

US EPA ARCHIVE DOCUMENT



I-D.52

PETROCHEMICALS
Victoria Plant
P.O. Box 2626
Victoria, Texas 77902

March 19, 1996

MAR 25 1996

Regulatory Reinvention Pilot Projects
FRL-5197-9
Water Docket
Mail Code 4101
U.S. Environmental Protection Agency
401 M Street, S.W.
Washington DC 20460

Dear Agency:

Enclosed are four copies of a Regulatory Reinvention (XL) Pilot Project application for DuPont's Victoria Texas site.

Following a review with the Texas Natural Resource Conservation Commission Dan Pearson, Executive Director, sent a letter of support for the proposal to David Gardner of the USEPA. The proposal has also been reviewed by a group assembled by Rob Lawrence in the USEPA Region VI office. This group also supported the proposal.

As suggested by Region VI personnel, we have enclosed three simple flowsheets showing (1) current waste water handling process, (2) our future arrangement based upon technology currently developed, and (3) after implementation of this XL pilot.

Based upon our experience with the two above mentioned agency visits, we believe that a personal discussion might help explain this somewhat complex proposal. Therefore, we would appreciate the opportunity to review this submittal with you and answer any questions you might have.

Thank you in advance for your assistance in this endeavor.

Sincerely,

F.W. Farnsworth
SHE Manager

cc: Ed Clark
Texas Natural Resources Conservation Commission
P.O. Box 13087
Austin TX 78711-3087

Rob Lawrence (6EN-XP)
U.S. Environmental Protection Agency
Region VI
1440 Ross Ave
Dallas TX 75202

"Safety is my Responsibility"

Better Things for Better Living

Opp + 3 ATT (C)

**REGULATORY REINVENTION (XL) PILOT PROJECT
PROPOSAL
DUPONT - VICTORIA PLANT**

PURPOSE:

To provide treatment of a listed waste in a manner which will allow DuPont to discontinue underground injection.

PROPOSAL:

Grant authority to treat a listed hazardous waste (multi-source landfill leachate--F039) concurrently with non-listed hazardous wastes without creating additional listed wastes as would result from the "mixture and derived from rules" (40 CFR 261.3 (a) (2) (iii), 261.3 (c)(2)(i)).

BENEFITS:

DuPont has committed over 100 million dollars to a major pollution prevention initiative at the Victoria Texas Plant, resulting in a significantly improved environmental posture. Granting the requested authority will result in another improvement -- the total elimination of the use of underground injection at the site in an economical, environmentally sound manner.

BACKGROUND:

The DuPont Victoria Plant site is a world class manufacturing site, producing over 25% of the world's supply of Nylon intermediates (Adipic Acid and Hexamethylene diamine), along with premium grades of ethylene-vinyl acetate copolymers. The site has operated in an environmentally conscious manner for 45 years.

DuPont, as a Company, has made a commitment to "drive to zero waste generation at the source", and as a step in that process, to "drive toward zero emissions". (Reference attached)

As measured by the commonly used Toxic Release Inventory standards, the Victoria site has reduced air emissions by over 80% (1994 vs. 1987). Overall emissions, which include substantial quantities disposed of in federally approved, and State regulated, underground injection wells, have been reduced by over 30%.

The next step in the site's progress towards the zero emissions goal is a major pollution prevention initiative involving reduction, recovery, and re-use of all forms of waste generated. This initiative includes some twelve distinct process changes which consist of

- waste elimination through process change
- creation of co-products for sale
- waste reduction through segregation and pretreatment
- segregation and destruction of some waste materials allowing the fuel values to be recovered, and
- waste treatment of by-products which today cannot be economically recovered.

A total investment of more than \$100 million dollars is expected to achieve a 95% reduction in TRI emissions (over 20 million pounds per year) -- about 80% of which is source reduction. Total hazardous waste will be reduced by over 8 billion pounds per year.

Included in the projects required to achieve these results is a state-of-the-art biological treatment facility for final water purification. Also included in the scope is a constructed wetlands, designed to treat effluent water beyond discharge standards and as a wildlife area for community enjoyment. Use of this facility to treat listed wastes would result in the biological treatment facility effluents being classified as listed hazardous waste, essentially preventing beneficial use of effluent water and biosolids, as well as precluding an economical constructed wetland. Therefore, DuPont will continue to require underground injection for this stream.

There are NO components of this leachate stream which are incompatible with our state-of-the-art biological treatment facility. Thus, with authority requested in this XL project, DuPont could treat its small listed waste stream concurrently with other wastes, eliminate underground injection, reduce waste stored underground and significantly reduce waste treatment and disposal costs.

DuPont is aware of the pending HWIR process, as well as, the proposed Region VI delisting process, but this process does not allow relief. The leachate stream can be hazardous as generated, and thus must be treated. It can be biologically treated in the manner proposed.

