# Texas Commission on Environmental Quality
# Application Checklist for Surface Coating Operations

**The following checklist is for guidance purposes only to assist in preparation of a complete application. It is not required to be submitted with the application.**

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| **Forms** | |
| **PI-1 or PI-1R Form** | |
| Has the form been completed in its entirety? | ☐ YES ☐ N/A |
| **Core Data Form** | |
| Has the form been completed in its entirety? | ☐ YES ☐ N/A |
| **Table 30 or Table 30R** | |
| For existing facilities, are all direct AND indirect costs accounted for? | ☐ YES ☐ N/A |
| Are capital costs included? | ☐ YES ☐ N/A |
| Is the cost of emission control equipment included? | ☐ YES ☐ N/A |
| **Table 1(a)** | |
| Is Page 2 of the Table 1(a) completed in its entirety? | ☐ YES ☐ N/A |
| For EPNs affected by the project, do the emission rates shown on the Table 1(a) match the emission rates in the Calculation Section of the application? | ☐ YES ☐ N/A |
| For EPNs not affected by the project, do the emission rates listed on the Table 1(a) for each EPN match the emission rates on the existing MAERT? | ☐ YES ☐ N/A |
| For an existing permit, do the EPNs shown on the Table 1(a) match those that are shown on the existing MAERT? | ☐ YES ☐ N/A |
| **Maps and Diagrams** | |
| **Area Map** | |
| Is a true north arrow included? | ☐ YES ☐ N/A |
| Is an accurate fixed scale included? | ☐ YES ☐ N/A |
| Are all of site's property boundaries identified and outlined? | ☐ YES ☐ N/A |
| Does the map contain a circle with a 3,000 foot radius from the site's property boundary lines (circle should not be drawn from the center of the property)? | ☐ YES ☐ N/A |
| Are all elementary, middle, and high schools labeled? | ☐ YES ☐ N/A |

| **Maps and Diagrams *(continued)*** | |
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| **Plot Plan** | |
| Is the plan drawn-to-scale? | __ YES ☐ N/A |
| Is a true north arrow included? | ☐ YES ☐ N/A |
| Is an accurate fixed scale included? | ☐ YES ☐ N/A |
| Is the date the plot plan was generated included? | ☐ YES ☐ N/A |
| Are all property lines of the site are clearly marked? | ☐ YES ☐ N/A |
| Are all EPNs labeled and match the EPNs listed on the Table 1(a), the MAERT, and the process flow diagram? | ☐ YES ☐ N/A |
| Are all EPNs authorized by other air authorizations (*i.e.*, Permits-by-Rule [PBR], standards permits [SP], etc.) identified and labeled? | ☐ YES ☐ N/A |
| Are all fugitive areas identified and labeled with their associated EPN(s)? | ☐ YES ☐ N/A |
| Are all buildings and other significant features associated with the site (*e.g.*, storage tanks, fabrication areas) clearly labeled? | ☐ YES ☐ N/A |
| **Process Flow Diagram** | |
| Are all air contaminant-emitting process steps identified? | ☐ YES ☐ N/A |
| Are all air contaminants emitted from each process step identified? | ☐ YES ☐ N/A |
| Is each EPN which emits air contaminants identified on the diagram? | ☐ YES ☐ N/A |
| Are activities with fugitive emissions identified and labeled on the diagram with their respective EPN(s) and air contaminants? | ☐ YES ☐ N/A |
| Are all EPN(s) listed on the Table 1(a) and plot plan included on the diagram? | ☐ YES ☐ N/A |
| Are all emission control devices and their control efficiencies labeled and accounted for? | ☐ YES ☐ N/A |
| **Process Description** | |
| Does the description include a discussion of each process step, from start (raw material receipt) to finish (waste material disposal) and does the description match the steps included on the Process Flow Diagram? | ☐ YES ☐ N/A |
| Does the description indicate if any facilities in the process are authorized via PBR or some other air authorization? | ☐ YES ☐ N/A |
| Does the description state the types of coatings used (*e.g.*, primers, epoxies)? | ☐ YES ☐ N/A |

