



**US Army Corps
of Engineers**

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (ug/m ³)								Naphthalene (ug/m ³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4		
12/1/13 12:00 AM	210.00	1.60	0.00	22.60	0.00	22.60	21.20	0.00	18.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 12:15 AM	218.00	1.70	24.90	23.80	0.00	23.80	24.40	24.90	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 12:30 AM	205.00	1.80	29.10	0.00	0.00	0.00	26.60	29.10	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 12:45 AM	213.00	2.10	39.40	37.00	0.00	37.00	34.20	39.40	25.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:00 AM	214.00	2.50	40.00	36.90	0.00	36.90	33.40	40.00	26.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:15 AM	212.00	1.30	35.40	33.40	0.00	33.40	29.80	35.40	25.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:30 AM	219.00	1.10	39.70	33.30	0.00	33.30	32.10	39.70	25.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:45 AM	204.00	0.90	42.50	37.10	0.00	37.10	33.10	42.50	27.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:00 AM	209.00	2.00	40.30	36.40	0.00	36.40	31.00	40.30	28.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:15 AM	197.00	1.70	38.80	37.40	0.00	37.40	28.10	38.80	27.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:30 AM	208.00	1.80	29.60	25.90	0.00	25.90	22.90	29.60	25.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:45 AM	219.00	2.20	37.60	28.30	0.00	28.30	29.60	37.60	23.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:00 AM	214.00	2.00	43.70	38.20	0.00	38.20	36.20	43.70	28.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:15 AM	222.00	1.40	44.60	39.80	0.00	39.80	35.50	44.60	30.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:30 AM	229.00	1.90	44.70	0.00	0.00	0.00	35.60	44.70	30.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:45 AM	232.00	1.40	46.50	41.60	0.00	41.60	36.30	46.50	31.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 4:00 AM	325.00	0.60	32.10	38.50	6.40	41.10	38.50	50.10	32.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 4:15 AM	292.00	1.10	34.50	39.70	5.20	49.70	39.70	51.50	34.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 4:30 AM	213.00	1.20	57.30	51.40	0.00	51.40	46.80	57.30	36.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 4:45 AM	220.00	0.70	60.70	50.20	0.00	50.20	47.00	60.70	36.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 5:00 AM	268.00	0.60	60.90	48.60	0.00	48.60	46.90	60.90	36.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 5:15 AM	244.00	1.20	59.10	49.20	0.00	49.20	45.70	59.10	33.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 5:30 AM	338.00	0.80	27.50	44.70	17.20	50.80	44.70	47.40	27.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 5:45 AM	288.00	1.60	26.30	31.30	5.00	31.40	31.30	35.10	26.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 6:00 AM	292.00	2.20	24.40	28.90	4.50	32.50	28.90	33.00	24.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 6:15 AM	264.00	1.60	32.70	28.10	0.00	28.10	29.00	32.70	23.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 6:30 AM	245.00	0.90	30.80	28.90	0.00	28.90	27.50	30.80	25.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 6:45 AM	213.00	1.20	30.70	29.70	0.00	29.70	27.60	30.70	26.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 7:00 AM	312.00	0.40	24.90	27.60	2.70	28.70	27.60	30.50	24.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 7:15 AM	315.00	0.90	27.10	28.00	0.90	30.30	28.00	31.00	27.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 7:30 AM	45.00	1.60	32.20	32.30	0.10	32.20	28.70	32.30	28.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 7:45 AM	328.00	1.70	29.50	31.60	2.10	34.20	31.60	34.20	29.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 8:00 AM	331.00	1.80	30.60	32.00	1.40	0.00	32.00	36.20	30.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 8:15 AM	353.00	0.50	29.30	31.90	2.60	34.70	31.90	36.00	29.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 8:30 AM	276.00	1.20	28.90	32.40	3.50	36.10	32.40	36.90	28.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 8:45 AM	282.00	2.60	30.10	32.50	2.40	36.10	32.50	37.30	30.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 9:00 AM	327.00	2.30	29.20	35.20	6.00	37.20	35.20	40.20	29.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 9:15 AM	346.00	3.00	29.30	37.60	8.30	40.00	37.60	42.80	29.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 9:30 AM	7.00	5.00	47.10	51.30	4.20	47.10	43.50	51.30	31.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 9:45 AM	12.00	6.90	45.10	53.20	8.10	45.10	44.40	53.20	30.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 10:00 AM	13.00	4.20	48.70	54.80	6.10	48.70	44.60	54.80	29.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 10:15 AM	355.00	4.40	26.10	44.90	18.80	45.20	44.90	54.00	26.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 10:30 AM	2.00	4.90	45.30	52.70	7.40	45.30	43.90	52.70	23.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 10:45 AM	10.00	4.40	43.00	49.30	6.30	43.00	41.20	49.30	21.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 11:00 AM	17.00	3.80	42.70	47.70	5.00	42.70	41.10	47.70	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 11:15 AM	5.00	4.20	42.80	44.10	1.30	42.80	38.40	44.10	16.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 11:30 AM	21.00	4.60	29.10	41.60	12.50	29.10	34.90	41.60	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 11:45 AM	5.00	7.40	26.80	39.70	12.90	26.80	33.50	39.70	14.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 12:00 PM	2.00	7.70	25.10	36.80	11.70	25.10	30.60	36.80	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 12:15 PM	1.00	6.60	24.50	35.00	10.50	24.50	29.90	35.00	16.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 12:30 PM	3.00	7.30	24.90	34.10	9.20	24.90	29.70	34.10	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 12:45 PM	359.00	6.80	18.40	29.80	11.40	25.30	29.80	33.80	18.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:00 PM	359.00	5.70	20.00	30.00	10.00	25.50	30.00	33.30	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:15 PM	353.00	4.90	21.90	29.90	8.00	26.30	29.90	33.20	21.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:30 PM	1.00	6.50	26.70	32.80	6.10	26.70	30.40	32.80	23.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 1:45 PM	5.00	6.90	26.60	32.80	6.20	26.60	29.70	32.80	23.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:00 PM	4.00	7.40	26.50	32.10	5.60	26.50	29.70	32.10	24.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:15 PM	2.00	6.90	27.80	32.10	4.30	27.80	30.20	32.10	25.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:30 PM	0.00	4.50	28.70	33.30	4.60	28.70	30.40	33.30	26.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 2:45 PM	359.00	6.40	26.60	32.40	5.80	30.10	32.40	35.10	26.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:00 PM	2.00	6.50	0.00	35.90	0.00	0.00	32.90	35.90	25.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:15 PM	7.00	6.80	33.80	37.90	4.10	33.80	35.00	37.90	23.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:30 PM	9.00	7.40	34.30	39.50	5.20	34.30	35.30	39.50	21.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 3:45 PM	4.00	6.00	34.00	38.90	4.90	34.00	34.50	38.90	19.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 4:00 PM	359.00	8.20	18.80	34.30	15.50	34.40	34.30	38.60	18.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/1/13 4:15 PM	6.00	5.30</																



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Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³), and Naphthalene (µg/m³). Rows show hourly data from 12/3/13 1:30 AM to 12/4/13 2:00 AM.



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Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m ³)								Naphthalene (µg/m ³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4		
12/4/13 2:15 AM	195.00	3.30	43.00	21.50	0.00	21.50	35.00	43.00	19.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 2:30 AM	191.00	2.40	37.40	21.50	0.00	21.50	38.80	37.40	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 2:45 AM	203.00	2.90	35.70	19.80	0.00	19.80	33.10	35.70	18.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:00 AM	202.00	2.60	34.20	19.20	0.00	19.20	33.10	34.20	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:15 AM	176.00	3.70	32.90	18.00	0.00	19.80	32.90	33.40	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:30 AM	171.00	3.60	33.80	18.20	0.00	21.20	33.80	34.40	18.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:45 AM	184.00	3.30	36.40	21.50	0.00	21.50	34.00	36.40	18.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:00 AM	177.00	3.40	34.90	18.90	0.00	23.10	34.90	37.10	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:15 AM	193.00	2.80	37.90	22.50	0.00	22.50	34.10	37.90	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:30 AM	173.00	4.40	33.60	19.30	0.00	23.30	33.60	38.50	19.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:45 AM	178.00	2.80	33.70	19.40	0.00	24.40	33.70	38.70	19.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:00 AM	147.00	2.20	34.80	19.80	0.00	23.60	34.80	39.70	19.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:15 AM	151.00	2.60	34.60	21.30	0.00	25.40	34.60	41.80	21.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:30 AM	158.00	3.50	36.30	22.00	0.00	26.50	36.30	45.20	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:45 AM	168.00	4.90	38.20	22.50	0.00	28.90	38.20	47.70	22.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:00 AM	150.00	3.80	39.40	22.50	0.00	27.70	39.40	49.90	22.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:15 AM	162.00	3.10	39.80	22.50	0.00	26.30	39.80	49.90	22.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:30 AM	163.00	4.40	39.50	22.80	0.00	27.30	39.50	50.20	22.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:45 AM	171.00	3.10	38.60	22.60	0.00	27.80	38.60	50.00	22.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 7:00 AM	158.00	3.60	38.00	22.00	0.00	28.40	38.00	49.80	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 7:15 AM	159.00	3.70	37.90	22.30	0.00	27.40	37.90	51.10	22.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 7:30 AM	157.00	3.90	38.00	21.60	0.00	27.40	38.00	54.90	21.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 7:45 AM	174.00	5.60	39.70	21.60	0.00	26.20	39.70	54.80	21.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 8:00 AM	163.00	4.90	37.90	21.20	0.00	23.40	37.90	38.80	21.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 8:15 AM	176.00	4.10	36.70	20.30	0.00	21.40	36.70	33.20	20.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 8:30 AM	174.00	5.60	34.00	19.10	0.00	21.00	34.00	26.90	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 8:45 AM	170.00	4.70	33.80	19.00	0.00	22.10	33.80	26.80	19.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 9:00 AM	155.00	4.20	34.40	19.10	0.00	20.10	34.40	24.10	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 9:15 AM	170.00	3.50	31.50	17.90	0.00	25.20	31.50	23.40	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 9:30 AM	162.00	5.10	28.90	16.70	0.00	28.60	28.90	22.40	16.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 9:45 AM	174.00	6.70	27.20	15.90	0.00	31.30	27.20	21.70	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 10:00 AM	163.00	6.10	25.30	15.10	0.00	32.20	25.30	21.30	15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 10:15 AM	182.00	5.20	21.20	29.80	8.60	29.80	24.90	21.20	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 10:30 AM	162.00	5.40	23.20	13.70	0.00	25.90	23.20	21.20	13.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 10:45 AM	170.00	5.00	23.40	13.60	0.00	20.50	23.40	20.70	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 11:00 AM	168.00	3.70	21.60	13.10	0.00	17.20	21.60	21.00	13.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 11:15 AM	171.00	4.90	22.20	13.30	0.00	14.30	22.20	20.90	13.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 11:30 AM	165.00	6.40	23.10	12.90	0.00	13.50	23.10	19.40	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 11:45 AM	171.00	4.60	23.90	13.30	0.00	13.30	23.90	17.30	13.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 12:00 PM	180.00	3.00	16.60	14.20	0.00	14.20	25.80	16.60	14.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 12:15 PM	164.00	5.60	29.20	16.10	0.00	16.70	29.20	15.60	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 12:30 PM	180.00	5.30	15.00	17.40	2.40	17.40	30.90	15.00	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 12:45 PM	179.00	5.50	31.70	17.40	0.00	18.50	31.70	14.70	17.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 1:00 PM	173.00	4.30	31.20	17.10	0.00	19.00	31.20	14.60	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 1:15 PM	183.00	4.70	14.30	16.20	1.90	16.20	28.60	14.30	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 1:30 PM	154.00	4.80	26.80	15.30	0.00	15.50	26.80	13.90	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 2:00 PM	164.00	5.50	29.60	17.30	0.00	16.90	29.60	16.50	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 2:15 PM	151.00	6.60	28.70	17.10	0.00	17.20	28.70	17.50	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 2:30 PM	167.00	7.00	25.70	14.70	0.00	15.30	25.70	15.70	14.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 2:45 PM	180.00	7.00	9.90	11.60	1.70	11.60	18.90	9.90	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:00 PM	181.00	5.40	9.40	12.00	2.60	12.00	20.00	9.40	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:15 PM	174.00	6.40	22.40	12.10	0.00	12.00	22.40	8.60	12.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:30 PM	185.00	6.40	7.80	12.10	4.30	12.10	23.40	7.80	12.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 3:45 PM	172.00	3.80	26.10	13.20	0.00	11.10	26.10	6.30	13.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:00 PM	164.00	5.80	28.10	13.50	0.00	11.50	28.10	6.00	13.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:15 PM	162.00	3.80	30.30	14.10	0.00	12.50	30.30	6.00	14.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:30 PM	176.00	4.70	29.00	13.00	0.00	12.00	29.00	6.20	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 4:45 PM	200.00	3.60	5.70	10.90	5.20	10.90	26.20	5.70	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:00 PM	197.00	4.70	6.40	10.50	4.10	10.50	28.40	6.40	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:15 PM	207.00	3.20	6.50	10.40	3.90	10.40	29.20	6.50	12.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:30 PM	198.00	4.60	5.60	10.60	5.00	10.60	28.70	5.60	12.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 5:45 PM	212.00	6.10	4.40	10.60	6.20	10.60	26.50	4.40	12.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:00 PM	204.00	6.10	4.00	11.10	7.10	11.10	25.40	4.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:15 PM	223.00	5.40	3.80	11.60	7.80	11.60	24.70	3.80	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:30 PM	203.00	8.30	4.20	12.00	7.80	12.00	24.10	4.20	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/4/13 6:45 PM	210.00	6.50	4.90															



US Army Corps of Engineers

Indiana Harbor and Canal Confined Disposal Facility Real-Time Air Monitoring Data December, 2013

Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³) [Upwind, Downwind, CDF Contribution, M1, M2, M3, M4], Naphthalene (µg/m³) [Upwind, Downwind, CDF Contribution, M1, M2, M3, M4]. Rows show hourly data from 12/5/13 3:15 AM to 12/6/13 3:45 AM.



