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March 8, 2013

**VIA EMAIL (**Kevin.Bromberg@sba.gov)
**AND FIRST CLASS MAIL**
U.S. Small Business Administration
Office of Advocacy – Economic Regulation
Office of Interagency Affairs (Legal Staff)
Mail Code 3114
409 Third Street, S.W.
Washington, DC 20416
Attn: Kevin L. Bromberg, Esq.

**Re: EPA's Failure to Meet BAT Legal Standards with Respect to Technology-Based Graywater Numeric Effluent Limit Requirements for Medium Cruise Ships with 100-249 Passenger/Crew Capacity in the National Pollutant Discharge Elimination System (NPDES) General Permit for Discharges Incidental to the Normal Operation of Vessels; EPA Failed to Comply with the Regulatory Flexibility Act with Respect to That Same Requirement**

Dear Mr. Bromberg:

You asked us to review the record for the 2008 National Pollutant Discharge Elimination System (NPDES) vessel general permit (VGP) to determine whether the EPA had a legal basis for the technology-based graywater numeric effluent limits for new "medium" cruise ships with 100-249 passenger/crew capacity built after the issuance date of the 2008 VGP. Specifically, you asked us to advise our views on whether the EPA met the best available technology economically achievable (BAT) legal standards required under the Clean Water Act (CWA) and found at 40 CFR § 125.3 with respect to Advanced Wastewater Treatment Systems (AWTS), the technology on which the EPA based its graywater numeric effluent limit requirements for medium cruise ships.

This letter replies to your request and also presents our views regarding how the proposed 2013 VGP is also impacted in these regards. Further, this letter provides our views with respect to the EPA's compliance with the Regulatory Flexibility Act (RFA) as to the referenced graywater numeric effluent limits.

## Summary of Conclusions

Our conclusion, based on the evidence identified and the analysis outlined in this letter, is

that the graywater numeric effluent limit requirements for medium cruise ships with 100-249 passenger/crew capacity in the 2008 VGP do **not** meet either the best practicable technology currently available (BPT) or the BAT legal standards required under the CWA. The graywater numeric effluent limitation requirements in the 2008 VGP, and in the currently proposed 2013 VGP, are the same for ships in the EPA's "medium" size category (100-499 passenger/crew capacity) as those in the "large" size category (500 passenger/crew capacity and larger). *See* 2008 VGP, Part 5.2.1.1.2 (medium cruise ships) and Part 5.1.1.1.2 (large cruise ships). There is no showing in the "record" or "materials supporting the VGP," however, that smaller medium cruise ships with 100-249 passenger/crew capacity can realistically install and carry the AWTS system which is required in order to meet those numeric effluent limitation requirement and which is very large and very heavy. All examples of ships carrying AWTS equipment relied on by the EPA are large cruise ships carrying thousands of passengers.

The 2013 VGP, as most recently proposed for comment by the EPA, contains the same graywater numeric effluent limit requirements for new medium cruise ships as did the 2008 VGP. Final promulgation of the 2013 VGP in the form most recently proposed by the EPA would therefore violate the CWA. In the 2008 VGP and the proposed 2013 VGP Fact Sheets, the EPA acknowledges that medium cruise ships may not be able to meet the graywater numeric effluent limit requirements due to the inability to retrofit ships in this size range with the technology needed to comply with those requirements. *See* 2008 Fact Sheet, at 97-98; 2013 Fact Sheet, at 173-175.

For that reason, medium cruise ships built prior to the 2008 VGP's issuance date and which are unable to travel more than 1nm from shore are made exempt from the graywater numeric effluent limit requirements. *See* 2008 Fact Sheet, at 98.

The problem remains, however, that the current 2008 VGP requires all medium cruise ships which are built or which undergo a major conversion after the date of issuance of the 2008 VGP to meet the graywater numeric effluent limit requirements even though it is not feasible for them to do so. *See* 2008 VGP, Parts 5.2.1.1.1 and 5.2.1.1.2, at 48-49.

In establishing the graywater numeric effluent limit for medium cruise ships for the 2008 VGP, the EPA was required to meet the BPT and BAT legal standards required under the CWA because the EPA is basing this numeric effluent limit on technology currently available and graywater is categorized as a toxic and non-conventional pollutant. *See* 2008 Fact Sheet, Part 4.2.3, at 46; 2008 Fact Sheet, Part 7.1.1, at 88; CWA section 301(b)(1)(B); 40 CFR 125.3(d)(1). The same is true for the proposed 2013 VGP. There is no indication we have found in the record that in developing the graywater numeric effluent limitations applicable to medium cruise ships of 100-249 passenger/crew capacity for either the 2008 VGP or the 2013 VGP, the EPA examined the feasibility of installing and carrying the equipment needed to meet with specified graywater numeric effluent limit on cruise ships in the 100-249 passenger/crew capacity size range, or even considered cruise ships of that size in the EPA's BAT analysis. By not considering medium cruise ships of 100-249 passenger/crew capacity in its BAT analysis, and not determining whether medium cruise ships in that size range can feasibly install the technology required to meet the numeric effluent limit, the EPA has failed to meet the BPT and

BAT legal standards as required by the CWA. *See* 2008 Fact Sheet, Part 7.2, at 96-98; 2008 Economic Analysis, Part 6.3.1, at 73-79; 2013 Fact Sheet, Part 7.2 at 173-175; 2013 Economic Analysis, Part 4.3.1, at 101-105.

Specifically, the EPA's analysis with respect to graywater numeric effluent limits required for medium cruise ships in the 100-249 passenger size range fails the BPT and BAT standards because the EPA did not consider:

(i) the "appropriate technology for the category or class of point sources" that consist of cruise ships with 100-249 passenger/crew capacity as required under 40 CFR § 125.3(c)(2);

(ii) the "engineering aspects of the application of various types of control techniques" as required under 40 CFR § 125.3(d)(iii); or

(iii) the "cost of achieving such effluent reductions" with respect to medium cruise ships in this size range as required under 40 CFR § 125.3(d)(v).

Further, the omission of medium cruise ships of 100-249 passenger/crew capacity from the EPA's analysis violates the Regulatory Flexibility Act because cruise ships in that size range consist of an entire industry segment of U.S.-flag coastwise trade overnight passenger cruise ships, all of which are small entities that will experience significant adverse economic impacts by this requirement notwithstanding there are less burdensome alternatives available.

The EPA has continued to disregard comments challenging the VGP graywater requirements for medium cruise ships. *See,* e.g. **Appendix A** (relevant comment excerpts and EPA responses by topic), attached to this letter. Below is a description of the various stages of the promulgation of the VGP, including the current 2008 VGP and the recently proposed 2013 VGP, with a focus on the graywater numeric effluent limit requirements for medium cruise ships with 100-249 passenger/crew capacity.

## I. Notice of Intent to Begin Development of NPDES Permit and EPA's Approach to Establishing Permit Limits

In March, 2005, the U.S. District Court for the Northern District of California held that the EPA exceeded its statutory authority by issuing a regulation that excluded certain discharges incidental to the normal operation of a vessel from NPDES permitting under the CWA. *See Northwest Environmental Advocates et al. v. U.S.E.P.A.,* 2005 WL 756614 (N.D.Cal. Mar. 30, 2005).

In response to the court's final Order, issued in September, 2006, the EPA provided notice to the public that it was beginning development of NPDES permitting. *See* 72 Fed. Reg. 34241 (June 21, 2007) (Notice of Intent; Request for Comments and Information). Although the EPA at that time was appealing the court's decision, the EPA issued a Notice of Intent to develop NPDES permits under the CWA to ask for public input on the matter by August 6, 2007. *Id.*

The EPA explained, pursuant to the court's Order, discharges incidental to the normal operation of vessels that were currently excluded from NPDES permitting by the regulation will become subject to CWA section 301's prohibition against discharge, unless covered under an NPDES permit. *Id.* at 34243.

In the 2007 Notice of Intent, the EPA describes how the NPDES permit limits will be established. *Id.* at 34248.

