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## Health Department Testimony Before Joint Senate-House Policy Committee

**PITTSBURGH** – The Allegheny County Health Department provided the following testimony to the joint Senate and House Democratic Policy Committee during a hearing on improving air quality held yesterday, February 7, at the Clairton Municipal Building:

*Good morning, Chair Boscola, Chair Sturla and members of the Joint Senate and House Democratic Policy Committee. I am Dr. Karen Hacker, Director of the Allegheny County Health Department (ACHD). This afternoon, I am joined by my Health Department colleagues: Jim Kelly, Deputy Director for Environmental Health; Dr. LuAnn Brink, Chief Epidemiologist; Michael Parker, Solicitor; and members of the Board of Health.*

*The Health Department prioritizes air quality as one of this area's most pressing public health challenges. We all deserve clean air. We hold polluters accountable by using a variety of tools available through federal, state and local regulations including permitting, regulatory development, constant monitoring of emissions, and enforcement to the extent possible within the law. We use these actions to improve air quality conditions throughout all 130 municipalities.*

*ACHD has been responsible for federal air quality requirements since the 1970s when the EPA was founded, and the Clean Air Act was strengthened. We are also governed by the Pennsylvania Clean Air Act which authorized local air pollution control agencies such as the Allegheny County Health Department to implement the federal requirements. We implement these based on the federal Clean Air Act's health-based air quality standards.*

*While air quality in Allegheny County has improved over the last few decades, there are still problems. The soot of the past is far less common. It was made up of large particles that you can see along with very small particles that you cannot see. Air pollution today is largely invisible; made up of very small particles – also called PM 2.5 – and gases such as Sulfur Dioxide (SO<sub>2</sub>). Despite having the strongest coke oven regulations in the country, Allegheny County is still out of compliance with the Clean Air Act largely due to PM 2.5 and SO<sub>2</sub> emissions recorded at the Liberty monitor. We must get the county into compliance with these standards which requires us to address U.S. Steel as the largest contributor of pollution at this monitor.*

*Over the last two years, the ACHD ramped up its enforcement efforts in several ways: We chose to leave behind negotiated consent orders because we weren't seeing needed progress. We began issuing direct enforcement orders and civil penalties. We expanded the Health Department's legal team. We increased inspections at U.S. Steel Coke Works. We increased penalties for violations through revisions to our civil penalty policy. We collaborated with the EPA to issue a Notice of Violation for air quality violations at U.S. Steel Edgar Thompson.*

*In the past year, we used the new civil penalty policy to fine U.S. Steel Clairton Coke Works \$2 million - \$400,000 initially, followed by a \$1 million penalty and then another \$600,000 penalty. The increased fines alone were not enough to get the industry to comply with the regulations and cut their violations. So, we took even stronger unprecedented action and ordered U.S. Steel to take whatever measures necessary to reduce its emissions within the first half of 2019. If it fails to reduce its emissions after six months, our order compels the Clairton Coke Works to "hot idle" two of its worst polluting batteries until*

it meets the Department's requirements. "Hot idle" means the batteries stay hot, but there is no production. Under the law, U.S. Steel has the right to due process and has appealed the order and recent fines. Despite the appeal, no stay has been issued and the requirements of the order remain in place.

We are operating under a new SO<sub>2</sub> state implementation plan – a plan designed to get the county into attainment with sulfur dioxide emissions. The plan is currently pending approval by the EPA. In addition, the state implementation plan for PM 2.5 to address non-compliance will be submitted this summer. Additionally, we are now proposing new coke oven rules to deal with fugitive emissions. U.S. Steel has hindered our progress by not providing information necessary for completing the regulatory analysis. Despite this, we plan to move forward and engage independent experts to revise the coke oven rules with or without U.S. Steel's input. Regulatory actions must be thoughtful if we are to see the desired improvement and they must be methodically developed and evidence-based in order to survive any legal challenge.

Mr. Jim Kelly, Deputy Director of Environmental Health will now walk you through the events immediately following the fire at U.S. Steel as they evolved.

Before I begin, please allow me to define a few terms to inform this conversation:

- SO<sub>2</sub> - sulfur dioxide is a gas that is a respiratory irritant at high concentrations.
- SO<sub>2</sub> Standard was established in 2010 and is the existing health-based standard. It is 75 parts per billion based on the 3-year average of the 99th percentile of the yearly distribution of 1-hour daily maximum concentrations.
- SO<sub>2</sub> exceedance is a day with at least one 1-hour SO<sub>2</sub> average of > 75 PPB
- Desulfurization is the process of removing sulfur from the coke oven gas stream
- Hot idling means that the batteries that make coke remain hot but are not producing
- Air Quality Episode is an unexpected event such as a major breakdown causing air quality issues
- Poor dispersion is when air near the ground is cold with warmer air above acting as a "lid" on the valley, holding emissions down and preventing their spreading out.

