

Fact Sheet: 3

VOLATILE ORGANIC CHEMICAL (VOC) SAMPLING

Noncommunity Public Water Supplies

WATER SUPPLY SERIAL NUMBER: _____ WELL: _____

NAME OF WATER SUPPLY: _____

SAMPLING CONTACT PERSON: _____ PHONE: _____

HEALTH DEPARTMENT CONTACT: _____ PHONE: _____

⇒ VOC SAMPLE FREQUENCY: _____ SAMPLE(S) EVERY _____ MOS.

⇒ SAMPLING TAP LOCATION: _____

(Sampling siting plan required to be approved by local health department—see sanitary survey document)

Volatile Organic Chemicals - General Information

Volatile organic chemicals include components of petroleum based products and industrial solvents and chemicals. They may be associated with leaking underground tanks, improper disposal practices, leachate from landfills, discharge from chemical plants and other activities. Ingestion of these chemicals at certain levels in drinking water may lead to anemia, liver and spleen disorders, reproductive problems and an increased risk of certain cancers. Their presence in drinking water may be linked to possible contamination by these sources and may indicate a poorly constructed or damaged well, a vulnerable aquifer, a contaminated site or a combination of any of these. The US EPA has established Maximum Contaminant Levels (MCLs) for certain chemicals in public water supplies (see back).

SAMPLING PROTOCOL

- Obtain proper sample containers from a laboratory certified by the Michigan Department of Environmental Quality for analysis of all required parameters.
- The sample vials may contain a chlorine neutralizer. Tap each vial in an upright position to drain the preservatives from the cap. ***DO NOT RINSE VIAL BEFORE COLLECTION.*** Do not open the vial until ready to collect the sample. Do not touch the inside of cap or vial.
- Select a clean faucet without attachments or leaking stem. Allow water to run for ten minutes (until cold) at full flow.
- Reduce flow and collect the sample directly into all vials provided. **Fill vial until water rounds at the top of the vial. Cap and invert to check for air bubbles in the vial. (The septa, i.e. the rubber part inside the cap ring, must be smooth side down in contact with the sample to avoid possible contamination.)**
- If air is observed in the inverted sample, remove cap, add water, (DON'T DUMP SAMPLE) and recap as instructed.

(over)

- Keep the samples refrigerated and complete the report form ***making sure to record the WSSN, date and time of sampling*** and return address on the form correctly. Be sure to request the proper lab analysis or test code for volatile organic chemistry if using the MDEQ lab. Use the appropriate forms if using a different certified lab.
- Deliver or mail the sample units together to the lab as soon as possible so the transit time is not exceeded. See the unit label for transit times.

<i>VOLATILE ORGANIC CHEMICAL SAMPLING (WITH WAIVER)</i>			
<u><i>Contaminant</i></u>	<u><i>MCL (mg/l)</i></u>	<u><i>Contaminant</i></u>	<u><i>MCL (mg/L)</i></u>
<i>Benzene</i>	<i>0.005</i>	<i>Vinyl Chloride</i>	<i>0.002</i>
<i>Carbon tetrachloride</i>	<i>0.005</i>	<i>1,2-dichloroethane</i>	<i>0.005</i>
<i>Trichloroethylene</i>	<i>0.005</i>	<i>1,2-dichloroethylene</i>	<i>0.007</i>
<i>1,1,1-trichloroethane</i>	<i>0.20</i>	<i>Para-dichlorobenzene</i>	<i>0.075</i>
<i>Cis-1,2-dichloroethylene</i>	<i>0.07</i>	<i>Ethylbenzene</i>	<i>0.7</i>
<i>O-dichlorobenzene</i>	<i>0.6</i>	<i>Styrene</i>	<i>0.1</i>
<i>Tetrachloroethylene</i>	<i>0.005</i>	<i>Toluene</i>	<i>1.0</i>
<i>Trans-1,2-dichloroethylene</i>	<i>0.1</i>	<i>Xylenes (total)</i>	<i>10.0</i>
<i>Dichloromethane</i>	<i>0.005</i>	<i>1,2,4-trichlorobenzene</i>	<i>0.07</i>
<i>1,1,2-trichloroethane</i>	<i>0.005</i>	<i>1,3-dichloropropane</i>	<i>0.005</i>
<i>Monochlorobenzene</i>	<i>0.1</i>		

WHEN YOU RECEIVE THE TEST RESULTS:

1. Review the sample results and send a copy of results to the local health department. (Note if you use the MDEQ lab and have **properly completed the sample form**, results are sent to the local health department.)
2. **If the sample shows “non-detect” for all analytes:**
 - ◆ No further action is necessary unless conditions change or you are notified otherwise by the local health department.
 - ◆ Sample on the frequency established by your health department (usually 1 sample every 6 years with a written waiver.)
3. **If the sample indicates the presence of one or more of the analytes:**
 - ◆ Immediately contact your health department for instructions regarding further sampling requirements.
 - ◆ Compliance with MCLs is determined by averaging results for four quarters or if one confirmed result is four times higher than the standard.