

**Exhibit 2 - Attachment F**

Declaration of Harry V. Ellis III

**IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF INDIANA  
INDIANAPOLIS DIVISION**

<b>UNITED STATES OF AMERICA, <i>et al.</i>,</b> Plaintiffs,	)	
	)	
v.	)	
<b>CBS CORPORATION,</b> Defendant.	)	<b>CAUSE NO. 1:81-cv-448-RLY-KPF</b> <b>Consolidated</b>
<b>THE CITY OF BLOOMINGTON,</b> <b>INDIANA, <i>et al.</i>,</b> Plaintiffs,	)	
	)	
v.	)	
<b>CBS CORPORATION,</b> Defendant.	)	[Cause No. 1:83-cv-009-RLY-KPF]
<b>SARAH ELIZABETH FREY, <i>et al.</i>,</b> Plaintiffs,	)	
	)	
v.	)	
<b>UNITED STATES ENVIRONMENTAL PROTECTION AGENCY and CBS CORPORATION,</b> Defendants.	)	[Cause No. 1:00-cv-660-RLY-KPF]

**DECLARATION OF HARRY V. ELLIS III**

**This declaration applies to Cause No. 1:81-cv-448-RLY-KPF**

I, Harry V. Ellis III, state as follows:

1. I am a toxicologist employed by Tetra Tech EM Inc. (“Tetra Tech”) – an environmental consulting firm that provides a wide variety of services to governmental agencies and private clients in the United States and abroad. I have worked for Tetra Tech in Chicago, Illinois since 1985.
2. I received a Bachelor of Science in chemistry from Massachusetts Institute of Technology in 1965, and I have Ph.D. in pharmacology, which I received from Emory University in 1971.

3. From 1971 to 1975, I was on active duty as a research pharmacologist at Walter Reed Army Institute of Research where I assisted in the development of new drugs, such as drugs to prevent malaria. After completing my active duty service, I worked for ten years as a pharmacologist/toxicologist at Midwest Research Institute in Kansas City, Missouri before I left to join Tetra Tech.
4. In more than 23 years with Tetra Tech, I have provided technical support to EPA on more than 300 projects under a variety of environmental programs, including the Superfund Program. My area of expertise includes, among other things, data validation, which is a process in which laboratory data is analyzed to determine its reliability and suitability for its intended purpose. For instance, EPA may ask Tetra Tech to collect field samples of sediment for the purpose of determining whether the sediment is contaminated with dioxin at a concentration that may threaten human health or the environment. Tetra Tech collects the samples and sends them to an analytical laboratory that is a subcontractor to Tetra Tech. Upon receipt of the report of the analytical results, Tetra Tech must not only determine whether there are detectable levels of dioxin in each sample, but it must make a decision as to the reliability of this determination, a process called "data validation." After applying various quality control measures, such as comparing field samples with laboratory quality control samples, Tetra Tech will either accept or reject a field sample, and if accepted, Tetra Tech will determine whether the contamination of concern was detectable or "non-detect" within the sample. If detectable, the reported concentration will be either unqualified or it will be qualified as an "estimate" only.
5. Over the course of my career at Tetra Tech, I have validated hundreds of packages of chemical analysis data. Several of these packages involved field samples from the Bloomington Superfund sites that are the subject of the present litigation with CBS Corporation ("CBS"). Since Tetra Tech first began assisting EPA in 1998 with respect to the Bloomington sites, I have worked to provide chemical and toxicological expertise to the on-going activities. Specifically, I have reviewed documents submitted to EPA by CBS, helped in the preparation of Tetra Tech's sampling and analysis plans, validated the analytical results for field samples collected under those plans, and interpreted the validated analytical results.
6. Given my background and expertise, I was asked by counsel for the United States to provide assistance in responding to two public comments relating to the Proposed Agreed Amendment to the Consent Decree providing for remedial actions at three PCB sites in Bloomington. Specifically, I was asked to respond to the following comments:
  - The commenter states that polychlorinated dibenzofurans ("PCDFs") and polychlorinated dioxins ("PCDDs") conducted by Tetra Tech in 1995 and 1996 were flawed. The commenter maintains that the lab arbitrarily altered the detection limits from sample to sample, stating that detection limits for the same congener sometimes vary from sample to sample among a single sample

group by nearly an order of magnitude (e.g., from 0.055 to 0.32). The commenter asserts that the lab's methodology violated EPA's Contract Lab Program, Test Methods for Evaluating Solid Waste and EPA's methods for the Analysis of Water and Wastes.

- The commenter states that samples collected from Slaughterhouse Spring at Lemon Lane Landfill on October 23, 1995 and February 14, 1996 contained concentrations of tetrachlorinated dibenzofurans ("TCDF") and PCDF of 0.4 ppb and 0.59 ppb respectively. The commenter maintains that these samples were inappropriately marked as "estimates" only, and that EPA should have conducted follow-up and verification tests.

