November, 23 1999
Sequim, Washington

Anita J. Frankel, Director
Office of Air Quality
USEPA Region 10
1200 Sixth Avenue
Seattle, Washington 98101

Dear Ms. Frankel:

The purpose of this correspondence is to petition the Environmental Protection Agency under the provisions of'40 CFR part 70.8 (d), "Public Petitions to the Administrator." The subject of the petition is the deficiencies in the Title V Air Operating Permit No. 000025-6 which the Washington Department of Ecology (hereinafter referred to as Ecology) issued to the Fort James Camas Mill located in Camas, Washington.

Comment on deficiencies in the draft permit was submitted to Ecology on 27 February, 1999. Ecology published a Responsiveness, Summary on 24 August and subsequently issued the final permit on 20 October, 1999; retaining substantial deficiencies in the area of compliance assurance and periodic monitoring provisions of 40 CFR part 70. My comments as submitted
27 February, Ecology's responses, and my objections to Ecology's responses are presented herein as the basis for this petition.

The following format is used in order to be consistent with the format used in Ecology's Responsiveness Summary.

X Paragraph Y

Comment:	My original comment.
Ecology response:	Ecology's response.
Objection:	My objection to Ecology's response.

Where: X = Sequence number used in the Responsiveness summary.
Y = Paragraph number in my February 27 comment letter..

1.. Paragraph 2

Comment: In general simply specifying CEM's that conform to CFR 40 60, App. A, B, or
F is not a sufficient basis for providing compliance assurance. The permit should list the particular CEM and associated calibration, source testing method and frequency, reporting

requirements, and maintenance criteria, Sections pertinent to this comment, but are not limited, to A.3, A.5, B.3, B.5, G.4, G.9, G.11, H.4, H..5, H.8, I.5, I.9, L.2, L.4, J.2, and J.4.

Response: The issues are addressed by PSD 88-3/Regulatory Order 88-360 which is an applicable requirement of this air operating permit. Ecology required Fort James to submit a compliance monitoring plan and Quality Assurance/Quality Control (QA/QC) manual for each Continuous Emission Monitoring (CEM) system. The QA/QC manuals document calibration assessments, accuracy audits, data reporting, and preventive maintenance. The volume and complexity of these procedures precludes their direct inclusion in the permit. In *1991* Ecology required the Fort James Camas Mill to develop and submit and Air Emission Monitoring Plan. This plan displays the various air emission monitoring requirements including the source test method and frequency.

Objection: The comment has been partially addressed by inclusion of the PSD 88-3/Reglatory Order 88-360 summary, however. the information continues to be lacking for Sections J.2 and J.4.

2, Paragraph 3

Comment: Applying the reference source test for particulate (Section M.1) once per permit term Is not a sufficient basis for providing compliance assurance. The permit record contains no supporting data for the validity of the selected parameter range. The relationship between the monitored parameter and the regulated quantity can vary significantly over a five year period.

Response: Continuous compliance at the Will II Sheeter is assured by continuous monitoring of the air cleaning bathhouse. An initial performance source test was conducted and the once per permit term appears sufficient for a relatively small emission source where continuous monitoring of the pressure drop has been demonstrated to be adequate.

Objection: The original comment continues to be applicable. The permit record contains no information demonstrating that monitoring the pressure drop adequately assures compliance.

3. Paragraph 4

Comment: Throughout the permit and for every emission unit, the permit refers to ‘previous stack tests’ as a basis for demonstrating compliance. Previous stack tests cannot be a basis for demonstrating compliance. Compliance should be demonstrated via current source tests, performed at appropriate intervals, that reflect the current condition and operation of pollution control and production equipment, and are representative the range or ranges over which the systems are operated. The operating conditions during each source test should be recorded and submitted with the test results.

Response: The permit specifies an ongoing program of frequent stack sampling and analysis. Ecology has a history of requiring frequent stack sampling and analysis. Based on the recent Maximum Achievable Control Technology Rule promulgated by the US Environmental Protection Agency, Ecology has demonstrated that this partcular aspect of the air program in Washington is one of the most rigorous in the nation. The term "previous stack tests" refers only to the method used for calculating annual average emissions for the applicable emission units.

