

Background Information

The Dupont facility in Victoria holds the distinction of being the single largest polluter in the State of Texas for the last ten (10) years per Texas' Toxic Release Inventory reporting system. Dupont has reported eleven (11) million pounds of toxic wastes into the air from its stacks from 1988 to 1999. Over fifty percent (50%) of these 11 million pounds are heavy metals. In fact, this facility burns approximately 300 million pounds of hazardous waste every year without ever possessing a hazardous waste permit. Dupont's own internal documents and analysis of scale from these stacks confirm that the stack emissions contain barium, cerium, chromium, cobalt, copper, lead, manganese, and zinc. It is an undisputed fact that these heavy metals are contaminating my clients' properties, breathing air (both indoor and outdoor), plants, animals and their internal organs. **THE REASON THIS HAS OCCURRED IS BECAUSE DUPONT HAS ZERO POLLUTION CONTROL ON THESE STACKS.** Our clients' fireplaces have as much pollution control as Dupont's stacks. Dupont's own internal documents concede that retrofitted pollution controls in the form of an electrostatic precipitator, bag house, or wet scrubber could be employed that would reduce emissions over 90%, but that "retrofit costs are projected to be prohibitively high." See Exhibit 2.

Because profits outweigh human health and environmental concerns, our clients continue to suffer from unlawful pollution. A federal jury has recently determined that Dupont unlawfully trespassed the Stevensons' and Harper's properties with heavy metals. This trespass was affirmed by the United States Fifth Circuit Court of Appeals. See Fifth Circuit Opinion at Exhibit 3.

For the reasons set forth below and after presentation of witnesses and evidence at the contested hearing, we believe Dupont's permit should be denied in its entirety. Alternatively, the TCEQ must require Dupont to install pollution control equipment in order to eliminate the continued invasions of my clients' health, properties and livestock.

At this time, my clients would respectfully request an independent environmental audit of Dupont's plant emissions to be borne at the expense of Dupont. We would request such an audit to consist of not only heavy metal testing and modeling, but of all air pollutants emitting from these uncontrolled stacks. The reason this is necessary prior to the hearing is because Dupont's information submitted to the regulatory agencies is unreliable and misreported. For example, portions of Mr. Michael Miller's sworn testimony attached under Exhibit 4 demonstrates the following:

- a) Dupont furnished its air modelers incorrect feed rates and waste concentrations;
- b) Dupont without hesitation would arbitrarily change concentrations in order to avoid Tier 3 reviews; and
- c) Dupont admits it misreported in its BIF records the monthly feed rate for chromium for at least four (4) years.

Amazingly, Dupont's BIF reports, Title V reports and SARA Form R reports all show inconsistent reporting for the same substances for the same reporting periods. Additionally, Dupont's internal documents reflect that numbers were simply changed or arbitrarily chosen in order to meet permit requirements. See for example Exhibit 5. We look forward to presenting volumes of Dupont's internal records. We will further demonstrate at the contested hearing that stack tests were improperly conducted and information distorted in order to gain permit status.

Dupont's permit should be denied because:

- 1) Using Dupont's own air modeling and utilizing actual feed rates reported by Dupont demonstrates that our clients are being subjected to an unacceptable carcinogenic exposure level according to the BIF regulations. Dupont has significantly underestimated the cancer risk. See Sanders engineering report along with sworn testimony attached as Exhibit 6.
- 2) It is undisputed our clients reside in the maximum pollution impact area according to all dispersion modeling conducted at the facility. It is undisputed that the Dupont stacks have zero pollution control. It is undisputed that Dupont has trespassed and continues to trespass our clients' properties with toxic heavy metals. See Affidavit of Michael Stringer and supporting data attached as Exhibit 7.
- 3) Recent data received last week demonstrates that even the breathing air inside our clients' residences are contaminated with heavy metals. Specifically, the residences at Crescent Valley were recently analyzed for heavy metals in the soil and air filters inside the homes. This recent data confirms the pollution is widespread and inescapable. See data attached as Exhibit 8.
- 4) These heavy metals are entering our clients' bloodstreams and further entering the bloodstreams of their livestock. See report and sworn testimony of Dr. Ed Smith attached as Exhibit 9. Noteworthy, Dr. Smith and his lab have done work with Dupont for years.
- 5) These heavy metals are causing an extremely high incidence of tumors in the nearby animals. Specifically, the Stevensons' and Harper's properties are located at the maximum impact zone for Dupont's pollution. Seven out of nine of the Harper's animals had tumors. The Stevensons' horse had tumors the size of footballs (see Exhibit 10) on it; unlike any tumor that the Stevensons' veterinarian or Dupont's retained veterinarian had ever seen. While both vets concurred that heavy metal poisoning could cause such a rare tumor, Dupont's vet simply had no explanation for the real cause. As demonstrated from the sworn testimony of Dr. Horton (Exhibit 10), the long-time treating vet of the animals, these animals have tumors and respiratory illnesses from heavy metal poisoning. Remarkably, when heavy metal detoxicants were administered to the horse, the tumors dissipated.
- 6) A pond on Dupont's property and located in close proximity to the Stevensons' and Harper's properties was tested for heavy metal poisoning of fish and plants. Both the fish and plants were contaminated with the same metals emitting from the stacks in question. See Exhibit 11.
- 7) Most importantly, our clients are exposed to substantial unnecessary cancer and health risks. Specifically, Dr. Rod O'Connor performed a risk assessment regarding our clients' exposure to chromium and manganese. (Dr. O'Connor has a Ph.D. in chemistry and has taught chemistry and environmental toxicology for thirty-five years, most recently at Baylor University.) Dr. O'Connor determined that our clients were exposed to chromium at levels at least five times greater than the acceptable limits established by the Agency for Toxic Substances and Diseases Registry (ATSDR) and eight times the level for manganese. Moreover, all our clients are at very high risk for lung cancer from chromium and

neurological damage from manganese. See Exhibit 12.

- 8) Dr. Arch Carson further concurred that our clients are at significant increased risk for lung cancer and neurological disease from Dupont's pollution. Dr. Carson also testified that actual air monitoring results at our clients' property demonstrated that their mortality risk for lung cancer was increased by over 16% as a result of Dupont's actions. See Exhibit 12.

Very truly yours,



W. Todd Hoeffner

WTH/bd
enclosures

cc: E.I. Dupont De Nemours and Company
Attn: Michael Miller
PO Box 2626
Victoria, TX 77902

Director, EPA Region 6
1445 Ross Ave, Ste 1200
Dallas, TX 75202-2733

Margaret Hoffman
Executive Director
MC-109, TCEQ
PO Box 13087
Austin, TX 78711-3087

H

REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, CYNTHIA BROOKHOUSER, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.

Cynthia Brookhouser
CYNTHIA BROOKHOUSER

OPA

JUN 30 2003

BY *[Signature]*

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CHIEF CLERK'S OFFICE

H

REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, H. D. CAMPBELL, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.



H. D. CAMPBELL

OPA

JUN 30 2003

BY _____

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COMMISSION
ON ENVIRONMENTAL
QUALITY

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CHIEF CLERK'S OFFICE

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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, BARBARA CHAMBERS, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.

Barbara Chambers
BARBARA CHAMBERS

OPA

JUN 30 2003

BY *TD*

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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, BRANDON HASKELL COOK, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.

Brandon Cook
BRANDON HASKELL COOK

OPA

JUN 30 2003

BY Ⓟ

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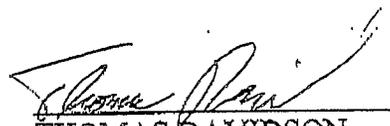
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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, THOMAS DAVIDSON, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.