TECHNICAL DESCRIPTION

DuPont's Victoria Plant effluent water is permitted under the Environmental Protection Agency's NPDES permit #TX0006050 and the Texas Natural Resources Conservation Commission's water permit #00476 issued 9/29/92 and 9/2/94 respectively.

In order to start construction of the waste water treatment system portion of the site's pollution prevention program, an Amendment to the Texas water permit was submitted on 8/4/95. (An application for revision of the NPDES permit has been discussed with the EPA, Region VI and alignment achieved to delay this submittal until processing of the State permit is well underway). Since current regulations make it economically impractical to include listed wastes in the waste water system, these permits do not include concurrent processing of the small waste stream coded F039.

All technical descriptions included herein are included in, or the basis for, the Texas water permit amendment and are believed to accurately reflect the site's actual and projected performance. Salient data from this application is given below. More complete data can be provided upon request.

Flow of hazardous waste landfill leachate is expected to vary with the percentage of the operative cell which has been filled/covered, and with rainfall, but will average 2 gallons per minute (yearly average) with a maximum daily flow of 20 gpm. Flow from the new biotreatment unit will average 3200 gpm (of which 1150 gpm is fresh raw water used for utility service in the treatment unit) and peak daily rates will be 6400 gpm.

Key compositional parameters (average annual concentrations in mg/L) of the landfill leachate and the projected biotreatment plant influent water are:

<u>Pollutant</u>	<u>Biotreatment Feed</u>	<u>Leachate</u>
Biochemical Oxygen Demand	5838	350
Chemical Oxygen Demand	9573	623
Total Organic Carbon	2720	141
Ammonia-Nitrogen	36	56

These concentrations show the relatively low level of contamination in the leachate stream, but more graphic are the relative quantities since the volume of the biotreatment feed stream is so much larger than the leachate stream. Listed below are the average annual quantities in pounds per day.

<u>Pollutant</u>	<u>Biotreatment Feed</u>	<u>Leachate</u>
Biochemical Oxygen Demand	155,812	9
Chemical Oxygen Demand	255,280	16
Total Organic Carbon	72,595	4
Ammonia-Nitrogen	960	1

Semiworks testing indicates that over 90% of the leachate carbon will be oxidized to carbon dioxide and water when treated with the other waste water streams.

PROPOSED ACTIONS TO INSURE PROTECTION OF THE ENVIRONMENT

- * Documentation of project progress will be via current reporting requirements of SARA and the Texas Pollution Prevention Plans, as well as the voluntary Clean Texas 2000 program. As such, no additional paperwork or reporting is envisioned.
- * Upon approval of this XL demonstration project, DuPont will modify its permit application to incorporate concurrent treatment of the F039 waste. DuPont will not request an increase in any of the effluent characteristics as part of this modification.

**REGULATORY REINVENTION (XL) PILOT PROJECT
PROPOSAL
DUPONT - VICTORIA PLANT**

PROPOSAL IN TERMS OF EPA CRITERIA

1. ENVIRONMENTAL RESULTS:

Granting approval for concurrent treatment of a small amount of listed hazardous waste with a major waste water system will result in DuPont at Victoria being able to completely discontinue underground injection.

Elimination of underground injection via this "XL" Project is only possible when coupled with pollution prevention projects DuPont currently plans, costing over \$100 million and reducing TRI emissions by more than 20 million pounds/year--mostly via source reduction.

2. COST SAVINGS:

Granting the requested approval would eliminate an annual \$540,000 operating cost for continued underground injection of the listed waste stream (one on-line well plus a backup and all necessary pretreatments facilities). Also avoided will be about \$500,000 of new investment to ensure continued processability of this stream without the streams which are being removed. Attempts to find a cost effective, environmentally superior process for handling this listed waste stream have been unsuccessful.

Both the EPA and the TNRCC would benefit by eliminating the cost of field auditing of Victoria wells and the associated quality assurance testing, and through the elimination of report processing costs.

3. STAKEHOLDER SUPPORT:

DuPont at Victoria has a long history of good relationships with their neighbors and of open dialogue with residents of local communities. As judged by Community Advisory Panel reactions, community surveys, and through routine discussions with members of the community, elimination of underground injection of hazardous wastes will be well supported. Note the appended comment from a local mayor following public discussion of our initiative.

About 50 people were invited to a meeting of environmentally conscious local citizens in November 1995. The meeting revealed strong support of the pollution prevention program. DuPont was encouraged to completely exit deepwells and to find means to put water and solid products from waste treatment into beneficial use. Educational discussions have been held with local community governing bodies, the river authority, and industrial neighbors.

The pollution prevention program has been reviewed with Texas Natural Resources Conservation Commission personnel. They strongly support the DuPont program as an important part of their Clean Texas 2000 initiative. They support the adoption of this XL Project to completely eliminate underground injection. Dan Pearson, the Executive Director, has issued a letter of support to David Gardner of the EPA.