The following background information will provide the basis and significant ramification for the employment of periodic source testing as one of Ecology's means to monitor for compliance with the permit conditions. Ecology has preferentially relied on direct source testing as the most robust and accurate method of determining compliance and through frequency of testing, continuous compliance. Source testing is conducted on a periodic basis due to its cost in both time and resources. Ecology has attempted to reconcile frequency of monitoring with accuracy of monitoring by relying on both direct periodic source testing and more frequent indirect monitoring using surrogate parameters. The Permit thus combines periodic direct source testing which definitively determines compliance with surrogate monitoring requirements as minimum operating parameters to reach an overall monitoring program intended to meet the Title V's monitoring requirement.

Furthermore, to answer the question directly, and understanding of how a certain activity, like a source test, could represent compliance with a standard, a review of the literature wherein this language is found is appropriate. 40 CFR Part 70, the federal operating permits rule, at 70.6(a)(3)(i) reads: "Each permit shall contain the following requirements with respect to monitoring: (B) Where the applicable requirement does not require periodic testing or instrumental or non-instrumental monitoring (which may consist of record keeping designed to serve as monitoring), periodic monitoring sufficient to yield reliable data from the relevant time period that are representative of the source's compliance with the permit." The preamble to the final rule (FR32304, dated July 21, 1992) sheds light on the meaning of the phrase "representative of the source's compliance." It reads: "...periodic testing or instrumental or non-instrumental monitoring which yields reliable data from the relevant time period that are taken under conditions representative of the source's operations and, therefore, representative of the source's compliance with its permit." Therefore, the meaning of the term "representative of the source's compliance with its permit." Therefore, the meaning of the term "representative of the source's compliance" can be taken as "representative of the source's operations."

Monthly source tests represent compliance with the standard because the time period over which the sources are tested is representative of the operation of the source throughout the month. The period of source testing is representative of operations during the entire month because source tests are, 1)'blind' in nature 2)conducted at or above the previous month's average operating parameters and 3)Additional surrogate monitoring parameters.

Source tests are 'blind' in nature. The only communication between the testers and operators is to verify that parameters meet or exceed the previous month's average operating conditions. Boiler operators are not given long lead times by the source testers, in order that they may "tune-up" their boiler.

Source test are conducted at or above the previous month's average operating parameters. Source tests are designed to utilize operating conditions that best emulate past plant operating parameters in order to show continuous compliance. To accomplish this, source tests are conducted at or above the previous month's average operating standards in terms of both production rates and unit operating configurations. It is assumed that the greater the operating parameters, the greater the mass emissions. Thus, if the

operating parameters exceed the previous month's averages and still meet standards, the overall assessment is that the source test was representative and the system was in continuous compliance.

Additional surrogate monitoring parameters. In addition to direct source testing conducted periodically, which definitely determines compliance, Ecology has proposed minimum requirements to indicate the effectiveness of the add-on control equipment.

Objection: The response to paragraph 5 is totally inconsistent Title V monitoring requirements and the descriptions in EPA's Periodic Monitoring Guidance (PMG) document (available from: www.epa.gov/ttn/emc) as illustrated below.

Regarding interpretation of 40 CFR 70.6, the following paragraph and associated footnote are cited from of the PMG.

PMG, page 4:

> "It has been and continues to be the Agency's view that sources are under an obligation to comply with permit limits, State implementation plan (SIP) limits, national emissions standards for hazardous air pollutants (NESHAP), and new source performance standards (NSPS) requirements at all times. Consistent with this view of compliance and with our stated approach in the compliance assurance monitoring (CAM) rule (40 CFR part 64), we believe that periodic monitoring requirements in title V permits must provide a reasonable assurance of compliance over all anticipated operating conditions. One of the purposes of the periodic monitoring requirement is to collect and record information that can be used by the source, in conjunction with any other relevant information, to assess that emission point's compliance with applicable requirements."
>
> footnote. "This guidance interprets sections 70.6(a)(3)'s and 71.6(a)(3)'s requirement that periodic monitoring be sufficient to yield reliable data that are representative of the source's compliance with the permit to require the same level of compliance assurance as part 64's requirement that monitoring and monitoring data provide reasonable assurance of compliance with emission limitations or standards for the anticipated range of operations at a pollutant-specific emissions unit. Both part 70's representative of compliance standard and part 64's reasonable assurance of compliance standard are reasonable interpretations of the Act, section 504's mandate to include monitoring to assure compliance with title V permit terms and conditions. In light of this, this guidance will use the terms representative of compliance, reasonable assurance of compliance, and assure compliance interchangeable. Moreover, when these terms are used, compliance shall mean continuous compliance."