7. As discussed further below, the assertions in the comments are not correct. The PCDF and PCDD analyses were conducted in accordance with EPA's standard analytical procedures. Further, there is no basis to conclude that samples collected on October 23, 1995 and February 14, 1996 were inappropriately identified as "estimates."

A. **Tetra Tech correctly analyzed PCDF and PCDDs in 1995 and 1996**

8. The commenter argues that Tetra Tech's analysis of PCDF and PCDD data was flawed because of the magnitude of the difference in detection limits between samples. To respond to this argument, it is necessary to first explain the operation of the gas chromatography ("GC") and mass spectrometry ("MS") instrument, which was used by the Tetra Tech's subcontracted laboratory to measure the concentration of PCDF and PCDD in various samples.

9. A GC/MS instrument vaporizes a sample so that the individual components in the sample may be identified. If a hazardous substance, such as dioxin, is present in the sample, it will appear as a peak on a spectral output from the GS/MS instrument, known as a "chromatogram." These peaks, however, are often difficult to identify because the GC/MS instrument may not fully separate the components in the sample, resulting in the appearance of "noise" on the chromatogram that obscures individual peaks.

10. The peaks are in the form of a varying electrical current, with an extremely low flow (amperage), which must be amplified before it can be measured. The electronic components themselves introduce more random noise into the current. Much of the skill involved in designing and building the instruments lies in minimizing the noise and separating the peaks from it.

11. Under the analytical methods approved by EPA, the detection limit in a sample is a function of the amount of noise in a sample. Specifically, EPA guidance provides that calculating the detection limit for PCDD and PCDF is a three-step process. First, the lab technician must measure the range of the peak-to-peak noise in the

relevant parts of the chromatograms. Second, the lab technician must multiply the magnitude of the noise by 2.5. Finally the lab technician must relate the product yielded by step two to an estimated concentration that would produce that peak height. After the laboratory completes this verification process, it sends its results and report to Tetra Tech, which reviews and validates the data to ensure the laboratory complied with appropriate procedures. I personally validated all data packages with respect to samples collected by Tetra Tech at the Bloomington sites.

12. Details of the calculations procedures can be found in Section 11.2.5 of Exhibit D of EPA Contract Laboratory Program Statement of Work (SOW) DLM02.0, "Multi-Media, Multi-Concentration Dioxins and Furans Analysis", available on-line at <http://www.epa.gov/superfund/programs/clp/dlm2.htm>, and in Section 11.9.5 of EPA SW 846 Method 8290A "Polychlorinated Dibenzo-p-dioxins (PCDDs) and Polychlorinated Dibenzofurans (PCDFs) by High-Resolution Gas Chromatography/High-Resolution Mass Spectrometry (HRGC/HRMS)", available on-line at [http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/8\\_series.htm](http://www.epa.gov/epawaste/hazard/testmethods/sw846/online/8_series.htm).
13. Because the amount of "noise" almost always differs between two samples, it is expected that two different samples will have different detection limits for the same compound. The magnitude of the difference in detection limits (e.g. from 0.055 to 0.32) among a single sample group collected from the Bloomington sites is not unusual and does not support the commenter's assertion that Tetra Tech arbitrarily altered the detection limits.

**B. There is no basis to conclude that the samples collected on October 23, 1995 and February 14, 1996 were inappropriately marked as estimates**

14. The commenter states that the samples collected on October 23, 1995 and February 14, 1996 were inappropriately marked as estimates. However, as noted above, the data validation process often requires that samples be labeled as "estimates."
15. EPA's contract lab program requires verification of reported concentrations of a compound through the application of quality assurance / quality control ("QA/QC") measures. The various analytical methods use calibration standards at several concentrations to construct a calibration curve that defines the concentration range of the method. The lowest calibration standard is always well above the limit of detection.
16. At sites with very low levels of contamination, as is the situation for dioxins and furans at Lemon Lane Landfill, many of the actual sample results will be above the limit of detection but still less than the lowest calibration standard. Therefore, they will be extrapolations outside the calibration range and can only be estimates. This was not an uncommon occurrence with respect to PCDF and PCDD data from the Bloomington sites.

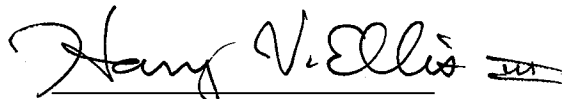
17. I did not personally validate the data packages containing the two samples referenced by the commenter because the data packages were collected in 1995 and 1996, and Tetra Tech did not begin work at the Bloomington sites until 1998. Nevertheless, based upon my own experience in validating data packages from this and other sites, it is not surprising that the concentrations of TCDF and PCDF were marked as estimates. In my experience, a reported concentration of TCDF or PCDF would need to be approximately 1 ppb or greater to be within the calibration range of the GC/MS instrument and, hence, not marked as an "estimate." The referenced samples, however, had concentrations of TCDF and PCDF of 0.4 ppb and 0.59 ppb respectively.

I declare under the penalty of perjury that the foregoing is true and correct.

DATE:

16 February 2009

Signed:

  
Harry V. Ellis III