4. INNOVATION/MULTIMEDIA POLLUTION PREVENTION:

Ninety-nine and nine tenths percent (99.9%) of current hazardous waste injection will be eliminated by DuPont investment. Adoption of this "XL" project would allow total elimination of underground injection at the site. Without this "XL" project, or a successful research and development initiative, two of eleven underground injection wells will remain in operation to handle this 0.1% of the total waste load.

5. TRANSFERABILITY:

This "XL" pilot will demonstrate the Regulatory Agency's ability to support initiatives when they make sense even though they deviate from normal requirements. It also demonstrates that "listed wastes" can be "delisted" in ways other than currently allowed without harm to the environment.

DuPont will share the success of this "XL" Project with all parties who think a similar arrangement may be of value to them.

6. FEASIBILITY:

There are no significant technical, environmental, or operation issues with concurrently processing this listed waste stream in this particular waste water treatment plant.

7. MONITORING, REPORTING, EVALUATION:

This project's results will be measurable by annual TRI reporting, and through the TNRCC's Clean Texas 2000 program which is measured by the Texas Pollution Prevention Plans.

Startup of the concurrent processing would be in the 1998/9 period. Upon startup performance of the "XL" project will be reported in the site's annual Texas Pollution Prevention Report.

8. SHIFTING OF RISK BURDEN:

There is no Environmental Justice issue related to this project and no new worker safety issues are created.

ATTACHMENTS:

- * The DuPont Commitment
- * Clean Texas documentation
- * Press coverage of the Seadrift meeting

The DuPont Commitment

Safety, Health and the Environment

We affirm to all our stakeholders, including our employees, customers, shareholders and the public, that we will conduct our business with respect and care for the environment. We will implement those strategies that build successful businesses and achieve the greatest benefit for all our stakeholders without compromising the ability of future generations to meet their needs.

We will continuously improve our practices in light of advances in technology and new understandings in safety, health and environmental science. We will make consistent, measurable progress in implementing this Commitment throughout our worldwide operations. DuPont supports the chemical industry's Responsible Care® and the oil industry's Strategies for Today's Environmental Partnership as key programs to achieve this Commitment.

Highest Standards of Performance, Business Excellence

We will adhere to the highest standards for the safe operation of facilities and the protection of our environment, our employees, our customers and the people of the communities in which we do business.

We will strengthen our businesses by making safety, health and environmental issues an integral part of all business activities and by continuously striving to align our businesses with public expectations.

Goal of Zero Injuries, Illnesses and Incidents

We believe that all injuries and occupational illnesses, as well as safety and environmental incidents, are preventable, and our goal for all of them is zero. We will promote off-the-job safety for our employees.

We will assess the environmental impact of each facility we propose to construct and will design, build, operate and maintain all our facilities and transportation equipment so they are safe and acceptable to local communities and protect the environment.

We will be prepared for emergencies and will provide leadership to assist our local communities to improve their emergency preparedness.

Goal of Zero Waste and Emissions

We will drive toward zero waste generation at the source. Materials will be reused and recycled to minimize the need for treatment or disposal and to conserve resources. Where waste is generated, it will be handled and disposed of safely and responsibly.

We will drive toward zero emissions, giving priority to those that may present the greatest potential risk to health or the environment.

Where past practices have created conditions that require correction, we will responsibly correct them.

Conservation of Energy and Natural Resources, Habitat Enhancement

We will excel in the efficient use of coal, oil, natural gas, water, minerals and other natural resources.

We will manage our land to enhance habitats for wildlife.

Continuously Improving Processes, Practices and Products

We will extract, make, use, handle, package, transport and dispose of our materials safely and in an environmentally responsible manner.

We will continuously analyze and improve our practices, processes and products to reduce their risk and impact throughout the product life cycle. We will develop new products and processes that have increasing margins of safety for both human health and the environment.

We will work with our suppliers, carriers, distributors and customers to achieve similar product stewardship, and we will provide information and assistance to support their efforts to do so.

Open and Public Discussion, Influence on Public Policy

We will promote open discussion with our stakeholders about the materials we make, use and transport and the impacts of our activities on their safety, health and environments.

We will build alliances with governments, policy makers, businesses and advocacy groups to develop sound policies, laws, regulations and practices that improve safety, health and the environment.

Management and Employee Commitment, Accountability

The Board of Directors, including the Chief Executive Officer, will be informed about pertinent safety, health and environmental issues and will ensure that policies are in place and actions taken to achieve this Commitment.

