

WATER LOG



**A Legal Reporter of the
Mississippi-Alabama Sea Grant Consortium**

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- **Small Business Hazardous Substance Reporting — A Guide to Understanding the Emergency Planning and Community Right-to-Know Act of 1986 — Scott Lefebvre**
- **Environmental Racism — Observations in Mississippi — D. Lynn Heidenreich**

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WATER LOG

WATER LOG is a quarterly publication reporting on legal issues affecting the Mississippi-Alabama coastal area. Its purpose is to increase public awareness and understanding of coastal problems and issues.

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Editor's Note:

The following two articles are condensed versions of detailed studies the authors conducted this summer. The in-depth reports were to fulfill the requirement for a course at the University of Mississippi School of Law. The course was Hazardous Waste Law, taught by visiting professor and former WATER LOG editor, Casey Jarman. The articles by Mr. LeFebvre and Ms. Heidenreich are taken from two of the best four of the papers in Professor Jarman's class. The next issue of WATER LOG will feature the other two of these four excellent research papers.

Small Business Hazardous Substance Reporting — A Guide to Understanding the Emergency Planning and Community Right-to-Know Act of 1986

by Scott LeFebvre

INTRODUCTION

In December, 1984, a Union Carbide insecticide plant in Bhopal, India accidentally released a highly toxic chemical, methyl isocyanate, into the atmosphere. The chemical formed a gaseous cloud which drifted into the surrounding community, killing over 2,000 people and injuring over 200,000 more. This accident, arguably the worst in industrial history, caused an immediate uproar among citizens across the United States. Although the Bhopal disaster occurred on the other side of the world, citizens of this country began to wonder what would happen if the plant in their community had an accidental release of toxic chemicals. How would they know that toxic chemicals had been released? What were they supposed to do if toxic chemicals were released? How could they even find out if potentially harmful toxic substances were being used in their community? Citizens quickly discovered the answers to these questions were nebulous at best.

Recognizing the public's extreme concern regarding toxic substances after the Bhopal incident, the government instituted a program by which it would serve as an informational bridge between citizens and industry. This informational bridge began with individual communities enacting "community right-to-know" statutes. These statutes re-

quired businesses to report to the local government the use and release of toxic substances and provided for public access to these reports. Shortly after the emergence of these local statutes, the U.S. Congress began to work on a federal program that would ensure that citizens of every state would have access to information concerning the use and release of toxic substances in their community. The legislation was introduced by Henry Waxman (D)-California, as part of the Clean Air Act, and eventually was passed as the Emergency Planning and Community Right-to-Know Act (EPCRA), also known as Title III of the Superfund Amendments and Reauthorization Act (SARA) of 1986. *Note: EPCRA section numbers which this article refers to are taken from Public Law No. 99-499, Title III (1986).*

PURPOSE OF EPCRA

Congress enacted the Emergency Planning and Community Right-to-Know Act (EPCRA) for the dual purpose of informing the public of the use and release of hazardous substances and outlining procedures for handling the accidental release of hazardous substances. First, EPCRA is designed to provide the public with access to information regarding the use and release of hazardous substances in their area. Access to this information is accomplished by bridging the informational gap between industry and citizens. The idea is that increased communications between business and the community will strengthen the relationship between the two groups by giving citizens the information necessary to make decisions about where they want to live and how to protect themselves and the environment from hazardous substances.

The second purpose of EPCRA is to establish comprehensive plans for reacting to accidental release of hazardous substances. After the Bhopal incident, both the public and the government realized that many of the people killed by the chemical released at Bhopal might still be alive if an emergency plan had existed. The emergency planning section of EPCRA was designed to help save lives during an accidental release of a hazardous substance by providing instructions to both the individual releasing the hazardous substance and the community which may be affected by the release.

APPLICABILITY OF EPCRA

When Congress passes a bill such as EPCRA, many people think that the law only applies to large industries which use or release vast amounts of hazardous substances. In fact, EPCRA applies to any business that uses or releases a certain amount of a hazardous substance. There are two

factors which determine whether a business must report its use or release of hazardous substances: (1) use or release of a hazardous substance listed by the United States Environmental Protection Agency (EPA); and, (2) use or release of the listed substance in an amount in excess of the Threshold Planning Quantity (TPQ) for that substance.

Determining Whether A Business Uses or Releases Substances Subject to EPCRA Reporting Requirements

There are generally two methods of determining if a business uses or releases substances subject to EPCRA reporting requirements. The first method is to review the SARA Title III *List of Lists* published by EPA. The *List of Lists* is a consolidation of substances and chemicals which are covered under EPCRA, including chemicals which EPA has determined are *Extremely Hazardous Substances* (EHS). If a business uses any of the chemicals or substances found in the *List of Lists*, the business may be required to report the use or release of these substances. For a copy of EPA's *List of Lists* contact the Mississippi Emergency Management Agency (MEMA) or EPA.

The second method of determining if a business uses hazardous substances subject to EPCRA is to determine whether the Occupational Safety and Health Administration (OSHA) requires the business to maintain and submit a Material Safety Data Sheet (MSDS) for any substance which the business uses or releases. Each substance for which the business is required to keep an MSDS is subject to the reporting requirements of EPCRA.

If none of the substances a business uses requires an MSDS or is on EPA's *List of Lists*, then the business is not subject to EPCRA. However, if at any time the business begins to use a substance which requires an MSDS or is on the *List of Lists*, that business will immediately be subject to EPCRA's reporting requirements. It is important to check with EPA or the Mississippi Emergency Management Agency at least once each year to determine whether EPA has added new substances to the list.

There are several types of hazardous substances which a business does not have to report, even if it is required by OSHA to keep an MSDS for the substance or the substance appears on the Extremely Hazardous Substance (EHS) List contained in EPA's *List of Lists*: (1) any food, additive, drug, or cosmetic regulated by the Food and Drug Administration; (2) any substance which is present as a solid in a manufactured item if exposure to the substance does not occur during normal use of the item; (3) any substance used for personal, family, or household purposes; (4) any sub-

stances used in research laboratories or medical facilities if used under the direct supervision of a technically qualified individual.

In addition to the above exemptions, the EPCRA reporting requirements do not apply to the transportation or storage incident to transportation of hazardous substances, except upon the accidental release of an extremely hazardous substance during transportation or storage incident to transportation.

Determining Whether A Small Business Uses or Releases A Reportable Quantity of Hazardous Substances

Once it is determined that a business uses or releases hazardous substances which must be reported under EPCRA, the next step is to determine if the hazardous substances that business uses or releases are present in a reportable quantity. EPCRA requires a business to report hazardous substances in three situations: (1) storage of hazardous substances as inventory or for use in normal business operations in excess of 10,000 pounds (500 pounds if the substance is on the EHS list); (2) use of 10,000 pounds of a hazardous substance in normal business operations in a single year, or manufacturing or processing of 25,000 pounds of a hazardous substance in a single year; and (3) accidental releases of extremely hazardous substances which require reporting under section 103(a) of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA).

There is an exemption to EPCRA's reporting requirements for accidental releases. Businesses do not have to report any release which does not result in exposure to persons outside of the business facility. But note that the release of an extremely hazardous substance into the air will not qualify for this exemption because it is impossible to contain the substance within the business facility.

EPCRA EMERGENCY PLANNING AND NOTIFICATION PROVISIONS

Once it is determined that a business uses or releases a reportable quantity of a hazardous substance, the next step is to determine what to report, how to report, and who to report to.

Emergency Planning Structure (EPCRA Section 301)

Since the response to accidental releases of hazardous substances will be quickest in the community where the release occurs, Congress designed EPCRA to place the burden of preparing for accidental releases on individual states and communities. To begin the process of preparing for accidental releases of hazardous substances, EPCRA required each state to create a State Emergency Response Commission (SERC). The initial responsibility of each SERC was to designate emergency planning districts and appoint Local Emergency Planning Committees (LEPC). In turn, each LEPC was responsible for creating an emergency response plan for its district. The plan itself must contain detailed information to be used in the event of an accidental release, such as what businesses and facilities are covered by the plan, how to determine if a release has occurred, what procedures emergency personnel should follow during a release, and how to notify and evacuate the public. The role of the federal government in emergency planning was to ensure that local emergency plans were instituted and to provide uniformity in reporting accidental releases.

Planning Notification Requirements (EPCRA Sections 302 and 303)

If an extremely hazardous substance is currently present at a business facility in excess of the TPQ for that substance, the business must immediately notify the LEPC for the appropriate district that the business is subject to EPCRA's emergency planning requirements. The emergency planning requirements include designating a representative from the business to be the facility emergency coordinator, informing the LEPC whenever a relevant change occurs or is expected to occur at the business, and providing the LEPC, on request, with information necessary for developing the local emergency plan. Even if a business is not subject to EPCRA's emergency planning requirements now, it may be in the future. If at any time a hazardous substance is present at a business facility in excess of the TPQ for that substance, or if EPA adds a substance to the EHS List which is present at a business in excess of the established TPQ, the business must notify the LEPC within 60 days and provide the information outlined above.

Emergency Notification (EPCRA Section 304)

In order to respond to an accidental release in a manner which will minimize the risk of injury to the public and the environment, EPCRA contains stringent requirements for reporting accidental releases of extremely hazardous substances. If a business accidentally releases a reportable quantity of an extremely hazardous substance, it must immediately report the release to both the LEPC and the SERC. (Note: The Mississippi SERC interprets "immediately" as being within one hour of the release). If the release occurs while transporting the substance, or while the substance is being stored incident to transport, calling 911 or the operator will satisfy this requirement. Information the reporting business must give to the LEPC and SERC includes a description of the type and quantity of the substance released, known or anticipated acute and chronic health risks, known medical advice for treating persons exposed to the substance, and precautions in responding to the release. It is important that the business notify the LEPC and SERC as soon as possible after the release so they can take the appropriate response actions. Furthermore, LEPC and SERC must receive an emergency follow-up notice as soon as possible, including an update on initial information and an outline of actions taken to respond to and contain the release.

