UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
RESEARCH TRIANGLE PARK, NC 27711

MAR 28 2001

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Mr. Larry Price
General Manager
Smurfit Stone Container Corporation
19th and Main Streets
P.O. Box 100
West Point, Virginia 23181

Dear Mr. Price:

This is in response to your letter dated October 4, 2000, which requests the approval of alternative procedures for determining compliance with the requirements of 40 CFR 63.446 and 40 CFR 63.453. Specifically, the West Point Mill has installed a UNOX biological treatment system to control HAP emissions in condensates as required in §§63.446 and 63.453. Our responses to the specific requests in your proposed alternative compliance plan for condensates follow.

Alternative Compliance Procedures (Initial Performance Test(s)):

In your letter, you requested an alternative compliance procedure because the "compliance demonstration procedures provided in the MACT Rule, Appendix C and in 40 CFR 63.453 are not applicable where pulping system condensate is treated in a UNOX 'closed' biological treatment system." Considering that there are specific performance test procedures in the rule for determining initial compliance for a UNOX closed biological treatment system, we are denying this request. However, as discussed later, we agree that the rule does not specify specific continuous compliance monitoring parameters to monitor for UNOX systems, but it does provide procedures to follow to determine those parameters.

The initial performance test procedures (40 CFR 63.457(l)) use, in the compliance calculation, the fraction (f_{bio}) of individual HAP removed by biodegradation. As specified, f_{bio} is determined by using the procedures in 40 CFR 63, Appendix C. The procedures to determine f_{bio} are incorporated in forms in Appendix C. If you refer to Form II in Appendix C, you will see directions to determine a liquid-phase mass transfer coefficient (KL) for a UNOX system. Form II will direct you to Form V-A to determine a KL and also a first order biodegradation rate constant (K1). These KL and K1 values will then be used in Form III to determine f_{bio} in the unit.

In addition, your facility needs to demonstrate that the UNOX system is a "closed system" (no leaks or losses other than the measured air vents and liquid inlets and outlets). Also, any performance testing must be representative performance (i.e., performance based on normal operating conditions) of your mill's process and control systems. Therefore, you must determine and justify that you have used appropriate test procedures and that your UNOX and process units are tested under the range of normal operating conditions.

National Council for Air Stream Improvement (NCASI) Test Methods:

Your letter also included a request for an alternative to the test method for measuring the HAP content of the condensate streams, Method 305, required by Section 63.457(c)(3)(I) of Subpart S. You are proposing to use a procedure titled, 'Selected HAPS in Condensates by GC/FID,' developed by the NCASI to analyze for acetaldehyde, methanol, propionaldehyde, and methyl ethyl ketone in the condensate streams. I notified the NCASI by letter dated September 22, 2000, that this test method met Method 301 criteria for measuring these four HAPS in condensate streams, provided that the tester uses the appropriate correction factor. A copy of this letter is enclosed. Based on the data submitted by the NCASI and the similarity of the source at which you propose to use the method to the source at which the NCASI collected their supporting data, we are approving your request for use of this alternative test method at the West Point Mill in West Point, Virginia.

The method that you are proposing to measure the HAP content of the vent gas streams would be an alternative to the method (Method 308) required by Section 63.457 (b)(5)(I) of Subpart S. You are proposing to use an alternative method developed by the NCASI (NCASI Chilled Impinger/Silica Gel Tube Method) to measure acetaldehyde, methanol, acetone, formaldehyde, and methyl ethyl ketone in the pulp mill gas streams. The previous Director of the Emissions, Monitoring, and Analysis Division notified the NCASI by letter dated August 12, 1997, that this test method met Method 301 criteria for measuring these four HAPS in vent gas streams, provided that the tester uses the appropriate correction factor. A copy of this letter is enclosed. You are proposing to use this method to measure propionaldehyde in addition to the compounds for which we received validation data. In your particular application, you will use this method to establish the ratio of methanol to total HAP's in the vent gas stream. Because methanol will constitute most of the HAP emissions from this source and propionaldehyde will be much less significant, we agree that propionaldehyde is a reasonable addition to the list of compounds measured by this method for your particular application. Based on the data submitted by the NCASI and the similarity of the source at which you propose to use the method to the source at which the NCASI collected their supporting data, we are approving your request for use of this alternative test method at the West Point Mill in West Point, Virginia.

