider the impacts to air quality of new land sales or leases based on the 2002 Act. 68 FR 55991, September 29, 2003. Once it is determined how land use will change in the area, Clark County and EPA will need to determine whether a Plan revision is needed to ensure the area demonstrates attainment and Reasonable Further Progress (RFP) as outlined in the Plan.

Comment 13. NEC states that Clark County does not justify its claim that approximately 99 percent of the nonattainment area resides within the BLM Disposal Area.

Response 13. Clark County has not determined that 99 percent of the nonattainment area resides within the BLM Disposal Area but rather that over 99 percent of the nonattainment area population resides within the BLM Disposal Area.[22] This statistic is based on 2000 U.S. census data, as determined by Clark County GISMO.[23]

C. Best Available Control Measures

CAA section 189(b)(1)(B) requires serious PM-10 SIPs to include provisions to assure that BACM shall be implemented. In the Addendum to the General Preamble, we defined BACM as:

"[T]he maximum degree of emissions reductions of PM-10 and PM-10 precursors from a source (except [sources in de minimis source categories]) which is determined on a case-by-case basis, taking into account energy, environmental, and economic impacts and other costs, to be achievable for such source through application of production processes and available methods,

[22] 2001 PM-10 Plan at 3-8.

[23] Phone conversation between Mike Uhl, Clark County DAQM, and Karen Irwin, EPA Region 9, September 18, 2003.

systems, and techniques for control of each such pollutant." 59 FR 41998, 42010 (Aug. 16, 1994). We have identified four steps for determining BACM: (1) inventory sources of PM-10 and PM-10 precursors; (2) identify which of those sources are significant sources of emissions; (3) evaluate potential control measures, including their technological feasibility, costs, and energy and environmental impacts; and (4) select control measures as BACM or provide reasoned justification for rejecting potential control measures. See 68 FR 2954, 2956 (Jan. 22, 2003); see also 59 FR at 42012-13.

Comment 14. Sierra Club states that the Plan improperly fails to identify, evaluate, and implement BACM on sources identified as de minimis. Citing CAA section 189(b)(1)(B), commenter argues serious area PM-10 plans must include provisions to assure that BACM will be implemented by the relevant deadline on *all* sources of PM-10 and that there is no exception to this explicit mandate for source categories deemed to be "insignificant." Commenter acknowledges that in *Ober v. Whitman*, 243 F.3d 1190 (9th Cir. 2001) ("*Ober II*"), the Ninth Circuit Court of Appeals upheld EPA's approval of a moderate area PM-10 plan that exempted "de minimis" sources from reasonably available control measures (RACM) but attempts to distinguish this holding from the present action because the court relied heavily on the use of flexible standards such as "reasonably available" in the moderate area planning requirements, and concluded that such terms allowed for the "exercise of agency judgment." Id. at 1194-95. Commenter claims the court implicitly recognized that more rigid statutory language would not allow for application of a de minimis exemption. Id. Thus, commenter concludes the *Ober II* holding does not apply to the more rigid statutory language of the serious area PM-10 control measure requirements, which mandate BACM and most stringent measures (MSM).

Response 14. EPA disagrees with commenter's reading of *Ober II* and believes it is not consistent with the court's analysis. The court explained that courts have recognized EPA's inherent authority to invoke a de minimis exemption unless such an exemption is not allowed under the statute or the statutory language is extraordinarily rigid. Id. at 1194-95. In finding that EPA had the authority to exempt de minimis source categories of PM-10 from CAA control requirements, the court first noted that "There is no explicit provision in the Clean Air Act prohibiting the exemption from controls for de minimis sources of PM-10 pollution." Id. at 1195. The same is true for the BACM requirement in CAA section 189(b)(1)(B). *Compare* CAA § 189(a)(1)(C) *with* CAA § 189(b)(1)(B). Contrary to commenter's assertion, there is no language in section 189(b)(1)(B) that requires application of BACM to "all" sources.

Nor can it be said that the BACM statutory language is "uncompromisingly rigid." See *Ober*, 243 F.3d at 1194. Like RACM, the Act and EPA policy provide that a PM-10 plan must include the "best" available control measures to bring the area into attainment unless attainment is "impracticable." The term "best"-- no

less than the term "reasonably" -- allows for the exercise of agency judgment. See Addendum to the General Preamble, 59 FR at 42009-11 (discussing absence of definition of BACM and historical interpretation of similar terms).

The same analysis applies to the implementation of the MSM requirement in CAA section 188(e), which requires States seeking an extension to demonstrate "to the satisfaction of the Administrator that the plan for the area includes the most stringent measures that are included in the implementation plan of any State or are achieved in practice in any State, and can feasibly be implemented." Moreover, the objective of the provision is to ensure "attainment by the most expeditious alternative date practicable." Id. As with the RACM and BACM provisions, this language does not expressly preclude the exemption of sources, the controls of which would not meaningfully contribute to attainment, and allows for the exercise of considerable agency discretion to determine when this requirement is met and what timeframe for attainment is practicable. Our MSM evaluation applies the same principles upheld in *Ober II* for determining when a source is considered de minimis. As a result, the de minimis exemption for the MSM requirement prevents states from eliminating any controls on sources or source categories that alone or together would result in more expeditious attainment of the PM-10 standards.

Finally, we note that we invoke a de minimis exemption from the Act's general but open-ended control requirements like RACM, BACM, and MSM as a means of ensuring that states focus their limited resources on the controls most likely to result in real air quality benefits. It is more likely to harm air quality than to help it if these limited resources are diverted away from more substantive measures into the adoption and implementation of measures with trivial impacts.

Comment 15. Sierra Club states that the County's finding that vehicular exhaust emissions can be considered "insignificant" does not meet EPA's de minimis criteria. EPA's BACM guidance states that "BACM are required for all source categories for which the State cannot *conclusively* demonstrate that their impact is de minimis." 59 Fed. Reg. 41998, 42012 (emphasis added). The Plan's claim that motor vehicle emissions are de minimis is directly contradicted by chemical mass balance (CMB) receptor modeling conducted by the Desert Research Institute (DRI), which demonstrated that motor vehicle exhaust accounts for three to nine percent of total PM-10 emissions in the Las Vegas Valley.[24]

Sierra Club argues that the Plan fails to provide an adequate justification for rejecting this data. The Plan compares the DRI study to the micro-inventory assessment and then disregards the former based on the micro-inventory, therefore concluding that the motor vehicle contribution was insignificant. This approach has two flaws: (1) the

[24] DRI Study.

comparison between the micro-inventory and the valley-wide inventories was not made, and it has therefore not been shown that the micro-inventory is the correct approach; and (2) the DRI study was deemed incorrect based on the unjustified micro-inventory. Thus, the conclusion of deeming the motor vehicle contribution as insignificant, on a valley-wide basis, is not justified.

The Plan's justification that the CMB receptor modeling "did not evaluate PM-10 levels for an exceedence" does not explain why this fact invalidates the source impact calculated by this modeling. And the Plan's rejection of this modeling with respect to motor vehicle exhaust contradicts its embrace of the CMB results with respect to emissions from secondary and condensible particulate formation and fugitive dust. In short, the Plan fails to demonstrate that vehicular exhaust emissions fall below EPA's de minimis thresholds. Thus, this source must be included in the Plan's BACM analysis.

Response 15. Clark County's attainment demonstration is based on rollback of microinventories of areas influencing monitors, and on rollback of the valley-wide emission inventory. Vehicle emissions (excluding fugitive dust from roads) account for between 0.21% and 1.09% of the microinventories, and for 0.23% of the BLM disposal area 24-hour PM-10 inventory. The corresponding impacts on ambient concentrations range from 0.55 to 1.64 μg/m3 for the microinventory areas, and is 0.35 μg/m3 for the BLM disposal area. See 2001 PM-10 Plan at 5-9 to 5-14, Tables 5-3 through 5-8. Based on these estimates, vehicle emissions are not a significant contributor to ambient PM-10 concentrations. Control measures on these sources would have a negligible effect on the attainment demonstration.

The DRI work was not used as the basis for the attainment demonstration because no PM-10 exceedences occurred during its study; its estimates are not representative of conditions leading to PM-10 violations in Clark County. See 59 FR at 42011 (explaining de minimis assessment is to determine whether source "contribute[s] significantly to a violation" of the NAAQS by looking at the ambient impact at the time and location of the expected violations) (emphasis added).[25] Nevertheless, it provided several useful qualitative and quantitative results. First, CMB receptor modeling and ISCST3 dispersion modeling both showed that fugitive dust sources are by far the largest contributors to PM-10 emissions and ambient concentrations. Based on this qualitative observation, the decision was made to focus controls on fugitive dust. It was also concluded that rollback would be a reasonable approach, since: a) the emissions are relatively evenly distributed in space (unlike point sources); and b) their relatively poorly known spatial and temporal characteristics imply that dispersion modeling would

[25] By analogy, if ozone were being considered, it would not make sense to base BACM or emission reduction requirements on an emission inventory for a typical winter day, when ozone NAAQS violations never occur.

add little to the analysis.

In a second use of the DRI study, ISCST3 modeling showed the range of influence of fugitive dust sources; this provided a basis for choosing the sizes of the microinventory areas. The CMB work was not used as part of this analysis.

Finally, ambient measurements of secondary particulates used as CMB inputs in the DRI work were used in the Plan. Despite the fact that study conditions were not representative of exceedence conditions, its secondary measurements were used because such measurements are otherwise not available, and they need to be included in the rollback attainment demonstration. Omitting them would be equivalent to assuming they are proportional to primary emissions; including them as part of the irreducible background provides some conservatism to the demonstration.

Thus, the DRI study was not deemed to be incorrect based on the microinventory work, contrary to commenter's assertion. Rather, it was deemed insufficient as a basis for the Plan's attainment demonstration, but provided several qualitative and quantitative results useful in developing the demonstration.

Despite all this, it is true that during the DRI study, motor vehicle exhaust near the East Charleston monitoring site averaged 9.9 $\mu g/m^3$, 16% of measured concentrations. DRI Study at 7-36. (Most high levels were observed during the Christmas-New Year's holiday season.) Unfortunately, the study period did not include exceedences, and so CMB results cannot be used in conjunction with rollback. Even if we ignored this fact, it is not clear how the CMB results could be reasonably combined with the microinventory rollback demonstration. One approach would be to assume that about 10 $\mu g/m^3$ is part of the concentration at each site, and then assume that to be proportional to emissions. But since vehicle emissions are so small, in both the microinventory areas and the overall BLM disposal area, this would grossly inflate their ambient impact.

The DRI study work and the Clark County rollback demonstration can be reconciled by recognizing that different meteorological conditions are being examined. DRI's CMB modeling estimated motor vehicle concentrations between 0.5% and 4% PM-10 mass at the Bemis site and between 1% and 14% at the East Charleston site.[26] The East Charleston site represents the maximum amount of contribution to PM-10 from motor vehicles. For the East Charleston site, the data shows that the highest vehicle contributions were measured under low-wind conditions (i.e., less than 6 mph). DRI Study at 8-5, Fig. 8-2. This is consistent with the relatively stagnant conditions associated with high carbon monoxide values seen in the past near this congested roadway intersection. However, the

[26] DRI Study at 7-60.

East Charleston site has not historically exceeded the 24-hour standard during stagnant, low-wind conditions. Exceedences occur during high wind conditions as evidenced by 2002 data.[27]

The Clark County emission inventory and attainment demonstration is based on the high wind conditions associated with high fugitive dust emissions and with NAAQS exceedences. Other things being equal, ambient concentrations are inversely proportional to wind speed (more air passing by a source per time dilutes the pollutants more). Since vehicle emissions do not increase with wind speed, this general relation holds, so their ambient impacts decline with wind speed. Thus, under higher wind conditions, motor vehicle emissions are unlikely to concentrate and their ambient impact is overwhelmed by fugitive dust concentrations. Under these conditions, it is not surprising to find motor vehicles are de minimis contributors to violations of the NAAQS and relatively high vehicle impact at East Charleston is not likely to carry over to exceedence sites or conditions. If a microinventory had been developed for the East Charleston area, the vehicle contribution would likely have been higher than for the other microinventory areas, but that is not relevant for the attainment demonstration, which is focused on NAAQS exceedences.