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³), and Naphthalene (µg/m³). It contains 336 rows of monitoring data.



**US Army Corps
of Engineers**

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m ³)								Naphthalene (µg/m ³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4		
12/7/13 4:45 AM	316.00	3.60	9.50	9.40	0.00	12.30	9.40	7.30	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:00 AM	316.00	3.00	10.10	9.60	0.00	13.30	9.60	8.50	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:15 AM	327.00	4.70	9.00	9.10	0.10	11.90	9.10	7.90	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:30 AM	319.00	4.10	9.90	9.10	0.00	12.80	9.10	8.70	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:45 AM	325.00	4.40	10.30	9.40	0.00	12.40	9.40	9.00	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:00 AM	316.00	3.70	10.30	9.70	0.00	12.50	9.70	9.10	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:15 AM	331.00	4.40	9.60	8.90	0.00	11.80	8.90	8.00	9.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:30 AM	319.00	3.40	10.20	8.80	0.00	12.10	8.80	8.20	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:45 AM	332.00	4.20	11.00	9.20	0.00	12.10	9.20	9.10	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:00 AM	325.00	2.90	11.50	10.10	0.00	13.20	10.10	10.90	11.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:15 AM	322.00	4.20	12.80	12.30	0.00	0.00	12.30	12.80	12.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:30 AM	320.00	4.30	15.40	13.20	0.00	15.50	13.20	13.30	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:45 AM	320.00	3.60	13.50	13.70	0.20	16.00	13.70	15.40	13.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:00 AM	325.00	4.20	15.20	13.20	0.00	15.70	13.20	13.90	15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:15 AM	329.00	3.30	16.60	13.20	0.00	18.60	13.20	16.00	16.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:30 AM	330.00	3.70	13.30	13.30	0.00	16.70	13.30	16.60	13.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:45 AM	290.00	4.00	14.30	14.10	0.00	19.70	14.10	15.10	14.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 9:00 AM	309.00	4.40	13.80	15.60	1.80	15.80	15.60	14.50	13.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 9:15 AM	330.00	3.90	13.60	15.40	1.80	18.50	15.40	16.80	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 9:30 AM	314.00	5.10	17.30	15.50	0.00	20.30	15.50	17.00	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 9:45 AM	334.00	3.20	13.60	15.00	1.40	17.40	15.00	13.60	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 10:00 AM	358.00	3.40	11.20	13.00	1.80	15.50	13.00	12.40	11.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 10:15 AM	337.00	3.50	12.30	13.20	0.90	15.10	13.20	12.60	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 10:30 AM	334.00	4.80	10.90	14.00	3.10	16.00	14.00	12.00	10.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 10:45 AM	327.00	2.90	12.30	13.40	1.10	15.60	13.40	13.10	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 11:00 AM	5.00	3.90	13.70	10.90	0.00	13.70	12.40	10.90	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 11:15 AM	326.00	3.40	11.10	12.90	1.80	13.60	12.90	11.70	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 11:30 AM	337.00	3.60	13.40	13.10	0.00	14.40	13.10	12.20	13.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 11:45 AM	332.00	2.10	11.70	13.40	1.70	13.30	13.40	12.60	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 12:00 PM	295.00	2.10	12.60	12.50	0.00	13.20	12.50	10.50	12.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 12:15 PM	298.00	3.80	11.70	12.30	0.60	11.90	12.30	11.30	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 12:30 PM	346.00	1.60	11.10	11.60	0.50	10.90	11.60	9.60	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 12:45 PM	334.00	1.60	11.10	11.10	0.00	11.40	11.10	9.80	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 1:00 PM	11.00	2.50	10.60	10.90	0.30	10.60	10.50	10.90	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 1:15 PM	358.00	2.80	11.10	10.50	0.00	10.80	10.50	10.20	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 1:30 PM	331.00	2.60	11.70	11.20	0.00	11.10	11.20	12.00	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 1:45 PM	16.00	1.50	11.40	12.90	1.50	11.40	11.20	12.90	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 2:00 PM	25.00	2.70	11.80	13.80	2.00	11.80	11.40	13.80	12.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 2:15 PM	15.00	2.40	11.80	13.70	1.90	11.80	10.90	13.70	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 2:30 PM	6.00	2.70	11.20	14.10	2.90	11.20	11.30	14.10	13.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 2:45 PM	105.00	0.50	11.30	13.40	2.10	11.30	11.30	13.40	13.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 3:00 PM	29.00	2.60	11.10	13.40	2.30	11.10	11.20	13.40	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 3:15 PM	61.00	0.40	10.90	13.70	2.80	10.90	11.10	13.70	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 3:30 PM	349.00	1.20	14.00	11.40	0.00	11.40	11.40	13.80	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 3:45 PM	338.00	1.70	14.50	12.30	0.00	11.60	12.30	13.00	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 4:00 PM	353.00	1.90	14.50	13.00	0.00	11.10	13.00	13.00	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 4:15 PM	307.00	1.20	14.50	12.90	0.00	12.70	12.90	13.00	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 4:30 PM	7.00	2.60	11.80	13.60	1.80	11.80	13.80	13.60	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 4:45 PM	338.00	2.40	14.70	13.70	0.00	12.10	13.70	14.10	14.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:00 PM	330.00	2.40	15.30	14.00	0.00	12.80	14.00	14.10	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:15 PM	342.00	2.50	15.50	14.70	0.00	12.60	14.70	14.30	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:30 PM	329.00	2.70	15.50	14.10	0.00	13.30	14.10	14.40	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 5:45 PM	5.00	2.30	12.80	14.70	1.90	12.80	14.90	14.70	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:00 PM	359.00	3.70	15.70	15.10	0.00	13.90	15.10	15.00	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:15 PM	357.00	2.60	15.70	15.20	0.00	13.80	15.20	15.00	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:30 PM	348.00	1.60	15.10	15.60	0.50	0.00	15.60	14.50	15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 6:45 PM	8.00	1.40	12.50	15.70	3.20	12.50	14.70	15.70	14.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:00 PM	29.00	1.90	14.40	13.60	0.00	14.40	14.60	13.60	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:15 PM	74.00	1.50	13.90	13.90	0.00	13.90	15.40	13.90	15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:30 PM	34.00	2.00	13.60	14.00	0.40	13.60	15.70	14.00	14.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 7:45 PM	85.00	0.90	13.20	14.20	1.00	13.20	20.40	14.20	14.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:00 PM	167.00	1.20	19.00	15.90	0.00	14.20	19.00	15.30	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:15 PM	192.00	1.60	15.90	16.60	0.70	16.60	20.40	15.90	17.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:30 PM	193.00	2.40	19.10	19.60	0.50	19.60	26.60	19.10	17.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 8:45 PM	272.00	1.00	17.50	22.90	5.40	18.50	22.90	19.30	17.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/7/13 9:00 PM	240.00	1.90	29.80	21.70	0.00													



Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m³)							Naphthalene (µg/m³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	
12/9/13 6:15 AM	258.00	4.80	29.40	17.30	0.00	17.30	29.20	29.40	20.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 6:30 AM	285.00	6.10	20.30	28.00	7.70	17.50	28.00	28.40	20.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 6:45 AM	269.00	5.80	28.50	17.40	0.00	17.40	28.60	28.50	20.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:00 AM	288.00	6.00	20.50	29.70	9.20	17.20	29.70	28.30	20.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:15 AM	274.00	5.10	21.70	30.20	8.50	18.10	30.20	28.90	21.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:30 AM	269.00	6.80	29.40	17.70	0.00	17.70	31.90	29.40	21.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:45 AM	265.00	7.80	29.60	0.00	0.00	0.00	31.20	29.60	21.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 8:00 AM	286.00	4.50	21.00	32.40	11.40	18.40	32.40	31.40	21.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 8:15 AM	262.00	5.10	32.10	0.00	0.00	0.00	36.60	32.10	21.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 9:30 AM	266.00	6.00	34.80	22.00	0.00	22.00	47.20	34.80	25.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 9:45 AM	271.00	6.40	25.60	45.80	20.20	22.00	45.80	35.50	25.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:00 AM	281.00	6.00	26.20	42.40	16.20	19.90	42.40	33.90	26.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:15 AM	268.00	7.50	33.60	18.30	0.00	18.30	42.30	33.60	21.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:30 AM	265.00	5.70	32.10	18.90	0.00	18.90	41.90	32.10	22.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:45 AM	274.00	7.00	20.60	39.60	19.00	17.60	39.60	28.20	20.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 11:00 AM	267.00	6.60	30.50	17.30	0.00	17.30	42.80	30.50	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 11:15 AM	253.00	8.00	29.70	18.10	0.00	18.10	42.80	29.70	21.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 3:30 PM	261.00	7.00	20.50	13.00	0.00	13.00	29.70	20.50	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 3:45 PM	271.00	6.30	18.50	31.00	12.50	13.80	31.00	19.30	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 4:00 PM	269.00	7.40	22.70	15.10	0.00	15.10	32.20	22.70	19.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 4:15 PM	262.00	10.20	24.50	16.60	0.00	16.60	34.80	24.50	20.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 4:30 PM	278.00	7.00	21.20	35.80	14.60	16.70	35.80	25.30	21.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 4:45 PM	283.00	4.60	22.20	35.60	13.40	17.40	35.60	25.50	22.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 5:00 PM	271.00	8.70	22.40	36.10	13.70	17.80	36.10	23.80	22.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 5:15 PM	277.00	6.10	21.70	34.00	12.30	16.80	34.00	23.20	21.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 5:30 PM	276.00	5.50	21.30	30.60	9.30	16.80	30.60	19.20	21.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 5:45 PM	296.00	5.90	20.60	31.70	11.10	16.10	31.70	21.80	20.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 6:00 PM	279.00	8.30	20.80	33.00	12.20	16.70	33.00	22.50	20.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 6:15 PM	274.00	6.50	20.10	32.70	12.60	16.00	32.70	22.60	20.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 6:30 PM	293.00	8.80	19.30	29.30	10.00	15.90	29.30	20.20	19.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 6:45 PM	280.00	4.90	18.90	28.80	9.90	16.10	28.80	19.20	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:00 PM	271.00	5.70	18.50	28.40	9.90	15.90	28.40	19.70	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:15 PM	275.00	7.50	18.20	28.30	10.10	16.60	28.30	18.60	18.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:30 PM	263.00	4.70	16.20	15.10	0.00	15.10	25.70	16.20	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 7:45 PM	257.00	5.10	13.10	12.20	0.00	12.20	24.60	13.10	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 8:00 PM	261.00	7.00	8.10	10.80	2.70	10.80	16.20	8.10	13.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 8:15 PM	286.00	3.90	12.70	17.00	4.30	10.30	17.00	8.90	12.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 8:30 PM	286.00	4.30	12.80	17.30	4.50	10.00	17.30	8.60	12.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 8:45 PM	296.00	5.20	13.00	18.90	5.90	10.80	18.90	9.80	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 9:00 PM	292.00	5.90	14.30	20.80	6.50	12.30	20.80	11.90	14.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 9:15 PM	296.00	5.10	14.70	20.00	5.30	12.60	20.00	11.90	14.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 9:30 PM	297.00	6.50	15.70	19.80	4.10	12.80	19.80	12.10	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 9:45 PM	269.00	5.10	12.10	13.70	1.60	13.70	20.40	12.10	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:00 PM	287.00	4.80	14.60	20.50	5.90	13.30	20.50	12.30	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:15 PM	289.00	4.70	15.60	20.40	4.80	13.00	20.40	14.00	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:30 PM	289.00	3.70	15.20	23.20	8.00	12.90	23.20	13.20	15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 10:45 PM	300.00	3.30	15.60	21.70	6.10	14.90	21.70	13.60	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 11:00 PM	301.00	5.60	14.00	21.90	7.90	12.80	21.90	13.30	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 11:15 PM	311.00	3.70	14.60	20.80	6.20	14.50	20.80	12.50	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 11:30 PM	295.00	4.50	14.90	22.70	7.80	15.40	22.70	16.50	14.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/9/13 11:45 PM	305.00	5.00	15.10	22.40	7.30	14.50	22.40	14.90	15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 12:00 AM	288.00	4.60	15.70	21.60	5.90	15.40	21.60	15.20	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 12:15 AM	277.00	5.90	17.30	22.00	4.70	15.70	22.00	18.20	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 12:30 AM	282.00	3.90	15.50	21.80	6.30	15.90	21.80	15.30	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 12:45 AM	284.00	4.60	16.10	22.10	6.00	17.00	22.10	15.90	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 1:00 AM	278.00	3.60	17.00	22.40	5.40	17.80	22.40	15.80	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 1:15 AM	253.00	4.10	20.20	18.80	0.00	18.80	24.80	20.20	17.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 1:30 AM	251.00	4.70	18.00	18.70	0.70	18.70	24.20	18.00	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 1:45 AM	244.00	2.50	17.60	18.50	0.90	18.50	23.20	17.60	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 2:00 AM	236.00	2.70	21.00	19.60	0.00	19.60	26.20	21.00	18.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 2:15 AM	268.00	3.30	22.70	21.40	0.00	21.40	26.90	22.70	19.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 2:30 AM	280.00	3.10	19.10	26.50	7.40	21.30	26.50	21.50	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 2:45 AM	291.00	4.20	18.90	25.50	6.60	20.30	25.50	19.90	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 3:00 AM	288.00	4.00	18.50	24.10	5.60	19.40	24.10	18.70	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 3:15 AM	293.00	3.30	18.10	25.10	7.00	20.20	25.10	19.50	18.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/10/13 3:30 AM	287.00	2.70	20.20	26.10	5.90	20.60	26.10	20.20									



