

Town of Orangetown

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MEMORANDUM

TO: TOWN BOARD
FROM: AIR QUALITY REVIEW COMMITTEE; PETER DUDA, CHAIRMAN
SUBJECT: PHASE II AMBIENT AIR TESTING ANALYSIS AND COMMENTARY
DATE: APRIL 22, 2018
CC:

Below are the collected comments from the Air Quality Review Committee regarding the TRC Solutions Phase II Ambient Air Testing report.

Responsibility

One cannot conclude from the testing as conducted for this report that Aluf is not responsible for the odors or emissions as reported. Though their facility not being in operation during certain times when odors were reported makes it less likely that they are responsible for those particular reports, the fact that the ventilation system is left running during off hours means that there is still potential for them to produce odors during that time.

Air Safety

Area testing as conducted recently indicates the air has minimal to no risk for residents, with all levels of all chemicals falling below the Short Term Guideline Concentrations (SGC's), and most falling below the Annual Guideline Concentrations (AGC's). There were small exceedances of AGC's for Acrolein, Benzene and Carbon Tetrachloride, but even if one were to apply the 24-hour samples to the AGC's these small exceedances would have minimal or no impact on health, given that the AGC's are set very conservatively. However, as these are 24 hour samples and complaints appear to be sporadic/not continuous, it is impossible to know with certainty whether such a projection would actually be an accurate representation of a resident's annual exposure, whether higher or lower.

Blanks & Duplicate Measurements

There are no blanks or duplicate measurements reported. Duplicates in particular are very helpful to interpret this data. It may be that the variations in levels reported are just noise. Three sample locations with duplicates at one location would help prevent this.

Background Site

There is no true background site – a site far enough away that we can confidently say it is not impacted by the emissions being tested for.

Testing Days/Times

Aluf specifically is closed from the evening on Fridays through late afternoon on Saturdays. The first 24-hour sampling period was entirely over this interval. The second 24-hour sampling period started around 8 AM on a Friday, so it likely caught part of a working day and part of a closed period. The third 24-hour period appears to have been the factory was running.

Flow Rate from Certain Sampling Systems

Referencing page 5 of the report- 3.1- "Volatile Organic Compounds," since there was an apparent equipment failure on the samples taken at the Rail Trail NW on January 26th and 27th as "These two sampling systems failed to maintain a constant flow rate resulting in an unknown sample duration," it would seem inappropriate to trust any results from those sampling systems. It would appear there is no way to know if the sample duration was 10 minutes vs. 20 hours, etc.

Request for DEC

We recommend that the town request that the NYS DEC withdraw Aluf's permit to operate because they exceeded the scope of their permitted operations unless Aluf permits free and open access to Town and NYS DEC officials to inspect facilities and maintenance/operating records, and cooperate with authorities to immediately address any findings. If the permit is withdrawn, operations would not be restarted until Town and NYS DEC officials verify that all emissions systems and controls were operational, open vents and stacks were sealed and the building operating pressure confirmed to be slightly negative to the outside. This last step would insure that all air exhausted from the facility was passing through the appropriate environmental controls (filters, carbon, etc.). The goal is to insure a safe environment and a return of local resident's ability to enjoy their homes while enabling Aluf to continue to operate safely.

Additional Analysis

One member conducted further data analysis looking at spatial variability of individual compounds. The idea is that low spatial variability indicates no sources in the study area, while high spatial variability means there may be a source in the study area. Most of the compounds were stable spatially, with the exception of some which had a spike on 2/1/18 at the Murphy Ct site (where Methylene Chloride, Cyclohexane and a few others were 5-20 times higher than all other sampling events). The most interesting possibly coming from the factory were Acrolein, Isopropanol, and Chloroform. These were consistently variable in space and were highest at the Glenshaw site.

Compound	Average Daily %RSD	Notes
Chloromethane	4%	very stable
Carbon Tetrachloride	4%	very stable
Trichlorofluoromethane (Freon 11)	6%	very stable
dichlorodifluoromethane (Freon 12)	7%	very stable
Benzene	11%	very stable
1,1,2-trichloro-1,2,2-trifluoroethane (Freon 113)	19%	very stable
Heptane	25%	stable except 2/1/18 Murphy Ct
o-xylene	27%	stable except 2/1/18 Murphy Ct
m&p xylene	29%	stable except 2/1/18 Murphy Ct
Acetone	30%	stable except 2/1/18 Murphy Ct
1,2,4-trimethylbenzene	30%	stable except 2/1/18 Murphy Ct
Hexane	47%	fairly stable except 2/1/18 Murphy Ct
Ethanol	50%	fairly stable except 2/1/18 Murphy Ct
methylene chloride	65%	fairly stable except 2/1/18 Murphy Ct
Cyclohexane	69%	fairly stable except 2/1/18 Murphy Ct
1,3-butadiene	32%	?
2-Butanone	34%	?
Tetrachloroethylene	36%	higher last 2 weeks. Consistently Highest at Murphy Ct.
Styrene	43%	variable
Toluene	44%	variable
Ethylbenzene	86%	variable, one very high reading at 1/26/18 Murphy Ct
ethyl acetate	94%	variable, one very high reading 2/1/18 Murphy Ct
Acrolein	47%	variable in space more than time. Glenshaw consistently higher
Isopropanol	72%	variable in space & time, highest at Glenshaw
Chloroform	84%	variable in space more than time, highest at Glenshaw
vinyl acetate	37%	mostly below detection limit, possible elevation at Glenshaw
Tetrahydrofuran	13%	mostly below detection limit, possible elevation at Glenshaw