After this remediation and redevelopment work is complete, EPA will have a basis to determine background PCB levels and the impacts (if any) of storm water runoff from the GE Site on ambient water quality conditions. In the meantime, recognizing that GE is continuing to make progress toward eliminating contaminated storm water runoff, EPA properly followed the New Bedford Harbor precedent and imposed monitor-only conditions at GE's storm water outfalls. It would be arbitrary and capricious for EPA to depart from such precedent in the absence of distinguishing reasons to do so. None have been cited or in fact exist at the GE Site.

C. More Stringent PCB Limits Would Be Inappropriate At 64G

The PCB limits associated with GE's 64G groundwater treatment facility in the existing Individual Permit are technology-based. *See* Fact Sheet at p. 12. Since those limits already reflect the most stringent level of control technology required by the Clean Water Act, EPA lacks both authority and justification to impose more stringent technology-based limits in the Draft Permit. Even if the limits were water quality-based, it would be premature to impose more stringent limits at this time. In any event, such limits would run afoul of the CD.

1. The Best Available Technology Is In Place

GE already has achieved the most stringent level of control required of it under the Clean Water Act. Achieving more is infeasible. Requiring more is arbitrary and capricious.

Where, as here, a limit is not required by EPA's national effluent guidelines, then a case-by-case technology-based limit, derived using best professional judgment ("BPJ"), may be imposed only if the permit writer performs the analysis required in 40 CFR § 125.3. As part of that analysis, the permit writer must consider:

a. the appropriate technology for the category or class of point sources of which the applicant is a member, based upon all available information; and

b. any unique factors related to the applicant.

The permit writer also must consider the factors in § 125.3(d), which, for the most stringent level of control conceivably applicable to GE ("best available technology economically achievable" or "BAT"), include:

a. The age of equipment and facilities involved;

b. the process employed;

c. the engineering aspects of the application of various types of control techniques;

d. process changes;

e. the cost of achieving such effluent reduction; and

f. non-water quality environmental impact (including energy requirements).[5]

When conducting the required § 125.3 analysis, the permit writer must look at both the industry as a whole and the particular facility.[6] In other words, before imposing a technology-based PCB limit on GE at 64G, the permit writer would need to conduct a reasoned analysis of control technologies available for PCB removal at groundwater remediation facilities generally, and at the 64G groundwater treatment facility in particular.

Activated carbon has been recognized as the most widely practiced treatment method for PCBs in the aqueous phase. *See, e.g., Guidance on Remedial Actions for Superfund Sites with PCB Contamination* (EPA, 1990); *Granular Activated Carbon and Biological Activated Carbon Treatment of Dissolved and Sorbed Polychlorinated Biphenyls* (Ghosh, U., A. S.

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[5] 40 CFR § 125.3(d)(1).

[6] *See U.S. Steel Corp. v. Train*, 556 F.2d 822, 844 (7th Cir. 1977); *Alabama v. EPA*, 557 F.2d 1101, 1110 (5th Cir. 1977).

Weber, et al., Water Environment Research 71(2): 232-240, 1999); *Hudson River Water PCB Treatability Study* (O'Brien & Gere Engineers, Inc., 1982).

Activated carbon also has been determined to be BAT by EPA. *See Removal of Endocrine Disruptor Chemicals Using Drinking Water Treatment Processes* (EPA-625-R-00-015, 2001) ("[Granular activated carbon] is the BAT for removal of [PCBs]"). Consistent with this determination, EPA has used activated carbon in its own remediation projects.

For example, in New Bedford Harbor, EPA relied on two granular activated carbon units in series, with a design capacity of 350-400 gallons per minute, to achieve a discharge limit of 0.6 µg/L PCBs. Similarly, at this Site, in the ongoing remediation of the 1½ Mile Reach of the Housatonic River, EPA relies on two granular activated carbon units in series, with a design capacity of 400 gallons per minute, to achieve a discharge limit of 0.5 µg/L PCBs.[7]

In the current proceeding, GE already has an activated carbon treatment system in place. GE's 64G groundwater treatment facility relies on four granular activated carbon units in series, with a design capacity of 700 gallons per minute (nearly twice that of EPA's two treatment systems referenced above). The performance data for GE's system over the past ten years (March 1994 to July 2004) indicate that GE can achieve a discharge limit of 0.5 µg/L PCBs (consistent with and, in some cases, even better than the performance at EPA's own treatment systems).

Based on both general and site-specific information about available control technologies, activated carbon treatment indisputably is BAT. EPA cannot direct GE to go

[7] It would be arbitrary and capricious for EPA to prescribe a double standard (one for itself and the other for the regulated community) for the same type of activity and the same treatment technology.

beyond BAT. Nor can EPA impose more stringent PCB limits than BAT is designed to achieve.

2. Numeric PCB Limits Cannot Be Calculated Until The Remediation Work Is Complete

Even assuming that the limits at 64G were water quality-based, it would be premature to impose more stringent limits until background water quality conditions have been established (*i.e.*, following completion of remediation and redevelopment). *See* Section V.B above (in particular, with respect to the pending remediation in Unkamet Brook, upstream of 64G).

Even if such conditions could be established, more studies of treatment options would be needed before EPA would have a legitimate basis to impose more stringent water-quality based PCB limits. EPA acknowledges the need for additional studies before water-quality based PCB limits could be determined in the Draft Permit, which calls for GE to complete PCB treatment capability and optimization evaluations of the 64G treatment system. *See* Draft Permit Part I.D.

3. More Stringent PCB Limits Would Run Afoul Of The Consent Decree

GE believes that imposition of more stringent limitations at 64G would trigger additional "response actions" preempted by the Consent Decree. That said, in a number of past circumstances, GE has elected not to exercise all of its potential legal appeal rights and, as a consequence, has undertaken a number of discretionary environmental actions in Pittsfield in order to further site-wide remediation and development objectives. GE will determine whether to appeal specific NPDES requirements after the Agencies issue the final permit.

D. The Conditions And Requirements Related To The Mass Limits For Outfalls 001, 005 And 009 Are Inappropriate And Should Be Revised

The Draft Permit imposes effluent limitations, including discharge conditions and sampling and analytical requirements, for total suspended solids ("TSS") and oil and grease ("O&G") at Outfalls 001, 005, and 009 during "wet weather." As described in more detail in GE Technical Exhibit 5, GE objects to the imposition of the mass limitations, particularly in relation to the discharge conditions and sampling and analytical requirements, and to the justification provided for imposition of the mass limitations. As a general matter, it is inappropriate to subject these discharges of storm water runoff to numeric limits. Assuming, though, that the Agencies retain these mass limits, then the discharge conditions and sampling/analytical requirements related to those limits need to be revised.

The Draft Permit proposes the collection of an initial grab sample within the first 30 to 60 minutes of a storm event, as well as a 3-hour flow weighted composite sample, for TSS monitoring at Outfalls 001, 005 and 009. The requirement for an initial grab sample is inappropriate for TSS levels when a discharge includes dry and wet flow that has been routed through wastewater treatment systems. That grab sample requirement should be deleted. In addition, the use of 3-hour flow weighted composite samples is not appropriate or justified for a continuous discharge from a treatment system, such as those related to these outfalls (*i.e.*, oil-water separators and water treatment facilities). The use of a 24-hour time-weighted composite will capture entire runoff events thus providing more representative data, and will provide data that are consistent with historic data sets.

