Date 12 - 12 - 18 FILING

IN RE: PETITION FOR SPECIAL HEARING *

W/S of Shipyard Road, 1,136' c/line of

Tin Mill Road

(600 Shipyard Road)

15th Election District 7th Council District

SPS Limited Partnership, LLLP, Legal Owner
Ecron SP Corporation, Contract Lessee *
Petitioners

BEFORE THE

ZONING COMMISSIONER

OF

BALTIMORE COUNTY

Case No. 07-192-SPH

FINDINGS OF FACT AND CONCLUSIONS OF LAW

This matter comes before the Zoning Commissioner for consideration of a Petition for Special Hearing filed by SPS Limited Partnership, LLLP, Legal Owner of the subject property and Ecron SP Corporation, Contract Lessee (Petitioner), through its attorney, Robert A. Hoffman, Esquire. Petitioner filed a petition for special hearing, pursuant to Section 500.6 of the Baltimore County Zoning Regulations (B.C.Z.R.), to confirm that an ethanol plant is permitted as a matter of right within the MH-IM Zone. Ecron proposes to construct an ethanol processing plant on an approximately 54.06 acre leased portion of the former Sparrows Point Shipyard located at 600 Shipyard Road. The subject property and proposed plant are more particularly described on the site plan submitted, which was accepted into evidence and marked as Petitioner's Exhibit 1.

At the requisite public hearing, Robert A. Hoffman, Esquire and Patricia A. Malone, Esquire appeared as attorneys for Petitioner. Several representatives from Ecron SP Corporation also appeared in support of the petition, including Dr. Boris Maslov, CEO of Ecron and Joseph Zembles, Vice President of Ecron. On behalf of Daft-McCune-Walker, Inc., the engineering and land planning firm responsible for the preparation of the site plan for this property, the following individuals also appeared: Barbara Kernan, Vice President & Director

of Marketing & Public Affairs, Mitchell Kellman, Director of Zoning Services, and Eric Hadaway, Director of Environmental Services.

In addition, at the hearing, Ecron presented or had available several expert witnesses, including Dr. Antonio Moreira, an expert in the field of chemical engineering and currently Vice Provost for Academic Affairs at University of Maryland Baltimore County; Mickey Cornelius, expert traffic engineer with The Traffic Group, Inc.; and representatives from ICM, Inc., a company specializing in the design, construction, and support of ethanol plants. Three individuals also appeared as interested persons: Harry Wujek, Hope Janicki, and Russell Donnelly.

At the beginning of the hearing, Mr. Hoffman briefly identified the question presented to me for determination. As Mr. Hoffman explained, Ecron is asking for a determination as to the appropriate use category for the proposed ethanol plant. The possible options identified by Mr. Hoffman within the MH (or Manufacturing, Heavy) Zone are: "brewery" (B.C.Z.R. Section 256.2); "distilling of liquor and malt manufacture" (B.C.Z.R. Section 256.2); "other industrial or manufacturing use" (B.C.Z.R. Section 256.3); or "heavy chemical manufacturing" (B.C.Z.R. Section 256.4). The first three categories of uses identified are permitted as a matter of right within the MH Zone, assuming compliance with certain specified distance requirements, and the last of these uses is only permitted upon the approval of a Petition for Special Exception. It is my task, therefore, to determine which of these use categories applies to the proposed ethanol plant.

On behalf of Ecron, Dr. Maslov provided a brief description of the process for making fuel ethanol. As Dr. Maslov explained, ethanol or ethyl alcohol is a clear, colorless liquid. Ethanol is made from corn and is produced through a fermentation and distillation process. As outlined on the Ethanol Production flow chart introduced as Petitioner's Exhibit 4, the first step

of the process is to grind the corn. Water is then added, and the mixture is fermented, causing the conversion of starch into sugar. The fermented mixture is then distilled into alcohol. Excess water is then removed leaving the pure alcohol or ethanol. As Dr. Maslov explained, up to this point, this process is identical to the production of beverage alcohol.

An additive, however, is then mixed into the ethanol to "denature" it, making it unfit for human consumption. Each of these steps will occur at the proposed Sparrows Point ethanol plant. Dr. Maslov expects that the plant will produce 100 million gallons per year of ethanol with an average daily production of 280,000 gallons.

In addition to producing ethanol, the ethanol-making process creates "by-products" that will be collected and sold by Ecron. One is a grain mash called "distillers' grain" that is used as animal feed. The other is carbon dioxide, which is captured and sold for use in carbonated beverages, dry ice, etc. This system is very efficient; as Dr. Maslov confirmed, even the process water is collected and reused. Having provided a detailed description of the process, Dr. Maslov stated his opinion that the process involved in making ethanol is very similar to a brewery or distillery and does not involve the manufacture of "heavy chemicals," which would require special exception approval.

To demonstrate more definitively that the ethanol plant is not involved in the manufacture of "heavy chemicals," Ecron presented the testimony of Dr. Moreira, an expert in the field of chemical engineering. As Dr. Moreira explained, the term "heavy chemical," as found in B.C.Z.R. Section 256.4, is an old term that refers not simply to the quantity of chemical being manufactured, but, rather, to the quality of that chemical.

As he explained, "heavy chemicals" are acids, salts, or sodas manufactured in large quantities in rather crude or impure states that are designed to be used in other types of chemical or manufacturing processes. Dr. Moreira provided sulfuric acid as an example of a

"heavy chemical." By contrast, the production of ethanol, which is closer to the process of liquor distilling or beer making, involves what he described as a natural fermentation process and results in a very pure end product.

Dr. Moreira's explanation is consistent with the definition of "heavy chemical" found in Webster's Third New International Dictionary:

heavy chemical – a chemical produced and handled in large lots (as a ton or more a day) and often in a more or less crude state – used esp. of acids (as sulfuric acid), alkalies, and salts (as aluminum sulfate) – compare FINE CHEMICAL.

See Petitioner's Exhibit 7. The Baltimore County Zoning Regulations refer to this resource for the meaning of undefined terms. B.C.Z.R. Section 101.

Additionally on this issue, Ecron presented the testimony of Mitchell Kellman, an expert on the application and interpretation of the Baltimore County Zoning Regulations. Mr. Kellman confirmed that, from his experience and the testimony presented, the ethanol plant should be classified as either a distillery or else should fall within the "other industrial or manufacturing use" category.

In addition to opining on the use category, Mr. Kellman also confirmed that the proposed plant will far exceed any requirements contained in B.C.Z.R. Section 256.2 or 256.3 regarding maintaining a setback distance from any residential or business zone. In presenting this testimony, Mr. Kellman measured and confirmed these distances on the 1000' Scale Baltimore County Zoning Map entered into evidence as Petitioner's Exhibit 3.