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4), and Naphthalene (µg/m³) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4). Rows contain hourly data from 12/10/13 12:00 PM to 12/11/13 12:45 PM.



US Army Corps of Engineers

Indiana Harbor and Canal
 Confined Disposal Facility
 Real-Time Air Monitoring Data
 December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m³)							Naphthalene (µg/m³)						
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4
12/11/13 1:00 PM	343.00	4.70	19.10	35.70	16.60	22.20	35.70	27.10	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 1:15 PM	342.00	4.40	20.10	37.80	17.70	19.60	37.80	25.70	20.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 1:30 PM	351.00	3.40	20.70	36.40	15.70	15.60	36.40	24.20	20.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 1:45 PM	313.00	6.00	20.90	34.00	13.10	23.70	34.00	23.10	20.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 2:00 PM	339.00	3.30	18.90	30.90	12.00	15.70	30.90	20.30	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 2:15 PM	296.00	4.60	20.40	30.80	10.40	17.60	30.80	22.50	20.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 2:30 PM	329.00	6.00	19.20	31.40	12.20	19.30	31.40	22.10	19.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 2:45 PM	358.00	5.30	20.00	31.70	11.70	18.10	31.70	23.10	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 3:00 PM	333.00	4.40	20.40	32.20	11.80	16.80	32.20	23.80	20.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 3:15 PM	342.00	4.10	20.20	30.20	10.00	18.80	30.20	22.80	20.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 3:30 PM	315.00	5.70	21.80	34.50	12.70	17.10	34.50	27.40	21.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 3:45 PM	309.00	6.70	27.00	33.60	6.60	16.80	33.60	23.60	27.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 4:00 PM	316.00	6.40	21.00	31.20	10.20	14.60	31.20	22.70	21.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 4:15 PM	316.00	4.70	24.20	30.60	6.40	18.50	30.60	21.90	24.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 4:30 PM	317.00	4.20	22.80	30.90	8.10	17.00	30.90	24.10	22.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 4:45 PM	341.00	4.70	23.90	28.60	4.70	14.60	28.60	21.60	23.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 5:00 PM	332.00	4.80	18.70	26.10	7.40	13.60	26.10	22.80	18.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 5:15 PM	301.00	3.50	23.30	48.00	24.70	17.70	48.00	38.00	23.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 5:30 PM	334.00	4.30	22.70	37.40	14.70	18.00	37.40	24.70	22.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 5:45 PM	298.00	3.00	21.90	32.20	10.30	0.00	32.20	28.00	21.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 6:00 PM	310.00	4.80	21.10	25.10	4.00	17.80	25.10	21.20	21.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 6:15 PM	319.00	5.80	17.00	21.10	4.10	11.70	21.10	12.00	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 6:30 PM	313.00	4.20	18.50	24.10	5.60	12.70	24.10	14.30	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 6:45 PM	316.00	6.10	18.90	24.20	5.30	13.40	24.20	15.50	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 7:00 PM	306.00	5.20	16.60	24.20	7.60	11.40	24.20	10.60	16.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 7:15 PM	320.00	3.50	17.40	21.00	3.60	14.30	21.00	10.30	17.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 7:30 PM	317.00	3.70	19.20	23.80	4.60	13.70	23.80	15.50	19.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 7:45 PM	313.00	5.10	19.40	25.50	6.10	15.70	25.50	17.80	19.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 8:00 PM	317.00	2.70	23.40	26.80	3.40	19.50	26.80	19.10	23.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 8:15 PM	308.00	3.30	21.60	28.30	6.70	18.60	28.30	18.30	21.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 8:30 PM	309.00	2.80	24.40	27.90	3.50	22.50	27.90	18.20	24.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 8:45 PM	317.00	4.70	22.50	25.20	2.70	21.90	25.20	17.30	22.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 9:00 PM	312.00	3.70	24.70	29.40	4.70	24.10	29.40	20.40	24.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 9:15 PM	300.00	4.30	20.20	23.80	3.60	19.20	23.80	15.40	20.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 9:30 PM	305.00	3.60	18.60	23.70	5.10	19.20	23.70	16.50	18.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 9:45 PM	322.00	2.90	18.00	24.70	6.70	17.10	24.70	17.10	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 10:00 PM	306.00	4.10	17.30	25.00	7.70	16.60	25.00	18.70	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 10:15 PM	304.00	5.00	18.10	26.10	8.00	17.90	26.10	16.70	18.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 10:30 PM	303.00	3.90	18.30	24.80	6.50	18.90	24.80	16.00	18.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 10:45 PM	325.00	3.90	18.70	23.10	4.40	19.50	23.10	14.90	18.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 11:00 PM	291.00	3.20	17.40	22.80	5.40	18.30	22.80	15.40	17.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 11:15 PM	285.00	3.20	16.90	21.70	4.80	18.20	21.70	15.30	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 11:30 PM	281.00	3.10	18.70	23.50	4.80	20.50	23.50	15.90	18.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/11/13 11:45 PM	263.00	3.80	15.70	0.00	0.00	0.00	23.40	15.70	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 12:00 AM	282.00	4.30	16.70	23.00	6.30	18.50	23.00	16.10	16.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 12:15 AM	272.00	3.60	15.50	20.90	5.40	16.00	20.90	14.00	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 12:30 AM	273.00	4.20	16.20	20.40	4.20	16.90	20.40	13.70	16.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 12:45 AM	282.00	3.10	16.80	21.50	4.70	18.60	21.50	14.90	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 1:00 AM	276.00	4.00	16.90	23.20	6.30	20.30	23.20	16.20	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 1:15 AM	302.00	3.50	17.00	23.20	6.20	19.00	23.20	16.20	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 1:30 AM	295.00	2.00	16.60	21.00	4.40	18.20	21.00	13.90	16.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 1:45 AM	260.00	2.40	14.10	17.50	3.40	17.50	20.90	14.10	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 2:00 AM	302.00	3.90	15.30	18.50	3.20	15.60	18.50	12.00	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 2:15 AM	270.00	2.70	15.60	20.50	4.90	16.10	20.50	13.50	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 2:30 AM	275.00	2.40	16.40	22.30	5.90	18.00	22.30	16.10	16.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 2:45 AM	278.00	1.60	16.90	22.60	5.70	18.80	22.60	17.40	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 3:00 AM	278.00	2.90	16.00	22.30	6.30	19.10	22.30	16.90	16.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 3:15 AM	262.00	4.10	17.30	18.80	1.50	18.80	22.50	17.30	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 3:30 AM	247.00	3.20	15.30	18.50	3.20	18.50	20.50	15.30	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 3:45 AM	261.00	4.50	13.50	16.50	3.00	16.50	18.60	13.50	14.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 4:00 AM	265.00	4.60	14.60	17.20	2.60	17.20	19.80	14.60	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 4:15 AM	273.00	4.30	15.50	20.20	4.70	18.00	20.20	15.10	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 4:30 AM	245.00	3.70	14.60	16.90	2.30	16.90	20.60	14.60	14.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 4:45 AM	247.00	3.90	16.50	18.20	1.70	18.20	21.20	16.50	16.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 5:00 AM	264.00	4.80	17.10	18.50	1.40	18.50	21.00	17.10	16.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 5:15 AM	235.00	3.80	17.30	19.90	2.60	19.90	22.30	17.30	17.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 5:30 AM	232.00	3.90	19.30	20.00	0.70	20.00	22.10	19.30	17.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/12/13 5:45 AM	240.00	2.90	17.40	19.40	2.00	19.40	21.80	17.40	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with 18 columns: Reading Time (EST), Wind Direction, Wind Speed, and four columns for Particulates (Upwind, Downwind, CDF Contribution, M1-M4) and four columns for Naphthalene (Upwind, Downwind, CDF Contribution, M1-M4). Rows represent hourly data from 12/12/13 1:45 PM to 12/13/13 2:15 PM.



