

Louisville Metro Air Pollution Control District

Odor Investigation Procedure

Purpose

These procedures shall be used to aid Louisville Metro Air Pollution staff, during routine surveillance and in response to complaints, in the investigation of odors in the community and in the determination of compliance with District Regulation 1.13 Control of Objectionable Odors in the Ambient Air, Section 2.1.

No person shall emit or cause to be emitted into the ambient air any substance that creates an objectionable odor beyond the person's property line. An odor will be deemed objectionable when documented investigation by the District includes, as a minimum: observations on the odor's nature, intensity, duration, and location, and evidence that the odor causes injury, detriment, nuisance, or annoyance to persons or to the public

Procedure

These procedures should be used as completely as possible in making odor observations. However, not all situations will allow for these procedures to be followed exactly. In these cases, variation from the procedures should be documented and explained.

1. The investigator should patrol the area near the complaint or potential odor source. If odors are detected, the investigator should then attempt to determine the source responsible for the odors. This can be done by tracing the odor upwind or, if a source is suspected, by going directly to that source. If the source is identified, the investigator should make an odor observation of at least 15 minutes, near the boundary of the source. Information should be recorded on the observation form. If the source cannot be identified, the investigator should perform their odor observation where the odor is observed at its highest intensity.
2. If odors are not detected during an investigation in response to a complaint, the investigating officer will document the area that was investigated and the absence of objectionable odors at the time of his/her investigation.
3. When possible, the investigator should go to the opposite side of the suspected source and make an odor observation approximately 180° from the initial observation point and record the information obtained.
4. As time and circumstances permit, the investigator should patrol the area around the source and determine the extent of the area affected by the odors. Observations made in transit between observation points may be added to the 'Additional Notes' section of the observation form.
5. The investigator may interview people present in the area affected by the odors to obtain background information. Relevant information includes the frequency and duration of the

odors, whether odors are more common at certain times or days, or under certain circumstances, the period over which the odors have occurred, a description of the odors, their strength, characteristics, and effects.

6. The investigator should make reasonable efforts to notify the source of any objectionable odors at or near the time of the investigation in an effort to mitigate them in the community. Who was notified or reason they were not notified should be included in the Additional Notes section of the Odor Observation form.

Odor Complaint Response Priority

The District will make every attempt to investigate all complaints regarding nuisance odors in a timely and efficient manner. The investigator tasked with these investigations split their time between performing daily routine surveillance around the city, responding to complaints, and taking complaints from citizens. In instances when multiple areas are reporting nuisance odors, the compliance group will use the following matrix to help prioritize their investigations.

Intensity Reported	4 - Very Strong	M	H	VH	VH
	3 - Strong	M	H	H	VH
	2- Moderate	L	M	M	H
	1 – Slight (Weak)	L	L	L	M
		1	2	3	4+
Number of Complaints					

Scale: Low, Medium, High, Very High

Other factors may be used to determine priorities, including but not limited to, the proximity of the compliance officers to an area, the nature of the reported odors, potential health impacts, and if the odor being reported is a frequent or re-occurring odor.

Observation Form

Information for each observation should be recorded at the time of the observation.

- A. Strength of Odor: The range of odors observed at each observation point should be recorded using the Odor Intensity scale. If the intensity varies during the observation, the highest should be listed and notations made regarding the range of intensities observed.

0: No Odor

1: Slight (Weak) Odor: The level at which the odor becomes detectable and can be described by its characteristics or can be distinguished from other odors.

2: Moderate Odor: The level at which the odor becomes strong enough to block the other odors but is not so strong as to make someone try to avoid the odor.

3: Strong Odor: The level at which a person would take a positive action to attempt to avoid the odor.

4: Very Strong Odor: The level at which the odor produces physiological effects, such as nausea, difficulty of breathing, irritation of the eyes, nose, throat, or the level at which a residual smell remains after the odor is gone.

B. Odor Nature: The investigator should describe as fully and objectively as possible the odors perceived, including descriptions of commonly known odors. Any physiological effects should be noted. Here are some examples of offensive, foul, unpleasant, or repulsive odors:

Blood drying operations	Landfill waste	Digested or chemically treated sludge
Sewage treatment	Stockyard odors (confined cattle, pig or poultry)	Waste-activated sludge processes
Rotting animals/fish	Decaying silage, composting	Gasoline/Diesel fuel
Hide processing	Rending plant material & wastewater	Combustion Exhaust
Rancid grease	Typical grease trap odor	Burned coffee
Landfill gas, sour gas	Burning trash	Petroleum Products
Rotten Eggs (Hydrogen Sulfide)	Organic chemicals like auto body paint & styrene	Chlorine
Natural gas (mercaptan additive)	Ammonia	

C. Weather information: Should be obtained from the National Weather Service (<https://www.weather.gov/>). Use the search function on the website to search for the zip code for your location during the investigation. Any significant differences between actual

conditions at the observation sites and the information obtained from such meteorologist should be noted on the observation form.

- D. Location: The observation form should include a description of where each observation was made, including an address or intersection. After the initial observation is made, a second observation should be made from the opposite side of the suspected source if possible.
- E. Duration: Each odor observation should be made for a minimum of 15 minutes. The investigator will enter the time that the observation began and ended on the Odor Observation Form, and the cumulative amount of time the odor was observed during this period should be entered in the space for “Odor Duration.”

The procedure set out in this document is intended solely for the guidance of Louisville Metro Air Pollution Control District employees. The District reserves the right to act at variance with the procedure and to change it at any time without public notice. This procedure is not binding on the District. District Enforcement staff should continue to make appropriate case-by-case enforcement judgements, guided by, but not restricted or limited to, this procedure.

Effective v1 8-7-18; Amended v2/11-7-19, v3/11-15-19, v4 11/01/22, v5 11/04/22

Louisville APCD Odor Observation Form

Investigator: _____

Date: _____

CSR #: _____

Suspected Source of Odor: _____

Odor Strength (circle one)	Odor Nature	Location of 1 st Observation
0 - No Odor	_____	_____
1 - Slight (Weak)	_____	_____
2 - Moderate	_____	_____
3 - Strong	_____	_____
4 - Very Strong	_____	_____

Observation Start Time _____ Observation End Time _____ Odor Duration _____
Wind Direction _____ Wind Speed _____
Weather _____

*** If possible, go to the opposite side of the suspected odor source to make a 2nd observation ***

Odor Strength (circle one)	Odor Nature	Location of 2 st Observation
0 - No Odor	_____	_____
1 - Slight (Weak)	_____	_____
2 - Moderate	_____	_____
3 - Strong	_____	_____
4 - Very Strong	_____	_____

Observation Start Time _____ Observation End Time _____ Odor Duration _____
Wind Direction _____ Wind Speed _____
Weather _____

Additional Notes