Lastly, Ecron also provided a letter from Baltimore County's Zoning Review Office confirming its agreement that this proposed plant qualifies under the "catch-all" category of "other industrial or manufacturing use." See Exhibit 11.

Having considered all of the evidence and testimony presented on this issue, I am persuaded, particularly by the testimony of Dr. Moreira, that the ethanol plant will not be

engaged in the manufacture of "heavy chemicals." The testimony on this point was strong and was not refuted. In fact, Mr. Donnelly graciously provided his own opinion that this use was the manufacture of a "fine chemical" not a "heavy chemical."

I find that the proposed ethanol processing plant falls within the category of "other industrial or manufacturing use" under B.C.Z.R. Section 256.3 and is permitted by right. While the process of making ethanol is very similar to a distillery or a brewery, the plant's purpose is not to produce a product fit for human consumption, therefore, I do not find distillery or brewery to be the appropriate category for this use. It is for these reasons that I find the appropriate use category for the ethanol plant to be the "catch-all" category under Section 256.3. From the testimony of Mr. Kellman and my own examination of Petitioner's Exhibit 3, it is evident that the proposed plant will meet or exceed the minimum distance requirements from any residential zone and from any BL, BM, or MR Zone.

Lastly, an issue was raised regarding the location of the proposed plant within the Chesapeake Bay Critical Area. As Mr. Hadaway confirmed, the property has been designated an "intensely developed area" or IDA. Being within the Chesapeake Bay Critical Area, before I rule on a zoning application, I am required to have received from the Department of Environmental Protection and Resource Management (DEPRM) the Chesapeake Bay Critical Area findings required pursuant to B.C.Z.R. Section 500.14. I have confirmed that the appropriate finding is contained within the file. In summary, DEPRM has made appropriate findings regarding the improvement of water quality and habitat. Petitioner has, therefore, demonstrated its entitlement to approval of the requested relief, and I will grant the Petition for Special Hearing.

Pursuant to the Zoning Regulations of Baltimore County, the advertising and posting of the property, and public hearing held thereon, for the reasons set forth above, the Petition for Special Hearing shall be granted.

THEREFORE, IT IS ORDERED by the Zoning Commissioner of Baltimore County this day of December, 2006, that the Petition for Special Hearing, pursuant to B.C.Z.R. Section 500.6, seeking confirmation that an ethanol manufacturing plant is a use permitted by right in the MH-IM Zone under Section 256.3 of the Baltimore County Zoning Regulations, is hereby GRANTED, subject to the following restrictions:

- 1. Petitioner may apply for building permits and be granted same upon receipt of this Order; however, Petitioner is hereby made aware that proceeding at this time is at its own risk until such time as the 30-day appellate process from this Order has expired. If, for whatever reason, this Order is reversed, the relief granted herein shall be rescinded.
- 2. Compliance with the environmental regulations set forth in the Zoning Advisory Committee (ZAC) comments submitted by DEPRM, dated November 21, 2006 and December 1, 2006, copies of which are attached hereto and made a part hereof.
- 3. Compliance with the ZAC comments submitted by the Bureau of Development Plans Review relative to Chesapeake Bay Critical Areas regulations and appropriate floodplain and B.O.C.A. regulations for the protection of wetlands and floodplains. A copy of this comment has also been attached hereto and made a part hereof.

Any appeal of this decision must be taken in accordance with Section 32-3-401 of the

Baltimore County Code.

Zoning Commissioner of Baltimore County

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JAMES T. SMITH, JR. County Executive

December 12, 2006

WILLIAM J. WISEMAN III Zoning Commissioner

Robert A. Hoffman, Esquire Patricia A. Malone, Esquire Venable, Baetjer & Howard, LLP 210 Allegheny Avenue Towson, MD 21204

RE:

PETITION FOR SPECIAL HEARING

W/S of Shipyard Road, 1,136' c/line of Tin Mill Road

(600 Shipyard Road)
15th Election District - 7th Council District

SPS Limited Partnership, LLLP, Legal Owner; Ecron SP Corporation, Contract Lessee - Petitioners

Case No. 07-192-SPH

Dear Mr. Hoffman and Ms. Malone:

Enclosed please find a copy of the decision rendered in the above-captioned matter. The Petition for Special Hearing has been granted with restrictions, in accordance with the attached Order.

In the event any party finds the decision rendered is unfavorable, any party may file an appeal to the County Board of Appeals within thirty (30) days of the date of this Order. For further information on filing an appeal, please contact the Department of Permits and Development Management office at 887-3391.

Zoning Commissioner for Baltimore County

WJW:dlw

Tom Lingan, Venable, Baetjer & Howard, LLP, 210 Allegheny Avenue, ¢: Towson, MD 21204

Dr. Boris Maslov, 6701 Democracy Blvd., Ste. 300, Bethesda, MD 20817

Mr. Joseph Zembles, 28061 Harria, Mission Viejo, CA 92692

Barbara Kernan, Mitchell Kellman, Eric Hadaway, Daft-McCune-Walker, Inc., 200 East Pennsylvania Avenue, Towson, MD 21286

Dr. Antonio Moreira, 1000 Hilltop Circle, Baltimore, MD 21250

Mr. Mickey Cornelius, The Traffic Group, Inc., 9900 Franklin Square Drive, Suite H, Baltimore, MD 21236

Mr. Harry Wujek, 9005 Chesapeake Avenue, Baltimore, MD 21219

Ms. Hope Janicki, 8021 Shore Road, Baltimore, MD 21229

Mr. Russell Donnelly, 2114 Oak Road, Baltimore, MD 21219

Korey Hutchinson, South Lemay Avenue, Fort Collins, CO 80537

Mr. Bill Roddy, 301 N. First, Colwich KS 67030

Mr. Al Clemens, 2858 Riva Road, Annapolis, MD 21401

Mr. Dimitry Belyanov, 807 N. Lincoln Street, Arlington, VA 22201

Mr. Gary Lipsky, 2 Jessie Court, Reisterstown, MD 21136

DEPRM; Development Plans Review; People's Counsel; Case File



Pention for Special Hearing

to the Zoning Commissioner of Baltimore County

for the property located at _	600 Shipyard Road	
which is	presently zoned MH-IM	

This Petition shall be filed with the Department of Permits and Development Management. The undersigned, legal owner(s) of the property situate in Baltimore County and which is described in the description and plat attached hereto and made a part hereof, hereby petition for a Special Hearing under Section 500.7 of the Zoning Regulations of Baltimore County, to determine whether or not the Zoning Commissioner should approve

