

TGG. JOL. ERI. MJH: AJU: RF

To: Distribution

XF: _____

From: Joe Ledvina

Date: April 6, 1990

Subject: Benzene Waste Operations NESHAP Treatment Processes

I have been reading more closely Section 61.348 of the Benzene Waste Operation NESHAP concerning dilution of wastewater prior to biological treatment. If we mix wastewater containing greater than 10 ppm benzene with wastewater containing less than 10 ppm such that the mixture is less than 10 ppm, we need to pay close attention to the anti-dilution provisions in this section. I believe we will have this situation with the converted fuel tank at LCCC.

The anti-dilution provisions of the standard requires that all treatment facilities receiving diluted wastewater containing more than 1 Megagram/yr of benzene have emission controls. The exception is if the wastewater is being treated in an "enhance biodegradation unit" (Activated Sludge Unit) provided that the biodegradation unit is operated as specified in the rule.

If the water from the fuel tank is a mixture of wastewater streams that were above and below 10 ppm, then the West Basin must be fitted with an emission control device unless there is less than 1 Mg/yr benzene being fed to the basin. If the ASU does not meet the following parameters, it too must be fit with a control device if it receives more than 1 Mg/yr benzene:

The ASU typically operates as an F/M ratio in the range of 0.05 - 1.0 kg BOD/kg biomass; and

Has a mixed liquor suspended solids ratio in the range of 1 to 8 grams per liter; and

Has a residence time in the range of 3 to 36 hours.

Demonstrations must be made initially and again each year that the above conditions apply.

If the ASU is considered an "enhanced biodegradation unit", one way to avoid controlling the West Basin is to route the fuel tank flow directly to the ASU. If the ASU does not meet the above conditions we would need to either strip the fuel tank contents or pretreat any streams going to the fuel tank that contain more than 10 ppm benzene to below 10 ppm benzene before putting them in the tank. This assumes putting emission controls on the West Basin and the ASU is infeasible.

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This is a complicated portion of the Benzene Waste Operation
NESHAP. Give me a call and we can discuss.


Joe Ledvina

Distribution: Tony Salah, Mike Hayes, David Booth, Jerry Johnson

cc: WLM, DLC, DLM, JF, JW, RAC, JAD, CRW, TWH

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