

LANE REGIONAL AIR PROTECTION AGENCY

TITLE 40

Air Quality Analysis Requirements

Section 40-0010 Purpose

This title contains the definitions and requirements for air quality analysis referred to in LRAPA Rules. It does not apply unless a rule in another title refers the reader here. For example, Title 42 (Stationary Source Plant Site Emissions Limits) and Title 38 (Major New Source Review) refer the reader to provisions in this title for specific air quality analysis requirements.

Section 40-0020 Definitions

The definitions in LRAPA Title 12 and this rule apply to this title. If the same term is defined in this rule and LRAPA Title 12, the definition in this rule applies to this title.

1. "Allowable Emissions" means the emissions rate of a stationary source calculated using the maximum rated capacity of the source (unless the source is subject to federally enforceable limits which restrict the operating rate, or hours of operation, or both) and the most stringent of the following:
 - A. The applicable standards as set forth in 40 CFR parts 60 and 61;
 - B. The applicable State Implementation Plan emissions limitation, including those with a future compliance date; or
 - C. The emissions rate specified as a federally enforceable permit condition.
2. "Background Light Extinction" means the reference levels (Mm^{-1}) shown in the estimates of natural conditions as referenced in the FLAG to be representative of the PSD Class I or Class II area being evaluated.
3. "Baseline Concentration" means:
 - A. The ambient concentration level for sulfur dioxide and PM_{10} that existed in an area during the calendar year 1978. If no ambient air quality data is available in an area, the baseline concentration may be estimated using modeling based on actual emissions for 1978. Actual emission increases or decreases occurring before January 1, 1978 must be included in the baseline calculation, except that actual emission increases from any source or modification on which construction commenced after January 6, 1975 must not be included in the baseline calculation;
 - B. The ambient concentration level for nitrogen oxides that existed in an area during the calendar year 1988.

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C. The ambient concentration level for PM2.5 that existed in an area during the calendar year 2007.

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4. "Competing PSD Increment Consuming Source Impacts" means the total modeled concentration above the modeled Baseline Concentration resulting from increased emissions of all other sources since the baseline concentration year that are within the Range of Influence of the source in question. Allowable Emissions may be used as a conservative estimate, in lieu of Actual Emissions, in this analysis.
5. "Competing NAAQS Source Impacts" means total modeled concentration resulting from allowable emissions of all other sources that are within the Range of Influence of the source in question.
6. "FLAG" refers to the Federal Land Managers' Air Quality Related Values Work Group Phase I Report. See 66 Federal Register 2, January 3, 2001 at 382 to 383.
7. "General Background Concentration" means impacts from natural sources and unidentified sources that were not explicitly modeled. LRAPA may determine this as site-specific ambient monitoring or representative ambient monitoring from another location.
8. "Nitrogen Deposition" means the sum of anion and cation nitrogen deposition expressed in terms of the mass of total elemental nitrogen being deposited. As an example, Nitrogen Deposition for NH_4NO_3 is 0.3500 times the weight of NH_4NO_3 being deposited.
9. "Ozone Precursor Distance" means the distance in kilometers from the nearest boundary of a designated ozone nonattainment or maintenance area within which a major new or modified source of VOC or NO_x is considered to significantly affect that designated area. The determination of significance is made by either the formula method or the demonstration method.
 - A. The Formula Method.
 - 1) For sources with complete permit applications submitted before January 1, 2003: $D = 30 \text{ km}$
 - 2) For sources with complete permit applications submitted on or after January 1, 2003: $D = (Q/40) \times 30 \text{ km}$
 - 3) D is the Ozone Precursor Distance in kilometers. The value for D is 100 kilometers when D is calculated to exceed 100 kilometers. Q is the larger of the NO_x or VOC emissions increase from the source being evaluated in tons/year, and is quantified relative to the netting basis.
 - 4) If a source is located at a distance less than D from the designated area, the source is considered to have a significant effect on the designated

area. If the source is located at a distance equal to or greater than D, it is not considered to have a significant effect.