It is noted that the requirements for reasonable assurance of compliance at all times, over all anticipated operating conditions are not provided by the averaging approach described in the Department Ecology response. Consequently, the permit does not meet Periodic Monitoring standards.

Regarding "additional surrogate parameters," the following are cited from the PMG..

PMG, page 8:
"If additional monitoring is required, then the permitting authority should consider all of the relevant factors listed below, as well as other factors that may apply on a case-by-case basis, in order to arrive at the appropriate periodic monitoring methodology. Those factors include:

- The likelihood of violating the applicable requirement (i.e., margin of compliance with the applicable requirement);
- Whether add-on controls are necessary for the unit to meet the emission limit;
- The variability of emissions from the unit over time;
- The type of monitoring, process, maintenance, or control equipment data already available for the emission unit;
- The technical and economic considerations associated with the range of possible monitoring methods; and
- The kind of monitoring found on similar emission units.

While EPA does not plan to specify any particular protocol in implementing periodic monitoring, the preceding factors provide an outline of how to analyze what is appropriate periodic monitoring for an emission unit with a particular applicable standard. The process is informed at each step by the underlying purpose of periodic monitoring, to provide a reasonable assurance of compliance with the applicable requirement for the anticipated range of operations."

PMG, page 13:
"When using parametric data to satisfy the periodic monitoring requirement, the permit should specify a range which will provide a reasonable assurance that the source is n compliance with the underlying requirement. Wherever possible, the proposed range should be supported by documentation indicating a site-specific developed relationship between parameter indicator ranges and compliance with the emission limit, although it is not required that the range be set such that an excursion from the range will prove noncompliance with the associated limit. Operational data collected during performance testing is a key element in establishing indicator ranges; however, other relevant information in establishing indicator ranges would be engineering assessmets, historical data, and vendor data. The permit should also include some means of periodically verifying the continuing validity of the parameter ranges."

"Where documentation of a site-specific developed relationship between parametric monitoring and compliance with the emission limit is not possible because data are lacking and because generation of such data are not feasible prior to issuance of the permit, it may be necessary to include in the permit milestones, including source testing, for establishing such relationship."

The permit record contains no confirmation of the validity of the proposed minimum operating conditions that are intended to indicate compliance with emission limits, and the permit contains no milestones for developing such confirmation.

It the historical emissions test results presented in Appendix A of the AOP Support Document are intended to confirm the validity of the proposed minimum operating conditions, they fall short of that goal, and can be categorized as inadequate for periodic monitoring purposed for the following reasons.

- Although the permit documentation contains no description of the associated operating conditions, presumably, the data in Appendix A of the support document are from tests that were run at unspecified representative average conditions as described in the Department of Ecology response.

  Compliance assurance over the anticipated operating range is not provided by evaluating average conditions.

- The data in Appendix A are plotted results of monthly tests for particulate at seven emission points. The tests performed over a 24 month period. For five of the seven emission points, measured emissions approach or exceed eighty percent of the emissions limit (twenty per cent margin of compliance). For two of the seven emission points, the stipulated emission limits are equaled or exceeded (negative margin of compliance).

- For six of the seven emission points the test results show such a high degree of variability that emission level at the 95% confidence level would exceed the stipulated emission limits.

Because of the averaging approach, the frequency and magnitude of emissions and margin of compliance have not been properly considered. The conditions in this permit almost guarantee that emission limits will be exceeded on a regular basis.

4. Paragraph 5

Comment: CEM measurements are used as surrogates for direct measurement of regulated parameters throughout the permit. In all such cases, there needs to be a site-specific relationship between the surrogate and the regulated parameter that is based on empirical studies. For those regulated parameters that show significant variability, the empirical studies should include envelope conditions. Also, there should be ongoing source testing to assure that the empirical relationships are maintained.