> The first of these [two possible approaches] involves using national effluent limitations guidelines (ELGs). The development of legally defensible effluent guidelines is an extremely complex process that requires the preparation of detailed engineering, economic and environmental analyses typically taking many years to accomplish. Because there are no existing ELGs applicable to discharges incidental to the normal operation of vessels, and the Court's order would potentially result in such discharges becoming subject to NPDES permitting as of September 30, 2008, as a practical matter, ELGs to establish technology-based permit limits for discharges incidental to the normal operation of vessels would not be available at that time.
>
> The second approach, used in the absence of ELGs, employs Best Professional Judgment (BPJ) to set technology-based limits on a case-by-case basis. The authority for development of BPJ permit limits is contained in CWA section 402(a)(1), which authorizes EPA to issue permits containing "such conditions as the Administrator determines are necessary to carry out the provisions of this Act" prior to taking the necessary implementing actions, such as the establishment of ELGs. 40 CFR 125.3(c)(2) provides that in setting limitations based on BPJ, the permit writer must include consideration of the factors listed in 40 CFR 125.3(d), which are the same as those required to be considered by EPA in the development of ELGs. For example, under the CWA, non-conventional pollutants (e.g., oil, metals, solvents) are subject to the "best available technology" (BAT) standard, and the factors contained in 40 CFR 125.3(d)(3) for development of such limits on a BPJ basis are:
>
> - The age of equipment and facilities involved.
> - The process employed.
> - The engineering aspects of the application of various types of control techniques.
> - Process changes.
> - The cost of achieving such effluent reduction.

- Non-water quality environmental impact, including energy requirements.

72 Fed. Reg. at 34248. In addition to applying the factors listed above, 40 CFR § 125.3(c)(2) also requires permit writers to consider: "(i) The appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information; and (ii) Any unique factors relating to the applicant."

As further discussed below, the EPA did not apply the factors listed in 40 CFR §125.3(d)(3) in its development of graywater numeric effluent limit requirements for medium cruise ships with 100-249 passenger/crew capacity, nor did the EPA consider the appropriate technology for that category of medium cruise ships. These failures occurred despite the fact that all available information on the AWTS technology at the time the 2008 VGP was promulgated lacked data showing that medium cruise ships in that small size range could physically install the AWTS technology required for meeting the graywater numeric effluent limit. Instead, the EPA omitted this category and class of medium cruise ships from its BAT analysis and consequently did not consider the unique factors relating to this class of medium cruise ships.

## II. Issuance of First Draft of VGP for Public Comment and Failure of EPA to Account for Smaller Size Cruise Ships

On June 17, 2008, the EPA published a Notice announcing the issuance of the proposed permit. *See* 73 Fed. Reg. 34295 (June 17, 2008) (Notice of Proposed Permit Issuance and of Public Hearing). This was the first instance in which the public had the opportunity to read the proposed permit. The Notice requested comments to be submitted by August 1, 2008. *Id.* Several comments submitted focused on the graywater requirements in the proposed permit, including a specific focus on medium cruise ships. Some comments recommended a different passenger/crew capacity range for medium cruise ships and other comments pointed out that smaller cruise ships do not currently have graywater technology installed and have minimal footprint in engineering spaces for installation of AWTS. *See* **Appendix A**, annexed hereto, listing excerpts of some of the relevant comments. The EPA failed to take into account the unique limitations of the smaller-size cruise ships and the lack of available data concerning their ability to comply with requirements of the proposed permit.

## III. The Final 2008 VGP Issued Makes Graywater Numeric Effluent Limits for Medium Cruise Ships the Same Limits as for Large Cruise Ships

The EPA first established numeric effluent limits for graywater discharges from medium cruise ships in the 2008 VGP. The 2008 VGP states, in pertinent parts:

> **5.2 Medium Cruise Ships (authorized to carry 100 to 499 people for hire)**
> The requirements in Part 5.2 apply to vessel discharges from cruise ships providing overnight accommodations (has onboard sleeping

> facilities) to passengers authorized to carry between 100 and 499 people for hire.
>
> ***5.2.1 Additional Effluent Limits***
> *5.2.1.1 Graywater Management*
> 5.2.1.1.1 Graywater Discharge Location and Rate
> All medium cruise ships must meet the requirements of Parts 5.2.1.1.1 unless they are a vessel unable to voyage more than 1 nm from shore. Vessels unable to voyage 1 nm from shore must meet the requirements of Part 5.2.1.1.1 if they are constructed on or after the issuance date of this permit.
> * * *
> 5.2.1.1.2 Graywater Treatment Standards
> The discharge of treated graywater must meet the following standards:
> 1) The discharge must satisfy the minimum level of effluent quality specified in 40 CFR 133.102,
> 2) The geometric mean of the samples from the discharge during any 30-day period may not exceed 20 fecal coliform/100 milliliters (ml) and not more than 10 percent of the samples exceed 40 fecal coliform/100 ml, and
> 3) Concentrations of total residual chlorine may not exceed 10.0 micrograms per liter (μg/l).

2008 VGP, at 48-49. Although the 2008 VGP addresses medium cruise ships, the stated graywater numeric effluent limit requirements <u>are the same</u> as those for large cruise ships. *Compare* 2008 VGP, Part 5.2.1.1.2, at 49 (medium cruise ships) *with* 2008 VGP, Part 5.1.1.1.2, at 44 (large cruise ships). This is because the data the EPA relied on at the time the graywater numeric effluent limits were established pertained to only large cruise ships. The studies providing that large cruise ship data included information on smaller cruise ships, but not information on small cruise ships with AWTS since none of the small cruise ships in those studies had AWTS installed. *See* Section V, *infra*.

## IV. <u>Final 2008 VGP Fact Sheet States EPA Met BCT/BPT/BAT Requirements Generally, But Omits Data and Analysis for Smaller Cruise Ships</u>

To meet the graywater numeric effluent limits established by the EPA, which are the same for both large and medium size cruise ships, cruise ships must install AWTS, i.e., the numeric effluent limits were technology-based limits. *See* 2008 Fact Sheet, Part 7.1.1, at 89.

The CWA establishes two levels of technology-based controls that must be met before each pollutant discharge requirement is imposed. The first level of control, "best practicable control technology currently available," or "BPT" applies to all pollutants. *See* 2008 VGP Fact Sheet, at 43, *citing* CWA section 304(b)(1)(B); 33 U.S.C. 1314(b)(1)(B). BPT represents the initial stage of pollutant discharge reduction, designed to bring all sources in an industrial

category up to the level of the average of the best existing performance of point sources in that category. *Id. citing EPA v. National Crushed Stone Association*, 449 U.S. 64, 75-76 (1980). In the second level of control, all point sources are required to meet effluent limitations based on "best conventional pollutant control technology," or "BCT" (CWA section 304(b)(4)(B); 33 U.S.C. 1314(b)(4)(B)) or "best available technology economically achievable," or "BAT" (CWA section 301(b)(2)(A); 33 U.S.C. 1311(b)(2)(A)), depending on the types of pollutants discharged. *Id.* BCT applies to conventional pollutants listed at 40 CFR 401.16 (e.g., biological oxygen demand (BOD), pH, fecal coliform, TSS, and oil and grease). *Id.* BAT applies to toxic and non-conventional pollutants (e.g., graywater). *Id.*

Thus for toxic pollutants such as graywater, the EPA must promulgate effluent limitations based on BAT. *See* 2008 VGP Fact Sheet, at 42, *citing* CWA section 301(b)(2)(A); 304(b)(2)(B); 40 CFR 125.3(d)(3). In establishing BAT, the technology must be technologically "available" and "economically achievable." *Id.* In conducting a BAT analysis for technology-based numeric effluent limitations, the legal standard the EPA is required to meet is stated in 40 CFR § 125.3. *See* Section I, *supra.* at 4.

In the 2008 VGP Fact Sheet, the EPA concluded that the effluent limits contained in the permit are technologically available and economically achievable:

> This permit contains effluent limits that correspond to required levels of technology-based control (BPT, BCT, BAT) for various discharges under the CWA. Some effluent limits have been established by examining other existing laws and requirements. Where these laws already exist, it was deemed feasible for the operators to implement these practices as effluent limits in this permit. Because these are demonstrated practices, EPA has found that they are technologically available and economically practicable (BPT) or achievable (BAT).

2008 VGP Fact Sheet, at 42. The problem with this reasoning, with respect to the graywater numeric effluent limit requirements for medium cruise ships, is that the Alaskan laws on which the EPA based its VGP technology-based numeric effluent requirements do not apply to cruise ships with fewer than 250 passengers. *See* Section V, *infra.*, beginning at 8.

The EPA further explained:

> In determining "economic achievability" under BAT, EPA has considered whether the costs of the controls can reasonably be borne by the industry. EPA typically evaluates "closures," whereby the costs of requirements are evaluated to see whether they would cause a facility to go out of business. EPA has assessed the costs of the requirements in this permit and finds that this permit will result in no "closures" in that the costs of the rule are small compared to all operating costs. EPA has assessed the costs of the

> requirements and finds that except in rare cases, the cost of implementing this permit is estimated to be below 1% of the total operating costs. . . . EPA concludes that the BAT limits in this permit are unlikely to result in a substantial economic impact on all businesses, and, in particular, small businesses. Hence, EPA interprets this analysis to indicate that the BAT limits are economically achievable.