- B. The Demonstration Method. An applicant may demonstrate to LRAPA that the source or proposed source would not significantly impact a nonattainment area or maintenance area. This demonstration may be based on an analysis of major topographic features, dispersion modeling, meteorological conditions, or other factors. If LRAPA determines that the source or proposed source would not significantly impact the nonattainment area or maintenance area under high ozone conditions, the Ozone Precursor Distance is zero kilometers.

10. "Ozone Precursor Offsets" means the emission reductions required to offset emission increases from a major new or modified source located inside the designated nonattainment or maintenance area or within the Ozone Precursor Distance. Emission reductions must come from within the designated area or from within the Ozone Precursor Distance of the offsetting source as described in Section 38-0090. The offsets determination is made by either the formula method or the demonstration method.

A. The Formula Method.

- 1) Required offsets (RO) for new or modified sources are determined as follows:
 - (a) For sources with complete permit applications submitted before January 1, 2003: $RO = SQ$
 - (b) For sources with complete permit applications submitted on or after January 1, 2003: $RO = (SQ \text{ minus } (40/30 * SD))$
- 2) Contributing sources may provide offsets (PO) calculated as follows:
 $PO = CQ \text{ minus } (40/30 * CD)$
- 3) Multiple sources may contribute to the required offsets of a new source. For the formula method to be satisfied, total provided offsets (PO) must equal or exceed the required offset (RO).
- 4) Definitions of factors used in paragraphs 1), 2) and 3) of this subsection:
 - (a) RO is the required offset of NO_x or VOC in tons per year as a result of the source emissions increase. If RO is calculated to be negative, RO is set to zero;
 - (b) SQ is the source emissions increase of NO_x or VOC in tons per year above the netting basis;
 - (c) SD is the source distance in kilometers to the nonattainment or maintenance area. SD is zero for sources located within the nonattainment or maintenance area.
 - (d) PO is the provided offset from a contributing source and must be equal to or greater than zero;
 - (e) CQ is the contributing emissions reduction in tons per year quantified relative to contemporaneous pre-reduction actual emissions (Section 41-0030-1.B.).

(f) CD is the contributing source distance in kilometers to the nonattainment or maintenance area. For a contributing source located within the nonattainment or maintenance area, CD equals zero.

B. The Demonstration Method. An applicant may demonstrate to LRAPA using dispersion modeling or other analyses the level and location of offsets that would be sufficient to provide actual reductions in concentrations of VOC or NO_x in the designated area during high ozone conditions. The modeled reductions of ambient VOC or NO_x concentrations resulting from the emissions offset must be demonstrated over a greater area and over a greater period of time within the designated area as compared to the modeled ambient VOC or NO_x concentrations resulting from the emissions increase from the source subject to this rule. If LRAPA determines that the demonstration is acceptable, then LRAPA will approve the offsets proposed by the applicant. The demonstration method does not apply to sources located inside an ozone nonattainment area.

11. “Range of Influence (ROI)” means:

A. For PSD Class II and Class III areas, the Range of Influence of a competing source (in kilometers) is defined by:

- 1) $ROI (km) = Q (tons/year) / K (tons/year km)$.
- 2) Definition of factors used in paragraph (1) of this subsection:
 - (a) ROI is the distance a source has an effect on an area and is compared to the distance from a potential competing source to the Significant Impact Area of a proposed new source. Maximum ROI is 50 km, however LRAPA may request that sources at a distance greater than 50 km be included in a competing source analysis.
 - (b) Q is the emission rate of the potential competing source in tons per year.
 - (c) K (tons/year km) is a pollutant specific constant as defined in the table below:

| Pollutant | PM _{2.5} /PM ₁₀ | SO _x | NO _x | CO | Lead |
|-----------|-------------------------------------|-----------------|-----------------|----|------|
| K | 5 | 5 | 10 | 40 | 0.15 |

B. For PSD Class I areas, the Range of Influence of a competing source includes emissions from all sources that occur within the modeling domain of the source being evaluated. LRAPA determines the modeling domain on a case-by-case basis.

