To: Denny
From: Christa
Date: 5/4/02

Remarks:

Hi Denny!

😊
May 3, 2006

The Honorable Frank Jackson
Mayor of the City of Cleveland
601 Lakeside Avenue
Cleveland, Ohio 44114

Dear Mayor Jackson:

The owners and employees of General Environmental Management LLC (GEM) would like to take the opportunity to defend themselves against the attack of Ohio Citizen Action as expressed in its April 25, 2006 letter to you.

Ohio Citizen Action makes a number of extremely broad, unsubstantiated allegations against GEM and the City relating to air emissions from its facility. We take these allegations very seriously, and we believe the City does too.

We have reviewed the letter submitted by Ohio Citizen Action to you with our experts and counsel. Based on our data, Ohio Citizen's Action expresses concerns regarding the potential health impacts of GEM emissions, noting that "Our tests show that GEM is emitting levels of benzene and hydrogen sulfide that exceed community health screening levels established by several federal agencies and several states..." Attached to the letter is a report titled "Summary of Results of Air Samples Taken by Ohio Citizen Action and Global Community Monitor," which presents results of air sampling performed by Ohio Citizen's Action on two different dates: November 29, 2005 and March 21, 2006. After reviewing this information, we disagree with the comparisons made and the conclusions reached by Ohio Citizen Action.

For the reasons that follow, you should conclude, rather, that Ohio Citizen Action has raised unfounded health risk concerns based on questionable comparisons between their data and inappropriate or inapplicable health based and exposure levels for chemicals, and has attempted, without support, to link complaints regarding nuisance odors to its unfounded health risk conclusions. Many questions remain unresolved as to the representative nature of the sampling, the validity of the analytical results taken by Ohio Citizen Action, and the existence of other sources. As explained in more detail below, it is clear that Ohio Citizen Action's inflammatory charges are without merit.

To properly interpret the data, it is important to understand the two types of sampling performed by Ohio Citizen Action and Global Community Monitor. First of all, they collected two "grab" samples, referred to as "bucket" samples in their report. This involved "grabbing" a
sample of air in a very short time period. The report is silent regarding the period of time each sample took to complete, but it is likely that the samples were taken in a matter of seconds to minutes. Thus, the samples are truly a "snapshot" in time and can't tell you what the air concentrations were just before or just after the samples were taken. Fortunately, in March of this year, they employed a second method of air sampling, using a "real-time" monitoring device known as a CEREX UV-Hound system. A real-time instrument such as this gives a continuous reading of air concentrations of chemicals over whatever period of time the instrument is running. These real-time samples can help us understand the "grab" samples taken at the same time. As shown in the two "gas concentration plots" attached to their report, the real-time monitoring was conducted over a period of around 45 minutes or so. However, the benzene and toluene they detected were only present in the air for about 10 minutes of that 45-minute sampling period. During the other 35 minutes, they detected no benzene or toluene in the air. Therefore, these real-time sample results demonstrate that the grab samples taken don't, in fact, represent the air around the GEM plant before or after they were taken.

Why is this important? This information is important because the health-based "Levels of Concern" that Ohio Citizen Action selected\(^1\) to refer to in its report each are applicable to very specific time periods. It is not scientifically valid to try to apply these reference levels to sample results that don't represent the same time period. Remember, based on the testing provided in this report, the levels measured in the grab samples were present in the air for, at most, 10-minutes. In contrast, the levels of concern they compare these results to are for periods of continuous exposure ranging from one-hour to 70 years! For example, they compare the 10-minute samples to a U.S.E.P.A. Region 6 Screening Level which is intended to address a possible long-term exposure for up to 70 years, 350 days per year, 24-hours per day. It should be obvious why their comparisons are not scientifically valid.

The two levels referenced by Ohio Citizen Action that have the closest applicable time periods are the North Carolina 1-hour standard, and the Texas Effects Screening Level (ESL)-Short Term, which is also a 1-hour guidance level. As shown in the Levels of Concern Report, the air concentrations of toluene, ethyl benzene, and m, p, o-xylene air concentrations are all far below the North Carolina 1-hour standard (toluene) and the Texas ESL-Short Term values. The Texas ESL-Short Term level for benzene listed in the table is misleading. The value presented (12 μg/m\(^3\)) is really the 24-hour value. The 1-hour ESL-Short Term is 75 μg/m\(^3\). What does all

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\(^1\) Ohio Citizen Action has chosen to compare the results of their sampling to selected non-applicable health-based screening levels, and has chosen to ignore other more relevant comparisons. By way of example, we have attached a chart from U.S.E.P.A.'s air toxics website. The attached chart shows many reference numbers for benzene and the most stringent advisory number is 0.32 mg/m\(^3\) or 320 μg/m\(^3\) which is more than four times higher than the level of 70 μg/m\(^3\) found by Ohio Citizen Action. The most relevant OSHA standard for benzene is the OSHA STEL of 16.3 mg/m\(^3\) or 16,300 μg/m\(^3\) versus the reported number of 70 μg/m\(^3\). The benzene found by Ohio Citizen Action is orders of magnitude below this more relevant OSHA standard.
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This means that the samples collected by Ohio Citizen Action demonstrate that the levels of chemicals in the air around the GEM plant are far below the most stringent relevant health-based screening standards Ohio Citizen Action could find! Furthermore, contrary to the implications in the April 25 letter, none of the standards they reference have been adopted or approved by U.S. EPA Region V or by the Ohio EPA.