Since the DRI study's results were inconclusive enough upon which to base a significance finding, the Plan relies instead on results from the microscale and valleywide emissions inventory to estimate the microgram per cubic meter concentrations due to motor vehicles. The J.D. Smith site's 2-kilometer radius of sources include portions of the I-15 freeway and Las Vegas Boulevard. Average daily vehicle miles traveled within the study area accumulated to over 2.7 million.[28] Even with these nearby traffic corridors, the site's estimated PM-10 concentrations impacts from tailpipe emissions within the impact area did not approach significance levels (Table 7-9).

Comment 16. Sierra Club states that combustion sources, including primarily gasoline and diesel engine exhaust, are dominant sources of particles in the PM-2.5 range and are hazardous to human health. PM-2.5 is also the primary cause of the brown haze that hangs over the Las Vegas Valley on fall and winter days. The Las Vegas Valley will undoubtedly violate the new PM-2.5 standard once this standard is implemented. The State of Nevada and Clark County should not delay any further in addressing the serious public health hazards posed by this form of pollution by, for example, adopting effective transportation control measures, requiring emissions testing of heavy duty diesel vehicles, and mandating the use of cleaner burning diesel fuel.

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[27] Fax from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA, January 20, 2004.

[28] PM-10 Plan, Appendix D at 28.

Response 16. EPA's rulemaking only addresses the PM-10 standards. We are not evaluating the Las Vegas nonattainment area with respect to the PM-2.5 standards or other air pollutants. We further note that analysis of PM-2.5 monitoring data to date in the Las Vegas Valley does not show exceedences of the annual and 24-hour PM-2.5 standards.[29]

Comment 17. Sierra Club states that the exemption of stationary sources from controls is inappropriate. The Plan acknowledges that stationary source emissions "came close to" EPA thresholds for presumed significance, and provides no assurance that emissions from this source category will not increase above the significance threshold. The Plan speculates that declining rates of population growth and construction activity will decrease activity levels in the sand and gravel operations and asphalt concrete manufacturing categories. However, Clark County is still the fastest growing community in the nation and housing construction continues to be strong, particularly in the northwest and southwest areas of the valley. Moreover, the Plan fails to demonstrate to what extent declining rates of growth, if any, will translate into reduced emissions.

Response 17. First, to clarify, Clark County's finding that stationary sources are de minimis contributors to PM-10 violations does not exempt these sources from all controls. For example, new and modified stationary sources are subject to pre-construction review including BACT and LAER requirements. EPA can enforce the County's permitting requirements per SIP-approved Sections 15 and 16.

Commenter misconstrues Clark County's assessment on future emissions from these sources. Clark County looked at the different categories of sources and projected how these categories are likely to be affected by growth in the area. The level of operation for many categories are roughly proportionate to the rate of growth (e.g., sand gravel operations will remain unchanged as long as the area continues to add the same number of homes every year). Several categories have operation levels that are proportionate to the change in population itself (i.e., not the rate population grows, but the total population itself). For example, residential firewood emissions will increase with every new home with a fireplace added to the area. Thus, contrary to commenter's claim, Clark County did not ignore the fact that the Las Vegas area continues to grow. Clark County did, however, explain that the rate of growth is not expected to increase. This fact is supported by population estimates prepared by the Regional Transportation Commission. See 2001 PM-10 Plan at E-4. These estimates show the area's population increased by 214,000 people from 1998 to 2001 (an average rate of 71,000 new residents per year) and project the population to continue to increase by 225,000 people between 2001 and 2006 (an average rate of 45,000 new residents per year). Thus, while the total population continues to grow, the rate of increase is

[29] Air Quality System Quick Look Report (January 21, 2004).

expected to decline. Clark County conservatively assumes that there will be no change in those categories of sources with levels of operation tied to this rate of growth. Clark County's approach reasonably considers the concerns raised by commenter. In addition, the County has made a SIP commitment to update the emissions inventories as part of its Reasonable Further Progress reports, and to revise the Plan if significant changes occur in the emissions inventories, including stationary sources.

Comment 18. Sierra Club states that the exclusion of stationary area sources such as sand and gravel operations from the list of "significant" sources appears to be inconsistent with findings that elevated PM-10 concentrations were associated in part with industrial processes such as sand and gravel operations. See 2001 PM-10 Plan at 4-8.

Response 18. First, to clarify, sand and gravel operations fall under the category "stationary point sources" rather than stationary area sources. The DRI study's use of the term "elevated PM-10 concentrations" does not mean concentrations approached 150 μg/m3. In fact, average concentrations at the saturation monitors located near sand and gravel facilities were between 33 and 47 μg/m3, with a highest measured maximum concentration of 115 μg/m3.[30] Similar concentrations were measured for construction sites. However, unlike construction sites, DRI concludes based on ISCST-3 modeling that "stationary sources (e.g., sand and gravel operations) contribute little to the valley except at one particular region southwest of the urban center..."[31] This corroborates the District's conclusion that, valleywide, stationary point sources are of de minimis impact. With respect to the study's modeled concentrations for stationary point sources in a particular location as being above 5 μg/m3, DRI indicates "the concentration falls to less than 1 μg/m3 within 3 km of the peak."[32] DAQM has explained that these elevated estimated concentrations from DRI's dispersion modeling were due to emissions from a single sand and gravel facility -- the Buffalo Gravel Pit complex.[33] The DAQM documents that the emissions from this facility have been reduced by approximately 60 percent since the DRI modeling took place in 1995 and indicates that current dismantling of the plant's conveyor system and rock crushing plant will likely reduce the facility's emissions further.[34] Therefore, the

[30] DRI study, pg. 6-41.

[31] DRI study, pg. 7-51.

[32] Id.

[33] See attached letter from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA, March 11, 2004.

[34] Id.

elevated concentrations in this location modeled by DRI in 1995 no longer apply.

Comment 19. Sierra Club states that the Plan fails to provide any supporting documentation or analysis for its assertion that, to the extent non-area stationary source categories grow in proportion to overall population, BACT and LAER control technology requirements will ensure that emissions remain at de minimis levels. Since the Plan fails to conclusively demonstrate that stationary point sources will remain insignificant in the future, it must adopt a BACT requirement for all stationary point sources. At a minimum, this should be a committed contingency measure.

Response 19. The Plan identifies the following categories of "non-area stationary sources": sand and gravel operations, utilities,[35] asphalt concrete manufacture, industrial processes and "other sources." See 2001 PM-10 Plan at E-2. The Plan projects no change in the emissions from these sources through 2006. Id. The activity levels for most of these categories depend on the rate of growth of the area (e.g., sand and gravel and asphalt manufacturing will remain steady as long as the area continues to grow at the same rate). (See Response to Comment 17.) The one obvious exception is the utilities category, which should increase as the population grows. The Plan explains, however, that emissions in this category are not expected to change because electricity for the growing population is being provided by sources outside the nonattainment area. The Plan's projections are supported by inventory data for the area, which shows that despite the rapid growth in the area, emissions from these categories have actually decreased slightly from 1995 to 1998. Id. at E-3. We find the rationale for projecting no change in emissions to be reasonable.

In addition, the Plan mentions the backstop provided by new source review requirements, which act as both a deterrent for significant emissions increases and as a means of minimizing and offsetting such increases. We find this rationale supports the reasonableness of the Plan's projections but do not agree it is critical for the de minimis conclusion. The effect of these programs on decision-making is speculative in nature and does not preclude all growth. The reasonableness of the Plan's approach is better supported by looking at growth trends and using this data to project the likely impact on emissions. We further note that the County's commitments to conduct a PM-10 saturation study and to update emissions inventories for Reasonable Further Progress Reports[36] should capture any significant changes in stationary point source emissions if they occur.

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[35] The Plan only considers growth in natural gas-fired utilities because State law prohibits the construction or modification of fossil-fuel-powered electricity generation plants within the PM-10 nonattainment area.

[36] 2001 PM-10 Plan, sections 4.8.2.2 and 4.8.2.8.

Comment 20. NEC states that the de minimis finding for race tracks must be justified by credible data.

Response 20. Clark County has not determined that race tracks are a de minimis category for the 24-hour standard. They are subject to the disturbed vacant land requirements of Section 90. Therefore, the County's finding that race tracks are de minimis with respect to the annual standard does not alter the fact that race tracks are subject to the BACM and MSM requirement.

Comment 21. Sierra Club states that the Plan fails to provide adequate justification for rejecting as BACM a requirement to pave unpaved haul roads at construction sites. The Plan indicates that this measure is "not technologically feasible" and contends that removing the paving and storing of used paving materials would generate additional emissions of PM-10. However, the Plan fails to calculate whether these incidental emissions would exceed the benefits from the measure. The Plan also fails to analyze whether existing control measures could be used to mitigate emissions associated with these activities.

Response 21. Clark County reasonably decided to leave open the options available for meeting the BACM requirement for controlling fugitive dust from unpaved haul roads. It concluded that requiring paving for haul roads could be economically infeasible due to the high initial cost of paving temporary roads that may need to be removed upon project completion. Furthermore, the County indicates that such a requirement may have unintended consequences by requiring additional dust-creating construction activity upon removal of temporary roads. Given these concerns and the fact that all unpaved haul roads are required to either be paved or have a stable surface via other methods of control, it was reasonable for Clark County not to mandate a specific paving requirement.

Comment 22. Sierra Club states that the Plan fails to provide a reasoned justification for rejecting as BACM a requirement for construction sites to prevent visible emissions from crossing the property line. The Plan reasons that a property line limit may result in a no-visible-emissions standard for public works agencies and contractors working on road construction projects in close proximity to property lines. Yet the Plan fails to indicate why this is infeasible or to explore ways that such a standard could be implemented for activities that are farther from the property line. The Plan's rejection of the measure on the basis that it would provide no air quality benefits with respect to construction projects on large sections of land fails to consider the benefits it might provide when implemented on smaller sections of land.

Response 22. Commenter acknowledges that a no-visible-emissions standard would be

infeasible when construction projects occur close to property lines[37] and would provide no benefit when construction projects occur far from property lines. Moreover, Section 94 limits visible plumes to less than 100 yards. Thus, commenter's concern is for the narrow band around property lines that is not so close to the property line that it would be infeasible to prevent visible emissions but is not otherwise captured by the 100-yard restriction. Notwithstanding the difficulty of defining it, commenter pushes for an analysis of the feasibility and benefit of a property line limit for construction plumes that occur within this narrow area. We do not agree that such an analysis is necessary in order for the County to conclude that an alternate standard satisfies BACM.

The applicable standard in Section 94 for construction sites is 20% opacity. Comparing the relative stringency of a property line limit to an opacity standard is technically difficult due to the variety of meteorological and other factors associated with any scenario. Because the 20% opacity standard is determined at the source's origin, we generally consider it to be the more stringent standard given the quickness with which visible fugitive dust particles disperse into the atmosphere.

Clark County considered the property line limit and reasonably concluded that opacity and plume limits would provide a more stringent set of requirements while avoiding the potential infeasibilities of a blanket property line limit. We note, however, that Clark County has since amended Section 94 to incorporate a limited form of a property line limit.[38]

Comment 23. Sierra Club states that the Plan fails to provide a reasoned justification for rejecting as BACM a limitation on the acreage at construction sites that can be graded and disturbed at any one time. The Plan summarizes the arguments of the measure's opponents without any analysis as to whether those arguments support a finding that the measure is technologically or economically infeasible.

Response 23. Clark County considered establishing a limitation on acreage that could be graded at any one time, but determined that such a limitation could result in the off-site hauling and stockpiling of fill dirt, which might have the unintended consequence of increase fugitive dust emissions.[39] Clark County indicates that off-site hauling

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[37] Clark County explains that some visible emissions are unavoidable where hydrophobic and caliche soils are present even if owners/operators are fully implementing dust suppression controls. E-mail with attached explanation from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA Region 9, September 8, 2003.

[38] Section 94.11.3(c), adopted March 18, 2003.

