

Air Quality Modeling Guidelines Checklist

1.0	Project Identification Information
	Applicant/Facility: _____
	Permit Application Number: _____ Air Quality Account Number: _____
	Nearest City: _____ County: _____
	Applicant's Modeler: _____
2.0	Project Overview Plant process(es) and types and locations of emissions under consideration ____ For RCRA BIF , each BIF unit and the nature of wastes being generated or burned ____
2.1	Type of Permit Review
	State Property Line ____ State NAAQS ____ State Effects Review ____ State Disaster Review ____
	PSD ____ RCRA BIF ____ Other ____
2.2	Constituents to be Evaluated
	PM ____ PM ₁₀ ____ CO ____ NO ₂ ____ Pb ____
	SO ₂ ____ H ₂ S ____ H ₂ SO ₄ ____ TRS ____
	Speciated VOCs ____ Speciated Metals ____ Other ____
3.0	Plot Plan
	Clearly marked scale ____ All property lines ____ For PSD , fence lines ____
	A true-north arrow ____ UTM coordinates along the vertical and horizontal border ____
	Datum of UTM coordinates? NAD27 ____ NAD83 ____ Other ____
	Reference UTM coordinates and locations of all emission points including fugitive sources modeled ____

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	Buildings and structures on-property or off-property which could cause downwash with length, width, and height identified_____
4.0	Area Map (More than one map may be required)
	For State Analyses
	Full-scale (no reduction or enlargement)_____ Cover area within a 1.9-mile (3-kilometer) radius of the facility for Auer land-use analysis _____
	UTM coordinates along the vertical and horizontal borders ____ Date and title of the map____ Datum of UTM coordinates? NAD27_____ NAD83_____ Other_____
	School within 3000 feet?_____ (Include as a sensitive receptor in the analysis.)
	For Effects Review Distance to nearest sensitive receptor other than a school _____ Distance to nearest residents _____
	For hazardous waste landfill or land treatment facility permits, or an areal expansion of an existing facility. Any churches, day care centers, surface water body used for a public drinking water supply, or dedicated public parks within 1000 feet of the facility or expansion boundary? _____ If this is the case, no permit should be issued.
	For commercial hazardous waste management facility permits, or an areal expansion of an existing facility or unit of the facility. Any churches, day care centers, surface water body used for a public drinking water supply, or dedicated public parks within 2640 feet? ____ If this is the case, no permit should be issued. For amendments, distance limits apply as of the date of the original permit.
	For PSD Analyses
	Full-scale (no reduction or enlargement)_____ Cover area within a 1.9-mile (3-kilometer) radius of the facility for Auer land-use analysis _____

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	UTM coordinates along the vertical and horizontal borders ____ Date and title of the map____ Datum of UTM coordinates? NAD27____ NAD83____ Other____
	Class I area within 10 km (6.2 miles)?_____ Class I area within 100 km (62 miles)?_____ Urban areas, nonattainment areas, and topographic features within 50 km (31 miles)?
	On-site or local meteorological stations, both surface and upper-air?_____
	State/local/on-site ambient air monitoring sites within 50 km (31 miles)? _____
	For RCRA BIF Analyses
	Full-scale (no reduction or enlargement)_____ Cover area within a 1.9-mile (3-kilometer) radius of the facility for Auer land-use analysis _____
	UTM coordinates along the vertical and horizontal borders ____ Date and title of the map____ Datum of UTM coordinates? NAD27____ NAD83____ Other____
	On-property residence? _____ Include as a receptor in the analysis.
5.0	Air Quality Monitoring Data
	For State NAAQS and PSD , are monitoring data for background concentrations available? _____ If not, are there regional data that could be used? _____
	For Effects Review , identify any monitored data that could be used to supplement or substitute for modeling. Demonstrate that the data represent near worst-case operational and meteorological conditions.
6.0	Modeling Emissions Inventory
6.1	On-Property Sources in the Permit Application
	Stack parameters for any averaging period or load level different than Table 1(a)?_____

