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October 6, 2015

Honorable Cynthia A. Giles Assistant Administrator EPA Office of Enforcement and Compliance Assurance 1200 Pennsylvania Ave. NW Mail Code 2201A Washington, D.C. 20008

Re: EPA Definition of "High Priority Violations" of the Clean Air Act

Dear Ms. Giles,

On August 25, 2014, EPA revised its enforcement policy defining the "High Priority Violations" of the Clean Air Act that are "most likely to be significant for human health and the environment." As the term implies, these criteria determine which violations get the most attention from EPA and state enforcement programs.

Under the revised version, illegal emissions of hazardous chemicals and other pollutants will no longer be considered a "high priority" unless the violations persist for at least seven days. We are writing to respectfully request that the policy be amended to include short term violations that, due to the amount or toxicity of the specific pollutants released, deserve equal attention from federal and state enforcement programs.

This issue is particularly important to communities downwind from refineries, chemical plants, and oil and gas drilling and processing sites. These and other industrial operations frequently release large quantities of benzene, butadiene, hydrogen sulfide, sulfur dioxide, particulates, and other noxious pollutants in short but intense bursts, rather than in steady and predictable amounts over longer periods of time. The following examples, compiled from online reports of unauthorized "emission events" submitted to the Texas Commission on Environmental Quality (TCEQ) in 2015, illustrate our concerns:

<sup>1</sup> Memorandum from Phillip A. Brooks, Director, Air Enforcement Division, Office of Civil Enforcement, USEPA, to Regional Air Enforcement Division Directors Regions 1-10, Regional Air Enforcement Branch Chiefs, Regions 1-10, and Regional Counsels, Regions 1-10, Revision of U.S. Environmental Protection Agency's Enforcement Response Policy for High Priority Violations of the Clean Air Act: *Timely and Appropriate Enforcement Response to High Priority Violations* – 2014 (Aug. 25, 2014).

- On August 9, **Shell Oil Deer Park** released more than 300,000 pounds of 1,3-butadiene, a carcinogen, when relief valves opened on a spherical tank at its Houston petrochemical plant. This emission event lasted just 55 minutes.
- Over a six hour period beginning August 11<sup>th</sup>, nearly 12,000 pounds of 1,3-butadiene and 35 tons of other smog-forming volatile organic chemicals escaped from an unlit flare at the **Texas Petrochemicals** manufacturing site in Houston's Manchester neighborhood. The Houston area remains in violation of federal ozone standards.<sup>2</sup>
- The **Conoco Phillips Borger refinery** in Hutchinson County reported emitting more than 177 tons of particulates during startup of its catalytic crackers between July 12 and July 17.<sup>3</sup> Three short term upsets in June, none of which lasted longer than two days, released another 90 tons of particulates.
- Between August 12 and 14, the **Ascend Performance Materials Chocolate Bayou plant** released 8,678 pounds of acrylonitrile, a human carcinogen even more potent than benzene, according to the inhalation risk assessment posted on EPA's "Integrated Risk Information System."
- On August 13, the **Huntsman Port Neches chemical plant** vented 12,900 pounds of ethylene oxide to the atmosphere in just fifteen hours following an electrical outage. Ethylene oxide is a probable human carcinogen, according to EPA.<sup>4</sup> Huntsman had earlier released 3,695 pounds of ethylene oxide, when a transformer outage on March 1 shut down several pumps and a compressor.
- Between April 15 and April 20, a cooling tower leak at **the BASF Total Fina Nafta Complex** in Port Arthur released 13,065 pounds of benzene, a known carcinogen, and 9,060 pounds of other pollutants classified as hazardous under the Clean Air Act.
- The **Dow Texas Operations Chemical Plant** in Freeport released nearly 9,000 pounds of benzene during a plant startup that began late afternoon on July 17 and ended the early morning of July 20. Including six other startups or malfunctions, the longest of which lasted less than six days, the facility has released 18,149 pounds of benzene, 8,968 pounds of 1,3-butadiene, and more than 180 tons of additional VOCs so far this year. Dow reports that its flares smoked intermittently during most of these events, releasing unknown amounts of oily soot and black carbon.

<sup>&</sup>lt;sup>2</sup> The facility appears as the "Houston Plant" in TCEQ's online database, but the RN number for this facility confirms that Texas Petrochemicals is the owner/operator.

