



REGION 2

NEW YORK, N.Y. 10007

December 3, 2024

Kevin Clarke
Portfolio Manager
New York City Department of Environmental Protection
96-05 Horace Harding Expressway
Corona, NY 11386

Re: RH-34 CSO Retention Tank Mass Excavation

Dear Mr. Clarke:

As you know, during the construction of the RH-034 combined sewer overflow (CSO) retention tank perimeter wall, numerous odor complaints were made by neighborhood residents. In response, the New York City Department of Environmental Protection (NYCDEP) and your contractor took several steps to mitigate the odors and emissions that may have originated from the RH-034 CSO tank site. These steps included the application of odor suppressing foam, use of a perimeter misting system, and construction of a tent over the desander unit, among others. Due to the odor complaints and health concerns expressed by the residents, NYCDEP began collecting weekly air samples via SUMMA canisters in late February 2024 at the intersection of Sackett and Nevins Streets. At the U.S. Environmental Protection Agency's (EPA's) direction, this effort was expanded in June and July 2024 to support a comprehensive health assessment for neighborhood residents. Based on the data that was collected, EPA concluded that it is unlikely that long-term negative health impacts existed for residents near the RH-034 CSO tank site during the subject work.

Because of the need to address the known presence of coal tar contamination at the RH-034 CSO tank site, which is on a portion of the former Fulton Works Manufactured Gas Plant site, in April 2024, EPA directed NYCDEP to develop a work plan to perform the next phase of work (i.e., excavation for the RH-034 CSO retention tank) inside a sprung structure. This directive was consistent with prior communications from EPA regarding the expectation that a sprung structure would be needed for this work (see below).

In response to EPA's April 2024 letter, NYCDEP presented four options for consideration during the mass excavation--a full-sized tent covering the entire area of excavation; a half-sized tent which could be moved between the northern and southern halves of the excavation as work progresses; a half-sized tent which would remain stationary over the southern half of the excavation where more heavily contaminated soil is anticipated to be encountered; and the accelerated completion of the excavation work without the use of a tent.

NYCDEP's evaluation concluded that a full-sized tent would not be a viable option at this site due to space constraints. EPA agrees with this conclusion. NYCDEP also concluded that the half-sized tent options were physically viable but would add 19 to 29 months to the project schedule for the stationary and moveable options, respectively. Finally, NYCDEP concluded that the work could be completed in around five months by accelerating it, performing a significant portion of said work during the winter months, and not using a tent.

Additional factors to be considered related to the potential for odors during the next phase of work include a shallower depth of excavation compared to the previous phase of work, the planned dewatering of the soil prior to excavation, the planned direct loading of the excavated soil into trucks, and the utilization of additional engineering controls, such as new foam options, directed misting (i.e., OdorBoss), and vapor boxes to capture emissions at the point of excavation and while loading material for off-site disposal.

If NYCDEP can ensure that emissions from the site do not pose adverse health effects to nearby residents, odors are minimized to the maximum extent practicable, and the next phase of the work can be completed in a timely manner, EPA agrees that the excavation work at the RH-034 CSO tank site may be performed under NYCDEP's accelerated option. This concurrence is subject to EPA's requirements for more stringent air monitoring (see below), action levels (see enclosed tables), and reporting, as well as NYCDEP obtaining contracting capacity for the contingency implementation of a moveable sprung structure for the excavation, set forth below.

If the noted measures are not effective in controlling air emissions and odors, EPA will direct NYCDEP to stop the soil excavation work until a sprung structure can be constructed.

Increased Air Monitoring Requirements

Air monitoring during the excavation phase of the work shall include the eight community air monitoring plan stations utilized during the previous phase of work to monitor total volatile organic compound concentrations and PM₁₀ concentrations around the site perimeter. NYCDEP shall also collect daily (i.e., seven days per week), 24-hour SUMMA canister samples from 13 locations on-site, at the site perimeter, and further out in the neighborhood to establish whether emissions from the RH-034 CSO tank site work are impacting air quality in the area surrounding the site. EPA also concurs with the proposed placement of two background SUMMA canister locations to be collected daily. See Figure 1, enclosed, for the approved monitoring locations. NYCDEP shall endeavor to receive laboratory data for the daily SUMMA canisters within 24 hours or the shortest possible turnaround time achievable.