SEE ATTACHED

Property is to be posted and advertised as prescribed by the zoning regulations. i, or we, agree to pay expenses of above Special Hearing, advertising, posting, etc. and further agree to and are to be bounded by the zoning regulations and restrictions of Baltimore County adopted pursuant to the zoning law for Baltimore County. I/We do solemnly declare and affirm, under the penalties of perjury, that I/we are the legal owner(s) of the property which is the subject of this Petition. <u>Contract Purchaser/Lessee:</u> Legal Owner(s): SEE ATTACHED SEE ATTACHED Name - Type or Print Name - Type or Print Signature Signature Address Telephone No. Name - Type or Print City State Zip Code Signature Attorney For Petitioner: Address Telephone No. Robert A. Hoffman Name Type or Print City State Zip Code Representative to be Contacted: Signature Venable LLP Robert A. Hoffman Company Name 210 Allegheny Avenue 494-6200 410) 210 Allegheny Avenue (410) 494-6200 Address Telephone No. **Address** Telephone No. Towson, Towson, 21204 21204 Maryland Maryland City State Zip Code City Zip Code State OFFICE USE ONLY ESTIMATED LENGTH OF HEARING _ Case No. <u>67-192-594</u> UNAVAILABLE FOR HEARING JF Date 10/26/06 Reviewed By __

REV 9/15/98

PETITION FOR SPECIAL HEARING

600 Shipyard Road Baltimore, Maryland 21219

Petition for Special Hearing to confirm that an ethanol manufacturing plant is permitted as a matter of right within the MH-IM Zone.

PETITION FOR SPECIAL HEARING

SIGNATURE PAGE

600 Shipyard Road Baltimore, Maryland 21219

LEGAL OWNER:

SPS Limited Partnership LLLP

Sparrows Point Shipyard, LLC, General Partner

by Vincent F. Barletta, Manager

c/o Whirlwind Capital, LLC

40 Shawmut Road, Suite 200

Canton, Massachusetts 02021

PETITION FOR SPECIAL HEARING

SIGNATURE PAGE

600 Shipyard Road Baltimore, Maryland 21219

CONTRACT PURCHASER:

Boris A. Maslov, PhD, CEO

ECRON SP Corporation

6701 Democracy Boulevard, Suite 300

Bethesda, Maryland 20817

(301) 214-4042

Description

To Accompany Zoning Petition

For Special Hearing

West Side of Shipyard Road

Fifth Election District, Baltimore County, Maryland



Daft•McCune•Walker, Inc.

200 East Pennsylvania Avenue
Towson, Maryland 21286
http://www.dmw.com
410 296 3333
Fax 410 296 4705

A Team of Land Planners,

Landscape Architects,

Golf Course Architects,

Engineers, Surveyors &

Environmental Professionals

Beginning for the same at a point 130 feet West of the centerline of Shipyard Road and said point being 1,136 feet South of the centerline of Tin Mill Road running the following courses:

	-	
1.	S83°20′2.21″W	242.65
2.	S7°06′25.53″E	183.63
3.	S83°20′2.21″W	538.48
4.	S7°06′25.53″E	372.52
5.	S82°28'17.98"W	137.85
6.	S15°08′17.67″E	87.46′
7.	S26°40'39.51"	26.59'
8.	S48°06′22.19″	34.31'
9.	S35°32′7.52″	8.36'
10.	S71°33′9.42″E	8.35′
11.	S42°08′53.03″E	61.34'
12.	S50°47′42.3″E	48.30'
13.	S60°57′21.56″E	79.37′
14.	S86°23′50.41″E	40.92'
15.	N82°07′11.04″W	63.53'
16.	N87°19′54.49″E	50.09′
17. ·	N82°06′1.24″E	55.86′
18.	N88°31′39.49″E	49.34′
19.	S42°22′13.96″E	44.43'
20.	S29°50′25.35″E	70.97′
21.	S32°25′34.5″E	35.94′
22.	S13°21′42.5″E	35.85′
23.	S39°13′4.93″E	73.63′
24 .	S61°57′51.49″E	31.33′
25.	S57°47′7.02″E	94.78′
26.	N35°01′49.05″W	28.95′
27.	N66°17′1.22″W	36.94′
28.	N48°06′20.04″W	51.57′

29.	N53°15′37.88″W	67.47'
30.	N65°19′51.8″W	32.52'
31.	N56°52′43.98″W	44.19'
32.	N54°3′11.81″W	34.73'
33.	N84°28′2.36″W	13.73′
34.	S77°02′38.46″W	41.78′
35.	S48°52′55.22″W	15.15'
36.	S12°40′34.53″W	17.95′
37.	S7°14′14.73″E	14.35'
38.	S7°20′44.52″W	25.25'
39.	N19°14′12.83″E	46.23'
4 0.	N47°29′22.39″E	24.13'
4 1.	N69°56′38.06″E	14.20′
42 .	N80°47′58.56″E	30.46'
43.	N53°34′8.91″E	8.69'
44 .	S52°13′14"E	327.20
4 5.	S54°28′58″E	126.50′
46.	S08°37′31″W	71.78′
47.	S15°32′03″E	71.03′
4 8.	S06°09′14″E	800.98'
49.	N82°10′39″E	25.56′
50.	S06°01′58″E	380.80'

Back to point of beginning containing 54.06 acres of land, more or less.

October 26, 2006

DMW Project No. 06058.B

This description is for zoning purposes only and not for conveyance.



THE SPICERIES THE PERSON ** T. Hds-201 512 No.21857 07-めしじょしつつ AMOUNT \$325 YELLOW - CUSTOMER ACCOUNT_ ... , MARYLAND & FINANCE RECEIPT 25.24 PINK - AGENCY & FII BALTIMORE COUNTY ڻ ن NENAB MISCELLANEOUS 16/c OFFICE OF BUDGET 4 ママツ DISTRIBUTION WHITE - CASHIER 2 2 RECEIVED FROM: DATE

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CASHIER'S VALIDATION

NOTICE OF ZONING REARING

The Zoning Commissioner of Baltimore County, by authority of the Zoning Act and Regulations of Baltimore County will hold a public hearing in Towson, Maryland on the property identified herein as follows:

Case: #07-192-SPH
600 Shipyard Road
W/side of Shipyard Road at the distance of 1,136 feet s/of centerline of Tin Mill Road
15th Election District --- 7th Councilmanic District Legal Owner(s): SPS Limited Partnership, LLLP, Sparrows Point Shipyard, LLC

œ,

Contract Purchaser: Boris A. Maslov, PhD, CEO, Special Hearing to confirm that an ethanol manufacturing plant is permitted as a matter of right within the MH-IM zone. 2006 at 2:00 p.m. In 19, 401 Bosley Ave-Hearling: Tuesday, November 28, 201 Room 407, County Courts Building, nue, Towson 21204.

WILLIAM J. WISEMAN, III

Zoning Commissioner for Baltimore County
NOTES: (1) Hearings are Handicapped Accessible; for
special accommodations Please Contact the Zoning Commissioner's Office at (410) 887-4386.
(2) For information concerning the File and/or Hearing,
Contact the Zoning Review Office at (410) 887-3391.

