

March 12, 1996

Via facsimile (512) 239-1330

Karen M. Bullard
TNRCC Office of Air Quality
NSR Division/Coatings Section
P.O. Box 13087
Austin, TX 78711-3087

Re: Air Permit No. 29466 Solvent Usage Rates for Camp Stanley Storage Activity
(CSSA)

Dear Karen:

Per our telephone conversation yesterday, Parsons Engineering Science, Inc. is providing information, on behalf of CSSA, to clarify materials usage at CSSA Cleaning Vats #1 through #4 (EPNs 1-3) and Fingerprint Removal Tank (EPN 4). The air permit application and subsequent modeling effort were submitted with the identification of materials used in these units inadvertently reversed. The permit indicated that the Cleaning Vats [EPNs 1-3] use mineral spirits when in fact they use stoddard solvent, and the Fingerprint Removal Tank [EPN 4] was indicated as using stoddard solvent when in fact it uses mineral spirits.

Because of the similarity of the materials (e.g., they both have the same ESL, are petroleum distillates, etc.), CSSA would like to alter their permit to reflect actual material usages within the Cleaning Vats and the Fingerprint Removal Tank. CSSA proposes to change the material usage designation with no increase in total VOC emissions from any emission point listed on the maximum allowable emission rates table. Attached are supporting data and calculations that would reflect the material usage changes for EPNs 1 through 4.

After you have reviewed this information, I would like to discuss the most appropriate method for changing the material usage rates within the permit. Please feel free to call me with questions or comments at 512/719-6000.

Sincerely,



Ken Rice
Senior Engineer

xc: Brian Murphy, CSSA
Julie Burdey, Parsons ES Austin

PHYSICAL CHARACTERISTICS DATA

	Mineral Spirits	Stoddard Solvent
TNRCC ESL <u>short term</u> (April 10, 1995) ($\mu\text{g}/\text{m}^3$)	3500	3500
<u>long term</u> ($\mu\text{g}/\text{m}^3$)	350	350
Specific Gravity	0.811	0.780

Back calculation of allowable material usage rates from the maximum Allowable Emission Rates Table (MAERT)

$$\text{Solvent vat material uage limitations} = \frac{(\text{VOC}_A)(C)}{(f_{\text{voc}})(\text{Sg})(\text{Pw})}$$

where

VOC_A = Annual VOC emission limits allowed by the MAERT (tons/year)

f_{voc} = Fraction of solvent emitted = $1 - \frac{\text{Material Output}}{\text{Material Input}}$

Sg = Specific gravity of the product, (unitless)

Pw = Density of water, (lb/gallon)

C = Pounds to tons conversion, (2,000 lb/ton)

EPN #1 - Cleaning Vat #1 (with stoddard solvent)

$$\text{Material Usage} = \frac{(0.48)(2000)}{(1 - \frac{150}{200})(0.78)(8.3346)} = 590 \text{ gal / year}$$

EPN #2 - Cleaning Vats #2 and #3 (with stoddard solvent)

$$\text{Material Usage} = \frac{(0.58)(2000)}{(1 - \frac{20}{30})(0.78)(8.3346)} = 535 \text{ gal / year}$$

EPN #3 - Cleaning Vat #4 (with stoddard solvent)

$$\text{Material Usage} = \frac{(0.53)(2000)}{(1 - \frac{100}{150})(0.78)(8.3346)} = 652 \text{ gal / year}$$

Total stoddard solvent usage rates (EPNs 1-3) 1,777 gallons/year

EPN #4 - Fingerprint Remover Tank (with mineral spirits)

$$\text{Material Usage} = \frac{(0.53)(2000)}{(1 - \frac{105}{155})(0.811)(8.3346)} = 486 \text{ gal / year}$$