[39] 2001 PM-10 Plan at 4-31.

and stockpiling of fill dirt would cause additional dust-generating activity that could otherwise be avoided by compliance with requirements to control disturbed surfaces and stockpiles on-site absent a limit on the amount of disturbed acreage. In addition, we are not aware of any other PM-10 nonattainment area with a requirement limiting the amount of acreage that can be disturbed at any one time. Even without such a limit, it is reasonable to assume developers will seek to minimize the acreage of land left disturbed at a specific time. First, all disturbed land will need to be stabilized to meet the requirements of Section 94 to prevent wind erosion. See Section 94.6.8. The more land that is graded at a time, the more land developers will need to maintain in compliance. Second, grading of more than 50 acres triggers the requirement for a full time, on-site, certified dust monitor. This provides incentive to land developers to keep the total amount of disturbed surface under 50 acres. Finally, the handbook directs sources to consider phasing of activities as a best management practice in the dust control plan. These provisions should ensure the area graded at any one time is minimized whenever feasible and avoids the potential for arbitrary acreage limitation requirements that may not be necessary for adequate control of fugitive dust.

Comment 24. Sierra Club states that the Plan's construction site threshold for dust control permits fails to provide a BACM level of control. Maricopa County has set the BACM standard for such permits at one-tenth of an acre, while Clark County only requires dust control permits for construction sites of one-quarter of an acre or larger. Clark County claims that reducing the construction site size threshold for requiring permits to one-tenth of an acre would provide no air quality benefits, but fails to provide any data or analysis to support this assertion.

Response 24. Commenter confuses permit applicability cutoffs for the BACM limits for these sources. The BACM limits for these sources are listed in Section 94.6.8 (e.g., no wind erosion for disturbed soil, 20% opacity for construction activity). These BACM limits of Section 94 apply to all sites, regardless of their size. This is also true for Maricopa County Rule 310. The acreage cutoffs challenged by commenter determine which activities must go through the additional administrative requirements of obtaining a permit. These permit requirements help facilitate compliance with applicable rule requirements, thereby contributing to rule effectiveness, but do not alter the stringency of the requirements.[40]

For purposes of calculating the benefits of these requirements, Clark County estimates that approximately 98.5 percent of construction sites are subject to these administrative permitting requirements under the adopted one-quarter acre

[40] Citing EPA's Federal Register discussion of RACM at 57 FR 13498, 13541 (April 16, 1992), Sierra Club acknowledges the distinction between control measures and permitting requirements elsewhere in the comments. See Comment 35 below.

threshold.[41] Based on this value, Clark County conservatively estimates rule penetration at 98% for purposes of the attainment demonstration even though BACM requirements apply to all sites.[42]

Comment 25. Sierra Club states that the Plan improperly fails to consider transportation control measures (TCM) as potential BACM for paved road dust. EPA stated with respect to the Maricopa County, Arizona serious area PM-10 plan (MAG Plan) that "TCM's can reduce PM-10 emissions in both the on-road motor vehicle exhaust and paved road dust source categories by reducing vehicle miles traveled (VMT) and vehicle trips." 65 FR 19964, 19973. The MAG plan identified numerous TCM's for consideration, including the CAA section 108(f) measures, which the Las Vegas Valley Plan fails to consider as potential BACM for paved road dust. In this rulemaking, EPA reiterates that "reductions in vehicle miles traveled and vehicle trips are . . . candidate [TCM] that could have positive impacts on reducing paved road dust." 68 FR at 2962 n. 28. Yet the Plan improperly omits them from consideration. Thus, the Plan fails to provide for the implementation of BACM and the inclusion of MSM for paved road dust.

Response 25. The TCM referred to by the commenter listed in section 108(f) of the Act pertain to reducing PM-10 from on-road motor vehicle exhaust emissions. Unlike the MAG Plan, Clark County determined that on-road motor vehicle exhaust is not a significant contributor to PM-10 in the Las Vegas Valley, and therefore, BACM for this category is not required. TCM aimed at reducing VMT on paved roads do have peripheral positive impacts on reducing paved road dust, however, as we note in our proposed approval of the plan, "[T]hese measures are more appropriate for areas addressing significant on-road mobile source emissions and would not impact paved road dust on the same magnitude as measures directed towards preventing or removing deposition." 68 FR 2954, 2962.

Although Clark County has not calculated how reduction in VMT would translate into PM-10 emissions reductions of paved road dust, we developed rough estimates that show these impacts are much smaller in magnitude than the measures relied upon in the Las Vegas plan to reduce silt loading from paved roads.

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[41] Id. at L-9. In addition, Clark County requires permits at sites with mechanized trenching greater than 100 feet in length and for mechanical demolition of any structure larger than 1,000 square feet, which may trigger the permit requirement for sites smaller than one-quarter acre.

[42] EPA TSD at 136.

An analysis of TCM for Clark County conducted by Lima & Associates in May 1998[43] shows implementing TCM could result in VMT reductions ranging from 0.06% to 1.6%.[44] Using assumptions for paved road VMT from the Plan and assumptions for TCM costs and percentage VMT reduced from the Lima & Associates report, we estimate the average PM-10 reduction from a potential TCM to equal 1.4 tons/day. By contrast, paved road measures adopted in the Plan are estimated to reduce emissions by approximately 47 tons/day in 2006 for the 24-hour attainment demonstration.[45]

We calculate the cost-effectiveness of TCM to range between $17,963 and $210,210 per ton with respect to PM-10 emissions reductions. Thus, even assuming the feasibility of implementing these measures, the poor cost-effectiveness supports their rejection as BACM.

Comment 26. Sierra Club states that the Plan improperly fails to implement traffic reduction and speed control measures as BACM for unpaved roads. The commenter believes it is not sufficient for the Plan to justify rejection of this measure by determining that more stringent emission reductions are associated with surface stabilization when both in tandem would result in even greater emissions reductions. Also, difficulties in enforcement do not justify the rejection of a measure as BACM.

Response 26. Surface stabilization is a preferable means of control as compared to limiting vehicle speed because speed controls do not provide control of windblown dust and successful speed control depends on driver compliance with speed limits, which is highly uncertain without monitored enforcement. Clark County found no indication that the public would voluntarily adhere to speed limits[46] and also indicates that "speed enforcement cannot be accurately measured continuously."[47] Law enforcement personnel primarily enforce speed limits on paved roads. For

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[43] "Carbon Monoxide Transportation Control Measures Analysis", Lima & Associates, May 1998.

[44] See "Calculations for Response to Comment 25 of the Clark County Final PM-10 Plan Approval", Karen Irwin, EPA.

[45] EPA TSD at 130 indicates approximately 29% reduction of paved road emissions in 2006. We multiply this value by the total paved roads emissions estimate in 2006 (EPA TSD at 44), and divide by 365 for a daily reduction estimate.

[46] 2001 PM-10 Plan, Appendix P, "Responses to comments received in letter from Jessica Hodge, Southern Nevada Group of the Sierra Club, dated April 17, 2001," Response to Comment #23.

[47] Id. at 4-18.

these reasons, this measure cannot be relied upon to generate emissions reductions. Furthermore, on paved roads and even unpaved roads that are chemically stabilized, reducing vehicle speeds may provide little incremental emissions benefit. Therefore, it is unclear to what extent a speed limit requirement would result in additional emissions reductions beyond what is already adopted. We note that Clark County public agencies have largely met the Section 91 requirements for unpaved public roads by paving, in which case implementing speed limits on unpaved roads no longer has relevance as a control measure.

Comment 27. Sierra Club states that the Plan should make clear through its dust control regulations that dirt race tracks are prohibited in the nonattainment area, and not assume that lot owners will realize these are "effectively" prohibited by the Section 90 requirements.

Response 27. Section 90.2.1.1(a) requires owners/operators of vacant land 5,000 square feet or larger that has been disturbed by off-road vehicle or motor vehicle trespassing, parking, and/or access to install traffic control measures and to stabilize the surface. Dirt race tracks constitute off-road vehicle trespassing and/or motor vehicle disturbance and are therefore effectively prohibited by the Section 90 requirement. In addition, Clark County has notified public agencies within the Las Vegas Valley that permits for dirt race tracks within the PM-10 nonattainment area are prohibited and local permits should no longer be issued. We believe these letters clearly put the affected parties on notice of the section 90 requirements.[48]

Comment 28. Sierra Club states that the Plan fails to provide a reasoned justification for rejecting various measures as BACM, but even assuming full implementation of these measures would be infeasible, the Plan cannot simply restrict its analysis to simple acceptance or rejection of each measure. Rather, Clark County must consider implementing measures on a more limited basis or over a more extended period of time. The Plan fails to do this with respect to any of the rejected measures.

Response 28. The measures referred to by the commenter were rejected on a technological or economic basis as infeasible to achieve emissions reductions beyond those already adopted in the Plan. If a measure will not result in emissions reductions, it is not feasible whether implemented on a full or partial basis. For those measures where partial implementation might be reasonable, the record shows Clark County did consider it, for example, adopting property line and 100-foot dust

[48] DAQM letters to public agencies are provided as Attachments G through L of the EPA TSD.

plume limits where BACM is not being fully implemented.[49] Although we are not relying on the County's inclusion of these limits, we note that the County has attempted to incorporate partial as opposed to full implementation of these requirements.

Comment 29. NEC states that Clark County did not submit to EPA its local emissions reductions credit (ERC) program as required per CAA section 110(a)(2)(A). Also, the commenter cites numerous alleged deficiencies in this local offset program (e.g., double-counting of reductions, inaccuracies in quantification, lack of an overall air quality benefit, not meeting federal standards, etc.).

Response 29. There is no express requirement in 110(a)(2)(A) to submit local ERC or other programs for SIP approval if such measures are not "necessary or appropriate" to meet the requirements of the Act. The Plan submitted by Clark County does not rely on this credit program to demonstrate attainment.[50] Since the submitted Plan demonstrates attainment without including emission reductions from the local road paving credit program, EPA does not believe it is necessary to scrutinize Clark County's implementation of this program for purposes of approving the submitted Plan.

Comment 30. NEC states that the PM-10 Plan relies heavily on contractors' use of water for dust control without a demonstration from the Southern Nevada Water Authority that the required water is available in a drought. Citing the Southern Nevada Water Authority approved water conservation plan, the commenter states that it does not include a provision for water necessary for dust control. Clark County is expected to lose a substantial amount of the water as a result of water disputes involving California agricultural interests and Salton Sea issues. Clark County must amend and re-submit the Plan as the drought becomes worse. There is no evidence that Clark County and the State of Nevada have addressed this problem and it is not discussed in EPA's proposed rulemaking.

Response 30. Clark County has considered the issue of continued availability of water necessary for dust control purposes. Clark County met with the Las Vegas Valley Water District (LVVWD), the Southern Nevada Water Authority and other governmental agencies on May 19, 2003 to discuss drought issues. We agree with the commenter that the LVVWD Drought Plan does not include a provision that

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[49] Section 94.11.3, adopted March 18, 2003.

[50] We note that CAA section 173 requires New Source Review (NSR) programs to provide for offsets of certain emissions increases. EPA is currently reviewing the County's NSR program and will act on this submittal in a separate FR notice. The local ERC program, however, does not apply to the major source permitting program required under the Act and therefore will not be "necessary or appropriate" under CAA section 110(a)(2)(A) for this subsequent action either.

concerns water necessary for dust control. At the May 19th meeting, LVVWD indicated that the Drought Plan does not address construction activities (i.e., it does not curtail the use of water for dust control).[51] This is because dust control at construction sites is considered an important use of water and the Plan identifies other means of water conservation. The LVVWD Service Rule that establishes requirements for water commitment requests confirms this by exempting "any activity where the use of water is the most appropriate and practical method to abate a health or safety hazard or where the use of water is required to reasonably meet the provisions of federal, state, or local law."[52]

Comment 31. NEC states that the use of water for dust control must be justified in light of the drought, given that the area has already exceeded its legal allotment for water use.

Response 31. The use of water as a dust suppressant is a cost-effective control measure for controlling fugitive dust from construction sites and other sources. Limiting the availability of water for dust control purposes could not only drive up the costs of compliance with dust control regulations but also result in less effective compliance with the regulations leading to increased levels of PM-10. We recommend that PM-10 nonattainment areas rely to the greatest extent possible on reclaimed water for dust control purposes, however, we do not have authority to require this for purposes of compliance with CAA requirements.