THOMAS DAVIDSON

OPA

JUN 30 2003

BY  _____

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ON ENVIRONMENTAL
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CHIEF CLERKS OFFICE

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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, JOHNNY DENNING, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.


JOHNNY DENNING

OPA

JUN 30 2003

BY 

TEXAS
COMMISSION
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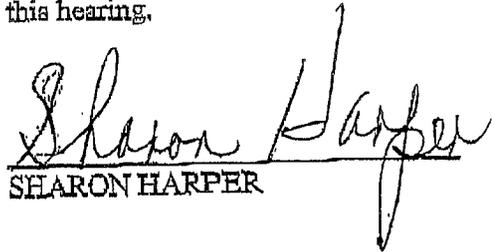
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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, SHARON HARPER, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.


SHARON HARPER

OPA

JUN 30 2003

BY 

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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

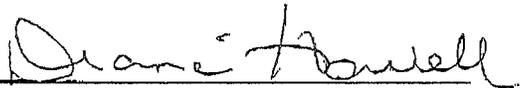
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We, ROBERT AND DIANE HOWELL, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting our property and/or health.

We reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating our property, our breathing air and unlawfully invading our bodies.

We would like to individually be parties to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is our legal representative in this hearing.


ROBERT HOWELL


DIANE HOWELL

OPA

JUN 30 2003

BY 

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CHIEF CITIZENS OFFICE

HA

REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, DOUGLAS LAWRENCE, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.


DOUGLAS LAWRENCE

OPA

JUN 30 2003

BY 

TEXAS
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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

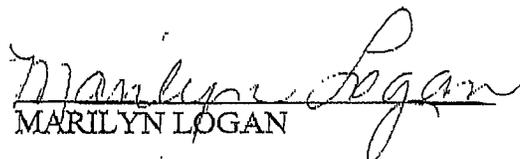
We, ASA AND MARILYN LOGAN, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting our property and/or health.

We reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating our property, our breathing air and unlawfully invading our bodies.

We would like to individually be parties to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is our legal representative in this hearing.



ASA LOGAN



MARILYN LOGAN

OPA

JUN 30 2003

BY Ⓟ

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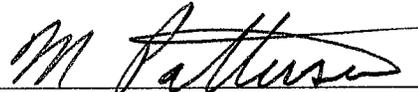
REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

H

I, MARVIN PATTERSON, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.


MARVIN PATTERSON

OPA

JUN 30 2003

BY 

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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

We, ANTON AND JOANNE PIEGSA, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting our property and/or health.

We reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating our property, our breathing air and unlawfully invading our bodies.

We would like to individually be parties to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is our legal representative in this hearing.


ANTON PIEGSA


JOANNE PIEGSA

OPA

JUN 30 2003

BY 

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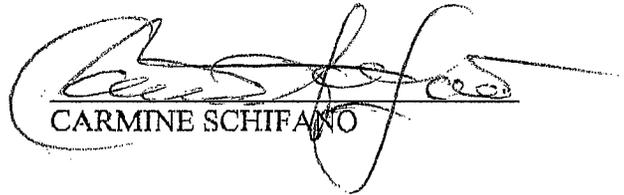
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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, CARMINE SCHIFANO, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.


CARMINE SCHIFANO

OPA

JUN 30 2003

BY 

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2003 JUN 30 AM 10:48

CHIEF CLERKS OFFICE

H

REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, ARLENE SCHULTZ, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.

Arlene Schultz

ARLENE SCHULTZ

OPA

JUN 30 2003

BY *D*

TEXAS
COMMISSION
ON ENVIRONMENTAL
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CHIEF CLERKS OFFICE

H

REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, VERNON SINGLETON, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.


VERNON SINGLETON

OPA

JUN 30 2003

BY D

VERNON SINGLETON
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CHIEF CUSTODY OFFICE

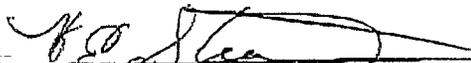
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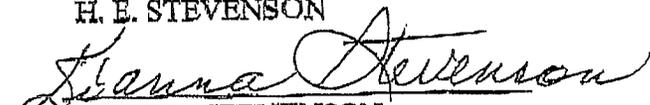
REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

We, H. E. and DIANNA STEVENSON, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting our property and/or health.

We reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating our property, our breathing air and unlawfully invading our bodies.

We would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.


H. E. STEVENSON


DIANNA STEVENSON

OPA

JUN 30 2003

BY 

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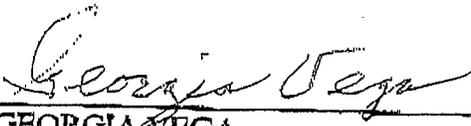
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REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, GEORGIA VEGA, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilck, LLP is my legal representative in this hearing.



GEORGIA VEGA

OPA

JUN 30 2003

BY  _____

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ON ENVIRONMENTAL
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CHIEF CLERKS OFFICE

H

REQUEST FOR CONTESTED HEARING
AGAINST DUPONT'S PERMIT #809

I, FORREST VOLKERT, hereby request a contested hearing since Dupont's emissions from its operations under Permit #809 are adversely affecting my property and/or health.

I reside approximately one and one-half miles downwind from Dupont's industrial facility, and Dupont's heavy metal emissions are contaminating my property, my breathing air and unlawfully invading my body.

I would like to individually be a party to this contested hearing. W. Todd Hoeffner of the law firm of Hoeffner & Bilek, LLP is my legal representative in this hearing.

Forrest Volkert
FORREST VOLKERT

OPA

JUN 30 2003

BY *D*

TEXAS
COMMISSION
ON ENVIRONMENTAL
QUALITY

2003 JUN 30 4:10:49

CHIEF CLERKS OFFICE

CONFIDENTIAL

**E.I. DuPont de Nemours &
Co. (Inc.)**

Victoria, Texas

ENSR

Revised Permit Modification
Adipic Powerhouse
Volume II: Confidential

ENSR Consulting and Engineering

March 1992

Document Number 2360-032

PLAINTIFF'S
EXHIBIT

CONFIDENTIAL

ENSR

CONTROL OPTION

REASON FOR REJECTION OF OPTION

Selective Catalytic Reduction
(Applied to Boiler Exhaust)

- 80 to 90% reduction at optimal conditions.
- Effective temperature window limited between 500 to 800°F which restricts catalyst placement.
- Location restriction necessitates reheating exhaust gas, increasing fuel use and NO_x emissions.
- Catalyst subject to fouling/poisoning from particulate entrained in exhaust from burning with non-clean fuel.
- Process may result in the release of ammonia.
- Process may require disposal of hazardous material (spent catalyst).

Gas Return

- Process may result in a 50 percent reduction in the boiler's NO_x emissions.
- Pilot scale studies have achieved 70% reduction but were focused on coal fired boiler.
- No current commercial application of technology is known for similar process.
- Process limited by stoichiometry in reburn zone.
- Major reconstruction of boiler required.
- Complete mixing of reburn fuel is essential for high efficiency, and is difficult to control with a gaseous reburn fuel.
- Process requires sophisticated fuel/air control system.
- Significant increase in natural gas use/cost will result.

5.2 Particulate Matter Control

The major contributors to the particulate emissions in the Adipic Powerhouse are:

- NVR streams from AA and DDDA
- WFE TAILS from DDDA

The ash contents of these streams are fixed by process requirements, and little can be done to reduce the ash content of these streams. The Adipic Powerhouse stacks (1A5 and 1A6) are currently equipped with no PM control.