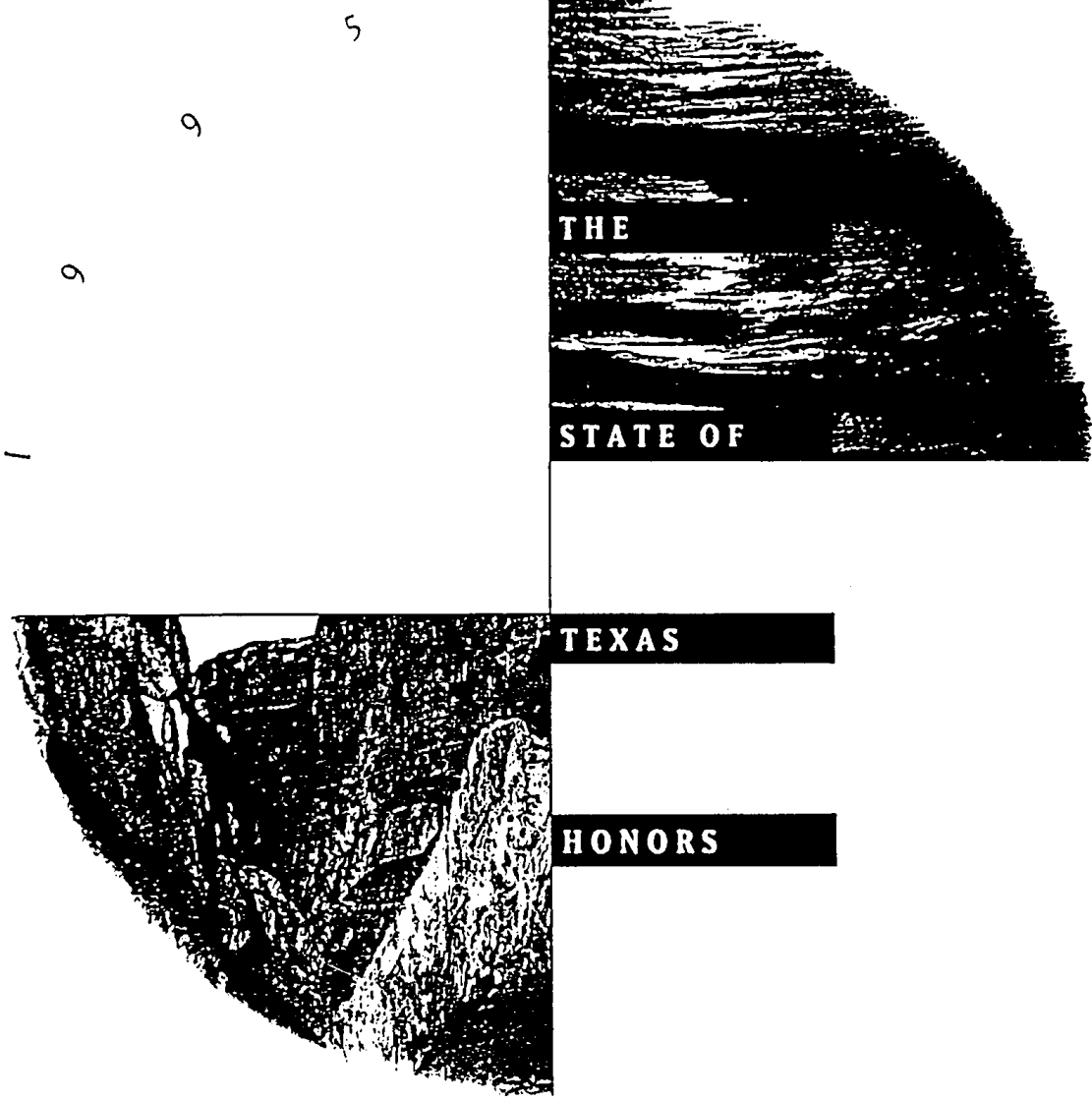
Compliance with this Commitment and applicable laws is the responsibility of every employee and contractor acting on our behalf and a condition of their employment or contract. Management in each business is responsible to educate, train and motivate employees to understand and comply with this Commitment and applicable laws.

We will deploy our resources, including research, development and capital, to meet this Commitment and will do so in a manner that strengthens our businesses.

We will measure and regularly report to the public our global progress in meeting this Commitment.

