

## Fact Sheet: 4

### *SYNTHETIC ORGANIC CHEMICAL (SOC) SAMPLING Nontransient Noncommunity Public Water Supplies*

WATER SUPPLY SERIAL NUMBER: \_\_\_\_\_ WELL #: \_\_\_\_\_

NAME OF WATER SUPPLY: \_\_\_\_\_

SAMPLING CONTACT PERSON: \_\_\_\_\_ PHONE: \_\_\_\_\_

HEALTH DEPARTMENT CONTACT: \_\_\_\_\_ PHONE: \_\_\_\_\_

⇒SOC SAMPLE FREQUENCY: \_\_\_\_\_ SAMPLE(S) EVERY \_\_\_\_\_ MOS.

⇒SAMPLING TAP LOCATION: \_\_\_\_\_  
(Sampling siting plan required to be approved by local health department—see sanitary survey document)

#### **Synthetic Organic Chemicals – General Information**

**Synthetic organic chemicals are commonly found in pesticides and other industrial and commercial chemical discharges, such as emissions from incinerators. It reaches groundwater through runoff and leachate from industrial and agricultural activities, as well as from landfills. Many of these chemicals may cause health effects such as liver and kidney problems, central nervous system and reproductive difficulties and may even increase the risk of certain kinds of cancers. Their presence in drinking water may indicate a damaged or poorly constructed well, an aquifer under the influence of surface water, a contaminated site or a combination of any of these. The US EPA has established Maximum Contaminant Levels (MCL) for certain chemicals in public water supplies.**

#### **SAMPLING PROTOCOL**

- Obtain proper sample containers from a lab certified by the Michigan Department of Environmental Quality for analysis of all required parameters.
- The MDEQ lab provides three different sample bottles per SOC sample. All three must be filled according to the directions with the bottles. Follow the sampling protocols included with the bottles if using a different certified lab.
- **These bottles contain preservatives. Tap the bottle in an upright position to drain preservatives from cap. Do not rinse bottle before collection.** Do not open bottle until ready to sample. Do not touch the inside of the cap or bottle.
- Select a clean faucet without attachments or leaking stem. Allow water to run for about ten minutes (until cold) at full flow from the sampling tap.
- Reduce flow to avoid splashing and collect the sample directly into the bottle. Fill to the bottom of the neck. **Cap and invert 5 times to mix the sample with the preservatives.**

*(over)*

- Complete the report form *making sure the WSSN, date and time of sampling* and

return address are recorded correctly. Be sure to request the proper lab analysis or test code for synthetic organic chemicals and place the form with the bottles.

- Keep the sample refrigerated. Deliver or mail the samples to the lab as soon as possible to the transit time is not exceeded. See the unit label for transit times.

<i>SYNTHETIC ORGANIC CHEMICAL SAMPLING (WITH WAIVER)</i>			
<i><u>Contaminant</u></i>	<i><u>MCL (mg/l)</u></i>	<i><u>Contaminant</u></i>	<i><u>MCL (mg/l)</u></i>
<i>Alachlor</i>	<i>0.002</i>	<i>Aldicarb</i>	<i>0.003</i>
<i>Aldicarb sulfoxide</i>	<i>0.004</i>	<i>Aldicarb sulfone</i>	<i>0.002</i>
<i>Atrazine</i>	<i>0.003</i>	<i>Benzo(a)pyrene</i>	<i>0.0002</i>
<i>Carbofuran</i>	<i>0.04</i>	<i>Chlordane</i>	<i>0.002</i>
<i>Dalapon</i>	<i>0.2</i>	<i>Di(2-ethylhexyl)adipate</i>	<i>0.4</i>
<i>Di(2-ethylhexyl)phthalate</i>	<i>0.006</i>	<i>Dinoseb</i>	<i>0.007</i>
<i>Heptachlor</i>	<i>0.0004</i>	<i>Heptachlor epoxide</i>	<i>0.0002</i>
<i>Hexachlorobenzene</i>	<i>0.001</i>	<i>Hexachlorocyclopentadiene</i>	<i>0.05</i>
<i>Lindane</i>	<i>0.0002</i>	<i>Methoxychlor</i>	<i>0.04</i>
<i>Oxamyl (vydate)</i>	<i>0.2</i>	<i>Pentachlorophenol</i>	<i>0.001</i>
<i>Picloram</i>	<i>0.5</i>	<i>Polychlorinated biphenyls</i>	<i>0.0005</i>
<i>Simazine</i>	<i>0.004</i>	<i>Toxaphene</i>	<i>0.003</i>
<i>2,4-D</i>	<i>0.07</i>	<i>2,4,5-TP silvex</i>	<i>0.05</i>
<i>Endrin</i>	<i>0.002</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 samples are “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 the local 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 an SOC MCL is determined by averaging results for four quarters. It is exceeded if one confirmed sample is four times higher than the standard.