2008 VGP Fact Sheet, at 46-48. The problem with this statement, with respect to the graywater numeric effluent limits for medium cruise ships, is that the EPA omitted an entire industry segment of medium cruise ships with 100-249 passenger/crew capacity from its analysis. *See* Section VI, *infra.*, beginning at 13. This industry segment consists of U.S.-flag coastwise trade overnight passenger cruise ships, all of which are small businesses in the 2007 NAICS class 483114 "Coastal and Great Lakes Passenger Transportation." *See* Section XIV, *infra*.

Obviously the economic impact on small business of not being able to comply with the 2013 VGP as currently proposed because suitable discharge technology is unavailable could hardly be more extreme. If a small business is unable to build new ships in the medium cruise ship size (100-249 passenger/crew capacity) which it operates, its fleet soon will be obsolete and it may soon be forced out of business.

## V. EPA Conducted a BAT Analysis for Graywater Requirements for Large Cruise Ships, But Not for Medium Cruise Ships

In its analysis of the graywater numeric effluent limits, the EPA relies on data relating to large cruise ships to provide a rationale for imposing the same graywater numeric effluent limits on medium cruise ships. Specific examples cited and relied on by the EPA regarding current use of the technology are all large cruise ships. The EPA has not identified one medium cruise ship using the technology. Also, the EPA ignores the significant difference between large and medium cruise ship discharge by equating "similar pollutants" as being the same as "similar negative impact." The EPA cites a report by the Alaska Department of Environmental Conservation for the proposition that graywater of smaller cruise ships contains similar pollutants as large cruise ships, but ignores the report's conclusion that only 6% of the total annual cruise ship and ferry wastewater discharge comes from cruise ships with 249 or fewer overnight passengers. Finally, the EPA concedes that it does not know if requiring medium size cruise ships to install the recommended system is economically feasible.

### A. Large Cruise Ships

In its analysis of large cruise ships, the EPA stated that it established the numeric effluent limits for graywater found in Part 5.2.1.1.2 of the permit because data gathered by EPA demonstrate that technologies are available, as well as economically practicable and achievable, and therefore, would represent BPT and BAT. *See* 2008 VGP Fact Sheet, Part 7.1.1, at 88.

The EPA explained that the technology to meet the effluent limits found in Part 5.2.1.1.2 of the permit is currently in use and already required for many large cruise ships operating in Alaskan waters which discharge within the territorial seas. *Id.* Based on this information, the EPA stated that it anticipates no major physical impediments to installing such technology on large cruise ships, and that many cruise ships are already capable of meeting these standards. *Id.* There are two systems available that cruise ships can use to treat graywater: marine sanitation devices (MSDs) and advanced wastewater treatment systems (AWTSs). *Id.* at 88-89. The EPA stated that AWTSs are capable of treating graywater to more stringent standards than traditional MSDs and therefore, EPA has based the effluent limits in the 2008 VGP on the AWTS technology. *Id.* at 89. The EPA summarized the reports and findings that it relied on as follows.

> One recent estimate by the cruise industry is that roughly 40% of the International Council of Cruise Lines members' 130 ships (which make up two-thirds of the world fleet) have installed AWTSs, with 10 to 15 more systems added each year (Choi, 2007). In 2006, 23 of 28 large cruise ships that operated in Alaskan waters had AWT[S]s in order to meet the more stringent discharge requirements required under Title XIV (see subsection 2.2.3 of EPA Draft Cruise Ship Discharge Assessment Report for additional information). The remainder operated traditional Type II MSDs and held the treated sewage and untreated graywater in double-bottom ballast tanks for discharge outside Alaskan waters. For additional information on Title XIV and cruise ship discharges, please see Part 2 of the EPA Draft Cruise Ship Discharge Assessment Report.

*Id.* Although this data is for large cruise ships, as discussed below, the EPA relies on this same data and analysis for establishing effluent limits requiring AWTS technology for medium cruise ships with only 100-499 passenger/crew capacity.

B. Medium Cruise Ships

The 2008 VGP does not account for differences between large and medium cruise ships. The permit reflects only three differences in the requirements for medium cruise ships: (1) an additional option for discharging while operating in Nutrient Impaired Estuaries; (2) different annual reporting requirements to the EPA; and (3) exemption from Part 5.2.1.1.1 (including the graywater numeric effluent limitations) for ships in operation as of the effective date of the permit if the ship is unable to voyage 1 nm from shore. *See* 2008 Fact Sheet, at 97-98. Vessels exempt as described in (3), however, will no longer be exempt if they undergo a major conversion subsequent to the effective date. *Id.* at 98. All vessels constructed on or after the effective date of the permit are required to meet the graywater standards. *Id.*

The standards set for medium size cruise ships are based on data, analysis and rationale pertaining to large cruise ships. For example, the 2008 Fact Sheet, with respect to BPT/BAT for medium cruise ships, states "[s]ee Part 7.1 for the reason why effluent limits were established,

and how these limits represent BPT/BAT." 2008 Fact Sheet, Part 7.2 (medium cruise ships), at 97. Part 7.1, however, pertains to large cruise ships. Part 7.1 reads:

> EPA established the numeric effluent limits for graywater found in Part 5.1.1.1.2[1] (discussed below) because data gathered by EPA demonstrate that technologies are available, as well as economically practicable and achievable, and therefore, would represent BPT and BAT. The treatment technologies that remove non-conventional pollutants also treat conventional pollutants; hence, EPA applied the BAT standard to all pollutants for which the permit proposes standards for graywater.
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> * * *
>
> The technology to meet the effluent limits found in Part 5.1.1.1.2 of the permit is currently in use and already required for **large** cruise ships operating in Alaskan waters which discharge within the territorial seas. EPA anticipates no major physical impediments to installing such technology on large cruise ships, and in fact, many cruise ships are already capable of meeting these standards.

2008 Fact Sheet, Part 7.1.1, at 88 (emphasis added).

Unlike large cruise ships, there is no data indicating that it is feasible for a medium cruise ship in the 100-249 size range to install AWTS. In fact, the EPA concedes that medium cruise ships may not be able to meet these technology-based effluent limits:

> Though treatment technologies to meet the standards in part 5.2.1.1.2 are available, EPA has not concluded that requiring all medium cruise ship owner/operators to install these systems prior to coverage under this permit is economically achievable.

2008 Fact Sheet, Part 7.2.1.1, at 97.

By way of further example, the EPA cites its EPA Cruise Ship Assessment Report, Part 2.3, which discusses four specific AWTSs and provides examples of four large cruise ships by name, each having one of the four available AWTSs installed. *See* EPA Cruise Ship Assessment Report, at 2-11, 2-12. Notably, the smallest of those four cruise ships has capacity for 1,258 passengers. *Id.*

[1] Part 5.1.1.1.2 lists the graywater numeric effluent limits for large cruise ships and Part 5.2.1.1.2 for medium cruise ships. Both Parts list the same numeric effluent limits. *Compare* 2008 VGP, at 44 *with* 2008 VGP, at 49.

As well EPA's basis for requiring compliance by medium cruise ships with fewer than 250 passengers fails because the technology to meet the effluent limits is not already in use or required for cruise ships with fewer than 250 passengers operating in Alaskan waters. *See* State of Alaska Department of Environmental Conservation Large Commercial Passenger Vessel Wastewater Discharge General Permit No. 2009DB0026, available at http://dec.alaska.gov/water/cruise_ships/pdfs/2010_Cruise_Ship_GP_FINAL.pdf ("Large commercial vessels include passenger vessels for hire that provide overnight accommodations for 250 or more passengers, determined with reference to the number of lower berths. Effluent limits apply to large vessels.").

Moreover, the Alaska Department of Environmental Conservation (ADEC) Science Advisory Panel November 2002 report, which is cited in the 2008 Fact Sheet and thus available information at the time the 2008 VGP was promulgated, defined and distinguished small ships discharge as follows.

> Small ships are defined as having 50-249 overnight passengers. These ships discharge continuously, including at anchor and in port.
>
> * * *
>
> Small ships collect graywater in small tanks and then discharge using a pump or discharge the graywater directly from drains to the ambient water. Some ships manage graywater using a combination of both practices. The graywater management practice depends on ship configuration. Most small ships do not have space for wastewater holding tanks. Black water is treated in Marine Sanitation Devices (MSD) before discharge. The Alaska Marine Highway System (AMHS) ferries and two small passenger ships mix their graywater and blackwater and treat both effluents with their MSD.
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> * * *
>
> To put the quantity of wastewater discharged from small cruise ships in perspective, one can compare the volume from small ships to that from large cruise ships. Large and small cruise ships and ferries discharge approximately 559,802 $m^3$ (147,704,923 gallons) of wastewater annually in Alaskan waters. Of this total, small cruise ships and ferries discharge an estimated 33,666 $m^3$ (8,882,860 gallons), roughly 6% of the total annual cruise ship and ferry wastewater discharge.
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> * * *
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> Small ships do not have the same per person water usage as large vessels. Large vessels are more water intensive because they do laundry up to 20 hours per day, produce food and cleanup 24-hours per day. The volume of gray water on a large cruise ship is 50 gallons per day (GPD) per passenger, whereas on a small cruise ship it is 25 gpd per passenger.

