This is in reply to your January 19, 1981 memorandum regarding the application of tax to purchases of flourspar, sinter mix and coal ash by M--- P--- C--- Company (M---) and loading, handling, and hauling charges of coal purchased by M---.

We will discuss each of the questioned item in the order in which you presented them.

**Flourspar**

You explained that M---’s primary purpose for purchasing flourspar is to mix it with the limestone slurry to lower the alkali content in cement. The result is accomplished by a chemical reaction that occurs under the extreme heat in the kiln. The residue of flourspar and alkali is captured in the dust bags. The flourspar is also a flux which helps prevent the slurry from adhering to the lining of the kiln. M--- purchases approximately $120,000 of flourspar a year for resale. You believe that the flourspar is a taxable manufacturing aid.

Our research of flourspar has shown that it is added to cement raw mixes to facilitate clinkering. Calcium is formed and thus reduces the clinkering temperature. The reduced clinkering temperature is advantageous, but the presence of the flourspar has no beneficial effect on the finished product. In fact, in many cases, it seems to reduce the strength of the cement.

We agree that flourspar is a taxable manufacturing aid.

**Sinter Mix**

Sinter mix is a reddish powder iron waste by-product. The sinter mix is mixed into the cement slurry to aid in uniform heating and drying of the slurry. Under extreme heat, the sinter mix acts as a “fluffing” agent when mixed thoroughly into the slurry. You believe that sinter mix is a taxable manufacturing aid.
We have been unable to locate research information sources that explain the uses of “sinter mix.” Based on your explanation, we agree that the product, as used by M--, is a taxable manufacturing aid.

However, “blast furnace slag” is a by-product obtained in the manufacture of pig-iron. The slag is formed by the combination of earthy constituents of the iron ore with the limestone flux. Ground slag, mixed with a suitable proportion of limestone, is used as a raw material for the manufacture of Portland cement. If “sinter mix” is merely another name for “blast furnace slag,” we believe it is a non-taxable ingredient of the final product if the use of the product in the manufacturing process is simultaneous with the incorporation into the final product.

Coal Ash

The quality of coal depends upon the volatile materials that are in the coal. The higher the volatile content, the more BTU’s the coal will generate. In the cement making process, coal is crushed into powder, blown into the kiln, and ignited.

The volatile organic elements burn or evaporate. The inorganic elements remain in the kiln in the form of an ash. Some of the ash is mixed with the cement, and some of the ash is captured in dust bags as required by the Environmental Protection Agency.

Sometime in the past, M--- claimed a refund of tax paid on coal for the portion of which remains in the final product as ash.

A preliminary hearing was later held, and the Decision and Recommendation of Hearing Officer states that M--- “desires the fly ash to remain in the clinker since it increases the amount of silicon dioxide, aluminum dioxide, and other elements beneficial to the finished cement. The Board granted M--- a refund of tax and interest totaling $30,208.50.

You have, since that time, discussed M---’s use of fly ash with Mr. R--- S---, a director of research at M---. He stated to you that fly ash is not a desirable ingredient of the M--- formula although other manufacturers may use it. He also stated that the silicon dioxide and alumina dioxide do not come from the inorganic elements of the coal.

You note that the Standard Chemical Requirements for the manufacturing of Type II cement, which type M--- manufactures, require that such cement contain less than 1 percent of insoluble residue. Coal ash is one of the insolubles.

You believe that coal should be subject to tax at 100 percent of cost as a taxable manufacturing aid, because coal ash is only incidentally incorporated into the final product.
Our research has shown that coal ash consists mainly of silica, alumina, and ferric oxide. Coal ash is often purposely incorporated into cement formulas with a corresponding decrease in the amount of other raw materials to compensate for the elements found in the coal ash. The hearing officer relied in part on this information to recommend a refund. We remain of the opinion that coal ash is an ingredient of cement mixes.

In view of this, we suggest that you obtain written confirmation of the facts disclosed to you by Mr. S--- that M--- does not purposely incorporate coal ash into M---’s cement formula as an ingredient. In the absence of such confirmation, we adhere to the position that M--- incorporates coal ash into the cement formula as an essential ingredient. We also adhere to such position with other cement manufacturers who claim that coal ash is an essential ingredient.

If Mr. S--- provides such written confirmation, the coal ash, as used by M---, should be considered a manufacturing aid, and you should, during your post audit discussion with M---, ask that the refund be returned to the Board. If M--- does not voluntarily return the refund, we must refer the matter to the Controller’s Office for recovery pursuant to Section 6961, Revenue and Taxation Code.

**Loading and Handling**

M--- purchases its coal from out-of-state vendors and pays tax on the coal, excluding separately stated charges for handling, hauling to the loading site, and loading. Such charges are a result of transporting the coal from the vendor’s coal pit to rail cars. The railroad company sends M--- a separate freight bill. You believe the charges are part of the taxable sales price.

We agree.

The loading and handling charge you described does not qualify for exclusion from the sale price under Section 6011(c)(7) as a separately stated charge for “transportation from the retailer’s place of business or other point from which shipment is made directly to the purchaser.” Rather, the charge is a service that is part of the sale and taxable under Section 6011(b)(1).