Comment 32. NEC states that the Plan does not discuss the fact that humidity in the Las Vegas Valley is routinely below 10 percent and dust control with water remains effective in areas of very low humidity for only a short time.

Response 32. We agree with the commenter that in desert climates, frequent application of water for dust control purposes may be necessary for effective dust control. The Clark County best management practices for construction sites require that surfactants or tackifiers be used in combination with water on soils that are the most resistant to water penetration, thus not only improving control efficiency but conserving water.

Comment 33. NEC states that the Plan does not discuss potential means to slow land development, such as restricting water hook-ups or limiting building permits.

Response 33. The CAA does not mandate consideration of land use controls for purposes of meeting air quality standards. In fact, section 131 of the Act makes clear that these decisions remain local and EPA cannot infringe on this authority by

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[51] E-mail with attached explanation from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA Region 9, September 8, 2003.

[52] Id. (citing Section 12.5 of LVVWD Service Rule).

requiring consideration of specific land use controls.

D. Most Stringent Measures

A State requesting an extension of the serious area attainment date under section 188(e) must, among other things, demonstrate that the Plan includes the most stringent measures included in the implementation plan of any State or achieved in practice in any State that can feasibly be implemented in the area. CAA § 188(e). MSM is not defined in the Act. EPA has defined MSM as "the maximum degree of emission reduction that has been required or achieved from a source or source category in other SIPs or in practice in other States and can be feasibly implemented in the area." 66 FR 50252, 50282 (Oct. 2, 2001). As with the BACM requirement, EPA interprets the MSM analysis to consider both technological and economic feasibility. 65 FR 19964, 19968 (April 13, 2000). EPA has also determined that the MSM requirement should be subject to a de minimis limitation on source categories. Id.

The process for determining MSM (described below) is similar to the process for determining BACM, but with an additional step: to compare the potentially most stringent measures elsewhere to the measures already adopted in the area in question. 65 FR at 19968. Such MSM demonstrations must be "to the satisfaction of the Administrator." CAA § 188(e). Thus, we have concluded, "The presence and wording of this qualifier indicates that Congress granted us considerable discretion in determining whether a plan in fact includes MSM." 65 FR at 19969. Ultimately, the scope of the MSM that are required must be considered in light of the overarching requirement of CAA section 188(e) that the Plan include "a demonstration of attainment by the most expeditious alternative date practicable."

Comment 34. Sierra Club states that the plain language of Section 188(e) of the Act requiring most stringent measures and preliminary EPA guidance interpreting this provision make clear that the only basis for rejecting a most stringent measure is that it cannot feasibly be implemented in the area. 65 FR 19964, 19968.

Response 34. The Federal Register notice cited by the commenter explains the five steps to be followed in determining MSM. 65 FR 19964, 19968 (April 13, 2000). First, the area is to develop an inventory of PM-10 sources and source categories. Based on this information, the area is to conduct modeling to determine which of these sources and categories are significant for purposes of adopting MSM. Third, the area is to identify measures in other SIPs or used in practice in other states and evaluate the technological and economic feasibility of implementing the measures in the area. For each significant source or category, the area must compare the most stringent measure against the measures, if any, already adopted for the source or category. Finally, the area must provide for the adoption of the most stringent measure or provide a reasoned justification for why such measure cannot be feasibly implemented in the area. We have further explained that because the Act gives EPA considerable discretion in determining what demonstration is required by the State to satisfy section 188(e), we may "accept

an MSM demonstration even if it falls short of having every MSM possible." 66 FR 50252, 50284 (Oct. 2, 2001). Given this discretion and the focus of the MSM requirement on expeditious attainment, we will therefore "give more weight to a failure to include MSM for source categories that could provide for more expeditious attainment and less weight to those measures for source categories that contribute little to the PM-10 problems and would not expedite attainment." Id.

Based on the foregoing discussion it should be apparent that we have actually identified three general bases for rejecting controls as MSM. As noted by the commenter, an area may reject a measure shown to be infeasible for the area based on technological or economic grounds. In addition, we have concluded that the MSM requirement does not require 1) measures for insignificant source categories or 2) measures that individually or collectively would not contribute to expeditious attainment. 67 FR 48718, 48729 (July 25, 2002).

Comment 35. Sierra Club disagrees with Clark County's and EPA's interpretation of CAA section 188(e) that for purposes of a MSM analysis, the impact of the overall control strategy on emissions in a source category can be compared against the impact of the overall control strategy on the source category in other areas, and that individual measures within the source category need not be compared. See 65 FR at 19969. The commenter believes this approach does not comport with the Act or previous EPA guidance for the following reasons:

First, this interpretation violates the plain language and purpose of the Act. The Act clearly requires the inclusion of the "most stringent *measures*" in the Plan of an area seeking an attainment date extension, and does not allow a state or local government to settle for the most stringent overall control *strategy*. This makes sense, since the overall control strategy of a comparison area may achieve less in emission reductions than the overall strategy of the nonattainment area under consideration, but the comparison area's implementation plan could contain specific measures which, when added to the nonattainment area's strategy, would result in even further reductions. EPA's proposed approach invites states and local governments to arbitrarily incorporate less stringent measures into an otherwise more stringent "control strategy" to avoid having to adopt other, more stringent measures in place in other areas. It also violates the Act's requirement that serious areas seeking an extension of the attainment deadline demonstrate attainment by the most expeditious date practicable, because the approach allows states to reject feasible measures that would hasten attainment.

Second, EPA's interpretation represents a departure from prior EPA guidance for which the agency has failed to provide a rational explanation. EPA has long interpreted the Act as making a clear distinction between control measures on the one hand, and the permits or rules through which those measures are implemented on the other. See 57 FR 13498,

13541 (“When the process of determining RACM for an area is completed, the individual control measures should then be converted into a legally enforceable vehicle (e.g., a regulation or permit program) . . . .”).

Thus, the Plan’s MSM analysis must focus on the stringency of the individual measures identified from comparison areas, and cannot compare the stringency of overall control strategies. This comment applies to any aspect of the Plan’s MSM analysis where the Plan is comparing the relative stringency of overall control strategies rather than individual measures.

Response 35. The commenter suggests that the MSM test requires a serious nonattainment area to collect and adopt all individual requirements that have been applied to a particular source type or category in other States without consideration of whether these requirements have been applied as a group by any other State. We do not agree that this is a reasonable interpretation of section 188(e).

Contrary to commenter’s assertion, our interpretation of the MSM test is not to compare the relative stringency of “overall control strategies” for all sources at once, but to compare the stringency of the collection of controls that apply to a source or category. We have explained that in judging the stringency of a measure we look at both the applicability of the controls and the specific requirements for reducing emissions. “When we use the term ‘measure’ in the context of the MSM requirement, we are referring to this combination; we are not referring to just the control requirement or to individual methods of control.”[53]

We disagree with commenter’s claim that EPA’s interpretation is contrary to the plain meaning of the Act. The term “most stringent measures” is not defined in the Act. It is therefore necessary to look at the purpose of section 188(e) to define the term. We read the MSM requirement in section 188(e) as a backstop requirement: States seeking an extension must at a minimum ensure that the significant sources in the subject area are achieving the level of control required for such sources in other States. Our interpretation of “most stringent measure” as the combination of applicability and requirements for a given source or category is consistent with this objective of section 188(e). The emphasis of section 188(e) is expeditious attainment balanced by practicability. In order to achieve the standards, section 188(e) creates a minimum level of control to be achieved by sources based on an assessment of feasibility. The MSM requirement creates a presumption of feasibility. Measures that have been adopted in other States or are used in practice are presumed to be feasible. The State seeking the extension must evaluate whether in fact these measures can feasibly be implemented in the area. Without looking at the requirements and applicability of another State’s measure, it is not reasonable to presume the level of control is feasible.

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[53] EPA TSD at 28-29.

Under the commenter's reading, MSM would impose a level of control higher than that achieved in any other State because it would require an area to adopt a set of requirements that collectively are more stringent than the most stringent set of controls that apply in other areas. In other words, if requirements A, B, and C are being implemented for a source category in different areas, but no area implements a measure that includes all three requirements, the MSM demonstration cannot reasonably be read to require adoption of all three requirements because this would require a level of control that has not been demonstrated to be feasible. It puts the burden on the State seeking the extension to consider all possible combinations of requirements to determine the maximum feasible level of control. There would be little point in evaluating what other States require if this were the objective of section 188(e).

Finally, we disagree that our interpretation of the MSM requirement represents a departure from EPA guidance with respect to distinguishing control measures from their conversion into a legally enforceable vehicle (e.g., regulation or permit program). The focus in establishing RACM, BACM and MSM is the level of control. There are several ways to achieve a particular level of control. If the State has adopted a new or different set of requirements for a source or category that achieves a level of control that meets or exceeds the RACM, BACM or MSM level of control, that control measure would still satisfy the applicable requirement. As we have explained, the only difference between determining the BACM level of control and the MSM level of control is the additional step in the MSM analysis of comparing the potentially most stringent measure against the measures already adopted in the area to determine if the existing measures are most stringent. Once the level of control has been identified, each individual control measure adopted as RACM, BACM or MSM needs to be in the form of a legally enforceable vehicle. This is a separate consideration from the determination of which measures need to be adopted in the first instance.

Comment 36. Sierra Club states that the Plan fails to include a MSM for disturbed vacant land without demonstrating that it cannot be feasibly implemented in the Las Vegas Valley nonattainment area. The Plan rejects the South Coast Air Quality Management District ("South Coast") standard of no visible emissions over a property line when wind speeds are 25 miles per hour or less as an MSM for this source category without a proper demonstration that using this standard would be infeasible in all instances. The Plan claims that the standard would be technologically infeasible for dust-producing activities that occur next to a property line but does not evaluate the standard for activities near the property line, yet far enough away that the standard could feasibly be met. The commenter notes that there is no reason this standard could not be applied in conjunction with the surface stabilization standards and test methods in the Clark County rules; thus, the Plan's conclusion that the Clark County rules provide greater air quality benefits than the South Coast no-visible-emission standard is not a basis for

rejecting the South Coast standard when the two requirements used in conjunction with each other would provide even greater air quality benefits.

Response 36. As stated in our response to comment 35: (1) the MSM demonstration only requires areas to identify and adopt the most stringent measures for a source category if they would achieve a level of control greater than that achieved by the measures, if any, already adopted into the Plan, and; (2) the stringencies of the control measures are to be compared by looking at the level of control achieved for the source or category by the combination of requirements and their applicability in the measures.

We believe the Clark County MSM analysis sufficiently demonstrates that the control measure for disturbed vacant land in South Coast Rule 403 (as amended December 11, 1998) is less stringent than Clark County Section 90 for the following reasons. South Coast Rule 403 does not specify that any specific controls be implemented except to the extent needed to prevent visible emissions from crossing the property line during 25 mph or less winds. The only way to confirm whether a source fails to meet the requirement is *after* windblown fugitive dust has been released; thus it is a reactive rather than a preventative requirement with inherently limited emissions reductions potential. Also, sources may be able to comply with a property line limit by only stabilizing the outer perimeter of a lot. Finally, in determining whether visible dust is crossing a property line, it may be difficult to ascertain whether the fugitive dust originates from the disturbed vacant lot or from other sources in the area. Since South Coast Rule 403 does not contain specific control measure requirements and surface stabilization requirements for disturbed vacant lots, it is reasonable to find the South Coast requirements for this source category less stringent than Clark County Section 90.

Comment 37. Sierra Club states that the Plan rejects a MSM that would require construction sites to prevent visible dust plumes from extending 100 feet. The Plan acknowledges the 100-foot limit on dust plume length in South Coast Rule 403 (as amended December 11, 1998) is more stringent than the 100-yard requirement contained in Clark County Section 94, but rejects it on the basis that the Clark County rule's 20 percent opacity requirement is of equal or greater stringency as the South Coast requirement and provides better air quality benefits. The Plan fails to provide any evidence for this conclusion, or to explain why the two standards could not be used in conjunction with one another to achieve even greater reductions in PM-10.

