Air Quality Assessment Methodology for CMH

- **Franklin County is non-attainment for ozone and fine particulate matter ($PM_{2.5}$) emissions requiring a General Conformity Evaluation under the Clean Air Act.**

- **Preliminary Aircraft Operations Emissions Inventory of Existing Conditions at CMH**

PORT COLUMBUS INTERNATIONAL AIRPORT EMISSIONS INVENTORY – EXISTING CONDITIONS

AIRCRAFT TYPE	2006 ANNUAL OPERATIONS	SOURCE	ANNUAL EMISSIONS (tons per year) CO	VOC	NO_x	SO_x	PM_{10}	$PM_{2.5}$
Airbus 319	2,201	GSE/APU	88	3	5	0	0	0
		Aircraft	13	0	19	2	0	0
		Total	**101**	**3**	**24**	**2**	**0**	**0**
Airbus 320	2,200	GSE/APU	88	3	5	0	0	0
		Aircraft	14	0	21	2	0	0
		Total	**101**	**3**	**26**	**2**	**0**	**0**
Boeing 737	24,940	GSE/APU	1,009	38	51	6	1	0
		Aircraft	293	24	175	19	2	2
		Total	**1,302**	**62**	**226**	**24**	**3**	**2**
Boeing 757	733	GSE/APU	29	1	2	0	0	0
		Aircraft	9	0	12	1	0	0
		Total	**39**	**1**	**14**	**1**	**0**	**0**
Business Jet	50,616	GSE/APU	786	30	32	2	1	0
		Aircraft	750	308	69	10	3	3
		Total	**1,536**	**338**	**101**	**12**	**3**	**3**
Commuter Turbo Prop	6,602	GSE/APU	145	5	6	0	0	0
		Aircraft	23	4	7	1	0	0
		Total	**167**	**9**	**13**	**2**	**0**	**0**
Douglas DC-9	5,136	GSE/APU	209	8	10	1	0	0
		Aircraft	31	4	42	5	2	2
		Total	**241**	**12**	**52**	**6**	**2**	**2**
McDonnell-Douglas MD-80	5,868	GSE/APU	173	6	11	1	0	0
		Aircraft	52	0	51	6	0	0
		Total	**225**	**6**	**62**	**7**	**1**	**0**
KC-135 Military Tanker	1,168	GSE/APU	1	0	3	0	0	0
		Aircraft	34	2	32	3	0	0
		Total	**35**	**2**	**35**	**3**	**0**	**0**
Regional Jet	72,624	GSE/APU	1,522	57	62	6	1	0
		Aircraft	366	54	193	24	1	1
		Total	**1,888**	**111**	**254**	**30**	**2**	**1**
Single-Engine Prop	13,204	GSE/APU	0	0	0	0	0	0
		Aircraft	84	2	0	0	0	0
		Total	**84**	**2**	**1**	**0**	**0**	**0**
Twin-Engine Prop	11,001	GSE/APU	10	0	1	0	0	0
		Aircraft	278	7	2	0	0	0
		Total	**288**	**8**	**3**	**1**	**0**	**0**
Grand Total	**196,592**	GSE/APU	1,059	153	187	19	4	0
		Aircraft	1,947	406	623	72	8	8
		Total	**6,007**	**558**	**810**	**91**	**12**	**8**

- 57% of total emissions are from Regional Jets and Business Jets
- 22% of total emissions are from B737 operations
- CO is most prominent pollutant representing 80% of total emissions; most are from GSE
- NO_x, VOC, and PM primarily due to aircraft
- Mobile sources will add to the CO and NO_x emissions
- GSE survey conducted July 2006
- Stationary Source Inventory conducted July 2006

Next Steps:

- Prepare remaining emissions inventories using annual average temperature and annual average mixing height
- Prepare construction emissions inventory
- Five years of on-site meteorology used for the dispersion analysis of baselines and Sponsor's Proposed Project
- Conduct dispersion analysis using EDMS
- Develop background concentrations for determination of "design concentrations" for comparison to the NAAQs

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