EPA also intends to use its Trace Atmospheric Gas Analyzer (TAGA bus) mobile laboratory's triple quadrupole mass spectrometer and chemical ionization time-of-flight mass spectrometer to monitor real-time naphthalene concentrations in the ambient air in the neighborhood for several weeks.

Real-time naphthalene monitors¹ have been provided to NYCDEP by EPA. These monitors should be initially co-located with the TAGA bus analyzers so that the results between the devices can be compared to ensure that accurate data is being recorded. Once this has been confirmed, the sensors no longer need to be co-located with TAGA bus analyzers. In the event that the TAGA bus is not available at the beginning of project, the naphthalene monitors will be co-located and compared with Summa data, acknowledging the limitations. The data collected by the monitors shall be used to inform the construction team of when and where to apply additional engineering controls to reduce odors and emissions, as well as investigate off-site odor reports.

SUMMA canister results will be compared against several criteria to assess impacts to the neighborhood from naphthalene. These criteria are outlined in detail in the enclosed Tables 1, 2, and 3 and additional criteria to assess odors are outlined in enclosed Table 4. EPA reserves the right to stop work at any time if engineering controls prove ineffective at controlling odors and/or emissions.

¹ It should be noted that the current settings for the real-time monitors require downloading the collected data periodically, therefore although 1-hour sampling results will be available, there will be a short delay in evaluating the data. NYCDEP shall download data from the monitors at least every four hours while work is occurring.

Further, EPA reserves the right to require work to pause at any time if health-based air concentrations of TO-15 compounds are exceeded, if there is reason to believe these concentrations may have been exceeded (e.g., if real-time data is unavailable), or if odor complaints attributable either to the RH-034 site or unknown sources represent a significant negative impact to the quality of life for neighborhood residents. After repetitive exceedances, suspected exceedances, or odor complaints attributable to the RH-034 site, EPA reserves the right to stop work at any time.

Meteorological data shall be collected from four on/near-site locations as an additional means of determining the source of any odors or emissions. The locations of the meteorological stations are indicated on enclosed Figure 1 along with the SUMMA canister locations. Detailed daily field notes should also be collected to document additional potential sources of odors and emissions, such as road paving, roofing operations, etc. Wind roses shall be provided daily for each location.

NYCDEP shall immediately investigate all odor complaints received during working hours according to the decision tree outlined in enclosed Figure 2, and odors should be evaluated according to the criteria described in Table 4. Odor complaints received during non-working hours shall be investigated prior to the start of the next workday. If the RH-034 CSO retention tank site is determined to be a source of the odors, work shall pause until corrective actions can be taken. If odors are determined to be coming from another source, NYCDEP shall endeavor to inform a representative of the source site and work shall continue without further action on NYCDEP's part. If no source can be determined, NYCDEP may continue work while evaluating and implementing additional engineering controls, as appropriate.

NYCDEP shall also develop a quality assurance project plan (QAPP) for the above air monitoring. However, to establish a baseline dataset, monitoring shall begin as soon as possible (i.e., prior to approval of the QAPP) and prior to the start of excavation. NYCDEP shall seek to have all laboratory data validated as quickly as possible after receipt.

NYCDEP shall update the Community Air Monitoring Plan and Odor and Air Emissions Control Plan to include action levels for TO-15 compounds², contingency plans if action levels are exceeded, anticipated new and/or modified engineering controls, and any other new information, as appropriate, including requirements described elsewhere in this letter. These updates shall be completed prior to the start of any work which may cause odors. Enclosed Tables 1-4 shall be included in the above-noted plans.

EPA Oversight and Coordination

EPA will be providing additional on-site personnel to ensure increased oversight and response capacity during all working hours. NYCDEP shall, similarly, ensure that at least one department representative is on-site during all working hours to provide oversight.

EPA also directs NYCDEP to meet with EPA daily during the first two weeks of excavation to review all air monitoring data and determine if additional engineering controls are necessary, if work practices need to be altered, or if excavation work needs to be paused to meet the naphthalene concentration limits set forth in the enclosed tables. After the initial two-week period, the frequency of these meetings will be reassessed. EPA will be coordinating with the New York State Departments of Environmental Conservation and Health and request that NYCDEP representatives participate in these meetings.

² Naphthalene action levels are provided with this letter as it is the primary source of risk from potential site emissions. Additional action levels for the remaining TO-15 compounds are under development by EPA and will be provided to NYCDEP as soon as possible.