Response 37. As explained in the EPA TSD, it is unclear whether a 100-foot limit would capture the extent of emissions generated at the point of origin better than a 20% opacity standard, since the visible characteristics of plumes can quickly fade with

atmospheric mixing.[54] Clark County determined that a 100-foot plume limit was not technologically feasible where hydrophobic and caliche soils are present, even where the owner/operator is fully employing the required BACM.[55] For purposes of the MSM analysis, we find no compelling reason to believe that the South Coast performance standards for construction sites (i.e., a property line limit and 100-foot limit) would result in more stringent level of control than Clark County's 20% opacity limit and 100-yard limit, particularly if we also take into account the specific best management practices Clark County adopted for each construction activity that are not found in the South Coast rule. We note that Clark County has incorporated a 100-foot limit in a limited form in Section 94[56] (i.e., it applies only where BACM is not being fully employed), but we are not relying on this addition to Section 94 for the BACM and MSM finding.

Comment 38. Sierra Club states that the Plan improperly rejects the South Coast standard of no visible emissions over a property line when wind speeds are 25 miles per hour or less as an MSM for unpaved parking lots.

Response 38. We refer to our response to comment 22 that addresses this issue with respect to windblown dust from disturbed vacant land as the same applies to unpaved parking lots.

Comment 39. Sierra Club states that the Plan's construction site threshold for dust control permits fails to satisfy MSM. Maricopa County has set the BACM standard for such permits at one-tenth of an acre, while Clark County only requires dust control permits for construction sites of one-quarter of an acre or larger. The Plan rejects this measure without demonstrating that adopting the lower threshold in the Las Vegas Valley would be infeasible. In addition, the Plan notes that "elements of the Maricopa dust control plan process are more stringent than the Clark County dust control permit/dust mitigation plan program" without adopting those more stringent elements or demonstrating that they are infeasible.

Response 39. As explained in response to comment 24, the Clark County Section 94 requirements for construction sites apply to <u>all</u> sites, regardless of their size, as does Maricopa County Rule 310. The threshold referred to by the commenter governs which sources need to obtain permits – not which sources need to meet the applicable limits. While we agree permitting facilitates compliance with applicable rule requirements, thereby contributing to rule effectiveness, we do not

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[54] EPA TSD at 89.

[55] E-mail with attached explanation from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA Region 9, September 8, 2003.

[56] Section 94.11.3(b), adopted March 18, 2003.

agree that the requirement to incorporate these limits into a permit alters the stringency of the control measure. Thus, the lower threshold for permitting does not support a finding that the Maricopa measure is more stringent than Clark County Section 94.

Comment 40. Sierra Club states that it is unclear how Clark County's programs for cleanup of silt loading on paved roads are of equivalent stringency to those in other areas when Maricopa County has a requirement to clean up silt deposits within a specific time period (within 24 hours of discovery or prior to resumption of traffic on pavement), and Clark County does not. The Plan must include this most stringent measure or demonstrate that it is infeasible.

Response 40. Clark County Public Works agencies all have action plans or policies to rapidly clean up materials deposited on paved roads by storms or spills. The agencies indicate that clean up response time to truck spills or deposition from natural events is immediate or within 30 minutes of notification. Notwithstanding, we agree with the commenter that the Maricopa County provision is more stringent because it establishes a definitive 24-hour limit. Clark County, however, has provided an adequate BACM justification for not adopting a strict 24-hour limit. Clark County indicates that major storm events in Las Vegas Valley can cause such significant deposition that it is not always technologically feasible for public works agencies to clean up deposits within 24-hours. This is only the case with major storm events as Clark County attests that minor storm events do not generally result in significant off-site material deposition. However, we are not aware of a way in which the County could craft a 24-hour cleanup requirement that would define what constitutes major storm event deposition and make a legitimate exception for such circumstances. We therefore concur with the County's finding that establishing a 24-hour cleanup requirement for public works agencies in Las Vegas Valley is technologically infeasible. We further note that the Plan does not rely on any emissions reductions from rapid material deposition cleanup to demonstrate attainment of the 24-hour standard.

Comment 41. Sierra Club states that the Plan fails to meet MSM for unpaved roads because the County's requirements for stabilizing all existing unpaved roads that receive 150 average daily trips (ADT) or more is not as stringent as the City of Phoenix and City of Las Vegas commitments to pave all unpaved roads in their jurisdictions regardless of ADT. The commenter states that the Plan must include this measure or demonstrate why it is infeasible for all unpaved roads county-wide to be paved regardless of ADT.

Response 41. The CAA requirements to implement BACM and include MSM are a collective obligation of the nonattainment area and not of individual jurisdictions within that nonattainment area. Therefore, to judge whether the plan provides for implementation of BACM and for the inclusion of MSM, we have focused on the

combined effect of local commitments on the region as whole rather than judging compliance jurisdiction by jurisdiction. Moreover, because BACM and MSM are obligations of the nonattainment area, we do not judge one jurisdiction's efforts against another nor consider one jurisdiction's efforts to set a BACM or MSM standard that other jurisdictions must meet or provide a justification for not doing so. If some jurisdictions find it economically feasible to pave all of their unpaved roads, other jurisdictions are not compelled to do the same under the BACM or MSM requirements.

Comment 42. Sierra Club states that the Plan improperly fails to consider TCM as potential MSM for paved road dust.

Response 42. In our Response to Comment 25, we explained why TCM were reasonably excluded from the BACM analysis because of the small emission reduction potential and relatively high costs of these measures.[57] Likewise, such measures are of questionable feasibility for MSM. More fundamentally, however, the small emission reductions that could be achieved through implementation of TCM would not advance the attainment date for the area since the Plan's Reasonable Further Progress demonstration shows the area must achieve emission reductions of approximately 77 tons per day between 2003 and 2006 in order to demonstrate attainment.

E. Contingency Measures

Comment 43. Sierra Club states that the contingency measures identified in the Plan fail to meet the CAA section 172(c)(9) requirement for the following reasons:

First, contrary to EPA's statements in its proposed approval of the Plan, the measures have not been adopted for purposes of the Act or EPA guidance because they will require further rulemaking before they will ever take effect. The only commitment made with respect to the contingency measures identified in the Plan is that Clark County will evaluate the measures for an assessment of suitability. The July 27, 2000 Clark County Health District Board of Health Resolution regarding contingency measures makes clear that the Resolution is not an adoption of the measures, because it states that Clark County "*shall* adopt one or more of the candidate contingency measures listed above . . . no later than July 1, 2000." The commenter is not aware that these measures were adopted by the specified date, and there is no assurance that the measures will ultimately be adopted or implemented if the Las Vegas Valley fails to make reasonable further progress or attain the PM-10 annual and 24-hour standards.

Second, the measures themselves are too vague to allow estimates of their

[57] We estimate the average PM-10 reduction from a potential TCM to equal 1.4 tons/day.

emission reductions with any degree of confidence. For example, one proposed contingency measure would "[i]ncrease minimum penalties for violations of air pollution control regulations for fugitive dust" but does not specify what the new minimum penalties would be. Another proposed measure would "[r]educe the size threshold for requiring a dust control monitor (coordinator) at construction sites," but does not state what the new threshold would be. Because of the vagueness of these measures, Clark County cannot make any reliable estimates of emission reductions from the contingency measures, much less show that those reductions are equivalent to one year's average increment of RFP.

Third, to the extent that some of the contingency measures have already been implemented, they can no longer be considered contingency measures and their estimated emission reductions cannot be used to calculate equivalence to one year's average increment of RFP.

Response 43. Section 172(c)(9) of the Clean Air Act requires that SIPs provide for the implementation of specific measures to be undertaken if the area fails to make RFP or attain by its attainment deadline. These contingency measures are to take effect without further action by the State or the Administrator. We interpret the "take effect without further action by the State or the Administrator" to mean that no further rulemaking actions by the State or EPA would be needed to implement the contingency measures. 59 FR at 42015.

The Act does not specify how many contingency measures are necessary nor does it specify the level of emission reductions they must produce. The purpose of contingency measures is to ensure that additional emission reductions beyond those relied on in the attainment and RFP demonstrations are available if there is a failure to make RFP or attain by the applicable attainment date. These additional emission reductions will assure continued progress towards attainment while the SIP is being revised to fully correct the failure. To ensure this continued progress, we recommend that contingency measures provide emission reductions equivalent to one year's average increment of RFP. 59 FR at 42016.

Certain core control measure requirements such as RACM, BACM, and MSM may result in a state adopting and expeditiously implementing more measures than are strictly necessary for expeditious attainment and/or RFP. Because of this and because these core requirements effectively require the implementation of all non-trivial measures that are technologically and economically feasible for the area, States often are left with few, if any, substantive unimplemented control measures.[58]

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[58] In fact, under the Act's PM-10 planning provisions, if there were a measure or set of measures that were technologically and economically feasible and could collectively generate substantial emission reductions (e.g., one year's worth of RFP), a state would be hard pressed to justify

For this reason, we interpret the CAA to allow adopted and implemented measures to serve as contingency measures, provided those measures' emission reductions are not needed to demonstrate expeditious attainment and/or RFP. See Memorandum, G. T. Helms, Chief, Ozone/Carbon Monoxide Programs Branch, OAQPS to Air Branch Chiefs, Regions I-X, "Early Implementation of Contingency Measures for Ozone and Carbon Monoxide (CO) Nonattainment Areas," August 13, 1993 ("Helms memo") (noting, "[I]t seems illogical to penalize nonattainment areas that are taking extra steps to ensure attainment of the NAAQS by having them adopt additional [replacement] contingency measures now."). Contrary to commenters' assertion, nothing in CAA section 172(c)(9) or elsewhere provides that contingency measures cannot already be implemented. This approach to the contingency measure requirement has the benefit of allowing States to build uncredited cushions into their attainment and RFP demonstrations--which makes actual failures in RFP or attainment less likely--while still obtaining the air quality and public health benefits from the implemented measures.

With this background we turn to commenter's specific claims. First, we agree that the language in District Board Resolution #03-00 (see Appendix H of the Plan) requires Clark County to adopt one of the contingency measures listed by July 1, 2000. While we believe it is Clark County's intent to automatically implement the entire set of contingency measures listed in Section 4.6.3 of the Plan despite the actual language of the adopted resolution, we agree with commenter that these measures cannot be considered as capable of taking effect without further action by the state and therefore should not be used to satisfy the requirement of CAA section 172(c)(9).

Since submitting the Plan, however, Clark County has taken further action to implement two of the measures identified in the resolution. Specifically, the County has hired additional enforcement officers and has overseen paving of unpaved roads with 100 or more ADT. First, the resolution provided for at least two additional field enforcement officers. Clark County met this contingency measure by hiring an additional seven field enforcement officers in 2002.[59] This is in addition to the 15 compliance division staff that were hired per the Plan's commitment in Section 4.8.1. Second, the resolution listed requiring paving/stabilization of all unpaved roads with ADT of 100 or more. While Clark County has not formally changed the threshold for unpaved road requirements,

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withholding implementation of those measures. Likewise, we do not believe States are obligated by section 172(c)(9) to adopt infeasible or unreasonable measures or measures that individually and collectively have trivial benefit.

[59] EPA TSD at 123.

unpaved roads with 100 or more ADT have already been paved.[49] As explained above, EPA policy allows States to use implemented but uncredited measures as contingency measures. See Helms memo. EPA believes it is reasonable to accept Clark County's early implementation of contingency measures without a new enforceable commitment because these are not the type of voluntary actions that can be easily undone due to the cost and effort involved. These measures are not credited in the attainment, RFP or milestone demonstrations and are not necessary to demonstrate expeditious attainment of the 24-hour PM-10 standard.

Finally, we find the measures already implemented supply sufficient emissions reductions to ensure continued progress towards attainment. The emissions reductions associated with the implementation of the road paving contingency measure alone equal 1,272 tons per year.[50] This tonnage is 93 percent of the total tonnage Clark County attributed to the implementation of the full set of contingency measures.[51] These reductions significantly exceed one year's increment of RFP, which was calculated to be 19.07 tons per year. For the foregoing reasons, we conclude the requirement of CAA section 172(c)(9) is satisfied.

F. Compliance Date Extension

Comment 44. Sierra Club states that the Plan does not meet the requirements for an extension of the attainment date for the 24-hour PM-10 standard because it fails to demonstrate that attainment by the deadline of 2001 was impracticable. The Plan rejects numerous BACM measures without sufficient justification and exempts "insignificant" sources from any additional control measures, including sources estimated to account for three to nine percent of total PM-10 emissions in the Las Vegas Valley. The Las Vegas Valley might have been able to attain the 24-hour standard by the deadline had it implemented the rejected BACM and adopted BACM for insignificant sources. Thus, the Plan fails to demonstrate that attainment of the 24-hour standard by December 31, 2001 is impracticable.