| **Process Description *(continued)*** | |
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| Does the description state the types of application equipment (e.g., airless spray equipment, brushes, aerosol spray cans) used? | ☐ YES ☐ N/A |
| Does the description indicate if the surface coatings are applied manually or with automated equipment? | ☐ YES ☐ N/A |
| Does the description indicate if the surface coating operations are performed outdoors or in a booth and/or building? | ☐ YES ☐ N/A |
| If surface coating operations are performed outdoors, does the description explain how shrouds are used? (The description at a minimum should indicate the minimum height of the shrouds, the number of sides, the length and width of the shrouds, and the height of surface coating relative to the shroud height.) | ☐ YES ☐ N/A |
| If the surface coating operations are performed indoors (*e.g.*, booth, building), does the description indicate if the surface coating booths (or buildings) are totally enclosed booths or are the booths partially open during operations? | ☐ YES ☐ N/A |
| Does the description indicate how long it takes to coated parts/products to dry between coats? | ☐ YES ☐ N/A |
| Does the description indicate how long the parts/products are left inside the booth/building before moving them outside the booth/building? | ☐ YES ☐ N/A |
| Does the description identify each emission control device (*e.g.*, filters) and discuss the efficiency, capture, and other technical aspects of each device? | ☐ YES ☐ N/A |
| Does the description indicate how emissions are captured from each process step? | ☐ YES ☐ N/A |
| If the surface coating operations are automated, does the description indicate how the parts/products are conveyed between each coating step? | ☐ YES ☐ N/A |
| Does the description identify the emission point(s) of all air contaminants emitted? | ☐ YES ☐ N/A |
| Does the description explain what happens to the surface coated parts/products after coating application has been completes (*e.g.*, drying, curing in oven)? | ☐ YES ☐ N/A |
| Does the description include a discussion of MSS activities and how these activities are authorized (*i.e.*, PBRs, SP, de minimis)? | ☐ YES ☐ N/A |
| Does the description address cleanup, waste storage, and waste disposal? | ☐ YES ☐ N/A |

| **Calculations** | |
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| **Face Velocity Calculations** | |
| Are calculations provided if the surface coating booths/buildings are not totally enclosed? | ☐ YES ☐ N/A |
| Do all of the surface coating booths/buildings have a minimum face velocity of 100 feet per minute across all openings that are normally open during operations? | ☐ YES ☐ N/A |
| **Emission Calculation Methodology and Emission Calculations** | |
| Is the emission rate calculation methodology discussion included in the application? | ☐ YES ☐ N/A |
| Does the calculation methodology explain how and when the maximum possible emissions will be generated on an hourly basis for the surface coating operations? | ☐ YES ☐ N/A |
| Does the calculation methodology address transfer efficiency and particulate matter (PM) fallout for the type of application equipment used? | ☐ YES ☐ N/A |
| Does the calculation methodology address PM filter efficiency? | ☐ YES ☐ N/A |
| Are maximum hourly (*i.e.*, short-term) and annual emission rate calculations provided for criteria pollutants (and ES) for each air contaminant emitting process? | ☐ YES ☐ N/A |
| Are short-term and annual speciated emission rate calculations provided for each air contaminant emitting process? | ☐ YES ☐ N/A |
| Are hourly emission rate calculations based on the maximum throughput that can be achieved in one hour? (The hourly calculations should not be back-calculated from the expected annual throughput unless the process operates 24/7 at a continuous rate.) | ☐ YES ☐ N/A |
| Are annual emission rate calculations based on a weighted production average (not an arithmetic average) or on an expected maximum production basis (i.e., the maximum hourly emission rate multiplied by the expected annual operating hours)? | ☐ YES ☐ N/A |
| For speciated emission rate calculations, is the maximum weight fraction used in the calculations if a weight fraction range is given for a compound on an SDS? (Do not normalize weight fractions by adjusting weight fractions to add to 100% and do not use average weight fractions when ranges for weight fractions are provided.) | ☐ YES ☐ N/A |

