

Fact Sheet: 4

Synthetic Organic Chemical (SOC) Sampling Nontransient Noncommunity Public Water Supplies

Water Supply Serial Number (WSSN) _____ Well # _____

Name of Water Supply _____

Sampling Contact _____ Phone _____

Health Department Contact _____ Phone _____

SOC Sampling Frequency: Number of Samples _____ taken every _____ months.

Sampling Location _____

(Sampling siting plan approved by local health department in sanitary survey)

Laboratory Name _____ Phone _____

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 these chemicals in public water supplies.

Sampling Protocol

- Obtain proper sample containers from a lab certified by the DEQ for analysis of all required parameters.
- The DEQ 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 the bottle before collection. Do not open the 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 the water to run for about ten minutes (until cold) at full flow from the sampling tap.
- Reduce the 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.
- Keep the sample refrigerated and complete the report form making sure the WSSN, well number, 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.
- 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.

Synthetic Organic Chemical Sampling (with waiver)

Contaminant	MCL (mg/l)	Contaminant	MCL (mg/l)
Alachlor	0.002	Aldicarb	0.003
Aldicarb sulfoxide	0.004	Aldicarb sulfone	0.002
Atrazine	0.003	Benzo(a)pyrene	0.0002
Carbofuran	0.04	Chlordane	0.002
Dalapon	0.2	Di(2-ethylhexyl)adipate	0.4
Di(2 ethylhexyl)phthalate	0.006	Dinoseb	0.007
Heptachlor	0.0004	Heptachlor epoxide	0.0002
Hexachlorobenzene	0.001	Hexachlorocyclopentadiene	0.05
Lindane	0.0002	Methoxychlor	0.04
Oxamyl (vydate)	0.2	Pentachlorophenol	0.001
Picloram	0.5	Polychlorinated biphenyls	0.0005
Simazine	0.004	Toxaphene	0.003
2,4-D	0.07	2,4,5-TP silvex	0.05
Aldrin	Monitor only	Butachlor	Monitor only
Carbaryl	Monitor only	Dicamba	Monitor only
Dieldrin	Monitor only	3-hydroxycarbofuran	Monitor only
Methomyl	Monitor only	Metribuzin	Monitor only
Propachlor	Monitor only		

After Receiving VOC Test Results

1. Review the sample results and send a copy of results to the local health department. (Note if you use the DEQ 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.