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REGION II

DATE: EPA Region II Policy Decision: Interpreting the Monitoring  
Considerations for the Four Day Average Limit in the  
JECT: 40 CFR §413 Electroplating Point Source Category  
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This memorandum will provide background material and recommendations regarding the appropriate method for calculating the four-day averages applicable to the 40 CFR §413 Electroplating Point Source category:

- Appendix C of EPA's "Pretreatment Compliance Monitoring and Enforcement Guidance" (PCME) states:

In developing the Electroplating 4-day average, the Agency performed a statistical analysis that examined independent groups of 4 consecutive sampling days. Implementation of the Electroplating 4-day average calls for comparison of the standard with independent [not overlapping] results from 4 consecutive sampling days. For the sampling days to be independent, each calculated 4-day average should not include sampling data used in another 4-day average. For example, if there were 11 days of sampling, samples 1, 2, 3, and 4 constitute a 4-day average; samples 5, 6, 7, and 8 produce the next 4-day average; and samples 9, 10, and 11 will have to wait until an additional sample is taken so that the next 4-day average can be calculated. These sampling days are not necessarily calendar days, but reflect the sampling frequency; namely, weekly sampling produces a 4-day average every 4 weeks, and monthly sampling produces a 4-day average every 4 months.

- In a conversation between Ernie Hall, formerly an EPA HQs contact for Electroplating, and Ed Schlueter of my staff, Ernie further corroborated the understanding that the term "Average of daily values for 4 consecutive monitoring days" in the Electroplating Point Source category does not mean that the 4 samples have to be taken on consecutive days. Instead, he explained that the word consecutive is used to explain that only consecutive samples can be grouped together when averaging. As such, the above PCME guidance indicates that a 4-day average could not be calculated from grouping samples on sampling days 1, 2, 3, and 5 and grouping samples on sampling days 4, 6, 7, and 8, for example.

The other stipulation on this sampling frequency is that compliance with the 4-day average limit must be able to be determined at a minimum of once per 6 month reporting period as specified in 40 CFR §403.12(g)(3). Section 403.12(g)(3) states that the Control Authority shall require that frequency of monitoring necessary to assess and assure compliance by Industrial Users with applicable Pretreatment Standards. Section 5.3.5 of EPA's "Guidance Manual for Electroplating and Metal Finishing Pretreatment Standards" supports this. It states:

Section 403.12(g) states that the frequency of monitoring to demonstrate continued compliance shall be prescribed in the applicable Pretreatment Standard. Neither the Electroplating nor Metal Finishing Pretreatment Standard establish any monitoring frequency. Therefore, the appropriate Control Authority must establish the monitoring frequency to adequately demonstrate that indirect dischargers subject to these pretreatment standards are in compliance with the applicable standards.

Concerning the issue of when to monitor the discharge, page 8-9 of EPA's "Industrial User Permitting Guidance Manual" says:

For operations that are seasonal, the permit writer may want to require increased monitoring during peak operations. For batch discharges, monitoring frequencies could be geared to the frequency of discharge. For example, the permit writer could require a small electroplater which batch discharges once a month to monitor once a month when the batch discharge occurs.

Also, page 8-20 of the manual includes an example of special monitoring requirements which may be placed in the IU permit:

The sample shall be taken on a day when zinc plating wastewaters are discharged to the sanitary sewer and zinc is expected to be present in its maximum concentration.

With regard to promulgated regulations to support the 4-day average definition given in the PCME guidance manual, the January 28, 1981 Federal Register, page 9483 states:

The frequency of self-monitoring is independent of whether or not the long term average limit is expressed as a 4 day average or a 30 day average. The minimum frequency of self-monitoring required of an industrial user will be established by a section in each categorical standard. The self-monitoring section for electroplating will be proposed in the near future. The proposed self-monitoring section will also discuss how the self-monitoring data

will be compared to the 4 day average standards to determine compliance.

Regarding the "proposed self-monitoring section", per discussion with various EPA headquarters contacts, it could not be verified by them whether or not such information was ever proposed but it is unlikely that it ever was.

Finally, EPA's regulations in 40 CFR §403.12(g)(3) outline general sampling requirements for all CIUs:

[Periodic Reports] shall be based upon data obtained through appropriate sampling and analysis performed during the period covered by the report, which data is representative of conditions occurring during the reporting period.

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Based on the above, the following policies are established for the periodic self-monitoring reports for existing Electroplating CIUs covered under 40 CFR §413 in New York State and Puerto Rico.

Frequency of Sampling - At a minimum, four samples must be taken during each six-month reporting period to evaluate compliance with the 4-day average limitations. This is clearly required by 40 CFR §403.12(g)(3) which specifies that the sampling frequency must allow assessment of compliance with the applicable pretreatment standards. If a Control Authority determines that, for a particular facility, additional sampling is required to adequately assess compliance over the reporting period, the CIU permit should specify additional self-monitoring sampling in groups of four (e.g. 8 samples, or 12 samples, over the six-month period). Each group of four samples would be evaluated separately for compliance with the 4-day limitation.

Requirement for Sampling during Plating Operations - In order to implement the regulatory requirement for sampling which is "representative of conditions" occurring at an electroplating facility, sampling must be done during plating operations. Control Authorities must specify this requirement in the CIU permit.

Scheduling of Sampling - EPA's regulations and guidance do not outline requirements regarding scheduling of sampling within the reporting period. Therefore, EPA Region II is establishing the following two options:

1) Consecutive Production Days - Control Authorities may specify that Electroplating CIUs must take four samples on four consecutive production days (e.g. Monday, Tuesday, Wednesday and Thursday if plating takes place on all four

days; or Monday, Tuesday, Wednesday and the following Monday if no plating takes place between Thursday and Sunday). This option will ensure that samples are obtained which represent a full plating cycle and can be justified based on the regulatory requirement for "representative" samples.

2) Non-Consecutive Production Days - If a Control Authority determines that consecutive production day sampling is not required, an alternative schedule could be established (e.g. any four production days during the reporting period; or any four production days during a particular month; or weekly samples during a particular month, etc.).

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