APPENDIX K. *BISHOPVILLE TRUCK ROUTE PROJECT AIR QUALITY TECHNICAL MEMORANDUM*

BISHOPVILLE TRUCK ROUTE PROJECT (S-69-08)

FINAL AIR QUALITY TECHNICAL MEMORANDUM

Prepared for:

Federal Highway Administration

&

South Carolina Department of Transportation

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Acronyms

CAA	Clean Air Act
CEQ	Council on Environmental Quality
CFR	Code of Federal Regulations
EPA	U.S. Environmental Protection Agency
FHWA	Federal Highway Administration
GIS	Geographic Information Systems
MSAT	Mobile Source Air Toxics
NAAQS	National Ambient Air Quality Standards
SCDHEC	South Carolina Department of Health and Environmental Control
SIP	State Implementation Plan
STIP	State Transportation Improvement Plan
U.S.C.	United States Code
VMT	Vehicles Miles Travelled

1 INTRODUCTION AND PURPOSE

Air pollution originates from various sources. Emissions from industry and internal combustion engines are the most prevalent sources. The impact resulting from highway construction ranges from intensifying existing air pollution problems to improve the ambient air quality. Changing traffic patterns are a primary concern when determining the impact of a new highway facility or the improvement of an existing highway facility. The primary pollutants from motor vehicles are unburned hydrocarbons, nitrogen oxides (NOx), carbon monoxide (CO), and particulates. Hydrocarbons (HC) and NOx can combine in complex series of reactions catalyzed by sunlight to produce photochemical oxidants such as ozone and nitrogen dioxide (NO2).

Since these reactions take place over a period of several hours, maximum concentrations of photochemical oxidants are often found far downwind of the precursor sources. These pollutants are regional problems. Nationally, but mostly in urban areas, the majority of CO emissions come from mobile sources.

In compliance with the Clean Air Act (CAA) and its amendments, related Federal regulations, and FHWA Guidance, this report discusses the conformity status and the air quality impact of the proposed Bishopville Truck Route. Mobile Source Air Toxics (MSATs) are evaluated in Section 4.0. This document supports the EIS that's under development for the proposed project.

2 REGULATORY FRAMEWORK

The Clean Air Act (CAA), as amended, is the comprehensive federal law that regulates air emissions. Among other things, this law requires the United States Environmental Protection Agency (EPA) to establish national standards for air quality to protect public health and the environment . These standards are known as the National Ambient Air Quality Standards (NAAQS).

The EPA is responsible for the ensuring compliance with the NAAQS and has targeted six pollutants for reduction as part of achieving the standards: carbon monoxide (CO), nitrogen dioxide (NO_2), ozone (O_3), particulate matter (PM), sulfur dioxide (SO_2), and lead (Pb). These criteria pollutants are described in more detail in the next section.

States are divided into geographical areas that are classified as either "nonattainment" or "attainment" for air quality. A geographic area that meets or does better than the National Ambient Air Quality Standard is called an attainment area, and an area that doesn't meet this standard is called a nonattainment area. In non-attainment areas, the EPA requires states to develop a State Implementation Plan for Air Quality (SIP) to address regional goals for attaining NAAQS. Each plan includes measures to reduce transportation pollutant emissions. In non-attainment areas, once the concentrations of specific pollutants are reduced enough to be within the standards, the area is designated as a maintenance area.

The EPA delegates authority to the South Carolina Department of Health and Environmental Control (SCDHEC) for monitoring and enforcing air quality regulations in the state. The South Carolina SIP, developed in accordance with the CAA, contains the major state-level requirements regarding transportation.

FHWA is responsible for ensuring that a proposed project conforms to the SIP. As the state agency responsible for implementing air quality laws, SCDHEC requires a transportation conformity analysis to ensure that those transportation activities that receive federal funding and approval are consistent with state and federal air quality goals (40 CFR Parts 51 and 93). As part of transportation conformity, emissions analyses must be conducted for every proposed transportation plan, program or project in a *nonattainment area*. Nonattainment area is defined as any geographic region of the United States that has been designated as nonattainment for any pollutant listed in the NAAQS (40 CFR 93.101).

2.1 CRITERIA POLLUTANTS AND NAAQS

The EPA established the NAAQS in order to protect public health, safety, and welfare from known or anticipated effects of air pollutants. The SCDHEC Bureau of Air Quality is responsible for regulating and ensuring compliance with the CAA in South Carolina. The six criteria pollutants are described below and the NAAQS limits for these pollutants are presented in **Table 2-1**.