Hazardous Chemicals Storage Reporting (EPCRA Sections 311 and 312)

In addition to reporting accidental releases of extremely hazardous substances, EPCRA also requires reporting of the storage, use, or release of hazardous chemicals which occur as part of the normal operation of a business. If a business stores a reportable quantity of a hazardous chemical, there are two steps to take to fulfill EPCRA's hazardous chemicals reporting requirements: (1) submission of either an MSDS for each chemical or an aggregate list of all hazardous chemicals which the business stores in reportable quantities; and (2) submission of an emergency and hazardous chemical inventory form containing data on the hazardous chemicals the business stores each year.

Submission of Material Safety Data Sheets (MSDS) or Aggregate List of Hazardous Chemicals (EPCRA Section 311)

If a business is required under OSHA's Hazard Communication Standard to prepare or have available an MSDS for a hazardous chemical, it must submit either an MSDS for

each of these chemicals which the business stores in a reportable quantity or an aggregate list containing the identity and quantity of each such chemical to the LEPC, the SERC, and the local fire department. Submission of the aggregate list is the more efficient method of providing these agencies with the required information, and in Mississippi the SERC strongly suggests that businesses submit the aggregate list.

If a business submits the aggregate list of hazardous chemicals, it must categorize the chemicals according to health and physical hazards and include the identity and hazardous components of each chemical. Consult the United States Code at 29 U.S.C. sections 651 and following to determine the physical and health hazard categories for each chemical.

The deadline for submitting the initial MSDS or aggregate list is three months after the OSHA Hazard Communication Standard requires a business to prepare or have available an MSDS for a chemical the business stores. In addition, if a business discovers significant new information regarding a hazardous chemical for which it initially submitted an MSDS or included in the aggregate list, that business must submit a revised MSDS or aggregate list to the LEPC within three months of discovery. Except for revisions and additions, the submission of an MSDS or aggregate list is required only once.

Submission of Emergency and Hazardous Chemical Inventory Forms (EPCRA Section 312)

The second step in fulfilling EPCRA's reporting requirements for hazardous chemicals storage is to submit an emergency and hazardous chemical inventory form to the LEPC, the SERC, and the local fire department. Businesses may use one of two forms to fulfill this requirement, either the Tier I form or the Tier II Form.

Tier I Form

The Tier I Form is the basic requirement for reporting storage of hazardous chemicals. The LEPC and SERC will use the information businesses provide on the form to revise and improve state and local emergency response plans. The information which businesses must provide on the form includes the quantities of hazardous chemicals which a business stores annually and daily, and the general location of each hazardous chemical, categorized in the same manner as the aggregate list. The Tier I Form must be submitted annually by March 1, with the information a

business provides covering storage of hazardous chemicals for the preceding year. (Note: A business does not have to submit the Tier I Form if it submits the Tier II Form.)

Tier II Form

The Tier II Form is similar to the Tier I Form in that it requires much of the same information provided in the Tier I Form and must be submitted annually by March 1. However, the Tier II Form requires a business to provide more specific information regarding each hazardous chemical the business stores, including a description of how the business stores the chemical and whether the business wishes to withhold the location of the chemical from disclosure to the public. If a business submits the Tier I Form, it does not have to submit the Tier II Form unless the LEPC, the SERC, or the local fire department requests Tier II information. However, since the Tier II form is a work sheet for completing the Tier I form and must be submitted on request, EPA recommends, and the Mississippi SERC requires, that businesses submit the Tier II Form instead of the Tier I Form.

Toxic Chemicals Release Reporting (EPCRA Section 313)

EPCRA's final reporting requirement concerns toxic chemicals that a business releases incident to normal business operations. If a business employs 10 or more full-time employees and is in Standard Industrial Classification Codes 20 through 39, the business must submit a toxic chemical release form for each reportable substance it uses, manufactures, or processes each year in excess of the TPQ for that substance. (Note: EPA's *List of Lists* states which chemicals must be reported under section 313.)

Businesses should be aware that section 313 provides for EPA to add or delete chemicals from the list. EPA may add a chemical to the list if EPA determines that the chemical poses a substantial risk to human health or the environment. EPA may delete a chemical if evidence does not show that the chemical is significantly hazardous to human health or the environment. Any person may present such evidence and petition EPA to add or delete a chemical from the list, including the small business owner.

Toxic chemical release forms must be submitted no later than July 1 each year, with the data contained on the form covering use or release for the preceding year. Failure to submit these forms in a timely manner may result in civil and criminal sanctions.

EPCRA GENERAL PROVISIONS

In addition to specific hazardous substance reporting requirements, EPCRA contains two provisions which apply to all of the situations in which a business must report use or release of hazardous substances.

EPCRA's Relationship to Other Laws (EPCRA Section 321)

EPCRA section 321 defines EPCRA's interaction with state, local, and other federal laws, as well as EPCRA's effect on state and local MSDS requirements. Section 321 provides that EPCRA does not preempt any state or local law, except to the extent that a state or local law imposes MSDS requirements on business owners and operators. In the case of such requirements, the state or locality must require that the MSDS be identical in form and content to the OSHA MSDS. In addition to the OSHA MSDS, a state or local law may require a business to submit supplemental information by attaching additional sheets to the MSDS or by other appropriate means.