Science Advisory Panel & Alaska Department of Environmental Conservation Commercial Passenger Vessel Environmental Compliance Program, "The Impact of Cruise Ship Wastewater Discharge on Alaska Waters," Nov. 2002, at 103-104.

The EPA's rationale for imposing the effluent limits on medium size cruise ships conflicts with this information. The EPA selected a threshold of 100 people as the lower end of the 100-499 range to capture vessels where the volume of graywater generated gradually increases. *See* 2008 Fact Sheet, Part 7.2, at 96. The EPA further explains that discharges of untreated graywater from cruise ships in this size range has been shown to contain similar pollutants to those in untreated graywater discharges from large cruise ships and cites the Alaska Department of Environmental Conservation report (ADEC, 2002). Based on that information, the EPA concludes that therefore, these discharges also have a similar negative impact on water quality as large cruise ships discharge even though, as quoted above, the ADEC, 2002 report states small ships (cruise ships and ferries) discharge about 6% of the total wastewater (graywater and blackwater) discharge in Alaskan waters. *Id.* (Of note, the EPA did change the definition of ferries to match that of Alaska's based on a submitted comment. *See* **Appendix A**, Section II.B.)

The EPA continues to omit small cruise ships with 100-249 passenger/crew capacity entirely from its analysis even though it acknowledges that Alaska does not require ships of this size to install AWTS. *See* EPA Cruise Ship Discharge Assessment Report, Dec. 29, 2008, at 2-6 (acknowledging that Alaska requires only large commercial passenger vessels of 250 or more passenger capacity to obtain a wastewater discharge permit that requires installation of an AWTS).

The EPA has not cited one report, state law, or example of a medium cruise ship in 100-249 range with AWTS. The EPA Cruise Ship Assessment Report distinguishes "U.S. flagged cruise vessels that are not required to have SOLAS certificates but who are CLIA members (i.e., a small number of very small river cruisers and coastal operators)" from those CLIA members operating internationally under Safety of Life at Sea (SOLAS). *See* EPA Cruise Ship Assessment Report, at 1-4. Those vessels whose itineraries are fully within U.S. territorial waters include medium cruise ships with 100-249 capacity but they are not further discussed in the EPA's Cruise Ship Assessment Report.

In sum, the EPA does not address how medium cruise ships that are newly built or that undergo a major conversion subsequent to the 2008 VGP effective date can comply. *See* 2008 Fact Sheet, at 96-98. As well, EPA notes that "installation of AWTSs may be more complicated on older vessels than on newer vessels" without addressing whether installation of AWTSs is even feasible on cruise ships in the 100-249 range, new or old. *Id.* at 98.

The EPA's analysis with respect to small cruise ships in the 100-249 range fails the BAT standard because the EPA did not consider (i) the "appropriate technology for the category or class of point sources" that consist of cruise ships with 100-249 passenger/crew capacity as required under 40 CFR § 125.3(c)(2), (ii) the "engineering aspects of the application of various

types of control techniques" as required under 40 CFR § 125.3(d)(iii), or (iii) the "cost of achieving such effluent reductions" under 40 CFR § 125.3(d)(v).

The last sentence of the Fact Sheet discussion on medium cruise ships states: "For additional information on economic achievability and BAT, please see the economic analysis for this permit." 2008 Fact Sheet, at 98. The 2008 Economic Analysis, discussed next, is similarly deficient.

## VI. 2008 VGP Economic Analysis of Large and Medium Cruise Ships

In its Economic Analysis on graywater numeric effluent limit requirements, the EPA states that it *excluded* cruise ships with 100-249 passenger/crew capacity.

> The estimated number of medium cruise ships in *Table 6-27* was determined based upon a 250-499 passenger/crew capacity classification rather than the 100-499 range. However, based on preliminary data provided by CLIA, there are very few cruise ships within the 100-249 passenger/crew capacity classification. EPA therefore expects that the estimate is only slightly below the actual universe of medium cruise ships.

2008 Economic Analysis, at 73 n.22. Of note, as indicated in the 2008 Fact Sheet, the EPA based the technology requirements to meet the graywater numeric effluent limits on the fact that cruise ships in Alaska already use the required technology. In its Economic Analysis, however, only large cruise ships were Alaskan Certified Cruise Ships. *Id.* Table 6-27; 2008 Fact Sheet, at 88.

The EPA does not analyze whether it is feasible for medium cruise ships to install the required technology. Instead, the EPA only estimates costs of installing this technology under the assumption that it is feasible for medium cruise ships to do so and still operate safely. The EPA states:

> According to estimates provided by an industry representative, there are 30 cruise ships operating in Alaska that already have a graywater treatment system installed. These ships are assumed to incur incremental operation and maintenance cost. EPA gathered information as part of its evaluation of standards for discharges of sewage and graywater from cruise ships operating in Alaska. Based upon these data, EPA estimates the average cost per passenger (including crew), per season, for operation and maintenance of a graywater treatment system at $7.09. This cost is applied to the preliminary **average large cruise ship** passenger/crew capacity of 3,211 to derive an average annual incremental cost per cruise ship of operating and maintaining a graywater treatment system: $22,765.99. The total incremental cost

for this requirement across the 30 large cruise ships is therefore estimated at $683,022.24.

Large cruise ships are not anticipated to install a graywater treatment system to comply with the VGP since they either currently have such a system in place, or have other compliance options available to them, including holding their graywater until they are allowed to discharge. If a graywater treatment system were required, EPA estimates that the capital cost of installing such as system averages $1,050 per passenger, or approximately $3.4 million for a large cruise ship having the average passenger/crew capacity of 3,211.

Existing medium cruise ships unable to voyage more than 1 nm from shore must not immediately meet graywater treatment standards found in Part 5.2.1.1.1 of the VGP. However, medium sized cruise ships that are unable to voyage 1 nm from shore must meet the graywater discharge requirements if they are constructed (including major conversions) on or after the permit issuance date. Within the Seatrade Cruise Review (December 2007 issue), a CLIA representative indicated that no ships within the medium sized cruise ship category and for the particular style (i.e. those that are unable to voyage 1 nm from shore) are scheduled to be newly constructed. However, EPA assumes that medium sized cruise ships are replaced or undergo a major conversion at a rate of approximately once every 30 years. EPA identified four medium sized cruise ships that are unable to voyage 1 nm from shore (CLIA). In estimating the costs of this requirement, EPA also assumed that an additional eight medium cruise ships during the 30-year period will install graywater treatment systems even if they have the ability to voyage 1 nm from shore so that they may discharge graywater within 1 nm. This brings the total number of medium cruise ships assumed to purchase a graywater treatment system over the 30-year period to twelve, or an average of two ships within each 5-year period. **The estimate of costs of installing, operating and maintaining a graywater treatment system is based upon EPA information gathered as part of its evaluation of standards for discharges of sewage and graywater from cruise ships operating in Alaska**. Based upon these data, EPA estimated the average capital cost of installing a graywater treatment system at $1,150 per passenger (including crew), while the cost of operating and maintaining the graywater treatment system is $7.09 per capita and per season. The average capital cost is annualized over 30 years using a 7 percent discount rate to derive an annual capital cost of $92.67 per passenger

> (including crew). **Assuming an average number of 557 passengers and crew**, the total cost per cruise ship is approximately $55,589. The total annual cost associated with the medium and large sized cruise ships is detailed in *Table 6-28*.

2008 Economic Analysis, at 76-77, 77 n.23 (emphasis added). Of concern, the average number of passengers and crew for medium cruise ships is 557, which does not make sense considering the fact that medium cruise ships are defined in the VGP as having 100-499 passenger/crew capacity. *Id.* at 77 Table 6-28. Cruise ships with greater than 499 passenger/crew capacity should not be included in the economic analysis for medium cruise ships.