• Replaces November 1971 Policy
July 1994





*E. I. Du Pont De Nemours,
Victoria*

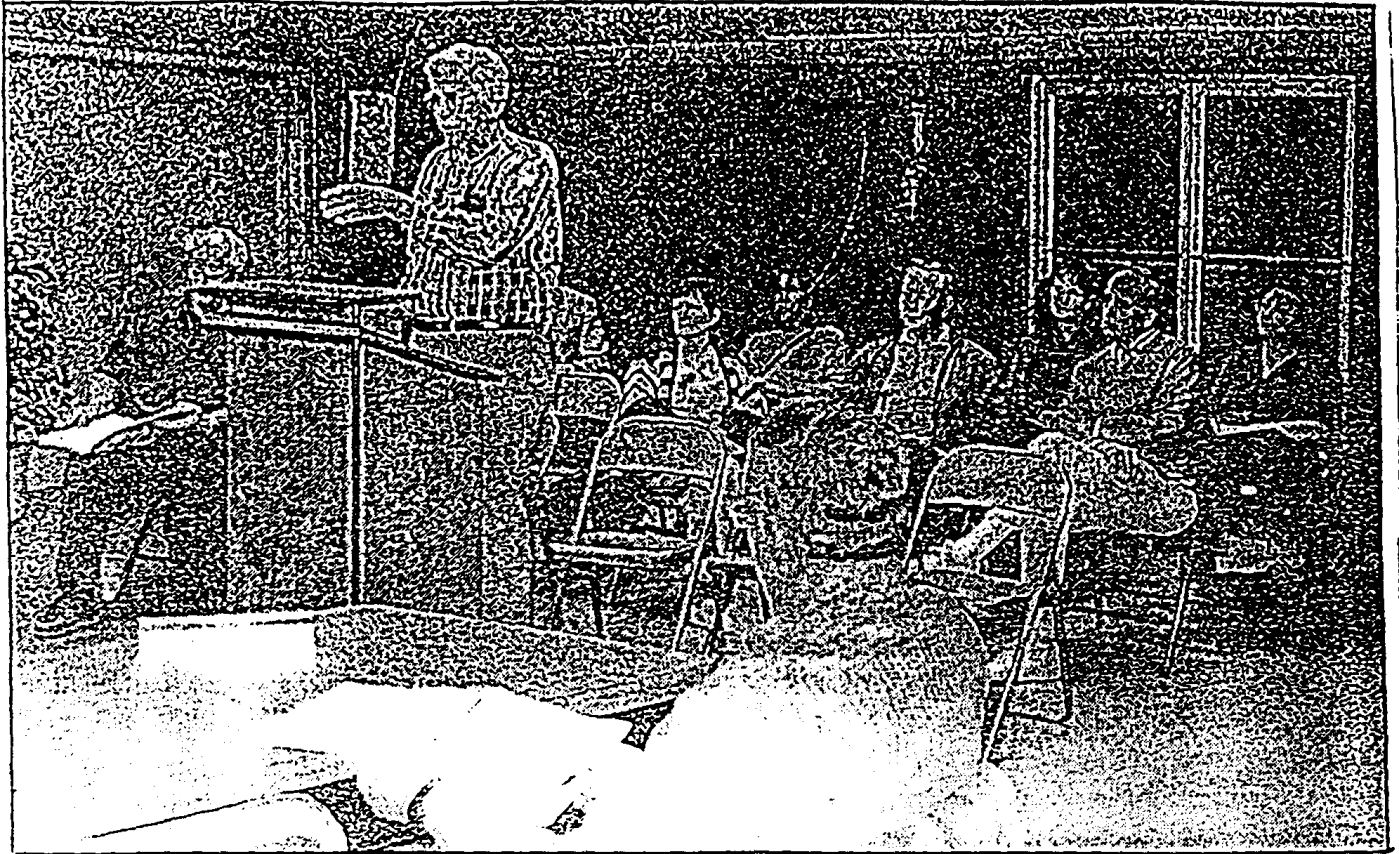
C L E A N I N D U S T R I E S 2 0 0 0 M E M B E R
FOR TAKING CARE OF TEXAS THROUGH OUTSTANDING EFFORTS IN
ENVIRONMENTAL PROTECTION AND POLLUTION PREVENTION.

GEORGE W. BUSH, GOVERNOR, STATE OF TEXAS

JOHN HALL, CHAIRMAN, TEXAS NATURAL RESOURCE CONSERVATION COMMISSION



SATURDAY, JANUARY 13, 1996



A touchy issue

Bill Farnsworth of Dupont explains to Seadrift residents why his company plans to emit treated water into the Guadalupe River, which empties into San Antonio Bay, the source of livelihood for Seadrift fishermen. The plant conducted a workshop Wednesday to explain Dupont's plan to build a water treatment plant. (Wave staff photo)

Dupont says water treatment plant is most feasible solution

By Charlyn Finn
Wave News Editor

SEADRIFT — Representatives of the E. I. Dupont plant at Bloomington assured members of the Seadrift City Council Wednesday that a proposed water treatment plant, which will replace underground injection wells, is the most economical and environmental feasible solution.

Construction work on the water treatment plant will commence in late 1996.

Plant officials conducted a

public workshop in response to a Seadrift City Council resolution requesting the plant to adopt a zero emission into water policy. The council had been requested to approve the resolution by Diane Wilson of Calhoun Resource Watch. Wilson, a shrimper, is concerned because the plant plans to build a water treatment plant and to release the treated water of the plant into the Guadalupe River. The river empties into San Antonio Bay, where Wilson and other Seadrift shrimpers earn their living.