Trade Secrets (EPCRA Section 322)

EPCRA section 322 deals with how to handle reporting hazardous substance information which a business considers to be a trade secret. A business may withhold the specific chemical identity of hazardous substances by claiming that the information is a trade secret. A trade secret claim is only valid, however, if (1) the business has not disclosed the information to a third party; (2) the business is not required by any other state or federal law to disclose the information; (3) disclosing the information would result in substantial harm to the business; and (4) the chemical identity of the substance is not readily discoverable through reverse engineering.

EPCRA section 322 requires a business to provide two trade secret forms to the LEPC, SERC, and local fire department: (1) a "sanitized" form which does not contain the information the business is claiming as a trade secret and (2) an "unsanitized" form which does contain the information the business claims as a trade secret. It is important to fulfill all of the requirements for each trade secret claim a business has by completely and accurately filling out and submitting the trade secret forms. If a business fails to meet these requirements, EPA may deny a trade secret claim or impose a \$25,000 fine on your business, or both.

Any person may petition EPA for disclosure of the information a business claims as a trade secret. EPA will

review the trade secret claim and, if EPA finds that the claim is valid, EPA will not disclose the information. If, however, EPA finds that the claim is not sufficiently substantiated, EPA will inform the business that it intends to disclose the information, at which time the business may appeal the decision to EPA. If EPA does not reverse its decision, the business may then petition the court to review the decision.

The final aspect of EPCRA's trade secret provisions is that there are situations in which a business must disclose trade secret chemical information which a business would otherwise be entitled to withhold. First, if a business accidentally releases a substance which the business is required to report under EPCRA section 304, the business must disclose chemical information which it claims as a trade secret to ensure that authorities responding to the release may take appropriate actions. Second, if a doctor or other health care professional requests chemical information for the purpose of (1) treating persons exposed to the substance or (2) conducting exposure studies and taking preventive measures, a business must disclose the information, even if it is covered by a valid trade secret claim. If the situation is an emergency, the business must disclose such information immediately. If there is no emergency, the business may require the doctor or other health care professional to submit a written statement of need and a confidentiality statement before disclosing the information.

Enforcement of EPCRA Reporting Requirements (EPCRA Sections 325 and 326)

When Congress drafted EPCRA, it realized that the traditional civil penalties were not sufficient to ensure that businesses report their use and/or release of hazardous substances. Even fines as large as \$25,000 per day may not be enough of a threat to cause some businesses to comply with EPCRA, since many of the larger companies make much more in profit each day than the fine for not reporting. To deal with this problem, Congress included in EPCRA, in addition to fines and civil actions, provisions for criminal penalties if a business fails to comply with reporting requirements.

Civil Sanctions (EPCRA Section 325)

EPCRA provides for severe monetary fines for each violation of an EPCRA provision. These fines may be as much as \$25,000 for each violation or for each day in which a business is in violation of an EPCRA provision. As a small

business owner, it is important to be aware of these fines and comply with EPCRA's provisions, since continued and repeated violations could cause the financial ruin of a business.

Once EPA assesses a fine on a business for violating an EPCRA provision, the business may petition the federal district court to review the assessment within thirty days. If the business does not file an appeal within thirty days and does not pay the assessed fine, the U.S. Attorney General may commence a civil action against the business on behalf of EPA to collect the fine.

Criminal Sanctions (EPCRA Section 325)

In addition to the fines outlined above, failure to comply with EPCRA provisions may additionally subject the business owner or operator to criminal sanctions. Criminal sanctions apply to the business owner who violates the provisions for reporting accidental releases and any person who discloses trade secret information which is entitled to protection under EPCRA section 322. Criminal sanctions include fines of up to \$25,000 for first offenses and \$50,000 for subsequent offenses, and may include imprisonment of up to 2 years.

Civil Actions (EPCRA Section 326)

EPCRA's final enforcement provision, the commencement of civil actions against violators, is quickly becoming a powerful tool in enforcing environmental laws. In particular, the advent of the citizen suit threatens violators, and even EPA itself with action by the public to enforce EPCRA's provisions. Under section 326 of EPCRA, any person may commence a civil suit against the owner or operator of a business for violating certain EPCRA provisions.

Public Availability of Information (EPCRA Section 324)

Since one of EPCRA's primary purposes is to provide the public with information regarding the use and release of hazardous substances in their area, the information a business provides to the LEPC and SERC will be available to the public through these agencies. Any member of the public may request from their LEPC or SERC, during normal working hours, copies of the local emergency response plan and any of the forms which a business has submitted in compliance with EPCRA provisions. The only information which is not available to the public is the

specific chemical identity of a substance protected by a valid trade secret claim under EPCRA section 322 and the location of any specific chemical which a business has requested be withheld from the public on the Tier II Form.

