

A Legal Professional Association

Sowash, Carson & Shostak

39 N. College Street, P.O. Box 2629
Athens, Ohio 45701
Phone 614/594-8388
Fax 614/593-6490

Jonathan Sowash
Herman A. Carson
Robert J. Shostak*
Beth B. Ferrier
Jeffrey A. Wish

Of Counsel:
David Baer
Eric B. Fenstermaker

July 6, 1992

ATTORNEY-CLIENT PRIVILEGE
CONFIDENTIAL

Bruce Cornett
Greene Environmental Coalition
112 Xenia Avenue
Yellow Springs, Ohio 45387

Dear Bruce:

First, pursuant to our Wednesday, June 3, 1992, telephone conversation, we are writing to provide you a brief explanation of a possible lawsuit that the Greene **Environmental** Coalition could file regarding Southdown, **Inc.'s** failure to have a permit for the burning of hazardous waste fuel in its cement kiln. Second, we will also explain the significance of the Hazardous Waste **Facility** Board's (HWFB) denial of **Southdown's Motion in Limine** as it relates to the Coalition's proposed lawsuit. Please **keep this letter confidential** as it is attorney work product and a privileged **communication**.

A. **Southdown's Lack of a Permit for the Kiln**

Ohio law requires any person who stores, treats, or disposes of hazardous waste to obtain a hazardous waste facility installation and operation permit. The HWFB approves or disapproves applications for these permits. Southdown, Inc., is currently seeking the HWFB's approval of its application for a hazardous waste facility installation and operation permit covering only the storage of hazardous waste at its Greene County, Ohio, facility.

Since Southdown's view is that the HWFB does not have -jurisdiction to approve or disapprove the operation of its hazardous waste burning cement kiln, Southdown's permit application only seeks permission to store hazardous waste. The permit application does not seek permission to burn hazardous waste in Southdown's cement kiln.

9-4-92
approved for
reproduction
B.C.

Our view is that Ohio law requires Southdown to obtain approval from the HWFB in order to burn hazardous waste in its cement kiln. Our argument arises from the definition of a "hazardous waste facility." Chapter 3734 of the Ohio Revised Code requires any person who proposes to establish or operate a hazardous waste facility to obtain a hazardous waste facility installation and operation permit from the Ohio HWFB. If Southdown's hazardous waste burning cement kiln is a "hazardous waste facility," then Southdown must obtain permission from the HWFB to operate its hazardous waste burning cement kiln. R.C. 3734.01(N) defines the word "facility" as a place used for the ". . .storage, treatment, or disposal of hazardous waste."

Is Southdown "treating" hazardous waste by burning it in the cement kiln? R.C. 3734.01(K) defines the word "treat" and "treatment" as follows:

"Treat" or "treatment," when used in connection with hazardous waste, means any method, technique, or process designed to . . .recover energy or material resources from the waste. (Emphasis added.)

Since Southdown burns hazardous fuels to recover energy from the hazardous waste, it follows that Southdown is treating hazardous waste at its plant and, therefore, must have a hazardous waste facility installation and operation permit.

It is interesting to note that Ohio's definition of "treatment" did not always include energy recovery. In 1984, the General Assembly adopted House Bill 506 which was sponsored by State Senator Hartley whose district included the Greene County area. House Bill 506 amended the definition of "treatment" to specifically include energy recovery, thus the intent of the General Assembly to fully regulate energy recovery from hazardous waste as a form of treatment seems clear.