The options for PM control are:

- An electrostatic precipitator (ESP)
- A bag house (BH)
- A wet scrubber (WS)

These control technologies can be designed to achieve about 80% PM control by retrofitting the Adco Powerhouse. However, these control technologies do not represent BACT for the following reasons:

- Retrofit costs are projected to be prohibitively high.
- The impact of waste constituents on the performance of these devices is unknown.
- Inadequate space exists within the existing powerhouse for the addition of these control devices. The Adco Powerhouse is bounded on two sides by roadway and on the others by tanks and ancillary facilities. The closest open area for the construction of remote facilities is approximately 1,000 feet away, which would require the construction of a 2,000-foot insulated duct. The installed cost of this 2,000-foot duct alone is estimated to be greater than \$2,000,000, resulting in a cost effectiveness of more than \$2,000 per ton of particulates removed. This is not considered economically feasible.

5.3 Sulfur Dioxide Control

The major source of SO_2 is the sulfur content of the fuel oil. The fuel oil is currently used on a less frequent basis, and in situations which involve natural gas use curtailment. DuPont plans to control the SO_2 emissions by the purchase of fuel oil with sulfur content less than 0.4%. In the past, the Adco Powerhouse has used fuel oil with sulfur contents up to 0.7%. Thus, a reduction in SO_2 emissions of approximately 50% would be achieved by controlling the sulfur content of the fuel oil.

The use of more stringent SO_2 control technology such as a wet lime or limestone scrubber is not justified because of the routine (90% of the time) low SO_2 emissions when the boilers are fired with natural gas and/or nonsulfur-containing wastes.

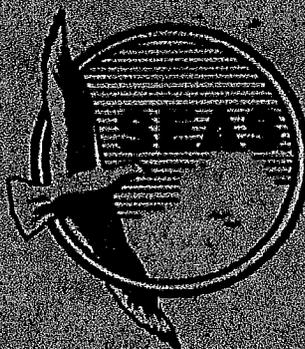
**SANDERS ENGINEERING & ANALYTICAL SERVICES, INC.
REVISED ENVIRONMENTAL STUDY OF
METALS EMISSIONS**

AT

E. I. DUPONT DE NEMOURS & COMPANY, INC.
Victoria, Texas

FOR

HOEFFNER, BILEK & EIDMAN, L.L.P.



January 29, 2002

1568 LEROY STEVENS ROAD
MOBILE, ALABAMA 36695
(251) 633-4120
FAX: (251) 633-2285

1. INTRODUCTION

Sanders Engineering & Analytical Services, Incorporated (SEAS) was retained by the law firm of Hoeffner, Bilak & Eidman, L.L.P. to determine the transport and fate of metals emissions from the E.I. DuPont de Nemours & Company, Incorporated (DuPont) facility located near Victoria, Texas (the Facility). Through onsite inspections and documents obtained from the Texas Natural Resource Conservation Commission and from DuPont, through attorney Todd Hoeffner of Hoeffner, Bilak & Eidman, L.L.P., we determined that DuPont was a generator of large quantities of toxic and hazardous wastes. These wastes contain both volatile organic compounds and metals.

2. PROCESS DESCRIPTION

The DuPont Victoria plant has two independent powerhouses which primarily use large quantities of liquid and gaseous process wastes and supplementary natural gas and/or fuel oil as fuel for its associated boilers. Four boilers (Boilers No. 1, 2, 3, and 4) are located in the Adipic Power Area (Number 2 Powerhouse) and two boilers (Boilers No. 7 and 8) are located in the Diamine Power Area (No. 1 Powerhouse). All six boilers are tangentially fired Combustion Engineering Model VU-50 boilers and produce steam at a nominal pressure of 550 psig. It is our understanding the Facility accepts no commercial waste from other facilities. Although no exact figures were available at the time of our inspection, we understand the facility burns tens of thousands of pounds of hazardous waste per hour. These six boilers exhaust emissions into the air through three stacks. Boilers 1 and 2 exhaust through Stack No. 5 (Emission Point 15STK-005), Boilers 3 and 4 through Stack No. 6 (Emission Point 15STK-006), and Boilers 7 and 8 through Stack No. 7 (Emission Point 17STK-007).

These boilers have no emission control devices for the control of the metals emissions that are generated in the combustion process. All the metals that enter the boiler exit the boiler into the atmosphere.

There are control devices available for the reduction of the metals emissions for the Facility. These control devices include electrostatic precipitators, baghouses, and wet scrubbers. These were recognized in DuPont's application for an air permit submitted by BNSR in 1995. However, at that time DuPont chose to purchase none of those devices primarily because of the expense involved in the purchase and operation of the control devices.

FIGURE 3A. OSHA PERMISSIBLE EXPOSURE LIMITS (PELS) VS. ISC3 MODELING AT THE STEVENSON RANCH FOR AN EIGHT-HOUR PERIOD

Substance	Feed Rate Limit p/hr	Highest Predicted 8 Hour Average Metals Concentration at Stevenson Ranch during the period from 1987 to 1991 using 100% Feed Rate Limit ug/m ³	Highest Predicted 8 Hour Average Metals Concentration at Stevenson Ranch during the period from 1987 to 1991 using 60% Feed Rate Limit ug/m ³	Highest Predicted 8 Hour Average Metals Concentration at Stevenson Ranch during the period from 1987 to 1991 using 26% Feed Rate Limit ug/m ³	PEL ug/m ³	Occupational Safety and Health Administration Permissible Exposure Limit (PEL) PEL Source and Additional Notes
Antimony	78.20800	5880	2395	1272	500	29 CFR CH XVIII § 1910.1000 Table Z-1
Arsenic	5987	0.05	0.02	0.03	500	29 CFR CH XVIII § 1910.1000 Table Z-1
Barium	12.8000000	988.46	499.23	247.11	500	29 CFR CH XVIII § 1910.1000 Table Z-1
Beryllium	10769	0.08	0.04	0.02	2000	29 CFR CH XVIII § 1910.1000 Table Z-1
Cadmium	10450	0.11	0.06	0.03	50	29 CFR CH XVIII § 1910.1000 Table Z-1
Cerium	23.07800	178	0.89	0.45	5000	29 CFR CH XVIII § 1910.1000 Table Z-1
Chromium	20293	0.16	0.08	0.04	500	29 CFR CH XVIII § 1910.1000 Table Z-1
Cobalt	23.07800	178	0.89	0.45	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Copper	23.07800	178	0.89	0.45	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Lead	23.07800	178	0.89	0.45	500	29 CFR CH XVIII § 1910.1000 Table Z-1
Manganese	23.07800	178	0.89	0.45	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Mercury	26.09578	591	2.97	1.49	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Nickel	23.07800	178	0.89	0.45	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Phosphorus	23.07800	178	0.89	0.45	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Selenium	23.07800	178	0.89	0.45	200	29 CFR CH XVIII § 1910.1000 Table Z-1
Silver	769.2172	69.40	2970	1485	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Vanadium	128.2112	9.80	795	278	100	29 CFR CH XVIII § 1910.1000 Table Z-1
Zinc	23.07800	178	0.89	0.45	100	29 CFR CH XVIII § 1910.1000 Table Z-1

CORRECTED FOR MAGNETRON (concentrations divided by 60)

Those values displayed in **Bold-Italics** type exceed the eight-hour OSHA PEL at the Stevenson Ranch. The feed rate limit for lead (23.078.00 grams per hour) is used for metals for which a feed rate limit has not been provided by the Facility (cerium, cobalt, copper, manganese, nickel, phosphorus, selenium, vanadium, and zinc). Predicted concentrations from EPA ISC3 dispersion model results. ISC3 modeled at 0.001 boiler MMBtu per emission point (three total emission points, two boilers per emission point).

