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Pesticide Contamination of Groundwater: Superfund Liability?

David R. Andrews

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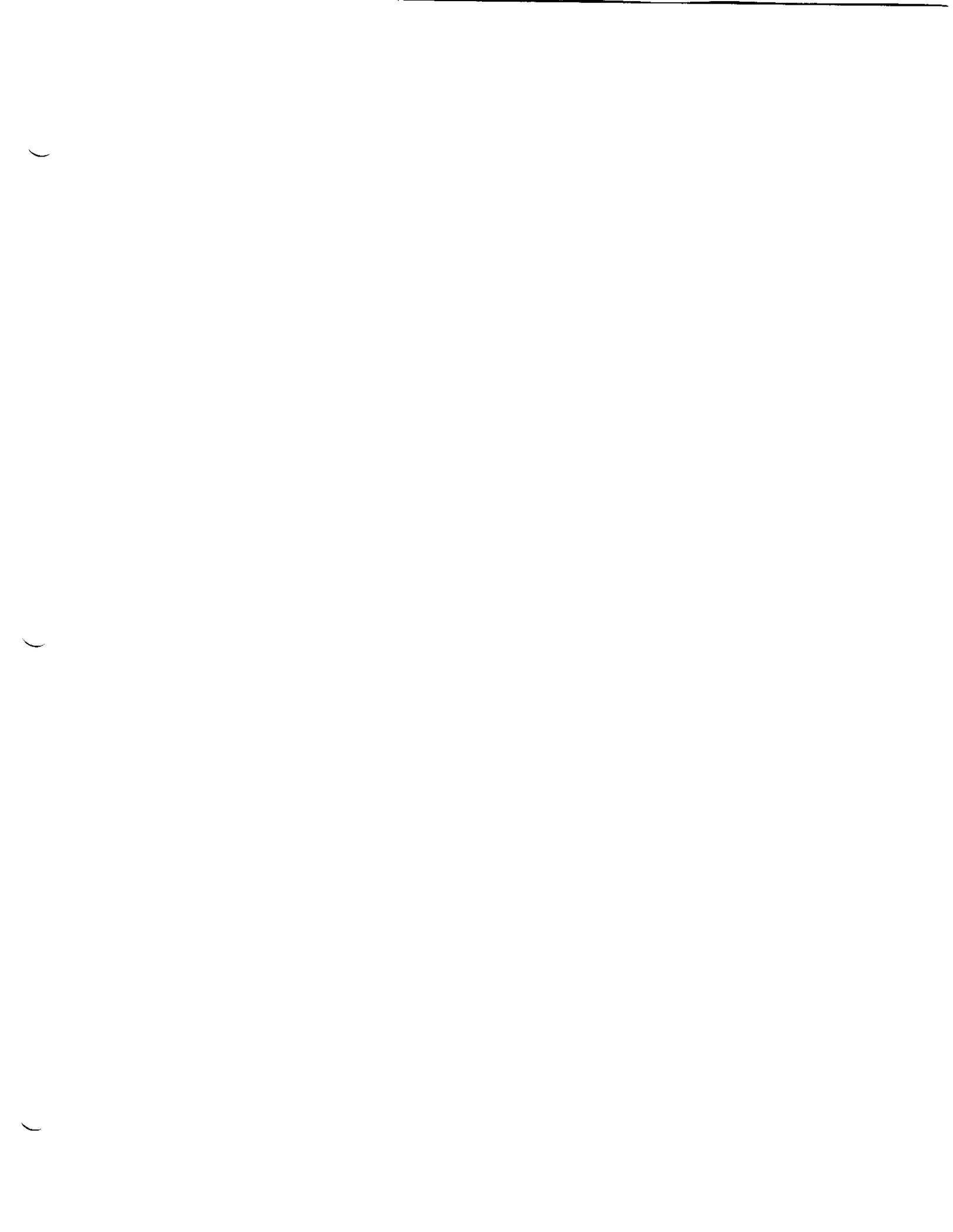
PESTICIDE CONTAMINATION OF GROUNDWATER
SUPERFUND LIABILITY?