<sup>&</sup>lt;sup>3</sup> The RN number for the "Borger Refinery" identifies Conoco Phillips as the owner/operator.

<sup>&</sup>lt;sup>4</sup> http://www3.epa.gov/airtoxics/hlthef/ethylene.html

- Between February 23 and 24, the **Formosa Point Comfort plant** in Calhoun County released 10,333 pounds of 1,3-butadiene and more than 20 tons of VOCs after its propylene and ethylene compressors malfunctioned. That was not the first big upset at the Point Comfort plant. On January 20, a failed startup released 3,672 pounds of 1,3-butadiene, while another process upset between September 9 and 10 in 2015 released 4,394 pounds of benzene and butadiene (combined) and 17 tons of other VOCs.
- **Blanchard Refining** in Galveston Bay released more than 108 tons of catalyst fines (as particulate matter) over a 23 hour period starting on January 13. According to the company's report, the upset was triggered by a malfunctioning slide valve on a Fluid Catalytic Cracking Unit.
- Short term events can result in substantial pollution over the course of a year. For example, the **James Lake Gas plant** in Ector County has already released more than 550 tons of sulfur dioxide from its acid gas flare from February 5th through the end of August, due to compressor malfunctions or repairs. Since none of these upsets lasted more than three days and at least a week elapsed between the start of each event, they do not appear to qualify as "high priority violations," even though emissions in the first eight months of 2015 are already twice the plant's annual limit of 246 tons.
- Similarly, the permit for the **Amerada Hess Gas plant** in Gaines County authorizes no more than 94 pounds of sulfur dioxide an hour, or 420 tons per year. Yet just 17 different emission events, ranging from less than two hours to no more than five days each, have already released nearly 700 tons of sulfur dioxide so far in 2015. The flares releasing this pollution smoke intermittently, releasing an unknown amount of oily soot.

Attachment 1 includes the Facility Identification Number (RN) for each facility and the report number for each event. Each report can be obtained online through the Texas Air Emission Event Report Database at <a href="http://www2.tceq.texas.gov/oce/eer/">http://www2.tceq.texas.gov/oce/eer/</a>. Attachment 2 summarizes the health effects of the specific pollutants released during these upsets.

The online reports filed by each of these companies indicate that these upset releases exceed permit limits, but further investigation may be required to make a final determination. The reports may significantly understate releases of these pollutants. EPA recently revised the "AP-42" factors used to estimate emissions from flares after finding that even well operated flares release about four times more volatile organic chemical pollutants than the Agency had previously assumed.<sup>5</sup>

We understand that EPA and states retain the discretion to classify any of the emission events described above as high priority violations. That does not address our concerns. The policy is clearly intended to create a presumption that violations that do not persist for at least seven days (either continuously or intermittently) are less serious because they are unlikely to pose a

<sup>&</sup>lt;sup>5</sup> Chapter 13.5, Emission Factors for Industrial Flares (revised April 2015), AP42 Fifth Edition, Vol. I, available online at http://www3.epa.gov/ttn/chief/ap42/ch13/.

significant risk to public health or the environment. We respectfully disagree with these assumptions. The short term emission events can overwhelm communities with high volumes of pollution, include significant amounts of carcinogens and other toxins that are dangerous in small concentrations, and may contribute more to annual emissions than so-called "normal operations."

The communities most affected by these episodes are typically working class neighborhoods, where a majority of the residents are Latino or African American. They may also include large numbers of children and elderly residents, who are more sensitive to the respiratory ailments triggered by air pollution. On its webpage, EPA's Office of Enforcement and Compliance Assurance promises to "advance environmental justice by protecting communities most vulnerable to pollution." It will be hard to keep that promise if emissions from catastrophic or chronic upsets at plants near these vulnerable communities are classified as a lower priority for EPA or state enforcement.

We ask that the policy reclassify as a high priority any short term violation (lasting less than seven days) caused by emission events that either:

- 1. Release an unusually large volume of criteria pollutants like sulfur dioxide or particulates<sup>7</sup>, or small but significant amounts of acrylonitrile, benzene, butadiene, ethylene oxide, hydrogen fluoride, and other toxins that are hazardous in minute concentrations;
- 2. Occur frequently enough to cause emissions to exceed annual limits or (where applicable) major source thresholds.