JT 11/671 Nov. 14

1116/ 2006

CERTIFY, that the annexed advertisement was published successive weeks, the first publication appearing ekly newspaper published in Baltimore County, Md., in the following we THIS IS TO once in each of

leffersonian X The J

- Arbutus Times
- Catonsville Times
- Owings Mills Times Towson Times
- NE Booster/Reporter County News North

Wullus

LEGAL ADVERTISING





CERTIFICATE OF POSTING

RE: Case No.: 07-192-SPH

Petitioner/Developer: BORIS A. MAZOV

PhD, CEO, ECRON 3P CORP.

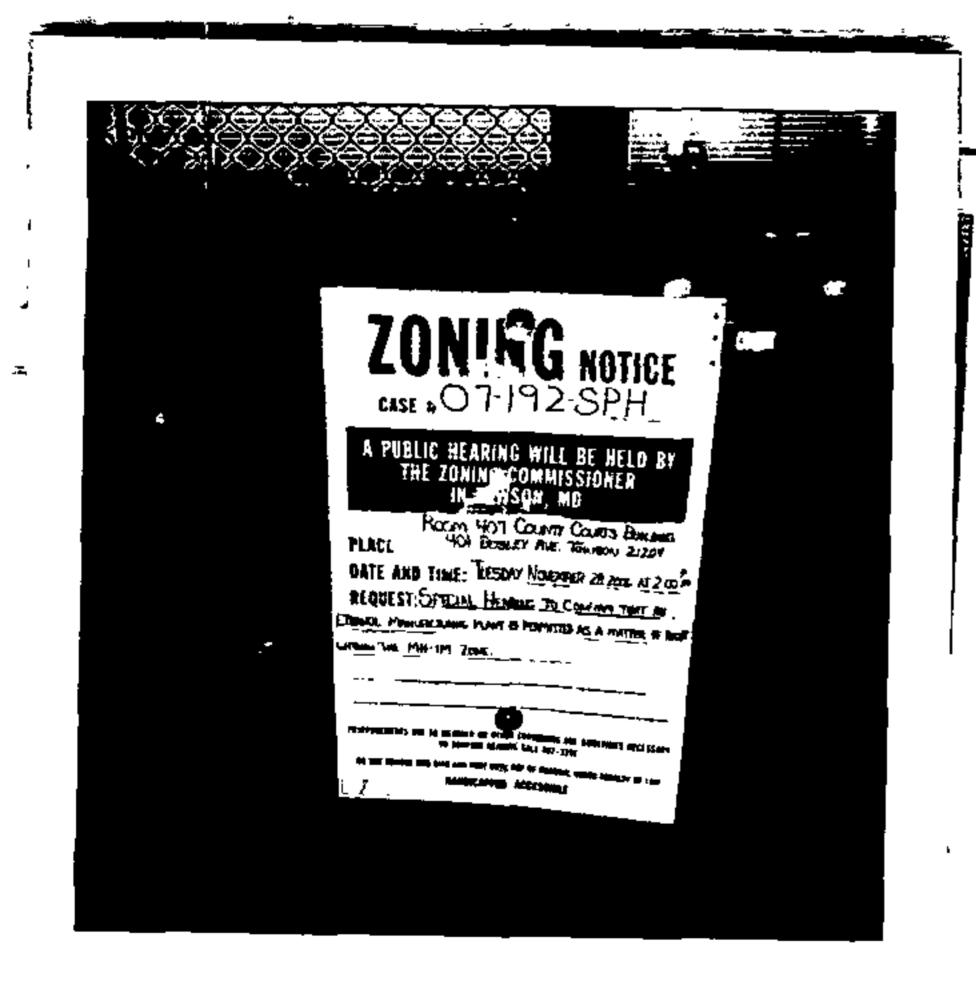
Date of Hearing/Closing: 11-28-06

Baltimore County Department of Permits and Development Management County Office Building, Room 111 111 West Chesapeake Avenue Towson, Maryland 21204

ATTN: Kristen Matthews {(410) 887-3394}

Ladies and Gentlemen:

Sincerely,



Pobert Black	11-17-00
(Signature of Sign Poster)	(Date)
SSG Robert Black	
(Print Name)	
1508 Leslie Road	
(Address)	
Dundalk, Maryland 2122	22
(City, State, Zip Code)
(410) 282-7940	•
(Telephone Number)	·

Department of Permits and Development Management

Director's Office County Office Building 111 W. Chesapeake Avenue Towson, Maryland 21204 Tel: 410-887-3353 • Fax: 410-887-5708



Baltimore County

James T. Smith, Jr., County Executive Timothy M. Kotroco, Director

November 8, 2006

NOTICE OF ZONING HEARING

The Zoning Commissioner of Baltimore County, by authority of the Zoning Act and Regulations of Baltimore County, will hold a public hearing in Towson, Maryland on the property identified herein as follows:

CASE NUMBER: 07-192-SPH

600 Shipyard Road

W/side of Shipyard Road at the distance of 1,136 feet s/of centerline of Tin Mill Road 15th Election District – 7th Councilmanic District

Legal Owners: SPS Limited Partnership, LLLP, Sparrows Point Shipyard, LLC Contract Purchaser: Boris A. Maslov, PhD, CEO, ECRON SP Corporation

Special Hearing to confirm that an ethanol manufacturing plant is permitted as a matter of right within the MH-IM zone.

Hearing: Tuesday, November 28, 2006 at 2:00 p.m. in Room 407, County Courts Building, 401 Bosley Avenue, Towson 21204 & Wednesday, December 13, 2006 at 9:00 a.m. in Room 106, County Office Building, Towson 21204

Timothy Kotroco

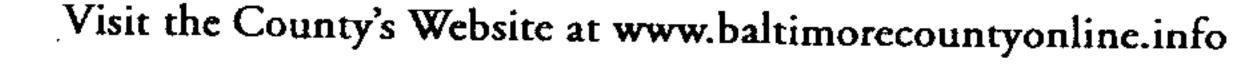
Director

TK:klm

C: Robert Hoffman, 210 Allegheny Avenue, Towson 21204
Vincent Barletta, 40 Shawmut Road, Ste. 200, Canton Massachusetts 02021
Boris Maslov, 6701 Democracy Blvd., Ste. 300, Bethesda 20817

NOTES: (1) THE PETITIONER MUST HAVE THE ZONING NOTICE SIGN POSTED BY AN APPROVED POSTER ON THE PROPERTY BY MONDAY, NOVEMBER 13, 2006.