The Draft Permit recommends that monitoring be conducted at a number of discharge locations for a number of parameters during "wet weather." In addition, the Draft Permit proposes application of the monthly average mass limits to this specific discharge condition at

Outfalls 001, 005 and 009. In the Draft Permit, "wet weather" is defined as "a storm event with at least 0.1 inches of precipitation, providing the interval from the preceding storm is at least 72 hours." The inclusion of a 72-hour dry period requirement in the definition of wet weather is not justified or appropriate, and this requirement will result in the collection of fewer and less representative data. GE therefore proposes that a 24-hour dry period be used in the definition of wet weather. The use of 24-hour dry period criteria will allow for the opportunity to collect more wet weather data, therefore providing a more representative data set that can routinely support calculation of monthly averages.

Outfall 001, which receives mostly municipal runoff, is subject under the Draft Permit to requirements that are much more stringent than EPA imposes on discharges from municipal storm sewers, even though the discharge from 001 is very similar to those municipal discharges. Oil-Water Separator ("OWS") 31W, which receives municipal runoff and other water going to Outfall 001, can, under certain flow conditions, remove solid materials. However, because this system is not designed specifically to reduce TSS, and does so effectively only under certain conditions, application of technology-based limits, such as those in the Draft Permit, should be limited to situations where the OWS is performing to reduce TSS. GE's analysis indicates that when 24-hour average flow is above 0.432 million gallons in response to wet weather events, the performance of OWS 31W may not be representative of the conditions on which the monthly average mass limit was based. Therefore, for determining compliance with the monthly average 'wet weather' TSS limit, data collected over a 24-hour period should be used if the 24-hour flow is less than or equal to 0.432 million gallons. When the 24-hour flow is greater than 0.432 million gallons, the data and mass result should be reported but not used for compliance assessment.

VI. GE TECHNICAL EXHIBITS

The technical exhibits referenced in these comments follow.

A. GE Technical Exhibit 1 (Discharge Outfall Descriptions)

Attachment A
Discharge Outfalls
NPDES Permit No. MA0003891
General Electric Company
Pittsfield, MA

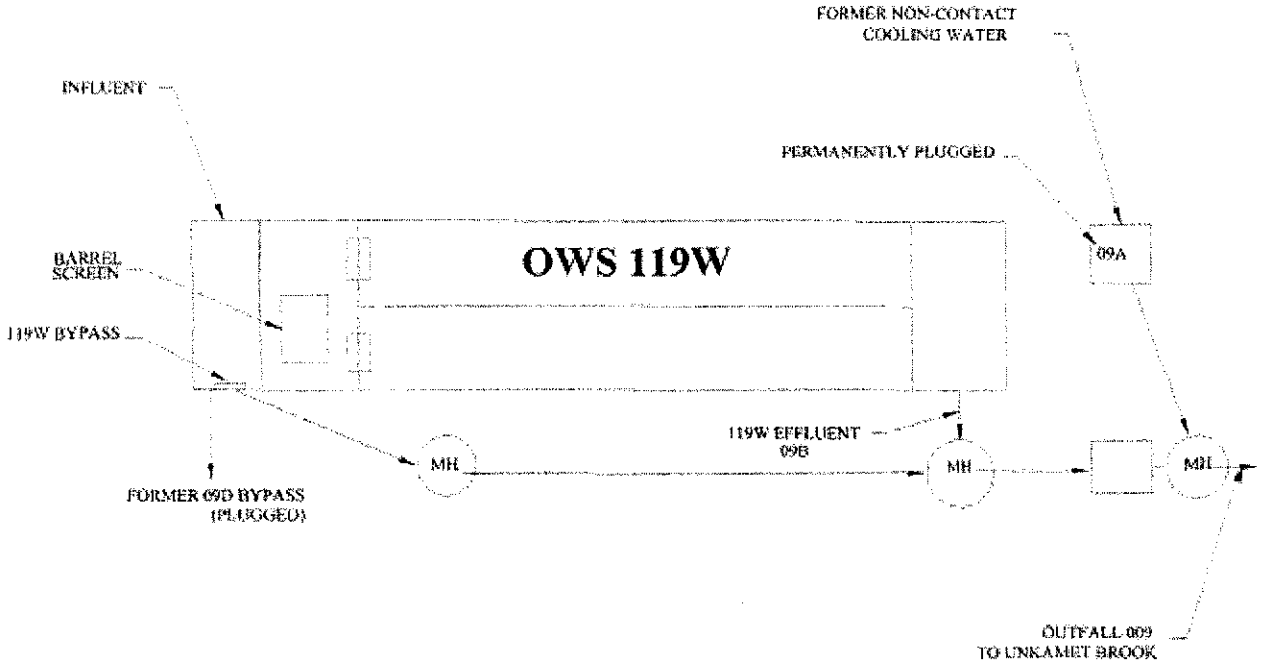
Outfall:	Description of Discharge:	Location (Latitude/Longitude):	Receiving Water:
001	wet and dry weather discharge including: groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain system; facility and city storm water	42 27' 09"/ 73 14' 16"	Silver Lake
01A	overflow from 001 drainage system: wet weather discharge including groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain system; facility and city storm water	42 27' 10"/ 73 14' 18"	Silver Lake
004	wet weather discharge of storm water	___	Silver Lake
005	wet and dry weather treated discharge including: groundwater, OPCA leachate and other EPA approved influent to (64G); groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain; facility and city storm water	42 26' 59"/ 73 13' 53"	Housatonic River
05A	overflow from outfall 005 drainage system: wet and dry weather discharge of groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain; facility and city storm water.	42 26' 59"/ 73 13' 53"	Housatonic River

Outfall:	Description of Discharge:	Location (Latitude/Longitude):	Receiving Water:
05B	overflow from outfall 005 drainage system: wet weather discharge of groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain; facility and city storm water	42 26' 59"/ 73 13' 53"	Housatonic River
SRO4	overflows from 005 drainage system: wet weather Discharge of facility storm water	___	Housatonic River
006	wet and dry weather discharge including: groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain; facility and city storm water	42 27' 04" / 73 13' 44"	Housatonic River
06A	overflow from 006 drainage area: wet weather discharge of groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain; facility and city storm water	42 27' 04"/ 73 13' 44"	Housatonic River
SRO5	overflow from 006 drainage area: wet weather discharge of groundwater (infiltration); city water (used for fire protection testing); unknown dry weather flow from city storm drain; facility and city storm water	___	Housatonic River
09B	wet and dry weather discharge including: ground water (infiltration); city water (used for fire protection testing); facility storm water	42 27' 42"/ 73 12' 30"	Unkamet Brook
009	wet and dry weather discharge including: ground water (infiltration); city water (used for fire protection testing); facility storm water	42 27' 42"/ 73 12' 30"	Unkamet Brook