Condensate Compliance Averaging Time:

The West Point Mill is proposing to use a 15-day averaging time for demonstrating compliance with the condensate requirements. Condensate testing averaging time has been an important issue with the pulp & paper industry and was the focus of a letter dated November 5, 1999, from Winston Smith, Director, EPA Region 4 Air Pesticides and Toxics Management

Division, to Ronald Gore, Chief, Air Division, Alabama Department of Environmental Management (available at www.epa.gov/ttn/oarpg/t3/reports/rwgore.pdf). This letter explains that the burden is on the mill to demonstrate what compliance averaging time is appropriate for that particular mill, and that ***mill specific data*** is required for the demonstration. Therefore, West Point Mill condensate data is needed to justify the proposed 15-day averaging time and should be forwarded to the mill's permitting authority for approval.

Continuous Compliance Monitoring Parameters:

Because Subpart S does not specify parameters to be monitored for UNOX systems, your facility must follow the procedures in 40 CFR 63.453(m) to determine the appropriate parameters. Your facility must provide this demonstration to EPA Region 3 for approval. Although your request suggests some parameters to be monitored, we cannot approve those parameters, until you demonstrate to the EPA that the parameters establish compliance with applicable control requirements. After fulfilling the requirements of 63.453(m), please submit your request to Ms. Judith M. Katz at the EPA Region 3 office and send a copy to me and your permit authority.

Continuous Compliance Vent Gas Measurements:

In your letter, you state that if the initial compliance test shows the vent gas to be less that 1.0 percent of the HAP mass entering the UNOX system, you do not plan to test the vent gas emissions annually. If the initial compliance test shows the vent gas to be greater that 1.0 percent of the HAP mass entering the UNOX system, you plan to test the vent gas emissions quarterly. In your request for excused excursions, you state that during an excursion you will measure the HAP concentration in the inlet and outlet condensate streams but that you will not measure the HAP concentration of the vent gas stream and instead will use the concentration from the most recent vent gas measurement. We cannot approve the use of historical vent gas measurements for compliance determinations without supporting data to demonstrate that the emissions do not vary significantly over time. This demonstration must be provided to the EPA along with your complete continuous compliance monitoring demonstration discussed above, and with your request of excused excursions discussed below.

Excused Excursions:

In your request, you asked for excused excursions similar to the excursions/retests allowed for open biological systems. This request is being considered by the EPA's Office of Enforcement and Compliance Assurance. The contact there is Scott Throwe whose phone number is (202) 564-7013.

If you need further assistance, please contact Gary McAlister of my staff at (919) 541-1062.

Sincerely,

Fred Dimmick

for J. David Mobley, Acting Director
Emissions Monitoring and Analysis Division

Enclosures

cc: Theresa Horgan, Region 3
James B. Lafratta, Virginia Department of Environmental Quality, Fredricksburg, VA
Christopher B. Pilla, Branch Chief, Air Enforcement (3AP12), Region 3
Steve Shedd, OAQPS/ESD
Tamera Thompson, Virginia Department of Environmental Quality, Richmond, VA
Scott Throwe, OECA

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
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AUG 12 1997

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Ms. Mary Ann Gunshefski
NCASI
Southern Regional Center
P.O. Box 141020
Gainesville, Florida 32614-1020

Dear Ms. Gunshefski:

We have reviewed your report entitled, "Method 301 Validation of the NCASI Chilled Water Impinger/Silica Gel Tube Test Method at Selected Pulp Mill Sources for Methanol, Acetone, Acetaldehyde, Methyl Ethyl Ketone, and Formaldehyde." We agree with your conclusion that the NCASI Chilled Water Impinger/Silica Gel Tube Test Method (NCASI Impinger Method) met Method 301 criteria for the pollutants and sources that are summarized in the enclosed table. The NCASI Impinger Method may be used for determining compliance with the proposed emission limits in 40 CFR Part 63, Subpart S.