12. “Source Impact Area” means a circular area with a radius extending from the source to the largest distance to where predicted impacts from the source or modification equal or exceed the [Class II](#) Significant Air Quality Impact levels set out in Table 1 of LRAPA Title 12. This definition only applies to PSD Class II areas and is not intended to limit the distance for PSD Class I modeling.

13. "Sulfur Deposition" means the sum of anion and cation sulfur deposition expressed in terms of the total mass of elemental sulfur being deposited. As an example, sulfur deposition for (NH₄)₂SO₄ is 0.2427 times the weight of (NH₄)₂SO₄ being deposited.

Section 40-0030 Procedural Requirements

Information Required. In addition to the requirements defined in Section 37-0040, the owner or operator of a source (where required by Titles 42 or 38) must submit all information necessary to perform any analysis or make any determination required under these rules. Such information must include, but is not limited to:

1. Emissions data for all existing and proposed emission points from the source or modification. This data must represent maximum emissions for the following averaging times by pollutant:

| | |
|-------------------|--------------------------|
| PM ₁₀ | 24 hours, annual |
| PM _{2.5} | 24 hours, annual |
| Sulfur Oxides | 3 hour, 24 hours, annual |
| Nitrogen Oxides | annual |
| Carbon Monoxide | 1 hour, 8 hours, annual |
| Lead | annual quarterly, annual |

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2. Stack parameter data (height above ground, exit diameter, exit velocity, and exit temperature data) for all existing and proposed emission points from the source or modification,
3. An analysis of the air quality and visibility impact of the source or modification, including meteorological and topographical data, specific details of models used, and other information necessary to estimate air quality impacts; and
4. An analysis of the air quality and visibility impacts, and the nature and extent of all commercial, residential, industrial, and other source emission growth, that has occurred since January 1, 1978, in the area the source or modification would significantly affect.

Section 40-0040 Air Quality Models

All modeled estimates of ambient concentrations required under this rule must be based on the applicable air quality models, data bases, and other requirements specified in 40 CFR Part 51, Appendix W, "Guidelines on Air Quality Models (Revised) " (July 1, 2000). Where an air quality impact model specified in 40 CFR Part 51, Appendix W is inappropriate, the methods published in the FLAG are generally preferred for analyses in PSD Class I areas. Where an air quality impact model specified in 40 CFR Part 51, Appendix W is inappropriate in PSD Class II and III areas, the model may be modified or another model substituted. Any change or substitution from models specified in 40 CFR Part 51, Appendix W is subject to notice and opportunity for public comment and must receive prior written approval from

LRAPA and the EPA. Where necessary, methods like those outlined in the "Interim Procedures for Evaluating Air Quality Models (Revised)" (U.S. Environmental Protection Agency, 1984) provide guidance in determining the comparability of models.

Section 40-0045 Requirements for Analysis in Maintenance Areas

Modeling: For determining compliance with the limits established in Section 38-0060-2.C., NAAQS, and PSD Increments, the following methods must be used:

1. A single source impact analysis is sufficient to show compliance with standards, PSD increments, and limits if modeled impacts from the source being evaluated are less than the **Class II** Significant Air Quality Impact levels specified in LRAPA Title 12, Table 1 for all maintenance pollutants.
2. If the above requirement is not satisfied, the owner or operator of a proposed source or modification being evaluated must perform competing source modeling as follows:
 - A. For demonstrating compliance with the NAAQS, the owner or operator of a proposed source or modification must show that the total modeled impacts plus total Competing NAAQS Source Impacts plus General Background Concentrations are less than the NAAQS for all averaging.
 - B. For demonstrating compliance with the PSD Increments (as defined in Section 50-055, Table 1), the owner or operator of a proposed source or modification must show that modeled impacts from the proposed increased emissions (above the baseline concentration) plus competing PSD Increment Consuming Source Impacts (above the baseline concentration) are less than the PSD increments for all averaging times.