Outfall:	Description of Discharge:	Location (Latitude/Longitude):	Receiving Water:
YD3	facility storm water	___	Silver Lake
YD10	facility and city storm water	___	Unkamet Brook
YD11	facility storm water	___	Unkamet Brook
YD12,	facility storm water	___	Unkamet Brook
YD6, YD7	facility storm water	___	Housatonic River
YD8, YD9	facility storm water	___	Housatonic River
YD13, YD14	facility storm water	___	Housatonic River
YD16	facility storm water	___	Housatonic River

B. GE Technical Exhibit 2 (OWS 119W Flow Diagram)

119W Oil Water Separator



C. GE Technical Exhibit 3 (Fact Sheet Attachments D, F, G, M, N and Q Data Sets)

Attachments D, F, G, M, N, and Q – See GE Technical Comments Summary Chart #28

The effluent data for metals as generated in support of the Whole Effluent Toxicity (WET) monitoring should be revised:

- to reflect the time period representative of facility conditions that are more similar to future facility conditions; and
- to correspond with the data set used to evaluate effluent variability in Attachment R and for the Outfalls 009 and 005 during dry weather conditions.

The DMR time period considered representative of facility conditions in the future is from January 2001 to June 2004. The metals data are generated from a flow-proportional 24-hr composite sampled collected from Outfalls 001, 004, 005, 007, and 009. However, Outfalls 004 and 007 only discharge in response to wet weather events. Hence, two distinct sets of data are generated, one applicable to dry weather conditions and the other more representative of wet weather conditions. Finally, there are conditions when Outfall 001 and 009 dominate the dry weather flow-proportional 24-hr composites, and other conditions when Outfall 005 dominates the composite. Therefore, the metals data can be further fine-tuned to be representative of facility conditions.

Both total and dissolved metals are analyzed, however dissolved metals is the indication of the quality of the effluent for comparison to in-stream aquatic life criteria.

The dissolved metals data representative of Outfall 001 (Attachment D) and Outfall 009 (Attachment N) during dry weather conditions for cadmium and lead are all non-detect with detection limits of 0.001 mg/L and for chromium, nickel, and silver are all non-detect with detection limits of 0.0025 mg/L. The data for dissolved aluminum, copper, and zinc are:

Al (mg/L)	Cu (mg/L)	Zn (mg/L)
<0.100	0.014	0.05
0.072	0.0052	0.0096
<0.100	0.015	0.03
<0.100	<0.005	0.034
<0.100	<0.005	0.016
<0.100	0.0075	0.0025
<0.100	0.0055	0.046
<0.100	<0.005	0.026
<0.100	<0.005	0.025
<0.100	<0.005	0.017
<0.100	0.0027	0.034

The dissolved metals data representative of Outfall 005 (Attachment G) during dry weather conditions for cadmium are all non-detect with a detection limit of 0.001 mg/L and for chromium, nickel, and silver are all non-detect with detection limits of 0.0025 mg/L. The data for dissolved aluminum, copper, lead, and zinc are:

Al (mg/L)	Cu (mg/L)	Pb (mg/L)	Zn (mg/L)
<0.100	0.014	<0.005	0.018
0.25	0.0079	<0.0025	0.03
0.035	0.0025	<0.0025	0.01
<0.100	<0.005	<0.005	0.023
0.047	<0.005	<0.005	0.035
0.049	<0.005	<0.005	0.024
<0.100	0.0049	<0.005	0.075
<0.100	<0.005	<0.005	0.025
0.07	<0.005	<0.005	0.047
<0.100	0.0048	<0.005	0.051
<0.100	<0.005	<0.005	0.016
<0.100	<0.005	<0.005	0.032
<0.100	0.011	<0.005	0.033
<0.100	<0.005	<0.005	0.03
<0.100	0.0052	<0.005	0.0077
<0.100	<0.005	<0.005	0.01
<0.100	<0.005	<0.005	<0.02
<0.100	<0.005	<0.005	<0.02
0.084	0.0071	0.0031	0.024
0.075	0.0078	<0.005	0.056
<0.100	0.0056	0.0044	0.046
<0.100	0.0062	<0.005	0.035
<0.100	0.0047	<0.005	0.018
<0.100	0.003	<0.005	0.017
<0.100	0.0078	<0.005	0.014
<0.100	0.0068	<0.005	0.017
<0.100	0.0023	<0.005	0.011
<0.100	0.0057	<0.005	0.016

The dissolved metals data representative of wet weather conditions, including Outfall 004 (Attachment F) and Outfall 007 (Attachment M) from January 2001 to June 2004 for cadmium, chromium, nickel, and silver are non-detect except for one detection for each chemical. The detection limit is 0.001 mg/L for cadmium and 0.0025 mg/L for chromium, nickel, and silver. The data for dissolved aluminum, copper, lead, and zinc are:

Al (mg/L)	Cu (mg/L)	Pb (mg/L)	Zn (mg/L)
0.084	0.0130	<0.005	0.071
<0.100	0.0059	<0.005	0.024
<0.100	0.0087	<0.005	0.040
<0.100	0.010	<0.005	0.090
<0.100	0.0072	<0.005	0.110
<0.100	<0.005	<0.005	0.089
<0.100	0.0048	<0.005	0.024
<0.100	0.012	<0.005	0.034
<0.100	0.0083	0.0055	0.017
0.082	0.0094	<0.005	0.060
0.088	0.0073	<0.005	0.037
0.057	0.0092	<0.005	0.034
0.078	0.011	<0.005	0.043
0.072	0.0092	<0.005	0.052
0.17	0.0075	<0.005	0.048
0.056	0.0064	<0.005	0.053
<0.100	0.0082	<0.005	0.032
<0.100	0.0038	<0.005	0.020
<0.100	<0.005	<0.005	0.020
<0.100	0.0058	<0.005	0.030
<0.100	0.0078	<0.005	0.0180

D. GE Technical Exhibit 4 (Fact Sheet Attachment R Revisions)

Attachment R – See GE Technical Comments Summary Chart #30

The table presenting the variability of copper in the flow-proportional 24-hr composite sample dominated by the discharge of Outfalls 001 and 009 (and not Outfall 005) and the comparison to the preliminary effluent limit based on the limiting aquatic criterion should be revised to as follows:

Pollutant	N	Maximum (mg/L)	Coefficient of Variation	Projected Effluent Quality (PEQ) (mg/L)	Daily Maximum Projected Effluent Limit (PEL) (mg/L)	Monthly Average Projected Effluent Limit (PEL) (mg/L)	Most Restrictive Controlling Criteria	RPE TEST PEQ > PEL_{DM}?	RPE TEST PEQ > PEL_{MA}?
Copper, dissolved	11	0.015	0.82	0.0285	0.017	0.012	Chronic	yes	yes

1. Metals chemistry associated with monthly composite samples collected from January 2001 to June 2004 for the purposes of toxicity testing.
2. Effluent composite samples were collected from sampling locations 001, 005-64T, 005-64G, 09A, 09B and dominated by Outfall 001 + 009 flow.
3. Multiplying factor to generate PEQ based on $95^{th}/95^{th}$ table in the EPA TSD.