RESPONDING TO EPCRA

Small business owners should not view the Emergency Planning and Community Right-to-Know Act as simply another administrative burden imposed by the government which accomplishes nothing more than creating paperwork and tying up a company's resources. After the Bhopal disaster, public confidence in how businesses manage hazardous substances was shaken. For the most part, the relationship between business and the general public has become a relationship based on confrontation. This kind of relationship hurts both business and the public. Businesses need the public to purchase their products and services; the public needs business to provide needed and desired products and services, as well as jobs. EPCRA's goal is to renew the relationship between business and the public as one of cooperation instead of confrontation. Instead of seeing EPCRA as an impediment to business, small business owners should view it as an opportunity to interact with the citizens in their communities to achieve a goal which is just as important to business owners as it is to the general public: creating an environment which is safe for everyone. □

For further information regarding the Emergency Planning and Community Right-to-Know Act, or to obtain copies of EPCRA reporting forms, contact the Mississippi SERC or the EPA at the following addresses:

Mississippi Emergency Management Agency
Mississippi Emergency Response Commission
P.O. Box 4501, Fondren Station
Jackson, Mississippi 39296
Phone: (601) 352-9100

Emergency Planning and Community Right-to-Know
U.S. Environmental Protection Agency OS-120
401 M Street, S.W.
Washington, D.C. 20460
Hotline: (800) 535-0202

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The views expressed in this article are those of the author and do not necessarily represent the view of the editors or the Mississippi-Alabama Sea Grant Consortium.

Environmental Racism — Observations in Mississippi

by D. Lynn Heidenreich

INTRODUCTION

"Environmental Racism" as a concept is recognized by experts in grassroot organizations, mainstream environmental organizations, in law, and politics. Differences of opinion exists as to the meaning of the phrase as well as to the proper terminology. Phrases such as environmental inequity and environmental injustice are also used. Regardless of the term used, it generally denotes disparate impact of polluting activities such as siting of sanitary landfills, incinerators, and hazardous waste sites on communities of color. The biggest difference of opinion regarding the meaning of environmental racism is whether the phrase encompasses intent to discriminate in addition to disparate impact. Some social scientists have stated that once you recognize the disparate impact and choose not to take corrective action, you are exercising a form of passive intentional discrimination.

GENERAL BACKGROUND

The concept of environmental racism evolved over a relatively brief period of time. The focus and energy, however, that was required to bring attention to the impact of polluting activities on minorities was not much different in nature than that associated with the civil rights movement of the sixties. The protests that took place in Warren County, North Carolina in 1982 illustrate the point. Those protests were in response to the proposed siting of a PCB landfill in a predominately black neighborhood. The protests resulted in the arrest of about 500 individuals. Subsequent to and as a result of the Warren County incident, a General Accounting Office study (GAO) was conducted. The GAO study was one of two studies credited for effecting a heightened awareness of environmental racism. The second study was the Toxic Waste and Race in the United States study.

The GAO study was descriptive, not quantitative, but it is still important for two reasons. First, it was the first governmental response to national concerns related to environmental racism. Second, the results laid the ground work for subsequent studies. The GAO study was conducted over a four month period between December 1982 and April 1983. Data was collected in Environmental Protection

Agency (EPA) Region IV. Region IV includes eight states: Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. Although there were several objectives to the study, the one that received the most attention was pertinent to the collection of social economic and siting data. Four hazardous waste landfills were identified in Region IV. The authors concluded that the majority of the population in the immediate area surrounding three of the four hazardous waste sites were African-American. The mean income of the minority population in the immediate area surrounding all four hazardous waste sites was reported to be lower than for all other races combined. The GAO study represents a turning point in acknowledgment of disparate impact on minorities.

The Toxic Waste and Race in the United States Study was conducted by The Commission for Racial Justice, United Church of Christ. *Commission for Racial Justice, United Church of Christ, Toxic Waste and Race in the United States, a National Report on the Racial and Socio-Economic Characteristics of Communities with Hazardous Waste Sites, 1987.* This was a quantitative study that found statistically significant disparate impact of toxic waste siting on communities of color. The investigators evaluated the relationship between socio-economic variables and siting of commercial waste sites and uncontrolled hazardous waste sites. Comparisons were made specific to minority distribution in the communities, mean household income, mean value of owner occupied homes, quantity of uncontrolled hazardous waste sites per 1000 persons, and pounds of hazardous wastes per person.

The findings were interesting. The United States was divided into zip code areas. The zip codes groups having the largest number of facilities also had the highest distribution of minority population. In addition, the groups having one facility had minority distributions that were twice as high as groups without a facility, and in groups having one of the five largest facilities in the nation, minority distribution was three times that of the groups without one of the five largest facilities in their area.

The mean income and mean value of owner occupied homes were less discriminating variables than racial distribution as indicators of siting, but they were considered significant. In addition, the authors reported that more than half the residents in the United States live in communities having one or more uncontrolled hazardous waste sites, and three out of every five black or Hispanic Americans live in areas where these facilities are located.