Section 40-0050 Requirements for Analysis in PSD Class II and Class III Areas

Modeling: For determining compliance with the NAAQS and PSD Increments in PSD Class II and Class III areas, the following methods must be used:

1. A single source impact analysis is sufficient to show compliance with standards and increments if modeled impacts from the source being evaluated are less than the **Class II** Significant Air Quality Impact levels specified in LRAPA Title 12, Table 1 for all pollutants.
2. If the above requirement is not satisfied, the owner or operator of a proposed source or modification being evaluated must perform competing source modeling as follows:
 - A. For demonstrating compliance with the PSD Increments (as defined in Section 50-055, Table 1), the owner or operator of a proposed source or modification must show that modeled impacts from the proposed increased emissions (above the modeled Baseline Concentration) plus Competing PSD Increment Consuming Source Impacts (above the modeled Baseline Concentration) are less than the PSD increments for all averaging times.

- B. For demonstrating compliance with the NAAQS, the owner or operator of a proposed source must show that the total modeled impacts plus total Competing NAAQS Source Impacts plus General Background Concentrations are less than the NAAQS for all averaging times.

3. Additional Impact Modeling:

- A. When referred to this rule by Titles 42 or 38, the owner or operator of a source must provide an analysis of the impairment to visibility, soils and vegetation that would occur as a result of the source or modification, and general commercial, residential, industrial and other growth associated with the source or modification. As a part of this analysis, deposition modeling analysis is required for sources emitting heavy metals above the significant emission rates as defined in LRAPA Title 12, Table 2. Concentration and deposition modeling may also be required for sources emitting other compounds on a case-by-case basis;
- B. The owner or operator must provide an analysis of the air quality concentration projected for the area as a result of general commercial, residential, industrial and other growth associated with the source or modification.

4. Air Quality Monitoring:

- A. Preconstruction:
 - 1) When referred to this rule by Titles 42 or 38, the owner or operator of a source must submit with the application an analysis of ambient air quality in the area impacted by the proposed project. This analysis, which is subject to LRAPA's approval, must be conducted for each pollutant potentially emitted at a significant emission rate by the proposed source or modification. The analysis must include continuous air quality monitoring data for any pollutant that may be emitted by the source or modification, except for volatile organic compounds. The data must relate to the year preceding receipt of the complete application and must have been gathered over the same time period. LRAPA may allow the owner or operator to demonstrate that data gathered over some other time period would be adequate to determine that the source or modification would not cause or contribute to a violation of an ambient air quality standard or any applicable pollutant increment. Pursuant to the requirements of these rules, the owner or operator must submit for LRAPA's approval, a preconstruction air quality monitoring plan. This plan must be submitted in writing at least 60 days prior to the planned beginning of monitoring and approved in writing by LRAPA before monitoring begins.
 - 2) Required air quality monitoring must be conducted in accordance with 40 CFR 58 Appendix B, "Quality Assurance Requirements for Prevention of Significant Deterioration (PSD) Air Monitoring" (July 1, 2000) and with other methods on file with LRAPA.

- 3) LRAPA may exempt the owner or operator of a proposed source or modification from preconstruction monitoring for a specific pollutant if the owner or operator demonstrates that the air quality impact from the emissions increase would be less than the amounts listed below **or** that modeled competing source concentration (plus General Background Concentration) of the pollutant within the Source Impact Area are less than the following significant monitoring concentrations:
- 1) Carbon monoxide - 575 ug/m³, 8 hour average;
 - 2) Nitrogen dioxide - 14 ug/m³, annual average;
 - ~~3)~~ 3) PM₁₀ - 10 ug/m³, 24 hour average;
 - ~~3)4)~~ 3)4) **PM_{2.5}; 10 ug/m³, 24-hour average;**
 - ~~4)5)~~ 4)5) Sulfur dioxide - 13 ug/m³, 24 hour average;
 - ~~5)6)~~ 5)6) Ozone - Any net increase of 100 tons/year or more of VOCs from a source or modification subject to PSD requires an ambient impact analysis, including the gathering of ambient air quality data. However, requirement for ambient air monitoring may be exempted if existing representative monitoring data shows maximum ozone concentrations are less than 50% of the ozone NAAQS based on a full season of monitoring;
 - ~~6)7)~~ 6)7) Lead - 0.1 ug/m³, 24 hour average;
 - ~~7)8)~~ 7)8) Fluorides - 0.25 ug/m³, 24 hour average;
 - ~~8)9)~~ 8)9) Total reduced sulfur - 10 ug/m³, 1 hour average;
 - ~~9)10)~~ 9)10) Hydrogen sulfide - 0.04 ug/m³, 1 hour average;
 - ~~10)11)~~ 10)11) Reduced sulfur compounds - 10 ug/m³, 1 hour average.
- 4) LRAPA may allow the owner or operator of a source (where required by Titles 42 or 38) to substitute post construction monitoring for the requirements of 4.A.(1) for a specific pollutant if the owner or operator demonstrates that the air quality impact from the emissions increase would not cause or contribute to an exceedance of any air quality standard. This analysis must meet the requirements of Section 40-0050-2.B. and must use representative or conservative General Background Concentration data.
- 5) When PM₁₀ preconstruction monitoring is required by this section, at least four months of data must be collected, including the season(s) LRAPA judges to have the highest PM₁₀ levels. PM₁₀ must be measured in accordance with 40 CFR part 50, Appendix J (July 1, 1999). In some cases, a full year of data will be required.