E. GE Technical Exhibit 5 (Analysis and Recommendations Regarding Mass Effluent Limits for Outfalls 001, 005 and 009)

GE Recommendation: The conditions and requirements related to the mass limits in the Draft Permit for Outfalls 001, 005 and 009 are inappropriate and should be revised.

Prior to discharge, flows from Outfalls 001, 005 and 009 (as presented and corrected in GE Technical Exhibit 1) are subject to treatment by oil-water separator ("OWS") 31W (for Outfall 001); the 64T and 64G water treatment facilities (for Outfall 005); and OWS 119W (for Outfall 009). Although there are continuous dry weather sources of water to these wastewater treatment systems, discharges can be dominated by storm water in response to certain rain events. In these cases, the storm water component mixed with the dry weather flow (hereafter referred to as "co-mingled treated discharge") is treated by the wastewater treatment systems prior to discharge. The Draft Permit refers to these system characteristics as "wet weather" discharge.

The Draft Permit imposes effluent limitations, including discharge conditions and sampling and analytical requirements, for total suspended solids ("TSS") and oil and grease ("O&G") at Outfalls 001, 005 and 009 during "wet weather." The draft fact sheet provides the following explanation for the limitations:

> The proposed draft permit retains the same limitations on TSS and oil and grease required in the current permit in accordance with antibacksliding regulations.

For several reasons, GE objects to the imposition of the mass limitations, particularly in relation to the discharge conditions and sampling and analytical requirements, and to the justification provided for imposition of the mass limitations. As a general matter, it is inappropriate to subject discharges of storm water runoff to numeric limits. This is especially

true for TSS mass limits.[1] Assuming, though, that EPA retains mass limits at Outfalls 001, 005 and 009, then the discharge conditions and sampling/analytical requirements related to those limits need to be revised.

It is important to note, as an initial matter, that the mass effluent limitations proposed in the Draft Permit are not the same as, and in fact are more stringent than, those in GE's existing NPDES permit, because of the way in which they are applied through the discharge conditions and sampling and analytical requirements. Therefore, EPA's use of antibacksliding as a justification for these limits is incorrect. These new discharge conditions and sampling and analytical requirements are inappropriate, and should be revised to reflect changes in facility operations and conditions and more relevant technology considerations. These comments provide GE's recommendations on appropriate provisions for these Outfalls. These suggested revisions to the discharge conditions and sampling/analytical requirements are not prohibited by the antibacksliding regulations, and these revisions need to be included in the final permit.

I. MASS EFFLUENT LIMITATIONS IN DRAFT PERMIT AS COMPARED TO THOSE IN CURRENT PERMIT

GE Recommendation: The mass limits in the Draft Permit, with associated discharge conditions and sampling/analytical requirements, are more stringent than those in the

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[1] The reasons why it is generally inappropriate to issue numeric limits for storm water are detailed in Section V.A of the GE comments on the Draft Permit. In addition, it should be noted that the effluent from Outfall 001 is very similar to municipal runoff. EPA has not required numeric limits for municipal runoff for TSS or other parameters. *See* 40 CFR § 122.34(a) (reflecting EPA's preference for "narrative effluent limitations requiring implementation of best management practices"). Nor has EPA required treatment of all municipal runoff. In fact, the control program for municipal storm sewer discharges is very flexible, focusing on the following types of control measures: public education and outreach, public participation/involvement, illicit discharge detection and elimination, construction site runoff control, post-construction runoff control, and pollution prevention/good housekeeping. *See* 40 CFR § 122.34(b). The control requirements that the Draft Permit imposes regarding the discharge from Outfall 001 are markedly more stringent than those measures that EPA requires municipalities to follow.

current permit. As a result, EPA's use of antibacksliding to justify these new limits is incorrect.

The draft fact sheet states that the mass limitations in the Draft Permit are the same as those in the current permit. This is not correct. In fact, as applied the mass limitations are more stringent than the current permit.

Although the numerical values from the current permit also appear in the Draft Permit, the limitations are not the same. Limitations also include the conditions under which sampling is required, the specified weather conditions prior to and during the sampling event; and the sampling and analytical requirements (when to sample, type of sample). When one considers the complete picture, it is quite clear that the limitations in the current permit are distinctly different from the limitations proposed in the Draft Permit.

Table 1 highlights the differences between current and proposed TSS mass limitations based on required sample discharge conditions for Outfalls 001, 005 and 009.[2] For each outfall, the highlighted boxes compare the conditions that apply during wet weather under the current permit and under the Draft Permit.

[2] Please note that similar revisions to the O&G limitations appear in the Draft Permit.

Table 1. Comparison of Current and Proposed Permit Conditions for Total Suspended Solids

Permit	Sample Conditions	Weather Restrictions	Sample Type	Sample Frequency	Monthly Average Limit	Daily Maximum Limit
Outfall 001						
Current Permit	Dry or Wet*	None	24-hr composite	Monthly	**138 lbs/day**	**628 lbs/day**
Draft Permit	Dry only	< 0.1 inch rain and no snow melt	24-hr composite	Quarterly	No limit; No report	No limit; report
Draft Permit	Wet only	>0.1" during collection; < 0.1" previous 72 hours	Initial Grab & 3-hr flow-weighted composite	Monthly	**138 lbs/day**	**628 lbs/day**
Outfall 005						
Current Permit	Dry or Wet	None	24-hr composite	Monthly	**188 lbs/day**	**270 lbs/day**
Draft Permit	Wet only	> 0.1" during collection; < 0.1" previous 72 hours	Initial Grab & 3-hr flow-weighted composite	Monthly	**188 lbs/day**	**270 lbs/day**
Outfall 009						
Current Permit	Dry or Wet	None	24-hr composite	Monthly	**213 lbs/day**	**876 lbs/day**
Draft Permit	Wet only	> 0.1" during collection; < 0.1" previous 72 hours	Initial Grab & 3-hr flow-weighted composite	Monthly	**213 lbs/day**	**876 lbs/day**

Notes:
* Dry weather conditions are < 0.1 inch of rain and no snow melt
* Wet weather is defined in the Draft Permit

Note that the current permit does not distinguish between dry and wet weather conditions – samples can be taken at any time; and the current permit does not specify weather conditions prior to or during the sample collection. In contrast, the Draft Permit clearly distinguishes between dry and wet weather conditions, and applies the mass-based limitations only during wet weather discharges. This is problematic because mass is a function of flow, and the proposed limitations have not been adjusted to reflect first flush flow through the treatment systems and associated outfalls during wet weather conditions.

Furthermore, the wet weather sampling requirements are different between the two permits. The sample type for TSS during wet weather is a flow-weighted composite for each

hour up to three hours, which is very different from a 24-hour composite. Furthermore, the Draft Permit states that wet weather sampling must be taken during a storm event with at least 0.1 inch of precipitation which occurs at least 72 hours from the previous storm event of at least 0.1 inch. In contrast, the current permit has no definition of wet weather as applied to reporting or monitoring.

