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United States Environmental Protection Agency
Washington, D.C. 20460
Office of Solid Waste and Emergency Response

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NMEID
1190 Saint Francis Street
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Dear Ms. Wanslow:

In response to your phone conversation of March 22, 1989, with Mike Fitzpatrick of my staff, we have prepared the following explanations to clarify the boundaries of the oil field RCRA exemption as discussed in the December 1987 EPA Report to Congress (RTC) and given final definition in the July 1988 regulatory determination.

The scope of the exemption as defined in the RTC and regulatory determination is based on the legislative history and Sections 3001(b)(2)(A) and 8002(m) of RCRA. Using these sources the Agency has identified three separate criteria to be used when defining specific waste streams that are exempt. These criteria are listed on pages II-18 and II-19 of the RTC (enclosed.)

In regard to pipeline or gathering line-related wastes, the following excerpts from the criteria in the RTC may prove helpful:

"Primary field operations encompass those activities occurring at or near the well head, but prior to the transport of oil from an individual field facility or a centrally located facility to a carrier (i.e., pipeline or trucking concern) for transport to a refinery or to a refiner.... Waste generated by the transportation process itself are not exempt because they are not intrinsically associated with primary field operations ...
Transportation for the oil and gas industry may be for short or long distances. [emphasis added]

According to the Manual of Oil and Gas Terms (sixth edition) there are many terms in common usage within the industry and applied to the various pipelines associated with oil and gas production and transportation (see enclosed definition of "pipeline"). Feeder lines may or may not be exempt depending on the point of custody transfer or other site-specific factors relating to transportation from the primary field of operation as defined in the RTC. Although the Agency used the term "gathering line" in the RTC in reference to a generally small diameter pipe within a primary field operation, the term "gathering line" itself should not be used as the determining factor in defining the scope of the exemption. Rather, the applicability of the criteria in the RTC to the particular line in question should be used in determining the scope of the exemption.

As for gas plant cooling tower wastes, the July 6, 1988, regulatory determination identifies "cooling tower blowdown" as exempt and "gas plant cooling tower cleaning wastes" as non-exempt. The difference between the two is that blowdown is comprised only of water, scale or other wastes generated by the actual operation of the cooling tower; whereas cleaning wastes include any solvents, scrubbing agents or other cleaning materials introduced into the process solely to remove buildup or otherwise clean the equipment and are not included as part of the functional operation of the cooling tower. Since these cleaning wastes can come from any cooling tower, they are not intrinsically derived from primary field operations for natural gas production. The determining factor for defining the exemption is not the frequency with which the cooling tower is blown down, either with or without cleaning agents, but whether the resulting waste is solely derived from the normal operation of the tower for natural gas production or from any added cleaning materials.

I trust these explanations will enable you to better determine the scope of the RCRA exemption as applied to the specific waste streams within your jurisdiction. If you have any further questions please contact Mike Fitzpatrick at (202) 475-6783.

Dan Derkics
Chief
Large Volume Waste Section

cc: Mike Fitzpatrick
Ivy Main, Office of General Counsel

Enclosure

1. Exempt wastes must be associated with measures (1) to locate oil or gas deposits, (2) to remove oil or natural gas from the ground, or (3) to remove impurities from such substances, provided that the purification process is an integral part of primary field operations (see footnote 5).
2. Only waste streams intrinsic to the exploration for, or the development and production of, crude oil and natural gas are subject to exemption. Waste streams generated at oil and gas facilities that are not uniquely associated with the exploration, development, or production activities are not exempt. (Examples would include spent solvents from equipment cleanup or air emissions from diesel engines used to operate drilling rigs.)

Clearly those substances that are extracted from the ground or injected into the ground to facilitate the drilling, operation, or maintenance of a well or to enhance the recovery of oil and gas are considered to be uniquely associated with primary field operations. Additionally, the injection of materials into the pipeline at the wellhead which keep the lines from freezing or which serve as solvents to prevent paraffin accumulation is intrinsically associated with primary field operations. With regard to injection for enhanced recovery, the injected materials must function primarily to enhance recovery of oil and gas and must be recognized by the Agency as being appropriate for enhanced recovery. An example would be produced water. In this context, "primarily functions" means that the main reason for injecting the materials is to enhance recovery of oil and gas rather than to serve as a means for disposing of those materials.

3. Drilling fluids, produced waters, and other wastes intrinsically derived from primary field operations associated with the exploration, development, or production of crude oil, natural gas, or geothermal energy are subject to exemption. Primary field operations

encompass production-related activities but not transportation or manufacturing activities. With respect to oil production, primary field operations encompass those activities occurring at or near the wellhead, but prior to the transport of oil from an individual field facility or a centrally located facility to a carrier (i.e., pipeline or trucking concern) for transport to a refinery or to a refiner. With respect to natural gas production, primary field operations are those activities occurring at or near the wellhead or at the gas plant but prior to that point at which the gas is transferred from an individual field facility, a centrally located facility, or a gas plant to a carrier for transport to market.

Primary field operations may encompass the primary, secondary, and tertiary production of oil or gas. Wastes generated by the transportation process itself are not exempt because they are not intrinsically associated with primary field operations. An example would be pigging waste from pipeline pumping stations.

Transportation for the oil and gas industry may be for short or long distances. Wastes associated with manufacturing are not exempt because they are not associated with exploration, development, or production and hence are not intrinsically associated with primary field operations.

Using these definitions, Table II-1 presents definitions of exempted wastes as defined by EPA for the purposes of this study. Note that this is a partial list only. Although it includes all the major streams that EPA has considered in the preparation of this report, others may exist. In that case, the definitions listed above would be applied to determine their status under RCRA.

Waste Volume Estimation Methodology

Information concerning volumes of wastes from oil and gas exploration, development, and production operations is not routinely collected nationwide, making it necessary to develop methods for estimating these volumes by indirect methods in order to comply with the Section 8002(m) requirement to present such

estimates to Congress. For this study, estimates were compiled independently by EPA and by the American Petroleum Institute (API) using different methods. Both are discussed below.

Estimating Volumes of Drilling Fluids and Cuttings

EPA considered several different methodologies for determining volume estimates for produced water and drilling fluid.

Footnote

5. Thus, wastes associated with such processes as oil refining, petrochemical-related manufacturing, or electricity generation are not exempt because those processes do not occur at the primary field operations.