Summary of LaPorte County Bump-Down Modeling Analysis

Comparison modeling was conducted to determine the affect LaPorte County emissions have on ozone concentrations at the Michigan City and LaPorte ozone monitors. Comparison of results from modeling the removal of all emissions located in LaPorte County vs. all emission sources modeled showed small ozone concentration decreases. Model performance is not adequate at this time but results can be used to determine relative reduction factors to show trends and estimate future ozone design values. Relative reduction factors calculated for Michigan City and LaPorte ozone monitoring sites are close to 1.0, meaning that there will be little impact on ozone concentrations at those sites and future year ozone concentrations will not be greatly impacted.Figure 2 - Michigan City Monitoring Site

	Observed	Year 1999 – All emissions	Year 1999 – LaPorte Co. Zero-Out	Relative Reduction Factor (RRF)	Observed	Year 2007 – All emissions	Year 2007 – LaPorte Co. Zero-Out	Relative Reduction Factor (RRF)
	Max. 8-hour	Max. 8-hour	Max. 8-hour		Max. 8-hour	Max. 8-hour	Max. 8-hour	
	(ppb)	(ppb)	(ppb)		(ppb)	(ppb)	(ppb)	
June 20, 2002	81	80	81	1.01	81	72	73	1.01
June 21, 2002	107	72	79	1.1	107	76	78	1.03
June 23, 2002	113	79	80	1.01	113	74	74	1.00
June 24, 2002	116	76	80	1.05	116	78	80	1.03
July 3, 2002	107	64	66	Not considered	107	71	72	1.01
July 7, 2002	84	80	72	0.9	84	77	65	0.84
July 14, 2002	83	70	67	0.96	83	65	62	Not considered
July 15, 2002	85	82	87	1.06	85	81	83	1.02
July 16, 2002	96	77	81	1.05	96	85	87	1.02
July 17, 2002	88	74	77	1.04	88	76	78	1.03
July 18, 2002	86	81	85	1.05	86	84	85	1.01
			Average Relative Reduction Factor	1.02			Average Relative Reduction Factor	1.00

Current Design Value at Michigan City is 93 ppb * 1.02 RRF for 1999 modeling = 95 ppb Projected Design Value
Current Design Value at Michigan City is 93 ppb * 1.00 RRF for 2007 modeling = 93 ppb Projected Design Value

Figure 3 - LaPorte Monitoring Site

	Observed	Year 1999 – All emissions	Year 1999 – LaPorte Co. Zero-Out	Relative Reduction Factor (RRF)	Observed	Year 2007 – All emissions	Year 2007 – LaPorte Co. Zero-Out	Relative Reduction Factor (RRF)
	Max. 8-hour	Max. 8-hour	Max. 8-hour		Max. 8-hour	Max. 8-hour	Max. 8-hour	
	(ppb)	(ppb)	(ppb)		(ppb)	(ppb)	(ppb)	
June 20, 2002	95	79	77	0.97	95	69	66	Not considered
June 21, 2002	95	75	74	0.99	95	70	67	0.96
June 22, 2002	101	73	73	1.0	101	69	67	Not considered
June 23, 2002	100	75	73	0.97	100	68	65	Not considered
June 24, 2002	116	78	79	1.01	116	75	74	0.99
July 2, 2002	71	66	72	Not considered	71	71	74	1.04
July 3, 2002	89	70	74	1.06	89	72	72	1.00
July 15, 2002	89	76	77	1.01	89	74	72	0.97
July 16, 2002	111	80	88	1.1	111	84	87	1.04
July 17, 2002	84	72	75	1.04	84	71	70	0.99
July 18, 2002	96	65	74	Not considered	96	68	71	Not considered
			Average Relative Reduction Factor	1.02			Average Relative Reduction Factor	1.00

Current Design Value at LaPorte is 87 ppb * 1.02 RRF for 1999 modeling = 89 ppb Projected Design Value
Current Design Value at LaPorte is 87 ppb * 1.00 RRF for 2007 modeling = 87 ppb Projected Design Value