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- B. Post-construction: After construction has been completed, LRAPA may require ambient air quality monitoring as a permit condition to establish the effect of emissions, other than volatile organic compounds, on the air quality of any area that such emissions could affect.

Section 40-0060 Requirements for Demonstrating Compliance with Standards and Increments in PSD Class I Areas

For determining compliance with standards and increments in PSD Class I areas, the following methods must be used:

1. Before January 1, 2003, the owner or operator of a source (where required by Titles 42 or 38) must model impacts and demonstrate compliance with standards and increments on all PSD Class I areas that may be affected by the source or modification.
2. On or after January 1, 2003, the owner or operator of a source (where required by Titles 42 or 38) must meet the following requirements:
 - A. A single source impact analysis will be sufficient to show compliance with increments if modeled impacts from the source being evaluated are demonstrated to be less than the Class I impact levels specified in LRAPA Title 12, Table I below.

Table I
Significant Impact Levels for PSD Class I Areas

| Pollutant | Averaging Time | PSD Class I Significant Impact Level |
|------------------|----------------|--------------------------------------|
| PM ₁₀ | 24 hour | 0.30 µg/m ³ |
| PM ₁₀ | Annual | 0.20 µg/m ³ |
| SO ₂ | 3-hour | 1.0 µg/m ³ |
| SO ₂ | 24 hour | 0.20 µg/m ³ |
| SO ₂ | Annual | 0.10 µg/m ³ |
| NO ₂ | Annual | 0.10 µg/m ³ |

- B. If the above requirement is not satisfied, the owner or operator must also show that the increased source impacts (above Baseline Concentration) plus Competing PSD Increment Consuming Source Impacts are less than the PSD increments for all averaging times.
- C. A single source impact analysis will be sufficient to show compliance with standards if modeled impacts from the source being evaluated are demonstrated to be less than the Class II impact levels specified in LRAPA Title 12, Table 1 for all pollutants.
- D. If the requirement of (2.A) is not satisfied, and background monitoring data for each PSD Class I area shows that the NAAQS is more controlling than the PSD increment then the source must also demonstrate compliance with the NAAQS by showing that their total modeled impacts plus total modeled Competing NAAQS Source Impacts plus General Background Concentrations are less than the NAAQS for all averaging times.