For these reasons, the Draft Permit's mass limitations – which are proposed to apply only during wet weather discharges in accordance with revised monitoring requirements – are actually more stringent than those in the current permit. Therefore, the antibacksliding requirements cannot be used as support for imposition of the limitations, because the limitations are not the same as those in the current permit. Antibacksliding restrictions can apply (subject to exceptions described below) when the limitations contained in a renewal permit are less stringent than the limitations in the current permit; they certainly do not apply when new limitations are more stringent. Therefore, antibacksliding cannot be used to justify the more stringent limitations in GE's Draft Permit.

The draft fact sheet states that effluent data show that the outfall discharges achieve the current permit limitations. Generally speaking, this is a correct statement. However, it is incorrect to use that logic to establish a BPJ limit and assume that the outfall discharges can achieve the proposed limitations and monitoring requirements in the Draft Permit. For several reasons, the data generated as required by the current permit have no relationship to the database that would be generated under the Draft Permit requirements. A sample of a continuous discharge independent of weather conditions is not equivalent to a sample of a first surge of a continuous discharge under specifically defined wet weather conditions. For TSS, a 24-hour composite is not equal to a 3-hour composite. For O&G, a grab sample taken during

the first 30 minutes of a discharge is different from a grab taken at any time during a discharge. As a result, the current database cannot be used to assess compliance with the proposed limitations in the Draft Permit.

Without an outfall-specific data set that corresponds to the monitoring requirements established in the Draft Permit, it is not possible to understand or assess the potential ramifications of the proposed monitoring changes in terms of compliance with the discharge limitations. However, it is reasonable to assume that the sampling provisions included in the Draft Permit (*i.e.*, an initial grab sample within the first 30 or 60 minutes of a storm event and a flow-weighted composite sample collected over the next 3 hours) will result in TSS and O&G concentrations that are higher than those obtained as part of the monitoring conducted under GE's current permit (*i.e.*, a 24-hour composite sample). Therefore, there is an increased potential that -- even under existing conditions and without any physical changes in the nature, quantity and quality of flow discharged from Outfalls 001, 005 and 009 -- GE will exceed the discharge limitations established in the Draft Permit. This is inconsistent with EPA's assertion that GE will be able to achieve these discharge limits.

II. RECOMMENDATIONS FOR MONITORING OF CO-MINGLED TREATED DISCHARGES

GE's technical rationale for recommendations to clarify the characterization and monitoring of Outfalls 001, 005 and 009 when the treated discharge is a combination of dry and wet weather include three main issues:

1) sampling approach;
2) definition of monitoring condition (*i.e.*, wet weather); and
3) the applicability of TSS mass limits.

1) Sampling Approach (Sample Compositing)

Permit Reference: Footnotes 1 and 2

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GE Recommendation: For those outfalls where the wet weather discharge may also include a dry weather flow component (*i.e.*, Outfalls 001, 005 and 009), EPA should modify the composite sampling approach described in footnote No. 2 of the Draft Permit. GE proposes to replace the collection of an initial grab sample, as well as a flow-weighted composite sample for the first 3 hours of a storm event, with the collection and compositing of 24-hour time-weighted samples (See Row 19 of GE's Technical Comments Summary Chart).

The Draft Permit proposes the collection of 3-hour flow weighted composites for TSS monitoring at Outfalls 001, 005 and 009, and also requires (in Footnote 2) the collection of an initial grab sample for TSS. As an initial matter, GE notes that the requirement for an initial grab sample is not appropriate. Footnote 2 of the Draft Permit governs parameters where composite samples are required, but also contains a statement requiring an initial grab. No reason is provided. There are other parameters (such as oil and grease) where a grab sample makes sense, and the Draft Permit requires grabs in those situations. In the case of measuring TSS levels of a discharge that includes dry and wet flow that has been routed through treatment systems, there is no basis for requiring an initial grab sample. The reference to grab samples in Footnote 2 should be deleted.

The use of 3-hour flow weighted composite samples is not appropriate or justified for a continuous discharge from a treatment system (OWS or OWS and GWTP). Future compliance sampling for these outfalls should reflect the fact that flow discharge is not solely an intermittent discharge of storm water runoff, but instead is continuous in nature, composed on both dry and wet weather flow components, and subject to treatment prior to discharge by OWS 31W (for Outfall 001); the 64T and 64G water treatment facilities (for Outfall 005); and OWS 119W (for Outfall 009). It is GE's belief that these considerations are the underlying rationale for the site-specific sampling approach that has long been implemented at the Pittsfield facility - *i.e.*, the characterization of these outfall discharges through the collection

and analysis of 24-hour, time-weighted composite samples. The use of a 24-hour time-weighted composite will capture entire runoff events, thus providing more representative data, and will provide data that are consistent with historic data sets.

A 24-hour time-weighted composite sample is a single sample comprised of 24 individual sample aliquots collected over the entire runoff event and concurrently with the 24-hour flow. This is a typical method for generating discharge characteristics for the effluent from treatment systems. There are no data or evidence provided in the draft fact sheet, that a 3-hour period captures the representative flow associated with a co-mingled (dry and wet) treated discharge. Typical flow and concentration hydrographs for storm water collected in a storm water conveyance system and then discharged cannot be assumed to apply to a conveyance system that already contains flow that then is routed through wastewater treatment systems. GE contends that sampling over a longer time period of discharge (*e.g.*, a 24-hour duration) provides the best and most appropriate approach for representing the various flow components within each drainage basin, over a representative time period. As such, GE sees no reason to modify the historic/current and site-specific sampling approach for these outfalls, and proposes that the current sampling approach remain intact.

The 24-hour composite sample approach is not only the preferred technical approach to measuring compliance for these outfalls, it also is consistent with EPA's fundamental views regarding wastewater and storm water sampling. From a wastewater perspective, effluent characteristic assessment for NPDES permit applications, as set forth in 40 CFR § 122.21(7)(g)(i) requires a 24-hour composite sample. If such a sample is required for effluent characteristic assessment with regard to permit applications, the Agency could logically conclude that similar sampling should be required for effluent compliance purposes.

The addition of storm water to the effluent does not affect this conclusion. In its original storm water regulations, EPA discusses appropriate sampling requirements and then sets forth minimum sampling to ensure that industries would be able to develop effective storm water management programs. 55 Fed. Reg. at 48,005 (November 16, 1990). In this discussion, EPA clearly is balancing the benefits derived from flow or time-proportioned sampling throughout the entire hydrograph of a storm event versus the cost and practicality of mandating such sampling as a minimum requirement. EPA recognized the need for flexibility and stated that "industries may vary from [EPA's] requirements to the extent that their implementation is at least as stringent" as EPA's regulations. *Id.*

EPA's focus in developing the storm water program has been on quality of data for decision-making and compliance purposes. The Agency ultimately allows storm water permit applicants to choose between a three hour and an "entire discharge" composite. Fifteen years later, EPA should not now confuse the establishment of the three-hour minimum requirement with a site-specific determination of what is appropriate. In this instance, a 24-hour composite, consistent with the "entire discharge" approach is the appropriate management and compliance tool.