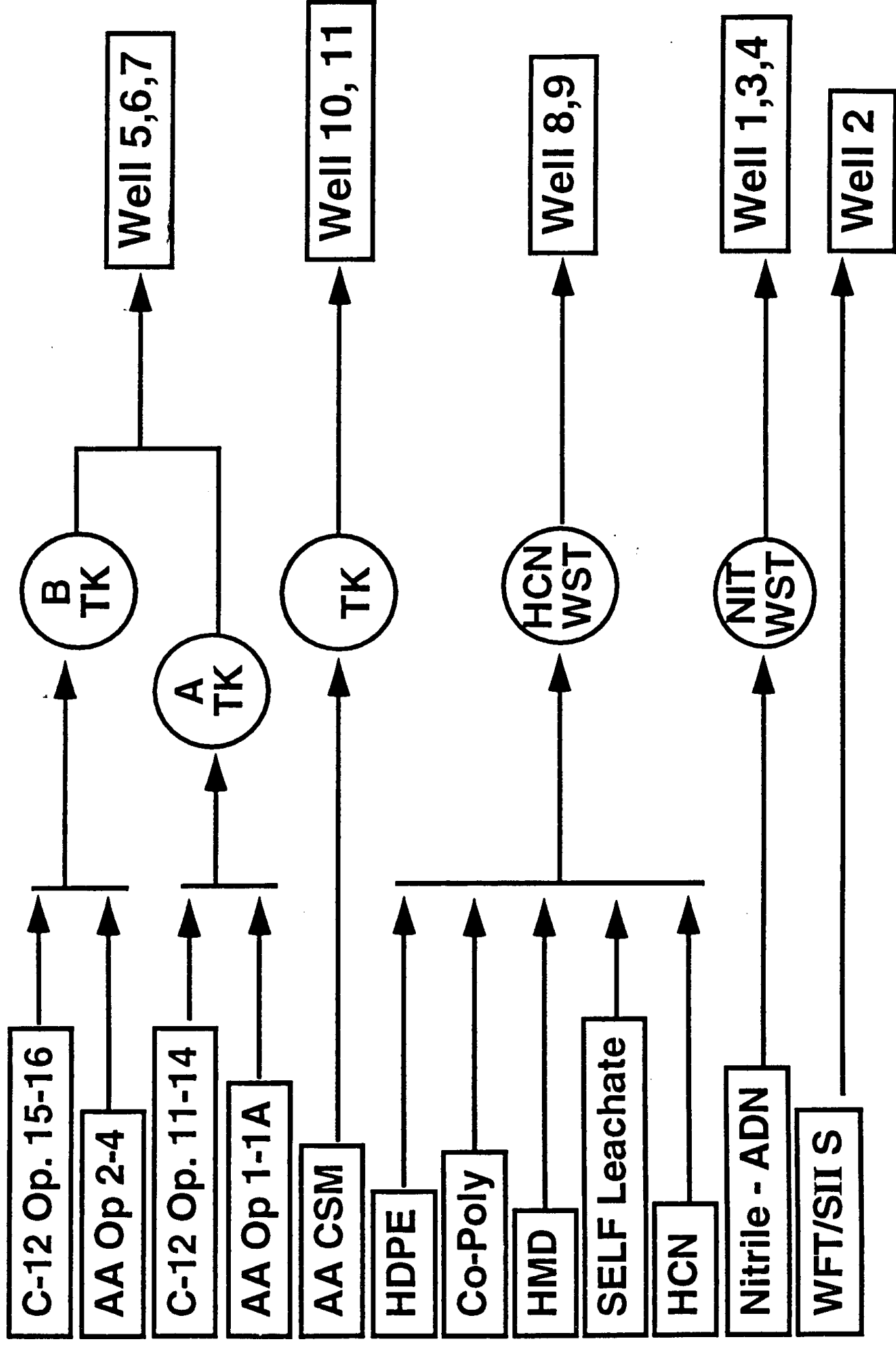
The river is a major source of the area water supply. The City of Port Lavaca and many rural residents in Calhoun County purchase their water from the Guadalupe/Blanco River Authority.

Bill Farnsworth of Dupont said Wednesday that his company has offered to conduct an information workshop for the City of Port Lavaca but the city has not accepted the plant's offer.