Also of concern, the EPA used the costs for large cruise ships with average number of passengers and crew of 3,211 as the basis for calculating the costs for medium cruise ships. *Id.*; *see also* PVA Comment Excerpt, Section VII, *infra*. Further, the EPA stated that it based its cost estimates for large cruise ships on information gathered as part of an evaluation of cruise ships operating in Alaska. *Id.* The EPA again fails to take into consideration the fact that in Alaska, cruise ships with 50-249 passenger capacity are not subject to these same numeric effluent standards. *See* 2008 Economic Analysis, at 76; *see also* State of Alaska Department of Environmental Conservation Large Commercial Passenger Vessel Wastewater Discharge General Permit No. 2009DB0026, available at http://dec.alaska.gov/water/cruise_ships/pdfs/2010_Cruise_Ship_GP_FINAL.pdf (effluent limits apply to large commercial passenger vessels that provide overnight accommodations for 250 or more passengers). Specifically, the EPA did not consider the fact that in Alaska, cruise ships with 100-249 passenger/crew capacity do not have to install AWTS.[2] *See* ADEC, "Small Vessel

[2] Alaska law requires that the owner or operator of a small commercial passenger vessel (50 to 249 overnight passengers), registered under the Commercial Passenger Vessel Environmental Compliance (CPVEC) Program, may not discharge treated sewage, graywater and other wastewater in Alaska waters unless the vessel meets one of the options described below. The vessel owner or operator must choose an option at the time of registration with the State of Alaska.

- **Standard terms and conditions** under Alaska Statute (AS) 46.03.462(b) require that the fecal coliform concentration of the wastewater not exceed 200 fecal coliform/100 ml and the total suspended solids (TSS) not exceed 150 mg/L. Once an owner or operator chooses this option, their vessel's compliance with these standards is demonstrated through required wastewater sampling and analytical test results submitted by the vessel owner/operator and by independent compliance inspection, sampling and analytical testing performed by the Alaska Department of Environmental Conservation (ADEC).

- **Vessel-specific alternative terms and conditions** are required for a vessel that cannot practically comply with the standard terms and conditions described above. Upon application by the owner or operator, ADEC reviews, approves or denies alternative terms and conditions:
    - Alternative terms and conditions under AS 46.03.462(c), for a vessel which had its keel laid prior to January 1, 2004, that operate the vessel according to a Best Management Practices (BMP) Plan. The vessel-specific BMPs include practices that protect the environment to the maximum extent feasible through wastewater volume reduction, improved water quality, enhanced dispersion, or reduced human exposure; prohibited

Discharge Options," available at http://dec.alaska.gov/water/cruise_ships/small_vessel_dischargeoptions.htm.

Consequently, the EPA did not meet its requirement under the CWA to consider BAT when it established the numeric effluent limitations for medium cruise ships with 100-249 passenger/crew capacity. The EPA must carry out a BAT analysis of its graywater numeric effluent limitations for medium cruise ships with 100-249 passenger/crew capacity in order to meet the legal requirements of the CWA. Information on the operators of cruise ships with 100-249 passenger/crew capacity was provided by the Passenger Vessel Association (PVA) in its comment letter to the EPA submitted in August 2008. *See* Section VII, *infra.*

## VII. EPA Response to Public Comments on the Draft of the 2008 VGP

The above-discussed graywater numeric effluent limit requirements were imposed on medium cruise ships of 100-249 passenger/crew capacity despite the fact that provided comments challenged these requirements.

The shortcomings of the EPA's economic analysis with respect to the graywater requirements for medium cruise ships were first brought to the EPA's attention in comments responding to the EPA's Notice of Proposed Permit Issuance that was published in the Federal Register on June 17, 2007 (73 Fed. Reg. 34296) ("EPA's June 2007 Notice"). *See* **Appendix A**, attached.

For example, the Passenger Vessel Association (PVA) pointed out in its comment that the EPA is incorrect in stating that medium cruise ships will incur no incremental cost, assuming that vessels are currently equipped with AWTS, the only equipment capable of meeting the graywater requirements for large and medium cruise ships. The comment emphasized the need to further examine and collect information on the cruise ship companies that operate only U.S.-flag passenger vessels, that carry a crew of U.S. citizens, and that provide employment to only U.S. citizens. PVA asked the EPA to work directly with these companies and listed them by name in its comment, specifically asking the EPA "to develop a best management plan for each vessel to reduce graywater discharge and the level of pollutants to the best practicable level using equipment that is commercially available and technologically appropriate to the size of each vessel." PVA Comment Excerpt Number 31, at 12-15 to 12-17 of the EPA's Response to Public Comments published on December 19, 2008 (emphasis added). The PVA stated that it believed the impact on small businesses has been grossly underestimated by the EPA and urged the EPA to reassess its small business impact estimates. *Id.* at 12-17. American Cruise Lines was one of the companies listed by the PVA. *Id.* at 12-16.

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discharges in sensitive areas; crew/passenger training; vessel scheduling; and other means.

The EPA disagreed with the PVA comments. The EPA stated: "With regards to smaller cruise ships, EPA has revised its cost analysis to account for the possibility that some medium cruise ships may need to purchase and install graywater treatment systems to comply with the permit." *Id.* at 12-17; *see* 2008 Economic Analysis, at 77 (estimating costs for medium cruise ships to install AWTS based on the data of costs for large cruise ships without considering feasibility of physically installing AWTS on medium cruise ships). Of note, other commenters to the EPA's June 2007 Notice stated that they do not have the treatment equipment or graywater storage facilities onboard. *See, e.g.*, V. Ships Leisure S.A.M., at 10-5 (**Appendix A**, Section II.C., *infra*); Majestic America Line and Windstar Cruises, at 10-49 to 10-50 (**Appendix A**, Section I., *infra*).

The EPA continues to ignore the fact that is repeatedly pointed out to them: the AWTS equipment that is required to meet the graywater requirements for medium cruise ships is not technologically appropriate or achievable to a vessel of such small size with 100-249 passenger/crew capacity. *See, e.g.,* Majestic America Line and Windstar Cruises, at 10-49 to 10-50 ("These vessels typically have limited to no grey water storage capability, minimal footprint in engineering spaces for installation of an advanced wastewater purification system (AWPS), and operate on an inland river system (often less than ½ mile from bank to bank.)") (emphasis added) (Appendix A, Section I, *infra*). Despite the fact this problem has been pointed out since August, 2007, the EPA has not yet performed an economic analysis on this segment of the medium cruise ship category to evaluate whether the graywater requirements are achievable and/or feasible for this size range of cruise ships (particularly those built after the issuance date of the 2008 VGP and those that undergo a major conversion after the issuance date of the 2008 VGP since those ships are not exempt from the graywater numeric effluent limit requirement).

In addition, there were a couple of comments submitted in response to the EPA's June 2007 Notice that pointed out that cruise ships are typically divided into two categories: (1) small cruise ships with 1-249 passengers, and (2) large cruise ships with 250 passengers and above. *See, e.g.,* Lindblad Expeditions, at 10-52 (**Appendix A**, Section II.A., *infra*); Four Seasons Marine Services, at 10-49 (**Appendix A**, Section II.A., *infra*). This is significant in that the EPA changed the categorization of cruise ships commonly recognized in the industry without considering the lower threshold of the EPA's new category because the EPA "expects that the estimate[,based on preliminary data provided by the Cruise Lines International Association,] is only slightly below the actual universe of medium cruise ships." 2008 Economic Analysis, at 73 n.22; 2013 Economic Analysis, at 104 n.49. The EPA's response was only that it was retaining the 100-499 range for medium cruise ships for the purposes of establishing technology-based limits on graywater discharge. The EPA notes that it is more inclusive by including the lower threshold of 100. Both the 2008 VGP and the proposed 2013 VGP economic analyses, however, continue to omit cruise ships in the 100-249 passenger/crew capacity classification from the specific analysis on the effect of the graywater requirements on medium cruise ships. *Compare* 2013 Economic Analysis, at 104 *with* 2008 Economic Analysis, at 73.