Response: CEMs are continuous emission monitors of the regulated parameters. The comment probably referring to continuous monitoring systems (CMS) which monitor surrogate parameters. Surrogate parameters are used when direct measurement of the regulated parameter is either inappropriate or impossible (an example would be opacity measurement in a wet stack-). The relationship between the surrogate parameters and the regulated parameters

has been established for each Fort James source through a series of special studies. The studies are listed in the Compliance Monitoring Plan (Appendix D of the A0P Support Document).

Objection: I am referring to permit Sections A, B, D, G, and H where there is CEM monitoring of scrubber parameters as surrogates to infer compliance with opacity and grain-loading limits, and to permit section I where opacity is monitored to infer compliance with a grain-loading limit. As currently constructed, the permit presumes that the opacity and the grain-loading limits would be reached simultaneously, a most unlikely event.

Appendix D lists no information or results that relate surrogate parameters to regulated parameters.

5 Paragraph 6

Comment: Utilizing surrogates as indicators is inherently less accurate than direct measurement of the regulated parameter. In the case of the hog fuel boiler, the pollutant loading at the inlet to the ESP will vary over a wide range and may be produce by combinations of several fuels: hog fuel; sludge from wastewater treatment; washed pulp mill rejects, natural gas and No. 6 fuel oil. The final emissions would be determined by the operational settings of the ESP. Finding a correlation between opacity, the surrogate, and the regulated parameter PM_{10},. , with such a large number of parameters involved will be extremely difficult if not impossible. Further, when sludge from wastewater treatment is included in the fuel mix, the fuel feed will contain dioxins and other chlorinated organics and there will be de novo creation of dioxins in the combustion chamber. Because these compounds constitute a huge threat to human health and the environment, surrogate monitoring of PM_{10} should not be considered for the hog fuel boiler.

Response: The Fort James No.3 Power Boiler bums only natural gas and woodwaste (including primary solids). Both opacity and particulate matter (PM) are regulated parameters. Opacity is measured directly with a CEM. Particulate matter is measured monthly with the reference method (EPA Method 5). There is no practical, proven method for direct continuous measurement of PM at this source. The assumption that the combustion of wastewater solids in wood fired boilers creates dioxin emissions is contradicted by the available technical information. Recent studies submitted to Ecology and the U. S. Environmental Protection Agency indicate that co-firing pulp and paper solids actually reduces the formation of dioxins in wood fired boilers as compared with those boilers that only combust wood. See "Locating and Estimating Air Emissions From Sources of Dioxins and Furans" (U S. EPA, May 1997) and Strang, et al, "Sulphur Addition to Control Dioxins Formation In Salt-Laden Power Boilers! (Tappi, 1998).

Objection: The permit section I I states that compliance with opacity limits also satisfies compliance with grain-loading limits. Such a relationship is unlikely (see PMG) and has not been substantiated in the permit record.

As in other sections of the permit, scrubber parameters could be monitored as surrogate indicators of PM compliance. However, the necessary relationships between emission levels

and scrubber parameters need to be derived from valid source test data that are representative of compliance over the anticipated range of operating conditions, or are taken at the anticipated operating conditions that provide the highest grain loading at the ESP inlet. If such data are not available, the permit should contain milestones for developing the appropriate relationships.

There is no assumption regarding dioxin emissions from the Fort James hog fuel boiler The Washington State Department of Ecology has published material showing the presence of dioxins in the Fort James bleach-plant and hog-fuel-boiler waste streams (Washington State Dioxin Source Assessment", July 1998, Ecology Pub. No. 98-320) and (-Final Report: Screening Survey for Metals and Dioxins in Fertilizer Products and Soils in Washington State," January, 1999. Ecology Pub. No. 99-309)

In summary.

The permit does not require the source testing to-be representative of compliance over the anticipated operating range.

The permit record does not contain supporting documentation for the selected operating ranges for parametric indicators.

The permit does not contain milestones or other provisions for developing site-specific relationships between surrogate parameters and the regulated emissions.

Consequently, the permit does not provide assurance of compliance with emission limits over the range of anticipated range of operating conditions at all times

It is requested that the Environmental Protection Agency revoke the issued permit and require that it be replaced with a permit that will assure compliance with the monitoring requirements of 40 CFR part 64 and part 70.

Your consideration of this petition is appreciated.

Sincerely,

Carl D. Larkins
702 Roberson Rd.
Sequim WA 98382

cc: Carol Kraege, Washington Department of Ecology