

To: Mr. Jim Broderick
Quality Assurance Officer, NYCDEP, Kensico
From: David L. Vinci
Supervisor, Semivolatile Environmental Laboratory
Date: September 27, 2001

Subject: Yves Mikol memo (9/26/01) regarding test results on sample AD22485

First, let me state that an error exists in the first sentence of the result comment for method 525.2. The corrected statement now reads "Benzo(a)pyrene is present in this sample at an estimated level of 0.15 ug/L." I apologize for this sentence error. A corrected report will be issued. MDL values are established based on many analytical and regulatory facts. They are not absolute cut off points where below an MDL value we can not detect a compound. Method 525.2 is used by our laboratory to analyze for Benzo(a)pyrene. It is 100% reliable. Our statistical MDL for Benzo(a)pyrene for method 525.2 is officially established at 0.12 ug/L based upon analyses of standards at 0.20 ug/L. Our method MDL is established at 0.20 ug/L because this level gives us 100% confidence in measuring this compound (and which also happens to be the MCL level). Under optimal conditions our method can detect as low as 0.02 ug/L Benzo(a)pyrene, however we chose not to do so. In sample AD22485 all required analytical criteria including retention time and mass spectrum were met with regard to Benzo(a)pyrene, so we feel it is confirmed. It is present at the quantitated level of 0.15 ug/L, based on a calibration curve that ranges from 0.10 ug/L to 12.5 ug/L. Analytical certainly decreases below 0.20 ug/L, hence I reported the amount detected below as "estimated". It is our policy to provide a margin of safety to our clients so in certain situations we report positive findings even if they are below reportable or regulatory detection levels. Our method 525.2 is not set up to look for other polynuclear aromatic hydrocarbons, hence there is no examination for them.

The extract prepared for the 508 pesticide/pcb method, in addition to being analyzed for pesticides and pcbs, was analyzed by method 625 using a HP 5972 MSD. The HP software has programs which scan a sample for unknown compounds. Typically this instrument is calibrated from 5.0 ug/L and upwards. Any compound detected below this level, if reported, will have less certainty, and its level would only be estimated. Any compound reported below the MDL level would have meet retention time and most or all mass spectral requirements. For sample AD22485, in addition to the five compounds reported in the comment for method GCMS Unknown Scan there are several other polynuclear aromatic hydrocarbons which appear to be present, including Benzo(a)pyrene, but with a poor degree of certainty. Accordingly, I can not state with confidence that they are present based on this 625 method.

We feel that there is no contamination relating to this analysis. Analysis of a field blank was clean. There is a significant difference between an Ion Trap Mass Spectrometer, used in method 525.2, and a 5972 MSD used in method 625, in as far as detection levels are concerned. A compound which is easily and confidently detected by method 525.2, may not be detected by method 625. Our findings on this sample support this fact.

Should you have any further questions or concerns feel free to contact me again anytime.



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Fax Number: 773-0365
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*Jim -
Wants us to let him know
of anythin we see even if
it is below MDL!*
Don

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