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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460
OFFICE OF SOLID WASTE AND EMERGENCY RESPONSE

CLARIFICATION OF THE REGULATORY STATUS OF A REFINERY DITCH
SYSTEM

MAY 12, 1994

MEMORANDUM

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

FROM: Michael H. Shapiro, Director
Office of Solid Waste

TO: Allyn M. Davis, Director
Hazardous Waste Management Division, Region 6

In your March 30, 1994 memorandum, you requested clarification of the regulatory status of the Shell Oil, Norco, Louisiana, refinery ditch system that has been used to convey hazardous waste. In previous correspondence, Headquarters provided a detailed interpretation regarding RCRA applicability to the facility. That interpretation concluded that Shell Oil's Norco facility ditch system can not be considered ancillary equipment to a tank (or as troughs/trenches connected to sump) within the meaning of "tank systems" in 40 CFR 260.10. Therefore, the ditch system is not eligible for the wastewater treatment unit exemption. (See February 1, 1994, memorandum from Frank McAlister (OSW) to Bill Gallagher (Region 6)). Below we have provided further explanation of this interpretation.

The RCRA regulations require that ancillary equipment, as part of a tank system, must be designed and operated so that it will not leak. See 40 CFR 265.191. Natural soils, such as those at the Norco ditch system, although useful for many construction applications, are not leak-proof materials. One of the fundamental properties of natural soil is that it allows transmission of liquids; no natural soil is leak-proof. The Norco ditch system, therefore, fails to qualify as part of a tank

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system under this regulatory test.

Shell maintains that it should be able to demonstrate (pursuant to 40 CFR 265.191(a)) that its ditch system is leak proof by using a leak test or other integrity assessment. However, this regulatory provision is intended only to confirm that tank systems constructed of leak-proof materials do not in fact leak. As discussed above, the Shell ditch system is not constructed of leak-proof material.

Furthermore, the Norco ditch system does not meet the requirement in 40 CFR 265.191 that tank systems be constructed of materials that provide structural strength. The tank system regulations require that the owner/operator obtain a tank assessment attesting to the tank system's integrity. 40 CFR 265.191(a). This assessment must determine that the tank is adequately designed and has "sufficient structural strength and compatibility with the waste(s) to be stored or treated to ensure that it will not collapse, rupture or fail." 40 CFR 265.191(b). We interpret the term "structural strength" required of tank systems in 40 CFR 265.191 (b) consistently with our interpretation of the almost-identical term "structural support" in the definition of tank in 40 CFR 260.10. Specifically, EPA has interpreted the term "structural support" to mean that the sides of the structure must be capable of supporting themselves, and the wastes they contain, without the aid of adjacent soils. These structural support qualities are what distinguish tanks, for example, from surface impoundments.

This distinction for tanks was made in an April 8, 1983, memorandum from Bruce R. Weddle, Acting Director, State Programs and Resource Recovery Division to Thomas W. Devine, Director, Air and Waste Management Division, Region IV. The Third Circuit further articulated this distinction in *Beazer East, Inc. v. U.S. EPA Region III*, 963 F.2d 603 (3rd Cir. 1992). In the *Beazer* case, the Third Circuit determined that a surface impoundment that was lined with concrete was not a tank, because the sides of the impoundment were not capable of supporting themselves, and the wastes they contain, without additional support from underlying dike soils. Similarly, Shell's partially lined Norco ditch system is not ancillary equipment that is part of a tank system, because it is not capable of demonstrating that it can support itself without additional support from the surrounding soils.

You also inquired about what we meant in our February 1 memorandum by the sentence, "Alternatively, the ditch system could be retrofitted in accordance with the tank regulations." By this we mean that in order to convert the ditch to an exempt wastewater treatment unit, Shell would need to reconstruct the entire Norco ditch system using materials that are both leak-proof and provide the structural strength required of ancillary equipment that is part of a tank system.

