

APPENDIX I

AIR QUALITY MODELING RESULTS

Road Construction Emissions Model, Version 7.1.5.1

Emission Estimates for -> McCormack 2019				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	
Grubbing/Land Clearing	6.2	44.6	63.2	22.9	2.9	20.0	6.8	2.7	4.2	8,863.8
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	6.2	44.6	63.2	22.9	2.9	20.0	6.8	2.7	4.2	8,863.8
Total (tons/construction project)	0.2	1.5	2.1	0.8	0.1	0.7	0.2	0.1	0.1	292.5

Notes: Project Start Year -> 2019
 Project Length (months) -> 3
 Total Project Area (acres) -> 41
 Maximum Area Disturbed/Day (acres) -> 2
 Total Soil Imported/Exported (yd³/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> McCormack 2019				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	
Grubbing/Land Clearing	2.8	20.3	28.7	10.4	1.3	9.1	3.1	1.2	1.9	4,029.0
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	2.8	20.3	28.7	10.4	1.3	9.1	3.1	1.2	1.9	4,029.0
Total (megagrams/construction project)	0.2	1.3	1.9	0.7	0.1	0.6	0.2	0.1	0.1	265.3

Notes: Project Start Year -> 2019
 Project Length (months) -> 3
 Total Project Area (hectares) -> 17
 Maximum Area Disturbed/Day (hectares) -> 1
 Total Soil Imported/Exported (meters³/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

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Emission Estimates for -> <i>Scour Pond 2020</i>				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	
Grubbing/Land Clearing	6.3	49.0	62.7	22.9	2.9	20.0	6.8	2.7	4.2	9,600.7
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	6.3	49.0	62.7	22.9	2.9	20.0	6.8	2.7	4.2	9,600.7
Total (tons/construction project)	0.2	1.6	2.1	0.8	0.1	0.7	0.2	0.1	0.1	316.8
Notes:	Project Start Year -> 2020									
	Project Length (months) -> 3									
	Total Project Area (acres) -> 11									
	Maximum Area Disturbed/Day (acres) -> 2									
	Total Soil Imported/Exported (yd ³ /day)-> 0									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										
Emission Estimates for -> <i>Scour Pond 2020</i>				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	
Grubbing/Land Clearing	2.9	22.3	28.5	10.4	1.3	9.1	3.1	1.2	1.9	4,364.0
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	2.9	22.3	28.5	10.4	1.3	9.1	3.1	1.2	1.9	4,364.0
Total (megagrams/construction project)	0.2	1.5	1.9	0.7	0.1	0.6	0.2	0.1	0.1	287.4
Notes:	Project Start Year -> 2020									
	Project Length (months) -> 3									
	Total Project Area (hectares) -> 4									
	Maximum Area Disturbed/Day (hectares) -> 1									
	Total Soil Imported/Exported (meters ³ /day)-> 0									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										

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Emission Estimates for -> Decker Site 2021				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	CO2 (lbs/day)
Grubbing/Land Clearing	5.6	48.5	55.5	22.5	2.5	20.0	6.4	2.3	4.2	9,602.2
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	5.6	48.5	55.5	22.5	2.5	20.0	6.4	2.3	4.2	9,602.2
Total (tons/construction project)	0.2	1.6	1.8	0.7	0.1	0.7	0.2	0.1	0.1	316.9
Notes:	Project Start Year -> 2021									
	Project Length (months) -> 3									
	Total Project Area (acres) -> 82									
	Maximum Area Disturbed/Day (acres) -> 2									
	Total Soil Imported/Exported (yd ³ /day)-> 0									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										
Emission Estimates for -> Decker Site 2021				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	CO2 (kgs/day)
Grubbing/Land Clearing	2.5	22.1	25.2	10.2	1.1	9.1	2.9	1.0	1.9	4,364.6
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	2.5	22.1	25.2	10.2	1.1	9.1	2.9	1.0	1.9	4,364.6
Total (megagrams/construction project)	0.2	1.5	1.7	0.7	0.1	0.6	0.2	0.1	0.1	287.4
Notes:	Project Start Year -> 2021									
	Project Length (months) -> 3									
	Total Project Area (hectares) -> 33									
	Maximum Area Disturbed/Day (hectares) -> 1									
	Total Soil Imported/Exported (meters ³ /day)-> 0									
PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.										
Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.										

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Emission Estimates for -> Bradford 2022				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (lbs/day)
Project Phases (English Units)	ROG (lbs/day)	CO (lbs/day)	NOx (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM10 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	PM2.5 (lbs/day)	
Grubbing/Land Clearing	5.0	48.4	47.9	22.1	2.1	20.0	6.1	1.9	4.2	9,606.4
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (pounds/day)	5.0	48.4	47.9	22.1	2.1	20.0	6.1	1.9	4.2	9,606.4
Total (tons/construction project)	0.2	1.6	1.6	0.7	0.1	0.7	0.2	0.1	0.1	317.0

Notes: Project Start Year -> 2022
 Project Length (months) -> 3
 Total Project Area (acres) -> 100
 Maximum Area Disturbed/Day (acres) -> 2
 Total Soil Imported/Exported (yd³/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.

Emission Estimates for -> Bradford 2022				Total	Exhaust	Fugitive Dust	Total	Exhaust	Fugitive Dust	CO2 (kgs/day)
Project Phases (Metric Units)	ROG (kgs/day)	CO (kgs/day)	NOx (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM10 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	PM2.5 (kgs/day)	
Grubbing/Land Clearing	2.3	22.0	21.8	10.1	1.0	9.1	2.8	0.9	1.9	4,366.6
Grading/Excavation	-	-	-	-	-	-	-	-	-	-
Drainage/Utilities/Sub-Grade	-	-	-	-	-	-	-	-	-	-
Paving	-	-	-	-	-	-	-	-	-	-
Maximum (kilograms/day)	2.3	22.0	21.8	10.1	1.0	9.1	2.8	0.9	1.9	4,366.6
Total (megagrams/construction project)	0.2	1.4	1.4	0.7	0.1	0.6	0.2	0.1	0.1	287.5

Notes: Project Start Year -> 2022
 Project Length (months) -> 3
 Total Project Area (hectares) -> 40
 Maximum Area Disturbed/Day (hectares) -> 1
 Total Soil Imported/Exported (meters³/day)-> 0

PM10 and PM2.5 estimates assume 50% control of fugitive dust from watering and associated dust control measures if a minimum number of water trucks are specified.

Total PM10 emissions shown in column F are the sum of exhaust and fugitive dust emissions shown in columns H and I. Total PM2.5 emissions shown in Column J are the sum of exhaust and fugitive dust emissions shown in columns K and L.