Sprung Structure Contracting

It is EPA's understanding that NYCDEP's excavation contract provides for a sprung structure but does not provide funding for the additional equipment and costs to operate the sprung structure. Consistent with EPA's directives, EPA believes that NYCDEP's contracting should have provided for contingency funding for implementation of a sprung structure.

EPA believes that NYCDEP has been on notice since the 2016 Tank Administrative Order on Consent (AOC) of the strong potential need for a sprung structure. EPA's expectation regarding the use of a sprung structure was communicated to NYCDEP verbally in Spring 2023 and in writing on July 7, 2023. NYCDEP raised no objections.

As a result, based on the currently available information, EPA does not believe that excavation delays related to contracting are justified, and, if EPA directs the use of a sprung structure, any contracting-related delay may be a potential violation of the 2016 Tank AOC and subject to stipulated penalties of up to \$10,000 per day.

Nevertheless, in the event that EPA directs that excavation activities cease pending implementation of a sprung structure, NYCDEP may submit a request to EPA for an extension of the excavation schedule. Note, however, as per the discussion above, contracting-based extensions will be particularly closely scrutinized.

EPA directs NYCDEP to obtain contracting capacity for the contingency implementation of a moveable sprung structure for the excavation. If NYCDEP can utilize alternative interim contracting measures, such as work change orders that will allow sprung structure implementation without contract-related delays, those measures shall be utilized.

If EPA directs the use of a sprung structure, any contracting-related delay may be a potential violation of the 2016 Tank AOC and subject to stipulated penalties of up to \$10,000 per day.

As required by the 2016 Tank AOC provisions regarding avoidance of delays, particularly as it pertains to contingency measures for implementation of a sprung structure, NYCDEP shall also explore and, subject to EPA approval, implement all appropriate options for odor and emission controls and otherwise take all reasonable measures to avoid or minimize delays to the work,

Increased Community Involvement

All data shall be posted to NYCDEP's website as soon as possible after it is received either from the laboratory, in the case of the SUMMA canisters, or compiled by the construction team, in the case of the real-time naphthalene sensors. Where applicable, the website should indicate that the data is unvalidated and subject to change. The website should be updated with validated data when it is available.

Residents shall be provided with a brief, two-week lookahead schedule each week so that they are aware of upcoming work at the site, including any afterhours activities which may cause noise or otherwise disturb the residents. This summary shall include an easy-to-read summary of the air monitoring data collected over the previous week. The summary shall be posted on the NYCDEP website, as well as sent to the site's e-mail list.

NYCDEP shall set up a 24/7 hotline for residents to call with questions or complaints related to the RH-034 tank project. NYCDEP shall provide EPA with notice of all resident complaints which are not otherwise submitted to EPA directly.

When an odor complaint is received during working hours, NYCDEP shall reply to the person making the complaint as quickly as possible, but no later than 24 hours following the completion of an odor investigation, indicating whether a source was determined and what, if any, corrective/mitigation actions were taken. Complaints received during non-working hours or non-working days shall be replied to no later than the end of the next working day.

Conclusion

EPA's primary concern during the excavation of the RH-034 CSO retention tank is protecting the health of the neighborhood's residents. We look forward to working with NYCDEP to ensure that this project is completed safely, in a timely manner, with as minimal impact to the community as possible. Please let me know if you have any questions or concerns. EPA and our consultants are available to meet upon request.

Sincerely,

**THOMAS
MONGELLI**

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MONGELLI
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Thomas Mongelli
Remedial Project Manager

Enclosures

Table 1 – Summa Air Sample (24-hour) Action Levels for Naphthalene. *Note this will apply to fence line and community monitoring results.*

