Message

From: Edge, Charles (ATSDR/DTHHS/OD) [ibd7@cdc.gov]
Sent: 10/26/2017 5:50:19 PM
To: Werner, Lora [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=921f9f156035403fa605c142a287cc1a-Lwerne02]
CC: Holler, James S. (Jim) (ATSDR/DTHHS/OD) [jsh2@cdc.gov]; ran2@cdc.gov [/o=ExchangeLabs/ou=Exchange Administrative Group (FYDIBOHF23SPDLT)/cn=Recipients/cn=03bbfb4721134794ba6e837cee3f0dd3-ran2@cdc.gov]
Subject: Parkersburg, WV Fire
Attachments: Air Quality Index Table (003).tiff; Parkersburg PM2-5.pptx

Lora,

Below is the ATSDR data analysis. I removed the following sentence based on my conversation with Jim. I have also attached the PowerPoint of the spikes along with AQI standards. Jim will forward this to Bill and Renee. Please distribute as you see fit.

Over the past couple of days, the combustion is becoming less efficient and less energetic. The smoke is hugging the ground and there seems to be more particulate matter in the air around the fire site. The spikes last longer and are more frequent. The hazard going forward may be greater until the fire is extinguished. So while the shelter in place and avoidance advice over a broad area provided by Woods County Health and EPA was appropriate up to now, there may need to be an evacuation of a smaller area around the fire until it is extinguished.

Charles

On Saturday morning at 1230 AM, Parkersburg fire crews responded to a fire at the Intercontinental Export and Import Company - Plant #1 on Camden Avenue in Parkersburg WV. The facility is a warehouse housing many plastics related materials. The fire is still ongoing. EPA deployed four particulate air monitors around the perimeter of the fire, and began collecting data late 10/21/17 (Saturday night). The County has also hired an environmental contractor, CTEH, to conduct air monitoring and sampling. ATSDR R3, ATSDR R5, and DTHHS ERS are coordinating with EPA, WV state and local health, and OH state and local health. Air quality is impacted in both WV and across the river in OH.

Overall, levels of $PM_{2.5}$ and PM_{10} seem to be decreasing from the first recorded readings (10/23) to date. No air sampling data has been made available. Below are the trends in the realtime air monitoring.

<u>10/23/17</u>
Levels of PM2.5 were highest 0.32 miles from the site at 2,810 ug/m^3. Levels of PM10 were highest 1.15 miles from the site at 384 ug/m^3. The average of the PM2.5 and PM10 readings for all the locations monitored were 241 ug/m^3 and 110 ug/m^3, respectively. The highest concentration of SO_2 was recoded at 0.5ppm.

<u>10/24/17</u>
Levels of PM2.5 were highest 0.4 miles from the site at 2,210 ug/m^3. Levels of PM10 were highest 0.21 miles from the site at 858 ug/m^3. The average of the PM2.5 and PM10 readings for all the locations monitored were 77 ug/m^{3}and 96 ug/m^3, respectively. The highest concentration of SO_2 was recoded at 0.1ppm.

<u>10/25/17</u>
Levels of PM2.5 were highest 0.25 miles from the site at 531 ug/m^3. Levels of PM10 were highest 0.25 miles from the site at 425 ug/m^3. The average of the PM2.5 and PM10 readings for all the locations monitored were 49 ug/m^3 and 41 ug/m^3, respectively. No SO_2 readings were recorded.

<u>10/26/17</u>
Levels of PM2.5 were highest 3.21 miles from the site at 442 ug/m^3. Levels of PM10 were highest 1.47 miles from the site at 24 ug/m^3. The average of the PM2.5 and PM10 readings for all the locations monitored were 85 ug/m^3 and 24 ug/m^3, respectively. No SO_2 readings were recorded. The exceedance that was recorded 3.21 miles away was from a

residential area. More investigation should be done in these areas. The exceedance could be attributed to the temperature inversion or to the presence of wood-burning fireplaces.

According to the Air Quality Index for Particulate Matter, 250.5 to 500 ug/m^3 on a 24-hour average is considered hazardous. Based on the maximum concentrations only, these areas would be considered hazardous to health. 24-hour averages were not available. These are realtime instantaneous readings. The average concentrations above are the averages of the total detected readings for the day in all monitoring locations. No time weighted averages for each monitoring location were available.

The maximum concentrations that have been seen to date generally last from 20-30 minutes and drop below the EPA National Ambient Air Quality Standards for PM2.5 of 35 ug/m^3 and PM10 of 150 ug/m^3. These spikes have occurred on each of the monitoring days. On 10/23, there were 3 spikes above 35 ug/m^3. On 10/26 there were 7 spikes that occurred over a few hours. This could have been due to a temperature inversion that may have occurred over night. With the absence of meteorological data and changing wind directions, it is difficult to predict these spikes. Terrain steering may also play a role in impacting the direction of the plume. Attached is PowerPoint presentation that denotes these spikes for PM2.5.

Over the past couple of days, the combustion is becoming less efficient and less energetic. The smoke is hugging the ground and there may be more particulate matter in the air around the fire site. The spikes last longer and are more frequent. The hazard going forward may be greater until the fire is extinguished.

ATSDR has yet to receive safety data sheets (SDSs) or comprehensive information about chemicals at this warehouse, beyond the OSC's handwritten list on 10/21. No chemical analytical data from the response has been available to ATSDR; therefore, there is uncertainty about the overall mixture that was potentially (or might still be) in the air. There have been strong plastics odors as well as typical combustion odors in residential areas and ATSDR does not have information on what would be causing these odors or the public health implications.