Primary standards are set to protect public health, including "sensitive" populations such as asthmatics, children, and the elderly. Secondary standards are designed to protect public welfare, including protection against decreased visibility and damage to animals, crops, vegetation, and buildings.

Carbon monoxide (CO) - CO forms when carbon is not completely burned in fuel. It is an odorless and colorless gas that is mainly formed from vehicle exhaust. Breathing CO reduces the body's ability to deliver oxygen to vital organs, and can affect the heart, lungs, and central nervous system. Inhaled in high amounts, it can cause poisoning or death.

Lead (Pb) - Lead is usually released into the environment from processing metals. Utilities, waste incinerators, and lead-acid battery manufacturers are sources of lead. It can cause damage to major organs such as the brain, liver, and kidneys, and can cause seizures, mental disorders, reproductive problems, high blood pressure, anemia, and osteoporosis.

Nitrogen dioxide (NO_2) - Nitrogen dioxide is an odorless and colorless gas that comes from various sources such as vehicle, industrial, and utility emissions. It is a component of ozone, which causes numerous respiratory problems.

Ozone (O_3) - Ozone is created when nitrogen oxide compounds mix with volatile organic compounds in the presence of sunlight. Sources of the compounds creating ozone include vehicle and industrial emissions, gasoline vapors, and chemical solvents. Ozone causes respiratory problems such as decreased lung function, asthma, wheezing, coughing, pain when breathing, and higher susceptibility to respiratory illnesses such as pneumonia and bronchitis.

Particulate Matter ($PM_{2.5}$ and PM_{10}) - Particulate matter forms when small solid particles combine with liquid droplets to form dust, dirt, haze, soot, or smoke. These can be emitted from primary sources such as unpaved roads, construction sites, fields, or smokestacks. They can also be emitted as a result of secondary reactions of gases released from automobiles and industrial plants. Particulate matter causes a variety of respiratory problems, from asthma and bronchitis, to decreased lung capacity and function. If

particulate matter is very small, it can be transferred to the cardiovascular system and cause irregular heartbeat and even non-fatal heart attacks.

Sulfur oxides (SO_X) - Sulfur dioxide is formed when fuel such as coal and oil is burned, and sulfur is released into the atmosphere and mixes with oxygen. The main sources of sulfur dioxide include fuel burning utility plants, petroleum refineries, large ships and locomotives, and metals processing plants. Sulfur dioxide can cause respiratory illnesses such as asthma, decreased lung function, and susceptibility to other illnesses such as pneumonia and bronchitis. It can also aggravate existing heart diseases.

Table 2-1. National Ambient Air Quality Standards

Pollutant		Primary/ Secondary	Averaging Time	Level	Form
Carbon Monoxide (CO)		primary	8-hour	9 ppm	Not to be exceeded more than once per year
			1-hour	35 ppm	
Lead (Pb)		primary and secondary	Rolling 3-month average	0.15 µg/m^3 (1)	Not to be exceeded
Nitrogen Dioxide (NO_2)		primary	1-hour	100 ppb	98th percentile of 1-hour daily maximum concentrations, averaged over 3 years.
		primary and secondary	1-year	53 ppb (2)	Annual Mean
Ozone (O_3)		primary and secondary	8-hour	0.070 ppm (3)	Annual fourth-highest daily maximum 8-hour concentration, averaged over 3 years
Particulate Matter (PM)	$PM_{2.5}$	primary	1-year	12 µg/m^3	annual mean, averaged over 3 years
		secondary	1-year	15 µg/m^3	
		primary and secondary	24 hours	35 µg/m^3	98th percentile, averaged over 3 years
	PM_{10}	primary and secondary	24-hour	150 µg/m^3	Not to be exceeded more than once per year on average over 3 years
Sulfur Dioxide (SO_2)		primary	1-hour	75 ppb (4)	99th percentile of 1-hour daily maximum concentrations, averaged over 3 years
		secondary	3-hour	0.5 ppm	Not to be exceeded more than once per year

Source: EPA 2020a.
ppb = parts per billion; ppm = parts per million; µg/m^3 = micrograms per cubic meter.

(1) In areas designated nonattainment for the Pb standards prior to the promulgation of the current (2008) standards, and for which implementation plans to attain or maintain the current (2008) standards have not been submitted and approved, the previous standards (1.5 µg/m^3 as a calendar quarter average) also remain in effect.