Agencies would have some discretion in applying these criteria, as they do under the current policy in deciding whether a violation of monitoring or testing requirements is "substantial" enough to be a high priority. We do ask that the criteria be based upon the volume, toxicity and frequency of actual emissions, and not depend on agency judgments about the extent of exposure in affected communities. Agency resources are scarce and ambient monitoring (especially of air toxins) is limited, making it unlikely that EPA's risk assessment would accurately assess the full range of health risks that result from exposure to these pollutants.

<sup>7</sup> Significant violations of opacity standards should be included in this category, as high opacity events indicate the release of large amounts of fine particles.

<sup>&</sup>lt;sup>6</sup> U.S. Environmental Protection Agency, "About the Office of Enforcement and Compliance Assurance (OECA)." http://www2.epa.gov/aboutepa/about-office-enforcement-and-compliance-assurance-oeca

We would welcome the opportunity to meet with you to discuss our concerns and recommendations, and provide further examples of emission events that ought to qualify as high priority violations. In the meantime, thank you for considering our views.

Sincerely,

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**Attachment 1: Short-Term Emission Events: 2015 Examples from Texas** 

Name	County	RN	Report #	Event Began	Duration of Event	Pollutant	Amount
	•		220583	9/22/15	(hours:minutes) 12:18	Sulfur Dioxide	Released (lbs) 41,326
			217577	7/20/15	32:45:00	Sulfur Dioxide	262,62
			217440	7/16/15	4:11	Sulfur Dioxide	36,09
			216398	7/6/15	81:54	Sulfur Dioxide	40,87
			215732	6/13/15	3:30	Sulfur Dioxide	72,89
			215140	6/2/15	56:45	Sulfur Dioxide	263,14
Amerada Hess Seminele Cos			214858	5/28/15	71:59	Sulfur Dioxide	17,35
Amerada Hess Seminole Gas Processing Plant	Gaines	103758470	214838	5/28/15	1:42	Sulfur Dioxide	12,05
			<u>214087</u>	5/13/15	108:05	Sulfur Dioxide	52,47
			213602	5/5/15	15:10	Sulfur Dioxide	76,01
			213513	5/4/15	79:54	Sulfur Dioxide	30,49
			<u>211161</u>	3/10/15	62:17:00	Sulfur Dioxide	72,92
			<u>209589</u>	2/1/15	9:11	Sulfur Dioxide	43,76
			209312	1/26/15	119:37	Sulfur Dioxide	329,54
			208820	1/15/15	72:15	Sulfur Dioxide	27,06
Ascend Performance Materials Chocolate Bayou Plant	Brazoria	100238682	<u>218858</u>	8/12/15	47:55	Acrylonitrile	8,678
DASS Total Sine Notte Design Olefine		100216977	212758	4/15/15	121:45	Benzene	13,065
BASF Total Fina Nafta Region Olefins	Jefferson					Ethylbenzene	1,978
Complex						Other HAPs	7,082
Blanchard Refining Galveston Bay	Galveston	102535077	208455	1/13/15	22:54	Catalyst Fines	216,480
Refinery				•		1,3-Butadiene	319
		100225945	219065	8/19/15	26:00	Benzene	542
	Brazoria			0/ 13/ 13		Other VOCs	34,107
			218061	8/8/15		1,3-Butadiene	1,088
					156:00	Benzene	853
						Other VOCs	49,746
				7/17/15		1,3-Butadiene	1,484
			217273		59:00	Benzene	8,912
Dow Texas Operations Freeport						Other VOCs	60,322
			<u>216997</u>	7/8/15	64:40	1,3-Butadiene	410
						Benzene	913
						Other VOCs	16,663
			210215	3/5/15	65:00	1,3-Butadiene	1,922
						Benzene	2,961
						Other VOCs	104,158
			209798	2/5/15	13:42	1,3-Butadiene	1,003
						Benzene	1,407
			207797	1/8/15	71:00	Other VOCs	20,696
						1,3-Butadiene	2,742
						Benzene	2,561
						Other VOCs	82,845
	Calhoun	100218973	219879	9/9/15	18:15	Butadiene Other VOCs	4,076 34,541
Formosa Point Comfort Plant			_			1,3-Butadiene	10,333
Formosa Point Connort Plant			<u>210551</u>	2/23/15	29:40	Other VOCs	41,141
			208841	1/20/15	11:10	1,3-Butadiene	3,672
1						1,3-Butadiene	11,784
Houston Plant <sup>1</sup>	Harris	100219526	<u>218679</u>	8/11/15	6:03	Other VOCs	73,390
Huntsman Port Neches	Jefferson	100219252	218781	8/13/15	15:00	Ethylene Oxide	12,938
James Lake Gas Plant	Ector	107088759	219592	8/29/15	54:00	Sulfur Dioxide	136,125
			217499	7/17/15	62:00	Sulfur Dioxide	366,832
			212258	4/1/15	12:00	Sulfur Dioxide	36,546
			212259	3/27/15	9:30	Sulfur Dioxide	22,566
			211456	3/11/15	42:00	Sulfur Dioxide	130,899
			210714	2/26/15	10:20	Sulfur Dioxide	22,331
			<u>210655</u>	2/24/15	40:00	Sulfur Dioxide	123,329
			<u>210552</u>	2/22/15	31:30	Sulfur Dioxide	65,268
			210072	2/8/15	70:15	Sulfur Dioxide	148,530
			209893	2/7/15	8:20	Sulfur Dioxide	19,184
			<u>209869</u>	2/5/15	22:20	Sulfur Dioxide	45,028
Borger Refinery <sup>2</sup>	Hutchinson	102495884	<u>217030</u>	7/12/15	127:30	Particulate Matter	334,000
			<u>215969</u>	6/17/15	8:35	Particulate Matter	25,200
			215727	6/13/15	40:30	Particulate Matter	143,000
			<u>215142</u>	6/2/15	36:59	Particulate Matter	12,500
Shell Oil Deer Park	Harris	100211879	218482	8/9/15	0:56	1,3-Butadiene	309,213