Response 44. In previous responses, we explain the technological or economic justification that

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[49] Letter from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA, with attached letters from the Clark County Department of Public Works, City Of Henderson, City of North Las Vegas, and City of Las Vegas, March 31, 2004.

[50] 2001 PM-10 Plan, Appendix B at B-135. See Table B-93 for the combined tonnage of unpaved roads with "Less than 150 ADT and equal to or greater than 125 ADT" and "Less than 125 ADT and equal to or greater than 100 ADT".

[51] Implementation of the full set of contingency measures would result in an emissions benefit of 1,373 tons per year. 2001 PM-10 Plan at 4-118.

supports Clark County's rejection of each of the candidate measures the commenter has identified as additional BACM. As to whether control of de minimis source categories would have enabled the Las Vegas Valley to demonstrate attainment of the 24-hour standard in 2001, Clark County estimates the cumulative contribution of de minimis source categories to ambient concentrations in 2001 to be 5.1 $\mu g/m^3$.[52] Clark County estimates the total contribution of all source categories to ambient concentrations in 2001 (accounting for controls adopted in the Plan) as 209 $\mu g/m^3$. Therefore, even if all emissions from de minimis sources were eliminated, this would not have enabled attainment of the 24-hour standard (i.e., 150 $\mu g/m^3$) in 2001.

Comment 45. Sierra Club states that the Plan does not meet the requirements for an extension of the attainment date for the 24-hour PM-10 standard because it fails to demonstrate attainment by the most expeditious alternative date practicable. The Plan does not meet the requirements for an extension of the attainment date for the 24-hour PM-10 standard because it fails to meet MSM by improperly rejecting measures without demonstration that they are infeasible. If the Plan included the various MSM's that were rejected without adequate justification, included all BACM for both significant and insignificant source categories, and fully implemented the measures on a more expeditious basis, the Las Vegas Valley might be able to attain the 24-hour PM-10 standard by December 31, 2003 and the Plan fails to demonstrate otherwise.

Response 45. In previous responses, we explain why the measures adopted by Clark County for each significant source category meet the CAA section 188(e) requirement for MSM. In the Technical Support Document for our proposed approval of the Plan, we discuss why the adopted BACM and MSM are being implemented as expeditiously as practicable.[53] We also note that in order to meet a December 2006 attainment date, the area needs to be attaining the 24-hour standard by 2004 given that the attainment determination is based on three years of monitoring data. A December 31, 2003 attainment date for the 24-hour standard would have required the area to meet the 24-hour standard beginning in 2001. As discussed in our response to comment 44, the estimated contribution of sources in 2001 exceeded the 150 $\mu g/m^3$ 24-hour standard.

Comment 46. NEC states that if EPA had enforced what the commenter believes are more stringent requirements adopted in the SIP in 1979-1982, the Las Vegas Valley would have been able to demonstrate attainment of the 24-hour PM-10 standard without requesting an extension of attainment to December 31, 2006.

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[52] 2001 PM-10 Plan at 6-4.

[53] EPA TSD at 139-140.

Response 46. Commenter's assertion is not supported by the inventory and monitoring data. These data demonstrate that the bulk of the emissions causing nonattainment in the area come from fugitive dust sources. As discussed further below, the 2001 SIP does not relax the requirements that apply to these sources. To the contrary, the new requirements add to or strengthen these existing requirements. It is only through these additional incremental reductions that the area can demonstrate attainment. Thus, even if commenter is correct in claiming that existing requirements have not been adequately enforced, the attainment demonstration shows that more stringent controls are necessary to achieve the 24-hour standard.

Comment 47. NEC states that Clark County's past record of compliance with the CAA must be taken into account before granting an extension of the attainment date.

Response 47. We disagree. Our determination that the Plan is adequate with respect to the attainment date extension request is based on the measures and commitments Clark County has enacted in the 2001 PM-10 Plan and subsequent amendments. We note that for general SIP-approval purposes, under CAA section 110(a)(2)(E), we evaluate the enforceability of the measures adopted and whether the County has the authority and resources necessary to carry out the Plan. In theory we might look at historical compliance to identify potential pitfalls in future implementation, but we do not find the specific problems noted by the commenter here to be relevant to either our general assessment under CAA section 110(a)(2)(E) or our determination that an extension is warranted.

G. Compliance with General SIP Approval Criteria

Comment 48. Sierra Club cites section 110(a)(2)(E)(i) of the Act and 40 CFR § 51.280 regarding provision of adequate resources to carry out a plan during the five-year period following its submission, with a description that includes projections of the extent to which resources will be required at 1-, 3-, and 5-year intervals. The commenter states that the Plan only estimates the costs of enforcement for fiscal year 2000/2001 (in the amount of $780,000) and does not project future costs as required by 40 CFR § 51.280. The Plan only identifies "targeted" funding sources for these additional costs (a dust control permit fee, redirected funding from the PM-10 Emission Control Research Account, and increased funding from the Clark County general fund). The Plan does not assure that these funding sources are actually available or indicate whether they will continue to be available in the future. Thus, the Plan fails to provide adequate assurances of personnel and funding as required.

Response 48. The DAQM indicates that the Board of County Commissioners has assumed

financial responsibilities for the commitments made in the Plan.[54] On July 3, 2001, the Board of County Commissioners accepted the Governor's designation as the air pollution control agency for Clark County.[55] The State of Nevada ultimately has responsibility for ensuring adequate implementation of the Clark County air pollution control program. Nevada Revised Statue 445B.520 allows the State Environmental Commission to supersede a County's program in instances when the Commission determines that a local air quality program is inadequate. This provides adequate assurance that the Plan commitments will be funded for purposes of meeting CAA section 110(a)(2)(E)(i).

H. Withdrawal of Previous Attainment Demonstration

Comment 49. NEC states that the proposed approval notice does not discuss the effects of the State of Nevada's withdrawal of the moderate and serious area PM-10 plans submitted prior to the 2001 PM-10 Plan.

Response 49. The withdrawal of previous PM-10 plans is not relevant to EPA's proposed and final rulemaking on the efficacy of the 2001 PM-10 Plan with respect to meeting CAA requirements for PM-10. In addition, as explained further below in response to comment 52, there is no immediate air quality impact from the withdrawal of the previous plans because SIP approval (or disapproval) does not affect the implementation of the underlying local rules.

Comment 50. NEC states that the withdrawal of previous moderate and serious PM-10 plans effectively granted an unlawful extension of the attainment date without EPA public notice. The commenter states the CAA does not allow withdrawal of a PM-10 plan once it has been submitted to EPA and argues such withdrawal conflicts with CAA section 110(a)(1). The commenter further states that EPA encouraged and facilitated the State of Nevada's withdrawal of the previous moderate and serious area PM-10 plans without providing a legal basis for allowing the withdrawal, public notice, or opportunity for judicial review.

Response 50. The CAA does not contain a requirement that would prohibit a State from withdrawing a plan that has been submitted but which is not SIP-approved. Nor does the CAA require EPA to solicit public comment before a State withdraws such a plan. CAA section 110(a)(1) provisions relate only to SIP-approved plans or rules. EPA's legal recourse, should a submitted plan be withdrawn, is to issue a finding of nonsubmittal per CAA 179(a) and 40 CFR § 52.31. EPA promptly

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[54] 2001 PM-10 Plan, Appendix Q, "Responses to comments received in letter from Jessica Hodge, Southern Nevada Group of the Sierra Club, dated June 19, 2001," Response to Comment #35.

[55] Id.

issued a finding of nonsubmittal following the State of Nevada's withdrawal of the moderate and serious area PM-10 plans on December 5, 2000.

Comment 51. NEC states that the air quality benefits of the original moderate and serious area plans were automatically terminated by the State of Nevada's withdrawal of the previous moderate and serious area PM-10 plans.

Response 51. Since these plans were not SIP-approved, any air quality benefits that may have been associated with the plans were not incorporated into the Nevada SIP. Therefore no SIP benefits were terminated with the State's action to withdraw them. As EPA had proposed to disapprove the plans that the State of Nevada withdrew, EPA clearly was not intending to attribute any air quality benefit to the withdrawn plans.

Comment 52. NEC states that EPA's proposed approval notice does not discuss the public health problems that evolved during the years when EPA did not act on previously submitted plans or impose sanctions on the State of Nevada, allowing adverse air quality impacts in the Las Vegas Valley and associated quality of life and economic impacts.

Response 52. At the outset it is important to note that commenter points to no statutory requirement for including the discussion demanded and it is unclear how such a discussion would be relevant to the decision being made in this action. Nonetheless, we believe some clarification is warranted. Commenter either misconstrues or misunderstands the function of planning and plan approval. Approval or disapproval does not effect the benefits achieved by implementation of the local control measures. EPA review and approval ensures that these measures are consistent with an overarching plan that is adequate to achieve the national standards and provides for federal enforcement as a backstop in the event the measures are not adequately enforced. Disapproval may mean the State or local agency must revise these rules, but does not prevent these local measures from being implemented pending those revisions, or otherwise change the emissions in the area. As commenter repeatedly points out, the 1979-82 SIP for the Las Vegas area included what commenter labels stringent requirements. These requirements remain in effect until replaced. Thus, EPA's disapproval or any other alleged delay in acting on previously submitted plans would not affect air quality in the area.

I. SIP Relaxations

NEC makes repeated assertions that the SIP revisions being approved in this action illegally relax existing SIP-approved requirements. This section address the criteria for evaluating SIP revisions and then addresses commenter's claims regarding the specific rules being approved.

1. 116 Comparison generally

Comment 53. NEC argues CAA section 116 requires that superceding EPA-approved regulations be no less stringent than the prior EPA-approved 1979/81/82 SIP regulations individually or collectively. Commenter argues EPA has ignored the requirements of section 116 and approval may not move forward without a side-by-side comparison of the SIP-approved regulations with the regulations proposed for approval into the SIP.

Response 53. Commenter misreads CAA section 116. Section 116 provides:

> Except as otherwise provided in sections 119 (c), (e), and (f) (as in effect before the date of the enactment of the Clean Air Act Amendments of 1977), 209, 211(c)(4), and 233 (preempting certain State regulation of moving sources) nothing in this Act shall preclude the right of any State or political division thereof to adopt or enforce (1) any standard or limitation respecting emissions of air pollutants or (2) any requirement respecting control or abatement of air pollution; except that if an emission standard or limitation is in effect under an applicable implementation plan#### such State or political subdivision may not adopt or enforce any emission standard or limitation which is less stringent than the standard or limitation under such plan#.

CAA section 116 does not impose requirements for evaluating SIP revisions nor preclude States from revising SIPs to include less stringent standards or limitations. The purpose of this section is to clarify the relationship between the federally enforceable requirements in the SIP and other State requirements that may be adopted and enforced without SIP approval. CAA section 116 makes clear that while a State may choose to apply standards that are more stringent than those in the SIP, they cannot apply standards that are less stringent without revising the SIP (i.e., until revised, the SIP requirements will continue to apply even if the State has adopted a less stringent version of the standard or limit).[56]

Commenter's reading of section 116 as imposing requirements for SIP revisions or a blanket prohibition on relaxation of SIPs would be inconsistent with CAA sections 110(l) and 193, which specify the criteria to be applied in evaluating SIP revisions. CAA section 110(l) provides:

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[56] State adoption of a relaxed measure does not itself modify the EPA-approved SIP -- the EPA-approved SIP measure remains in effect and subject to federal and citizen enforcement. Relaxation of an EPA-approved SIP measure without a request for a SIP revision, however, could trigger a SIP call under CAA section 110(k)(5) or a noncompliance finding under CAA section 179(a)(4).

> The Administrator shall not approve a revision of a plan if the revision would interfere with any applicable requirement concerning attainment and reasonable further progress (as defined in section 171), or any other applicable requirement of this Act.

