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| Minnesota Pollution Control Agency (MPCA), 520 Lafayette Road North, St. Paul, MN 55155-4194 | Qualitative information checklist  AERA-02  Air Emissions Risk Analysis (AERA)  *Doc Type: Air Emissions Risk Assessment – External Documentation* |

**Purpose:** This form serves as a checklist for submitting all necessary qualitative AERA materials. All AERA forms can now be submitted through e-Services. Consult the Minnesota Pollution Control Agency (MPCA) AERA guidance website for general instructions at <https://www.pca.state.mn.us/business-with-us/air-emissions-risk-analysis-aera>. Please go to the “Qualitative Risk Characterization” section within the “Risk Characterization: pulling it all together” in the AERA guidance.

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| **Contents:**  Facility information  Project description  Maps  Exposure information |  |

**Instructions:** Check appropriate box by clicking on it. Response areas may be expanded as needed. All AERA documents must be submitted electronically in their most recently updated form. Spreadsheets should not be submitted in PDF format. The AERA will be deemed incomplete if all requested forms and support documents are not included.

**This form is submitted as part of a:**

Protocol/workplan

Completed AERA

Facility information

|  |  |  |  |
| --- | --- | --- | --- |
| Facility name: |  | TEMPO AI number: |  |

Project description

|  |
| --- |
| Describe existing conditions, proposed facility changes, and any past AERA, permitting or environmental review. Include information about types of air permits, types of environmental review and other pertinent information. |
|  |
| Has the facility had past compliance issues, complaints or community concerns?  Yes  No |
| If yes, summarize below: |
|  |

Maps

**Each of the following maps needs to be standardized with a title, reference, date, legend, scale, north arrow, and appropriate radius.** Additional information can be added to clarify the maps or facility surroundings. A site visit is recommended to verify information.

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| File name(s): |  |

What is the minimum stack height modeled?       meters

What is the maximum stack height modeled?       meters

1. **Buffer distances**

A map is provided showing the following radii around the facility and surrounding area:

|  |  |  |
| --- | --- | --- |
| **Stack height (meters)** | | **Radius (kilometers)** |
|  | < 50 | 1.5 (approximately one mile) |
|  | 50 to 100 | 3 (approximately two miles) |
|  | > 100 | 10 (approximately six miles) |

1. **Sensitive receptors**

Within this radius the map indicates the following:

|  |  |  |  |
| --- | --- | --- | --- |
| facility | nursing homes | public recreation areas (e.g., playgrounds, swimming pools, tennis courts, city parks) | |
| schools | hospitals | other locations where sensitive receptors congregate: | |
| nearby residents | daycares |  |  |

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| File name(s): |  |

What is the smallest distance between the fence line and a resident:       meters

1. **General neighborhood information**

What is the population density surrounding the facility:       persons/square mile

Provide a map of census and demographic information, such as population density if there is considerable variation within the appropriate radius (see sensitive receptor map criteria above).

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| File name(s): |  |

Additional information about the surrounding community:

Is the facility located in an area described by Minn. Stat. §116.07, subd. 4a?  Yes  No

Check the map of South Minneapolis at (found on the MPCA’s website at <https://www.pca.state.mn.us/sites/default/files/aq1-40a.pdf>) to determine if the facility is in the described area. If yes, contact a MPCA supervisor or manager for a pre-app meeting/call.

1. **Nearby permitted air emission facilities within:**       kilometers

Provide a map and/or list below, of the permitted air emission facilities and related information within the proper radius of the facility. *(See recommended radius distances under “Buffer distances” on page 1.)*

A map is provided.

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| File name(s): |  |

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| **Nearby facility name** | **Type of permit (registration, state, Title V)** | **Approximate distance from project to nearby facility** | **Reference** |
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1. **Zoning**

A zoning map of the area, centered at the facility centroid, extending out to at least ten kilometers of the facility is provided. Supplemental maps with relevant ordinances informing potential exposures (e.g., raising chickens in town or prohibitions of livestock) may be helpful. If land is not zoned and ordinances are not available, a detailed land use map is sufficient.

