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September 24, 1986

Mr. J--- F. W---, Jr.

Dear Mr. W---, Jr.:

This is in reply to your letter of September 10, 1986. You have requested our opinion as to the application of sales tax to certain transactions involving your client, --- --- --- ("T---").

We understand that T--- is an independent petroleum refiner which currently operates a refinery at [city] California. Until 1983, T--- owned and operated a refinery in Bakersfield, California. In essence, T--- purchases crude oil from production companies and sells refined petroleum products (primarily motor fuels) to marketing companies.

During the refining process, before crude oil enters the coking unit ("coker") it is subjected to various processes each of which sequentially extracts valuable products. In brief, crude oil is first introduced into a "crude unit" and is immediately separated by distillation into various fractions. The least valuable fraction leaving the crude unit is a thick oil called "reduced crude". This viscous material has a significantly lower market value than crude oil. The reduced crude coming from the crude unit then flows through a "vacuum unit" designed to extract additional valuable fractions through continued distillation under vacuum conditions. The residue of this step is a substance called "pitch." Pitch has the consistency of asphalt. The pitch is then introduced into the coker for the purpose of creating further valuable fractions by the process of "thermal cracking." The coking process is the first step in refining that portion of crude oil which is effectively the "bottom of the barrel."

T---'s --- Refinery is equipped with a "fluid coker," which is made up of three main components: a reactor vessel, a burner vessel, and an elutriator. The reactor vessel is where the thermal cracking of the pitch occurs. Pitch is heated and then sprayed through atomizing nozzles into the reactor vessel as a feedstock where it is cracked into valuable hydrocarbon fractions, which are removed as vapors. The cracking occurs when the pitch comes into contact with very hot (1000°F) particles of coke from the burner vessel, floating in a fluid bed constantly stirred up by jets of steam (hence the term "fluid coker").

As the pitch is cracked into valuable hydrocarbons, the hot particles of coke tend to grow in size and to cool. This results in the production of coke, clearly a byproduct of the production of valuable and widely marketed hydrocarbon products. Coke, cooled to approximately 900°F, is continuously drawn out of the bottom of the reactor vessel and piped to the burner vessel for reheating. No coke is burned in the reactor vessel.

The burner vessel is where fine grains of coke are burned to provide the heat necessary for the cracking reaction and where particles of coke are heated for introduction back into the reactor vessel. The material which is burned is primarily very fine grains of coke called "coke fines" and volatile matter residing on the surface of "fresh coke" from the reactor. As a matter of physics, the first particles with their higher ration of surface area to the mass burn first while the coarser particles absorb heat. The coarser grains are carried through the 'hot' coke standpipe back to the reactor vessel.

The elutriator assures maximum separation and burning of the undesirable coke fines. The elutriator, which is attached to the burner unit, draws coke from the coke bed in the burner, separates the fine coke particles from the coarse coke particles, introduces the fine coke particles back into the burner, and removes coarse grain coke from the cycle.

* * * * *

We are in agreement with your analysis and conclusion that tax does not apply to the use of coke fines described in the process specified.

For periods prior to January 1, 1981, the tax would not apply pursuant to our Business Taxes General Bulletin 67-7, which specified as follows:

A manufacturer purchases raw material for the purpose of manufacture into marketable finished products. In the course of manufacture, a by-product is incidentally produced which is not marketed by the manufacturer and disposition of which is restricted by governmental controls. Where such by-product is disposed of under conditions which meet the governmental standards for disposition by consumption in the over-all manufacturing process, such consumption is not subject to use tax.

On or after January 1, 1981, the use of fines was and is exempt in accordance with Revenue and Taxation Code section 6358.1, which provides in relevant part that "There are exempted...waste byproducts from...manufacturing, which are used in an industrial facility as a fuel source in lieu of the use of either oil, natural gas or coal." Specifically, it is our position that a refiner's use of fluid coke (including flexicoke) produced in and not extracted from the unit, which is consumed as part of the fluid coking (of flexicoking) process without being removed from the fluid coker (or flexicoker) for further treatment before consumption, is exempt pursuant to Revenue and Taxation Code section 6358.1(b).

Very truly yours,

Gary J. Jugum
Assistant Chief Counsel