I hope this memorandum clarifies our position on this issue. If you have any further questions on this matter, please contact Chris Rhyne of my staff at (703) 308-8658.

cc: Jim Michael
Frank McAlister
Matt Hale
Dev Barnes
Kathy Nam, OGC
Allyn Davis, Region 6
William Honker, Region 6
Mike Roulter, ORD

Attachments

U.S. ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1445 ROSS AVENUE, SUITE 1200
DALLAS, TX 75202-2733

March 30, 1994

MEMORANDUM

SUBJECT: Regulatory Determination
Refinery Effluent Ditch System
Shell Oil Company, Norco, Louisiana
EPA I.D. No. LAD008186579

FROM: Allyn M. Davis, Director
Hazardous Waste Management Division (6H)

TO: Michael H. Shapiro, Director
Office of Solid Waste (OS-300)

Attached is a memorandum forwarded to Frank McAlister of your staff requesting written clarification of the issues included in his memorandum of February 1, 1994, concerning the regulatory status of Shell Oil's (Norco, Louisiana) ditch system. A meeting was held on March 22, 1994, at EPA regional offices which included, among others, counsel for Shell and the Deputy Director of the Hazardous Waste Management Division. Shell has sent a letter requesting clarification of the February 1, 1994, Frank McAlister memorandum (see attachments).

Shell contends that the wording of the referenced memorandum specifies that if Shell demonstrates that the ditch system is not leaking, then the ditch system could then be considered ancillary equipment and thus exempt from regulation under Subtitle C of RCRA. Shell proposes to make this demonstration under 40 CFR §265.191 (Assessment of existing tank system's integrity). Region 6 argues that Shell's reading of the memo was not our intent. Therefore, we are requesting written clarification of these issues in order to respond to Shell in a timely manner. Shell plans to request a meeting with you to present their

argument. Therefore, we are requesting that clarification come from your office. If you have any questions or comments concerning our request, please call Bill Honker of my staff at (214) 655-6770.

Attachments

March 24, 1994

MEMORANDUM

SUBJECT: Regulatory Determination
Refinery Effluent Ditch System
Shell Oil Company, Norco, Louisiana
EPA I.D. No. LAD008186579

FROM: William K. Honker, P.E., Chief
RCRA Permits Branch (6H-P)
Hazardous Waste Management Division

TO: Frank F. McAlister, Chief
Assistance Branch (S303W)
Permits and State Programs Division
Office of Solid Waste

The purpose of this memorandum is to request written clarification of the issues included in your letter of February 1, 1994, concerning the regulatory status of Shell Oil's (Norco, Louisiana) ditch system. A meeting was held on March 22, 1994, at EPA regional offices which included, among others, counsel for Shell and the Deputy Director of the Hazardous Waste Management Division.

Shell contends that the wording of the referenced letter specifies that if Shell demonstrates that the ditch system is not leaking, then the ditch system could then be considered ancillary equipment and thus exempt from regulation under Subtitle C of RCRA. Shell proposes to make this demonstration under 40 CFR §265.191 (Assessment of existing tank system's integrity). Shell states that the natural clay liner (hydraulic conductivity about 1×10^{-8} cm/sec) underlying the ditch system along with the hydraulic gradient of the groundwater towards the ditch system will not allow contaminants to migrate into the groundwater. Shell proposes to model groundwater under the two following worst-case scenarios: the ditch system full of water and the lowering of the water table to a level below the ditch system.

Region 6 argues that Shell's reading of the memo was not the intent of EPA and that in order for the ditch system to be designated as ancillary equipment, it must be designed according to those specifications (e.g., leak tested, secondary containment, etc). Additionally, EPA has not determined that the ditch system is part of a tank system and is thus ineligible for the demonstration specified in the regulations for tank systems. If a demonstration were conceivable, this demonstration should have been made one year after the date that the waste became a hazardous waste [see 40 CFR sec 265.191(c)]. This deadline has already passed.

Region 6 is requesting written clarification of these issues in order to respond to Shell in a timely manner. Additionally, the Region is requesting clarification of the term "retrofitting" as used in the context of the referenced letter. Since Shell may request a review from a higher authority at EPA Headquarters, the Region is also requesting that the clarification memo be signed by Mike Shapiro.