(2) The level of the annual NO_2 standard is 0.053 ppm. It is shown here in terms of ppb for the purposes of clearer comparison to the 1-hour standard level.

(3) Final rule signed October 1, 2015, and effective December 28, 2015. The previous (2008) O_3 standards additionally remain in effect in some areas. Revocation of the previous (2008) O_3 standards and transitioning to the current (2015) standards will be addressed in the implementation rule for the current standards.

(4) The previous SO_2 standards (0.14 ppm 24-hour and 0.03 ppm annual) will additionally remain in effect in certain areas: (1) any area for which it is not yet 1 year since the effective date of designation under the current (2010) standards, and (2) any area for which an implementation plan providing for attainment of the current (2010) standard has not been submitted and approved and which is designated nonattainment under the previous SO_2 standards or is not meeting the requirements of a SIP call under the previous SO_2 standards (40 CFR 50.4(3)). A SIP call is an EPA action requiring a state to resubmit all or part of its State Implementation Plan to demonstrate attainment of the required NAAQS.

3 ATTAINMENT STATUS AND TRANSPORTATION CONFORMITY

Current attainment status for Lee County was obtained from the EPA Nonattainment Areas for Criteria Pollutants (Green Book) (EPA 2020). Lee County is currently in attainment for all NAAQS pollutant standards (EPA 2020b). Under this guidance, no further action to evaluate air quality is required for the Bishopville truck route project. The project is included in the FY 2017 to FY 2022 South Carolina State Transportation Improvement Program (STIP) and there have been no significant changes in the project's design concept or scope. The SCDOT has reviewed the project for air quality compliance[1].

4 MOBILE SOURCE AIR TOXICS

4.1 BACKGROUND

Controlling air toxic emissions became a national priority with the passage of the CAA amendments in 1990, whereby Congress mandated that the EPA regulate 188 air toxics, also known as hazardous air pollutants. The EPA has assessed this expansive list in their latest rule on the Control of Hazardous Air Pollutants from Mobile Sources[2] and identified a group of 93 compounds emitted from mobile sources that are listed in their Integrated Risk Information System (IRIS)[3]. EPA refers to these compounds as Mobile Source Air Toxics (MSATs). In addition, EPA identified nine compounds with significant contributions from mobile sources that are among the national and regional-scale cancer risk drivers from their 2011 National Air Toxics Assessment (NATA)[4]. These are acetaldehyde, acrolein, benzene, 1,3-butadiene, diesel particulate matter (diesel PM), ethylbenzene, formaldehyde, naphthalene and polycyclic organic matter. While the FHWA considers these the priority MSATs, the list is subject to change and may be adjusted in consideration of future EPA rules. The 2007 EPA rule for MSATs requires controls that will dramatically decrease MSAT emissions through cleaner fuels and cleaner engines.

FHWA has provided interim guidance on addressing MSATs in the National Environmental Policy Act (NEPA) analysis (FHWA 2016). While a basic discussion of potential MSAT emission impacts from the proposed project has been addressed, technical resources are not available at this time to determine project-specific health impacts from MSATs associated with the project alternatives. Due to the lack of technical resources, a qualitative impact evaluation is provided, along with FHWA guidance and CEQ regulation (specifically 40 CFR §1502.22(b)).

Technical shortcomings of emissions and dispersion models and uncertain science with respect to health effects prevent meaningful or reliable estimates of MSAT emissions and effects of transportation projects. However, even though reliable methods do not exist to accurately estimate the health impacts of MSATs at the project level, it is possible to qualitatively assess the levels of future MSAT emissions if the project is implemented. Although a qualitative analysis cannot identify and measure health impacts from MSATs, it can give a basis for identifying and comparing the potential differences among MSAT

[1] South Carolina Department of Transportation, Statewide Transportation Improvement Program, Lee County, Available at: https://www.scdot.org/inside/planning-stip.aspx, Accessed May 8, 2020.
[2] Federal Register, Vol. 72, No.37, page 8430, February 26, 2007.
[3] EPA, *Integrated Risk Information System*. Available: https://www.epa.gov/iris, accessed January 2, 2020.
[4] Federal Highway Administration, *Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents*. Available at: https://www.fhwa.dot.gov/environMent/air_quality/air_toxics/policy_and_guidance/msat/, accessed January 3, 2020.

emissions. The qualitative evaluation presented is derived in part from guidance provided by the FHWA[5].