MISSISSIPPI BACKGROUND

There are two hazardous waste facilities within twenty miles of Noxubee County, Mississippi. Emelle, Alabama's Chemical Waste Management is located fifteen miles outside the Noxubee line and Holnam Inc. (a cement kiln) is located five miles away in the adjoining county. Although two Resource and Conservation and Recovery Act (RCRA)¹ permit applications were filed in the last year for Noxubee County, Hughes Environmental Systems/Federated Technologies and United States Pollution Control Incorporated (U.S.P.C.I.) of Mississippi, one of the permits has been officially withdrawn and the second is pending. A group of Noxubee County citizens, African-Americans for Environmental Justice (AAEJ), opposed the siting of the proposed commercial hazardous waste facilities. They retained counsel who requested the United States Commission on Civil Rights to investigate the permitting policies in Mississippi and to consider the potential impact on minority residents of Noxubee County. Although the matter has not yet been resolved, a court order currently prohibits permitting of any commercial hazardous waste facility in the state.

The following data was collected as part of a study conducted between June 15th, 1994 and July 19th, 1994. This author conducted telephone interviews with numerous EPA and Department of Environmental Control staff, a University of Mississippi geologist, the Director of the Environmental Justice Project, the counsel for AAEJ, and the staff at the Mississippi Automated Information Services (MARIS). The telephone interviews provided general information on where and how to locate lists of all RCRA permitted facilities and active and proposed Superfund sites in the State of Mississippi.

The locations of RCRA permitted facilities and the Superfund sites were correlated with 1990 Census Data. The percent of families living below poverty level and minority population distribution were the only Census Data variables correlated with location of facilities. The 1990 Census Data is organized and provided by county, supervisor district, and in some instances by select regions within each district. To correlate the RCRA permitted and Superfund facilities with the census data, it was necessary to identify the district in which each facility was located. District locations for RCRA permitted facilities and Superfund sites were obtained by contacting staff in the circuit clerks' office for each county and providing them with the address for the facility of interest.

RCRA PERMITTED SITES

Top Generators and Impact

Mississippi has over seven hundred RCRA permitted facilities. Each is required by state law to report annually the amount of hazardous waste generated in the proceeding year. The top five generators in Mississippi by volume are: (1) Chevron, located in Pascagoula County; (2) DuPont, located in Harrison County; (3) Morton International, located in Jackson County; and 5) United Technologies, located in Columbus County. These generators produce 98 percent of all the toxic waste produced in the state.

Correlations existed between the minority population in the area immediately adjacent to the location of the top generators of hazardous waste and the minority distribution in the surrounding county and districts. The second variable correlated between site and surrounding district and counties was the percent of families living below poverty level. A positive correlation was found for both variables correlated at two of the five top generator sites.

Land Disposal Facilities and Impact

A RCRA permitted land disposal facility is a facility that happens to store its own hazardous waste on the same grounds where it is produced. These facilities do not store hazardous waste for other generators. This study is limited to a review of land disposal facilities since there aren't any commercial hazardous facilities in the state of Mississippi. Of the over seven hundred RCRA permitted facilities in the state, only twenty-one are land disposal facilities.

Correlations were made between percent minority population and percent of families living below poverty income at the land disposal sites and compared to the same variables in the surrounding districts and counties. In fourteen of the twenty-one sites the minority pollution was greater in the immediate area than in the surrounding districts or counties. In a different fourteen of twenty-one sites, the percentage of families living in poverty was greater than in the surrounding districts or counties. In sixteen of twenty-one sites, at least one of the two variables considered was higher in the immediate area than in surrounding districts or counties.

Pending Permits and Impact

As noted previously, three groups in the past year have completed RCRA permit applications. Two of the sites proposed were in Noxubee County and one was in Jackson county. One of the permit applications in Noxubee County has been officially withdrawn. The second application is

pending for two reasons. First, a court order currently in place prohibits DEQ from furnishing any permits for commercial hazardous waste siting. Second, the applicant, U.S.P.C.I., has expressed publicly an interest in divesting itself from the hazardous waste industry. Staff at DEQ state they anticipate that U.S.P.C.I. will withdraw its permit in the near future. It is important to note that Noxubee County has a 68.8 percent minority distribution and 34.4 percent of the families are living below poverty level. Jackson County has a 21 percent minority distribution with a 34.4 percent of families living below poverty. The state has a minority distribution of 37 percent with 20.2 percent living below poverty. It is likely that the grass roots organizations in Mississippi, like the *Environmental Justice Project* in Jackson, as well as activists such as the *AAEJ* have a continuing impact on the evaluative process utilized by applicants in making the decision to site or not to site in Noxubee County.

SUPERFUND SITES

Active Sites and Impact

There are two active Superfund sites in the state of Mississippi. Staff at the DEQ state that one site, located in Marion County, is 90 percent clean with some remaining sediments in a pond. The second site, located in Rankin County, has been completed but it is still listed as a Superfund site with an observation and follow-up phase in process. In comparing the two sites, differences are noted with respect to both percent minority distribution and percent of families living below poverty in the immediately adjacent areas. In Rankin County, there are positive correlations to both variables in the immediately adjacent area. In Harrison County the correlations are negative.