<sup>&</sup>lt;sup>1</sup> TCEQ's online database identifies the Texas Petrochemicals facility as "Houston Plant." The RN number was used to identify the owner/operator as Texas Petrochemical.

<sup>2</sup> The RN number was used to identify the owner/operator of the "Borger Refinery" as Conoco Phillips.
Source: This information was obtained from reports submitted to Texas Commission on Environmental Quality's Air Emission Event Reporting Database. http://www2.tceq.texas.gov/oce/eer/

## **Attachment 2: Health Effects of Pollutants Released in Emission Events**

Pollutant	Type of Health Risk	Notes	Source
	Carcinogen	elevated cases of leukemia	IRIS CA OEHHA
1,3-Butadiene	Cardiovascular, Respiratory, Neurological	increased cardiovascular disease, irritation of eyes, nasal passages, throat, and lung, blurred vision, fatigue, headache, vertigo	EPA Air Toxics
	Probable Carcinogen	elevated cases of lung cancer	IRIS CA OEHHA
Acrylonitrile	Blood, Respiratory, Neurological	low grade anemia, leukocytosis, kidney irritation, mild jaundice, mucous membrane irritation, headaches, fatigue, nausea, feelings of nervous irritability	EPA Air Toxics
	Carcinogen	elevated cases of leukemia	IRIS CA OEHHA
Benzene	Blood, Respiratory, Neurological	blood disorders, irritation of skin, eyes, and upper respiratory tract, drowsiness, dizziness, headaches, unconsciousness, vomiting, convulsions	EPA Air Toxics
Ethylbenzene	Respiratory	irritation of throat and eyes, chest constriction, neurological effects (dizziness)	EPA Air Toxics
Ethylene Oxide	Probable Carcinogen	elevated cases of leukemia, stomach and pancreatic cancer, Hodgkin's disease	EDA Air
	Respiratory, Neurological	neurological disorders, nausea, vomiting, bronchitis, pulmonary edema, emphysema, irritation of eyes, skin, and mucous membranes	Toxics CA OEHHA
Particulate Matter	Heart and Lung Disease, Respiratory	premature mortality (long-term exposure), heart attacks, decreased lung functions, irregular heartbeat, asthma, irritation of the respiratory systems	EPA Air & Radiation
Sulfur Dioxide	Heart Disease, Respiratory	premature mortality from fine particle formation, bronchoconstriction, increased asthma symptoms, respiratory illnesses	EPA Air & Radiation