

Arizona Department of Transportation
Air Quality Technical Report Requirements

5 AIR QUALITY TECHNICAL REPORT REQUIREMENTS

If, during interagency consultation, it is determined that an Air Quality Technical Report (report) is required to support a conformity determination, then the following chapter provides guidance for the information that should be included in the report. Please see Appendix D for an illustrative outline.

The report shall be broken down into the following topic areas:

0. Report cover page
 - a. Project name, number, and subaccount code
 - b. NEPA class of action (CatEx, EA, EIS)
 - c. Report date (month, day, year)
 - d. ADOT region and address for which report was prepared
 - e. Consulting company name, address, and phone number that prepared report

1. Project Description

This section of the air quality technical report shall include the following information:

 - a. Introduction
 - b. Project purpose and need
 - c. Project location, both general and specific, including a figure
 - d. Project description, including the project sponsor, the NEPA project description, and ADOT's fiscal year(s) for construction
 - e. Description of project alternatives

2. Regulatory Framework
 - a. Provide an overview of any criteria pollutants and MSATs, including any relevant standards, emission sources, and health effects. State what type of analysis is required for each pollutant as it relates to NEPA or conformity.
 - b. Include a description of relevant regulations at the federal, state, and local levels. For local regulations, include any plans/studies conducted by the local MPO, air district, or city/county.

3. Affected Environment

Describe the existing conditions data for the project location, including the project setting, regional NAAQS status, weather data (if modeled), NAAQS pollutant monitoring data, and sensitive receptor locations.

 - a. Project Setting: Identify the local setting of the project with respect to air quality. Describe the climate, meteorology, and topography at the project site. Identify if the project is in an urban versus rural area. Identify the land uses within the project area and surrounding areas.
 - b. Regional NAAQS Status: Provide a project-specific table with the following:
 - Pollutant (CO, PM₁₀, PM_{2.5}, and ozone)
 - NAAQS and its units (e.g., ppm)
 - NAAQS status (attainment, maintenance, nonattainment)

- NAAQS classification (e.g., “severe”, “moderate”) (“Not Applicable” for attainment areas)
- Year the standard for maintenance or nonattainment was established (“Not Applicable” for attainment areas)
- Anticipated year for end of maintenance period (“Not Applicable” for nonattainment or attainment areas)
- Relevant SIPs by title and date for each pollutant for which the project area is in nonattainment or maintenance (“Not Applicable” for attainment areas”)

Obtain the current NAAQS and NAAQS status at the time of the analysis. The project area NAAQS status can be determined by checking the EPA’s website (<https://www.epa.gov/green-book>) and ADEQ’s website (https://azdeq.gov/nonattainment_areas)

- c. Weather Data: Describe the weather data used for pollutant dispersion modeling, if the project was modeled.
- d. NAAQS Pollutant Monitoring Data: Provide monitoring data from the station(s) that best represents the project area for pollutants for which the project has nonattainment and/or maintenance areas. Selection of the monitoring station(s) most representative for a project site may require consultation with ADOT or the EPA. Generally, three years of air quality data from the nearest monitoring station(s) should be used as a demonstration of the air quality trends.
- e. Sensitive Receptors: If the project was modeled for PM and/or CO hot-spots, discuss the sensitive receptors within a quarter mile of the project area (e.g., homes, schools, daycare facilities, elder care facilities).

4. Conformity Determination

- a. State whether conformity is applicable to the project (40 CFR 93). If so, for project-level conformity, state whether the project was exempt (Table 2 of 40 CFR 93.126 or 40 CFR 93.128) or required a qualitative analysis or a quantitative analysis. For regional conformity (40 CFR 93.127), check if regional conformity applies and if so, include the TIP or RTP number and project information consistent with the Project Description written in the report.
- b. For conducting a project-level conformity evaluation, please refer to Chapter 3.
- c. The hot-spot analysis, if applicable, should contain information regarding the analysis years, geographic area, emissions model, other emissions, air quality dispersion model, background concentrations, and mitigation. Provide the raw files of the supporting traffic data that was inputted into the dispersion model, spreadsheet of dispersion model inputs, air quality dispersion model input and output files, and any post-processing spreadsheets used for tables in the Technical Appendices section.
- d. Describe interagency consultation activities and include a record of any meetings or correspondence that occurred. If consultation was not conducted, include a justification on why it was not required.

- e. Determine if an ozone conformity determination is applicable or state if the project is exempt.

