

THIS POLICY DOES NOT HAVE THE FORCE OF LAW

Designation of Community Public Water Systems Vulnerable to Contamination from Beta Particle and Photon Radioactivity

Division: DDAGW
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I. PURPOSE

This document describes the process that the Ohio EPA Division of Drinking and Ground Waters (DDAGW) will follow when determining whether a community public water system is considered vulnerable to contamination from beta particle and photon radioactivity.

II. BACKGROUND

The U.S. EPA Radionuclide Rule 40 CFR 141.26 revised December 7, 2000 requires public water systems to sample for radiological contamination. As part of this rule, 40 CFR 141.26 (b)(1), community public water systems designated by the state to be vulnerable to beta particle and photon radionuclide contamination will have increased monitoring requirements.

Ohio Administrative Code (OAC) 3745-81-26 (B) states that this designation is based on identified potential radioactive sources which may affect source waters by air deposition, groundwater migration, or surface water releases, however does not indicate which community water systems are involved.

This document describes how a public water system is to be designated as "Vulnerable to Beta Particle and Photon Radioactivity" (hereafter, "Beta Vulnerable"). Consideration will be based on the proximity of a system's well(s) or intake(s) to a known source of man-made beta particle/photon radioactivity. Sources of naturally occurring beta emitter potassium-40 are excluded from consideration per CFR 141.26(b)(1)(i).

III. POLICY:

Community public water systems (excluding satellites) will be examined to determine if they are to be designated as Beta Vulnerable as follows:

1. Attachment A lists entities known to have utilized highly radioactive substances. The list does not include hospitals or sub-critical research facilities unless a release from the facility could result in a substantial amount of contamination. These facilities are identified as potential contamination sources for man-made beta particle and photon radioactivity in Ohio. A GIS search will be conducted to establish if any community public water system (PWS) has wells or surface water intakes located within a one mile radius of these facilities.

2. Those community PWSs wells or intakes within a one mile radius of any of the facilities appearing in Attachment A will be considered “Beta Vulnerable” unless source water assessment and protection (SWAP) data or other information indicate the PWS sources are not susceptible to contamination. If a facility identified as a potential contamination source maintains an established environmental surveillance program, this information will be used to evaluate if monitoring by the PWS is necessary. In conjunction with Division of Emergency and Remedial Response (DERR) and the Office of Federal Facility Oversight (OFFO), historical environmental surveillance data including groundwater monitoring data for the facilities identified as potential contamination sources will be reviewed to identify any aquifers or surface water bodies with detections of man-made beta particle or photon radioactivity.
3. If environmental surveillance data shows that contamination is not present, the community PWSs will not be designated as “Beta Vulnerable” and monitoring will not be required as long as the environmental surveillance data from the facility continues to indicate no contamination. If a facility identified as a potential contamination source does not have adequate historical environmental surveillance data or if the available data indicate detections of contamination for man-made beta particle or photon radioactivity in aquifers or surface waters that could impact a community PWS, that community PWS will be designated as “Beta Vulnerable” and monitoring will be required as specified by OAC 3745-81-26 (B)(1). Alternately, the community PWS could perform an environmental assessment of the suspected contaminant source. If the result of the environmental assessment is a finding of “No Significant Impact”, then the community PWS may not be required to perform the monitoring.
4. In the event of a major radioactive release from any of the facilities listed in Attachment A or from a newly identified man-made radionuclide contaminant source, any community public water system which uses waters impacted by the incident may be designated as “utilizing waters contaminated by effluents from nuclear facilities” and required to perform the monitoring as specified by OAC 3745-81-26 (B)(2).
5. Designation of a community public water system as “Beta Vulnerable” will be proposed as an action of the director.
6. The designation of a community public water system as “Beta Vulnerable” may be reviewed by the director after completing at least one year of monitoring. Based on a review of the monitoring data, the designation of “Beta Vulnerable” may be removed through an action of the director.

IV. HISTORY:

The Division of Drinking and Ground Waters issued this policy on August 23, 2004.

Attachment A

Facilities within or bordering Ohio known to have utilized/handled highly radioactive materials.

Facility	Location	City	Description
Mound Environmental Management Project	P.O. Box 66	Miamisburg	Active DOE Cleanup
Fernald Environmental Management Project	P.O. Box 538705	Miamitown	Active DOE Cleanup
Portsmouth Uranium Enrichment Plant	P.O. Box 700	Piketon	Active DOE Cleanup
Alba Craft	10 W. Rose Ave	Oxford	Closed FUSRAP
Associated Aircraft	Currently Force Control Manufacturing @ 3660 Dixie Highway	Fairfield	Closed FUSRAP
B&T Metals	425 W. Town St.	Columbus	Closed FUSRAP
Baker Brothers	Harleau Place & Post Street	Toledo	Closed FUSRAP
Dayton Unit III	Currently Dayton City Schools Storage @ 1601 West First Street	Dayton	Active FUSRAP Cleanup
Dayton Unit IV	Runnymede Playhouse @ Runnymede Rd & Dixon Ave	Dayton	Active FUSRAP Cleanup
Harshaw Chemical	1000 Harvard Ave	Cleveland	Active FUSRAP Cleanup
HHM Site (Herring-Hall-Marvin Safe Company)	Currently Diebold Company @ 1550 Grand Blvd.	Hamilton	Closed FUSRAP
Luckey Site	Currently Uretech International Corporation	Luckey	Active FUSRAP Cleanup
Scioto Laboratory	Scioto Ordnance Plant	Marion	Active FUSRAP Cleanup
Aliquippa Forge Site*	Beaver Ave & 1 st Street	Aliquippa, PA	Closed FUSRAP
C.H. Schnoor Site*	644 Garfield St.	Springdale, PA	Closed FUSRAP

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Battelle	(2) sites on King Ave. and West Jefferson	Columbus	Active DOE Cleanup
Ashtabula Environmental Management Project	Currently RMI Titanium Company Extrusion Plant	Ashtabula	Active NRC Cleanup
Davis-Besse	5501 N. St. Rt. 2	Oak Harbor	Power Reactor
Perry Nuclear Power Plant	10 Center St	Perry	Power Reactor
Beaver Valley Power Station*	P.O. Box 4	Shippingport, PA	Power Reactor
Ohio State University	Reactor Building (#158) 1298 Kinnear Rd	Columbus	Non-power reactor

*Facility located outside Ohio, within five miles of state border.

DOE - Department of Energy

FUSRAP - Formerly Utilized Sites Remedial Action Program

NRC - Nuclear Regulatory Commission