- (2) HEARINGS ARE HANDICAPPED ACCESSIBLE; FOR SPÉCIAL ACCOMMODATIONS PLEASE CALL THE ZONING COMMISSIONER'S OFFICE AT 410-887-4386.
- (3) FOR INFORMATION CONCERNING THE FILE AND/OR HEARING, CONTACT THE ZONING REVIEW OFFICE AT 410-887-3391.





TO: PATUXENT PUBLISHING COMPANY

Tuesday, November 14, 2006 Issue - Jeffersonian

Please forward billing to:

Amy Dontell 210 Allegheny Avenue Towson, MD 21204

410-494-6244

NOTICE OF ZONING HEARING

The Zoning Commissioner of Baltimore County, by authority of the Zoning Act and Regulations of Baltimore County, will hold a public hearing in Towson, Maryland on the property identified herein as follows:

CASE NUMBER: 07-192-SPH

600 Shipyard Road

W/side of Shipyard Road at the distance of 1,136 feet s/of centerline of Tin Mill Road 15th Election District – 7th Councilmanic District

Legal Owners: SPS Limited Partnership, LLLP, Sparrows Point Shipyard, LLC Contract Purchaser: Boris A. Maslov, PhD, CEO, ECRON SP Corporation

Special Hearing to confirm that an ethanol manufacturing plant is permitted as a matter of right within the MH-IM zone.

Hearing: Tuesday, November 28, 2006 at 2:00 p.m. in Room 407, County Courts Building, 401 Bosley Avenue, Towson 21204 & Wednesday, December 13, 2006 at 9:00 a.m. Room 106, County Office Building, Towson 21204

in

WILLIAM J. WISEMAN III

ZONING COMMISSIONER FOR BALTIMORE COUNTY

NOTES: (1) HEARINGS ARE HANDICAPPED ACCESSIBLE; FOR SPECIAL ACCOMODATIONS, PLEASE CONTACT THE ZONING COMMISSIONER'S OFFICE AT 410-887-4386.

> (2) FOR INFORMATION CONCERNING THE FILE AND/OR HEARING, CONTACT THE ZONING REVIEW OFFICE AT 410-887-3391.

DEPARTMENT OF PERMITS AND DEVELOPMENT MANAGEMENT ZONING REVIEW

ADVERTISING REQUIREMENTS AND PROCEDURES FOR ZONING HEARINGS

The <u>Baltimore County Zoning Regulations</u> (BCZR) require that notice be given to the general public/neighboring property owners relative to property which is the subject of an upcoming zoning hearing. For those petitions which require a public hearing, this notice is accomplished by posting a sign on the property (responsibility of the petitioner) and placement of a notice in a newspaper of general circulation in the County, both at least fifteen (15) days before the hearing.

Zoning Review will ensure that the legal requirements for advertising are satisfied. However, the petitioner is responsible for the costs associated with these requirements. The newspaper will bill the person listed below for the advertising. This advertising is due upon receipt and should be remitted directly to the newspaper.

OPINIONS MAY NOT BE ISSUED UNTIL ALL ADVERTISING COSTS ARE PAID.

Item Number or	Case Num	nber:	07-192-	SPH	<u>. </u>
Petitioner:	Ecron	SP Co.	poration		
Address or Loca	ation:	600	Shipyard	Road	
PLEASE FORW	/ARD ADV	ERTISING	BILL TO:		
Name:	Amy	Pont	ell		
	210	Allen	theny Arc		
Address:					
Address:	To	~5a~	mb 212	24	



JAMES T. SMITH, JR. County Executive

TIMOTHY M. KOTROCO, Director
Department of Permits and
Development Management

November 20, 2006

Robert A. Hoffman Venable LLP 210 Allegheny Avenue Towson, MD 21204

Dear Mr. Hoffman:

RE: Case Number: 07-192-SPH, 600 Shipyard Road

The above referenced petition was accepted for processing by the Bureau of Zoning Review, Department of Permits and Development Management (PDM) on October 26, 2006.

The Zoning Advisory Committee (ZAC), which consists of representatives from several approval agencies, has reviewed the plans that were submitted with your petition. All comments submitted thus far from the members of the ZAC are attached. These comments are not intended to indicate the appropriateness of the zoning action requested, but to ensure that all parties (zoning commissioner, attorney, petitioner, etc.) are made aware of plans or problems with regard to the proposed improvements that may have a bearing on this case. All comments will be placed in the permanent case file.

If you need further information or have any questions, please do not hesitate to contact the commenting agency.

Very truly yours,

U. Callibal)

W. Carl Richards, Jr. Supervisor, Zoning Review

WCR:amf

Enclosures

c: People's Counsel Vincent Barletta 40 Shawmut Road, Suite 200 Canton, Massachusetts 02021 Boris Maslov 6701 Democracy Boulevard, Suite 300 Bethesda 20817





Office of the Fire Marshal 700 East Joppa Road Towson, Maryland 21286-5500 410-887-4880

County Office Building, Room 111 Mail Stop #1105 111 West Chesapeake Avenue Towson, Maryland 21204

October 31, 2006

ATTENTION: Zoning Review Planners

Distribution Meeting Of: October 30, 2006

Item Number(s): 183 through (192)

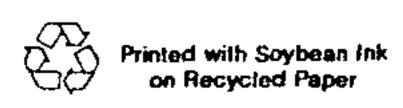
Pursuant to your request, the referenced plan(s) have been reviewed by this Bureau and the comments below are applicable and required to be corrected or incorporated into the final plans for the property.

1. The Fire Marshal's Office has no comments at this time.

Lieutenant Roland P Bosley Jr. Fire Marshal's Office 410-887-4881 (C)443-829-2946 MS-1102F

cc: File

Come visit the County's Website at www.co.ba.md.us





Robert L. Ehrlich, Jr., Gonernor Michael S. Steele, Lt. Gonernor

Robert L. Flanagan, Scoretary Neil J. Padersen, Administrator

MARYLAND DEPARTMENT OF TRANSPORTATION

Date: 00005 51, 2006

Ms. Kristen Matthews
Baltimore County Office Of
Permits and Development Management
County Office Building, Room 109
Towson, Maryland 21204

RE:

Baltimore County

Item No.7-192-5PH

600 SHIPYARD ROAD

SPARRELLS POINT SMP XIRD

PARCE SY

SPECIAL HELENARD

Dear Ms. Matthews:

Thank you for the opportunity to review your referral request on the subject of the above captioned. We have determined that the subject property does not access a State roadway and is not affected by any State Highway Administration projects. Therefore, based upon available information this office has no objection to Baltimore County Zoning Advisory Committee approval of Item No. 7-19z-5vid

Should you have any questions regarding this matter, please contact Michael Bailey at 410-545-2803 or 1-800-876-4742 extension 5593. Also, you may E-mail him at (mbailey@sha.state.md.us).