In addition to being technically inappropriate, the Draft Permit condition to use 3-hour flow-weighted composites is not representative of the current compliance monitoring database, which is comprised of 24-hour flows and 24-hour time-weighted composite results. The current database does include discharge characteristics in response to wet weather (rain or snow melt) events. However, the results (flow and concentration) represent the response of the system over 24 hours, not just the first 3 hours. Hence, the current database cannot be used to determine if the outfall discharge will comply with the proposed mass limits. This significant

change to compliance assessment is inappropriate and not needed. EPA should retain the 24-hour, time-weighted composite sampling approach that is contained in the current permit.

2) **Monitoring Condition (Wet Weather Definition)**

Permit Reference: Footnotes 1 and 2

Page #: 5

GE Recommendation: In Footnotes No 1 and No. 2 of the Draft Permit, EPA should modify the definition of wet weather conditions (for the purposes of sampling) to specify a preceding dry-period interval of 24 hours instead of 72 hours.

The Draft Permit recommends that monitoring, in the form of reporting requirements and/or numeric limits, be conducted at a number of discharge locations (*i.e.*, 001, 004, 005, 006, 007, 009 and associated overflow/bypass discharges) for a number of parameters (*e.g.*, TSS, O&G, PCBs) during wet weather. In addition, the Draft Permit proposes application of the monthly average mass limits to this specific discharge condition at Outfalls 001, 005 and 009.

In the Draft Permit, "wet weather" is defined as "a storm event with at least 0.1 inches of precipitation, providing the interval from the preceding storm is at least 72 hours." No technical or other rationale has been provided for the inclusion of a 72-hour "dry period" requirement in the definition of "wet weather". The inclusion of a 72-hour dry period requirement (which includes both precipitation and snow melt) in the definition of wet weather is not justified or appropriate, and this requirement will result is the collection of fewer and less representative data. In particular, assessment of compliance with daily maximum limits may be problematic due to the lack of monitoring opportunities, and assessment of compliance with monthly average limits may be impossible.

Table 2 (below) presents an analysis of the number of potential wet weather sampling days in 2003 and 2004 based on a 72 hour and 24 hour dry period requirement prior to the start

of rainfall. The summary and analysis focuses on the months of April through November as the presence of snow melt conditions from December through March preclude this type of analysis during these months. The raw data have not been provided with these comments as the raw data set is quite large (*e.g.*, there are approximately 35,000 data points per year). GE can provide this data on CD or as zipped electronic files at the request of the Agency.

Using the 72 hour rule, the presence of any significant snow melt or precipitation would preclude the collection of monitoring samples for the following 72 hours. A review of rainfall data for the Pittsfield facility for the past 2 years for April through December indicates that, using the 72 hour criteria, only 1 to 3 days per month (average of 2.9 days per month) in 2003 and 1 to 3 days per month (average of 2.5 days per month) in 2004 would have met the "dry period" criteria for wet weather. It is unlikely that the once per month sampling frequency could be routinely met during these months, or that sufficient data would be routinely available to calculate a monthly average. During the months of January, February and March, the presence of snow melt alone could make it very difficult to conduct the required monitoring sampling. Observable snowmelt is likely in any 3 day window during this timeframe, excluding certain periods of extremely cold weather.

Alternatively, the use of a 24 hour dry period requirement (preceding a wet weather event), would provide for significantly more opportunities to collect required monthly wet weather monitoring samples. A review of rainfall data for the Pittsfield facility for the past 2 years for April through December indicates that, using the 24 hour criteria, 4 to 7 days per month (average of 5.3 days per month) in 2003, and 1 to 7 days per month (average of 4.4 days per month) in 2004 would have met the "dry period" criteria for wet weather sampling. Although relatively few days met the 24 hour criteria on a monthly basis, the use of the 24 hour

criteria provides significantly more opportunities (in some cases more than twice the number compared to using the 72 hour criteria) to conduct wet weather sampling.

Table 2. Number of Days Meeting Dry Prior Requirement for Wet Weather Sampling (April to November, 2003 and 2004)

		Dry Period Requirement	
Year	**Month**	**72 hr.**	**24 hr.**
2003	April	2	4
	May	3	5
	June	2	5
	July	3	4
	August	4	7
	September	3	7
	October	3	5
	November	3	5
	Average	**2.9**	**5.3**
2004	April	2	3
	May	3	7
	June	3	4
	July	3	6
	August	2	6
	September	3	4
	October	1	1
	November	3	4
	Average	**2.5**	**4.4**

The use of a 72 hour dry period requirement may be justified for monitoring at active industrial facilities, where significant deposition of contaminants can occur in a relatively short time frame. We do not believe, nor have we seen any data to support the assumption that the watershed associated with the Pittsfield facility drains an area that receives frequent or significant deposition on an ongoing basis. The use of longer "dry period" criteria will, therefore, not provide more relevant or useful wet weather monitoring data. To the contrary, the use of the 72 hour dry period criteria as part of the definition of wet weather will limit the amount of representative monitoring data collected in the future. We therefore propose that a 24-hour dry period be used in the definition of wet weather. The use of a 24-hour dry period

criteria will allow for the opportunity to collect more wet weather data, therefore providing a more representative data set that can routinely support calculation of monthly averages.

EPA's choice of the 72-hour antecedent period between rain events that triggers sampling is arbitrary. In the original storm water rule, 55 Fed. Reg. at 48018, EPA had proposed a 96-hour period, and again was forced to balance the perceived benefits of antecedent periods, storm event characterizations, and the effort to collect samples. In settling on 72-hours, EPA made clear that the rule was flexible and that "the Director may allow or establish site specific requirements such as the minimum duration between the previous measurable storm event and the storm event sampled." *Id.* While it never has changed the 72-hour presumption - or its 50 percent variation limitation on storm depth or duration - subsequent experience has shown that the Agency has openly accepted samples collected that are inconsistent with these limitations if appropriately justified.

States also have modified their programs to eliminate problems associated with the 72-hour rule. Most notably, the State of Washington requires only that the "storm event sampled is preceded by at least 24-hours of no greater than trace precipitation." Washington Industrial General Permit as modified on December 1, 2004 at 26 of 72. EPA's Multi-Sector General Permit and many state permits (*e.g.*, Nevada, Wyoming) allow industrial facilities to waive the 72-hour requirement based on local storm event patterns and frequencies.

It is also important to note that in those situations when a 72 hour dry period requirement is applied, the required sampling frequency is typically much lower (*e.g.*, quarterly or semi-annually) than the monthly sampling proposed by EPA in the Draft Permit. The lower sampling frequency mitigates the impact of the 72 hour rule on collection of sufficient wet weather data to meet monitoring requirements. If the application of a 24 hour dry period

criteria is not acceptable to EPA, we suggest that the required sampling frequency be changed to a quarterly requirement, to support monitoring that can reasonably be achieved. If that is done, then the applicable limits would also need to be changed from monthly average to quarterly average, to be consistent with the monitoring provisions.

3) **Applicability of TSS Limits (Specific to Outfall 001)**

Permit Reference: Part I.A.2

Page #: 3

GE Recommendation: In determining compliance with the TSS discharge limits for Outfall 001 during wet weather, TSS data corresponding to a 24-hour discharge flow greater than 0.432 million gallons should be excluded from the calculation of the average monthly TSS mass. The mass result in those flow situations should remain subject to reporting requirements only.