CAA section 110(l) does not preclude SIP relaxations but requires that relaxations not interfere with specified requirements of the Act including requirements for attainment and reasonable further progress. Thus, if an area can demonstrate that it will continue to attain or maintain the NAAQS and meet any applicable reasonable further progress goals or other specific requirements, it may revise SIP provisions, even if the revision amounts to a relaxation. See Hall v. U.S. EPA, 273 F.3d 1146, 1160 (9th Cir. 2001) (explaining that to make finding under CAA section 110(l), "EPA must be able to conclude that the particular plan revision before it is consistent with the development of an overall plan capable of meeting the Act's attainment requirements."). Because the SIP revisions being approved in today's action have been submitted with the area's attainment demonstration, the review under CAA section 110(l) is simplified – the attainment demonstration shows the SIP revisions will support attainment of the NAAQS and reasonable further progress.

Even if the SIP revisions are consistent with the area's plan for attainment, CAA section 193 imposes additional restrictions on modifications to certain SIP control requirements in nonattainment areas that were in effect prior to the 1990 Clean Air Act Amendments ("pre-1990 control requirements"). CAA section 193 provides:

> No control requirement in effect, or required to be adopted by an order, settlement agreement, or plan in effect before the date of the enactment of the Clean Air Act Amendments of 1990 in any area which is a nonattainment area for any air pollutant may be modified after such enactment in any manner unless the modification insures equivalent or greater emission reductions of such air pollutant.

Thus, while commenter's interpretation of CAA section 116 as providing a broad prohibition against SIP relaxations is erroneous, CAA section 193 does limit nonattainment areas from backsliding from the emissions reductions achieved by pre-1990 control requirements. As a result, even though commenter does not cite these authorities, we will apply the requirements of CAA sections 110(l) and 193 in responding to specific comments on SIP relaxations below. Since most of the SIP-approved measures were in effect prior to the 1990 CAA Amendments, the focus of the analysis will be on whether the SIP revision amounts to a relaxation or whether equivalent emission reductions are maintained.

2. Changes to specific SIP-approved sections

Comment 54. In support of it's contention that the proposed SIP rules are less stringent than the rules in the EPA-approved SIP, NEC lists the following definitions in SIP-approved section 1:

1.84 defining "Source of Air Contaminant" as anything which emits any air contaminant;

1.3 defining "Air Contaminant" as any substance discharged into the atmosphere except water vapor or water droplets;

1.61 describing the "Non-Attainment Area" for Clark County as the area coinciding with the boundaries of Hydrographic Area 212;

1.90 defining "Stationary Source" as any building, structure, facility or installation which emits or may emit any air contaminant and describing the emission units composing the stationary source as including stacks, vents, process areas, unpaved haul roads serving a gravel processing operation, etc.;

1.78 defining "Significant" in reference to a net emissions increase as 5 tpy for PM; and

1.48 defining "Lowest Achievable Emission Rate."

Response 54. NEC recites these definitions as supporting its claim that the proposed SIP approval amounts to a relaxation, but does not clearly tie these definitions to changes proposed for approval. Most of these definitions relate to the applicability of the new source review requirements in Section 15. Commenter presumably notes these definitions to explain what Section 15 requires and to support the claim that the proposed approval amounts to a relaxation of Section 15. This claim is discussed further below.

Today's action approves into the SIP a number of new definitions adopted by Clark County in Section 0. These new provisions are necessary to define terms used in the new control measures in Sections 90 through 94. In all but two instances, these definitions are new and do not replace existing SIP-approved definitions in section 1. The provisions approved today replace the definitions of "Fugitive Dust" (Section 1.35 will be replaced by Section 0.70) and "Offroad Vehicle" (Section 1.64 will be replaced by 0.114). NEC does not comment on these two specific revisions to definitions in Section 1.[57] In all other instances, the new definitions in section 0 being approved today supplement the current SIP-

[57] These two definitions are relevant to the currently SIP-approved Section 41 and the new requirements in Sections 90 through 94 being approved in this action. Nothing in these definitions has the effect of relaxing Section 41.

approved definitions in Section 1. Thus, contrary to NEC's assertion, the SIP approval does not relax any otherwise applicable definitions. We conclude that CAA section 193, therefore, does not preclude these revisions, and because these revisions are part of the area's new attainment demonstration, we find the revisions satisfy the requirements of 110(l).

NEC's one specific comment on the definitions is that the proposal would revise the definition of "Non-Attainment Area" (Section 1.61) from the entire hydrographic basin to only the BLM Disposal Area. The definitions being approved today do not revise Section 1.61 (i.e., Section 1.61 remains in the SIP). A new definition of "PM-10 Nonattainment Area" is being added to the SIP in Section 0.132, but this definition covers the identical geographic area as Section 1.61. Section 0.132 provides, "PM_{10} Nonattainment Area' means that area which has been designated as nonattainment for the National Ambient Air Quality Standards for PM_{10} by the EPA and which coincides with the area designated as Hydrographic Basin 212 . . . ." Thus, all requirements applicable to the PM-10 nonattainment area will continue to apply to the same area.

Comment 55. NEC references the requirements of Sections 17 and 41 as provisions in the SIP that are more stringent than those proposed for SIP approval. Section 17, entitled "Permission to Disturb Topsoil," requires a permit for specified activities that disturb topsoil, including construction activities, clearing and grubbing operations, and the addition or removal of dirt fill in excess of an aggregate of 0.1 hectares. NEC notes that the only exception is for agricultural operations and landscaping by a person at his or her place of residence. Section 41, entitled "Fugitive Dust" establishes restrictions and prohibitions on specified activities with the potential to generate fugitive dust, including demolition and construction, agriculture, transporting materials, sand blasting and off-road racing. NEC argues Section 94 appears to replace Sections 17 and 41, and claims the proposed SIP "dilutes" the control requirements for different industrial classifications.

Response 55. As we explained in the Notice of Proposed Rulemaking and EPA TSD, the new requirements in Sections 90 through 94 would replace the SIP-approved requirements in Section 17 but not those in Section 41. In the TSD, we explained why we concluded the new requirements were superior to the requirements of Section 17. See EPA TSD at 85-87. NEC's comments fail to acknowledge the TSD analysis and fail to explain why Sections 90 through 94 amount to a relaxation as compared to Section 17.

As we explained in the TSD, the current SIP-approved Section 17 merely requires persons planning to disturb topsoil to obtain a permit specifying "acceptable" methods to prevent PM from becoming airborne and to secure topsoil when the project is completed. See Air Pollution Control Regs Sections 17.5.2 and 17.5.3

(July 24, 1979). In addition, the permit applicant must agree to take additional precautions as may be reasonably prescribed by the Control Officer. Id. at Section 17.5.1.4. We concluded that these requirements were vague and included inappropriate Executive Officer discretion. By contrast, Sections 90 through 94 include specific control measures to be applied, methods for demonstrating compliance and documentation and recordkeeping requirements.

The requirements of Section 17 applied to persons disturbing topsoil, engaging in construction activities, conducting a clearing and grubbing operation, or adding or removing dirt or fill in excess of 0.1 hectares (0.25 acres). Id. at Section 17.1.1. Agricultural operations and landscaping by a person at his or her place of residence were exempt. Id. at Section 17.2.1. All of these activities are covered by the new Sections 90 through 94. Section 94 alone applies more broadly to all activities related to construction that disturb or have the potential to disturb soils including, but not limited to, land clearing, maintenance, and land cleanup using machinery, soil and rock excavation or removal, soil or rock hauling, soil or rock crushing or screening, filling, compacting, stockpiling and grading, explosive blasting, demolition, implosion, handling of building materials, abrasive blasting, concrete, stone and tile cutting, trenching, landscaping, operation of motorized machinery, and driving vehicles on construction sites. Air Quality Regs Section 94.2.1 (Nov. 16, 2000).[58] The exemptions from the rule include the same exemptions provided in Section 17 (i.e., agricultural operations, landscaping by a person at his or her place of residence, and activities on less than 0.1 hectares (0.25 acres). Id. at Section 94.4.2. Two new exemptions have been added for emergency maintenance activities, and the agricultural exemption has been expanded to include existing equestrian facilities in compliance with zoning requirements. Id. The addition of these narrow exemptions, however, does not amount to a relaxation as compared to Section 17. Emergency activities, while not explicitly exempted in Section 17, could not reasonably have been subject to permitting requirements even under the previous rule. In addition, equestrian facilities, while exempt from Section 94, remain subject to the requirements of

[58] We note that Section 94 provides that its requirements do not apply to the "operation of sources permitted under Section 12 and Section 16 of the Air Quality Regulations but shall apply to any construction activities at such facilities." Air Quality Regs Section 94.2.1. Thus, activities related to construction of stationary sources will be subject to Section 94, but activities that are part of the normal operation of the source (e.g., explosive blasting or rock removal at mining operations) will not. Section 17, while more ambiguous on its applicability to the "operation" of sources, was also intended to apply only to construction-related activities. See History of Section 17 Amendments (1981 - 1994), prepared by Clark County DAQM (undated). Even if read to apply to operations, however, Section 17, which merely required identification of "acceptable" methods to prevent PM from becoming airborne and the securing of topsoil when the project is finished, is less stringent than the new permitting requirements, which require BACT for new and modified sources.

section 90.

Comment 56. NEC argues the proposed SIP severely relaxes opacity limits as compared to the limits in section 26 of the SIP-approved rules. NEC notes that Section 26 ("Emissions of Visible Air Contaminants") requires new sources to incorporate control devices and methods calculated to produce zero opacity except for three minutes in any sixty-minute interval. NEC argues that Sections 91.4.1, 92.2.1.3, 93.2.1.5, 94.5.2, 94.5.3.1 and 94.6.8(d) all allow sources to operate with 20% opacity, which is less stringent than required under Section 26. In addition, NEC notes that Section 94.6.8(b) doesn't consider controls to be inadequate unless the construction activity creates a visible plume of dust that extends more than 100 yards from the point of origin.

Response 56. Sections 90 through 94 do not replace the requirements of Section 26. Section 26 will remain in the SIP. To the extent these requirements are found to overlap, sources will need to comply with both the old and new requirements, which typically is done by meeting the more stringent.[59]

Comment 57. NEC makes two arguments related to CAA section 116 and the new source review provisions in Section 15. First, similar to the arguments above, NEC argues the proposed rules amount to a relaxation as compared to the current SIP-approved Section 15. NEC makes repeated reference to the LAER and offset requirements in Section 15 and argues the proposed BACM or BMP measures would be less stringent. NEC writes, "In summary, the old SIP required LAER . . . on all particulate sources above 5 tpy and offsets above 25 tpy thresholds. The newly proposed SIP allows less stringent control technology and no offsets whatsoever . . . ." NEC also notes that the proposed rules do not comply with the requirement in Section 15.13.12 that sources exceeding 40 tpy conduct pre-construction monitoring of VOCs.

Response 57. Today's approval of section 90 through 94 does not change the SIP-approved requirements of Section 15. Section 15 remains in the SIP therefore there is no relaxation of these requirements.[60]

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[59] Because Section 26 is not being removed from the SIP, we do not need to compare the stringency of the SIP-approved section to the new sections being approved today. Nonetheless, we note that it is not clear that the requirements of Section 26 will in fact overlap with the requirements of Sections 90 through 94. The former appears to apply to point source discharges, while the latter is limited to non-point fugitive dust emissions.

[60] NEC's comment again reflects some confusion as to how these requirements relate to one another. Sections 90 through 94 are not new source review standards. The CAA defines two technology standards for new and modified sources: LAER for nonattainment new source review and BACT for prevention of significant deterioration (PSD) review in attainment areas.

Comment 58. NEC's second argument related to CAA section 116 and Section 15 is that the Plan fails to acknowledge that Clark County implements separate NSR provisions in Section 12 of the local rules and that these requirements, which are not in the SIP, are less stringent than the SIP-approved requirements of Section 15. NEC refers to the non-SIP-approved requirements as "shadow" local regulations. NEC argues CAA section 116 requires a side-by-side comparison of Sections 12 and 15 in order for EPA to approve the plan.

Response 58. We recognize that sources in Clark County are currently subject to two sets of NSR requirements. The SIP-approved Section 15 remains in effect and federally enforceable. At the same time, Clark County has adopted revised requirements in Section 12. Clark County has submitted the revised requirements for approval into the SIP and EPA is currently reviewing these revisions.