According to an FHWA analysis using EPA's MOVES2014 model, even if vehicle activity (vehicle miles traveled [VMT]) increases by 45 percent as assumed, a combined reduction of 90 percent in the total annual emission rate for the priority MSAT is projected from 2010 to 2050[6].

4.2 MSAT RESEARCH

Air toxics analysis is a continuing area of research. While much work has been done to assess the overall health risk of air toxics, many questions remain unanswered. In particular, the tools and techniques for assessing project-specific health outcomes as a result of lifetime MSAT exposure remain limited. These limitations impede the ability to evaluate how the potential health risks posed by MSAT exposure should be factored into project-level decision-making within the context of the National Environmental Policy Act (NEPA).

Nonetheless, air toxics concerns continue to be raised on highway projects during the NEPA process. The FHWA, EPA, the Health Effects Institute, and others have funded and conducted research studies to try to more clearly define potential risks from MSAT emissions associated with highway projects. The FHWA will continue to monitor the developing research in this emerging field.

4.3 NEPA CONTEXT AND ANALYSIS OF MSAT IN NEPA DOCUMENTS

NEPA requires, to the fullest extent possible, that the policies, regulations, and laws of the Federal Government be interpreted and administered in accordance with its environmental protection goals. The NEPA also requires Federal agencies to use an interdisciplinary approach in planning and decision-making for any action that adversely impacts the environment. The NEPA requires and FHWA is committed to the examination and avoidance of potential impacts to the natural and human environment when considering approval of proposed transportation projects. In addition to evaluating the potential environmental effects, we must also consider the need for safe and efficient transportation in reaching a decision that is in the best overall public interest. The FHWA policies and procedures for implementing NEPA are prescribed by regulation in 23 CFR § 771.

The FHWA developed a tiered approach for analyzing MSAT in NEPA documents, depending on specific project circumstances. The FHWA has identified three levels of analysis:

1. No analysis for projects with no potential for meaningful MSAT effects;
2. Qualitative analysis for projects with low potential MSAT effects; or
3. Quantitative analysis to differentiate alternatives for projects with higher potential MSAT effects.

For projects warranting MSAT analysis, the seven priority MSAT should be analyzed. This project is included in Tier 2 above.

[5] Federal Highway Administration. 2016. Updated Interim Guidance on Mobile Source Air Toxic Analysis in NEPA Documents, Available at: https://www.fhwa.dot.gov/environment/air_quality/air_toxics/policy_and_guidance/msat/2016msat.pdf, Accessed January 31, 2020.
[6] Ibid.

4.4 QUALITATIVE MSAT ANALYSIS

The amount of MSAT emitted for each of the 12 Build Alternatives considered for the project would be proportional to the amount of VMT, assuming that other variables such as fleet mix are the same for each alternative. The amount of VMT for the road on a new alignment such as the proposed Bishopville Truck Route would be anticipated to increase over an existing or No Build scenario because of its longer route.

Regardless of the alternative chosen, emissions will likely be lower than present levels in the design year because of EPA's national control programs that are projected to reduce annual MSAT emissions by 90 percent between 2010 and 2050. Local conditions may differ from these national projections in terms of fleet mix and turnover, VMT growth rates, and local control measures. However, the magnitude of the EPA-projected reductions is so great that MSAT emissions in the project area are likely to be lower in the future in nearly all cases.

If the project is implemented, by design year 2045, it is expected there would be reduced MSAT emissions in the immediate area of the Bishopville downtown, relative to the No-Build Alternative, due to the reduced VMT associated with less vehicles traveling through downtown and due to EPA's MSAT reduction programs.

There may be localized areas where ambient concentrations of MSAT could be higher than the No-Build Alternative. The localized increases in MSAT emissions would likely be most pronounced along the new roadway sections that would be built at US 15 and SC 341 for Alternatives 1-12. However, the magnitude and the duration of these potential increases compared to the No Build Alternative cannot be reliably quantified due to incomplete or unavailable information in forecasting project-specific MSAT health impacts.

In sum, with a new roadway, the localized level of MSAT emissions for the 12 Build Alternatives, and ultimately the Preferred Alternative could be higher relative to the No Build Alternative, but this could be offset due to increases in speeds and reductions in congestion along N. Main Street (which are associated with lower MSAT emissions). Also, MSATs will be lower in other locations when traffic shifts away from them. However, on a regional basis, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause region wide MSAT levels to be significantly lower than today.