TABLE IV. LISTING OF DIFFERENT EMISSION INVENTORIES SUPPLIED BY DUPONT TO MODELING CONSULTANTS AND GOVERNMENT AGENCIES

Year	Emission Inventory Source	Dispersions:				EMSE				RIP Model Predictions			
		Estimate lb/year	Concentration Predicted by D Modeling Risks	Estimate lb/year	Concentration Predicted by D Modeling Risks	Estimate lb/year	Concentration Predicted by D Modeling Risks						
1982	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1984	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1986	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1988	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1990	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1992	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1994	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1996	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
1998	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008
2000	0.30	0.012	0.0008	0.001	0.001	0.0008	0.001	0.001	0.001	0.0008	0.001	0.001	0.0008

No air emission inventory was submitted for the pollutant under article V. The maximum reported level is 0.1 tons per year or 100 pounds per year.

NE-SARA Form B was submitted for this pollutant.

TABLE V. LISTING OF DIFFERENT EMISSION INVENTORIES SUPPLIED BY DUPONT TO MODELING CONSULTANTS AND GOVERNMENT AGENCIES

ARSONIC

Emission Inventory Source	D/Binary Form			L/NER			BIP Monthly Load Rate Calculations		
	Arsonic Path Speciation USD from 40 CFR Part 63.66	Emission Rate lb/year	Concentration at Location Produced by D/Binary Form Modeling Result	Emission Rate lb/year	Concentration at Location Produced by D/Binary Form Modeling Result	Concentration at Location Produced by D/Binary Form Modeling Result	Volume of Air (ft ³ /year)	Concentration at Location Produced by D/Binary Form Modeling Result	Concentration at Location Produced by D/Binary Form Modeling Result
1992	0.0023	0.0013	0.0004	0.000	0.000	0.000	0.000	0.000	0.000
1993	0.0014	0.0021	0.0007	0.000	0.000	0.000	0.000	0.000	0.000
1994	0.0051	0.0124	0.0042	0.000	0.000	0.000	0.000	0.000	0.000
1995	0.0063	0.016	0.0051	0.000	0.000	0.000	0.000	0.000	0.000
1996	0.0063	0.016	0.0051	0.000	0.000	0.000	0.000	0.000	0.000
1997	0.0063	0.016	0.0051	0.000	0.000	0.000	0.000	0.000	0.000
1998	0.0063	0.016	0.0051	0.000	0.000	0.000	0.000	0.000	0.000
1999	0.0063	0.016	0.0051	0.000	0.000	0.000	0.000	0.000	0.000
2000	0.0063	0.016	0.0051	0.000	0.000	0.000	0.000	0.000	0.000

No measurement inventory was submitted for the pollutant under this V. This minimum reported to this Ozone year of 200 pounds per year.

No SARA Form E was submitted for this pollutant.

United States Court of Appeals
Fifth Circuit

FILED

April 3, 2003

Charles R. Fulbruge III
Clerk

UNITED STATES COURT OF APPEALS

For the Fifth Circuit

No. 02-40869

H E STEVENSON, ET AL,

Plaintiffs,

H E STEVENSON, DIANNA STEVENSON, AND SHARON HARPER,

Plaintiffs-Appellants,

VERSUS

E I DUPONT DE NEMOURS AND COMPANY,

Defendant-Appellant.

Appeal from the United States District Court
For the Southern District of Texas, Victoria

Before DeMOSS and STEWART, Circuit Judges, and FALLON, District
Judge.

DeMOSS, Circuit Judge:

Before the Court is the appeal of Defendant-Appellant E. I.

District Judge of the Eastern District of Louisiana,
serving by designation.

animals.

DuPont opened a petrochemical plant in Victoria, Texas, in 1951. The plant is approximately one and one-half miles from the Plaintiffs' properties, which are the closest lands to the plant. The plant produces 'intermediate products' for shipping to offsite customers. Throughout its operation, the plant has emitted heavy metals as a result of burning hazardous waste. The emissions from the factory contain barium, cerium, chromium, copper, lead, manganese, and zinc.

In January 2001, the Plaintiffs filed suit against DuPont for contamination of their person, property, and livestock. Their theories of recovery were negligence, nuisance, and trespass. During the trial, James Miller, DuPont's environmental consultant, testified as the employee most knowledgeable about the air emissions from the stacks. He admitted that all air dispersion reports, including DuPont's, showed that the Plaintiffs' properties were within the maximum level of impact for emissions from DuPont's factory. This dispersion modeling showed that the emissions were most heavily concentrated in the air over the Plaintiffs' properties.

Various testimony was heard during the trial regarding the health effects of the contamination on the Plaintiffs and their animals. However, the jury found in favor of the defendant on these issues, and this part of the verdict is not before this Court on appeal. Accordingly, discussion of this testimony is omitted.

DuPont De Nemours & Co. ("DuPont") from a jury verdict finding the defendants liable for trespass on the Plaintiffs Appellees' property. The Plaintiffs-Appellees in this case are H. E. Stevenson, Dianna Stevenson, and Sharon Harper (referred to collectively as "Plaintiffs"). Carried with DuPont's appeal is the Plaintiffs' motion for recovery of damages and costs under F.R.A.P. 38. The Plaintiffs brought suit against DuPont alleging that its Victoria, Texas, plant emits heavy metal particulates, which contaminated the Plaintiffs' properties located nearby and affected their health as well as the health of their animals. Their theories of recovery included negligence, nuisance, and trespass. Following a six-day jury trial, the jury found for the Plaintiffs only on the trespass theory and awarded the Stevensons \$168,000 and Harper \$96,000 in damages for the diminished value of their property.

DuPont appeals challenging the sufficiency of the evidence of the jury verdict. It contends first that, as a matter of law, the Plaintiffs cannot recover for trespass based on contamination by airborne particulates. Second, appellant asserts that the Plaintiffs' evidence of causation was insufficient to show that DuPont's factory emissions actually contaminated the Plaintiffs' properties. Finally, it alleges that the Plaintiffs presented insufficient evidence regarding damages for the diminution of property values.

Plaintiffs, in response, have moved for damages and costs as a result of a frivolous appeal. Specifically, the Plaintiffs contend that DuPont's challenges regarding the causation evidence are actually Daubert challenges regarding the admissibility of the evidence, and, because the defendant waived its Daubert challenge during a hearing on the matter, this Court cannot now review these findings. Second, Plaintiffs argue that DuPont's point of error on evidence of a temporary trespass as opposed to permanent trespass was waived when DuPont failed to request that the Court submit such an issue to the jury.

For the reasons set forth below, we AFFIRM the district court's denial of DuPont's motion for judgment as a matter of law. We REVERSE the jury's award for damages, and REMAND for a new trial on damages.

BACKGROUND & PROCEDURAL HISTORY

H. E. and Dianna Stevenson purchased 28 acres of land in Victoria, Texas in 1970 or 1971. Mr. Stevenson built a house on the property, and the family moved into that house in 1976. Mr. Stevenson used the property primarily to raise race horses. Sharon Harper purchased 16 acres of land approximately a block to block-and-a-half from the Stevensons' property in 1982. She resides in a house on the property, along with her daughter, who lives in a separate house on the property. During her time on the property, she raised cows, horses, goats, chickens, and various other

1 Q. Do you agree with that finally?

2 A. I'll agree with that. Yes.

3 Q. Thank you. Now, is it your testimony that when you're
4 furnishing these concentration numbers to ENSR, that DuPont
5 never monkeys around with the concentration level?

6 A. That's correct. We give them our, to our best knowledge,
7 the average annual concentration in the waste stream for their
8 calculations.