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| File name(s): |  |

***or***

Describe zoning within ten kilometers of the facility (if a zoning map is not available):

1. **Land use**

A map showing current land use, centered at the facility centroid, extending out to at least ten kilometers of the facility is provided. Land use maps include information such as areas of residential, commercial and industrial use, farms, forests, and waterways. If the land is used for purposes other than those designated on the land use map, explain why:

If no map is provided, the most restrictive land use will be assumed.

1. **Farming locations**

If farms are *currently* located within ten kilometers of the facility, indicate what type of farming occurs (e.g., beef farming, dairy cows, chickens, urban gardening).The MPCA also considers “reasonable potential *future* land use.”

When available, provide additional information about farms surrounding the facility. For example:

What crops are grown on the farm?

What animals are raised?

No farms are within the appropriate radius thus no map was provided.

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| File name(s): |  |

1. **Risk receptor information and isopleths**

No risk isopleth map is included because neither an Emission Rate/Chemical Health Index (Q/CHI) nor a receptor grid-based HHRAP-type analysis is done.

If conducting a more refined analysis such as the Q/CHI analysis or HHRAP-based analysis, provide a map showing a risk isopleth for each exposure scenario with a risk result above 0.1 (0.1 in 100,000 for cancer estimates). Locations of all receptors for whom risks are estimated need to be indicated on the map, including the maximum acute (hourly) receptor and the maximum chronic (annual).

If additional risk receptor scenario(s) are included, explain them and how they are chosen:

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| File name(s): |  |

1. **Fishable water bodies.** A water body may be considered “fishable” if it typically contains water year-round in a year that receives at least 75% of the normal annual precipitation for that area. Project proposers with facilities emitting persistent, bio-accumulative, and toxic pollutants (PBTs) need to provide a map showing potentially impacted fishable water bodies within the radii recommended below or fishable water bodies outside the recommended radii if they can be impacted by rivers and streams within the radius of interest.

A map is provided showing the following radii around the facility and surrounding area:

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| --- | --- | --- |
| **Stack height** | | **Radius** |
|  | < 100 m | 3 km (approximately 2 miles) |
|  | > 100 m | 10 km (approximately 6 miles) |

A map is provided indicating fishable water bodies outside the specified radii (above) since they may be impacted by rivers and streams inside the radii.

No PBTs are emitted thus none of the specified maps is provided.

There is no public access to water bodies in the specified radii (above) thus no map is provided.

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| Explain: |  |

No fishable water bodies are within the appropriate radius thus no map is provided. If water bodies are present within the appropriate radius, explain why they are not considered fishable:

|  |  |
| --- | --- |
| Explain: |  |

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| File name(s): |  |

1. **Exposure information**

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|  | Is there a fence surrounding the facility?  Yes  No | | |
|  | Is access to the property restricted?  Yes  No | | |
|  | Describe: |  | |
|  | Does the facility rent or lease portions of property for farming or other purposes that could provide exposure to public?  Yes  No | | |
|  | If yes, describe: | |  |
|  | Is there a fishable water body on farming property?  Yes  No | | |
|  | **Are the total emissions from idling diesel trucks on the facility property ≥ two trucks idling continuously for an hour or more?**  Yes  No | | |
|  | If yes briefly describe the scenario, the maximum expected number of concurrently idling trucks, length of idling time, and approximate distance to the maximally impacted receptor. Also, describe any proposed diesel emission reduction steps. A “yes” response prompts further consideration, but does not imply a requirement for further quantitative analysis. | | |
|  | Describe: |  | |
|  | Early life exposure adjustment for carcinogenic results   * 1. Enter the summed facility-specific cancer risks:   2. If this screening level default adjustment results in cancer risk estimates that are above facility risk guidelines, contact the MPCA risk assessment staff. | | |