Action Level	Concentration Level	Required Action	Required Reporting
Normal Operations Level	Below 80% of threshold <16 µg/m ³ – 24 hours	Continue existing controls.	Weekly reporting of data to EPA, NYSDEC, NYSDOH.
Alert Level	≥16 to <20 µg/m ³ – 24 hours	<ul style="list-style-type: none"> Identify the cause of increased emissions. Pause work, if necessary. Implement additional monitoring to confirm background concentrations. Reduce laboratory turnaround time to 24 hours, if not already implemented. Implement mitigation measures. 	<ul style="list-style-type: none"> Notify EPA within 1 day of receipt of alert level exceedance. Weekly reporting to EPA, NYSDEC, and NYSDOH to include description of corrective actions
Action Level	≥20 µg/m ³ – 24 hours	<ul style="list-style-type: none"> Pause work. Identify cause of exceedance. Establish additional monitoring stations to evaluate cause of increased emissions. Reduce laboratory turnaround time to 24 hours, if not already implemented. Develop action plan and implement additional mitigation measures. 	<ul style="list-style-type: none"> Notify EPA, NYSDEC, and NYSDOH immediately upon receipt of data. Provide daily monitoring reports to EPA, NYSDEC, and NYSDOH. Within 2 days of discovery of the exceedance, provide a corrective action report describing causes of exceedance and mitigation implemented.

Table 2 – Summa Air Sample (Weekly) Action Levels for Naphthalene. *Note this will apply to fence line and community monitoring results.*

Action Level	Concentration Level	Required Action	Required Reporting
Normal Operations Level	Below 80% of threshold <2.4 µg/m ³ – weekly	Continue existing controls.	Weekly reporting of data to EPA, NYSDEC, and NYSDOH
Alert Level	≥2.4 to <3 µg/m ³ – weekly	<ul style="list-style-type: none"> Identify the cause of increased emissions. Pause work, if necessary. Implement additional monitoring to confirm background concentrations. Reduce laboratory turnaround time to 24 hours, if not already implemented. Implement mitigation measures. 	<ul style="list-style-type: none"> Notify EPA within 1 day of receipt of alert level exceedance. Weekly reporting to EPA, NYSDEC, and NYSDOH to include description of corrective actions.
Action Level	≥3 µg/m ³ – weekly	<ul style="list-style-type: none"> Pause work. Identify cause of exceedance. Establish additional monitoring stations to evaluate cause of increased emissions. Reduce laboratory turnaround time to 24 hours, if not already implemented. Develop action plan and implement additional mitigation measures. 	<ul style="list-style-type: none"> Notify EPA, NYSDEC, and NYSDOH immediately upon receipt of data. Provide weekly monitoring reports to EPA, NYSDEC, and NYSDOH. Within 2 days of discovery of the exceedance, provide a corrective action report describing causes of exceedance and mitigation implemented.

Table 3 – Real-Time (1-hour) Action Levels for Naphthalene. *Note that the current settings for the real-time monitors require downloading the collected data in four-hour intervals, therefore although 1-hour sampling results will be available, there will be a delay in evaluating the data.*

Location	Action Level	Concentration Level	Required Action	Required Reporting
Community	Normal Operations Level	Below 80% of threshold <16 µg/m ³ – 1 hour	Continue existing controls.	Weekly reporting of data to EPA NYSDEC, and NYSDOH
	Alert Level	≥16 to <20 µg/m ³ – 1 hour	<ul style="list-style-type: none"> Identify the cause of increased emissions. Pause work, if necessary. Reduce laboratory turnaround time to 24 hours, if not already implemented. Implement mitigation measures. 	<ul style="list-style-type: none"> Notify EPA within 2 hours of receipt of alert level exceedance. Weekly reporting to EPA, NYSDEC, and NYSDOH to include description of corrective actions.
	Action Level	≥20 µg/m ³ – 1 hour	<ul style="list-style-type: none"> Pause work. Identify cause of exceedance. Establish additional monitoring stations to evaluate cause of increased emissions. Reduce laboratory turnaround time to 24 hours, if not already implemented. Develop action plan and implement additional mitigation measures. 	<ul style="list-style-type: none"> Notify EPA, NYSDEC, and NYSDOH immediately. Provide hourly monitoring reports to EPA, NYSDEC, and NYSDOH. Within 2 days of discovery of the exceedance, provide a corrective action report describing causes of exceedance and mitigation implemented.

