

Evaluation of Polychlorinated Biphenyls Concentrations in Fish from the Dan River in 2016

Dan River

DANVILLE, VIRGINIA

Letter Health Consultation

January 25, 2018

Virginia Department of Health
Division of Environmental Epidemiology
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COMMONWEALTH of VIRGINIA

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Dear Gabriel Darkwah,

Thank you for providing the polychlorinated biphenyls (PCBs) fish tissue concentrations results in fish collected at two sampling locations along the Dan River in Danville, VA in 2016. The Virginia Department of Health (VDH) has finished reviewing the results for public health implications as requested. VDH concludes that the concentrations of PCBs in fish tissue collected from the Dan River in Danville in 2016 are not expected to harm people's health. VDH does not have any recommendations at this time. Currently, there is no fish consumption advisory for this segment of the river.

BACKGROUND AND DISCUSSION

In 2016, the VA Department of Environmental Quality (DEQ) collected fish from the Dan River in the city of Danville. This was done in part to evaluate whether the coal ash release at Duke Energy in North Carolina has resulted in a change in PCBs and metal concentration in fish tissue from the Dan River near the city of Danville. See Table 1 in the attachment for PCB fish tissue results. Fish collection and laboratory analysis will not be discussed.

In October 2000, pursuant to § 32.1-248.01 of the *Code of Virginia*, VDH published guidelines for issuance of fish consumption advisories due to contamination of fish, including PCBs. In 2012, VDH updated the guidelines for establishing a fish consumption advisory. These are available at Virginia Regulatory Town Hall.¹

¹ <http://www.townhall.virginia.gov/>

The current fish consumption guidelines for PCBs are as follows:

- When total PCBs levels in fish range from 100 to below 500 micrograms per kilogram ($\mu\text{g}/\text{kg}$, also parts per billion or ppb; wet weight), VDH recommends limiting consumption of contaminated fish species to two 8-oz meals per month.
- When total levels equal or exceed 500 $\mu\text{g}/\text{kg}$ in fish (wet weight), VDH recommends avoiding consumption of contaminated fish species.

The PCB concentration in all of the fish collected from the Dan River was below the SV (all less than 100 $\mu\text{g}/\text{kg}$).

CONCLUSION

VDH concludes that the concentrations of PCBs in fish tissue collected from the Dan River above Danville in 2016 are not expected to harm people's health.

RECOMMENDATION

VDH does not have any recommendations at this time.

I trust that the above information will be of help to you. Should you have any additional questions please contact Rachel Ellick, M.S. at (804) 864-8194 or at rachel.ellick@vdh.virginia.gov, or Dwight Flammia, Ph.D., at (804) 864-8127 or at dwight.flammia@vdh.virginia.gov.

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Table 1. PCB tissue concentrations in fish collected from the Dan River in September 2016

DEQ Site #	Station name/location/description	DEQ River mile	Sampling Date & Time	Fish species name	No. of fish analyzed	Length (cm)	Weight (g)	Total PCB*
28	Dan River above Schoolfield Dam	4ADAN060.16	09/26/2016 14:00	Carp	3	69.0-73.3	4400-4500	53.21
28	Dan River above Schoolfield Dam	4ADAN060.16	09/26/2016 14:00	Channel Catfish	2	47.0-49.4	919-920	9.70
28	Dan River above Schoolfield Dam	4ADAN060.16	09/26/2016 14:00	Golden Redhorse Sucker	5	32.7-36.6	317-455	0.70
28	Dan River above Schoolfield Dam	4ADAN060.16	09/26/2016 14:00	Golden Redhorse Sucker	5	32.7-36.6	317-455	0.72
29	Dan River above Union Street Dam	4ADAN056.80	09/27/2016 10:30	Carp	3	70.0-72.5	4700-6200	63.86
29	Dan River above Union Street Dam	4ADAN056.80	09/27/2016 10:30	Carp	3	53.7-69.8	2300-5400	20.58
29	Dan River above Union Street Dam	4ADAN056.80	09/27/2016 10:30	Channel Catfish	2	45.7-47.2	799-952	42.93
29	Dan River above Union Street Dam	4ADAN056.80	09/27/2016 10:30	Golden Redhorse Sucker	5	42.3-45.6	663-975	2.84
29	Dan River above Union Street Dam	4ADAN056.80	09/27/2016 10:30	Golden Redhorse Sucker	5	41.1-42.0	646-748	1.59
29	Dan River above Union Street Dam	4ADAN056.80	09/27/2016 10:30	Quillback Carpsucker	4	39.5-45.7	902-1447	19.16
29	Dan River above Union Street Dam	4ADAN056.80	09/27/2016 10:30	White Sucker	2	32.0-32.7	362-366	1.49

*Total PCB denotes sum of polychlorinated biphenyl congeners in µg/kg (also parts per billion (ppb)) wet weight