4.5 INCOMPLETE OR UNAVAILABLE INFORMATION FOR PROJECT-SPECIFIC MSAT HEALTH IMPACTS ANALYSIS

In FHWA's view, information is incomplete or unavailable to credibly predict the project-specific health impacts due to changes in MSAT emissions associated with a proposed set of highway alternatives. The outcome of such an assessment, adverse or not, would be influenced more by the uncertainty introduced into the process through assumption and speculation rather than any genuine insight into the actual health impacts directly attributable to MSAT exposure associated with a proposed action.

The EPA is responsible for protecting the public health and welfare from any known or anticipated effect of an air pollutant. They are the lead authority for administering the Clean Air Act and its amendments and have specific statutory obligations with respect to hazardous air pollutants and MSAT. The EPA is in the continual process of assessing

human health effects, exposures, and risks posed by air pollutants. They maintain the Integrated Risk Information System (IRIS), which is "a compilation of electronic reports on specific substances found in the environment and their potential to cause human health effects"[7]. Each report contains assessments of non-cancerous and cancerous effects for individual compounds and quantitative estimates of risk levels from lifetime oral and inhalation exposures with uncertainty spanning perhaps an order of magnitude.

Other organizations are also active in the research and analyses of the human health effects of MSAT, including the Health Effects Institute (HEI). Two HEI studies are summarized in Appendix D of FHWA's Interim Guidance Update on Mobile source Air Toxic Analysis in NEPA Documents. Among the adverse health effects linked to MSAT compounds at high exposures are; cancer in humans in occupational settings; cancer in animals; and irritation to the respiratory tract, including the exacerbation of asthma. Less obvious is the adverse human health effects of MSAT compounds at current environmental concentrations or in the future as vehicle emissions substantially decrease[8].

The methodologies for forecasting health impacts include emissions modeling; dispersion modeling; exposure modeling; and then final determination of health impacts - each step in the process building on the model predictions obtained in the previous step. All are encumbered by technical shortcomings or uncertain science that prevents a more complete differentiation of the MSAT health impacts among a set of project alternatives. These difficulties are magnified for lifetime (i.e., 70 year) assessments, particularly because unsupportable assumptions would have to be made regarding changes in travel patterns and vehicle technology (which affects emissions rates) over that time frame, since such information is unavailable.

It is particularly difficult to reliably forecast 70-year lifetime MSAT concentrations and exposure near roadways; to determine the portion of time that people are actually exposed at a specific location; and to establish the extent attributable to a proposed action, especially given that some of the information needed is unavailable.

There are considerable uncertainties associated with the existing estimates of toxicity of the various MSAT, because of factors such as low-dose extrapolation and translation of occupational exposure data to the general population, a concern expressed by HEI[9] As a result, there is no national consensus on air dose-response values assumed to protect the public health and welfare for MSAT compounds, and in particular for diesel PM. The EPA[10] and the HEI[11] have not established a basis for quantitative risk assessment of diesel PM in ambient settings.

There is also the lack of a national consensus on an acceptable level of risk. The current context is the process used by the EPA as provided by the Clean Air Act to determine

[7] US Environmental Protection Agency, Integrated Risk Information System (IRIS), Available at: http://www.epa.gov/iris/, Accessed May 14, 2020.
[8] Health Effects Institute (HEI), Special Report 16: Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects, Available at: https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects, Accessed May 14, 2020.
[9] Ibid.
[10] US Environmental Protection Agency, Risk Assessment, Available at: http://www.epa.gov/risk/basicinformation.htm#g, Accessed May 14, 2020.
[11] Health Effects Institute (HEI), Mobile-Source Air Toxics: A Critical Review of the Literature on Exposure and Health Effects, Available at: https://www.healtheffects.org/publication/mobile-source-air-toxics-critical-review-literature-exposure-and-health-effects, Accessed May 14, 2020.

whether more stringent controls are required in order to provide an ample margin of safety to protect public health or to prevent an adverse environmental effect for industrial sources subject to the maximum achievable control technology standards, such as benzene emissions from refineries. The decision framework is a two-step process. The first step requires EPA to determine an "acceptable" level of risk due to emissions from a source, which is generally no greater than approximately 100 in a million. Additional factors are considered in the second step, the goal of which is to maximize the number of people with risks less than 1 in a million due to emissions from a source. The results of this statutory two-step process do not guarantee that cancer risks from exposure to air toxics are less than 1 in a million; in some cases, the residual risk determination could result in maximum individual cancer risks that are as high as approximately 100 in a million. In a June 2008 decision, the U.S. Court of Appeals for the District of Columbia Circuit upheld EPA's approach to addressing risk in its two-step decision framework. Information is incomplete or unavailable to establish that even the largest of highway projects would result in levels of risk greater than deemed acceptable.