OWS 31W, which receives municipal runoff and other water going to Outfall 001, can, under certain flow conditions, remove solid materials. However, because this system is not designed specifically to reduce TSS, and does so effectively only under certain circumstances, application of technology-based limits, such as those in the Draft Permit, should be limited to situations where the OWS is performing to reduce TSS. GE's analysis indicates that when 24-hour average flow is above 0.432 million gallons in response to rain events, the performance of OWS 31W may not be representative of the conditions on which the monthly average mass limit was based. Therefore, for determining compliance with the monthly average 'wet weather' TSS limit, data collected over a 24-hour period should be used if the 24-hour flow is less than or equal to 0.432 million gallons. When the 24-hour flow is greater than 0.432 million gallons, the data and mass result should be reported but not used for compliance assessment.

The draft fact sheet (page 12) provides that the TSS limits[3] for Outfall 005 are technology-based and were established using best professional judgment ("BPJ"). The draft fact sheet does not explicitly present the origin of the limits for Outfalls 001 and 009. However, without statements to the contrary in the draft Fact Sheet, it can also be assumed that the TSS limits[4] for Outfalls 001 and 009 were established based on BPJ, because they are similar in nature to the limit for Outfall 005. Also as stated in the draft fact sheet, the current limitations[5] required for Outfall 001 in the current permit are found in this permit in accordance with antibacksliding regulations. Therefore, it is assumed that the current Outfall 001 TSS monthly average mass limit is based on a BPJ evaluation of treatment technology.

The current monthly average mass limit of 138 lb/d applies independent of weather conditions and to 24-hours of operation as monitored by 24-hours of flow and sample collection. The proposed limits in the Draft Permit are to be monitored under significantly different conditions than the current permit. This alters the applicability of the current numeric mass limits. Instead of being applicable to continuous operations, the limits are to apply to a specific set of conditions for which no specific set of monitoring data exist to assess compliance. However, using BPJ to assess the OWS treatment technology, representative operating conditions, based on the current permit assessment (138 lb/d) of TSS, can be developed for use under the Draft Permit's proposed conditions.

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[3] "Limits" meaning the specific numeric mass values, not the associated monitoring conditions, sample type, or sample frequency.

[4] "Limits" meaning the specific numeric mass values, not the associated monitoring conditions, sample type, or sample frequency.

[5] "Limitations" meaning the specific numeric mass values, the associated monitoring conditions, sample type and sample frequency.

The OWSs currently present within the GE facility were originally designed, constructed and operated to support GE's active manufacturing activities, with the primary intent of removing oils and other floatable materials from plant waters prior to discharge. While not specifically designed to remove solids from such water, the OWSs can, under certain flow conditions, remove solid materials. Because OWS systems are not designed specifically to reduce TSS, and do so effectively only under certain circumstances, application of technology-based limits should be limited to situations where the OWS system is performing to reduce TSS. Reduction of TSS using an OWS will be a function of:

- the influent TSS composition, *e.g.*, particle size distribution and density;
- the residence time in the OWS, which is related to both influent flow and volume of OWS bays;
- the depth of water maintained in the OWS bays;
- the complete mix or routing of flow through the OWS, *e.g.* short circuiting; and
- the impact of turbulent flow on settling and scouring.

OWS 31W, which treats waters going to Outfall 001, poses unique challenges with regard to reduction of TSS. Unlike the other OWSs at the site, 31W receives municipal runoff from a large off-site drainage area (about 90 acres). The runoff from that area will contain a variety of solid materials that are not present on-site and which pose treatment difficulties for OWS 31W that are not presented for other site discharges.

Flow can be used as an indication of the potential ability for the 31W OWS to reduce influent TSS. Using Outfall 001 flow generated from 2002 to current, it is apparent that the OWS conditions during certain rain events are distinctly different from the representative OWS conditions assumed to have been the basis of the technology-based 138 lb/d. For instance, in

response to rain events, there where will be a time period[6] when flow through the system surges (increases), thereby reducing residence time for particle settling and causing turbulent flow through the OWS. One method to determine the average 24-hour flow that is representative of the conditions applicable to the 138 lb/d, is to evaluate the relationship between flow and rain events. The focus of this evaluation is to determine when there is a statistically noticeable flow response of the OWS (over a 24-hour period) to rain events. To have a rugged database, a rain event is defined as the sum of all rain or snow melt for the 72 hours prior. As there is a difference between flow during periods of rain (average = 0.17 mgd) and no rain (0.089 mgd), the relationship between increments of rain and the flow corresponding to those increments was used to evaluate the response of the OWS to rain-influenced flow. The increments of rain summarized into rain categories are:

- Category 1 = 0.01" to 0.029"; 85 flow measurements
- Category 2 = 0.03" to 0.059"; 68 flow measurements
- Category 3 = 0.06" to 0.099"; 48 flow measurements
- Category 4 = 0.10" to 0.19"; 82 flow measurements
- Category 5 = 0.20" to 0.49"; 92 flow measurements
- Category 6 = 0.50" and greater; 70 flow measurements

The relationship between the rain categories and statistical summaries of Outfall 001 concurrent with the categories is shown in the following graph:

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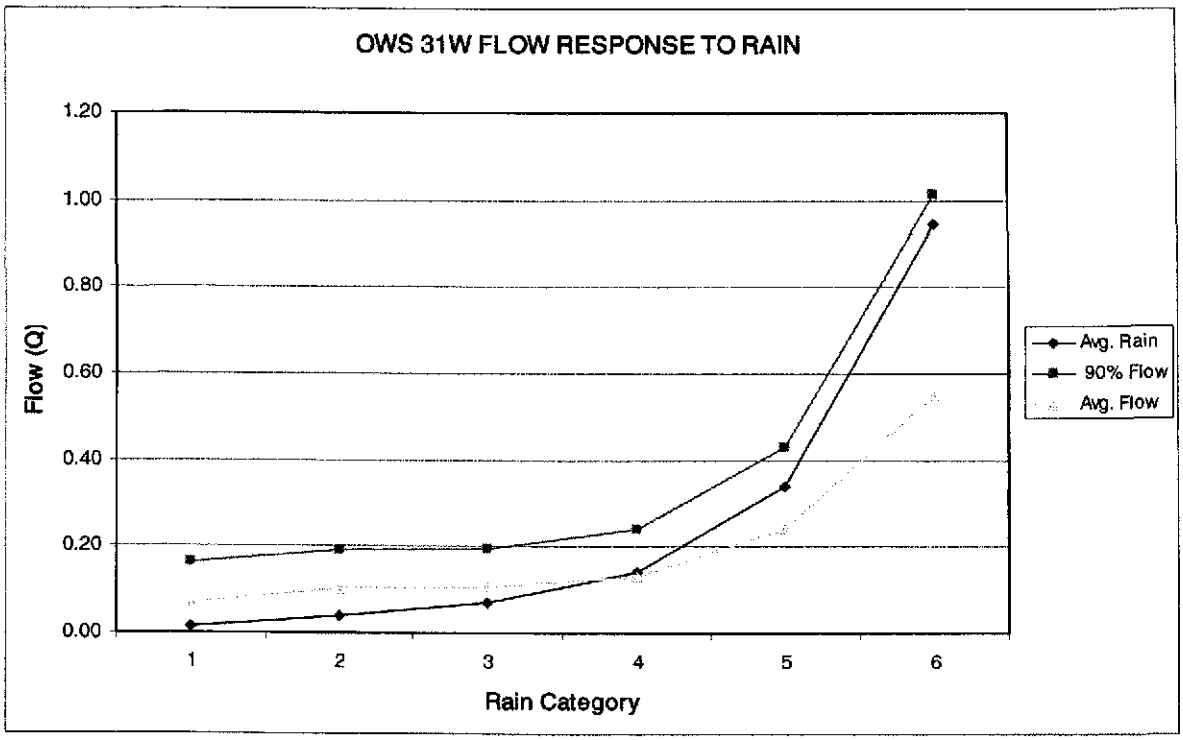
[6]The specific time period is not known, but should occur during the 24-hour monitoring period, but not necessarily during the first 3 hours.