Location	Action Level	Concentration Level	Required Action	Required Reporting
Fenceline	Normal Operations Level	Below 80% of threshold <48 $\mu\text{g}/\text{m}^3$ – 1 hour	Continue existing controls.	Weekly reporting of data to EPA, NYSDEC, and NYSDOH
	Alert Level	≥ 48 to <60 $\mu\text{g}/\text{m}^3$ – 1 hour	<ul style="list-style-type: none"> Identify the cause of increased emissions. Pause work, if necessary. Implement additional monitoring to confirm background concentrations. Reduce laboratory turnaround time to 24 hours, if not already implemented. Implement mitigation measures. 	<ul style="list-style-type: none"> Notify EPA within 2 hours of receipt of alert level exceedance. Weekly reporting to EPA, NYSDEC, and NYSDOH to include description of corrective actions.
	Action Level	≥ 60 $\mu\text{g}/\text{m}^3$ – 1 hour	<ul style="list-style-type: none"> Pause work. Identify cause of exceedance. Establish additional monitoring stations to evaluate cause of increased emissions. Reduce laboratory turnaround time to 24 hours, if not already implemented. Develop action plan and implement additional mitigation measures. 	<ul style="list-style-type: none"> Notify EPA, NYSDEC, and NYSDOH immediately. Provide hourly monitoring reports to EPA, NYSDEC, and NYSDOH. Within 2 days of discovery of the exceedance, provide a corrective action report describing causes of exceedance and mitigation implemented.

Location	Action Level	Concentration Level	Required Action	Required Reporting
On-Site (Work Zone) ¹²	Normal Operations Level	Below 80% of threshold <560 µg/m ³ – 1 hour	Continue existing controls.	Weekly reporting of data to EPA, NYSDEC, and NYSDOH.
	Alert Level	≥560 to <700 µg/m ³ – 1 hour	<ul style="list-style-type: none"> Identify the cause of increased emissions. Pause work, if necessary. Implement additional monitoring to confirm background concentrations. Reduce laboratory turnaround time to 24 hours, if not already implemented. Implement mitigation measures. 	<ul style="list-style-type: none"> Notify EPA within 2 hours of receipt of alert level exceedance. Weekly reporting to EPA, NYSDEC, and NYSDOH to include description of corrective actions.
	Action Level	≥700 µg/m ³ – 1 hour	<ul style="list-style-type: none"> Pause work. Identify cause of exceedance. Establish additional monitoring stations to evaluate cause of increased emissions. Reduce laboratory turnaround time to 24 hours, if not already implemented. Develop action plan and implement additional mitigation measures. 	<ul style="list-style-type: none"> Notify EPA, NYSDEC, and NYSDOH immediately. Provide hourly monitoring reports to EPA, NYSDEC, and NYSDOH. Within 2 days of discovery of the exceedance, provide a corrective action report describing causes of exceedance and mitigation implemented.

¹ Due to limited quantities of real-time monitors, it is unlikely that one-hour samples will be collected from on-site locations. The decision table for on-site (work zone) is included for completeness and will allow for utilization if additional real-time monitors become available and/or if a site-specific need for one-hour monitoring data on-site is necessary.