| **Calculations *(continued)*** | |
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| **Emission Calculation Methodology and Emission Calculations** | |
| If using the "Super Paint" calculation approach: | ☐ YES ☐ N/A |
| For the hourly emission rate calculations, the highest VOC/PM/ES content is selected from all of the materials used for each process | ☐ YES ☐ N/A |
| For the annual emission rate calculations, a reasonable method is used to determine the VOC/PM/ES content to use for each process | ☐ YES ☐ N/A |
| Speciated emission rates are based on the product's density rather than on the product's VOC and/or PM content | ☐ YES ☐ N/A |
| If applicable to the application, ensure the following items are accounted for in the emission rate calculations: | ☐ YES ☐ N/A |
| Is thinning of coatings addressed? | ☐ YES ☐ N/A |
| Is mixing of coatings addressed? | ☐ YES ☐ N/A |
| Are cleanup activities addressed? | ☐ YES ☐ N/A |
| Is emissions split/emissions flash-off addressed if the coated parts/products are not allowed to dry in the same area where the surface coating is applied? | ☐ YES ☐ N/A |
| Are combustion devices used for drying/curing? | ☐ YES ☐ N/A |
| Is any control device's overall control efficiency (*i.e.*, the capture efficiency times the control efficiency) accounted for? | ☐ YES ☐ N/A |
| Have source of emissions factors and/or testing data been provided? | ☐ YES ☐ N/A |
| Are emission factors (*e.g.*, transfer efficiency, fallout) consistent with type of coating application equipment being used? | ☐ YES ☐ N/A |
| **Modeling and Impacts Analysis** | |
| **Air Dispersion Modeling** | |
| Do the physical parameters for the modeling run for each EPN match the respective EPN's parameters listed on the Table 1(a)? | ☐ YES ☐ N/A |
| Is building downwash accounted for properly in the modeling run(s)? | ☐ YES ☐ N/A |
| Are modeling adjustment factors used appropriately (*i.e.*, low wind speed adjustment factor, fugitive adjustment factor)? (Screen3 modeling runs only) | ☐ YES ☐ N/A |

| **Modeling and Impacts Analysis *(continued)*** | |
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| **Air Dispersion Modeling *(continued)*** | |
| Are all EPNs in an emissions cap on the MAERT modeled? (If there is a short-term emissions cap for several EPNs, then the highest unit impact multiplier from the cap should be used to model all of the EPNs under the cap.) | ☐ YES ☐ N/A |
| Has justification been provided for the selected sizes of any area or volume sources? (The modeled size should be the most representative area/volume where the emitting activity can occur during the averaging time modeled.) | ☐ YES ☐ N/A |
| Modeling run(s) provide GLCmax, not the concentration, at the nearest receptor | ☐ YES ☐ N/A |
| Does the modeling run for each EPN account for the distance from the EPN to the closest property line? (Screen3 modeling runs only) | ☐ YES ☐ N/A |
| **Health Impacts Analysis** | |
| Has an ESL been assigned to each air contaminant? (For air contaminants that do not have an ESL or that do not have to meet the NAAQS, a default short-term ESL 2 µg/$m^3$ and an annual ESL of 0.2 µg/$m^3$ should be used unless Toxicology derives an ESL for the contaminant.) | ☐ YES ☐ N/A |
| Is each ESL used in the health impacts analysis the most current ESL at the time of submittal? | ☐ YES ☐ N/A |
| Has each air contaminant been identified as either P (PM), V (Volatile), or NE (Not Emitted)? | ☐ YES ☐ N/A |
| Are short-term and annual impacts included and evaluated in the analysis? (The short-term impacts for each air contaminant are based on the maximum hourly emission rate of that air contaminant.) | ☐ YES ☐ N/A |
| If using the MERA Flowchart for part of the impacts analysis, has the flowchart been completed correctly for each specified air contaminant? | ☐ YES ☐ N/A |
| Has the land-use (*e.g.*, industrial, residential, commercial) that surrounds the site been properly identified? | ☐ YES ☐ N/A |
| Does the short-term impact for each air contaminant meet acceptable off-property impacts criteria? | ☐ YES ☐ N/A |