David R. Andrews
Partner, McCutchen, Doyle, Brown & Enersen
San Francisco, California
Washington, D.C.

WATER QUALITY CONTROL: INTEGRATING BENEFICIAL USE AND
ENVIRONMENTAL PROTECTION

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I. INTRODUCTION

A. BACKGROUND

In October, 1984, EPA proposed listing on the National Priorities List (NPL) six sites in South Central Oahu, Hawaii, where portions of the basal aquifer had been contaminated by pesticides.

These pesticides are soil fumigants used in Oahu pineapple fields and all were registered under FIFRA. The best information was that the pesticides were legally applied.

These six sites were the first to be proposed to be added to the NPL on the basis of releases which appear to originate from the application of pesticides.

EPA noted that the proposal could set important precedents with unknown implications for the future direction of CERCLA. During reauthorization, EPA argued that CERCLA should be amended to prohibit listings such as those proposed for the six Hawaiian sites.

The problem is large in scope. In 1979, two pesticides were discovered in groundwater: dibromochloropropane (DBCP) in California and Aldicarb in New York. Additional monitoring in other states shortly thereafter showed DBCP in groundwater in Arizona, Hawaii, Maryland and South Carolina. Aldicarb was found in Wisconsin in 1980.

Perhaps the most serious case of pesticide contamination of groundwater was the discovery in 1982 of ethylene dibromide (EDB) in two California wells and in three wells in Georgia. By the end of 1983, EDB contamination of groundwater had been discovered in 16 different counties in California, Florida, Georgia and Hawaii. These findings caused EPA, in September 1983, to issue an immediate suspension of all EDB soil use.

By 1986, a total of 19 different pesticides had been detected in groundwater in 24 states where the source of the contaminant was most probably a result of agricultural application (nonpoint source) rather than from spills or other point sources of the pesticides.

Some of the more important findings from recent state monitoring efforts are as follows:

° California: Approximately 57 different pesticides have been detected in California's groundwaters; one-half of these were attributed to point sources (leaks and spills) rather than normal pesticide application. Nearly 2,500 drinking water wells were found to contain DBCP; about 60% of these had levels above the state standard of one part per billion (ppb). About 700,000 people may have been exposed to DBCP via drinking water as a result.

° Hawaii: Thirteen public drinking water wells have been found to be contaminated by EDB, DBCP and/or trichloropropane; these wells serve more than 130,000 people.

° Florida: EDB has been found in about 10% of public and private drinking water wells serving more than 50,000 people. About 1,200 wells have been closed.

° New York: On Long Island, almost 2,000 wells were found to contain aldicarb; about 50% of these wells had levels which were above the New York state standard of 7 ppb.

° Minnesota: Separate surveys of private and public drinking water wells have been conducted recently. In 1986, one or more pesticides were detected in 52% of 225 private wells; and in an ongoing survey of public wells, one or more pesticides have been detected in 29% of 366 wells sampled. The average concentrations of pesticides found in these wells were below the state health standards.

° Iowa: Nine herbicides and two insecticides have been detected in monitoring studies conducted in Iowa. For the most part, concentrations were less than one part per billion; the major source of these pesticides was attributed to normal agricultural application. Monitoring data indicate that about 27% of the population consumes drinking water which contains low concentrations of pesticides

B. GENERAL REFERENCES

1. A Congressional Agenda to Prevent Groundwater Contamination: Building Capacity to Meet Protection Needs, Environmental and Energy Study Institute, October 25, 1986.
2. Agricultural Effects on Groundwater Quality, Congressional Research Service, October 1986.
3. EPA National Pesticide Survey - Pilot Study Evaluation Summary Report, September 1987.
4. EPA Agricultural Chemicals in Groundwater Proposed Pesticide Strategy, December 1987.
5. Groundwater Quality State Activities to Guard Against Contaminants, United States General Accounting Office, February 1988.

