

**Coordinated State Agency Response Policy
for Detections of Volatile Organic Compounds in
Ground and/or Drinking Water**

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I. Purpose of Document

In recent years, state agencies have become increasingly involved in situations where volatile organic compound (VOC) contamination has been found in groundwater used for drinking water. Although individual agencies have worked together to respond to these incidents, these same agencies felt that a “coordinated response policy” was needed to maximize the State of Delaware’s effectiveness when responding to future incidents. This policy is designed to fulfill that need.

The purpose of this document is to:

- 1) Identify relevant state agencies and contacts,
- 2) Cite the legal authority each agency has as it applies to VOC contamination in groundwater and/or drinking water,
- 3) Identify the response actions available to each state agency,
- 4) Define a communication network between state agencies, and,
- 5) Define the procedure for data and information sharing.

II. Importance of Ground-Water Quality

Groundwater is used extensively in Delaware for drinking water. Approximately 43% of New Castle County’s drinking water is generated from ground water sources. Kent and Sussex County rely solely on groundwater either through private or public wells; therefore, it is important that the State be prepared to respond appropriately and effectively should a VOC be found in drinking water at *any* concentration.

III. Existing Legal Authority

Two state agencies, DNREC and DHSS, have statute(s) and accompanying regulations that apply to VOCs in groundwater and/or drinking water. In some cases, there is overlap in authority, and more than one statute may apply. This section identifies the legal authority of individual state agencies, and a brief summary of their responsibilities with regard to VOC contamination in groundwater and/or drinking water.

A. Department of Natural Resources and Environmental Control

The Delaware Department of Natural Resources and Environmental Control (DNREC) has legal authority for protecting the State’s ground and surface water, and enforcing water quality standards. DNREC has several Divisions with their own ground-water protection focus, and regulations.

DNREC's Division of Waste & Hazardous Substances (DWHS) has legal authority under 7 Del.C., Chapters 60, 63, 74 and 91 for enforcing ground and drinking water standards. The DWHS includes the Site Investigation and Restoration Section (SIRS), Tank Management Section (TMS), Solid and Hazardous Waste Management Section (SHWMS), and Emergency Prevention and Response Section (EPRS).

DWHS has legal authority in instances where a point source (e.g., abandoned dump, manufacturing facility, industrial site, leaking underground storage tank, etc.) has caused ground/drinking water contamination. This Division also regulates active industrial and commercial facilities, and is responsible for responding to chemical spills which may impact surface water and/or groundwater.

DNREC's Division of Water (DW) – has legal authority from 7 Del.C., Chapter 60, and has broad legal authority to protect ground and surface water from contamination. Of particular interest is the Division's Water Supply Section (WSS), responsible for issuing water well permits for groundwater extraction and monitoring. Water well permits are flagged for contaminant review when the proposed location is proximal to a known point source contaminant site.

DW – WSS is responsible for completing and updating public water system source water assessments which provide local and State governments and the public information about protecting public drinking water resources. The assessments are updated to reflect contamination detected in the raw well water for 5 years prior to the assessment by the Division of Public Health's Office of Drinking Water (HSP/ODW) at any concentration.

B. Department of Health and Social Services – Division of Public Health

The Division of Public Health's (DPH) Health Systems Protection (HSP), Office of Drinking Water (HSP/ODW) is responsible for ensuring the drinking water supplied by Public Water Systems (PWS) meets federal and state drinking-water quality standards. DPH has legal authority under 16 Del.C. to enforce drinking-water quality standards for PWS. DPH has additional legal authority under 29 Del.C. to protect public health and the general welfare when requested by a private well owner.

The State currently does not regulate the water quality of private drinking water wells. Therefore, State agencies are generally limited to offering recommendations and advice to a private well owner with a water quality problem.

IV. Criteria for Notification of DNREC by HSP/ODW for VOCs found in Ground and/or Drinking Water

This section describes VOCs regulated by HSP/ODW (Table 1) and the threshold conditions for notification of DNREC by HSP/ODW.

- 1) If, through routine water testing, HSP/ODW encounters a VOC in ground/drinking water that exceeds one-half the maximum contaminant level (MCL) shown in Table 1, then HSP/ODW will notify DNREC through DNREC/DWHS and DW.
- 2) If HSP/ODW records a VOC above the analytical practical quantitation limit (PQL) for two successive sampling events (independent of sampling schedule), then HSP/ODW will notify DNREC through DNREC/DWHS.

