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Industry's copper claims questioned

Cruise line group's metal counts too high, water engineers say

By Kate Golden | JUNEAU EMPIRE

An element of the Alaska Cruise Association's argument for relaxed wastewater discharge regulations is based on numbers an industry watchdog calls misleading.

If cruise lines want to dump wastewater into Alaska waters, they must comply with a slew of new limits on effluents by 2010. The industry group has said it can't meet the limits for copper, nickel, zinc and cadmium, and has appealed.

Copper has been a particularly sore point, because copper levels in port communities' drinking water are high - and that's drinking water the cruise ships buy and then have to filter before they discharge it.

Under the permit, "cruise ships would be violating the permit were they to simply to take aboard and then discharge water that is deemed safe for consumption by residents of Juneau, Ketchikan, Skagway, Haines and Sitka," according to a presentation made by Alaska Cruise Association president John Binkley in February.

In a chart, Binkley presents copper levels in Southeast ports' drinking water, ranging between 237 and 879 parts per billion, and compares them to the wastewater standard cruise ships will have to meet by 2010: 3.1 parts per billion.

Since cruise ships buy that drinking water from ports, that would mean they'd have to reduce the copper in the water by at least 99 percent.

"You can't take a glass of tap water from a home onto a cruise ship and pour it overboard," Binkley said in an interview. "To me, that's unreasonable. Your drinking water does not meet that standard for copper."

But while data is spotty, there may be a lot less copper in water going to cruise ships than Binkley's chart suggests, said water engineers at several ports.

"Data collected from the customer tap program is of no value with respect to cruise ship discharge permitting," said Tim Gladden, Skagway water superintendent. "Reviewing an informational document published by the Alaska Cruise Association, the residential values appear to have been used. The use of the wrong information in the chart is great for drama, however, of no relevance."

That's because the DEC readings Binkley cited measure the corrosion of local pipes, not the natural concentration of copper in the water cruise ships buy. DEC takes readings at houses with particularly old, corroded copper pipes after the water has sat in the pipes all night leaching copper. Readings have ranged since 1999 from 72 to 940 parts per billion at the most contaminated taps.

But water engineers can also flush out the system and take a reading on water coming through those taps that hasn't had a chance to sit and leach copper. Those readings are likely to be closer to the natural level of copper in the water-and closer to the copper cruise ships are taking aboard, because the water ships buy comes through concrete, not copper pipes.

The last flush reading for Ketchikan came in at 41 parts per billion, according to Dave Johnston, Ketchikan Public Utilities water division foreman.

Gershon Cohen, an industry watchdog in Haines, said filtering from 41 to 3 doesn't seem like such a hardship.

"That's very different from having to go from 878 to 3," said Cohen.

Cohen co-wrote the ballot initiative voters passed in 2006 that required DEC to issue the cruise ship's new permit, and he opposes the industry's appeal.

In an e-mail to DEC officials, he wrote he was convinced "that ACA is grossly misrepresenting the situation to convince people they are being sold water that is extremely high in (copper)."

The situation is echoed in Skagway, whose drinking water Binkley's chart lists at 700 parts per billion. Gladden said the naturally occurring concentration of copper isn't measured often; at the last sampling, in 2001, it was 119 parts per billion.

Binkley said he knew the DEC water tests don't accurately portray the copper levels in the water that ends up on the cruise ships. He said cruise lines were now in the process of collecting data and so far only had "preliminary" results.

Incidentally, none of the high copper values for port drinking water violate their own drinking water standard, which is much higher: 1,300 parts per billion.

Wastewater copper limits are more stringent than drinking water ones for a good reason, said DEC water quality division chief Jim Powell. Fish are a lot more sensitive to copper than people are. As an example of why, Lowell said, new University of Washington studies have found that salmon homing devices are disoriented by trace amounts of copper in the water.

DEC cruise ship program manager Denise Koch said she's interested in how much copper goes aboard cruise ships because it may affect what sort of technology the ships have to use to get it down to 3.1 parts per billion.

But in one sense, it doesn't matter to DEC whether the copper going aboard is 940 parts per billion or 41.

"The impact on the permit limit is this: The permit limit stays the same," she said.

State legislator Rep. Max Gruenberg, D-Anchorage, was one of those targeted for persuasion on a cruise ship junket in mid-June.

He saw the chart in Binkley's presentation, and gleaned that the cruise ship was being held to much more stringent standards than the port communities themselves.

"If it's the case that it was too stringent to be reasonable, then I'd be willing to take a look at it (in the Legislature)," he said.

But he did not know that even though the drinking water copper levels were much higher, they were within the limits for drinking water.

Upon learning that, he said, "That's comparing apples to oranges ... I had no idea one was drinking water and the other was wastewater."

"That takes the conversation to a different level," he said.

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