9 Q. And we just saw that you got that from the BIF reports.
10 Correct?

11 A. Okay. Yes.

12 Q. Let me show you what has been marked Plaintiff's 67, which
13 is a document to Mike Miller. That's you. Correct?

14 A. Yes.

15 Q. From Mr. Gardiner. Correct?

16 A. Yes.

17 Q. Dated June 1997. Now, I want to refer you to Page 4 of
18 the Exhibit 57, and could you read the second line starting
19 here, sir, into the record?

20 A. "These spreadsheets differ from yours in that they use the
21 data contained on the fuels analysis forms rather than the data
22 on your spreadsheet."

23 Q. Okay. Read the next sentence.

24 A. "The data generally match, with the following exceptions."

25 Q. Okay. And then they list the exceptions under the heading

1 powerhouse. What is the first thing they list? Would you read
2 that into the record?

3 A. "Chromium for AA NVR is listed on the fuel sheet as 50 PPM
4 max, versus your spreadsheet, which has 5.8 PPM."

5 Q. So when you are furnishing information to ENSR, you
6 furnished them the 5.8. You never furnished them anything
7 close to 50. Correct?

8 A. We furnished them the BIF operating record, as well as the
9 waste analysis sheet, and that's what these comments are based
10 on.

11 Q. And we saw yesterday you had six out of six samples in
12 1992 over 40 PPM when TRC checked the waste characterization.
13 Correct?

14 A. During that test period, yes.

15 Q. Okay. Let's see, on the diamine powerhouse, you have the
16 same comment. Correct? Will you read that into the record,
17 sir?

18 A. "Chromium for AA NVR is listed on the fuel sheet as 50 PPM
19 max, versus your spreadsheet, which has 5.8 PPM."

20 Q. Sir, would you agree with me that if you would have
21 furnished a number to ENSR that reflected, for instance, 50
22 parts per million in concentration as opposed to 5, that would
23 affect the impact of the modeling by a factor of 10. Correct?

24 A. That's right.

25 Q. And that would raise the cancer risk by a factor of 10.

FROM: NICHOLS MILLER

TO: HOPER (33740)

DATE: 1991-11-20
TIME: 09:14

CC:

SUBJECT: REVISED PERMIT PATH FORWARD
PRIORITY
ATTACHMENTS

ITEM 1

UPDATED NOTES FROM OUR MEETING AT ESK.

ITEM 2

MARKY J. NICHOLS MILLER
Created: 11/20/1991
Time: 09:14
Subject: REVISED PERMIT PATH FORWARD

The following is a summary of path forward items to move forward on permit activity for Adipic and Diamine powerhouses. Please note that even though we place proposed fuels in the air permits, they still have to be in place for compliance testing for both the air permit and BIF regulations to become a part of these permits.

BIF PRECOMPLIANCE ADIPIC/DIAMINE POWER

Revise maximum flow rate of HNO₃ OIL from 2500 gph max to 5000 gph. Adjust chime down in MPH if necessary. Total volume to remain at 21.9 MM pounds per year.

Revise HNO₃ toll waste composition to include ash content of .53 weight % and chlorine .02 weight %. Volume to remain unchanged at 21.9 MM pounds per year. Will advise if chlorine will affect adjusted tier 1 status. This change will reflect processing in shipped waste from Sabine.

Revise HPI off gas flow maximum from 32000 scfm to 30000 scfm.

Add note that IWR 506 and ANW 001 could be burned at either powerhouse but that total volume remains unchanged.

AIR PERMIT ADIPIC POWER

Review and revise maximum flow rates and emission tables to correspond to tables in BIF precompliance document.

Revise BAFI analysis for boilers to reflect results of 227

DATE: 4/17/90

TO: Andy Shah - ENSR

FROM: Mike Miller - Dupont

QUESTIONS RESPONSE

1) List of all PM sources at Victoria

-List is attached

2) List of SO2 emissions sources at Victoria

-List is attached

3) List of all other metal emissions sources at Victoria

-None

4) Location of H2 unit

-Plant coordinates E7750, N7400

5) Building heights for buildings shown in the attached table.

-Marked up table attached

6) Fugitive emissions tables

-Summaries are being prepared, expect completion by 4/30.

7) CO2 and aluminum emissions from acids powerhouse appear excessive

-Recent sampling of ADN LBW stream indicates 4 ppm Cl vs 1590 ppm in previous sample. Please use this reduced level in calculations. This is approximately 2 tons Cl contributed by this stream vs approx. 90.

-From DDBA permit application data, I calculate 18.5 tons Al from the WFE stream.

OTHER NOTES

The lowest sulfur #6 fuel oil we can find as a standard commodity on the open market is .3% please use this for calculations of predicted emissions and allowable maximums for burning fuel oil.

UNITED STATES DISTRICT COURT
SOUTHERN DISTRICT OF TEXAS
CORPUS CHRISTI DIVISION

EMILY STEVENSON, DIANA
STEVENSON, AND
SHARON HARPER

CIVIL ACTION NO. V-01-24

VS

E.I. DUPONT DE NEMOURS AND
COMPANY

JURY DEMANDED

AFFIDAVIT OF MICHAEL STRINGER

STATE OF TEXAS

COUNTY OF HARRIS

§
§
§

BEFORE ME, the undersigned authority, personally appeared Michael Stringer, known to me to be the person whose name is subscribed to this instrument, and having been by me duly sworn upon his oath, stated the following:

1. My legal name is Michael Stringer. I am over the age of eighteen years, have never been convicted of a crime, and have personal knowledge of the facts contained in this Affidavit, and they are true and correct.
2. Southern Ecology Management, Inc. (hereinafter "SEM") and I were retained by Rodman, Bilek & Bidram in the above-referenced case to review environmental testing data and to also conduct our own environmental testing at the Stevenson and Harper property which is on Farm Road 1432 in Victoria, Texas. This property appears to be the nearest residence to E. I. duPont de Nemours & Company's facility which is located on the old Bloomington road in Victoria, Texas. Ultimately, SEM and I have been retained to express opinions concerning the type of contaminants found on the Stevenson and Harper properties and to further express opinions concerning the source of the contaminants.
3. SEM collected background samples from a non-industrial area approximately 30 miles south of the Dupont plant. On the basis of information obtained from the firm performing the modeling, the height of the Dupont Stack, and the predominate wind speed, this distance was necessary to obtain the potential impact from the Dupont plant. Consideration was also given in the selection of the background sampling locations to minimize the potential impact to human activities. The sampling was conducted using the same procedure used to collect samples on the Dupont site.

4. I have summarized the data reviewed in the attached tables and graphs. These include:

- A table of Dupont Soils from 0-2 inches;
- A table of Dupont Soils from 12 inches;
- A table of Background Sampling results;
- A table of Roof Sampling results (comparisons); and
- A graph of Dupont Soils (0-2 inches) for several significant constituents.

5. I also reviewed the air modeling and waste fuel analysis prepared by Sanders Engineering. This model showed the expected location of metal concentrations derived from emissions from the stacks at Dupont. This model predicted that the metal concentrations would be higher on the Stevensons' property than on Dupont's property. Also, if contamination were present, it would be considerably higher than background data.

6. I have reviewed Dupont's analytical data on the waste stream it burns in the boilers, along with analyses that Sanders Engineering conducted on the waste streams. All the contaminants on the Stevensons' roof and property are also found flowing through Dupont's stacks.