5. Environmental Consequences

- a. Provide the methodology and calculations of the criteria pollutant emissions for each build and no-build alternative.
- b. Consistent with FHWA Updated Interim Guidance on MSAT Analysis in NEPA Documents¹, published January 2023, state whether the project will have no potential for meaningful impacts (no analysis required), low potential for MSAT effects (qualitative analysis required), or higher potential for MSAT effects (quantitative analysis required). If a qualitative analysis is required, include background information on MSATs, MSAT emission trends, sensitive receptors, traffic volumes, MSAT discussion including health effects (see FHWA guidance), and justification of why the analysis was needed. A quantitative analysis will follow the same format as the qualitative analysis but would also include technical methods and inputs and discussion of the interagency consultation process.

6. Mitigation Strategies

Mitigation strategies will be split between construction and operation as needed. During construction, refer to the local air district for any requirements related to dust mitigation and consider whether any alternative fuel, electric, or Tier 4 equipment will be used. During operation, mitigation may consider methods to improve traffic flow such as traffic signal optimization, HOV lanes, and transit use.

7. References

8. Technical Appendices

The appendices may include any dispersion modeling maps, sensitive receptor maps, EPA Emission Model Input/Output Files, CAL3QHC/AERMOD Input/Output Files, traffic data, conformity documentation correspondence including memos prepared for interagency consultation review, assumptions, and any other files used in the preparation of the report.

¹ https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/

This page is intentionally blank.

Appendix D: Air Quality Technical Report Outline

Chapter 1 Project Description	1-1
1.1 Introduction	1-1
1.2 Purpose and Need	1-1
1.3 Project Location	1-1
1.4 Project Description	1-1
1.5 Project Alternatives	1-1
Chapter 2 Regulatory Framework	2-1
2.1 Pollutant Overview	2-1
2.1.1 Criteria Air Pollutants	2-1
2.1.2 MSATs	2-1
2.2 Regulations	2-1
2.2.1 Federal	2-1
2.2.2 State	2-1
2.2.3 Local	2-1
Chapter 3 Affected Environment	3-1
3.1 Project Setting	3-1
3.2 Regional NAAQS Status	3-1
3.3 Weather Data	3-1
3.4 NAAQS Pollutant Monitoring Data	3-1
3.5 Sensitive Receptors	3-1
Chapter 4 Conformity Determination	4-2
4.1 CO Conformity Determination	4-2
4.1.1 Geographic Applicability	4-2
4.1.2 Action Applicability	4-2
4.1.3 Consistency with CO Regional Analysis	4-2
4.1.4 Basis for Determination of Qualitative or Quantitative Analysis	4-2
4.1.5 Categorical Finding/Determination	4-2
4.1.6 Consultation	4-2
4.1.7 Conclusion	4-2
4.2 PM ₁₀ Conformity Determination	4-2
4.2.1 Geographic Applicability	4-2
4.2.2 Action Applicability	4-2
4.2.3 Consistency with PM ₁₀ Regional Analysis	4-2
4.2.4 Basis for Determination of Qualitative or Quantitative Analysis	4-2
4.2.5 Determination	4-2
4.2.6 Consultation	4-2
4.2.7 Compliance with PM10 Control Measures	4-2

4.2.8 Conclusion	4-2
4.3 Ozone Conformity Determination	4-2
Chapter 5 Environmental Consequences	5-3
5.1 Criteria Air Pollutant Emissions	5-3
5.1.1 Construction	5-3
5.1.2 Operation	5-3
5.1.3 Conclusion	5-3
5.2 MSAT Analyses	5-3
5.2.1 Background	5-3
5.2.2 Sensitive Land Uses	5-3
5.2.3 Traffic Data	5-3
5.2.4 Qualitative or Quantitative Discussion	5-3
5.2.5 Health Effects	5-3
5.2.6 Conclusion	5-3
Chapter 6 Mitigation Strategies	6-3
6.1 Construction	6-3
6.2 Operation	6-3
Chapter 7 References	7-4
Chapter 8 Technical Appendices	8-4
<ul style="list-style-type: none"> ● Project Mapping with Receptors ● EPA Emission Model Input/Output Files ● CAL3QHC/AERMOD Input/Output Files ● Traffic Data Used in the Analysis ● Conformity Documentation ● Correspondence including memos prepared for interagency consultation review ● List of Assumptions 	