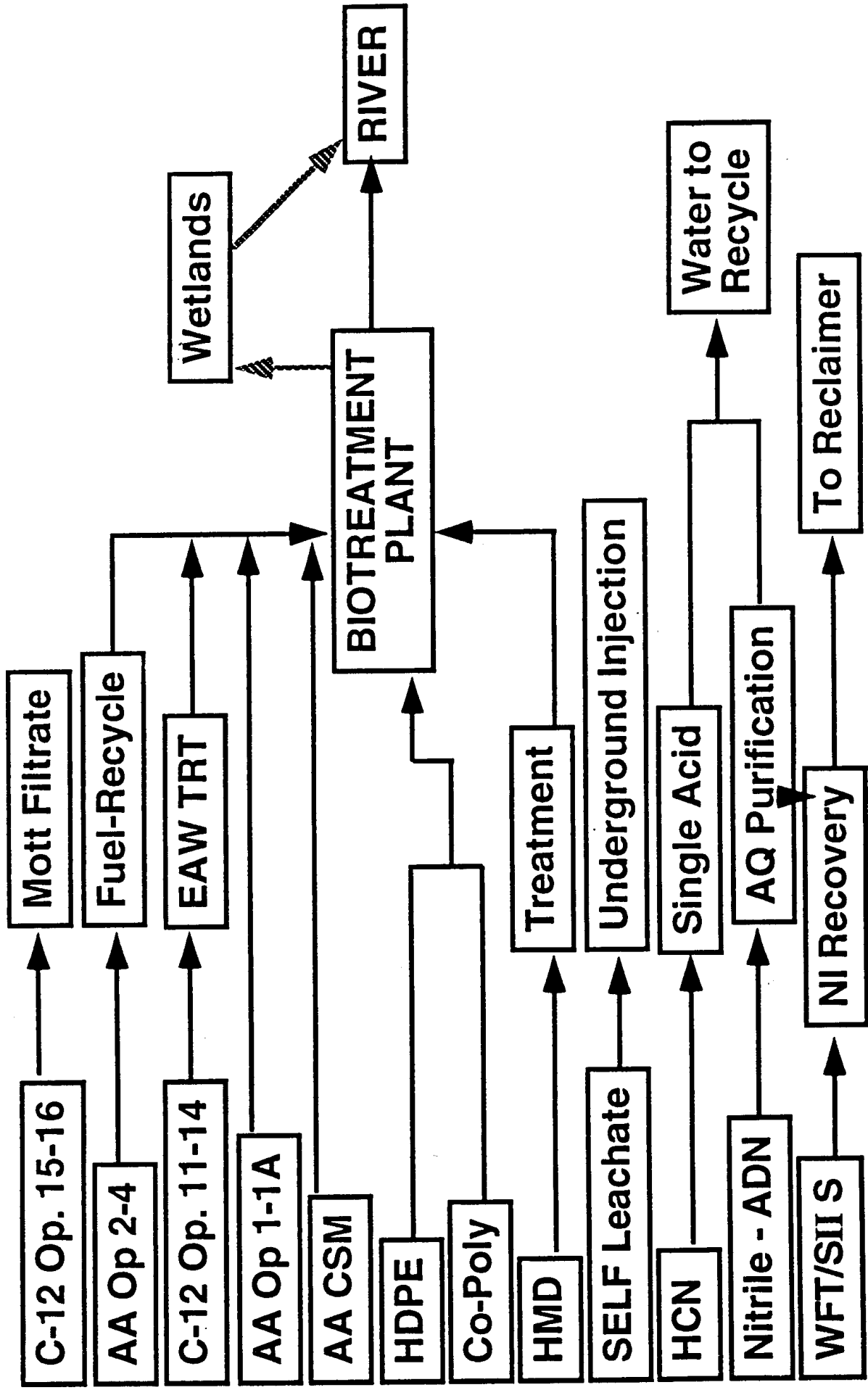
Dupont is a major worldwide producer of nylon.

(See DUPONT Page 2A)

