



Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³), and Naphthalene (µg/m³). The table contains 48 rows of monitoring data.



Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (ug/m³) [Upwind, Downwind, CDF Contribution, M1, M2, M3, M4], Naphthalene (ug/m³) [Upwind, Downwind, CDF Contribution, M1, M2, M3, M4]. Rows represent hourly data from 6/5/14 7:00 AM to 6/6/14 8:00 AM.



Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (ug/m3), and Naphthalene (ug/m3). Rows represent hourly data from 6/9/14 12:00 PM to 6/10/14 1:00 PM.



Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (ug/m^3) - Upwind, Downwind, CDF Contribution, M1, M2, M3, M4, Naphthalene (ug/m^3) - Upwind, Downwind, CDF Contribution, M1, M2, M3, M4.



US Army Corps of Engineers

Indiana Harbor and Canal Confined Disposal Facility Real-Time Air Monitoring Data June 2014

Table with columns: Reading Time (EST), Wind Direction, Wind Speed, Particulates (ug/m3) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4), and Naphthalene (ug/m3) (Upwind, Downwind, CDF Contribution, M1, M2, M3, M4). Rows represent hourly data from 6/14/14 8:00 PM to 6/15/14 9:15 PM.



US Army Corps of Engineers

Indiana Harbor and Canal Confined Disposal Facility Real-Time Air Monitoring Data June 2014

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 represent hourly data points from 6/15/14 9:30 PM to 6/16/14 10:30 PM.



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 represent hourly data from 6/16/14 10:45 PM to 6/18/14 1:15 AM.



US Army Corps of Engineers

Indiana Harbor and Canal Confined Disposal Facility Real-Time Air Monitoring Data June 2014

Table with columns for Reading Time (EST), Wind Direction, Wind Speed, Particulates (µg/m³), and Naphthalene (µg/m³). Rows include dates from 6/22/14 7:00 AM to 6/23/14 8:00 AM.



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Indiana Harbor and Canal
Confined Disposal Facility
Real-Time Air Monitoring Data
June 2014

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
6/30/14 7:15 PM	201.00	2.30	45.10	48.10	3.00	48.10	44.80	45.10	8.60	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 7:30 PM	251.00	1.60	50.30	0.00	0.00	0.00	47.00	50.30	8.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 7:45 PM	336.00	8.10	8.00	50.40	42.40	49.90	50.40	58.50	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 8:00 PM	17.00	5.40	0.00	64.10	0.00	0.00	53.90	64.10	8.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 8:15 PM	121.00	5.60	57.40	8.70	0.00	0.00	57.40	69.10	8.70	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 8:30 PM	95.00	6.90	59.70	8.70	0.00	0.00	51.40	59.70	76.30	8.70	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 8:45 PM	129.00	3.40	44.10	9.30	0.00	0.00	29.50	44.10	86.40	9.30	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 9:00 PM	127.00	4.00	7.80	8.80	1.00	5.00	7.80	-10.60	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 9:15 PM	173.00	2.20	17.90	9.10	0.00	3.40	17.90	4.00	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 9:30 PM	193.00	4.20	25.30	6.70	0.00	6.70	38.70	25.30	9.10	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 9:45 PM	172.00	4.60	23.80	9.00	0.00	7.60	23.80	14.30	9.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 10:00 PM	182.00	3.60	-0.20	-0.50	0.00	-0.50	16.10	-0.20	8.80	0.00	0.00	0.00	0.00	0.00	0.00	0.00
6/30/14 10:15 PM	181.00	3.20	8.10	9.90	1.80	9.90	23.00	8.10	9.30	0.00	0.00	0.00	0.00	0.00	0.00	0.00

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: 6/28/2014 11:30 _____ 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: Spiders

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:

- o Spiders inside of the nephelometer and paper filter caused M4 Thermo Unit alarm. The spiders were vacuumed out of the inlet tube and nephelometer. Unit was recalibrated at 8:30 AM 6/28/14 and inspected at 3:00 PM 6/28/14 to confirm proper function.



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: 6/26/2014 11:30- 6/27/2014-8:00AM 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 Fog

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:

- Alarms were caused from heavy fog.

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: 6/25/2014 4:00AM-9:00AM 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 Fog

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:

- o Alarms were caused from heavy fog.

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: 6/21/2014 4:30AM-7:00AM 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 checked="" type="checkbox"/> | Loss of Power |
| <input type="checkbox"/> | Loss of Radio Communication |
| <input checked="" 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 |

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:

- Alarms were caused from thunderstorms and high winds. Base station radio lost communication with air units during the storms. The base station server was re-set and radio communications is restored. M3 particle unit was out of calibration the unit nephelometer was calibrated.

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: 6/21/2014 4:30AM-7:00AM 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

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:

- o Alarms were caused from thunderstorms and high winds. Unit was checked the next morning 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: 6/21/2014 1:30AM-9:00AM 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

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:

- o Alarms were caused from thunderstorms and high winds. Unit was checked the next morning 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: 6/20/2014 11:30PM 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

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:

- Alarms were caused from thunderstorms and high winds. Unit was checked the next morning 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: 6/19/2014 7:30PM 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

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:

- o Alarms were caused from thunderstorms and high winds. Unit was checked the next morning 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: 6/11/2014 12:30AM 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 |

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:

- The surveillance cameras were checked to see if anything unusual around the site. Air units were checked and no problems were found. It was raining at the time of the alarm.

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: 6/09/2014 5:30PM

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

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:

- o The surveillance cameras were checked to see if anything unusual around the site. Air units were checked and 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: 6/06/2014 to 6/7/2014 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

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:

- Thunderstorms and high winds, which caused dust from the gravel roads is the source of the air unit alarms.

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: 6/05/2014 6:30 PM 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 checked="" 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 type="checkbox"/> | Other: |

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:

- o The air intake pump on M3 stopped running due to several power surges. The pump was restarted and no other 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: 6/02/2014 1:30 PM 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: site maintenance

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:

- o Site mowing and trim maintenance work along the top of the dike from 12:00 to 3:00. Interior dike excavation repairs by unit M1 from 11:00 to 1:00 is thought to cause the alarm.

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: 6/1/2014 8:30 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: unknown

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:

- o All units were checked but no problems were found.