The timeline from the fire at the Clairton Coke Works is as follows:

- At about 4:30 AM on December 24th, there was a fire at the U.S. Steel Clairton Plant. U.S. Steel called ACHD to report a breakdown of equipment at about 5:00 AM. The only information given the department regarding the fire was during a call later in the morning to the Air Quality Program Manager that Control Rooms 5 and 2 were shut down for the safety of the employees and equipment. U.S. Steel also indicated that natural gas was being substituted for coke oven gas to reduce emissions and flaring was also initiated to improve dispersion of pollution.
- The department posted information about the fire on our Facebook page that day and the public was advised of the potential for air quality issues. The post noted that we had not yet seen any exceedance of air quality standards following the fire.
- The first SO<sub>2</sub> exceedances at the Liberty monitor were observed after the fire on December 26 and December 28 at the Liberty monitor. This is a monitor at South Allegheny High School that gives the most direct measurement of emissions from the Clairton Plant. At this time, the exceedances were not considered unusual because occasional exceedances of SO<sub>2</sub> can often be seen when there is poor air dispersion. Last year, we had 11 exceedances and in 2017, there were 18. All of them occurred during normal operation of the plant in similar ranges of 76-171 ppb and were not associated with any breakdowns.
- On December 31, U.S. Steel provided a mandatory 7-day follow-up breakdown report. Breakdown reports are required by the plant's permit to give the department an assessment of equipment failure and includes the cause, what emissions are released, how to reduce the emissions and when the equipment will be repaired. The report indicated that amount of emissions was considered "light to moderate." The report also indicated that the time for the facility to be back in operation was "hours."
- There were additional sulfur dioxide exceedances at the Liberty monitor on January 2 and 3. On January 4, the Director was informed, and the department requested a conference with Clairton

plant officials. This was also the day that U.S. Steel was able to enter the building as it had sustained significant structural damage which required a crane to lift the roof. U.S. Steel informed the department that the damage from the fire would render the sulfur removal process (desulfurization) inoperable and the condition would possibly last for a significant length of time. The Health Department then prepared to issue a public notice that there was a risk for additional SO<sub>2</sub> exceedances. The department also prepared to order U.S. Steel to extend coking times; however, U.S. Steel reported that they were already undertaking several important and effective mitigation measures. They had already extended coking times at multiple batteries, thus reducing the amount of coke oven gas produced. The use of natural gas was also expanded and was now being used in significant quantities in the boilers on this day. We considered the use of natural gas in the boilers as an important step because emissions from the boilers have been shown to have a large impact on the SO<sub>2</sub> emissions at the Liberty monitor. Flaring was also still being used to dilute the impact of sulfur dioxide.

- Given the extent of the emission mitigation efforts, the department expected that this approach would significantly improve the situation. We also required U.S. Steel to provide regular reports of any fire-related activity and required additional mitigation strategies to be implemented in case of further exceedances. There were, in fact, no exceedances from January 4-7.
- On January 8, there were two more exceedances at the Liberty monitor. At this time, the department determined that despite the mitigation efforts, there would continue to be some level of risk for additional exceedances. Out of an abundance of precaution, the Health Department issued a formal public health alert on January 9, recommending that Mon Valley residents, especially those that may be sensitive to sulfur dioxide, limit their outdoor activities while repairs are being made to the factory.
- The department was prepared to issue an order to further extend coking times; however, U.S. Steel immediately implemented additional required mitigation strategies including further extending coking times and increasing the use of natural gas. These efforts were more than what we would have required. To date, there have been no further exceedances at the Liberty monitor; however, the recent exceedance at the North Braddock monitor is of concern due to the flaring at Irvin. Once information concerning this exceedance has been analyzed, an appropriate enforcement action will follow – as we announced earlier this week.
- ACHD is still reviewing all possible enforcement options for permit related violations. The extent of the violation penalties can only be assessed after the incident concludes. Once the problem is fixed and the Health Department can evaluate this incident, the company faces civil penalties for permit and Article XXI Air Pollution Control violations.