**US Army Corps
of Engineers**

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m ³)								Naphthalene (µg/m ³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4		
12/14/13 3:15 PM	47.00	6.70	13.30	15.60	2.30	13.30	17.20	15.60	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 3:30 PM	44.00	7.30	12.30	15.10	2.80	12.30	16.30	15.10	12.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 3:45 PM	50.00	7.10	12.30	13.70	1.40	12.30	15.60	13.70	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 4:00 PM	49.00	6.50	9.00	11.60	2.60	9.00	14.50	11.60	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 4:15 PM	48.00	7.30	9.60	12.60	3.00	9.60	14.10	12.60	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 4:30 PM	50.00	8.10	9.70	12.40	2.70	9.70	14.10	12.40	11.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 4:45 PM	32.00	6.60	8.00	13.40	5.40	8.00	12.90	13.40	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 5:00 PM	24.00	6.70	7.70	11.50	3.80	7.70	12.30	11.50	10.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 5:15 PM	37.00	6.80	7.60	14.00	6.40	7.60	11.90	14.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 5:30 PM	45.00	6.50	7.90	13.00	5.10	7.90	13.30	13.00	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 5:45 PM	44.00	8.80	7.90	17.10	9.20	7.90	11.80	17.10	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 6:00 PM	40.00	7.00	7.10	12.50	5.40	7.10	9.70	12.50	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 6:15 PM	9.00	5.70	0.00	10.90	0.00	0.00	8.90	10.90	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 6:30 PM	5.00	8.60	8.80	5.80	0.00	8.80	12.20	5.80	7.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 6:45 PM	15.00	8.00	11.30	5.70	0.00	11.30	10.40	5.70	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 7:00 PM	2.00	9.70	9.20	6.40	0.00	9.20	8.00	6.40	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 7:15 PM	13.00	5.90	9.10	6.90	0.00	9.10	8.10	6.90	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 7:30 PM	4.00	7.80	8.10	6.90	0.00	8.10	13.10	6.90	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 7:45 PM	15.00	6.80	9.70	6.40	0.00	9.70	7.40	6.40	8.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 8:00 PM	358.00	8.00	8.30	9.60	1.30	9.30	9.60	5.70	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 8:15 PM	4.00	8.30	5.70	5.70	0.00	5.70	8.40	5.70	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 8:30 PM	354.00	5.50	8.60	7.20	0.00	0.00	7.20	5.50	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 8:45 PM	3.00	8.50	4.90	6.00	1.10	4.90	7.20	6.00	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 9:00 PM	0.00	3.80	5.30	6.80	1.50	5.30	7.60	6.80	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 9:15 PM	0.00	4.50	5.10	6.00	0.90	5.10	7.20	6.00	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 9:30 PM	8.00	6.20	5.20	5.80	0.60	5.20	7.20	5.80	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 9:45 PM	325.00	4.60	8.20	8.00	0.00	5.20	8.00	12.60	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 10:00 PM	334.00	5.50	11.60	16.60	5.00	11.80	16.60	17.20	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 10:15 PM	322.00	3.70	12.70	15.80	3.10	0.00	15.80	16.60	12.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 10:30 PM	321.00	3.80	12.30	16.00	3.70	11.20	16.00	17.40	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 10:45 PM	327.00	2.80	12.90	15.20	2.30	11.60	15.20	16.40	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 11:00 PM	337.00	4.00	13.50	15.40	1.90	11.30	15.40	16.00	13.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 11:15 PM	335.00	4.50	14.60	17.40	2.80	13.00	17.40	19.30	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 11:30 PM	311.00	3.90	17.10	18.60	1.50	15.30	18.60	19.90	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/14/13 11:45 PM	312.00	4.70	16.10	18.30	2.20	13.50	18.30	17.40	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 12:00 AM	313.00	4.50	19.20	21.60	2.40	15.80	21.60	20.90	19.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 12:15 AM	292.00	3.30	16.40	16.70	0.30	13.60	16.70	17.20	16.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 12:30 AM	301.00	2.70	17.00	17.90	0.90	15.00	17.90	20.30	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 12:45 AM	291.00	3.70	17.70	20.10	2.40	16.60	20.10	21.90	17.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 1:00 AM	292.00	3.50	19.50	20.50	1.00	17.40	20.50	21.30	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 1:15 AM	278.00	4.00	19.30	20.90	1.60	17.70	20.90	22.30	19.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 1:30 AM	276.00	3.10	17.40	18.80	1.40	17.80	18.80	19.70	17.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 1:45 AM	285.00	4.00	15.30	19.70	4.40	16.20	19.70	20.00	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 2:00 AM	263.00	3.40	17.50	14.80	0.00	14.80	17.30	17.50	13.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 2:15 AM	251.00	5.20	19.90	0.00	0.00	0.00	19.00	19.90	13.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 2:30 AM	252.00	3.60	21.70	16.70	0.00	16.70	19.90	21.70	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 2:45 AM	257.00	3.50	21.70	16.70	0.00	16.70	20.10	21.70	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 3:00 AM	230.00	3.60	21.00	16.40	0.00	16.40	19.80	21.00	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 3:15 AM	252.00	5.20	23.70	18.40	0.00	18.40	22.00	23.70	16.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 3:30 AM	256.00	4.50	23.40	18.80	0.00	18.80	22.00	23.40	17.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 3:45 AM	263.00	6.20	22.40	18.10	0.00	18.10	20.80	22.40	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 4:00 AM	262.00	5.50	21.70	17.00	0.00	17.00	19.70	21.70	16.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 4:15 AM	265.00	8.50	19.50	15.90	0.00	15.90	17.80	19.50	16.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 4:30 AM	272.00	8.00	15.40	17.90	2.50	0.00	17.90	18.40	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 4:45 AM	257.00	6.40	18.10	15.40	0.00	15.40	17.50	18.10	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 5:00 AM	272.00	4.90	15.90	17.70	1.80	15.80	17.70	18.50	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 5:15 AM	285.00	5.50	15.10	17.90	2.80	15.80	17.90	18.90	15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 5:30 AM	278.00	7.00	14.50	19.10	4.60	16.20	19.10	19.70	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 5:45 AM	295.00	3.90	15.70	20.30	4.60	0.00	20.30	21.30	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 6:00 AM	275.00	7.60	15.60	22.30	6.70	19.20	22.30	23.90	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 6:15 AM	266.00	6.00	23.00	19.50	0.00	19.50	22.00	23.00	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 6:30 AM	271.00	6.10	15.30	21.60	6.30	18.40	21.60	22.20	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 6:45 AM	280.00	6.10	15.60	22.20	6.60	18.80	22.20	22.80	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 7:00 AM	269.00	4.20	22.30	18.30	0.00	18.30	22.50	22.30	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 7:15 AM	270.00	6.60	15.20	22.80	7.60	17.60	22.80	22.20	15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 7:30 AM	303.00	5.90	16.30	28.20	11.90	17.50	28.20	21.80	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 7:45 AM	306.00	5.40	16.00	26.90	10.90	16.20	26.90	20.70	16.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 8:00 AM	304.00	6.00	15.50	27.50	12.00	16.40	27.50	20.70	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00		
12/15/13 8:15 AM	295.00	5.30	15.20	25.60	10.40	16.00	25.60	17.70	15.20	0.00	0.00	0.00	0					



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with columns: Reading Time (EST), Wind Direction (Degrees Clockwise from North), Wind Speed (mph), Particulates (µg/m³) [Upwind, Downwind, CDF Contribution, M1, M2, M3, M4], and Naphthalene (µg/m³) [Upwind, Downwind, CDF Contribution, M1, M2, M3, M4]. Rows represent hourly readings from 12/16/13 4:45 PM to 12/17/13 5:15 PM.



**US Army Corps
of Engineers**

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates ($\mu\text{g}/\text{m}^3$)							Naphthalene ($\mu\text{g}/\text{m}^3$)						
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4
12/17/13 5:30 PM	254.00	3.90	5.10	6.10	1.00	6.10	8.40	5.10	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 5:45 PM	263.00	4.00	6.50	5.50	0.00	5.50	10.00	6.50	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 6:00 PM	257.00	3.00	6.20	6.00	0.00	6.00	11.00	6.20	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 6:15 PM	268.00	5.20	6.50	5.60	0.00	5.60	9.90	6.50	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 6:30 PM	280.00	5.40	9.70	7.90	0.00	5.30	7.90	4.20	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 6:45 PM	274.00	4.10	8.70	6.40	0.00	6.40	6.40	3.70	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 7:00 PM	299.00	4.30	8.30	5.80	0.00	4.10	5.80	2.70	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 7:15 PM	280.00	7.70	7.30	4.60	0.00	3.30	4.60	1.60	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 7:30 PM	290.00	4.20	7.00	4.40	0.00	3.00	4.40	1.50	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 7:45 PM	279.00	3.50	7.50	4.30	0.00	3.50	4.30	1.50	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 8:00 PM	273.00	6.90	7.50	5.10	0.00	3.10	5.10	0.80	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 8:15 PM	291.00	5.00	6.70	4.60	0.00	2.80	4.60	0.80	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 8:30 PM	290.00	3.40	6.40	4.50	0.00	2.90	4.50	0.70	6.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 8:45 PM	275.00	4.50	6.60	4.40	0.00	3.30	4.40	0.60	6.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 9:00 PM	292.00	4.30	6.60	5.10	0.00	2.80	5.10	1.20	6.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 9:15 PM	290.00	6.10	7.20	4.80	0.00	3.20	4.80	1.20	7.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 9:30 PM	271.00	3.40	6.70	5.50	0.00	3.40	5.50	1.50	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 9:45 PM	271.00	4.80	6.90	5.80	0.00	3.40	5.80	1.90	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 10:00 PM	263.00	5.10	2.10	3.90	1.80	3.90	6.30	2.10	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 10:15 PM	275.00	3.70	7.30	6.00	0.00	4.00	6.00	1.90	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 10:30 PM	282.00	4.80	7.40	6.00	0.00	3.90	6.00	2.30	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 10:45 PM	284.00	4.00	7.30	5.80	0.00	3.90	5.80	3.40	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 11:00 PM	289.00	5.00	6.90	5.40	0.00	3.80	5.40	1.70	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 11:15 PM	294.00	4.90	7.20	5.70	0.00	3.90	5.70	1.80	7.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 11:30 PM	297.00	5.00	6.60	5.60	0.00	3.70	5.60	1.70	6.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/17/13 11:45 PM	292.00	5.10	6.70	5.70	0.00	3.60	5.70	2.00	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 12:00 AM	277.00	6.40	7.10	5.60	0.00	4.50	5.60	1.80	7.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 12:15 AM	300.00	6.00	6.90	5.50	0.00	4.00	5.50	1.80	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 12:30 AM	284.00	5.00	8.90	6.00	0.00	5.20	6.00	2.40	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 12:45 AM	276.00	3.60	9.00	6.10	0.00	5.80	6.10	2.20	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 1:00 AM	295.00	5.70	7.60	6.20	0.00	4.30	6.20	2.20	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 1:15 AM	295.00	6.60	7.90	6.10	0.00	4.40	6.10	2.10	7.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 1:30 AM	271.00	5.80	7.70	6.70	0.00	4.60	6.70	2.60	7.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 1:45 AM	292.00	4.40	8.40	7.30	0.00	5.00	7.30	3.30	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 2:00 AM	276.00	3.00	8.40	7.30	0.00	5.30	7.30	3.30	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 2:15 AM	297.00	4.90	8.70	7.90	0.00	5.50	7.90	3.80	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 2:30 AM	294.00	6.40	8.50	7.90	0.00	6.10	7.90	3.90	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 2:45 AM	281.00	4.10	8.80	7.70	0.00	6.20	7.70	3.90	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 3:00 AM	288.00	5.30	9.00	7.80	0.00	6.80	7.80	3.80	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 3:15 AM	301.00	5.80	9.00	8.90	0.00	6.90	8.90	3.70	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 3:30 AM	285.00	4.20	9.40	7.60	0.00	7.00	7.60	3.70	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 3:45 AM	281.00	4.90	8.90	7.40	0.00	6.90	7.40	3.90	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 4:00 AM	289.00	3.90	8.30	7.50	0.00	6.50	7.50	3.90	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 4:15 AM	286.00	2.70	8.30	7.30	0.00	6.60	7.30	3.90	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 4:30 AM	282.00	3.40	8.70	8.30	0.00	6.70	8.30	5.40	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 4:45 AM	283.00	4.10	8.70	10.00	1.30	7.20	10.00	7.00	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 5:00 AM	277.00	5.20	8.50	8.30	0.00	7.00	8.30	5.00	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 5:15 AM	286.00	4.80	8.60	9.70	1.10	7.10	9.70	6.50	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 5:30 AM	273.00	4.70	7.90	7.70	0.00	7.80	7.70	4.10	7.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 5:45 AM	289.00	4.20	8.40	8.00	0.00	7.00	8.00	5.60	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 6:00 AM	278.00	3.60	9.50	8.60	0.00	8.20	8.60	5.60	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 6:15 AM	275.00	3.00	8.30	9.30	1.00	7.80	9.30	5.70	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 6:30 AM	266.00	3.70	6.00	7.80	1.80	7.80	9.20	6.00	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 6:45 AM	286.00	3.10	8.10	9.80	1.70	8.70	9.80	5.90	8.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:00 AM	267.00	3.20	5.60	9.80	4.20	9.80	9.20	5.60	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:15 AM	239.00	1.80	6.40	8.50	2.10	8.50	9.10	6.40	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:30 AM	238.00	1.90	6.50	9.20	2.70	9.20	9.40	6.50	7.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:45 AM	242.00	2.10	6.90	8.70	1.80	8.70	9.70	6.90	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:00 AM	219.00	1.30	7.00	8.90	1.90	8.90	9.80	7.00	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:15 AM	237.00	3.10	7.10	8.90	1.80	8.90	9.50	7.10	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:30 AM	0.00	0.00	0.00	0.00	0.00	8.70	9.30	7.20	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:45 AM	218.00	1.60	7.10	9.40	2.30	9.40	9.90	7.10	6.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:00 AM	260.00	3.30	7.90	9.70	1.80	9.70	10.30	7.90	6.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:15 AM	234.00	3.20	8.30	11.40	3.10	11.40	10.00	8.30	6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:30 AM	256.00	3.70	7.40	9.60	2.20	9.60	9.80	7.40	6.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:45 AM	269.00	3.80	7.50	9.90	2.40	9.90	9.80	7.50	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:00 AM	246.00	3.10	7.80	9.80	2.00	9.80	9.60	7.80	6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:15 AM	248.00	4.10	7.70	11.20	3.50	11.20	9.50	7.70	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:30 AM	250.00	3.70	8.00	9.50	1.50	9.50	9.90	8.00	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:45 AM	242.00	2.60	8.40	9.20	0.80	9.20	9.30	8.40	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 11:00 AM	238.00	3.60														



Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m³)								Naphthalene (µg/m³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4		
12/18/13 6:15 PM	217.00	9.60	4.20	7.10	2.90	7.10	8.70	4.20	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 6:30 PM	190.00	8.70	3.90	6.60	2.70	6.60	8.20	3.90	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 6:45 PM	193.00	7.90	4.20	6.80	2.60	6.80	8.40	4.20	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:00 PM	214.00	6.40	4.60	6.50	1.90	6.50	10.30	4.60	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:15 PM	222.00	7.00	3.20	6.50	3.30	6.50	8.80	3.20	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:30 PM	203.00	7.60	3.00	6.40	3.40	6.40	9.50	3.00	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 7:45 PM	211.00	6.50	4.70	6.70	2.00	6.70	10.20	4.70	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:00 PM	232.00	9.00	5.90	7.40	1.50	7.40	10.10	5.90	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:15 PM	209.00	5.00	6.80	8.50	1.70	8.50	10.90	6.80	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:30 PM	213.00	7.50	6.60	8.40	1.80	8.40	10.60	6.60	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 8:45 PM	209.00	4.50	7.20	8.50	1.30	8.50	10.80	7.20	7.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:00 PM	205.00	6.10	7.90	8.30	0.40	8.30	11.30	7.90	7.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:15 PM	220.00	4.90	7.90	8.70	0.80	8.70	9.70	7.90	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:30 PM	205.00	7.80	8.30	9.00	0.70	9.00	9.90	8.30	7.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 9:45 PM	211.00	5.80	8.30	8.90	0.60	8.90	10.00	8.30	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:00 PM	222.00	5.70	8.50	8.80	0.30	8.80	9.80	8.50	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:15 PM	224.00	6.60	8.00	8.40	0.40	8.40	9.70	8.00	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:30 PM	234.00	5.10	8.60	8.90	0.30	8.90	9.90	8.60	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 10:45 PM	233.00	4.60	8.30	8.80	0.50	8.80	10.00	8.30	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 11:00 PM	232.00	5.80	10.50	9.60	0.00	9.60	10.40	10.50	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 11:15 PM	235.00	7.70	11.60	10.00	0.00	10.00	11.30	11.60	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 11:30 PM	216.00	5.20	12.90	10.30	0.00	10.30	11.30	12.90	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/18/13 11:45 AM	235.00	6.80	14.30	11.50	0.00	11.50	12.00	14.30	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 12:00 AM	228.00	5.80	16.70	12.10	0.00	12.10	12.00	16.70	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 12:15 AM	200.00	5.10	20.70	14.40	0.00	14.40	16.80	20.70	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 12:30 AM	216.00	5.10	21.60	15.30	0.00	15.30	17.40	21.60	12.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 12:45 AM	221.00	5.10	21.20	15.10	0.00	15.10	16.70	21.20	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 1:00 AM	223.00	3.70	20.60	14.80	0.00	14.80	18.70	20.60	12.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 1:15 AM	213.00	3.70	21.50	15.60	0.00	15.60	19.90	21.50	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 1:30 AM	206.00	5.90	19.60	14.30	0.00	14.30	18.90	19.60	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 1:45 AM	242.00	6.00	18.60	14.10	0.00	14.10	16.80	18.60	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 2:00 AM	233.00	5.70	20.00	13.90	0.00	13.90	16.70	20.00	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 2:15 AM	232.00	5.90	19.80	14.40	0.00	14.40	16.30	19.80	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 2:30 AM	244.00	5.40	19.20	14.40	0.00	14.40	16.50	19.20	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 2:45 AM	240.00	4.70	18.50	13.60	0.00	13.60	16.70	18.50	10.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 3:00 AM	243.00	5.40	18.60	14.20	0.00	14.20	16.80	18.60	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 3:15 AM	233.00	5.70	18.80	14.00	0.00	14.00	16.60	18.80	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 3:30 AM	227.00	4.50	19.30	14.40	0.00	14.40	17.60	19.30	11.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 3:45 AM	209.00	5.70	19.00	14.40	0.00	14.40	17.20	19.00	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 4:00 AM	216.00	4.60	19.40	14.70	0.00	14.70	17.50	19.40	10.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 4:15 AM	205.00	5.10	19.10	14.80	0.00	14.80	18.80	19.10	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 4:30 AM	206.00	6.10	22.10	16.40	0.00	16.40	19.50	22.10	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 4:45 AM	202.00	4.00	22.60	16.50	0.00	16.50	21.10	22.60	13.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 5:00 AM	201.00	4.90	24.40	18.00	0.00	18.00	25.20	24.40	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 5:15 AM	226.00	4.40	25.70	19.00	0.00	19.00	24.40	25.70	16.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 5:30 AM	207.00	3.80	25.60	19.30	0.00	19.30	23.60	25.60	16.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 5:45 AM	202.00	4.40	26.80	19.50	0.00	19.50	23.80	26.80	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 6:00 AM	207.00	4.00	28.00	19.60	0.00	19.60	23.80	28.00	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 6:15 AM	213.00	3.50	26.50	20.20	0.00	20.20	24.80	26.50	13.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 6:30 AM	196.00	3.00	27.60	20.30	0.00	20.30	26.50	27.60	13.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 6:45 AM	206.00	3.20	27.50	20.40	0.00	20.40	26.90	27.50	14.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 7:00 AM	201.00	4.20	27.80	20.80	0.00	20.80	26.80	27.80	15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 7:15 AM	214.00	3.20	28.50	21.90	0.00	21.90	27.60	28.50	16.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 7:30 AM	225.00	1.70	29.10	22.70	0.00	22.70	27.40	29.10	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 7:45 AM	226.00	2.00	29.20	22.40	0.00	22.40	26.90	29.20	17.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:00 AM	215.00	1.90	29.40	22.20	0.00	22.20	27.70	29.40	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:15 AM	230.00	3.60	29.90	22.70	0.00	22.70	27.40	29.90	14.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:30 AM	217.00	2.20	29.90	23.00	0.00	23.00	28.10	29.90	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:45 AM	204.00	2.40	29.80	23.70	0.00	23.70	32.00	29.80	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:00 AM	208.00	2.90	29.60	23.90	0.00	23.90	33.90	29.60	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:15 AM	212.00	2.90	30.20	23.10	0.00	23.10	34.60	30.20	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:30 AM	215.00	3.00	29.70	23.00	0.00	23.00	33.50	29.70	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:45 AM	213.00	3.90	28.20															



Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m³)							Naphthalene (µg/m³)						
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4
12/19/13 7:00 PM	309.00	1.30	19.50	31.50	12.00	32.50	31.50	35.90	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 7:15 PM	340.00	1.20	20.50	31.60	11.10	32.50	31.60	36.20	20.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 7:30 PM	255.00	0.60	36.20	34.60	0.00	34.60	31.30	36.20	21.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 7:45 PM	349.00	1.10	21.50	31.30	9.80	34.60	31.30	35.30	21.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:00 PM	99.00	0.60	32.80	21.10	0.00	34.80	32.80	36.40	21.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:15 PM	163.00	1.00	34.40	18.90	0.00	35.50	34.40	34.90	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:30 PM	134.00	1.30	33.30	18.70	0.00	38.10	33.30	36.90	18.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 8:45 PM	154.00	1.40	31.90	20.10	0.00	37.30	31.90	36.40	20.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:00 PM	137.00	1.80	31.60	17.80	0.00	51.00	31.60	34.10	17.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:15 PM	127.00	2.20	33.30	19.10	0.00	40.10	33.30	36.30	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:30 PM	156.00	1.90	33.90	18.50	0.00	41.70	33.90	39.90	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 9:45 PM	137.00	1.50	34.40	18.90	0.00	47.10	34.40	40.10	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 10:00 PM	135.00	1.60	37.60	19.10	0.00	35.60	37.60	41.10	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 10:15 PM	138.00	1.90	40.10	19.00	0.00	33.00	40.10	46.80	19.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 10:30 PM	139.00	1.60	40.60	20.30	0.00	34.80	40.60	48.60	20.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 10:45 PM	134.00	1.90	44.30	21.80	0.00	37.40	44.30	49.70	21.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 11:00 PM	142.00	3.00	49.80	24.70	0.00	39.20	49.80	53.60	24.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 11:15 PM	136.00	2.60	47.90	25.80	0.00	41.40	47.90	58.30	25.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 11:30 PM	123.00	2.10	50.30	25.80	0.00	41.00	50.30	55.90	25.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/19/13 11:45 PM	132.00	2.60	62.10	33.00	0.00	50.60	62.10	56.90	33.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 12:00 AM	132.00	2.60	51.80	34.50	0.00	52.10	51.80	59.10	34.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 12:15 AM	133.00	2.40	53.60	33.40	0.00	50.90	53.60	63.50	33.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 12:30 AM	124.00	1.90	54.50	30.80	0.00	51.30	54.50	64.10	30.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 12:45 AM	111.00	3.30	50.10	30.90	0.00	54.40	50.10	64.20	30.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 1:00 AM	41.00	1.40	54.40	65.40	11.00	54.40	48.60	65.40	36.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 1:15 AM	158.00	1.10	48.70	34.70	0.00	59.30	48.70	65.30	34.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 1:30 AM	147.00	1.10	49.60	28.10	0.00	51.60	49.60	64.80	28.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 1:45 AM	224.00	0.20	64.90	48.40	0.00	48.40	49.60	64.90	28.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 2:00 AM	345.00	0.50	26.50	48.90	22.40	46.70	48.90	67.50	26.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 2:15 AM	153.00	1.60	48.80	29.90	0.00	40.20	48.80	56.10	29.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 2:30 AM	164.00	1.60	83.90	28.50	0.00	39.80	83.90	161.70	28.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 2:45 AM	179.00	1.10	83.90	25.60	0.00	43.10	83.90	278.90	25.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 3:00 AM	202.00	1.40	173.50	40.50	0.00	40.50	37.60	173.50	24.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 3:15 AM	184.00	2.10	45.80	42.80	0.00	42.80	38.30	45.80	22.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 3:30 AM	191.00	1.50	43.40	42.80	0.00	42.80	37.40	43.40	22.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 3:45 AM	207.00	2.30	53.30	38.30	0.00	38.30	36.90	53.30	22.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 4:00 AM	194.00	1.50	53.30	38.30	0.00	38.30	36.90	53.30	21.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 4:15 AM	241.00	1.60	53.30	38.30	0.00	38.30	38.10	53.30	21.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 4:30 AM	249.00	1.20	70.30	36.20	0.00	36.20	35.10	70.30	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 4:45 AM	0.00	1.70	32.70	38.50	5.80	32.70	33.10	38.50	19.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 5:00 AM	333.00	1.20	17.90	32.10	14.20	32.70	32.10	38.10	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 5:15 AM	2.00	3.20	34.70	33.30	0.00	34.70	28.60	33.30	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 5:30 AM	0.00	2.00	41.10	32.30	0.00	41.10	27.30	32.30	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 5:45 AM	358.00	2.50	17.90	27.50	9.60	41.10	27.50	32.30	17.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 6:00 AM	5.00	2.80	41.10	31.70	0.00	41.10	29.50	31.70	17.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 6:15 AM	8.00	4.50	34.90	31.70	0.00	34.90	29.00	31.70	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 6:30 AM	4.00	4.60	66.40	31.70	0.00	66.40	77.80	31.70	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 6:45 AM	352.00	4.50	21.90	280.90	259.00	38.70	280.90	154.40	21.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 7:00 AM	348.00	4.40	14.60	64.10	49.50	38.70	64.10	43.00	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 7:15 AM	5.00	6.30	25.70	43.00	17.30	25.70	64.10	43.00	13.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 7:30 AM	7.00	6.00	23.90	43.00	19.10	23.90	62.40	43.00	13.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 7:45 AM	1.00	6.30	20.70	37.30	16.60	20.70	54.50	37.30	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 8:00 AM	7.00	6.80	10.30	15.00	4.70	10.30	14.10	15.00	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 8:15 AM	2.00	6.60	8.80	6.50	0.00	8.80	6.50	6.50	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 8:30 AM	358.00	7.80	9.00	6.50	0.00	9.50	6.50	5.90	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 8:45 AM	6.00	6.90	14.30	6.20	0.00	14.30	7.20	6.20	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 9:00 AM	42.00	5.80	13.80	6.30	0.00	13.80	7.20	6.30	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 9:15 AM	12.00	4.80	18.60	9.20	0.00	18.60	11.80	9.20	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 9:30 AM	15.00	7.20	19.80	15.60	0.00	19.80	18.20	15.60	15.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 9:45 AM	26.00	7.10	21.70	10.80	0.00	21.70	15.10	10.80	12.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 10:00 AM	21.00	6.40	17.10	9.50	0.00	17.10	12.90	9.50	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 10:15 AM	23.00	6.70	15.70	8.80	0.00	15.70	11.40	8.80	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 10:30 AM	27.00	6.80	29.20	5.30	0.00	29.20	13.40	5.30	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 10:45 AM	30.00	8.10	19.50	4.80	0.00	19.50	11.90	4.80	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 11:00 AM	28.00	7.30	20.30	4.70	0.00	20.30	9.40	4.70	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 11:15 AM	21.00	4.90	14.90	4.60	0.00	14.90	9.20	4.60	5.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 11:30 AM	39.00	4.90	11.10	7.90	0.00	11.10	6.30	7.90	4.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 11:45 AM	24.00	6.70	8.90	4.00	0.00	8.90	4.10	4.00	4.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/20/13 12:00 PM	40.00	5.10	9.10	6.10	0.00											



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with columns: Reading Time (EST), Wind Direction (Degrees Clockwise from North), Wind Speed (mph), Particulates (µg/m³) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4), and Naphthalene (µg/m³) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4). Rows represent hourly data from 12/20/13 7:45 PM to 12/21/13 8:15 PM.