Attachment

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2100 FRANKLIN PLAZA
111 CONGRESS AVENUE
AUSTIN, TEXAS 78701
(512) 499-6200
FAX (512) 476-3866

March 24, 1994

Mr. Jack S. Divita
Deputy Director
Hazardous Waste Management Division
U.S. Environmental Protection Agency
1445 Ross Avenue
Dallas, Texas 75202-2733

Re: Shell Oil Company, Norco Louisiana
EPA ID No. LAD008186579

Dear Mr. Divita:

This letter is in response to issues raised at our March 22, 1994, meeting with you concerning the regulatory status of the wastewater collection and conveyance system at the Norco Manufacturing Complex ("Norco") owned and operated by Shell Oil Company ("Shell"). The purpose of the meeting was to determine what action Shell may take to demonstrate that this conveyance system meets the definition of ancillary equipment based on the Dr. Allyn Davis' letter of March 4, 1994 and an earlier advisory memorandum from the Office of Solid Waste. Shell disagrees with the apparent interpretation of these two documents by the Region as discussed at the March 22 meeting. This letter is intended to provide you our understanding of the regulatory criteria applicable to the conveyance system and request clarification of the Agency's position.

In an EPA memorandum, dated February 1, 1994, from Frank McAlister to Bill Gallagher, the Office of Solid Waste advised the Region that a facility ditch system could be construed to be ancillary equipment to a tank. To qualify, ancillary equipment must be designed to prevent leakage or discharge. Shell has not

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demonstrated that the conveyance system is designed to meet this criteria. This advise was incorporated without any significant modification or analysis by the Region in Dr. Davis' letter of March 4.

Based on our reading of the analysis from the Office of Solid Waste, we believe that the conveyance system would be classified appropriately as ancillary equipment to a wastewater treatment tank if Shell could meet the tank assessment and certification requirements of 40 CFR § 265.191. In the March 22 meeting, we were informed that we were misconstruing the EPA documents. We were told that it was not the agency's intent that Norco conveyance system, as it is presently designed, could qualify as ancillary equipment. The conveyance system should be classified as either a Subpart X (Miscellaneous Unit) or as a surface impoundment. We believe that the Region's statements are neither consistent with the very clear language in the EPA documents nor with the RCRA regulations.

Shell appreciates the Region's apparent concern with what appears to be "unlined-dirt ditches" that typically would be the source of uncontrolled discharges and releases of hazardous waste or hazardous constituents. This concern is misplaced because there is no evidence that the conveyance system has resulted in releases or discharges constituting disposal. The unique geologic and hydrogeologic characteristics of the site provides containment meeting or exceeding other types of engineered devices, including underground piping considered ancillary equipment at other facilities. Under these circumstances, Shell should be allowed the opportunity to perform the tank system assessment and obtain a certification.

Based on preliminary review of the substantial amount of site-specific data on Norco's conveyance system, Shell believes that the conveyance system could be certified after additional analyses and groundwater modelling. The natural clay bottom of the conveyance system exhibits low permeability. The physical characteristics of the surrounding soil are similar to the clay bottoms. The groundwater elevation in the soils surrounding the conveyance system are higher than those inside the conveyance system and is maintained through the operation of the conveyance system. Little or no organic constituents have been detected in chemical analyses of the underlying clays.

Shell is requesting that the Agency clarify its position on this matter. Shell intends to meet with appropriate representatives of the Office of Solid Waste to confirm that Norco's conveyance system could be classified as ancillary equipment if the conveyance system is certified by an independent, qualified, registered professional engineer to have integrity sufficient to contain the wastewater and prevent leakage and discharge. Shell believes very strongly that, if its conveyance system can be certified, Shell not be forced to incur significant construction costs to address a non-problem.

We appreciate the opportunity to meet with you and desire that this clarification can be made expeditiously.

Sincerely yours,
Paul Seals

PAS:rt
cc:
Dr. Allyn Davis
Frank McAlister
Bill Honker
Bill Gallagher
Elaine Taylor