

## System for Detecting Petroleum Product Quantity and Adulteration

### **Disclosure Number**

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### **Technology Summary**

Diesel fuel for over-road use is taxed at a higher level than off-road use petroleum products such as marine diesel and heating oil. These latter products are currently marked with dyes in order to distinguish them from over-road diesel fuel. Currently, the only method of detecting use of dyed products for over-road use is visual inspection, which can only be applied to a small fraction of the fuel sold for, and used in, over-road transportation. Moreover, numerous illegal schemes have been employed to evade fuel tax; it is often suspected that fuel purchased in a state with a particular fuel tax is actually used in a nearby higher-tax state. Such schemes, including misdirection of fuel, can often only be detected in hindsight or can be impossible to prove. The present invention relates to a sensing system and applications thereof that will deter use and/or diversion of inappropriately taxed fuel. The system is capable of detecting addition/removal of fuel or the presence of fuel that is of incorrect tax status.

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