If you have any questions about our comments or you would like to meet to discuss them, please contact Gary McAlister of my staff at (919) 541-1062.

Sincerely,

William F. Hunt, Jr.
Director
Emissions, Monitoring and
Analysis Division

cc: Penny E. Lassiter (MD-13)
Stephen A. Shedd (MD-13)
Jeffrey A. Telander (MD-13)

Enclosure

Pollutant	Brownstock Washer Hood		Bleach Plant Scrubber		Smelt Dissolving Tank		Recovery Furnace	
	Validated	Correction Factor	Validated	Correction Factor	Validated	Correction Factor	Validated	Correction Factor
Methanol	Yes	None	Yes	1.0	Yes	1.0	Yes	None
Acetone	Yes	1.3	Yes	1.2	Yes	1.1	Yes	1.2
Acetaldehyde	Yes	None	No	-	Yes	None	Yes	None
Methyl ethyl ketone	No	_	Yes	1.3	Yes	1.2	Yes	1.3
Formaldehyde	Yes	1.1	Yes	1.2	Yes	None	No	-

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SEP 22 2000

Dr. Mary Ann Gunshefski
NCASI
Southern Regional Center
P.O. Box 141020
Gainesville, Florida 32614-1020

OFFICE OF
AIR QUALITY PLANNING
AND STANDARDS

Dear Dr. Gunshefski:

We have reviewed your report entitled, "EPA Method 301 Validation Report of the NCASI Method 'Selected HAPS in Condensates By GC/FID.' " We agree with your conclusion that this method, in all of its variations, met Method 301 criteria for measuring acetaldehyde, methanol, propionaldehyde, and methyl ethyl ketone in samples from the pulp and paper mill condensate streams regulated under 40 CFR Part 63, Subpart S, Paragraph 446(b). I have summarized in the enclosed Tables 1-4 the correction factors for the individual HAP's for each of the four variations in the test method. During any future testing, the tester must document and use the appropriate correction factor to correct the data from the test method.

As we discussed, each specific source must make its own alternative test method request. However, we can and will consider the validation data that you submitted in evaluating an alternative method request from any source similar to the ones at which you collected your validation data.

For our records we would like to have an electronic file copy of the test method and the supporting report in Wordperfect 6.x format.

If you have any questions about our comments or you would like to meet to discuss them, please contact Gary McAlister of my staff at (919) 541-1062.

Sincerely,

J. David Mobley, Acting Director
Emissions, Monitoring and Analysis Division

cc: K. C. Hustvedt (MD-13)
Stephen A. Shedd (MD-13)
Jeffrey A. Telander (MD-13)

Enclosure

Table 1. NCASI Method DI/HAPS-99.01 - Purged-Packed Injector and Cyclohexanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.12
Methanol	Yes	None
Propionaldehyde	Yes	1.12
Methyl Ethyl Ketone	Yes	0.97

Table 2. NCASI Method DI/HAPS-99.01 - Split/Splitless Injector and Cyclohexanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.09
Methanol	Yes	1.04
Propionaldehyde	Yes	1.09
Methyl Ethyl Ketone	Yes	1.03

Table 3. NCASI Method DI/HAPS-99.01 - Purged-Packed Injector and 2,2,2-Trifluoroethanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.14
Methanol	Yes	None
Propionaldehyde	Yes	1.14
Methyl Ethyl Ketone	Yes	1.07

Table 4. NCASI Method DI/HAPS-99.01 - Split/Splitless Injector and 2,2,2-Trifluoroethanol as the Internal Standard

Compound	Validated	Correction Factor
Acetaldehyde	Yes	1.06
Methanol	Yes	1.01
Propionaldehyde	Yes	1.06
Methyl Ethyl Ketone	Yes	None