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³), and Naphthalene (µg/m³). The table contains 100 rows of monitoring data.



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4), and Naphthalene (µg/m³) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4). Rows represent hourly data from 12/22/13 9:15 PM to 12/23/13 9:45 PM.



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (ug/m ³)								Naphthalene (ug/m ³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4		
12/23/13 10:00 PM	287.00	5.60	10.40	10.20	0.00	14.70	10.20	7.80	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/23/13 10:15 PM	278.00	6.20	10.40	10.40	0.00	14.70	10.40	7.80	10.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/23/13 10:30 PM	291.00	7.10	9.90	10.30	0.40	13.80	10.30	7.60	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/23/13 10:45 PM	282.00	5.90	9.70	10.50	0.80	13.70	10.50	7.70	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/23/13 11:00 PM	280.00	4.60	9.60	10.50	0.90	14.10	10.50	7.40	9.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/23/13 11:15 PM	282.00	6.20	9.70	10.50	0.80	13.50	10.50	8.00	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/23/13 11:30 PM	275.00	7.30	9.70	10.90	1.20	14.00	10.90	8.50	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/23/13 11:45 PM	286.00	6.90	9.60	10.60	1.00	13.80	10.60	8.20	9.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:00 AM	286.00	3.70	9.70	11.00	1.30	13.90	11.00	7.90	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:15 AM	288.00	5.10	9.80	10.40	0.60	14.10	10.40	7.90	9.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:30 AM	301.00	3.90	9.40	10.40	1.00	15.20	10.40	7.60	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:45 AM	283.00	5.90	9.20	10.70	1.50	0.00	10.70	8.40	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:00 AM	300.00	5.50	9.30	10.30	1.00	13.60	10.30	7.90	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:15 AM	279.00	4.70	9.40	10.40	1.00	13.60	10.40	8.00	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:30 AM	259.00	4.70	7.90	0.00	0.00	0.00	10.50	7.90	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:45 AM	248.00	4.30	7.80	13.60	5.80	13.60	10.30	7.80	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 2:00 AM	272.00	5.40	9.10	10.20	1.10	14.00	10.20	7.80	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 2:15 AM	270.00	5.50	9.20	10.20	1.00	13.30	10.20	8.10	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 2:30 AM	249.00	4.80	7.90	13.40	5.50	13.40	10.40	7.90	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 2:45 AM	272.00	4.10	9.00	10.60	1.60	0.00	10.60	8.10	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 3:00 AM	254.00	3.20	8.40	13.30	4.90	13.30	10.90	8.40	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 3:15 AM	288.00	6.10	9.40	11.00	1.60	13.30	11.00	9.00	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 3:30 AM	282.00	6.10	9.60	11.00	1.40	13.70	11.00	8.70	9.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 3:45 AM	269.00	6.10	8.40	13.70	5.30	13.70	11.20	8.40	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 4:00 AM	268.00	4.20	8.60	13.60	5.00	13.60	11.40	8.60	9.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 4:15 AM	254.00	4.50	8.90	13.60	4.70	13.60	11.00	8.90	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 4:30 AM	271.00	4.80	9.10	11.00	1.90	13.90	11.00	9.00	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 4:45 AM	274.00	5.80	8.60	11.00	2.40	13.70	11.00	9.50	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 5:00 AM	285.00	6.90	9.10	11.70	2.60	14.20	11.70	9.50	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 5:15 AM	262.00	4.50	10.10	15.10	5.00	15.10	12.10	10.10	8.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 5:30 AM	261.00	4.80	10.00	15.00	5.00	15.00	12.60	10.00	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 5:45 AM	282.00	7.50	9.50	12.10	2.60	14.60	12.10	10.60	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 6:00 AM	266.00	5.10	11.00	14.60	3.60	14.60	12.30	11.00	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 6:15 AM	258.00	4.30	11.40	14.90	3.50	14.90	12.60	11.40	10.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 6:30 AM	265.00	5.10	11.30	14.60	3.30	14.60	12.80	11.30	10.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 6:45 AM	280.00	4.60	10.80	14.10	3.30	14.50	14.10	12.10	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 7:00 AM	273.00	5.30	11.00	13.90	2.90	14.60	13.90	12.60	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 7:15 AM	279.00	2.50	11.10	14.90	3.80	15.00	14.90	13.00	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 7:30 AM	277.00	3.80	11.00	14.60	3.60	15.90	14.60	12.90	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 7:45 AM	302.00	5.50	10.70	14.70	4.00	15.30	14.70	13.90	10.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 8:00 AM	291.00	4.30	10.60	15.40	4.80	16.00	15.40	13.40	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 8:15 AM	278.00	4.00	10.90	14.70	3.80	15.40	14.70	12.90	10.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 8:30 AM	262.00	4.30	13.80	15.10	1.30	15.10	15.10	13.80	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 8:45 AM	266.00	5.20	13.40	15.30	1.90	15.30	14.50	13.40	10.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 9:00 AM	260.00	4.70	13.30	14.90	1.60	14.90	14.90	13.30	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 9:15 AM	262.00	4.90	12.40	14.90	2.50	14.90	14.50	12.40	11.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 9:30 AM	241.00	4.10	12.80	14.10	1.30	14.10	14.30	12.80	10.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 9:45 AM	267.00	4.30	12.30	14.50	2.20	14.50	14.10	12.30	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 10:00 AM	259.00	4.10	11.30	0.00	0.00	0.00	14.30	11.30	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 10:15 AM	261.00	4.70	11.40	14.00	2.60	14.00	14.40	11.40	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 10:30 AM	261.00	4.70	10.90	13.80	2.90	13.80	13.80	10.90	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 10:45 AM	263.00	3.30	11.00	14.30	3.30	14.30	13.30	11.00	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 11:00 AM	253.00	4.40	11.90	13.60	1.70	13.60	14.10	11.90	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 11:15 AM	265.00	4.90	11.10	13.50	2.40	13.50	13.10	11.10	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 11:30 AM	255.00	4.60	11.60	14.20	2.60	14.20	13.20	11.60	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 11:45 AM	260.00	5.20	12.40	13.20	0.80	13.20	13.10	12.40	11.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:00 PM	256.00	4.90	12.10	13.30	1.20	13.30	13.10	12.10	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:15 PM	208.00	3.10	11.70	13.70	2.00	13.70	12.30	11.70	14.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:30 PM	225.00	3.60	11.70	12.50	0.80	12.50	12.40	11.70	12.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 12:45 PM	233.00	2.70	11.90	12.60	0.70	12.60	12.10	11.90	13.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:00 PM	227.00	2.40	12.30	13.30	1.00	13.30	12.70	12.30	13.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:15 PM	214.00	3.60	13.50	12.00	0.00	12.00	12.10	13.50	13.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:30 PM	230.00	3.50	14.60	12.90	0.00	12.90	12.30	14.60	16.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 1:45 PM	235.00	3.60	15.30	13.60	0.00	13.60	13.00	15.30	14.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 2:00 PM	263.00	3.40	15.80	13.70	0.00	13.70	12.50	15.80	15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/24/13 2:15 PM	218.00	4.1																



US Army Corps of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Table with columns: Reading Time (EST), Wind Direction, Wind Speed, and particulates (Upwind, Downwind, CDF Contribution, M1-M4) and Naphthalene (Upwind, Downwind, CDF Contribution, M1-M4).



US Army Corps
of Engineers

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates ($\mu\text{g}/\text{m}^3$)								Naphthalene ($\mu\text{g}/\text{m}^3$)					
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4
12/27/13 12:15 AM	243.00	3.80	14.10	12.00	0.00	12.00	15.70	14.10	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 12:30 AM	242.00	4.20	12.00	11.70	0.00	11.70	13.10	12.00	12.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 12:45 AM	237.00	4.40	12.50	11.90	0.00	11.90	12.90	12.50	12.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:00 AM	250.00	4.80	12.90	12.20	0.00	12.20	12.90	12.90	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:15 AM	245.00	5.60	13.00	12.50	0.00	12.50	13.60	13.00	13.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:30 AM	248.00	4.60	13.10	12.40	0.00	12.40	13.50	13.10	13.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:45 AM	253.00	4.60	14.10	12.90	0.00	12.90	14.00	14.10	13.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:00 AM	248.00	3.50	14.10	12.80	0.00	12.80	14.50	14.10	13.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:15 AM	243.00	4.10	14.50	13.00	0.00	13.00	14.80	14.50	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:30 AM	266.00	5.40	14.60	13.10	0.00	13.10	14.60	14.60	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:45 AM	263.00	4.60	15.70	13.60	0.00	13.60	15.10	15.70	13.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:00 AM	263.00	4.20	15.70	14.00	0.00	14.00	16.00	15.70	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:15 AM	233.00	2.90	15.90	14.40	0.00	14.40	16.20	15.90	13.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:30 AM	242.00	2.70	15.50	14.50	0.00	14.50	16.60	15.50	13.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:45 AM	238.00	1.70	16.30	15.00	0.00	15.00	16.80	16.30	14.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:00 AM	243.00	2.10	16.80	15.30	0.00	15.30	16.70	16.80	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:15 AM	219.00	2.00	16.70	15.00	0.00	15.00	17.10	16.70	14.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:30 AM	220.00	2.20	17.20	14.70	0.00	14.70	17.40	17.20	14.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:45 AM	271.00	2.20	14.20	17.30	3.10	15.10	17.30	17.00	14.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 5:00 AM	275.00	1.90	14.20	17.20	3.00	15.00	17.20	17.10	14.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 5:15 AM	257.00	1.50	17.80	15.70	0.00	15.70	17.80	17.80	14.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 5:30 AM	251.00	1.30	18.60	16.40	0.00	16.40	18.70	18.60	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 5:45 AM	233.00	1.70	20.10	16.50	0.00	16.50	20.10	20.10	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 6:00 AM	223.00	1.50	20.80	17.40	0.00	17.40	20.20	20.80	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 6:15 AM	213.00	2.10	22.00	18.00	0.00	18.00	20.60	22.00	16.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 6:30 AM	208.00	1.90	21.50	17.70	0.00	17.70	21.40	21.50	15.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 6:45 AM	226.00	1.40	22.20	19.60	0.00	19.60	21.70	22.20	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 7:00 AM	223.00	1.30	21.70	18.40	0.00	18.40	21.90	21.70	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 7:15 AM	239.00	1.10	21.20	18.80	0.00	18.80	22.20	21.20	15.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 7:30 AM	220.00	1.20	21.00	18.50	0.00	18.50	22.20	21.00	15.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 7:45 AM	205.00	1.40	22.30	18.20	0.00	18.20	21.10	22.30	16.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 8:00 AM	227.00	1.30	21.90	18.20	0.00	18.20	21.70	21.90	17.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 8:15 AM	207.00	2.00	21.70	18.40	0.00	18.40	21.30	21.70	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 8:30 AM	204.00	2.00	22.70	18.70	0.00	18.70	23.30	22.70	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 8:45 AM	207.00	1.70	23.20	21.40	0.00	21.40	26.10	23.20	17.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 9:00 AM	210.00	1.70	22.90	21.30	0.00	21.30	23.50	22.90	16.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 9:15 AM	223.00	1.80	22.40	20.70	0.00	20.70	23.10	22.40	15.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 9:30 AM	227.00	1.30	21.90	19.60	0.00	19.60	20.30	21.90	13.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 9:45 AM	212.00	2.80	19.90	18.70	0.00	18.70	18.60	19.90	10.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 10:00 AM	242.00	1.90	17.90	17.90	0.00	17.90	17.60	17.90	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 10:15 AM	242.00	2.00	17.40	17.50	0.10	17.50	17.80	17.40	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 10:30 AM	234.00	2.50	15.70	15.80	0.10	15.80	16.20	15.70	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 10:45 AM	241.00	3.30	15.70	15.80	0.10	15.80	15.80	15.70	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 11:00 AM	225.00	2.20	15.50	15.60	0.10	15.60	15.80	15.50	11.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 11:15 AM	184.00	2.90	14.10	14.80	0.70	14.80	15.30	14.10	12.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 11:30 AM	214.00	3.60	14.80	0.00	0.00	0.00	15.00	14.80	12.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 11:45 AM	203.00	4.30	14.10	14.50	0.40	14.50	14.60	14.10	14.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 12:00 PM	221.00	4.20	14.00	14.50	0.50	14.50	14.80	14.00	14.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 12:15 PM	213.00	3.80	12.50	13.80	1.30	13.80	13.00	12.50	14.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 12:30 PM	210.00	4.60	11.70	12.50	0.80	12.50	13.10	11.70	13.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 12:45 PM	215.00	4.10	10.50	11.30	0.80	11.30	10.50	10.50	12.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:00 PM	232.00	4.20	9.20	10.30	1.10	10.30	10.00	9.20	12.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:15 PM	197.00	4.40	8.70	9.50	0.80	9.50	9.80	8.70	11.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:30 PM	211.00	5.50	9.30	9.30	0.00	9.30	9.80	9.30	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 1:45 PM	233.00	5.70	10.10	10.30	0.20	10.30	10.90	10.10	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:00 PM	206.00	5.40	10.20	9.90	0.00	9.90	10.90	10.20	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:15 PM	221.00	6.40	10.60	10.70	0.10	10.70	11.30	10.60	12.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:30 PM	220.00	6.90	10.30	10.40	0.10	10.40	11.10	10.30	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 2:45 PM	203.00	5.80	10.20	10.20	0.00	10.20	10.70	10.20	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:00 PM	231.00	6.80	9.20	9.30	0.10	9.30	9.90	9.20	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:15 PM	220.00	4.80	8.70	8.80	0.10	8.80	9.40	8.70	10.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:30 PM	211.00	6.00	8.30	0.00	0.00	0.00	9.90	8.30	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 3:45 PM	210.00	8.20	8.40	9.10	0.70	9.10	9.50	8.40	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:00 PM	240.00	3.90	8.20	9.10	0.90	9.10	9.20	8.20	10.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:15 PM	230.00	6.10	8.50	9.30	0.80	9.30	9.80	8.50	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:30 PM	233.00	3.30	8.40	8.80	0.40	8.80	9.90	8.40	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 4:45 PM	217.00	4.60	7.90	9.10	1.20	9.10	9.40	7.90	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 5:00 PM	219.00	3.40	8.20	9.00	0.80	9.00	9.50	8.20	9.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/27/13 5:15 PM	215.00	3.80	9.10	9.6												



Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

US Army Corps
of Engineers

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates ($\mu\text{g}/\text{m}^3$)								Naphthalene ($\mu\text{g}/\text{m}^3$)					
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4
12/28/13 1:00 AM	242.00	5.60	12.90	13.30	0.40	13.30	12.50	12.90	13.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 1:15 AM	239.00	6.00	12.30	12.70	0.40	12.70	11.80	12.30	12.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 1:30 AM	237.00	7.10	12.10	12.20	0.10	12.20	11.30	12.10	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 1:45 AM	234.00	4.10	11.60	12.30	0.70	12.30	11.20	11.60	12.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:00 AM	261.00	4.80	11.30	12.40	1.10	12.40	11.10	11.30	12.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:15 AM	257.00	6.30	11.30	12.10	0.80	12.10	10.80	11.30	12.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:30 AM	246.00	6.30	11.00	11.80	0.80	11.80	10.90	11.00	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:45 AM	247.00	6.70	10.90	12.10	1.20	12.10	10.90	10.90	11.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:00 AM	252.00	3.90	11.00	11.90	0.90	11.90	11.00	11.00	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:15 AM	249.00	5.10	11.20	11.90	0.70	11.90	10.70	11.20	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:30 AM	251.00	4.20	11.40	12.30	0.90	12.30	11.00	11.40	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:45 AM	252.00	4.10	11.20	12.10	0.90	12.10	11.20	11.20	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:00 AM	238.00	4.40	11.50	12.40	0.90	12.40	11.20	11.50	11.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:15 AM	251.00	3.40	11.60	13.00	1.40	13.00	11.50	11.60	11.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:30 AM	245.00	2.60	11.80	12.80	1.00	12.80	11.30	11.80	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:45 AM	243.00	2.50	11.90	12.60	0.70	12.60	11.70	11.90	11.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:00 AM	226.00	3.50	12.40	13.10	0.70	13.10	11.50	12.40	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:15 AM	231.00	2.40	12.20	12.70	0.50	12.70	13.10	12.20	11.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:30 AM	211.00	2.50	12.00	12.40	0.40	12.40	11.50	12.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:45 AM	229.00	2.80	11.80	12.50	0.70	12.50	11.50	11.80	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 6:00 AM	231.00	3.10	11.80	12.60	0.80	12.60	11.30	11.80	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 6:15 AM	212.00	2.80	13.80	15.20	1.40	15.20	16.00	13.80	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 6:30 AM	224.00	3.00	20.60	18.40	0.00	18.40	17.70	20.60	12.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 6:45 AM	225.00	2.50	20.80	18.50	0.00	18.50	16.80	20.80	12.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 7:00 AM	220.00	3.80	17.20	15.60	0.00	15.60	15.80	17.20	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 7:15 AM	231.00	3.80	15.00	15.00	0.00	15.00	14.30	15.00	11.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 7:30 AM	228.00	3.30	12.70	13.00	0.30	13.00	13.70	12.70	10.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 7:45 AM	229.00	2.10	12.30	12.50	0.20	12.50	13.70	12.30	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 8:00 AM	217.00	3.50	12.30	12.30	0.00	12.30	13.30	12.30	10.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 8:15 AM	204.00	2.70	14.80	15.60	0.80	15.60	16.40	14.80	10.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 8:30 AM	206.00	2.90	17.30	17.70	0.40	17.70	16.80	17.30	10.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 8:45 AM	199.00	1.90	16.00	16.50	0.50	16.50	16.50	16.00	11.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 9:00 AM	191.00	2.40	22.40	20.60	0.00	20.60	21.00	22.40	11.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 9:15 AM	207.00	2.40	14.60	14.60	0.00	14.60	12.30	14.60	11.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 9:30 AM	216.00	3.10	12.80	13.70	0.90	13.70	11.70	12.80	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 9:45 AM	216.00	5.00	12.90	13.20	0.30	13.20	11.30	12.90	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 10:00 AM	193.00	4.20	12.80	13.00	0.20	13.00	11.10	12.80	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 10:15 AM	203.00	3.50	11.00	12.60	1.60	12.60	11.00	11.00	9.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 10:30 AM	207.00	5.20	10.90	12.10	1.20	12.10	10.50	10.90	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 10:45 AM	217.00	5.20	11.80	12.60	0.80	12.60	10.20	11.80	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 11:00 AM	215.00	4.60	12.30	12.90	0.60	12.90	10.50	12.30	9.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 11:15 AM	246.00	5.20	13.00	0.00	0.00	0.00	10.50	13.00	10.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 11:30 AM	208.00	5.80	11.80	11.50	0.00	11.50	10.10	11.80	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 11:45 AM	205.00	6.20	9.80	10.20	0.40	10.20	9.00	9.80	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 12:00 PM	212.00	6.10	9.30	10.00	0.70	10.00	8.80	9.30	7.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 12:15 PM	190.00	5.50	9.20	9.70	0.50	9.70	8.80	9.20	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 12:30 PM	212.00	6.50	9.30	9.60	0.30	9.60	8.90	9.30	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 12:45 PM	210.00	6.40	9.30	9.80	0.50	9.80	9.10	9.30	7.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 1:00 PM	221.00	6.00	10.00	10.00	0.00	10.00	8.90	10.00	7.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 1:15 PM	204.00	6.00	9.80	10.00	0.20	10.00	8.70	9.80	7.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 1:30 PM	243.00	6.70	9.90	0.00	0.00	0.00	8.60	9.90	7.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 1:45 PM	212.00	6.30	9.20	9.60	0.40	9.60	8.20	9.20	6.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:00 PM	210.00	7.10	8.80	9.20	0.40	9.20	7.80	8.80	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:15 PM	222.00	6.50	9.50	9.40	0.00	9.40	7.80	9.50	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:30 PM	214.00	4.80	9.50	9.50	0.00	9.50	8.10	9.50	7.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 2:45 PM	210.00	7.20	8.50	9.30	0.80	9.30	7.90	8.50	6.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:00 PM	224.00	4.80	8.30	8.50	0.20	8.50	7.00	8.30	5.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:15 PM	194.00	6.60	7.20	7.90	0.70	7.90	6.30	7.20	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:30 PM	214.00	9.30	7.80	8.00	0.20	8.00	7.10	7.80	5.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 3:45 PM	211.00	9.20	9.00	8.90	0.00	8.90	8.10	9.00	6.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:00 PM	214.00	7.40	9.30	8.80	0.00	8.80	8.10	9.30	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:15 PM	216.00	5.60	8.60	8.90	0.30	8.90	7.80	8.60	6.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:30 PM	208.00	4.50	7.70	8.30	0.60	8.30	7.10	7.70	6.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 4:45 PM	226.00	6.60	7.50	8.10	0.60	8.10	6.90	7.50	5.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:00 PM	219.00	4.10	7.30	7.60	0.30	7.60	6.50	7.30	5.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:15 PM	208.00	4.10	7.40	7.80	0.40	7.80	6.70	7.40	5.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:30 PM	213.00	3.90	7.70	8.10	0.40	8.10	6.70	7.70	6.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 5:45 PM	203.00	4.80	8.30	8.20	0.00	8.20	7.10	8.30	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/28/13 6:00 PM	218.00	5.50	7.90	8.60	0.70	8.60	7.40	7.90	7.20	0.00	0.00	0.00	0.			