B. The HWFB's Order Denying Southdown's Motion in Limine

On May 26, 1992, Southdown filed a Motion in Limine with the HWFB attempting to exclude all evidence at the hearing relating to the burning of hazardous waste in its cement kiln. The Coalition helped persuade the Board to deny Southdown's motion. The Coalition argued that since the kiln is integrally related to the storage of hazardous waste, the Board should not approve or disapprove Southdown's application for a permit covering the storage of hazardous waste without, to some degree, considering the hazardous waste burning cement kiln. However, the Board will only be looking at the hazardous waste burning cement kiln insofar as it relates to and is relevant to the storage aspect of Southdown's facility. The Board will not be approving or

APPENDIX I:

Cement and Lightweight Aggregate Kilns Burning or Planning to Burn Hazardous Waste

<u>Location</u>	<u>Company</u>
AL Demopolis	Lafarge (General Portland Cement) *
AL Gadsden	M & M Chemical Co. (Lime Kilns)
AL Jacksonville	Solite Corp. (Aggregate Kiln)
AL Ragland	National Cement •
AZ Rillito	Cal Mat (future)
AR Foreman	Ash Grove Cement
CA Colton	Cal Mat (future)
CA Lebec	National Cement •
CA Redding	Calaveras
CA Oro Grande	Riverside Cement/Gifford Hill
CO Lyons	Southbound Inc. (future)
FL Brooksville	Southbound Inc. [future)
FL Green Cove	Solite/Oldover (Aggregate kiln)
FL Miami	Rinker Cement *
IL Ogle&y	Lone Star Cement
IN Greencastle	Lone Star Cement •
IN Logansport	Coplay Cement •
KS Chanute	Ash Grove Cement •
KS Fredonia	Lafarge (Gen'l Portland) •
KS Independence	Heartland
KY Brooks	Solite/Oldover (Aggregate kiln)
KY Huberts	Solite/Oldover (Aggregate kiln)
KY Louisville	Southbound Inc. (future)
LA Amelia	Marine Shale Processors
MD Frederick	Coplay Cement (future)
MD Union Bridge	Lehigh Cement *
ME Thomaston	Dragon Products *

MI Alpena
MI **Detroit**
MI **Dundee**

MS **Artesia**

MO **Clarksville**
MO **Festus**
MO Hannibal

NB Louisville

NC Albermarle
NC Norwood

NY **Cementon**
NY Cohoes
NY **Ravena**

OH **Fairborn**✱
OH Helena
OH **Paulding**

OK Tulsa

OR Durkee

PA Bath
PA Cabot
PA Wampum
PA York

Puerto Rico
Puerto Rico

SC Harleyville
SC Holly Hill

TN Knoxville

TX Balcones
TX Los Robles
TX Midlothlan
TX Midlothian
TX Midlothian
TX New **Braunfels**
TX Waco

Lafarge (Gen'l Portland) *
St. Mary's Cement (future)
Dundee Cement (future)

Texas Industries

Dundee Cement •
River Cement •
Continental Cement *

Ash Grove Cement •

Solite Corp. (Aggregate **kiln**)
Oldover Corp. (Aggregate **kiln**)

Lehigh Cement (future)
Norlite (Aggregate kiln)
Blue Circle Cement

Southdown/Southwest Portland •
Ohio Lime (**future**)
Lafarge/Gen'l Portland *

Blue Circle Cement

Ash Grove Cement •

Keystone Cement •
Armstrong
Medusa Cement *
Lehigh Portland Cement

San Juan Cement
Safety Kleen Envirosystems

Giant Cement •
Dundee Cement (future)

Southbound. Inc. (future)

Lafarge/Gen'l Portland
Lafarge/Gen'l Portland
Boxcrow Cement (future)
Texas Industries •
Gifford Hill •
Lafarge Cement
Lehigh Cement

VA Arvonja	Solite/Oldover (Aggregate kiln)
VA Cascade	Solite/Oldover (Aggregate kiln)
VA Chesapeake	Solite/Oldover (Aggregate kiln)
VA Richmond	Solite/Oldover (Aggregate kiln)
VA Cloverdale	Lone Star Cement
WV Martinsburg	Capital Cement
WI Rockwood	Rockville Lime
WI Fond du Lac	Western Lime

Sources:

- Hazardous Waste Treatment Council. 1988.**
 EWK Associates, Washington DC. 1989: from Portland Cement Association 31 December 1987: **USEPA** cited by Washington **Analysis** Corporation 18 July 1988: and trade **information**.
- * **Confirmed** in Portland Cement Association, "U.S. Canadian Portland Cement Industry: Plant Information **Summary**," 12/31/1988.