| **Modeling and Impacts Analysis *(continued)*** | |
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| **NAAQS Analysis** | |
| Is a NAAQS analysis provided for all criteria pollutants across all averaging times that are affected by this permitting action? | ☐ YES ☐ N/A |
| Does the application demonstrate that the project meets all applicable NAAQS triggered by the project (*i.e.*, no NAAQS exceedances allowed)? | ☐ YES ☐ N/A |
| If a site-wide NAAQS analysis is required, are all emission sources of the criteria pollutant(s) at the site included in the analysis/ | ☐ YES ☐ N/A |
| Is the most current background monitoring data used in the NAAQS analysis? | ☐ YES ☐ N/A |
| Have the background monitor concentrations been correctly converted to the specific NAAQS standard's unit of measurement (*i.e.*, from ppm to $\mu g/m^3$)? | ☐ YES ☐ N/A |
| Were $NO_X$ to $NO_2$ hourly and annual adjustment factors properly applied? | ☐ YES ☐ N/A |
| **Rule Applicability** | |
| **State Rule Applicability** | |
| Does the application address applicability or non-applicability to the requirements in 30 TAC Chapters 101, 111, 112, 113, and 116? | ☐ YES ☐ N/A |
| Does the application address applicability to the specific requirements in 30 TAC Chapter 115? | ☐ YES ☐ N/A |
| If located in a non-attainment county for ozone, does the application address the applicability or non-applicability of Chapter 117 for all combustion devices to be authorized by the permit? | ☐ YES ☐ N/A |
| Does the application address applicability to the requirements in 30 TAC Chapter 122 (Title V)? (Major source if emitting site-wide 100 tpy or more of any criteria pollutant or 10/25 tpy of HAPs.) | ☐ YES ☐ N/A |
| **Federal Rule Applicability** | |
| Is a regulatory analysis included which identifies all of the potentially applicable federal rules for the site in 40 CFR Parts 60, 61, and 63 and explains either how the site will comply with the applicable rules or explains why the potentially applicable rules do not apply to the site? | ☐ YES ☐ N/A |

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| **Rule Applicability *(continued)*** | |
| **Federal Rule Applicability *(continued)*** | |
| If the site is located in a non-attainment county, is non-attainment applicability for the project addressed? | ☐ YES ☐ N/A |
| Is PSD applicability addressed for the site? (Please note that sites are considered major sources if they are a "named" source that emits100 tpy or more site-wide of a criteria pollutant or if they are an "unnamed" source that emits 250 tpy or more site-wide of a criteria pollutant.) | ☐ YES ☐ N/A |
| Is HAP major source applicability addressed? | ☐ YES ☐ N/A |
| **Best Available Control Technology (BACT)** | |
| Is a BACT analysis for the project's affected facilities (sources) included in the application? (The BACT analysis should also include sources currently authorized by PBR or standard permit that are being consolidated into the permit. Applicant should provide more than just the BACT tables.) | ☐ YES ☐ N/A |
| For a surface coating project with "affected facilities" that will emit 60 tpy or more of VOC and ES emissions for manual operations or 30 tpy or more of VOCs and ES emissions for automated operations, is a proposal included for add-on controls for those facilities or is a Tier III BACT analysis included which demonstrates that add-on controls are not economically reasonable and/or technically feasible? | ☐ YES ☐ N/A |
| **Miscellaneous Items** | |
| **Chemical Data Sheets (MSDS, SDS, Air Quality Data Sheet, etc.)** | |
| Do the weight fractions add to 100% or greater for each coating data sheet? | ☐ YES ☐ N/A |
| If any of the data sheets have weight fractions that add up to less than 100%, are the remaining compounds solids and not metal or silica? | ☐ YES ☐ N/A |
| Does the data sheet for each coating provide the VOC content and the density of the coating? | ☐ YES ☐ N/A |
| **Vendor Data** | |
| Is a vendor technical data sheet for the coating application equipment included? | ☐ YES ☐ N/A |
| Is a vendor technical data sheet for each control device (including filters) included? | ☐ YES ☐ N/A |

**PRINT FORM** **RESET FORM**