We further recognize that because of the history of our action on these rule revisions there has been some confusion as to the applicable requirements. The current SIP-approved NSR requirements are those in Section 15 of Clark County's Air Quality Regulations. See 46 FR 21758 (April 14, 1981) and 47 FR 26620 (June 6, 1982). In 1993, Clark County revised its local NSR rules (then contained in Sections 0, 12, and 58) and submitted them to EPA for SIP approval. In 1995, EPA proposed to approve with a contingency, and disapprove in the alternative, these rules into the Clark County portion of the Nevada SIP. See 60 FR 38777 (July 28, 1995). Following this proposal, Clark County revised its NSR rules to address deficiencies identified by EPA and re-submitted them for SIP approval. In 1999, EPA found the deficiencies to have been adequately addressed and published a notice of final rulemaking approving the Clark County NSR rules, as amended, into the Clark County portion of the Nevada SIP. See 64 FR 25210 (May 11, 1999). In particular EPA concluded the requirements of CAA section 110(l) were met because the revised rules were no less stringent than the SIP-approved rules.

Our 1999 final action was challenged, and, on August 29, 2001, the U.S. Court of Appeals for the Ninth Circuit vacated our approval of Clark County's NSR rules. See *Hall v. EPA*, 273 F.3d 1146 (9th Cir. 2001). The court vacated our approval on the grounds that EPA did not have an adequate basis under CAA section 110(l) of the Act to conclude that substitution of the existing NSR SIP rules (i.e., SIP Section 15 and related definitions in section 1 and ambient standards in section 11) with the new NSR rules would not interfere with attainment of the NAAQS

BACM/BACT under section 189(b)(1)(B), which is the requirement being met with Sections 90 through 94, is not a new source review requirement and should not be confused with the PSD BACT requirement. For a discussion of these requirements, see the Addendum to the General Preamble at 59 FR 41998, 42009 (Aug. 16, 1994).

by the applicable attainment deadlines. While the court did not disagree with EPA's finding that the new rules were no less stringent than the SIP-approved rules, it found that such a "no relaxation" test was not adequate to meet the CAA section 110(l) requirements in a nonattainment area. Id. at 1160-61.

EPA interprets the court's decision to result in the revocation of Sections 0, 12, and 58 from the Nevada SIP and in the restoration of previously approved SIP Section 15 (with related definitions in section 1 and ambient standards in section 11) as the NSR program for Clark County.

Not surprisingly, during the period between EPA's final approval of the revised NSR rules in 1999 and the court's vacature in 2001, Clark County applied the revised NSR requirements of Sections 12 and 58. Since the vacature, however, Clark County appears to have clarified that until the new regulations are approved into the SIP, permits must meet the requirements of both new regulations in Section 12 and the SIP-approved regulations in Section 15.[61] Because the County has resubmitted the new rules for SIP-approval and in the interim appears to be applying both the new requirements and the SIP-approved requirements, we do not believe action under CAA section 110(k)(5) or a noncompliance finding under CAA section 179(a)(4) are warranted. Should EPA or citizens find that permits are being issued without meeting the SIP-approved requirements, EPA or citizens may seek to enforce the SIP-approved requirements.[62]

We disagree with NEC that approval of the attainment demonstration cannot proceed until the new requirements in Section 12 are reviewed and approved into the SIP. The attainment demonstration does not rely in any quantifiable way on the new source review requirements. The Plan demonstrates that stationary sources are an insignificant source of PM-10 violations in the area and that these

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[61] NEC's Supporting Materials acknowledge that construction permits issued since the court's vacature of EPA's approval of Section 12 have recited the need to comply with both sets of requirements. See, e.g., Supporting Materials at 20107 (quoting Clark County's support document for the Genwest authority to construct, "The remand reestablished Section 15 as the SIP approved rule. This [permit] analysis will include requirements from both Section 15 and Section 12, with the permit conditions representing the more stringent requirements from both rules."). Admittedly, NEC disagrees that Clark County appropriately followed these steps, but Clark County acknowledges that both sets of requirements continue to apply.

[62] NEC's Supporting Materials include examples of EPA enforcement of the SIP-approved Section 15 even after Clark County's adoption of the new Section 12. See, e.g., Supporting Materials at 10023-32 (2001 Finding and Notice of Violation in re Kerr-McGee, citing Section 15), 10071-83 (2000 Finding and Notice of Violation in re CalNev Pipeline Co., citing Section 15), and 10084-10113 (2000 Finding and Notice of Violation in re Capital Cabinet Corp., citing both Sections 12 and 15).

sources are expected to remain small in the future. This projection is based primarily on growth trends for the area and the relationship between source activity and growth. The Plan does mention that new source review requirements ensure that any major changes to these sources will trigger control technology requirements, but does not attempt to quantify the benefits of these requirements. See, e.g., 2001 PM-10 Plan at E-3. Thus, it is not necessary for the attainment demonstration to have the revisions to the new source review requirements approved into the SIP. As part of our review of the new requirements in Section 12, we will assess whether the requirements of CAA sections 110(l) and 193 are satisfied. Under CAA section 110(l), in particular, this means we will evaluate whether the changes being proposed for the SIP are consistent with today's demonstration of attainment (as well as the attainment demonstration for CO).[63]

J. Compliance with Other Requirements

1. Conformity

Comment 59. NEC states that federal agencies operating in the Las Vegas Valley have not completed, publicly noticed and approved a post-1990 Clean Air Act conformity determination certifying compliance with the 1997[64]/81/82 SIP and that there is no discussion of this failure in the NPRM.

Response 59. Today's action is not a determination of conformity and EPA does not believe this SIP approval is the proper action for evaluating the compliance of other federal agencies with the conformity requirements. In this action we are approving the motor vehicle emissions budgets for the area in accordance with CAA section 176(c) and our implementing regulations in 40 CFR Part 93, Subpart A. With our initial finding of adequacy and today's final approval of these budgets, agencies subject to conformity requirements will use these budgets

[63] We note that to the extent Clark County mentions the new source review requirements, it describes the requirements of Section 12 and does not rely what NEC asserts are the more stringent requirements of SIP-approved Section 15.

[64] Commenter's letter references the 1997 SIP, but we assume commenter intended to reference the 1979 SIP based on similar comments made to the Regional Transportation Commission (RTC). See, e.g., NEC Supporting Documents at 20067. To the extent commenter intended to reference the 1997 PM-10 Plan that was later withdrawn by Clark County, we disagree that requiring conformity to this plan, which EPA found to be deficient, would be reasonable. Again, in comments to the RTC, commenter appears to agree that the 1997 SIP should not be the basis for conformity determinations. Id. at 20081-82.

to make the required demonstrations. See 40 CFR § 93.109(e)(2).[65]

2. NEPA

Comment 60. NEC states that federal agencies operating in the Las Vegas Valley have not complied with the National Environmental Policy Act (NEPA) by not preparing cumulative impact environmental documents associated with Valley activities that directly or indirectly cause air pollution. EPA does not discuss the impact of these omissions on achieving attainment with the NAAQS.

Response 60. As with conformity, EPA does not believe this SIP approval action is the proper place to evaluate NEPA compliance. Nor is it feasible to assess how alleged "omissions" might impact air quality. It is the responsibility of each individual Federal agency to comply with NEPA in connection with its own actions. Under title 15 of United States Code, section 793(c)(1), no action taken under the CAA shall be deemed a major Federal action significantly affecting the quality of the human environment within the meaning of NEPA. Because EPA's action related to the SIP is an action taken under the CAA, the Agency need not comply with NEPA for this specific action.

K. Other Incorporated Comments

Comment 61. NEC incorporates by reference two comment letters dated June 18, 2001 and September 6, 2001.

Response 61. The comments provided in the commenter's September 6, 2001 letter to EPA were submitted during the public comment period for EPA's proposed adequacy finding for the PM-10 transportation conformity budgets contained in the Plan's attainment demonstration. EPA responded to those comments upon finalizing our adequacy finding.[66] We incorporate by reference our responses to the September 6, 2001 comments for purposes of this final action. The commenter's reference to a June 18, 2001 letter pertains to comments submitted to Clark County during the development of the Plan. In reviewing the June 18, 2001 comment letter,[67] we note that the comments are duplicated in the September 6, 2001 comment letter to

[65] Prior to EPA's January 28, 2002 determination of adequacy, agencies were subject to either the "build/no-build" test or the baseline test. These tests are described in our regulations in 40 CFR Part 93. Thus NEC's comment appears slightly misleading because neither the Act nor our implementing regulations require a specific comparison of transportation projects or plans to pre-1990 SIPs.

[66] Letter to Allen Biaggi, Nevada Division of Environmental Protection, November 9, 2001.

[67] PM-10 Plan, Appendix Q.

EPA for which we have already provided responses.

Comment 62. NEC incorporates by reference and has submitted with its comments nine volumes of "Supporting Materials." Per the commenter's letter, this supporting material consists of EPA notices of violation and requests made by the commenter to EPA for administrative action, along with other supporting documents that pertain to the 1995-2003 period. The commenter requests that EPA take administrative notice of each document submitted and address the issues therein. The commenter states that these documents describe acts and omissions on the part of air pollution sources, Clark County, the State of Nevada and EPA that individually and collectively resulted in failure of the area to attain the PM-10 NAAQS in previous years. The commenter alleges that EPA abdicated its statutory obligations, including failure to levy sanctions and to implement a federal implementation plan, and did not timely respond to the notices the commenter has provided.

Response 62. We have included these supporting documents in the administrative record for this action. These documents do not include specific comments on the proposed SIP approval, so it is not possible to identify and address the "issues" generally noted by NEC. To the extent these materials, as explained by commenter, provide support for NEC's claims that Clark County should have attained the PM-10 NAAQS earlier or that EPA should impose sanctions and/or promulgate a FIP for the area, they are addressed in the previous responses.

LIST OF REFERENCED DOCUMENTS IN THE DOCKET

1. Jennifer B. Anderson, Sierra Club, Southern Nevada Group ("Sierra Club"), P.O. Box 19777, Las Vegas, Nevada 89132. Comment letter dated February 21, 2003.

2. Robert W. Hall, Nevada Environmental Coalition, Inc. ("NEC"), 10720 Button Willow Drive, Las Vegas, Nevada 89134. Comment letter dated February 21, 2003.

3. "PM-10 Emission Inventory Requirements", Office of Air Quality Planning & Standards, U.S. EPA, September 1994

4. Letter from John Koswan, Assistant Planning Manager, DAQM, to Karen Irwin, Planning Office, U.S. EPA Region IX (Dec. 2, 2003).

5. Record of conversations between Karen Irwin, EPA, and Carrie McDougall, Clark County DAQM, on August 21, 2003, and Mike Uhl, Clark County DAQM, on September 18, 2003, respectively.

6. Desert Research Institute, "Fugitive Dust and Other Source Contributions to the PM-10 in Nevada's Las Vegas Valley," April 18, 1997

7. Fax from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA, January 20, 2004

8. Air Quality System Quick Look Report (January 21, 2004).

9. Letter and attachment from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA Region 9, March 11, 2004.

10. E-mail and attachment from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA Region 9, September 8, 2003.

11. Section 94.11.3(b), adopted March 18, 2003.

12. "Carbon Monoxide Transportation Control Measures Analysis", Lima & Associates, May 1998.

13. Calculations for Response to Comment 25 of the Clark County Final PM-10 Plan Approval

14. Letter from Rodney Langston, Clark County DAQM, to Karen Irwin, EPA, with attached letters from the Clark County Department of Public Works, City Of Henderson, City of North Las Vegas, and City of Las Vegas, March 31, 2004.

15. History of Section 17 Amendments (1981 - 1994), prepared by Clark County DAQM (undated).

16. Letter to Allen Biaggi, Nevada Division of Environmental Protection, November 9, 2001.

17. 68 FR 55991, September 29, 2003 (BLM Notice of Intent to Prepare an Environmental Impact Statement for the Las Vegas Valley Disposal Area as Expanded by the Clark County Conservation of Public Land and Natural Resources Act of 2002)

18. Email with attachment from Bob Hall, NEC, to EPA, Region 9 (multiple recipients), March 6, 2003