For specific categories of rain amounts, there is a response in average flow and 90th percentile flow when rain amounts are greater than 0.1 inch (Category 4). When rain exceeds 0.2 inches (Category 5), the 24-hr average 90th percentile flow is statistically related (*i.e.*, similar line slope) to the average rainfall. In addition, the average flow line slope also noticeably changes above Category 5. Therefore, the conclusion can be drawn that the flow through the OWS distinctly changes in response to rain events more than 0.2 inches. The 90th percentile flow for rain events greater than 0.20 inches is 0.432 mgd. The implication of this analysis is that the OWS, for a 24-hour period, will be operating in conditions distinctly different than conditions assumed to be applicable for the TSS mass limit of 138 lb/d (*i.e.*, ability to settle particles, lack of turbulent flow).

The maximum flow in the historic DMR TSS database, when rain occurred (either 72-hr or 24-hr prior to the end of the 24-hr composite period), is 0.554 mgd with a mass result of

221.7 lb/d. This TSS mass result is greater than the proposed monthly average TSS limit of 138 lb/d. The next highest recorded flow, when rain occurred, is 0.226 mgd with a TSS mass result that is below the proposed monthly average TSS mass limit of 138 lb/d.

The results of the analysis presented above suggests that flow conditions within OWS 31W undergo a significant increase due to rain events above 0.2 inches and the 90th percentile flow rate is about 0.432 mgd. At a flow rate of up to approximately 0.432 mgd, there appears to be a relatively consistent flow through the OWS, suggesting a relatively steady-state performance of the OWS. As discussed above, one of the primary factors influencing the effectiveness of the OWS in solids removal is the retention time within the OWS, which in turn is a function of the influent flow rate. So, at a constant flow rate, the performance of the separator will also remain constant. However, as the rainfall/snowmelt-induced flow through the OWS approaches and exceeds approximately 0.432 mgd, the conditions within the separator are much more dynamic, resulting in conditions that would likely reduce its effectiveness in solids removal (relative to the conditions present within the OWS at lower flow rates).

When the 24-hour average flow is above 0.432 million gallons in response to rain events, the performance of OWS 31W may not be representative of the conditions that were used to determine the monthly average mass limit of 138 lb/d TSS. Therefore, for determining compliance with the monthly average 'wet weather' TSS limit, data collected over a 24-hour period should be used if the 24-hour flow is less than or equal to 0.432 million gallons.[7] When

[7] This analysis assumes that the final permit would require 24-hour composite samples and specify a 24-hour dry-period interval, as suggested in these comments. If those recommended revisions to the Draft Permit's provisions are not made, the appropriate flow

(continued...)

the 24-hour flow is greater than 0.432 million gallons, the data and mass result should be reported but not used for compliance assessment.

III. APPLICATION OF ANTIBACKSLIDING REQUIREMENTS

GE Recommendation: The revisions of discharge conditions and sampling/analytical requirements that are suggested in these comments are not prohibited by the antibacksliding regulations. These revisions are appropriate and should be included in the final permit.

As discussed above, there are substantial reasons for revising the discharge conditions and sampling and analytical requirements associated with the TSS and O&G mass limitations that apply to the co-mingled treated discharges from Outfalls 001, 005 and 009. It is not clear that such revisions would make the limitations less stringent than those in the current permit, because the limitations will be applied in a very different manner than the limitations are currently applied. However, assuming that the limitations arguably could be interpreted to be less stringent than those in the current permit, the antibacksliding requirements do not prohibit revision of the limitations.

The applicability of antibacksliding is based on the type of effluent limitation. The effluent limitations in the current permit are technology-based, and were established using best professional judgment (BPJ). The applicable antibacksliding provision concerning revision of technology-based BPJ limitations based on updated BPJ considerations is 40 CFR §122.44(l)(1):

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threshold would need to be recalculated for the monthly average limits and also would need to be calculated for the daily maximum limits.

> Except as provided in paragraph (l)(2) of this section when a permit is renewed or reissued, interim effluent limitations, standards or conditions must be at least as stringent as the final effluent limitations, standards, or conditions in the previous permit (unless the circumstances on which the previous permit was based have materially and substantially changed since the time the permit was issued and would constitute cause for permit modification or revocation and reissuance under §122.62.)

This provision allows revisions of limitations if the circumstances on which the previous permit was based have materially and substantially changed. Specifically, 40 CFR §122.62(a)(1) contains the following cause for permit modification:

> *Alterations.* There are material and substantial alterations or additions to the permitted facility or activity (including a change or changes in the permittee's sludge use or disposal practice) which occurred after permit issuance which justify the application of permit conditions that are different or absent in the existing permit.

Consistent with 40 CFR §122.44(l)(1), the limitations may be revised, because the circumstances on which the current permit was based have materially and substantially changed since the time that permit was issued, and would constitute cause for permit modification or revocation and reissuance §122.62(a)(1).

As discussed above, material and substantial changes have occurred at the Pittsfield facility to justify revision of the discharge conditions and sampling and analytical requirements associated with the TSS and O&G mass limitations. In fact, the fact sheet correctly recognizes the changes in facility operations, as follows:

- Page 3 - GE has made many changes to the wastewater discharges since the current individual permit was issued. Major changes include: (1) separation of non-groundwater flows from the storm drain system in cases where GE determined this change was feasible, and (2) discontinuing the discharge of treated process water, contact cooling water, and non-contact cooling water. The current status and flow schematic, showing the flow components through each permitted outfall, is also shown on **Figure 2** of this fact sheet.

- Page 10 – Facility operations contributing flow to Outfall 001 have substantially been altered since 1992 as cooling water discharges have been eliminated.

- Page 12 – Facility operations contributing flow to Outfall 005 have substantially been altered since 1992 as cooling water and process water discharges have been eliminated.

- Page 15 and Page 16 – Facility operations contributing flow to Outfall 009 have substantially been altered since 1992 as there are no dry weather discharges to the collection system and operations discharging from Building 120X have been eliminated.