Because of the limitations in the methodologies for forecasting health impacts described, any predicted difference in health impacts between alternatives is likely to be much smaller than the uncertainties associated with predicting the impacts. Consequently, the results of such assessments would not be useful to decision makers, who would need to weigh this information against project benefits, such as reducing traffic congestion, accident rates, and fatalities plus improved access for emergency response, that are better suited for quantitative analysis.

4.6 MSAT Conclusion

Based on the qualitative analysis completed, under all 12 Build Alternatives in the design year it is expected there would be slightly higher MSAT emissions in the project study area relative to the No Build Alternative due to the increased VMT. In comparing the 12 Built Alternatives, MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. However, in considering the project study area, EPA’s vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause area-wide MSAT levels to be significantly lower than today.

5 SHORT TERM CONSTRUCTION IMPACTS

Air quality impacts may occur during construction due to the dust and fumes from equipment, earthwork activities, and vehicles accessing the construction site. Air quality impacts may also occur from an increase of vehicle emissions from traffic delays due to construction activities. Construction activities could include staging of construction for interchange locations, delivery of equipment and materials, and longer waiting times at traffic signals.

Air quality impacts resulting from roadway construction activities are typically not a concern when contractors utilize appropriate control measures. During construction of the proposed project, all materials resulting from clearing and grubbing, demolition or other operations will be removed from the project, burned or otherwise disposed of by the Contractor.

6 MITIGATION, ENVIRONMENTAL COMMITMENTS, AND BMPS

Best management practices (BMPs) that limit dust generation are described in the *South Carolina Stormwater Management and Sediment Control Handbook for Land Disturbance Activities and A Guide to Site Development* and *Best Management Practices for Stormwater Management and Sediment Control*. These methods include vegetative cover, mulch, spray-on adhesive, calcium chloride applications, water sprinkling, stone, tillage, wind barriers, and construction of a temporary graveled entrance/ exit to the construction site.

In accordance with Section 107.07 of the South Carolina Highway Department Standard Specifications for Highway Construction, the contractor would comply with South Carolina Air Pollution Control Laws, Regulations and Standards. The contractor would also comply with county and other local air pollution regulations. Any burning of cleared materials would be conducted in accordance with applicable state and local laws, regulations and ordinances, and the regulations of the South Carolina's State Implementation Plan for air quality, in compliance with Regulation 62.2, Prohibition of Open Burning.

7 CONCLUSION

The primary pollutants from motor vehicles are unburned hydrocarbons, NOx, CO and particulates. These pollutants are regional problems. Lee County is currently in attainment for all NAAQS pollutant standards (EPA 2020b) and no further action is required to evaluate air quality for the Bishopville truck route project.

In addition, the Santees-Lynches Regional Council of Governments has entered Early Action Compacts to set goals for cleaner air in the region. This project also has been included in the South Carolina STIP, which is reviewed for air quality compliance. With the Early Action Compacts in place, and standard review of the project as part of the South Carolina STIP, the project is not anticipated to negatively impact regional air quality.

Mobile Source Air Toxics – In comparing the 12 Build Alternatives, MSAT levels could be higher in some locations than others, but current tools and science are not adequate to quantify them. However, in considering the entire project study area, EPA's vehicle and fuel regulations, coupled with fleet turnover, will over time cause substantial reductions that, in almost all cases, will cause area-wide MSAT levels to be significantly lower than today.

Construction Air Quality – Provided local ordinances for open burning and dust are followed, significant air quality impacts due to construction of the proposed project are not anticipated. There would also be emissions related to construction equipment and vehicles. However, these impacts related to construction would be temporary. The proposed project would be constructed in phases, limiting the overall construction activity occurring at any one location.

Based on the air quality assessment completed for the proposed project, the proposed Bishopville Truck Route would not cause or contribute to any violation of the NAAQS.

8 REFERENCES

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