Proposed Sites and Impact

There are two additional sites in Mississippi that are now listed on the Comprehensive Environmental Responsibility, Compensation, and Liability Information System (CERCLIS), which is a computerized list of proposed "Superfund" sites.² These sites are expected to be placed on the Superfund list in the near future: (1) Chemfax, Inc., Gulfport, Mississippi (Harrison County); and (2) Potter Company, Wesson, Mississippi (Coppiah County). There is a negative correlation between the variables studied and the area immediately adjacent to Chemfax Inc., and a positive correlation between the Potter Company and the variables studied.

GEOLOGICAL CONSIDERATIONS

The Mississippi Hazardous Waste Facility Siting Act of 1990, *Ms. St. 17-18-11*, created the Hazardous Waste Siting Committee. That committee was assigned the job of developing criteria for the selection of possible sites for three Hazardous Waste Facilities. The original committee had members from various professions and was chaired by Dr. Nolan Aughenbaugh of the University of Mississippi, now acting Chairman of the Department of Geological Engineering. The committee produced guidelines for siting of commercial hazardous waste facilities that served as the basis for the states' subsequent legislative enactments.

The criteria are exclusionary. If a single criteria is not met, then the site proposed is excluded from future consideration. One of the criteria that must be met before a site can be considered is that the facility be built on a chalk or clay base. The committee mapped the area that would support such a facility, and in the process ruled out most of the state. It is interesting to note that although the state requires that the commercial facility be above a clay or chalk base, only six of the twenty-one land disposal sites in the state happen to be sitting over clay or chalk base. Since this author did not have longitudinal and latitudinal locations for the proposed facilities, it is not known if the six sites that are located within counties having clay or chalk base are actually over the clay or chalk.

CONCLUSION

Over 98 percent of the states' hazardous waste is produced by five of the twenty-one RCRA permitted facilities currently storing hazardous waste on their property. The majority of the twenty-one facilities, however, are located in an area having a greater minority population than white population and with a higher percentage of those families living with below poverty level income.

The active Superfund sites have either a higher minority than white population in the area immediately adjacent to the facility, or greater numbers of families living below poverty level income. One of the proposed sites has a positive correlation to both variables studied. In addition, only six of the RCRA permitted hazardous waste facilities are located in counties with the geological support required by state law to support commercial hazardous waste facilities.

Unfortunately, these observations don't establish any statistically significant conclusions. They simply raise more questions. Since most of the hazardous waste is generated in five locations, do the residents in those communities suffer a greater impact than the remaining sixteen communities in which less than 4 percent of the hazardous waste in

the state is produced? Is it just as important to consider the type of toxins a community is exposed to as it is the amount? What impact does exposure to smaller amounts of toxins have on a community when the geological base is not there to contain the wastes and it disseminates into the community?

To consider just how ambiguous the findings are, look at Noxubee County, Mississippi. That county is involved in a controversial and heated debate over whether it will be the new site for a proposed commercial hazardous waste facility. Noxubee County has one RCRA permitted hazardous waste facility now that is not one of the five top generators. The residents are, however, already in close proximity to the largest commercial hazardous waste facilities in the nation and they have one of the largest minority populations in the state. Just when you decide that Noxubee is being disproportionately burdened, consider the fact that Noxubee is one of the few areas in the state that is located over an area that is considered geologically sound enough to place hazardous waste. If it is true that Mississippi has one of the strictest siting criteria for hazardous waste facilities in the nation, which has been alleged by some, then is selection of Noxubee County as the site for a commercial hazardous waste facility a form of environmental racism or just a sound scientific selection? In actuality, it might be safer to be in Noxubee where the geology supports containment of the waste than in the fifteen communities having hazardous waste stored over ground that does not support a containment.

This authors' conclusion is that you can't look at statistics in a vacuum. When people are endangered, even in small numbers and regardless of race or income, the impact is unjust. Attempts to find a solution must be geared toward protecting all citizens from unnecessary exposure to harmful substances. Grass roots organizations have facilitated a policing of motives for siting and play a critical role in facilitating a heightened awareness to disparate impact issues. Until long term solutions are discovered that will eliminate exposure for all individuals, selection criteria for siting should be based on scientific criteria with the goal of minimizing health risks to all citizens. The current state of affairs does not suggest that there isn't a solution to the problem of disparate impact, just that we haven't found it. □

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The views expressed in this article are those of the author and do not necessarily represent the view of the editors or the Mississippi-Alabama Sea Grant Consortium.

REFERENCES

1. *Resource Conservation and Recovery Act (RCRA)*, 42 U.S.C. section 7003 (1988). Congress enacted this statute to govern the treatment, storage, and disposal of hazardous wastes. It also provides for permanent injunctions when there is a potential danger for public health or the environment and civil fines for damages. In addition, RCRA provides permits for siting.

2. Superfund refers to the *Comprehensive Environmental Compensation, and Liability Act of 1980 as amended*, 42 U.S.C. Sections 960-9675 ("CERCLA"). "The Superfund" refers to the *Hazardous Substance Superfund*, 42 U.S.C. Section 9611.

