1,2,3-TRICHLOROPROPANE: SUPPLEMENT TO THE TREATMENT SUBCOMMITTEE MCL SUPPORT DOCUMENT

EVALUATION AND ASSESSMENT OF REMOVAL TECHNOLOGY FOR SPECIFIC ORGANIC CONTAMINANTS IN NJ DRINKING WATER (2009)

NEW JERSEY DRINKING WATER QUALITY INSTITUTE
TREATMENT SUBCOMMITTEE

JUNE 30, 2016

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In September 2015, Commissioner Bob Martin of the New Jersey Department of Environmental Protection requested that the DWQI review the basis for the 2009 recommended MCL for 1,2,3-TCP.

In order to fulfill this request, the Treatment Subcommittee:

- Reviewed the 2009 recommendation
- Reviewed the available relevant literature
- Contacted various water experts across the country

REVIEW OF NEW AVAILABLE TECHNICAL INFORMATION

- Methods other than granular activated carbon (GAC) are still being researched
  - These do not appear to be regularly employed at this time
  - GAC was found to be the most commonly used treatment process
- Identification of full-scale GAC installations and/or literature to assess the ability to remove 1,2,3 TCP to levels below 30 ng/L
  - Full scale GAC installations identified in 4 states

FULL SCALE INSTALLATIONS: EFFECTIVENESS

- Over 100 GAC full-scale installations in Hawaii, many in operation since the mid-1980s. Hawaii MCL is 600 ng/L.
  - A research study using bench-scale testing demonstrated that GAC can be successfully used to meet a possible new MCL for Hawaii of 5 ng/L, this study was conducted utilizing a revised research analytical method with a MDL of 1 ng/L
- Eight (8) GAC full-scale installations were identified in California. California target effluent concentration is 5 ng/L.
- In New Jersey, treatment of private wells to levels below 30 ng/L have been demonstrated to be effective for removal by GAC
- Treatment plants in Suffolk County, NY are also using GAC. In a pilot study of these plants, Suffolk County found 1,2,3 TCP to non-detect levels after treatment of 30,000 bed volumes.

CONCLUSIONS

- At this time, the Subcommittee finds no reason to amend or expand the findings or recommendations in the 2009 document.
- GAC is the only viable treatment technology for the removal of 1,2,3-TCP from drinking water (WaterRF State of the Science Report, March 2016).
- It has been demonstrated that 1,2,3, TCP can be reliably and feasibly removed by carefully designed GAC treatment below the Practical Quantitation Limit of 30 ng/L recommended by the DWQI Testing Subcommittee.