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	<p>For gravitational settling applications (for each applicable source):</p> <p>Particle size_____ Mass fraction for each particle size category____ Particle Density for each particle size category _____</p>
	<p>Special Source Types/Characterizations? _____</p> <p>Fugitive source_____ Covered stack_____ Horizontal exhaust____</p>
	<p>Tilted stack_____ Area source_____ Open pit_____ Volume source_____</p>
	<p>Flare_____ Stockpile_____ Road_____ Other_____</p>
	<p>Techniques to Model Special Sources? _____</p> <p>Follow <i>Air Quality Modeling Guidelines</i>_____ ADMT Technical Memo_____</p> <p>Other_____</p>
6.2	Other On-Property and Off-Property Sources
	<p>Sitewide modeling required? _____</p>
6.3	Table Correlating the Emission Inventory Source Name and EPN with the Source Number in the Modeling Output
	<p>Source identification numbers used in the modeling different from the emission point numbers in the Table 1(a) or from any additional list of sources? _____</p>
6.4	Stack Parameter Justification
	<p>Basis/calculations for stack parameters (flow rates, temperatures, stack heights, velocities)? _____</p> <p>Stack parameters for any averaging period different?_____</p> <p>If yes, include on the Table 1(a).</p>
	<p>Load evaluation required? _____ Evaluate at least 25 percent, 50 percent, 75 percent and 100 percent production or load levels, if the source could be operated at these levels.</p>
	<p>Any stack parameters for any averaging period different for maximum load? ____</p>
6.5	Scaling Factors
	<p>Scaling factors applicable?_____</p>

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7.0	Models Proposed and Modeling Techniques
	Model (Version Number) Iscst (_____) Screen (_____) Other (_____)
	Specialized Techniques? _____ Collocated Sources _____ Ratio _____ Other _____
8.0	Selection of Dispersion Coefficients
	Urban _____ Rural _____ How determined? Auer land-use analysis _____ Supplemented Auer land-use analysis _____ Population _____
9.0	Building Wake Effects (Downwash)
	EPA BPIP _____ Version _____ or Software package that employs BPIP algorithms? _____
10.0	Receptor Grid—Terrain
	Flat _____ Simple _____ Complex _____
	Elevated receptors? _____ (Ensure that the higher terrain in any direction is included in the modeling—not just the highest.)
	DEMs Used? 7.5-Minute _____ 1-Degree _____ Mixed _____ Datum of UTM coordinates? NAD27 _____ NAD83 _____ Other _____ 7.5-minute DEM data available for the entire receptor grid? _____ If not, use 7.5-minute DEM data for receptors within approximately 3-5 km of the property/fence line.
11.0	Receptor Grid—Design
	Datum of UTM coordinates? NAD27 _____ NAD83 _____ Other _____
12.0	Meteorological Data
	Surface/Upper-Air Data Set (Five Years For PSD, RCRA BIF)? Set(s) _____ Year(s) _____

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	Anemometer Height? _____
13.0	Modeling Results Compare results for each averaging period to applicable de minimis values, standards, guidelines, reference air concentrations, risk-specific doses, or risk-specific dose ratios____.
	For PSD , use Appendix G of the modeling guidelines format _____
	For Effects Review , separate results for sensitive receptors_____
13.1	Additional Impacts Analysis (For PSD) Additional impacts analysis for growth, and soils and vegetation, as applicable_____
13.2	Class I Area Impacts Analysis (For PSD) Class I area impacts analysis, as applicable_____
13.3	Dilution Factor (For RCRA BIF) Dilution factor for each constituent for this project_____
14.0	Modeling Runs and Hard Copy Output Output per constituent showing emission point numbers, locations, base elevation, and stack parameters_____
	Table of selected model options and any selected data such as meteorological stations and period of record, roughness heights, scalars _____
	Gridded maps showing the maximum predicted ground-level concentration for each modeled receptor for each type of analysis required_____
	Property lines on each map ____ For PSD, fence lines on each map_____
	For Effects Review , gridded maps for each constituent's concentration that exceeds an ESL____ Exceedances and magnitude of exceedance at each receptor____ Property lines on each map_____

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15.0	Disks (Model Input/Output and Associated Computer or Electronic Files) Provide:
	<i>All</i> input and output files for each dispersion model run, including data, grid and plot file_____
	<i>All</i> files produced by a software entry program_____
	<i>All</i> automated downwash program input and output files and any computer assisted drawing files _____
	<i>All</i> meteorological data files in ASCII format_____
	Boundary files—including computer assisted drawing files—specifying coordinates for property lines_____
	For PSD , boundary files—including computer assisted drawing files—specifying coordinates for fence lines_____
	<i>All</i> spreadsheet files used for comparison of predicted concentrations with standards or guidelines_____ (This includes spreadsheet files used for ratio techniques.)
16.0	Meeting Record
	Date:
	Participants / Affiliation / Telephone #s:
17.0	Remarks
18.0	TNRCC ADMT Staff Signature

	Date: