

PPC 9551.1991(01)

NO-MIGRATION PETITION FOR KOCH'S REFINING, TX

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

JAN 3 1991

Mr. John R. Kampfhenkel
Chief Environmental Engineer
Koch Refining Company
P.O. Box 2608
Corpus Christi, Texas 78403

Re: No-Migration Petition submitted for Koch Refining's Corpus
Christi, Texas Land Treatment Unit (F-90-NKCP-FFFFF)

Dear Mr. Kampfhenkel:

I am writing in regard to your April 26, 1990 "no-migration" petition, which requests a variance under 40 CFR §268.6 to allow Koch Refining Company (Koch) to continue the land treatment of restricted wastes at Koch's Corpus Christi, Texas land treatment unit (LTU). After a careful review of your petition, we have concluded that your facility does not meet the standard for a no-migration variance. Therefore, we will recommend to the Assistant Administrator for Solid Waste and Emergency Response that the petition be denied.

Our decision to recommend denial of the petition is based on the following concerns:

- Soil-pore and soil-core monitoring indicate that hazardous constituents have already migrated beyond the unit boundary.
- Ground-water monitoring for vanadium indicates that this hazardous constituent has already migrated beyond the unit boundary.

Presence of Hazardous Constituents Below the Treatment Zone (BTZ)

Soil-pore and soil-core monitoring data provided in Koch's petition indicate that migration of hazardous constituents below the treatment unit has already occurred. Specifically, analyses of soil pore liquid samples collected

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during August and September of 1988 and in February, April, May, June, and October of 1989 indicate the presence of beryllium, cadmium, chromium, lead, nickel, selenium, toluene, benzene, styrene, 2-butanone, 1,2dichloroethane, and ethyl benzene in excess of their respective health-based levels used in no-migration decision-making. The results of these analyses are presented in Attachments 1 and 2.

Analyses of soil core monitoring data collected in December 1989 indicate that beryllium was detected at concentrations exceeding the health-based level (HBL) of 0.2 mg/kg for soil ingestion in Bores 1, 2, 3, 4, and 6. Antimony was also detected at a concentration exceeding the HBL of 30 mg/kg for soil ingestion in Bore 6 during December 1989. (See Attachment 3.)

Furthermore, Attachment 3 also shows that several organic constituents were detected in the BTZ. Concentrations of benzo(a)pyrene (6.5 mg/kg) and methyl chrysene (4.4 mg/kg) were detected in Bore 1 (December 1989) above their respective HBL's of 0.055 mg/kg for soil ingestion. Oil and grease levels in two of the soil bores averaged 4,500 mg/kg for Bore 1 and 193 mg/kg for Bore 4 in December 1989. The individual values for the BTZ samples from Bore 1 were 1,900 mg/kg (5.0-5.5 feet); 7,000 mg/kg (5.5-6.5 feet); and 4,600 mg/kg (6.5-7.5 feet). The presence of benzo(a)pyrene and methyl chrysene and elevated levels of oil and grease beneath the treatment zone further demonstrate that hazardous constituents have migrated below the treatment unit.

Ground-Water Monitoring Data

Ground-water monitoring data presented in Koch's petition indicate that migration of hazardous constituents to the ground water has already occurred. Specifically, a review of the August 1988 ground-water monitoring data indicate the presence of vanadium in downgradient wells LE-3 (0.39 mg/l) and LE-5 (0.28 mg/l) in excess of the HBL (0.24 mg/l) used in no-migration petition decision-making. (See Attachment 4.)

In addition, total organic carbon (TOC) levels were significantly higher in downgradient wells LE-3, LE-4, LE-5, and LE-6 than in upgradient wells in September of 1988. However, we are unable to determine whether organics are present at levels of concern because Koch did not provide a fractional analysis of the constituents in the TOC samples. Lastly, although the difference between the downgradient and upgradient monitoring wells did not exceed the health-based levels, the downgradient concentrations for arsenic (LE-3 and LE-4), mercury (LE-6), and selenium (LE-6) did exceed the upgradient concentrations during August of 1988.

Incomplete Petition

Finally, our review indicates that the petition is incomplete and that information and clarification in areas beyond those highlighted above would be needed to complete the petition. However, because of the problems discussed above, we believe we have sufficient information at this time to move toward a denial of your petition.

It is our practice to give petitioners the option of withdrawing their petitions to avoid a negative publication in the Federal Register. If you prefer this option, you must send us a letter withdrawing your petition and acknowledging that the petitioned wastes are still considered to be restricted wastes subject to the Third Third Land Disposal prohibitions. This letter should be forwarded to the following address within two weeks of the date of receipt of today's correspondence:

Patricia Cohn, Acting Chief
Assistance Branch (OS-343)
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington, D.C. 20460

If you choose not to withdraw your petition, we will recommend that a proposed denial decision be published in the Federal Register.

Any questions regarding our findings may be submitted in writing to Mr. James Michael of my staff.

Sincerely,

Original Document signed

Jeffery D. Denit, Deputy Director
Office of Solid Waste

Attachments

cc: Bill Honker, EPA Region VI
Tony Robledo, EPA Region VI
Minor Hibbs, Texas Water Commission
Patricia Cohn, PSPD, OSW
James Michael, PSPD, OSW

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bcc: Terry Keidan, AB, PSPD; OSW
Jeffrey Gaines, AB, PSPD, OSW
Dave Reeves, AB, PSPD, OSW
Richard Kinch, WMD, OSW
Kathy Stein, OE
Nikki Roy, WMD, OSW
Howard Finkel, ICF Incorporated