Very truly yours,

Engineering Access Permits
Division

SDF/MB





DATE: November 2, 2006

RECENT

NOV - 6 2006

ZOMEN COMPLETE PROPERTY

BALTIMORE COUNTY, MARYLAND

INTER-OFFICE CORRESPONDENCE

TO:

Timothy M. Kotroco, Director

Department of Permits and Development Management

FROM:

Arnold F. 'Pat' Keller, III

Director, Office of Planning

SUBJECT:

600 Shipyard Road

INFORMATION:

Item Number:

7-192

Petitioner:

SPS Limited Partnership, LLLP

Zoning:

MH-IM

Requested Action:

Special Hearing

SUMMARY OF RECOMMENDATIONS:

The Office of Planning has reviewed the petitioner's request and offers its support to confirm that an ethanol manufacturing plant is permitted as a matter of right within the MH-IM zone.

For further information concerning the matters stated here in, please contact Amy Mantay at 410-887-3480.

Prepared by:

Division Chief: AFK/LL: CM

3W28

BALTIMORE COUNTY, MARYLAND

RECEIVED

Inter-Office Correspondence

DEC 0 1 2006



ZONING COMMISSIONER

To:

William J. Wiseman, Hearing Officer

Date: December 1, 2006

From:

Regina Esslinger, Supervisor

Environmental Impact Review

Subject:

Ecron Ethanol Plant

600 Shipyard Road Case #07-192-SPH

Environmental Impact Review has reviewed the special hearing plan for the above referenced project. Based upon this review, we render the following Chesapeake Bay Critical Area findings according to Section 500.14 of the Baltimore County Zoning Regulations.

A. Minimize adverse impacts on water quality that result from pollutants that are discharged from structures or conveyances or that have run off from surrounding lands;

The development of the site with an ethanol plant will entail site improvements, including the removal of impervious surfaces and planting the 100-foot Critical Area buffer, that will result in improved water quality. The site is currently highly disturbed. No impacts are proposed to the wetlands on the site, and the only proposed buffer impact involves a few hundred square feet for access to an existing pier.

B. Conserve fish, wildlife, and plant habitat; and

There is very little natural habitat currently on the site. The applicants are proposing to plant the 100-foot buffer with a variety of native trees, shrubs, and grasses. The proposed buffer plantings along the entire perimeter of the site will enhance fish, wildlife, and plant habitat.

C. Be consistent with established land use policies for development in the Chesapeake Bay Critical Area which accommodate growth and also address the fact that, even if pollution is

Ecron Ethanol Plant Case #07-192-SPH December 1, 2006 Page 2

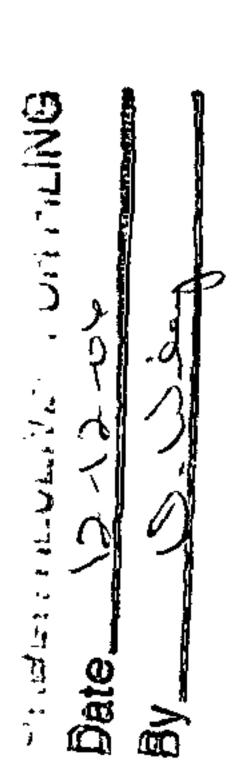
controlled, the number, movement and activities of persons in that area can create adverse environmental impacts.

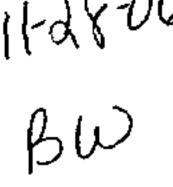
Redevelopment of an existing developed site within an Intensely Developed Area is consistent with established land use policies in the Critical Area. The existing pier and roads will remain in use; no additional roads or piers are proposed. No forest clearing or habitat impacts will occur, as the site is fully developed. Redevelopment of the existing site will help improve water quality and habitat on a degraded site and accommodate growth within an area that has been developed for decades.

If you have any questions regarding these findings, please contact me at 410-887-3980.

c: Boris Maslov, Ecron
Rob Hoffman, Venable LLP
David A.C. Carroll
David Iannucci
Pat Farr

Ecron ZP findings 12.1.06.doc/rae





BALTIMORE COUNTY, MARYLAND

Inter-Office Correspondence



MOY 3 7 2003

TO:

Timothy M. Kotroco

FROM:

Dave Lykens, DEPRM - Development Coordination 561

DATE:

November 21, 2006

SUBJECT:

Zoning Item

07-192-SPH

Address

600 Shipyard Road

(Sparrows Point Shipyard, LLC)

Zoning Advisory Committee Meeting of October 30, 2006

The Department of Environmental Protection and Resource Management has no comments on the above-referenced zoning item.

____ The Department of Environmental Protection and Resource Management offers the following comments on the above-referenced zoning item:

Development of the property must comply with the Regulations for the Protection of Water Quality, Streams, Wetlands and Floodplains (Sections 33-3-101 through 33-3-120 of the Baltimore County Code).

Development of this property must comply with the Forest Conservation Regulations (Sections 33-6-101 through 33-6-122 of the Baltimore County Code).

<u>X</u> Development of this property must comply with the Chesapeake Bay Critical Area Regulations (Sections 33-2-101 through 33-2-1004, and other Sections, of the Baltimore County Code).

Additional Comments:

Reviewer:

Regina Esslinger

Date: 11/17/06

Ďate_

S:\Devcoord\1 ZAC-Zoning Petitions\ZAC 2007\ZAC 07-192-SPH.doc

BALTIMORE COUNTY, MARYLAND

INTEROFFICE CORRESPONDENCE

TO:

Timothy M. Kotroco, Director

DATE: November 3, 2006

Department of Permits & Development

Management

FROM:

Dennis A. Kennedy, Supervisor

Bureau of Development Plans Review

SUBJECT:

Zoning Advisory Committee Meeting

For November 6, 2006 Item No. 07-192

The Bureau of Development Plans Review has reviewed the subject zoning item and we have the following comment(s).

The base flood elevation for this site is 9.4 feet Baltimore County Datum.

The flood protection elevation for this site is 10.4 feet.

In conformance with Federal Flood Insurance requirements, the first floor or basement floor must be at least 1 foot above the flood plain elevation in all construction.

The property to be developed is located adjacent to tidewater. The developer is advised that the proper sections of the *Baltimore County Building Code* must be followed whereby elevation limitations are placed on the lowest floor (*including basements*) of residential (*commercial*) development.

The building engineer shall require a permit for this project.

The building shall be designed and adequately anchored to prevent flotation, collapse, or lateral movement of structure with materials resistant to flood damage.

Flood-resistant construction shall be in accordance with the requirement of B.O.C.A. International Building Code adopted by the county.

