9432.1994(01)

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

REGULATORY STATUS OF SHELL OIL'S NORCO, LOUISIANA FACILITY DITCH SYSTEM

February 1, 1994

MEMORANDUM

SUBJECT: Regulatory Status of Shell Oil's Norco, Louisiana Facility Ditch System

FROM: Frank McAlister, Chief
Assistance Branch (5303W)

TO: Bill Gallagher, Chief
Arkansas/Louisiana Section
RCRA Permits Branch, Region VI (6H-PL)

We have reviewed your November 22, 1993 facsimile requesting assistance in determining the regulatory status of a wastewater/stormwater ditch system at Shell Oil Company's Norco, Louisiana manufacturing complex.

As we understand it, the ditch system is composed of five interconnected trenches/ditches that drain into an open-top in-ground tank referred to as the Storm Water Impounding Basin (SWIB) Inlet Tank. Five pumps within the SWIB Inlet Tank lift the wastewater/stormwater into the 22 acre Storm Water Impounding Basin with subsequent flow into the 12 acre Aeration Basin.

The ditch system was designated a hazardous waste management unit by Shell when the TC rule became effective on September 25, 1990 (See 55 FR 11798). Shell apparently would like to consider the SWIB Inlet Tank either an excluded tank or sump under the wastewater treatment unit exemption (See 40 CFR 264.1(g)(6)). According to Shell, the unlined trench system would then be considered either ancillary equipment to an excluded tank or a component of an excluded sump, and would, thereby, be exempt from RCRA permit regulations (e.g., liner and leak detection system

requirements).

Based on a review of Shell Oil's October 26 and December 15, 1993 submissions, and of the Agency's historical position on ditch systems, Shell's general conclusion that a ditch system could be construed to be ancillary equipment to a tank, or for that matter troughs/trenches connected to a sump, is correct. However, Shell's conclusion as it relates specifically to the Norco facility is in error.

The error lies in the assumption that Norco's unlined conveyance systems can be considered ancillary equipment to a tank system. The following discussion supports the Agency's position that ancillary equipment must be a device or devices that are designed and operated not to leak, and that any device designed to allow leakage or discharge into or on any land such that hazardous waste or any constituent thereof may enter the environment constitutes disposal (see definition of "disposal," 40 CFR 260.10).

First, in reviewing the definitions of "tank," "tank system" (which includes ancillary equipment), and "wastewater treatment unit," (40 CFR 260.10), as well as the "Applicability" requirements of Subpart J of Parts 264 and 265, it is evident that tanks and tank systems are used for treatment and storage -- not for land disposal. Secondly, the kinds of devices specifically noted as ancillary equipment (piping, fittings, flanges and pumps) provide containment for the purpose of treatment or storage (or conveyance) in accordance with the above mentioned general definitions. The fact that an entire tank system including ancillary equipment must provide containment is clearly illustrated by the regulations:

> (a)...[The] owner or operators must determine that the tank system is not leaking or is unfit for use... [The] owner or operator must obtain and keep on file at the facility a written assessment reviewed and certified by an independent, qualified registered professional engineer... that attests to the tank system's integrity... At a minimum this assessment must consider the following:
> (5) Results of a leak test, internal inspection, or other tank integrity examination such that: (ii) For other than non-enterable tanks and for ancillary equipment, this assessment must include either a leak test as described above, or other integrity examination... that addresses

cracks, leaks, corrosion, and erosion...
(d) If, as a result of the assessment conducted in accordance with paragraph (a), a tank system is found to be leaking or unfit for use, the owner or operator must comply with the requirements of □264.196

(Emphasis added). 40 CFR 264.191.

We conclude, therefore, that in order for a device to be defined as "ancillary equipment," it must be designed to previous leakage or discharge. Since Shell has not demonstrated that the ditch system meets the above criteria (i.e., that the ditch system is not leaking, leak test, etc.), this system cannot be considered ancillary equipment.