Section 40-0070 Requirements for Demonstrating Compliance with AORV Protection

1. Sources that are not Federal Major Sources are exempt from the requirements of the remainder of this rule.
2. Notice of permit application for actions subject to the requirements of Titles 42 or 38:
 - A. If a proposed major source or major modification could impact air quality related values (including visibility) within a Class I area, LRAPA will provide written notice to the EPA and to the appropriate Federal Land Manager within 30 days of receiving such permit application. The notice will include a copy of all information relevant to the permit application, including analysis of anticipated impacts on Class I area air quality related values (including visibility). LRAPA will also provide at least 30 days notice to EPA and the appropriate Federal Land Manager of any scheduled public hearings and preliminary and final actions taken on the application;
 - B. If LRAPA receives advance notice of a permit application for a source that may affect Class I area visibility, LRAPA will notify all affected Federal Land Managers within 30 days of receiving the advance notice;
 - C. During its review of source impacts on Class I area air quality related values (including visibility) pursuant to this rule, LRAPA will consider any analysis performed by the Federal Land Manager that is received by LRAPA within 30 days of the notice required by subsection A. If LRAPA disagrees with the Federal Land Manager's demonstration, LRAPA will include a discussion of the disagreement in the Notice of Public Hearing;
 - D. As a part of the notification required in Section 31-0060, LRAPA will provide the Federal Land Manager an opportunity to demonstrate that the emissions from the proposed source or modification would have an adverse impact on air quality related values (including visibility) of any federal mandatory Class I area. This adverse impact determination may be made even if there is no demonstration that a Class I maximum allowable increment has been exceeded. If LRAPA agrees with the demonstration, it will not issue the permit.
3. Visibility impact analysis requirements:
 - A. If Titles 42 or 38 require a visibility impact analysis, the owner or operator must demonstrate that the potential to emit any pollutant at a significant emission rate in conjunction with all other applicable emission increases or decreases, including secondary emissions, permitted since January 1, 1984 and other increases or decreases in emissions, will not cause or contribute to significant impairment of visibility on any Class I area.
 - B. The owner or operator must submit all information necessary to perform any analysis or demonstration required by these rules pursuant to Section 38-0030-1.

- C. Determination of significant impairment: The results of the modeling must be sent to the affected Federal Land Managers and LRAPA. The land managers may, within 30 days following receipt of the source's visibility impact analysis, determine whether or not significant impairment of visibility in a Class I area would result. LRAPA will consider the comments of the Federal Land Manager in its consideration of whether significant impairment will result. If LRAPA determines that impairment would result, it will not issue a permit for the proposed source.
4. Types of visibility modeling required. For receptors in PSD Class I areas within the PSD Class I Range of Influence, a plume blight analysis or regional haze analysis is required.
 5. Criteria for visibility impacts:
 - A. The owner or operator of a source (where required by Titles 42 or 38) is encouraged to demonstrate that their impacts on visibility satisfy the guidance criteria as referenced in the FLAG.
 - B. If visibility impacts are a concern, LRAPA will consider comments from the Federal Land Manager when deciding whether significant impairment will result. Emission offsets may also be considered. If LRAPA determines that impairment would result, it will not issue a permit for the proposed source.
 6. Deposition modeling may be required for receptors in PSD Class I areas where visibility modeling is required. This may include, but is not limited to an analysis of Nitrogen Deposition and Sulfur Deposition.
 7. Visibility monitoring:
 - A. If Titles 42 or 38 require visibility monitoring data, the owner or operator must use existing data to establish existing visibility conditions within Class I areas as summarized in the FLAG Report.
 - B. After construction has been completed the owner or operator must conduct such visibility monitoring as LRAPA requires as a permit condition to establish the effect of the pollutant on visibility conditions within the impacted Class I area.
 8. Additional impact analysis: the owner or operator subject to Section 38-0060-3. or Section 38-0070-2. must provide an analysis of the impact to visibility that would occur as a result of the proposed source or modification and general commercial, residential, industrial, and other growth associated with the source or major modification.
 9. If the Federal Land Manager recommends and LRAPA agrees, LRAPA may require the owner or operator to analyze the potential impacts on other Air Quality Related Values and how to protect them. Procedures from the FLAG report should be used in this

recommendation. Emission offsets may also be used. If the Federal Land Manager finds that significant impairment would result from the proposed activities and LRAPA agrees, LRAPA will not issue a permit for the proposed source.