All information generally reliable but may change with **industry/government/community** decisions.

APPENDIX II:

ENVIRONMENTAL AND TOXIC EFFECTS OF CHEMICALS EMITTED FROM KILNS BURNING HAZARDOUS WASTE

Human Health Effects

Human exposure to pollutants discharged from facilities burning hazardous wastes occur in a variety of ways:

- Inhalation
- Absorption through the skin
- Ingestion of contaminated dust and soils
- Ingestion of contaminated food products

Many of the pollutants known to be discharged from the burning of hazardous wastes -- including **dioxins**, other complex halocarbons, and **several** of the heavy metals -- bioaccumulate as they move through the food chain. **Significant** human exposure can result from the ingestion of fish, seafood, meats, and dairy **products** from areas contaminated with these bioaccumulative **toxics**, even though their concentrations in the environment are very low.

Reports of excess levels of **cancer**, birth defects, miscarriage, and lung disease are common among residents of neighborhoods adjacent to hazardous waste incinerators. Clusters of health effects which may be related to chemical exposure have been discovered near several **waste-burning kilns**. An outbreak of neuroblastoma -- a rare form of cancer -- near Marine Shale Processors in Amelia, Louisiana [WWL-TV 1988] and reports of pulmonary ailments near a waste-burning cement kiln in Lebec, California. [AV Press 1989) illustrate the local health impacts of such facilities.

Effects on Aquatic and Terrestrial Ecosystems

Deposition to **aquatic** ecosystems of **toxic chemicals** discharged by hazardous waste incinerators via air emissions, blowing and drifting ash residuals, and **leachate from** ash disposal may be significant. According to EPA, "Some of the compounds [emitted by incinerators] may have atmospheric lifetimes of weeks or more during the summer and fall and may be dispersed over the hemisphere." [EPA Science Advisory Board 1985]

Acute and chronic toxic effects of these **contaminants** on fish, wildlife, and other organisms include damage to genetic tissues, reproductive **difficulties**, and nervous and digestive system damage. EPA's Science Advisory Board summarized:

Exposures of organisms to chemicals originating from liquid hazardous waste incinerators on **land** and at sea... **will certainly** include absorption through lungs or **gills**, skin, and the food web. The Agency has made **only** limited efforts to assess such exposures and these **suffer from** various inadequacies because they resulted from either **individual** judgments or computer models without adequate laboratory or field verifications.”
 [USEPA Science Advisory Board 1985]

I. DIOXINS AND FURANS

No safe dose of **dioxin [2,3,7,8-tetrachlorodibenzo-p-dioxin, 2378-TCDD]** has ever been established. The 208 other chlorinated **dioxins** have toxic effects **similar** to those of **2,3,7,8-TCDD** -- the most studied and allegedly the most toxic of the dioxins -- although they commonly require greater doses to cause the same damage. Some of the characteristics of **2,3,7,8-TCDD** include:

- **Toxicity.** EPA has written that **2378-TCDD** is “the most potent animal carcinogen ever tested. It is 50 times more potent than **aflatoxin B1**...and 50 million times more potent than vinyl chloride.” [USEPA 1988] Because dioxin not only causes cancer but also promotes the **carcinogenicity** of other chemicals. EPA’s Carcinogen Assessment Group has argued that “There is no theoretical basis for making even ballpark estimates of the risk posed by promoters and cocarcinogens [like **2378-TCDD**] to exposed persons because the mechanism for promotion is not well understood and the degree of total exposure of the human population to the numerous carcinogens in the environment cannot be well quantified.” [Albert in Merrell. 1987]
- **Persistence.** One EPA study estimated cautiously that **2378-TCDD** may have a half life of **approximately** 29 years in the environment, suggesting that one-time emissions of **dioxins** will remain significant for hundreds of years. [USEPA 1988]
- **Bioaccumulation.** Once dispersed in the environment, **dioxins** and **furans** concentrate in the tissues of living organisms, building up to higher concentrations as they move up the food chain. Species near the top of the food **chain** serve as living reservoirs for these chemicals. Large fish have been shown to accumulate **dioxins in** their tissues at concentrations as much as 159,000 times greater than the concentration of dioxin in the water in which they **live**. [USEPA 1988] A human who eats 8 ounces of such a fish **will** receive a dioxin dose **equal** to drinking over 75,000 pints of the water in which the **fish** swam.

Dioxins and **furans** are already accumulating in the flesh of humans, fish, birds and other **wildlife in** the United States. A 1982 EPA study found that the fatty tissues of the average citizen carries 1,000 parts per trillion **total dioxins** and **furans** in his or her fatty tissues. [USEPA 1986]

II. OTHER HALOCARBONS

Many other pollutants formed in the combustion of the **halocarbons** in hazardous wastes have similar effects to those of the polyhalogenated dioxins and **furans**, although most are toxic at greater doses. Many of the other halocarbons are also bioaccumulative. Like dioxins and **furans**, most halocarbons are toxic to the nervous; reproductive, pulmonary, and digestive systems. **Many** are known or suspected carcinogens. The toxicological characteristics of some of the halocarbons identified as **PICs** in stack emissions of waste-burning cement and aggregate kilns are listed below:

CHLOROFORM/TRICHLOROMETHANE -- Carcinogen in humans: suspected human and animal carcinogen (**IARC**); in humans. affects kidney and liver functions and central **nervous system; in experimental animals, teratogenic, carcinogenic, and neoplastic** agent; bacterial mutagen: evidence of human mutagenicity; "can induce skeletal and visceral anomalies as well as cleft palate in mice" "and in rats."

METHYLENE CHLORIDE/DICHLOROMETHANE -- carcinogen. in humans and in animals (**IARC**); experimental carcinogen. tumorigen. and teratogen: "experimental reproductive effects:" evidence of mutagenicity in humans: exposed rats developed non-malignant mammary tumors; white mice exhibited large increases in cancers of the liver and lungs: bacterial mutagen: metabolizes to carbon dioxide, resulting in formation of carboxyhemoglobin: unlike other chlorinated compounds. **methylene chloride** does not bioaccumulate in individual **animals** or food chains.

MONOCHLOROENZENE/CHLOROENZENE -- "An experimental teratogen. Other experimental reproductive effects by **inhalation**. Mutagenic data: little data on effects of repeated exposures to subnarcotic concentrations: prolonged exposure may cause kidney and liver damage: resistant to biodegradation: bioaccumulative in Ash. aquatic invertebrates and algae: primary metabolites are p-chlorophenol. p-chlorocatechol. and **p-chlorophenyl-mercapturic acid**.

TETRACHLOROETHYLENE -- Carcinogen in humans: evidence of mutagenicity in humans: "the transfer of tetrachloroethylene by breast milk has been reported in animals and humans: animal carcinogen (**IARC**); bacterial mutagen: in humans. metabolizes to trichloroethanol. **trichloroacetic acid** and other unidentified chlorinated products: in ground water, degrades to trichloroethylene, **dichloroethylene**, and vinyl **chloride**.

1.1. **1-TRICHLOROETHANE** -- Indefinite carcinogen (**IARC**); **psychotropic**, gastrointestinal tract. and central nervous system effects in humans: sensitizes heart to epinephrine-induced **arrhythmias**, sometimes causing cardiac arrest: bacterial mutagen: metabolizes to a very limited extent. forming trichloroethanol (**TCE**), TCE-glucuronide and **trichloroacetic acid**: unlike other chlorinated compounds. 1.1.1 **-trichloroethane** does not bioaccumulate in individual **animals** or in food chains [15].