**US Army Corps
of Engineers**

Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
December, 2013

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m ³)								Naphthalene (µg/m ³)						
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	
12/30/13 2:30 AM	336.00	4.80	6.70	14.80	8.10	8.20	14.80	7.70	6.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 2:45 AM	342.00	3.60	6.80	13.10	6.30	8.40	13.10	8.10	6.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:00 AM	354.00	3.40	7.30	13.60	6.30	9.00	13.60	8.70	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:15 AM	338.00	5.00	7.30	13.70	6.40	9.40	13.70	8.70	7.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:30 AM	324.00	4.60	7.60	14.40	6.80	10.20	14.40	9.10	7.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:45 AM	343.00	3.30	8.20	16.20	8.00	11.40	16.20	11.00	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:00 AM	335.00	3.60	8.50	16.00	7.50	11.60	16.00	11.50	8.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:15 AM	339.00	4.00	8.40	16.40	8.00	0.00	16.40	11.90	8.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:30 AM	344.00	5.40	8.60	16.00	7.40	12.20	16.00	12.90	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:45 AM	0.00	0.00	0.00	0.00	0.00	11.10	14.10	11.30	8.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:00 AM	0.00	0.00	0.00	0.00	0.00	12.40	14.30	11.20	10.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:15 AM	0.00	0.00	0.00	0.00	0.00	11.90	14.80	12.60	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:30 AM	0.00	0.00	0.00	0.00	0.00	12.00	14.90	11.60	10.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:45 AM	0.00	0.00	0.00	0.00	0.00	10.70	16.40	12.10	9.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:00 AM	0.00	0.00	0.00	0.00	0.00	0.00	13.70	12.40	10.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:15 AM	0.00	0.00	0.00	0.00	0.00	0.00	16.50	14.60	9.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:30 AM	0.00	0.00	0.00	0.00	0.00	15.20	16.80	14.10	11.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:45 AM	0.00	0.00	0.00	0.00	0.00	15.70	18.30	14.90	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 7:00 AM	0.00	0.00	0.00	0.00	0.00	15.30	18.40	15.30	12.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 7:15 AM	0.00	0.00	0.00	0.00	0.00	17.20	17.50	15.30	13.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 7:30 AM	0.00	0.00	0.00	0.00	0.00	17.90	19.70	16.40	13.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 7:45 AM	0.00	0.00	0.00	0.00	0.00	15.20	18.40	15.00	11.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 8:00 AM	0.00	0.00	0.00	0.00	0.00	16.40	19.70	18.30	13.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 8:15 AM	0.00	0.00	0.00	0.00	0.00	32.30	33.90	41.80	17.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 8:30 AM	0.00	0.00	0.00	0.00	0.00	55.50	50.40	63.20	32.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 8:45 AM	287.00	3.20	22.90	54.00	31.10	32.50	54.00	57.10	22.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 9:00 AM	258.00	5.40	61.30	35.00	0.00	35.00	60.60	61.30	25.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 9:15 AM	284.00	3.80	37.00	67.10	30.10	47.50	67.10	65.90	37.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 9:30 AM	289.00	4.50	31.20	63.70	32.50	54.20	63.70	60.00	31.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 9:45 AM	0.00	0.00	0.00	0.00	0.00	26.60	28.50	24.50	17.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 10:00 AM	277.00	4.50	17.00	23.40	6.40	21.70	23.40	19.10	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 10:15 AM	0.00	0.00	0.00	0.00	0.00	23.30	23.30	19.30	17.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 10:30 AM	280.00	4.30	16.70	20.60	3.90	19.70	20.60	16.50	16.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 10:45 AM	0.00	0.00	0.00	0.00	0.00	19.00	20.80	17.20	15.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 11:00 AM	0.00	0.00	0.00	0.00	0.00	17.90	19.20	15.60	15.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 11:15 AM	236.00	4.10	14.40	17.20	2.80	17.20	18.20	14.40	15.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 11:30 AM	236.00	3.80	16.60	17.80	1.20	17.80	19.30	16.60	15.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 11:45 AM	227.00	7.30	18.90	18.50	0.00	18.50	22.30	18.90	16.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 12:00 PM	0.00	0.00	0.00	0.00	0.00	17.40	19.70	16.60	15.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 12:15 PM	0.00	0.00	0.00	0.00	0.00	17.70	18.50	17.00	15.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 12:30 PM	0.00	0.00	0.00	0.00	0.00	17.40	17.60	15.40	15.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 12:45 PM	0.00	0.00	0.00	0.00	0.00	17.80	18.60	16.30	16.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 1:00 PM	199.00	1.30	17.50	18.30	0.80	18.30	19.50	17.50	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 1:15 PM	260.00	1.90	18.50	17.30	0.00	17.30	20.30	18.50	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 1:30 PM	226.00	1.50	18.50	18.40	0.00	18.40	55.90	18.50	18.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 1:45 PM	241.00	3.00	15.20	15.30	0.10	15.30	18.60	15.20	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 2:00 PM	0.00	0.00	0.00	0.00	0.00	17.50	19.20	18.20	17.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 2:15 PM	0.00	0.00	0.00	0.00	0.00	17.40	16.90	17.70	18.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 2:30 PM	256.00	3.20	16.60	15.40	0.00	15.40	18.00	16.60	18.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 2:45 PM	221.00	2.90	19.20	18.10	0.00	18.10	20.70	19.20	19.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:00 PM	269.00	3.70	17.50	0.00	0.00	0.00	19.10	17.50	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:15 PM	263.00	2.50	19.50	18.70	0.00	18.70	21.30	19.50	21.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:30 PM	248.00	2.40	21.50	18.50	0.00	18.50	22.60	21.50	20.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 3:45 PM	303.00	6.80	23.60	23.30	0.00	19.50	23.30	21.70	23.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:00 PM	0.00	0.00	0.00	0.00	0.00	19.20	22.60	20.20	22.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:15 PM	0.00	0.00	0.00	0.00	0.00	19.10	23.20	21.70	21.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:30 PM	0.00	0.00	0.00	0.00	0.00	21.70	23.00	19.40	20.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 4:45 PM	0.00	0.00	0.00	0.00	0.00	18.30	22.70	19.20	21.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:00 PM	279.00	5.50	20.90	21.80	0.90	17.90	21.80	19.70	20.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:15 PM	272.00	5.00	21.30	22.70	1.40	18.00	22.70	18.20	21.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:30 PM	274.00	5.50	21.10	22.80	1.70	17.70	22.80	18.70	21.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 5:45 PM	0.00	0.00	0.00	0.00	0.00	0.00	23.70	20.20	19.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:00 PM	258.00	4.60	20.90	19.30	0.00	19.30	26.50	20.90	21.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:15 PM	233.00	3.20	23.70	20.60	0.00	20.60	25.40	23.70	23.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:30 PM	230.00	3.60	23.80	20.20	0.00	20.20	25.90	23.80	22.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
12/30/13 6:45 PM	225.00	3.00	23.90	20.60	0.00	20.60	27.50	23.90									



US Army Corps
 of Engineers

Reading Time (EST)	Wind Direction Degrees Clockwise from North	Wind Speed mph	Particulates (µg/m ³)								Naphthalene (µg/m ³)							
			Upwind	Downwind	CDF Contribution	M1	M2	M3	M4	Upwind	Downwind	CDF Contribution	M1	M2	M3	M4		
12/31/13 3:15 AM	260.00	3.70	35.50	17.30	0.00	17.30	49.80	35.50	23.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 3:30 AM	263.00	3.80	34.80	17.10	0.00	17.10	48.30	34.80	23.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 3:45 AM	297.00	4.90	22.80	49.30	26.50	16.20	49.30	34.20	22.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:00 AM	265.00	5.00	36.60	15.50	0.00	15.50	49.10	36.60	21.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:15 AM	251.00	5.10	36.50	17.80	0.00	17.80	49.60	36.50	21.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:30 AM	285.00	4.20	23.20	47.40	24.20	18.30	47.40	33.50	23.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:45 AM	269.00	4.40	35.40	18.20	0.00	18.20	48.80	35.40	25.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:00 AM	284.00	3.10	24.60	47.90	23.30	18.00	47.90	33.80	24.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:15 AM	280.00	4.40	24.40	47.10	22.70	18.80	47.10	33.30	24.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:30 AM	255.00	3.50	36.80	17.60	0.00	17.60	49.00	36.80	23.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:45 AM	268.00	4.10	33.90	20.00	0.00	20.00	46.10	33.90	26.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:00 AM	282.00	3.10	24.50	44.40	19.90	21.30	44.40	32.00	24.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:15 AM	300.00	2.70	23.10	42.50	19.40	18.70	42.50	30.70	23.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:30 AM	285.00	3.00	22.00	45.20	23.20	0.00	45.20	32.20	22.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:45 AM	306.00	2.20	22.30	45.00	22.70	17.90	45.00	33.60	22.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 7:00 AM	299.00	3.10	21.80	43.50	21.70	17.10	43.50	32.20	21.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 7:15 AM	289.00	3.90	21.90	41.90	20.00	18.00	41.90	42.90	21.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 7:30 AM	288.00	3.00	24.30	46.00	21.70	20.70	46.00	39.50	24.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 7:45 AM	290.00	3.30	24.10	44.20	20.10	20.10	44.20	35.90	24.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 8:00 AM	285.00	3.50	26.40	47.90	21.50	25.10	47.90	39.40	26.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 8:15 AM	283.00	3.00	25.10	62.00	36.90	25.10	62.00	49.10	25.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 8:30 AM	260.00	3.30	39.70	22.90	0.00	22.90	47.00	39.70	24.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 8:45 AM	268.00	3.00	38.20	22.80	0.00	22.80	43.60	38.20	21.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 9:00 AM	276.00	3.00	19.50	45.70	26.20	28.50	45.70	35.80	19.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 9:15 AM	257.00	5.10	29.00	20.20	0.00	20.20	44.00	29.00	20.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 9:30 AM	256.00	4.70	27.60	16.30	0.00	16.30	39.40	27.60	17.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 9:45 AM	258.00	4.50	25.00	17.10	0.00	17.10	36.40	25.00	21.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 10:00 AM	252.00	5.30	21.90	15.80	0.00	15.80	33.80	21.90	18.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 10:15 AM	254.00	4.30	17.70	15.60	0.00	15.60	29.30	17.70	17.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 10:30 AM	245.00	6.30	15.40	13.60	0.00	13.60	25.00	15.40	16.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 10:45 AM	271.00	6.00	15.80	27.10	11.30	13.10	27.10	17.90	15.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 11:00 AM	277.00	4.20	17.50	14.20	0.00	14.20	27.30	17.50	16.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 11:15 AM	254.00	5.20	20.70	15.10	0.00	15.10	29.80	20.70	16.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 11:30 AM	266.00	7.20	23.30	15.60	0.00	15.60	32.10	23.30	17.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 11:45 AM	270.00	5.70	16.60	29.20	12.60	14.60	29.20	21.10	16.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 12:00 PM	240.00	4.90	22.20	15.20	0.00	15.20	29.30	22.20	16.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 12:15 PM	256.00	4.10	22.40	15.20	0.00	15.20	30.50	22.40	17.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 12:30 PM	252.00	5.30	24.80	16.50	0.00	16.50	32.20	24.80	18.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 12:45 PM	250.00	6.00	30.20	18.30	0.00	18.30	33.10	30.20	20.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 1:00 PM	243.00	3.30	30.60	19.10	0.00	19.10	34.60	30.60	21.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 1:15 PM	264.00	6.10	31.40	17.00	0.00	17.00	34.50	31.40	21.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 1:30 PM	242.00	4.90	28.60	16.40	0.00	16.40	32.40	28.60	20.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 1:45 PM	252.00	4.40	27.40	17.00	0.00	17.00	29.60	27.40	21.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 2:00 PM	288.00	3.60	21.10	29.80	8.70	16.00	29.80	27.00	21.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 2:15 PM	272.00	3.60	19.10	28.00	8.90	15.40	28.00	23.90	19.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 2:30 PM	258.00	4.90	24.60	14.80	0.00	14.80	26.10	24.60	19.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 2:45 PM	250.00	6.20	20.70	14.30	0.00	14.30	24.00	20.70	19.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 3:00 PM	251.00	4.80	20.70	14.40	0.00	14.40	24.30	20.70	19.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 3:15 PM	254.00	4.10	23.70	14.30	0.00	14.30	24.50	23.70	18.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 3:30 PM	276.00	4.10	21.70	27.90	6.20	15.30	27.90	27.20	21.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 3:45 PM	264.00	4.70	29.60	16.60	0.00	16.60	29.70	29.60	20.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:00 PM	251.00	2.40	35.30	16.90	0.00	16.90	31.60	35.30	18.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:15 PM	264.00	3.00	32.90	17.20	0.00	17.20	32.20	32.90	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:30 PM	275.00	2.60	16.20	35.00	18.80	16.10	35.00	33.50	16.20	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 4:45 PM	270.00	2.70	16.30	42.10	25.80	16.30	42.10	37.00	16.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:00 PM	242.00	2.80	43.60	17.90	0.00	17.90	39.30	43.60	19.90	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:15 PM	261.00	3.30	40.10	16.70	0.00	16.70	37.80	40.10	18.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:30 PM	253.00	3.10	40.80	16.40	0.00	16.40	53.70	40.80	18.50	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 5:45 PM	277.00	1.50	20.40	45.60	25.20	18.00	45.60	46.40	20.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:00 PM	304.00	1.30	20.60	49.40	28.80	18.80	49.40	49.50	20.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:15 PM	276.00	1.70	21.40	49.00	27.60	19.30	49.00	50.40	21.40	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:30 PM	320.00	1.70	21.80	48.40	26.60	19.50	48.40	49.10	21.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 6:45 PM	305.00	1.60	22.80	50.00	27.20	19.30	50.00	46.90	22.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 7:00 PM	279.00	1.50	23.30	49.30	26.00	20.30	49.30	47.90	23.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	
12/31/13 7:15 PM	252.00	0.90	48.20	20.80	0.00	20.80	50.20	48.20										

IHC CDF Dredge Project : Air Monitoring Alarm Response Log

Air Monitoring Station: M1 M2 M3 M4 Dock

Air Monitoring Instrument:

Cerex Unit (Naphthalene) Thermo Unit (Particles) PID Monitor

Date & Time of alarm: 12/21/2013 5:15AM Email sent to site Technician? (Yes or No)

Technician responded to the alarm; Scott Peterson

1. Was dredging occurring at the time of the alarm? (Yes or No)

2. Alarm caused by:

- Loss of Power
- Loss of Radio Communication
- Out of Calibration
- UV Alignment
- Blockage in Air Tube
- Air Quality
- Other: weather, wind and snow

3. Corrective Actions taken? (Yes or No)

4. Dredging suspended? (Yes or No)

5. Alarm logged in air monitoring action spreadsheet? (Yes or No)

Description of Action Taken:

A) No problems were found.

IHC CDF Dredge Project : Air Monitoring Alarm Response Log

Air Monitoring Station: M1 M2 M3 M4 Dock

Air Monitoring Instrument:

Cerex Unit (Naphthalene) Thermo Unit (Particles) PID Monitor

Date & Time of alarm: 12/20/2013 6:00AM-7:00 AM Email sent to site Technician? ((Yes) or No)

Technician responded to the alarm; Scott Peterson

1. Was dredging occurring at the time of the alarm? (Yes or **No**)

2. Alarm caused by:

- | | |
|-------------------------------------|-------------------------------|
| <input type="checkbox"/> | Loss of Power |
| <input type="checkbox"/> | Loss of Radio Communication |
| <input type="checkbox"/> | Out of Calibration |
| <input type="checkbox"/> | UV Alignment |
| <input type="checkbox"/> | Blockage in Air Tube |
| <input type="checkbox"/> | Air Quality |
| <input checked="" type="checkbox"/> | Other: weather, wind and snow |

3. Corrective Actions taken? (Yes or **No**)

4. Dredging suspended? (Yes or **No**)

5. Alarm logged in air monitoring action spreadsheet? (Yes or **No**)

Description of Action Taken:

A) No problems were found.