Section 40-0090 Requirements for Demonstrating a Net Air Quality Benefit

Demonstrations of net air quality benefit for offsets must include the following:

1. Ozone areas (VOC and NO_x emissions). For sources capable of impacting a designated ozone nonattainment or maintenance area;
 - A. Offsets for VOC and NO_x are required if the source will be located within the designated area or within the Ozone Precursor Distance.
 - B. The amount and location of offsets must be determined in accordance with this subsection:
 - 1) For new or modified sources locating within a designated nonattainment area, the offset ratio is 1.1:1. These offsets must come from within either the same designated nonattainment area as the new or modified source or another ozone nonattainment area (with equal or higher nonattainment classification) that contributes to a violation of the NAAQS in the same designated nonattainment area as the new or modified source.
 - 2) For new or modified sources locating within a designated maintenance area, the offset ratio is 1.1:1. These offsets may come from within either the designated area or the ozone precursor distance.
 - 3) For new or modified sources locating outside the designated area, but within the ozone precursor distance, the offset ratio is 1:1. These offsets may come from within either the designated area or the ozone precursor distance.
 - 4) Offsets from outside the designated area but within the Ozone Precursor Distance must be from sources affecting the designated area in a comparable manner to the proposed emissions increase. Methods for determining offsets are described in the Ozone Precursor Offsets definition (Section 40-0020-11.).
 - C. In lieu of obtaining offsets, the owner or operator may obtain an allocation at the rate of 1:1 from a growth allowance, if available, in an applicable maintenance plan.
2. Non-Ozone areas (PM_{2.5}, PM₁₀, SO₂, CO, NO_x, and Lead emissions):

A. For a source locating within a designated nonattainment area, the owner or operator must:

- 1) Obtain offsets from within the same designated nonattainment area;
- 2) Provide a minimum of 1:1 offsets for emission increases over the Netting Basis or;
- 3) For PM_{2.5} precursor emissions increases over the Netting Basis, provide a minimum of 40:1 (SO₂:Direct PM_{2.5}) for offsets for SO₂ or 1:40 (Direct PM_{2.5}:SO₂);
- 4) Provide a net air quality benefit within the designated nonattainment area. "Net Air Quality Benefit" means a reduction in concentration at a majority of the modeled receptors and less than a significant impact level increase at all modeled receptors;
- 5) Provide offsets sufficient to demonstrate reasonable further progress toward achieving the NAAQS.

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B. For a source locating outside a designated nonattainment area but causing a significant air quality impact on the area, the owner or operator must provide offsets sufficient to reduce the modeled impacts below the significant air quality impact level (LRAPA Title 12) at all receptors within the designated nonattainment area. These offsets may come from within or outside the designated nonattainment area.

C. For a source locating inside or causing a significant air quality impact on a designated maintenance area, the owner or operator must either provide offsets sufficient to reduce modeled impacts below the significant air quality impact level (LRAPA Title 12) at all receptors within the designated maintenance area or obtain an allocation from an available growth allowance as allowed by an applicable maintenance plan. These offsets may come from within or outside the designated maintenance area.

3. Except as provided below, ~~The~~ the emission reductions used as offsets must be of the same type of pollutant as the emissions from the new source or modification. Sources of PM₁₀ must be offset with particulate in the same size range. In PM_{2.5} nonattainment areas, the following offsets are allowed for SO₂ and direct PM_{2.5}

a. SO₂ may be used to offset direct PM_{2.5} at a ratio of 40:1

3-b. Direct PM_{2.5} may be used to offset SO₂ at a ratio of 1:40.

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4. The emission reductions used as offsets must be contemporaneous, that is, the reductions must take effect before the time of startup but not more than two years before the submittal of a complete permit application for the new source or modification. This time limitation may be extended through banking, as provided for in LRAPA Title 41, Emission Reduction Credit Banking. In the case of replacement facilities, LRAPA may allow simultaneous operation of the old and new facilities during the startup period of the

new facility, if net emissions are not increased during that time period. Any emission reductions must be federally enforceable at the time of the issuance of the permit.

5. Offsets required under this rule must meet the requirements of Emissions Reduction Credits in LRAPA Title 41.
6. Emission reductions used as offsets must be equivalent in terms of short-term, seasonal, and yearly time periods to mitigate the effects of the proposed emissions.