The PVA comment mentioned above is particularly relevant to medium cruise ships with 100-249 passenger/crew capacity and is therefore copied below, in pertinent part:

The permit states "medium cruise ships will incur no incremental cost associated with this practice since the permit standards are currently practices." [T]his statement is incorrect as it relates to medium cruise ships because it assumes that medium cruise [ships] do not need to purchase graywater treatment systems. The analysis in the report appears to indicate that all vessels are currently equipped with such as a system, when we believe, in fact, that the report is simply incomplete, and these vessels were not accounted for. Further, PVA is concerned with the method by which the EPA arrived at estimating the cost of a graywater treatment system for cruise ships operating in nutrient impaired waters. The calculations are based on very large numbers of passengers and crew aboard large cruise ships, which dramatically reduces the per passenger and crew cost compared to much smaller U.S.-flagged overnight passenger vessels. The average number of passengers and crew aboard U.S.-flagged overnight cruise vessels is significantly lower than that of large cruise ships and, as a result, the per passenger and crew cost will be much higher. Additionally, the definition of a medium cruise ship as defined in the permit includes only "passengers for hire" in its calculation of capacity. However, in the analysis the average cost for the purchase of the graywater treatment system in includes crew. Therefore, there are some vessels that have fewer than 100 passengers for hire and may have additional crew. The operators of the vessels listed below have provided their comments to this docket, and PVA urges the EPA to work directly with the owners. These companies operate the only US-flagged passenger vessels that provides this level of cruising, carrying between 100 and 499 passengers. These companies fly the U.S. flag, carry a crew of United States citizens, and provide employment to United States citizens to support the vessels. These companies support their employees and their communities, contributing to the local economy and the U.S. economy. They deserve to be given consideration from the EPA to support the continuation of this service and the employment they provide. Since they are small and few in numbers, PVA asks that EPA work directly with these companies to develop a best management plan for each vessel to reduce graywater discharge and the level of pollutants to the best practicable level using equipment that is commercially available and technologically appropriate to the size of each vessel by next spring. American Cruise Lines, Inc. Mn American Eagle Mn American Spirit Ma/ American Glory Ma/ American Star American Canadian Carribbean Line, Inc. Ma/Grande Caribe Ma/ Grand Mariner Mn Niagara Prince Riverbarge Excursion Lines Mn River Explorer Cruise West Mv Spirit of Endeavour Ma/ Spirit of

> Yorktown Mn Spirit of Glacier Bay Majestic America Mn Delta Queen Mn American Queen Mn Mississippi Queen Mn Queen of the West Ma/ Empress of the North Mn Columbian Queen Ncl America, Inc. Mn Pride of America.
>
> * * *
>
> Overall, these [total costs for permit compliance] numbers highlight the huge financial impact that will negatively affect the passenger vessel industry. And yet, these numbers are created based on insufficient data and therefore, in reality, will be a higher cost to the business owner. PVA believes that the impact on small business has been grossly underestimated, and urges EPA to reassess its small business impact estimates. At the same time, we urge EPA to take into consideration the multitude of rulemakings that the Federal government is currently drafting that affects these same small businesses. Even within the EPA there are multiple rules moving forward that all impact these businesses such as those dealing with clean air and diesel emissions.

Comment submitted by the Passenger Vessel Association (PVA), Document Control Number: EPA-HQ-OW-2008-0055-0334.1, Comment Excerpt Number: 31, pages 12-15 to 12-18.

In response, EPA stated the following.

> EPA disagrees with the commenter's characterization of its Economic and Benefits Analysis. EPA's economic analysis was based on the best data available within the court-established timeframe for permit issuance, and reasonably support the requirements set forth in this permit. Specifically, with respect to passenger vessels, EPA based its analysis on careful consideration of comments on the proposed VGP submitted by twenty-eight passenger vessels, among other sources of data and information. See e.g. comment EPA-HQ-OW-2008-0055-0322.1, excerpt 2 (ECON). [See Appendix A for some of those passenger vessel comment excerpts that are relevant to the graywater numeric effluent limit requirements for medium cruise ships.]
>
> EPA recognizes that it incorrectly assumed that all medium cruise ships do not need to purchase graywater treatment systems. EPA notes that the capital costs of installing graywater treatment systems was not included as an incremental cost for the large cruise ships since, according to industry representatives, large cruise ships do not remain in nutrient impaired waters for extended periods of time and all large cruise ships have sufficient capacity to hold graywater until they are allowed to discharge. With regards

to smaller cruise ships, EPA has revised its cost analysis to account for the possibility that some medium cruise ships may need to purchase and install graywater treatment systems to comply with the permit. See Part 6.3.1 of the Economic and Benefits Analysis of the Final Vessel General Permit (VGP).

* * *

This cost of graywater treatment is based upon EPA information gathered as part of its evaluation of standards for discharges of sewage and graywater from cruise ships operating in Alaska. Based upon these data, an average cost per passenger (including crew), per season, for installing a graywater treatment system is $7.09. This cost is applied to the preliminary average large cruise ship passenger/crew capacity of 3,211 to derive an average annual incremental cost per cruise ship of installing a graywater treatment system. Though the commenter notes that per passenger cost may be higher for medium cruise ships, the commenter did not provide data to assist EPA in revising this analysis other than stating costs are higher. The $7.09 estimate is based upon the best information available to the Agency. A medium cruise ship is classified as having more than 100 passengers. Crew is not included in this total.

EPA has changed graywater requirements for medium cruise ships in the Final Permit to reflect these comments. EPA notes that existing medium cruise ships unable to voyage more than 1nm from shore are not required to immediately meet graywater treatment standards found in Part 5.2.1.1.1 of the VGP. Rather, such cruise ships are only required to meet the requirements if they are constructed on or after the issuance date of the permit. EPA estimates that medium cruise ships are replaced or undergo a major conversion once every 20 years. EPA identified four medium sized cruise ships that are unable to voyage 1nm from shore based on communication from a cruise ship representative. In estimating the costs of this requirement, EPA also assumed that an additional four medium cruise ships will install graywater even if they have the ability to voyage 1nm from shore so that they may discharge graywater within 1nm. Based on this, EPA estimated that over a 20 year period eight medium cruise ships will install a graywater treatment system. EPA factored these costs into its revised analysis.

Other than information submitted in this comment EPA has no information that indicates that operating under CLIA requirements is burdensome.

*Id.* (Emphasis added.)

EPA's response states that the commenter did not provide data to assist EPA in revising the analysis other than stating costs are higher. But the commenter listed by name all the medium cruise ships and small businesses that the EPA should contact to collect this information. The commenter also pointed out that these medium cruise ships comprise a distinct industry segment, namely U.S.-flag coastwise trade overnight passenger vessels. Under the Regulatory Flexibility Act, the agency is required to collect more information from small businesses affected by its regulation if the regulation has a significant economic impact on a substantial number of small entities. *See* EPA Guide, at 2-3; *see also* Section XIV, *infra*. It is notable that this comment was submitted by the PVA to which many cruise ships with 100-249 passenger/crew capacity are members and from which the EPA could gather information and data on these small-size cruise ships.

EPA's response does not take into consideration the fact that it may be physically infeasible for medium cruise ships to install the graywater AWTS that is required to meet the graywater treatment standards, regardless of whether the medium cruise ship has not yet been built or undergoes a major conversion. Some data indicate that the AWTS weighs 60,000 lbs and is nearly 20 feet long by 8 feet tall and 10 feet wide. Placing equipment of this size and weight on a small ship is an enormous problem.

Other comment excerpts relating to graywater numeric effluent limit requirements for medium cruise ships, including those comments cited above, are outlined by topic in **Appendix A**, attached. Included in these comments is the recommendation that that (i) the "medium cruise ship" category be defined so as not to include ships with 100-249 passenger/crew capacity to match the definition of Alaska's large commercial vessels, given the data the EPA relies on is for large cruise ships, and (ii) the EPA must consider the small size of cruise ships with 100-249 passenger/crew capacity in determining whether the technology required to meet the graywater numeric effluent limit can be installed on newly built ships of such small size, as required to meet the BAT legal standard. *See* **Appendix A**, attached.

## VIII. EPA Solicits Comments for the Next VGP to Take Effect in 2013

In October, 2010, the EPA issued a notice stating that it was beginning the process of developing the next VGP and that comments would be accepted on or before December 31, 2010. 75 Fed. Reg. 66757, 66759 (Oct. 29, 2010) (Notice Seeking Suggestions for Improving Next NPDES). On December 15, 2010, the EPA announced plans to hold a "listening session" to obtain suggestions from the public for improving the next VGP and stated. *Id*. at 66757.

### A. ACL's Comments in Response to Oct. 29, 2010 Notice

ACL submitted comments to the EPA specifically addressing the graywater numeric effluent limit requirements as they apply to very small overnight passenger cruise ships "such as the vessels we plan to build" with 100-249 passenger/crew capacity. ACL Comment Letter,

dated December 31, 2010, at 2. ACL requested that the "medium cruise ships" category as defined in the VGP should be adjusted from the current level of 100 overnight passenger accommodations to a more reasonable threshold of 250. *Id.*

ACL requested the change to the definition of medium cruise ships to address the insurmountable barrier created by the VGP forcing installation of AWTS in order to meet the graywater effluent limitations. *See Id.* at 2-3. The AWTS technology is so heavy and large compared to the standard marine sanitation devices currently used on small cruise ships that AWTS would have a significant impact on a small cruise ship's draft and stability, raising the question as to whether such small ships would still be able to operate safely with such heavy and large equipment on board. *Id.* at 4.