DAK:CEN:clw

cc: File

ZAC-ITEM NO 07-192-11032006.doc

Safe Dan Same

RE: PETITION FOR SPECIAL HEARING *
600 Shipyard Road; W/S Shipyard Road,
1,136' S c/line Tin Mill Road *
15th Election & 7th Councilmanic Districts
Legal Owner(s): SPS Limited Partnership, *
LLLP, Sparrows Point Shipyard, LLC
Contract Purchaser(s): Boris A. Maslov, PhD*

ZONING COMMISSIONER
FOR

BALTIMORE COUNTY

07-192-SPH

BEFORE THE

ENTRY OF APPEARANCE

Petitioner(s)

Please enter the appearance of People's Counsel in the above-captioned matter. Notice should be sent of any hearing dates or other proceedings in this matter and the passage of any preliminary or final Order. All parties should copy People's Counsel on all correspondence sent and all documentation filed in the case.

PETER MAX ZIMMERMAN

People's Counsel for Baltimore County

CAROLE S. DEMILIO Deputy People's Counsel Old Courthouse, Room 47 400 Washington Avenue Towson, MD 21204 (410) 887-2188

CERTIFICATE OF SERVICE

I HEREBY CERTIFY that on this 6th day of November, 2006, a copy of the foregoing Entry of Appearance was mailed to, Robert A Hoffman, Esquire, Venable, LLP, 210 Allegheny Avenue, Towson, MD 21204, Attorney for Petitioner(s).

RECEIVED

NOV 0 5 2006

PETER MAX ZIMMERMAN

People's Counsel for Baltimore County

Per.....

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MARYLAND

U.S. DISTRICT COURT

2006 SEP 22 P 3: 28

AES SPARROWS POINT LNG, LLC

and

MID-ATLANTIC EXPRESS, LLC,

V.

Plaintiffs,

CIVIL ACTION NO.

JAMES T. SMITH, JR., County Executive, Baltimore County,

WILLIAM J. WISEMAN, III, Zoning Commissioner, Baltimore County,

and

BALTIMORE COUNTY, MARYLAND,

Defendants.

COMPLAINT FOR DECLARATORY AND INJUNCTIVE RELIEF

AES Sparrows Point LNG, LLC and Mid-Atlantic Express, LLC (collectively, "AES"), by their attorneys, James W. Bartlett, III, Semmes, Bowen & Semmes, Randolph Q. McManus, and Baker Botts L.L.P., seek a declaration of their rights and of the legal relations of the parties under the Natural Gas Act, 15 U.S.C. § 717 et seq. ("NGA"), as amended by the Energy Policy Act of 2005, Pub. L. No. 109-58 ("EPAct 2005"). A recently enacted amendment to the Baltimore County Zoning Regulations, effective August 5, 2006, includes absolute prohibitions and limitations on the siting of liquefied natural gas ("LNG") importation facilities within the

IN THE UNITED STATES DISTRICT COURT FOR THE DISTRICT OF MARYLAND

FILED COURT COURT MARYLAND

2006 SEP 22 P 3: 28

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and

MID-ATLANTIC EXPRESS, LLC,

V,

Plaintiffs,

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THE SUN 11-28-06

Ethanol push spurs plans for Md. plants

Three sites in running for state's first factory to convert corn to auto fuel

BY TOM PELTON (SUN REPORTER)

A national boom in the use of ethanol has lured eight companies into a race to build Maryland's first factory to convert corn into car fuel.

Two of the proposals would put ethanol plants on the Baltimore area's industrial waterfront in 2008 — one on Sparrows Point and the other in Curtis Bay. A third, on the Eastern Shore, will be considered today when Somerset County commissioners vote on a zoning change to allow a \$136 million ethanol plant.

"Producing ethanol is quite compatible with what people already do in Somerset County — they raise grain here, and we're an agricultural industry," said Mack Shelor, a manager with Chesapeake Renewable Energy LLC, which plans to manufacture 50 million gallons of ethanol a year along U.S. 13 north of Pocomoke City.

"You can either make ethanol or you can buy oil from Arabs, which sends dollars offshore," Shelor said. He said his company's plant could be built by 2009 if he lines up financing and receives permits from the state and county.

The surge of interest in the once-marginal fuel is driven by a desire for freedom from Middle Eastern oil and billions of dollars in federal subsidies. Increased demand for ethanol is boosting income for corn farmers and could reduce global warming pollution — but it might also translate into higher food prices for con-[Please see ETHANOL, 4A]

FITANOL [From Page 1A]

for cows and pigs. sumers, because more expensive corn means higher feeding costs for cows and pigs.

Ethanol is grain alcohol, and it's been brewed for thousands of years as the intoxicating ingredient in liquor. But the odorless liquid also burns, and as oil prices have soared, ethanol has become increasingly popular as vehicle fuel. It can be distilled from corn, wood, sugarcane, even grasswith this last form, called cellulosic ethanol, considered the most potentially promising for energy production. But grass-based fuel

is not yet in commercial produc-tion, and the industry in America is focused on corn-Brazil, the world's biggest sugar producer, has replaced about 40 percent of its vehicle fuel with grows more com than any other country, has replaced only about 3 percent of its gasoline with ethaethanol made from sugarcane. By contrast, the United States, which

Subsidies play role

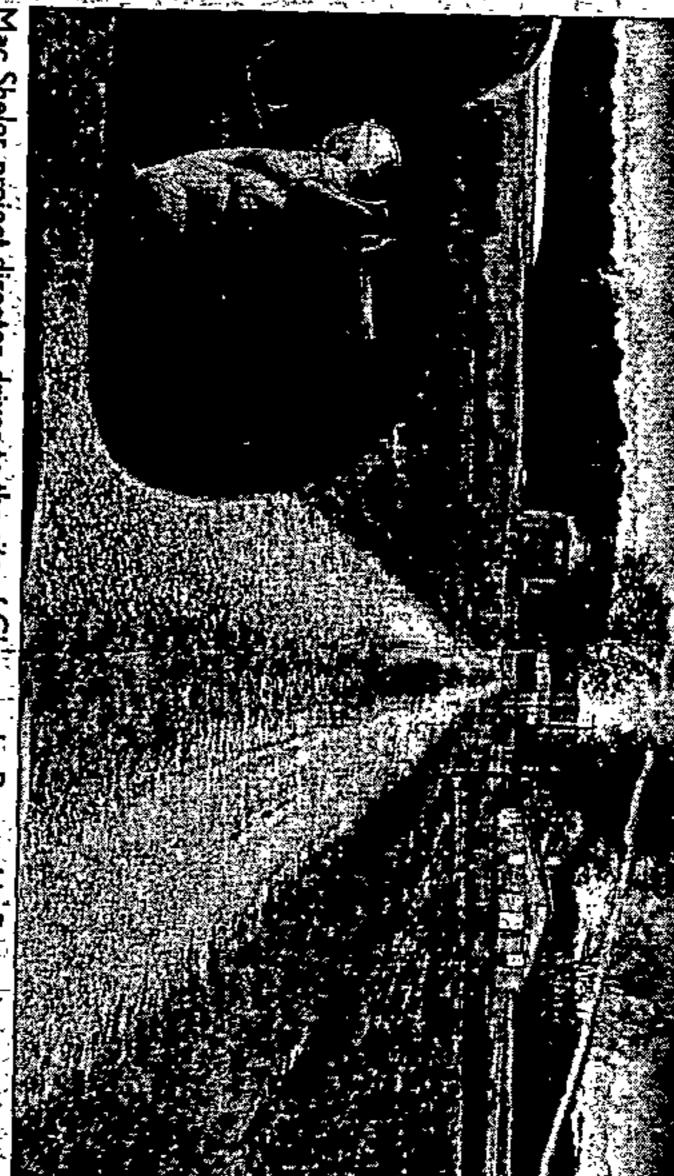
four years earlier.