7. On the basis of the results reviewed, comparison of the Dupont soil results, background soils data, and soils data collected from the Stevensons' property, it is our opinion that the source of elevated metal concentrations in the soil above background levels, on the Stevensons' property is a direct result of emissions from the Dupont plant. In addition, sample results were reviewed that were collected from the Stevensons' roof and compared to two (2) background samples of roof tile. The increases in metal concentrations for most of the constituents analyzed over the background concentrations were consistent with the findings in the soil data.

8. SEM also took plant and fish samples at Dupont's property and had them analyzed for metals. Manganese and zinc were the metals with the highest concentrations in the plant and fish samples.

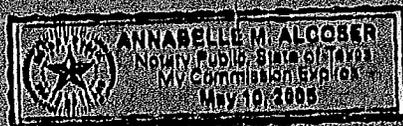
9. A true and current copy of my resume is attached.

FURTHER AFFRANT IS UNLAWFUL.

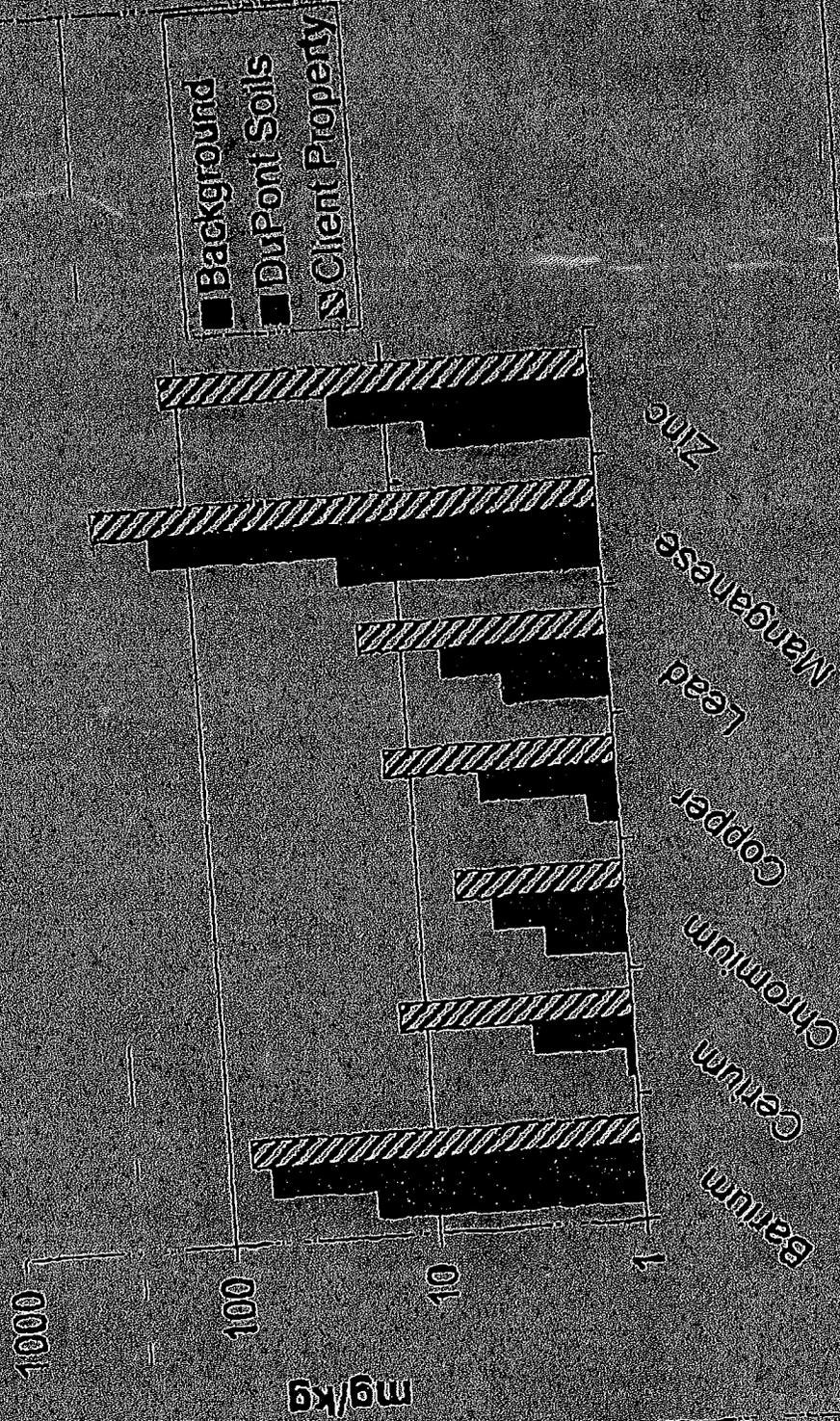

MICHAEL STRINGER

SWORN TO AND SUBSCRIBED BEFORE ME this 3rd day of January, 2002.


Annabelle M. Alcober
Notary Public, State of Texas
My commission expires



DuPont Soils 0-2 inches



Client: Southern Ecology Mgmt
 Attn: Michael Stange
 Address: 117 Vermont
 Corpus Christi TX 78409

Phone: (661) 289-1095 FAX: (661) 289-1098

4221 Redwood Lane, Suite 100, Austin, TX 78744
 2209 N. Padre Island Dr., Corpus Christi, TX 78408
 (512) 444-5895 FAX: (512) 447-0766

Report#/Lab ID#: 245247 Report Date: 11/01/01
 Project ID: Dupont Sampling
 Sample Name: Dwp 11/02/01
 Sample Matrix: soil
 Date Received: 10/22/2001 Time: 10:15
 Date Sampled: 10/18/2001 Time: 00:00

REPORT OF ANALYSIS

Parameter	Result	Units	ROL's	Blank	Date	Method	Data Qual	Prec2	Recov3	GCV4	LC5
Asbestos/CP	<2	mg/kg	2	<2	10/27/01	6010 & 2007	1	17.24	80.91	100.0	81.07
Bammy/CP	1.65	mg/kg	2	<2	10/27/01	6010 & 2007	1	20.42	96.09	93.15	75.85
Bertholom/CP	0.836	mg/kg	0.4	<0.4	10/27/01	6010 & 2007	1	3.77	91.34	98	81.83
Cadmium/CP	<0.5	mg/kg	0.5	<0.5	10/27/01	6010 & 2007	1	15.92	84.74	93.25	77.6
Cerium/CP	4.23	mg/kg	0.2	<0.2	10/31/01	6010 & 2007	1	0.6	97.65	131.5	98.11
Chromium/CP	7.77	mg/kg	1	<1	10/27/01	6010 & 2007	1	14.66	75.01	94.38	75.1
Copper/CP	7.11	mg/kg	2	<2	10/27/01	6010 & 2007	1	14.05	87.92	102.25	80.53
Lead/CP	9.58	mg/kg	1	<1	10/27/01	6010 & 2007	1	17.3	74.61	94.6	76.3
Manganese/CP	294	mg/kg	5	<5	10/30/01	6010 & 2007	1	18.67	92.13	97	76.95
Mercury/CV/AA	<0.04	mg/kg	0.04	<0.04	10/29/01	245-2&7471	1	3.08	98.28	104	112
Selenium/CP	<4	mg/kg	1	<1	10/27/01	6010 & 2007	1	15.99	82.88	94.7	78.9
Silver/CP	2.88	mg/kg	2	<2	10/27/01	6010 & 2007	1	14.02	87.77	100.25	77.91
Vanadium/CP	16.1	mg/kg	2	<2	10/27/01	6010 & 2007	1	11.45	79.95	98.65	82.64
Zinc/CP	40.9	mg/kg	1	<1	10/27/01	6010 & 2007	1	14.73	79.2	94	80.13

The analytical report is respectfully submitted to AnalySys, Inc. The analysis results have been carefully reviewed and to the best of my knowledge, the analytical results are consistent with AnalySys, Inc.'s Quality Assurance/Quality Control Program. © Copyright 2000 AnalySys, Inc. Austin, TX. All rights reserved. No part of this publication may be reproduced or transmitted in any form or by any means without the express written consent of AnalySys, Inc.