ACL pointed out to the EPA that this problem cannot be overcome simply by building a new ship. Due to a small ship's design, it is not feasible to install AWTS on a small cruise ship and operate the ship safely without draft and stability problems. *Id.*

In its comment letter, ACL pointed out the flawed basis on which the EPA relied for the graywater requirements for medium cruise ships with 100-249 passenger/crew capacity. *Id.* at 6. Namely, ACL pointed out that Alaska and Maine, the state laws on which the EPA based the VGP graywater requirements for cruise ships, do not require cruise ships carrying fewer than 250 passengers to install AWTS. *Id.*; *see* 2008 Economic Analysis, at 77; 2008 Fact Sheet, at 88-90.

B. Passenger Vessel Association's Statement at the December 15, 2010 Listening Session

The Passenger Vessel Association (PVA) also commented on the graywater numeric effluent limits required of medium cruise ships and stated as follows.

> PVA urges EPA to reassess whether the [medium cruise ship] category is needed. It is likely to be disproportionately costly for a cruise vessel in this category to comply with the Vessel General Permit graywater treatment requirement. The existing permit may well inhibit the construction in U.S. shipyards of new vessels of this size. Furthermore, there are only a few such vessels operating in the U.S. (PVA estimates fewer than a dozen), and they are predominantly U.S.-flagged. PVA is willing to work closely with EPA to develop a definite count.

Passenger Vessel Association's Statement dated December 15, 2010, at 5.

## IX. Issuance of Proposed 2013 VGP for Public Comment

One year after the 2010 listening session/comment period, the EPA published for comment a draft NPDES VGP referred to as the proposed 2013 VGP that if finalized would replace the current VGP. *See* 76 Fed. Reg. 76716 (Dec. 8, 2011) (Notice of Draft Permit Issuances and Notice of Public Hearing). The EPA solicited general and specific comments,

including "[w]hether the controls in this permit represent BPT, BCT and BAT levels of control. If commenters believe that the proposed controls do not, or that other controls would better represent the BPT, BCT or BAT levels of control, explicitly provide data and information about the applicability of such controls to all types of commercial vessels in all weather/operating situations, and the costs and non-water quality environmental impacts, including energy impacts, of such options." *See* Part 2.1 of the VGP and Section 4.2 of the VGP fact sheet. *Id.* at 76722.

## X. Proposed 2013 VGP

The proposed 2013 VGP contains the same graywater numeric effluent limitation requirements for "medium" cruise ships with 100-249 passenger/crew capacity as the 2008 VGP. *Compare* 2008 VGP, at 49 (Part 5.2.1.1.2) *with* proposed 2013 VGP, at 75 (Part 5.2.1.1.2). Regardless of the above comments by ACL and the PVA, the EPA did not respond to or consider those comments in its proposed 2013 VGP.

The graywater numeric effluent limit requirements specific to cruise ships of 100-249 passenger/crew capacity still do not meet the BPT and BAT legal standards with which the EPA must comply under the CWA. It is not physically feasible for these small cruise ships to install AWTS and still operate safely. Therefore, AWTS is not the best practicable control technology currently available or the best available technology economically achievable for cruise ships in the 100-249 size range.

## XI. Proposed 2013 VGP Fact Sheet

As a result of maintaining the same graywater numeric effluent limits in the proposed 2013 VGP, medium crew ships built or that undergo a major conversion after the 2008 VGP issuance date must install AWTS technology to meet these graywater numeric effluent limits. *See* Proposed 2013 Vessel General Permit (VGP) Fact Sheet ("2013 Fact Sheet"), at 164 ("EPA has . . . based the effluent limits in this permit on the AWTSs technology."). The medium cruise ship section of the 2013 Fact Sheet still refers to the large cruise ship section to explain and justify the medium cruise ship requirements just as it did in the 2008 Fact Sheet. *See* 2013 Fact Sheet, at 173 ("See Part 7.1 [large cruise ships] for a discussion on the nature of cruise ship discharges, the reason effluent limits were established, and how these limits represent BPT/BAT.") In other words, a separate BPT/BAT analysis was still not carried out for medium cruise ships.

The EPA's analysis with respect to small cruise ships in the 100-249 range again fails the BPT and BAT standards because the EPA did not consider:

(i) the "appropriate technology for the category or class of point sources" that consist of cruise ships with 100-249 passenger/crew capacity as required under 40 CFR § 125.3(c)(2);

(ii) the "engineering aspects of the application of various types of control techniques" as required under 40 CFR § 125.3(d)(iii); or

(iii) the "cost of achieving such effluent reductions" under 40 CFR § 125.3(d)(v).

The medium cruise ship section of the 2013 Fact Sheet states: "For additional information on economic achievability and BAT, please see the economic analysis for this permit." 2013 Fact Sheet, at 175. The next section describes the 2013 Economic Analysis and its reliance on the 2008 Economic Analysis.

## XII. Proposed 2013 VGP Economic Analysis

The Proposed 2013 Economic Analysis contains the same flaw as the 2008 Economic Analysis in that it also excludes cruise ships with 100-249 passenger/crew capacity from the analysis. *See* 2013 Economic Analysis, at 104 n.49. In fact, the EPA uses the same data and same table of data that it used in its 2008 Economic Analysis. *Id.* Table 4-25; *see* 2008 Economic Analysis, at 73 Table 6-27. The EPA states: "Medium cruise ships will incur no incremental cost associated with this practice since the Permit standards are already practiced." *Id.* at 104.

By continuing to exclude medium cruise ships with 100-249 passenger/crew capacity from its economic analysis, the EPA has still not provided a rational basis for the graywater numeric effluent limit with respect to cruise ships in the 100-249 size range and the required BPT and BAT standards are still not met.

## XIII. Comments to EPA on Proposed 2013 VGP

### A. American Cruise Line's February 2012 Comment Letter

In its February 2012 Comment Letter, ACL explains that its ships are designed and built to be sufficiently small so as to qualify for Subchapter K or T of Title 46 of the Coast Guard regulations and not be subject to the Subchapter H requirements applicable to larger ships. ACL Comment Letter dated Feb. 17, 2012, at 2. This business practice allows ACL to avoid the much higher manning and construction costs associated with vessels built to the large ship requirements, keep costs down, and enable ACL to compete in a specific market segment. *Id.*

ACL also explained for cruise ships with 100-249 passenger/crew capacity, the VGP graywater numeric effluent limits present an unachievable standard due to the fact that these small cruise ships cannot be designed and built with the AWTS technology required to comply with the VGP graywater numeric effluent limit. *Id.* at 6. ACL ships would no longer qualify for Subchapter K or T of the Coast Guard regulations if required to install AWTS because the ships would have to be built at a much larger size and would force ACL to change its business model. *Id.* This imposes a significant economic impact on ACL.

ACL also pointed out that the EPA's omission of cruise ships with 100-249 passenger/crew capacity from its economic analysis violates the Regulatory Flexibility Act. *Id.* at 3-7. As discussed above, the graywater numeric effluent limit requirement imposes a significant economic impact. In addition, it impacts a substantial number of small entities that

consist of an entire industry segment of U.S.-flag coastwise trade overnight passenger cruise ships within the 2007 NAICS class 483114 (Coastal and Great Lakes Passenger Transportation).

B. Passenger Vessel Association's February 2012 Comment Letter

The PVA also commented, *inter alia*, on the graywater requirements for medium cruise ships with fewer than 250 passengers. PVA Comment Letter dated Feb. 21, 2012, at 7-8. The PVA states:

> To comply with the proposed graywater purification requirements, a U.S.-flagged "small ship" cruise vessel would have to install the same treatment equipment designed for a large oceangoing cruise vessel that carries thousands of passengers and crew members. This equipment is so large and heavy that it is physically impossible to retrofit a smaller "medium cruise ship" to accommodate it. Furthermore, attempting to place such equipment on a smaller existing vessel would likely threaten the vessel's stability. Has the EPA consulted with the U.S. Coast Guard on how this treatment equipment would affect stability of "small ship" cruise vessels?

*Id.* at 8.

The PVA also commented on the EPA's economic analysis and the need to perform one for U.S. flag "small ship" cruise vessels. *Id.* The PVA states:

> EPA has not performed the required Regulatory Flexibility Act economic analysis as to how its proposed graywater treatment provisions would affect U.S.-flagged "small ship" cruise vessels, all of whom are operated by small businesses under federal government criteria. This discriminates against companies that have subjected themselves fully to all U.S. laws and standards, including tax and labor laws. PVA urges EPA to consult with the Office of Advocacy of the U.S. Small Business Administration to ensure that it is complian[t] with its obligations under the Regulatory Flexibility Act.

