**From:** Anne Viner
**To:** Sieffert, Margaret
**Cc:** Nguyen, Phuong; "John P. Iwanski"
**Subject:** Ele Corporation
**Date:** Wednesday, June 27, 2018 12:26:30 PM
**Attachments:** ATT00001.txt

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Margaret:

Now that Ele has completed its voluntary stack testing, we have reviewed and corrected the information that EPA provided earlier (per your email dated February 13, 2018). With regards to the nearby building dimensions, we are providing an updated height in red below for building #1 that EPA included in its modeling effort. The remainder of the building coordinates are reasonable approximations.

Building #1 - Building Height = **7.77** m
Lat/long of building corners
1. 41.805254; - 87.8176624
2. 41.805257; - 87.8171744
3. 41.805645; - 87.8171793
4. 41.805641; - 87.8176673

Building #2 - Building Height =4.82 m
Lat/long of building corners
1. 41.805679; -87.8172308
2. 41.805676; -87.8175991
3. 41.805766; - 87.8176015
4. 41.805774; -87.8172392

We have also reviewed and updated the property line corner coordinates to better match the actual property boundary, as shown in red below.

**1. 41.805922; 87.817924**
**2. 41.805946; 87.816813**
**3. 41.803164; 87.816698**
**4. 41.802816; 87.817791**

There are several changes to the modeling input parameters for the Stack #1 that EPA has modeled, which is the exhaust stack for the reactors where ethylene oxide is used in Ele's process. The stack location, stack height and stack diameter shown in red in the table below match the actual location and stack dimensions.

Per the recent stack testing, we have updated the stack temperature and stack exit velocity shown in red in the table below. The stack temperature and stack velocity measured during the recent testing are representative of Ele's typical exhaust parameters.

The ethylene oxide emission rate has also been updated in the table below, as shown in red. We understand EPA obtained the annual ethylene oxide emission rate that served as the basis for its

modeling effort (0.2184 tons per year) from the 2014 National Emission Inventory. Ele has confirmed that 0.2184 tons per year was the reported ethylene oxide emission rate in 2014, but we do not agree this number is suitable for use in EPA's analysis. We understand that each year, Ele reports ethylene oxide emissions based on an emission rate assumption that 1.5% of all ethylene oxide used is lost (per an AP-42 reference, Section 6.4.1), and this is assumed to be emitted. Even with this estimate, Ele is still comfortably below its existing permitted emission limit. The recent stack test confirmed that actual emissions of ethylene oxide, obtained during normal and typical process operations at Ele, are much less than Ele's reported annual estimate. The stack test result, at 0.00078 pounds per hour, is considered typical of normal operations, and should be used in EPA's modeling effort.

| Stack ID | Lat | Long | **2018 Tested Emission Rate (lb/hr)** | Stack Height (m) | Stack Temperature (K) | Stack Exit Velocity (m/s) | Stack Diameter (m) | Vertical or Horizontal Stack? |
|---|---|---|---|---|---|---|---|---|
| Stack#1 | **41.805139** | **-87.817376** | **0.00078** | **8.08** | **300** | **8.42** | **0.2** | V |

Please let me know if you have any questions.
Thank you.
Anne


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