Contrary to the allegations made by Ohio Citizen Action, all data presented by them is very favorable for GEM and for the City. The data presented in the Level of Concern Report are the highest numbers collected by the group, but, as indicated above, our review of the Level of Concern Report indicates that all data is well below the applicable guidance levels. For instance, the reported level of toluene is approximately 90% below the ATSDR/MRL acute level (150 versus 1190) and the reported level of ethylbenzene is approximately 90% below the ATSDR/MRL intermediate level (3.40 versus 1190). The toluene, ethyl benzene, and m,p,o-xylene air concentrations were well below what someone could be exposed to safely, without adverse health effects, for their entire life!

Available academic, scientific and regulatory resources contain not only references to the various health-based screening levels and exposure levels, some of which were selected for comparison by Ohio Citizen Action, but also references to various chemicals' "odor threshold," which is the amount of a chemical that must be present to be noticeable to the human nose. The human nose is very sensitive, and may detect an odor at levels far below any health based screening level or recognized exposure level. GEM agrees that the grab sample obtained in November 2005 revealed a hydrogen sulfide air concentration, possibly high enough to be smelled by some individuals. GEM does not agree with the statement that, based on their November 2005 sampling, the chemicals 2-braconone (MEK), methyl pentanone, and xylene "are possible explanations for the 'sickeningly sweet' chemical smell." These chemicals were detected by laboratory instruments in the grab sample obtained that day, but the extremely low levels measured were far below any published odor threshold for these chemicals.

For these reasons, GEM disagrees with the Ohio Citizen Action allegations regarding threats to health posed by the low levels of chemicals detected in their sampling. While the results on the November 2005 sampling could confirm an odor from hydrogen sulfide, which is typically described as a "rotten egg" smell, hydrogen sulfide could come from many sources, and the sampling is not conclusive regarding the source of the hydrogen sulfide detected. Moreover, GEM disagrees that the sample results offer any explanation for any other odor. Rather, the sample results would appear to disprove such a conclusion.

Furthermore, in addition to the questionable comparisons drawn by Ohio Citizen Action to health based and exposure levels for chemicals, and in addition to its questionable attempt to tie their health concerns to odor issues, many questions remain unresolved as to the representative nature of the sampling, the validity of the analytical results taken by Ohio Citizen Action, and how outside influences and other sources (such as a truck stop across the street) were separated. Overall, it is clear that Ohio Citizen Action has not adequately supported any of their inflammatory charges.
Finally, Ohio Citizen Action’s allegations, based on its very limited sampling, is not supported by the approximately 750,000 air samples taken by U.S.E.P.A. and its contractors and by third-party consultants and contractors retained by GEM. The U.S.E.P.A. conducted air sampling around the perimeter of the plant after the fire. Its results would represent worst case conditions. U.S.E.P.A., in its incident report on the fire, concluded that all air sampling results are “all well below any public health criteria.”
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Ohio Citizen Action has gone overboard in attempting to attack GEM and the City. We
stand willing and anxious to discuss all concerns and questions the City has about our facility.

Very truly yours,

[Signature]

Eric Lofquist, President

Enclosures
cc:  Matthew Carroll, Director, Department of Public Health
     Richard Nemeth, Cleveland Division of Air Quality
     Martin Flack, Director, Department of Public Safety
     Martin Sweeney, Cleveland City Council President
     Phyllis Cleveland, Cleveland City Council
     Robert J. Triozzi, Cleveland Law Director
     Joseph Kowalik, Director, Ohio EPA
     Jack McManus, Assistant Ohio Attorney General
     Sandy Buchanan, Ohio Citizen Action
     Kevin Drummond Eiber, Brouse McDowell
Benzene

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<tr>
<th>Health numbers*</th>
<th>Regulatory, advisory numbers*</th>
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<tbody>
<tr>
<td>LC50 (oral) (31.857 mg/l)</td>
<td>OSHA STEL (6.3 mg/l)</td>
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<tr>
<td>LC50 (inhal) (9,987 mg/l)</td>
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<td></td>
<td>AIHA ERPG-2 (440 mg/l)</td>
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<td>AIHA ERPG-1 (113 mg/l)</td>
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<td>CAVIA REFERENCE EXPOSURE LEVEL (6500 mg/l)</td>
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<td>CANCER RISK LEVEL (in a million risk 3 to 4 x 10^-6 mg/l)</td>
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ACGIH STEL—American Conference of Governmental and Industrial Hygienists’ short-term exposure limit.
ACGIH TLV—American Conference of Governmental and Industrial Hygienists’ threshold limit value expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effects.
AIHA ERPG—American Industrial Hygiene Association’s emergency response planning guidelines. ERPG 1 is the maximum airborne concentration below which it is believed nearly all individuals could be exposed up to one hour without experiencing other than mild transient adverse health effects or perceiving a clearly defined objectionable odor; ERPG 2 is the maximum airborne concentration below which it is believed nearly all individuals could be exposed up to one hour without experiencing or developing irreversible or other serious health effects that could impair their abilities to take protective action.
LC₅₀ (Lethal Concentration₅₀)—A calculated concentration of a chemical in air to which exposure for a specific length of time is expected to cause death in 50% of a defined experimental animal population.

NIOSH REL—National Institute of Occupational Safety and Health's recommended exposure limit; NIOSH-recommended exposure limit for an 8- or 10-hr time-weighted-average exposure and/or ceiling.

NIOSH STEL—NIOSH's short-term exposure limit; NIOSH recommended exposure limit for a 15-minute period.

OSHA REL—Occupational Safety and Health Administration's permissible exposure limit expressed as a time-weighted average; the concentration of a substance to which most workers can be exposed without adverse effect averaged over a normal 8-hr workday or a 40-hr workweek.

OSHA STEL—Occupational Safety and Health Administration's short-term exposure limit.

The health and regulatory values cited in this graph were obtained in December 1989.

a) Health values are the lower end of the range. b) Regulatory values are based on the lower end of the range.

References