II. SCOPE OF CERCLA/SARA

Congress enacted the federal Superfund law in 1980 to give EPA the authority it needed to clean up hazardous waste sites and otherwise protect public health and the environment from releases of hazardous substances and waste.

The legislative history of CERCLA is not helpful in deriving the intent of the drafters with respect to pesticide contamination of groundwater. The intent to cover pesticide pollution can be drawn from the statute itself.

CERCLA sets up an elaborate enforcement mechanism. Section 104 gives the government the authority to respond to releases and sets up the Superfund to pay government response costs. The government may use Section 106 to force PRPs to abate imminent and substantial dangers caused by releases or threatened releases. Section 107 imposes liability on site owners and operators, as well as past owners and those who transported the material to the site, for costs, including natural resources damages.

SARA did not make any changes to the fundamental liability scheme under Section 107 that would evidence an interest to treat the pesticide contamination issue any differently than CERCLA did.

III. SECTION 107 LIABILITY

Liability provisions of Section 107 do not apply to pesticide contamination because of a specific exemption. Section 107(i) provides, in part, that:

"[N]o person (including the United States or any state) may recover under the authority of this section for any response costs or damages resulting from the application of a pesticide product registered under the Federal Insecticide, Fungicide, and Rodenticide Act."

IV. SECTION 104 REMOVAL AND REMEDIAL ACTIONS

Section 104 can be applied to pesticides in groundwater. There is no exemption in Section 104.

Section 104 provides that the President can:

"act, consistent with the national contingency plan, to remove or arrange for the removal of and provide for remedial action relating to such hazardous substances, pollutant, or contaminant at any time (including its removal from any contaminated natural resources), or take any other response

measure consistent with the national contingency plan which the President deems necessary to protect the public health or welfare or the environment. . ."

Section 104 covers releases or threatened releases of hazardous substances. Release is defined to include pumping, pouring and emitting. "Hazardous substance" is defined by reference to designations of hazardous substances under Section 102 and other statutes.

Are registered pesticides "hazardous substances"? Are they "pollutants" or contaminants"? Section 107(i) is not applicable to Section 104. The exemption only precludes cost or damage recovery. Section 104 does not address recovery. Skimpy legislative history does not evidence an intent to exclude action under Section 104.

V. SECTION 106 - ABATEMENT ACTIONS

Section 106 allows EPA to issue either an administrative order to seek a court injunction to compel a PRP to eliminate a release or threatened release that is an imminent and substantial danger to public health or the environment.

"Imminent and substantial endangerment" is not defined in the act.

Section 106 applies to releases from a "facility." "Facility" is defined to include "any. . . equipment, . . . motor vehicle, . . .any. . . area where a hazardous substance has been deposited, . . . placed or otherwise come to be located."

Section 106 applies only to hazardous substances. Some pesticides meet the definition of hazardous substances. Are pesticides "hazardous waste"?

Does the Section 107(i) exemption apply to Section 106? does Section 107 define liability for all of CERCLA? Some courts have held, in other contexts, that liability under Section 106 is determined by Section 107.

VI. NCP REVISIONS

SARA requires the President to revise the NCP and its Hazard Ranking System to reflect the requirements of the new statute.

Congress directed EPA to "assure, to the maximum extent feasible, that the Hazard Ranking System accurately assess the relative degree of risk to human health and the environment posed by sites and facilities subject to review."

Congress also directed the President, for the purpose of taking action under Section 104 or 106 and listing facilities on the NPL, to "give a high priority to facilities where the release of hazardous substances. . . has resulted in the closing of drinking water wells or has contaminated a principal drinking water supply.

It has been reported that EPA will propose in revisions to the NCP that pesticide-contaminated sites are ineligible for Superfund monies. Earlier EPA had considered listing of point source pesticide application sites, but based on a study concluded that there were at least 1.7 million sites, including 9,000 golf course maintenance sheds.

Revisions to FIFRA attempt to deal with prevention of further contamination. Remediation is still left open. Is a separate Superfund the answer?