Respectfully Submitted:
Richard Haster

Quality assurance data is for the sample batch which included this sample. 1. Quality assurance data is for the sample batch which included this sample. 2. Precision (PREC) is the absolute value of the relative percent (%), difference between duplicate measurements. 3. Recovery (Recov) is the percent (%), of analyte recovered from a spiked sample. 4. Calibration Verification (GC/V) and Laboratory Control Sample (LCS) results are expressed as the percent (%), recovery of analyte from a known standard or matrix. 5. Reporting Quantitation Limits (RQL) typically show above the Practical Quantitation Limit (PQL) of the analytical method. 6. Method numbers typically denote USEPA procedures. Less than (<) values refer to optional quantitation limits adjusted for any extract dilutions. 7. Data Qual (residual) = analytical result potentially present between the PQL and the MDL. B = Analyte detected in associated method blank. S1 = MS and/or MSD recovery, exceed advisory limits. S2 = Post-digestion spike (PS) recovery, exceeds advisory limit. S3 = MS and/or MSD and/or PSD recovery, exceed advisory limits. P = Precision higher than advisory limit. M = Matrix interference.



EFEH & ASSOCIATES

3319 INDUSTRIAL DRIVE • PEARLAND, TEXAS 77581 • TELEPHONE (281) 966-5031 • FACSIMILE (281) 966-5050

Hoeffner, Bilck & Eldman
440 Louisiana, Suite 720
Houston, Texas 77002

1. EFEH & Associates was contacted by H. E. Stevenson in January 2000 regarding suspected airborne contamination. Consequently, EFEH conducted roof and soil grab samples on January 18, 2000. Thereafter, EFEH performed analysis. Specifically, EFEH ran elemental analysis on the roof and soil samples. EFEH further ran a full priority pollutant analysis on the soil. A copy of the results are attached as Exhibit A.
2. Additionally, EFEH ran serum and whole blood on Diana Stevenson and on one of the Stevensons' horses that was experiencing tumorigenicity. These results are attached as Exhibit B.
3. It is concluded from the results obtained that copper, manganese, nickel and zinc were all above expected TNRCC background concentration levels for Texas. Furthermore, these roof level results exceed soil analytical values for the area for each of the roof analysis. Based on these results, the roof analysis are, in my opinion, airborne. A review of the most recent testing of the Stevensons' roof further supports the airborne origin.
4. The whole blood from Mrs. Stevenson demonstrates elevated vanadium, cerium, and copper. These elevated metals are stated in literature to cause elevated sulfur and iodine levels in mammals. Mrs. Stevenson's blood contains elevated levels of sulfur and iodine. Based upon a review of scientific literature, it is my opinion that the only explanation for these findings are the previously mentioned airborne metals.
5. The Stevensons' horse also demonstrated in its blood results elevated cerium and vanadium. At the request of Mr. Stevenson, I supplied a nutritional supplement which has been shown in mammals to significantly reduce heavy metal toxicants. After administering this nutritional supplement, the previously mentioned tumors on the Stevensons' horse slowly reduced in size to the point they were undetectable. Cessation of the nutritional supplement and continued exposure to the airborne particles resulted in the development of tumors on the horse again. Based on the foregoing, it is my opinion that the horse was significantly exposed and is still continuously exposed to airborne heavy metals.
6. My qualifications are set forth in my curriculum vitae which is attached in Exhibit C. My hourly rate is \$275.00 per hour. I will provide a list of my prior depositions and trial testimony in the near future.





EFEH² ASSOCIATES

819 INDUSTRIAL DRIVE • PEARLAND, TEXAS 77601 • TELEPHONE (713) 978-6001 • FACSIMILE (713) 978-6150

February 4, 2000

Mr. F.E. Stevenson
1276 FM 1732
Victoria, Texas 77905

Dear Mr. Stevenson

Following are the results of the grab water sample submitted to our laboratory for analyses on January 18, 2000:

SAMPLE I.D.	Water A Well 01/17/00	Water B Pond 01/17/00	% RECOVERY	% RPD
LAB NO.	K-9847-3	K-9847-3		
TOTAL METALS				
Barium	0.22	0.11	109.1	2.46
Chromium	<0.10	<0.10	108.0	1.91
Copper	0.12	<0.10	110.6	1.26
Manganese	<0.10	<0.10	106.3	2.46
Nickel	<0.10	<0.10	109.3	1.15
Silver	0.25	<0.10	106.5	1.89
Vanadium	<0.10	<0.10	104.7	0.60
Zinc	1.20	0.58	105.2	2.76

NOTE: Units expressed in mg/L, unless otherwise noted.

ANALYST: T.N.
DATE & TIME ANALYZED: 02/01/00 1110-1455
METHOD: EPA 6010B

Please contact me if you have any questions concerning these results.

Sincerely,

Bryan B. Smith, Jr., PhD



1 THE COURT You may proceed.

2 MR. HOFFNER: Thank you, Your Honor.

3 EDWIN SMITH, PLAINTIFFS' WITNESS NO. 3, SWORN

4 DIRECT EXAMINATION

5 BY MR. HOFFNER:

6 Q. Sir, please state your full name for the record.

7 A. Edwin (Indiscernible) E. Smith.

8 Q. And where are you from?

9 A. I'm from Houston.

10 Q. How are you employed?

11 A. Self-employed, EEBH and Associates.

12 Q. And what is EEBH?

13 A. EEBH and Associates is a commercial analytical laboratory
14 that takes samples from major companies, all of the Fortune
15 500s all the way to individuals and analyzes those.

16 Q. How long have they been in existence?

17 A. Since 1978.

18 Q. How many employees do you have?

19 A. 26, sir.

20 Q. What is the range of their professional experience and
21 education?

22 A. Master's degrees on down through high school graduates.

23 Q. What is the primary business of EEBH?

24 A. Chemical analytical testing. We check anything from
25 petrochemicals through soils, air, water, environmental.

to establish with a reasonable degree of scientific certainty the origin and extent of contamination responsible for property damage and increased health risks to Plaintiffs. In addition, I have reviewed the following documents in forming the opinions expressed in this affidavit:

- a. The November 30, 2001 *Expert Report of Michael Stringer, Supplement Report*, pertinent pages of which are attached hereto as Exhibit "B"
 - b. The December 3, 2001 Sanders Engineering & Analytical Services, Inc. *Environmental Study of Metals Emission at E. I. DuPont De Nemours Company, Inc. Victoria Texas Facility*, a pertinent page of which is attached hereto as Exhibit "C"
 - c. Analytical results, dated November 15, 2001, from the Texas Natural Resources Conservation Commission, of DuPont monthly metal feed rates, a true copy of which is attached hereto as Exhibit "D"
 - d. Analytical results, dated 12/11/01, of DuPont boiler stack "slag" true copies of which are attached hereto as Exhibit "E"
 - e. ATSDR *Minimal Risk Levels (MRLs) for Hazardous Substances* (updated June 1, 2001), a true copy of which is attached hereto as Exhibit "F"
 - f. ATSDR *Toxicological Profile for Chromium* (April 1993), pertinent excerpts from which are attached hereto as Exhibit "G"
 - g. ATSDR *Toxicological Profile for Manganese* (July 1992), pertinent excerpts from which are attached hereto as Exhibit "H"
5. It is my understanding that Defendant DuPont has filed a motion for summary judgment alleging that there is no reliable evidence that any emissions from their plant pose any health risk to any of Plaintiffs in this case. It is also my understanding that Defendant DuPont has alleged that Plaintiffs have failed to prove that any emissions from their plant pose an "extreme risk", defined as "the likelihood of serious injury to the plaintiff". I have been asked by Counsel for Plaintiffs to respond specifically to these two allegations.
6. The dust collected from a roof area on the Stephenson's property was found (Exhibit "E") to contain barium at 5.0 times the roof dust background level, chromium at 2.4 times the roof dust background level, copper at 3.6 times the roof dust background level, lead at 3.7 times the roof dust background level, selenium at more than 3 times the roof dust background level, zinc at 15 times the roof dust background level, and manganese at nearly 20 times the roof dust background level, with all of these elements significantly above soil levels in the area. Accordingly, it is more likely than not that these contaminants were deposited in the Stephenson roof dust as the direct result of emissions from the DuPont plant. Airborne particulates and/or aerosols containing these elements (probably as the oxides, hydroxides, carbonates and/or sulfates) pose inhalation health risks that may be additive or, in some cases, the result of synergistic action. I will limit my comments in this affidavit to just two

of these elements, chromium and manganese, as examples of significant and, indeed, "extreme" health risks to Plaintiffs.

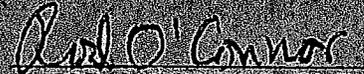
7. Using a generally accepted air modeling program, based upon DuPont's "100% Feed Rate Limit", Sanders Engineering & Analytical Services, Inc. concluded (Exhibit "C") that a highest 8 hour concentration of chromium at the Stephenson Ranch was approximately 9.40 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$), i.e., $9.4 \times 10^{-5} \text{ mg}/\text{m}^3$. According to the TNRCC report of November 15, 2001 (Exhibit "D"), the chromium content of the boiler feed streams averaged only 0.89% of the Feed Rate Limit. Thus, a more likely highest 8 hour concentration of airborne chromium at the Stephenson Ranch, if the TNRCC data are correct and truly representative, would be $8.4 \times 10^{-5} \text{ mg}/\text{m}^3$.
8. It is more likely than not that most, if not all, of the chromium emitted from a high temperature combustion would be in the +VI oxidation state, as the oxide, and that the hydrophilic nature of this oxide would cause it to be present in a high humidity environment, typical of the Victoria, Texas area, as an aerosol. The Minimal Risk Level (MRL) for chromium (VI) aerosol (Exhibit "F") is $5 \times 10^{-5} \text{ mg}/\text{m}^3$ for intermittent inhalation. Accordingly, Plaintiffs were, more likely than not, exposed intermittently to airborne chromium at about 17 times the MRL (i.e., $\text{RR} = 17$). This can only be interpreted as an "extreme" risk ratio, for damage to the respiratory system (see also Exhibit "G").
9. As additional evidence for the exposure to airborne chromium (VI) aerosols, it is my understanding that the Stephensons have experienced major corrosion problems of window screens and paint, which is consistent with exposure to oxidizing agents such as chromium (VI). Such corrosion is of itself a "nuisance", but it is also an indicator of probable "extreme" risk for respiratory system damage.
10. Sanders Engineering & Analytical Services, Inc. was unable to calculate a meaningful concentration of airborne manganese from "Feed Rate Limits", since DuPont's permit apparently disregards manganese, even though analysis (Exhibit "E") of the "slag" coating of DuPont boiler stacks shows high manganese. Thus, assuming that both chromium and manganese - containing particles settled at about the same rate (likely, since the two elements have very similar atomic weights), then the ratio of airborne manganese to airborne chromium should be about the same as the ratio of manganese to chromium in the roof dust (Exhibit "B"), i.e.,

$$C_{\text{Mn(air)}} / C_{\text{Cr(air)}} = 921 \text{ ppm} / 26 \text{ ppm}$$

From which it follows that the concentration of manganese, when the chromium concentration is $8.4 \times 10^{-5} \text{ mg}/\text{m}^3$ (paragraph 7 above), is about $3.0 \times 10^{-3} \text{ mg}/\text{m}^3$.

11. The Minimal Risk Level for manganese (Exhibit "F") is 4×10^3 mg/m³. Accordingly, Plaintiffs were more likely than not exposed intermittently to airborne manganese at about 75 times the MRL (i.e., RR = 75). This can only be interpreted as an "extreme" risk ratio, for neurological damage (see also Exhibit "F").
12. It is, therefore, my opinion, to a reasonable degree of scientific certainty, that there is more than sufficient evidence that some of the health problems experienced by Plaintiffs could have resulted from contaminants emitted by the DuPont plant. Moreover, Plaintiffs have been exposed to airborne manganese sufficient to cause neurological damage, including symptoms similar to Parkinson's Disease, with the concern over possible long term development of such symptoms almost certain to create fear and anxiety."

FURTHER AFFIANT SAITH NOT

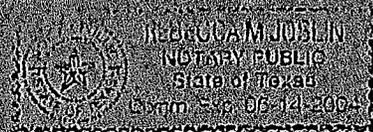

ROD O'CONNOR, Ph.D.

SWORN TO AND SUBSCRIBED BEFORE ME this 2nd day of January, 2002


Notary Public, State of Texas

My commission expires

6-14-2004



1 Q. Doctor, would you please state your full name?

2 A. Arch I. Carson.

3 Q. And where do you reside?

4 A. At 5247 Imogene Street in Houston, Texas.

5 Q. And how long have you lived in Houston, Texas?

6 A. Eleven years.

7 Q. And what is your college background?

8 A. I went to college at Rensselaer Polytechnic Institute in
9 Troy, New York, in engineering. And then in engineering and
10 biological sciences at the University of Cincinnati. I
11 graduated with a bachelor's degree in 1973. I then worked for
12 the university for several years, went into graduate school,
13 received a Ph.D. in environmental toxicology in 1987 and a
14 medical degree from Ohio State University in 1990. I went to
15 New York to pursue postgraduate medical education in internal
16 medicine at New York University, Bellevue Hospital in
17 Manhattan. And after that, came to Houston, where I got a --
18 finished a residency in occupational medicine at the University
19 of Texas Houston. Following my residency, I was hired as a
20 faculty member of that institution and have been since.

21 Q. And what is your current employment today?

22 A. I'm a faculty member at the University of Texas, stationed
23 in Houston at the UT School of Public Health.

24 Q. Okay.

25 A. I also have a private practice in occupational medicine

1 and toxicology.

2 Q. Are you a medical doctor?

3 A. I am.

4 Q. And what is your speciality?

5 A. Occupational medicine and medical toxicology.

6 Q. And do you teach courses at the University of Texas?

7 A. Yes, I do.

8 Q. What courses do you teach?

9 A. I teach a regular course in occupational and environmental
10 health, a regular course in occupational respiratory disease, a
11 regular course in workplace safety, and I'm a regular lecturer
12 at the toxicology series, as well as a number of other courses
13 there.

14 Q. And explain to the jury what board certified means.

15 A. It is a recognition by my peers that I have the
16 educational qualifications and experience necessary to be able
17 to practice efficiently and correctly in my chosen field. In
18 this case, I'm board certified in occupational medicine by the
19 American Board of Preventive Medicine.

20 Q. You're not board certified in pulmonary, are you?

21 A. No, I'm not.

22 Q. Okay. Explain to the jury what ATSDR is.

23 A. ATSDR stands for the Agency for Toxic Substances and
24 Disease Registry. It's an organization of the Government which
25 is designed to, among other things, pull together all of the