WASTEWATER MONITORING

Alaska Cruise Ship Initiative
Alaska Department of Environmental Conservation
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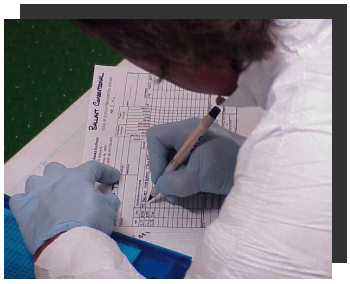
www.state.ak.us/dec/press/cruise/cruise.htm

What is Wastewater Monitoring?



- 21 large cruise ships visiting Alaska's waters were boarded twice during the 2000 season, and each of their overboard discharges were sampled for the common parameters used to assess the level of sewage treatment.

What are the standards?

- The only cruise ship wastewater discharge currently regulated is treated blackwater, or toilet waste, from the marine sanitation devices (MSDs).
- The fecal coliform standard for treated blackwater under EPA regulations is 200 fecal coliform per 100 milliliters. Fecal coliform indicates the possible presence of human or warm-blooded animal waste; however, it is not a pathogen.
- Alaska's water quality standard for fecal coliform is stricter (14 FC/100 ml) in marine waters to protect people eating raw shellfish.
- Graywater (from sinks, showers, etc.) is not regulated by the EPA or the Coast Guard.
- In Alaska graywater is regulated as sewage.

What have we found?

- 43% of the samples for fecal coliform were in compliance with the MSD standard.
- 32% of the samples for total suspended solids were in compliance with the MSD standard.
- Only one of the samples of conventional MSDs was in compliance with both the fecal coliform and total suspended solids standards.
- Five of the six samples of combined gray and blackwater treated by reverse osmosis systems were in compliance with both the fecal coliform and total suspended solids standards.
- 75% of the samples of graywater tested so far have over five times the fecal coliform standard for MSDs of 200 FC/100ml.
- Nine of the samples exceeded 10,000,000 FC/100 ml.

In other words, MSDs are not working well at producing an effluent that meets the standards set by EPA, and graywater is not benign like many thought, but more like sewage.

More information is needed to determine if the impacts from the cumulative cruise ship discharges are a potential threat to public health or the environment.

WHAT DO WE DO NEXT?

- The Alaska Cruise Ship Initiative water quality work group agreed, at their October meeting, to gather additional information next summer.
- A scientific subgroup will be formed to advise the water quality work group on how to determine if discharges are a potential threat to human health and the environment. The cruise lines will continue to evaluate new technologies for treating both black and graywater.
- The report of this year's activity will be completed by the end of the year and will provide detailed analysis results.

A marine sanitation device on board a cruise ship.