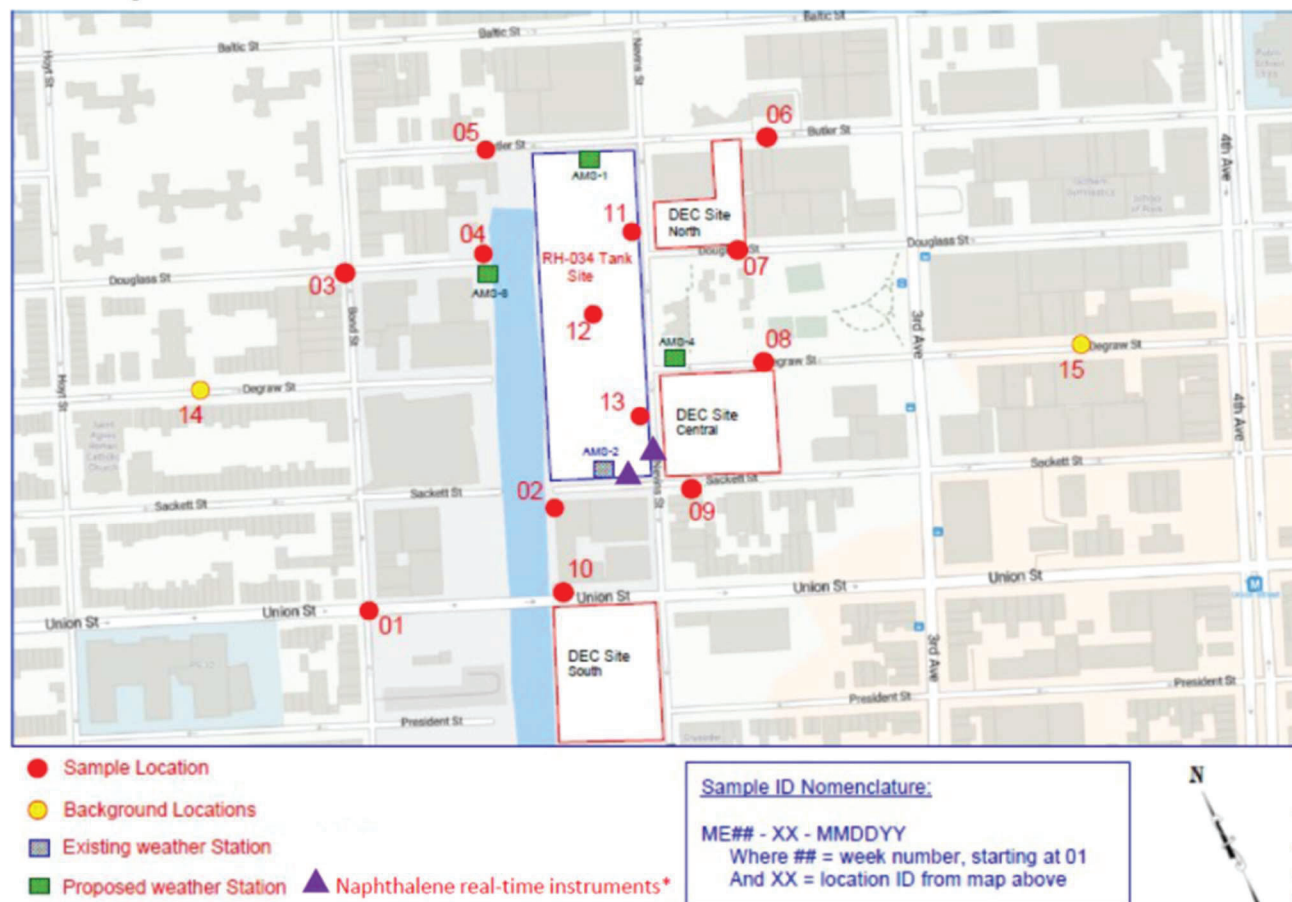
² While OSHA has jurisdiction for protecting worker safety, EPA is requesting they be monitored at a more conservative, health-protective level which will also inform the potential for off-site migration of naphthalene in air.

Table 4 – Odor Action Levels

While the intensity of odors is subjective, and odor threshold concentrations vary from person to person, nuisance odors are expected during the remediation activities. Odor observations will be classified following the odor classification scale below:

Odor Level	Description	Required Action
0	No odors detected at site perimeter.	N/A
1	A slight odor is present at the perimeter location. The odor is intermittent and not steady. Minimal impact to off-Site community receptors downwind of the location.	Odor control measures at the Site are adequate and activities may continue.
2	Odors at the perimeter are stronger than “1” condition and relatively steady. There is no indication that the off-Site community receptors downwind of the location have been affected.	In order to mitigate potential community impacts, additional odor control measures will be implemented including, but not limited to, odor-suppression foam, covering (tarping) of exposed face, or water spray.
3	“2” condition still exists after additional odor control measures have been applied. The community has become aware of the situation and is reacting.	Most likely on-Site odor-generating activities will cease, and full odor control measures will be applied (see condition “2”). The situation will be re-evaluated prior to resuming odor-generation activities.

Figure 1. Components of monitoring plan including location of SUMMA canisters, weather stations and real-time monitoring instruments.



Monitoring Plan

- Four weather stations
- Ten community summa canisters (daily 24-hour samples with 24-hour turnaround for results)
- Three on-site summa canisters (daily 24-hour samples with 24-hour turnaround for results)
- Two background summa canisters (daily 24-hour samples with 24-hour turnaround for results)
- Two naphthalene real-time instruments at fence line near work activity (continuous 1 hour sampling increments during work time – replaced and data download every four hours)
- TAGA bus in community with limited durations (weeks) as availability allows – instantaneous naphthalene results
- Portable GC and/or naphthalene real-time instrument (utilizing upwind monitor as needed) available for odor investigations (15 min to 4 hour sample results depending on instrument)

*note real-time instruments may consist of a variety of items, including but not limited to, naphthalene-specific monitor, portable GC or vehicle mounted GC (i.e., TAGA Bus)

Figure 2

Odor Complaint Decision Tree