Book Review: Islands at the Edge of Time — *A Journey to America's Barrier Islands* by Gunnar Hansen, Island Press, \$22.50, 240p.

by William C. Harrison

INTRODUCTION

Would it scare you to discover that America's coastline is sinking rapidly into the sea taking condominiums, golf courses and wetlands along with it? I never dreamed of how fast our beaches were eroding, and one of the major causes of this disintegration is the damaging of the barrier islands along the United States shore.

In *Islands at the Edge of Time*, Gunnar Hansen gives us an enlightening account of the brutality, vitality, and beauty of America's barrier islands. He looks at why these islands are such an important link in the precious balance of our ecosystem. His story of the journey around America's coastline, born while observing the barrier islands of the east coast from a plane, captures the role the islands play in America's geography, geology and culture.

Beginning on Boca Chica in Southern Texas, he begins a trek that takes him around the coastal United States to the Outer Banks of North Carolina. *Islands at the Edge of Time* is an examination of the life along the shore akin to Thoreau's *A Week on the Concord and Merrimack Rivers*. Like Thoreau, Hansen delves deeper than an overnight stay or a seashell hunt along the beach. He looks at the people that live on the island as well as the geological forces that maintain it.

Life is constantly in flux, and Hansen sees the islands as a representation of life in miniature--ever changing and responding to forces around it. From the creation of an island to its demise, Hansen walks the reader through the fascinating (and often unknown) processes that form the barrier islands. Hansen also brings out the beauty of the islands that casual travelers usually miss. Where most people see sand and sea oats, Gunnar points out the array of plant and animal life that abounds on many of the islands.

But the book is not just about the islands themselves. Hansen wants us to see the culture of the island, the people that live there year round. Gunnar walks in the shoes of the natives, seeing things through their eyes. He sympathizes with the islanders as they experience life on the edge. From hurricane victims in Texas to the impoverished Gullah

culture being replaced by golf courses in South Carolina, Hansen takes the time to get to know the people. Islanders are a unique breed and have a culture all their own. Known among themselves as BOIs (Born on the Islands), they learn to ride out Nature's awesome forces as well as enjoy the wondrous beauty that rewards those who remain.

One notable islander Hansen turns his attention to is Mississippian Walter Anderson. Always working on his watercolor portrayals of the gulf coast wildlife, Anderson regularly spent weeks at a time on Horn Island off the Mississippi coast. His family talked about the man they knew: "Everybody sort of picks out their island . . . and you don't necessarily mean a physical island . . . you mean a place where it can come together and you can be able to understand." "People can create an island anywhere they want to . . . but it's easier to do on an island that has those definitive borders." Walter Anderson seems to exemplify the indomitable and often isolated spirit of the islanders. They fully appreciate the precarious balance upon which depends their very survival and they have learned to trust in themselves.

Hansen also examines the role of Nature along the sea and her relation to mankind. He asks the question "...do we tough it out and try to control Nature, or do we back off and admit we are overpowered?" Islanders seem to take the force of nature in stride, as something to deal with. Hurricanes are a natural and regular occurrence along the shore (though Hansen points out the Corps of Engineers calls hurricanes "aberrations, something they cannot plan for in their engineering projects."). How the people react to these incredible forces of nature is a revelation of how the islands themselves react--they hope to last through the storm and then begin rebuilding.

One of the biggest problems facing barrier islands is the heavy human hand. Orrin Pilkey, a noted geologist, tells Hansen "The only proper human approach to these islands . . . is to leave them alone." Acts of man such as resort development and severely altering the features of the land just make the coastal erosion problems worse. We must save the islands, not develop them into oblivion. Hansen likens island development to some blob-shaped monster in a cheap horror film destroying nearly everything in its path (Hansen should know scary, as he played "Leatherface" in classic horror film *The Texas Chainsaw Massacre*). It is this terror that is breathing down our necks today.

Hansen pleads the cause of the barrier islands to all who will listen. He argues that the present policy of our country is not working and encourages America to think about what it is doing to the coast. Think about what the future will hold. Think about how alterations of the environment affect the land as well as the people who live there. It's a scary

thought, isn't it?

Although the future might appear bleak, we don't have to throw up our collective hands in defeat. There are several ways to slow the sea's inward march. Carefully planned beach replenishment can help if the contour of the land is duplicated. Strategies such as marsh management and sediment diversion can also provide relief. One study concluded that a diversion of only 10 percent of the Mississippi river's sediment could maintain existing Louisiana wetlands. This step would at least make up for some of the damage the levying of the river caused. Even if helping the coast is not cost effective, the impact on the land and the people has to be taken into consideration. You cannot always put a dollar figure on these things. As Robert Jones stated in *Islands*, "Just take one stealth bomber not constructed and save coastal Louisiana. That's what it comes down to."

That is what this book is about. In America today, it comes down to a placement of priorities. *Islands at the Edge of Time* is a call to arms for all who care about where our environment is headed as well as a chiding to those who have ravished the islands for a quick buck or stand by and do nothing as the coast fades away. If we don't change our policy soon there will be little left of one of our nation's most beautiful natural resources: America's barrier islands. □

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