Table 1- Maximum Contaminant Levels (MCLs) for VOCs as defined by HSP/ODW Regulations

Compound	MCL (mg/L)	Also Known As...
Benzene	0.005	Benzol 90, Coal Naptha, Phene, Pyrobenzol
Carbon Tetrachloride	0.005	Benzioform, Carbon tet, Perchloromethane
1,2-Dichlorobenzene	0.6	Chloroden, DCB, Dilantin DB, Dowtherm E
1,4- Dichlorobenzene	0.075	Para Crystals, Paradichlorobenzene, PDB
1,2-Dichloroethane	0.005	Brocide, Dutch oil, Ethylene dichloride,
1,1 Dichloroethylene	0.007	1,1-DCE, VDC, Vinylidene chloride
Cis-1,2-Dichloroethylene	0.07	1,2 DCE, Acetylene Dichloride
Trans 1,2 Dichloroethylene	0.1	1,2 Dichloroethene, Trans Acetylene Dichloride
Dichloromethane	0.005	DCM, Methylene Chloride
1,2 Dichloropropane	0.005	Propylene chloride, Propylene dichloride
Ethylbenzene	0.7	EB, Ethylbenzol, Phenylethane
Methyl tert Butyl Ether	0.01	MTBE
Monochlorobenzene	0.1	Benzene Chloride, Chloro Benzol, Phenyl Chloride
Styrene	0.1	Ethyenyl benzene
Tetrachloroethylene	0.001	Tetrachloroethene, PCE, PERC
Toluene	1	Methylbenzene, Metacide, Phenylmethane, Toluol
1,2,4-Trichlorobenzene	0.07	1,2,4 TCB
1,1,1-Trichloroethane	0.2	Chloroethene, Methyl Chloroform
1,1,2-Trichloroethane	0.005	Ethane trichloride, Vinyl trichloride
Trichloroethylene	0.001	Trichloroethene, TCE
Vinyl Chloride	0.001	Chloroethene, Monochlorethene, MVC
Xylenes (total)	10	Dimethyl benzene, Xylol, Methyl Toluene

V. Notification Procedures When VOCs are Found in Ground and/or Drinking Water

This Section describes the procedures to follow when a VOC is detected in ground and/or drinking water per the criteria set forth in IV.

A. Wells Used for Public Water Supply

The drinking water quality of PWS is regulated by the DPH-HSP/ODW. The DPH-HSP/ODW is required to take predetermined action(s) if a regulated VOC is in violation of a drinking water standard. The actions required are outlined in law and/or regulation. In addition to the required actions, the HSP/ODW will notify DNREC/DWHS and DW via email or telephone.

Depending on the circumstances, DNREC may also begin an investigation of the potential source(s) of the VOC contaminant. For example, if a former dump or waste site is suspected as a potential source of the contaminant(s), DNREC-SIRS may initiate a ground-water investigation. Whereas DPH is responsible for ensuring the PWS is in compliance with drinking water standards, DNREC is responsible for ensuring that environmental standards (i.e. for protection of human health and the environment) are met. DNREC may require remediation or “cleanup” if a point source for the contaminant is identified.

B. Wells Not Used for Public Water Supply:

The water quality of private domestic wells, agricultural wells, irrigation wells, etc. is not regulated by the DPH-HSP/ODW. Therefore, the drinking water standards and requirements established for VOCs in PWS do not necessarily apply to wells not used for public water supply. Should sampling by HSP/ODW of a private domestic well (or other non PWS well) indicate VOC contamination that meets the previously described criteria of one-half the MCL, notification will come from HSP/ODW to DNREC/DWHS and DW.

VI. Response by DNREC-DWHS and DW to Notification by HSP/ODW

DNREC-DWHS, once notified, will review the data supplied by HSP/ODW and determine whether there is a need to further investigate the identified contamination. DNREC/DWHS will place the data in a database and track locations of the data via a digital mapping system. DNREC/DW will provide hydrogeologic support and assist in preparing any institutional controls such as groundwater management zones, as needed, to protect public health. The DNREC/DW will continue to utilize the SDWIS/State chemical data to update source water assessments for PWS's.

VII. Effective Dates, Modifications and Termination

This agreement will become effective upon the date of the last signatory listed below and will continue in effect unless modified or terminated as stated in this section.

This Coordinated State Agency Response Policy may be modified or terminated only upon the agreement of all signatories or by a representative from each section/division/group. Any modifications must be proposed in writing and approved by the Secretary of DHSS and the Secretary of DNREC.

VIII. State Agency Contact List**DNREC- DWHS**

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IX. Authorized Signatures

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Rita M. Landgraf, Secretary
Department of Health and Social Services
Date: 8/17/15



Karyl T. Rattay, Director
DHSS – Division of Public Health
Date: 07/24/15



David Small, Secretary
Department of Natural Resources and Environmental Control
Date: 9/7/15



Marjorie A. Crofts, Director
DNREC – Division of Waste and
Hazardous Substances
Date: 8.2.15



Virgil Holmes, Director
DNREC – Division of Water
Date: 8/27/15