A few important points about the event and the effect on health by Dr. LuAnn Brink:

- After the fire, the exceedances of sulfur dioxide recorded at the Liberty monitor were very brief.
- In the Code of Federal Regulations, which represents the peer-reviewed literature used to create the 1-hour rule, they have determined 400 ppb as the level at which an uncompromised group have moderate changes in lung function, and 200 ppb as the lowest threshold at which some vulnerable individuals have lung function changes.
- At no time did the sulfur dioxide levels recorded at the Liberty monitor approach levels indicative of an emergency (800 ppb for a 24-hour period)
- The January 9 alert was issued out of an abundance of caution and was intended to make sensitive populations aware of the chance for higher than normal sulfur dioxide in the coming days while U.S. Steel finalized their mitigation strategies. As you are aware, there have been no additional exceedances since January 8 at the Liberty monitor.
- We conducted an analysis of emergency department visits for asthma before and after the fire. This is also known as syndromic surveillance and is used by health departments all over the country to examine the impact of events. This analysis determined that there were an equal number of emergency department visits in each time frame.

- *Given that many residents may not be able to go to an emergency department, we have also looked at “Smell Pittsburgh” and complaints called into our department. These were also equal before and after the incident.*
- *We do not have access to visits that occur at primary care facilities so there is always more to discover.*

*Since the alert, the Health Department has been monitoring the repair process and the air quality. ACHD was able to enter the building on January 11 only after taking safety training given the risks of entering the damaged building. The Health Department has provided extensive information to the public. Our monitoring data has always been available on the website and now we have recommitted to increased public reporting with weekly updates, daily information on our Facebook and website, and daily air quality updates distributed via the Allegheny Alert public notification system. We want residents throughout the county to have access to reliable information on air quality in a timely manner and we recognize that we can always improve.*

*We have also:*

- *Held regular meeting with advocates. Since this incident, we have had two phone calls with air advocates to share details of the fire and resulting actions, answer questions and get recommendations for additional communication*
- *Distributed a sulfur dioxide fact sheet to providers and residents*
- *Conducted outreach to pediatricians and school nurses to explain the situation and provide general information and resources*
- *Monitored emergency room visit data relative to respiratory health and found no unusual activity*
- *Provided updates for projected poor air dispersion days on our Facebook page and through Allegheny Alerts*
- *Encouraged U.S. Steel to provide public information*
- *Participated in the January 22 Clairton town meeting hosted by city officials to share information directly with area residents*

*Earlier this week, our Air Quality program installed a sulfur dioxide monitor at the Clairton Education Center. Hourly readings from this monitor are already available on our website. In the coming weeks, we will be installing a second sulfur dioxide monitor in the Mon Valley near U.S. Steel’s Irvin Works, where coke oven gas is currently being flared. We also plan to install a benzene monitor near the Irvin Works to assess any benzene risks to local residents.*

*In summary, the Allegheny County Health Department will continue to be proactive and aggressive to improve air quality in our county, as our actions indicate. We will continue to improve our communication via our current strategies through additional opportunities such as mobile phone applications and direct communication with citizens, municipal leaders and legislators.*

*Since this most recent incident in Clairton, we have been asked about additional tools and resources that would be helpful in improving our region’s air quality. We have been working with the Pennsylvania Department of Environmental Protection and legislative staff on these issues, and are happy to share our recommendations with you here today:*

- *Update existing air pollution episode criteria in state code, which hasn’t happened since 1990 by reevaluating levels for stages of alerts and emergencies based on the most recent information from EPA along with specific actions by regulatory agencies;*
- *Provide stronger regulations to allow for immediate shut-downs of any contributing industry if clean air standards are exceeded at monitors;*

- *Mandate that coke plants and all industry reduce production during air action days; determining the correct amount for reduction will require further investigation;*
- *Make the Health Department's more stringent coke oven regulations the uniform standard across the Commonwealth and adopt our forthcoming changes regarding fugitive emissions;*
- *Mandate industry to notify affected communities when accidents occur that have the potential to impact the health of the public; and*
- *Increase monetary penalties for air quality violations statewide by adopting the EPA's civil penalty maximum.*

*The Health Department staff looks forward to continuing discussions regarding these potential policy solutions and we welcome recommendations from this panel. We are all entitled to clean air. I am happy to offer myself and any of my staff as resources. We all share the same goals as the legislature in improving our region's air quality and quality of life. Thank you for the opportunity to testify on this issue today. We are happy to take questions.*

All testimony from yesterday's hearing can be found online at [www.pahouse.com/files/Documents/Testimony/2019-02-08\\_102639\\_hdpc020719.pdf](http://www.pahouse.com/files/Documents/Testimony/2019-02-08_102639_hdpc020719.pdf).

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