Shell's second key argument that the conveyance system is not or cannot be regulated is also in error. Shell's argument is based partially on a 1983 EPA trip report written before the development of a clear regulatory mechanism to address land disposal of hazardous wastes in ways other than a narrow set of traditional units such as surface impoundments and landfills. However, even the 1983 trip report makes it clear that "... Permit writers should evaluate the potential for these ditches to leak-into the subsoil. If those ditches are conveying hazardous waste, such a discharge can be considered to be an act of disposal with a resulting requirement that the discharge be either cleaned up or the area (ditch) be managed as a disposal unit." (Emphasis added) (See footnote 1). Since in 1983 there were no "ditch" regulations, permitting authorities chose the management option of treating ditches as impoundments for the purpose of addressing discharges from ditches, particularly in those cases where waste was impounded in drainage ditches by a weir or natural depression. On December 10, 1987 the Agency published standards for owners of miscellaneous units, i.e., those hazardous waste management technologies and units not covered by the existing regulations (51 FR 40726). These rules were published more than six years ago to address circumstances similar to those which appear to be occurring at Shell's facility in Norco, Louisiana.

Further, land disposal restrictions regulations define the limited circumstances under which F037/038 wastes (which are relevant to Shell) may continue to be disposed by broadly defining land disposal to mean "... placement in or on the land and includes, but not limited to, placement in a landfill, surface

impoundment..." (See 40 CFR 263.2(c), Emphasis added). This definition recognizes, in concert with the Subpart X final rule, that other forms of land disposal exist aside from those traditionally practiced. Examples of other forms of land disposal (i.e., placement into or on the land) are specified within the context of the listing for F037/038 waste. These include "ditches and other conveyances." You will notice that ditches and conveyances are listed in the same context as, but are separate from, tanks and sumps. (See 40 CFR 261.31)

Finally, Shell wrongly argues that the conveyance system is a Solid Waste Management Unit and is, therefore, not regulated. Since the conveyance system received hazardous waste after January 26, 1982, it is subject to full Part 264/265 regulation as a hazardous waste management unit.

In light of the regulatory requirements discussed above, there appears to be two options for identifying the unit-specific status of this ditch system as it currently stands. For the purposes of permitting, one option is to consider the ditch system either a Subpart X disposal unit or a surface impoundment. If it is determined that the ditch system is a Subpart X land disposal unit, relevant design and operation requirements from conventional units that function in a similar manner, such as surface impoundments, would apply. The most obvious relevant requirement in these standards is the liner/leak detection system requirement. If it can be determined that waste is actually being impounded (for example, in depressions in the drainage system), then the ditch system should be considered a surface impoundment, as originally designated by Shell in its Part A.

Alternatively, the ditch system could be retrofitted in accordance with the tank regulations. If that were the case, the ditch system would, in fact, be a part of a tank system (i.e., ancillary equipment) and, therefore, eligible for the wastewater treatment unit exemption.

With regard to the Region's question of similar ditch systems in other Regions, two systems seem to most closely fit Shell's circumstances. The first similar ditch system was operated at the Dow Chemical Company's Midland, Michigan facility. In the mid-1980's (prior to the final Subpart X regulations) these ditches were designated surface impoundments by Region 5. They were closed as such, and are now undergoing post-closure care. The second

similar ditch system was operated at the Sun Oil Company's Marcus Hook Refinery in Marcus Hook, Pennsylvania. Sun Oil recognized the need to retrofit the ditch system, and is currently constructing a new above-ground piping system.

Although this discussion analyzes whether Shell Oil's ditch system is ancillary equipment, we would arrive at the same conclusion under an analysis of whether the ditch system is a trough/trench connected to a sump. The reason for the same conclusion, no matter how we characterize Shell Oil's ditch system, is that sumps and connected troughs/trenches are defined as tanks and are governed by the same regulations as are tanks ("...it is EPA's intention that hazardous waste tank systems, including sumps used to transport hazardous wastes, are managed in a manner that would ensure protection of human health and the environment." (51 FR 25441 July 14, 1986). Even Shell agrees that the definitions of tank and sump and their respective components (e.g. trenches, troughs, conveyances, and ancillary equipment) are used interchangeably. (See especially page 11, paragraph D of Shell's December 15, 1993 letter to Ms. Elaine Taylor and 43 FR 34080 (September 2, 1988) quoted on page 4 of the same letter.)

Should you have questions regarding our analysis of Shell Oil's Norco, Louisiana facility ditch system, please contact Chris Rhyne of my staff at (703) 308-8658.

cc: Chris Rhyne, AB, PSPD, OSW
Chet Oszman, AB, PSPD, OSW
Frank McAlister, AB, PSPD, OSW
Rafael Casanova, Region VI
Kathy Nam, OGC

1 Shell did not address this underlined portion of the 1983 trip report in their December 16 letter