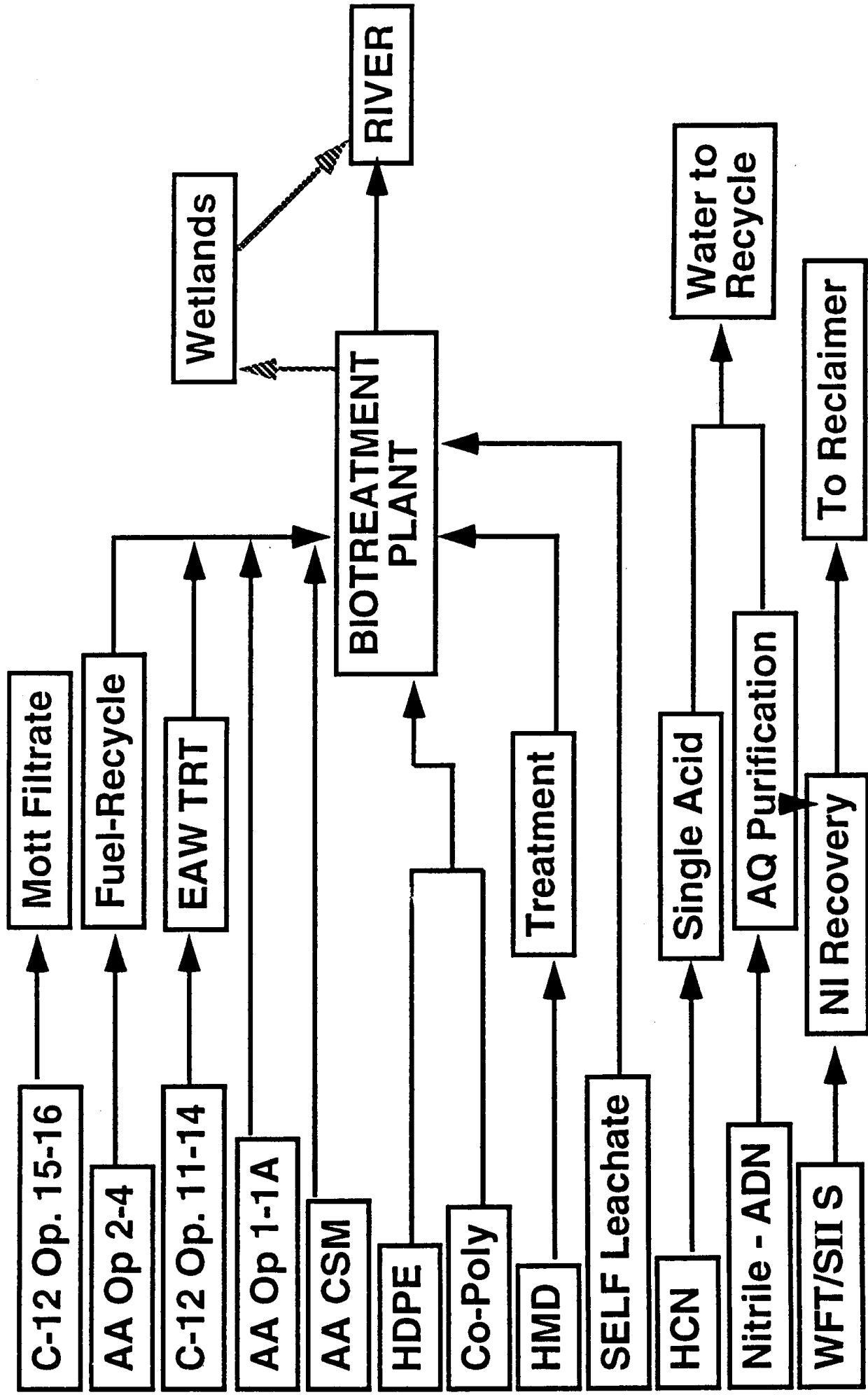
DuPont Victoria Plant - Current Wastewater Process



Wastewater Management Program- Current Plan



Wastewater Management Program - With XL Pilot



Barry R. McBee, *Chairman*
R. B. "Ralph" Marquez, *Commissioner*
John M. Baker, *Commissioner*
Dan Pearson, *Executive Director*

MAR 22

TO: SON KESSU

TEXAS NATURAL RESOURCE CONSERVATION COMMISSION

Protecting Texas by Reducing and Preventing Pollution

March 14, 1996

MAP

Mr. David Gardner
Assistant Administrator
Office of Policy, Planning & Evaluation
US Environmental Protection Agency
401 M Street SW
Washington DC 20460

Dear Mr. Gardner:

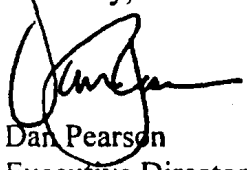
The Texas Natural Resource Conservation Commission (TNRCC) has reviewed and fully supports the Project XL proposal submitted by E. I. DuPont de Nemours for its Victoria facility. This proposal seeks an exemption from the "mixture and derived from rules" for a listed hazardous waste multi-source landfill leachate stream. This regulatory flexibility will allow this waste stream to be bio-treated concurrently with non-listed hazardous waste, without creating additional listed waste, and will eliminate the need for deep-well injection of this waste. The project demonstrates that equivalent environmental benefits can be achieved without the burden imposed by current regulations.

DuPont and the TNRCC recognize that the proposed Hazardous Waste Identification Rule has been published and that this rule was proposed for the primary purpose of exiting similar low-risk wastes from the Subtitle C system. However, DuPont would like to take a proactive stance and move ahead with its voluntary commitment to "drive toward zero emissions" without further delaying the environmental benefits associated with the facility's overall construction projects.

DuPont has a commendable record of environmental compliance in Texas and has undertaken voluntary initiatives to reduce the waste it generates. As a member of the TNRCC's Clean Industries 2000 program, DuPont Victoria has committed to reducing its TRI emissions by at least 60% by the year 2000 -- from 1987 levels. This represents TRI emissions reductions totaling 18 million pounds with reductions of nitric acid, ammonia, cyclohexane, ethylene and vinyl acetate.

The TNRCC appreciates this largely voluntary effort and the efforts by DuPont towards overall environmental citizenship. We would encourage approval of the DuPont Project XL by the EPA.

Sincerely,



Dan Pearson
Executive Director

DP:ecg