*Id.*

## XIV. Regulatory Flexibility Act

As mentioned in the ACL and PVA comment letters, in addition to not complying with the BPT/BAT requirements under 40 CFR § 125.3, the EPA has not complied with the Regulatory Flexibility Act. The EPA omitted from its economic impact analysis an entire

industry segment of U.S.-flag coastwise trade overnight passenger cruise ships with 100-249 passenger/crew capacity, all of which are operated by small entities.

In its small entity analysis, the EPA combines North American Industrial Classification System (NAIS) codes 483112 and 483114. *See* 2008 Economic Analysis, at 101-102; 2013 Economic Analysis, at 121-125. These two NAIS codes should be analyzed separately, especially with respect to the specific requirements in Part 5 of the VGP for medium and large cruise ships.

A. Description of Small Business Industry Sector Excluded from EPA's Analysis

The SBA has determined that a cruise ship qualifies as a small business for SBA purposes if it has fewer than 500 employees, the measure used by the North American Industrial Classification System (NAICS) and published by the Office of Management and Budget.

By the applicable standard, ACL is a "small business" for purposes of the SBREFA and the RFA. *See* 13 CFR § 121.201. This is because ACL is within the 2007 NAICS class 483114, identified as "Coastal and Great Lakes Passenger Transportation," currently employs fewer than 500 employees, and has always employed fewer than 500 employees.[3]

The EPA incorrectly combines the two NAICS classes that contain cruise ships in its small entity analysis. The cruise ships in the NAICS class 483112 (Deep Sea Transportation of Passengers) are mostly large cruise ship operators whereas the cruise ships in the NAICS class 483114 (Coastal and Great Lakes Passenger Transportation) are mostly small cruise ship operators that meet the definition of a small entity. Since 2007, U.S.-flag coastwise trade cruise ships have been separately identified in 2007 NAICS class 483114. Those cruise ships in NAICS class 483114 should be analyzed separately when performing an RFA analysis.

Ships in this industry segment (U.S.-flag coastwise trade overnight passenger cruise ships) do not travel internationally because they generally can only operate in rivers, lakes, and coastal waters. In order to qualify for coastwise trade privileges, these ships must meet stringent requirements of being U.S.-built, U.S.-owned, and U.S.-operated. *See, e.g.*, 46 U.S.C. §§ 12112, 55103, *et seq*. The larger foreign flag cruise ships operating internationally are not permitted to carry passengers between U.S. ports as do the much smaller ships in ACL's industry segment. 46 U.S.C. § 289. Instead of carrying at most a few hundred passengers interested in the cultural and historic attractions available in the smaller harbors and ports on U.S. rivers, lakes, and coastal waters, the international cruising market in which the larger foreign flag cruise lines operate involves typically thousands of passengers cruising in much, much larger ships with nearly endless on-board activities, which are themselves the primary passenger attraction.

[3] The SBA currently considers an entity within either class 483112 or 483114 and employing less than 500 employees to be a "small business" for SBA purposes. *See* SBA Table, effective November 5, 2010, p. 25, available at http://www.sba.gov/sites/default/files/Size_Standards_Table.pdf (last visited November 14, 2011).

B. Performing an RFA Analysis

The EPA Guide for performing an RFA analysis states:

> [Y]ou should analyze who is subject to the requirements of the rule even if the rule is either not immediately enforceable or does not impose immediately applicable requirements on those subject to the rule. You should perform this analysis as long as you know: (1) who will be regulated; and (2) what requirements will be imposed. For example, the promulgation of effluent limitations guidelines in the water program does not result in imposition of requirements on direct dischargers until the limitations are included as conditions in the discharger's NPDES permit. Either EPA or States must take some action before a specific discharger must comply with the requirements. We can, however, generally develop this screening assessment (and a Regulatory Flexibility Analysis if needed) because EPA must include conditions implementing guidelines in any permits it issues and State laws generally must be at least as stringent as EPA's. Moreover, EPA knows who will be regulated (we define that in each effluent limitation guideline). We can perform a screening analysis premised on a reasonably clear prediction as to who will be regulated and with what economic impact.

EPA Final Guidance for EPA Rulewriters: Regulatory Flexibility Act as amended by the Small Business Regulatory Enforcement Fairness Act, Nov. 2006 (the "EPA Guide"), at 13.

The EPA Guide further directs before beginning a quantitative analysis of the economic impact of the rule on small entities, the EPA should qualitatively think through the actions a small entity will have to take to comply with the rule and how those actions might differ from those taken by large companies. EPA Guide, at 19.

With respect to the VGP, all small ships with 100-249 passenger/crew capacity would have to install AWTS, which is not feasible and would compromise the safe operation of the ships. This fact should be considered when performing the RFA analysis.

In determining if the number of small entities impacted is substantial, there are three factors that should be considered: (1) the magnitude of economic impact that may be experienced by regulated small entities; (2) the total number of regulated small entities that may experience the economic impact; and (3) the percentage of regulated small entities that may experience the economic impact. EPA Guide, at 23.

In addition, consideration of the number of small entities facing regulatory costs is dependent on the characteristics of the affected industry or group of small entities being regulated. *Id.* at 25. "One hundred small businesses may represent a small fraction of the total

number of small businesses in some sectors, such as gasoline service stations, while the total number of small businesses in some niche markets may be less than a dozen." *Id.* For this reason, the number and percentage of regulated small entities experiencing significant economic impacts should be considered when determining whether a "substantial number" of small entities may be significantly impacted. *Id.* at 25-26.

In regard to the VGP, medium cruise ships with 100-249 passenger/crew capacity are in a distinct industry segment of U.S.-flag coastwise trade overnight passenger cruise ships and operate in U.S. rivers, lakes, and coastal waters. All (100%) of the medium cruise ships in this category are small entities that will be significantly impacted by the graywater numeric effluent limit requirements for new ships or ships that undergo a major conversion.

In assessing the economic impact of such a rule on small businesses, it may be appropriate to analyze the rule's impact on each kind of business separately, particularly where the rule may impose significantly higher costs on some kinds of businesses than on others. EPA Guide, at 26.

ACL submits that the proposed permitting structure places enormous adverse economic pressure on the viability of the U.S.-flag coastwise trade small ship cruising industry segment and thereby would give an unfair competitive advantage to large, foreign flag cruise lines. The requirements of the VGP may prevent small size ships from being built in the future, which may, in time, eliminate the industry. The extension to small cruise ships of the stringent VGP graywater purification standards applicable to "large cruise ships" without regulatory flexibility analysis, including consideration of alternatives, creates a barrier to entry in an economically distinct industry segment in which U.S.-built, U.S.-owned, and U.S.-operated cruise operators could otherwise compete, directly threatens a great many U.S. jobs in this industry segment and in the industries which build, outfit, maintain, repair, and provision U.S.-flag cruise ships. This discrimination is not justified by the actual environmental impacts of small cruise ship graywater discharge and imposes a "significant economic impact" on "a substantial number of small entities," in violation of the RFA.

### C. Less Burdensome Alternatives Are Available

As the February 2012 ACL Comment Letter outlines, the EPA should consider a less burdensome alternative and promulgate separate graywater management requirements for this small cruise ship industry segment. ACL submits that promulgation of a best management practices standard would both meet the goals of the EPA under the Clean Water Act and would provide an economically and physically feasible alternative with which the industry segment could comply.

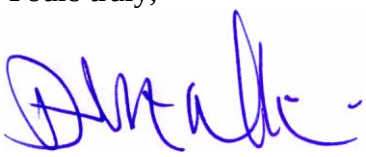
Another less burdensome alternative is to promulgate separate requirements that are similar to Alaska's requirements for cruise ships with fewer than 250 passengers at the time the 2008 VGP was promulgated.

## XV. Conclusion

In our opinion, ships with 249 or fewer passengers have less stringent graywater requirements in Alaska for the following reasons: (1) the graywater discharged by those ships is of significantly less quantity; and (2) these smaller ships would become unstable and thus unsafe if they were required to install such large and heavy equipment as AWTS.

We propose that the EPA consider adopting best management practices or a separate graywater discharge standard for medium cruise ships with 100-249 passenger/crew capacity that is similar to that of Alaska's requirements at the time the 2008 VGP was promulgated. At minimum, the EPA must perform BPT and BAT analyses with respect to its graywater numeric effluent limit requirements for medium cruise ships with 100-249 passenger/crew capacity. An RFA analysis must also be performed as to whether these technology-based requirements have a significant economic impact on a substantial number of small entities and if so, whether a less burdensome alternative is more appropriate.

Yours truly,



David McI. Williams, P.C.

cc: American Cruise Lines, Inc.