And last year's total could almost double soon, Silver said, because Congress required last year that companies add 7.5 billion gallons to the nation's vehicle fuel lons to the nation's vehicle fuel ing fast, in part because of government mandates and subsidies, said David Silver, an agriculture industry analyst with J.P. Morgan Securities in New York. The 4.1 billion gallons of ethanol burned in the United States last year was four times the amount consumed four ware earlier. The demand for ethanol is grow

supply by 2012.

The main government subsidy for ethan of is a 51-cents per-gallon federal tax break for fuel companies that add distilled grain to their gasoline as Ethanol is blended into gas at a ratio of up to 10 percent in many areas of the country with air pollution problems, including most of Maryland. It is increasingly replacing a fuel additive called MTBE that has been linked to cancer in lab animals.

Three gas stations in Maryland are among the few nationally that sell nearly pure ethanol—called E85, for 85 percent ethanol.
But only 2.5 percent of the wehi-



Mac Shelor, project director, drives to the site of Chesapeake nol plant near Pocomoke City. Somerset County officials vote to KARL MERION FERRON [SUN PHOTOGRAPHER] ay on a zoning

out damaging their engines.
The rush to build corn ethanol cles in the United States can run on this concentrated form with-

financiers pulling the plug.*

reflects expectations of future markets — has soared 50 percent since September, from \$2.40 per bushel to \$3.60 this month, Silver plants in Maryland is a micro-cosm of the trend nationally, where about 50 ethanol plants are under construction and 107 more are operating. As a result, the price of corn futures — which Midwest and Maryland's Easte believes gas prices are going to main high. His company is p posing to start construction no

gram manager with the Maryland Energy Administration, said he believes no more than two or three ethanol plants will be built in Maryland. The first will proba-Point in Baltimore County I cause that project appears to further along than the others, said. bly rise next year on Sparrows Chris Rice, alternative fuel pro-"From what we know this will be the first ethanol plant on the East Coast," Maslov said. "It will get built, no matter what," he pre-Maryland Department of the Environment, which enforces federal air quality laws. He thinks he might be able to sell the corn waste left over after distillation to a poultry company as animal He said he is close to completize financing for the project and he applied for a permit from the

Oil prices affect profit

Rice said producing ethanol be-comes more profitable as oil prices rise. A few months ago, it was a lot easier to get financing for ethanol plants because gasoline prices were higher and a lot of this market hinges on gasoline prices, said Rice. If we all of a sudden get a plummeting of gas prices, you might see a lot of these

dicted

Boris Maslov, chief executive ficer of Annapolis-based Ecre from the state has applied for

spring on a \$200 million ethano plant at a former shipyard on Sparrows Point.

Maslov said the goal is to distill 110 million gallons of ethanol a year from 36 million bushels corn, shipped in by rail from the ture of ethanol," Although gasoline prices have fallen since the summer, Roy said he is determined to move ahead. *Prices move up and down ased on today's price, We feel confident abo can't change your plans

Farmers to benefit

tion that the growing use of etha-nol as a pollution-reducing gaso-line additive is driving up income corn farmers. .: Gardner, an agriculturai University

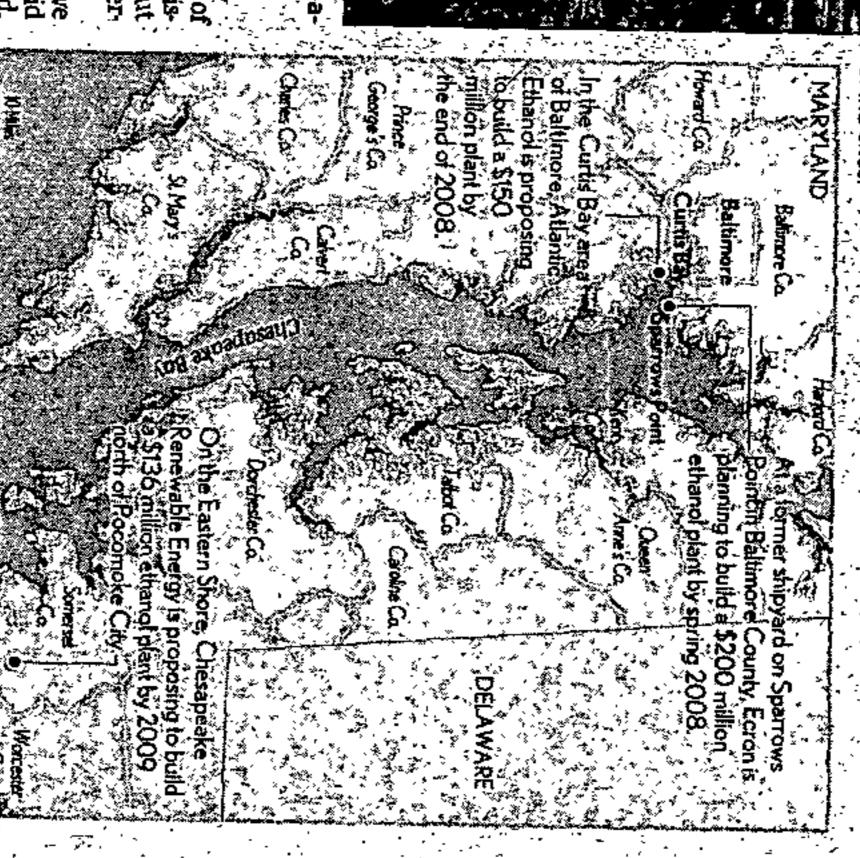
suburban sprawi e and remarks, customeating uses. ethanol plant coursets struggling farmers and perhaps help them to in business, discouraging rural areas of o Gardner said construction of Maryland's

On the other side of the harbor, Randy Roy, president of Atlantic Ethanol, said he is planning to build in 2008 a \$100 million to \$150 million ethanol plant on a former chemical plant site on ernment subsidies and mandates. But he cautioned that much the trend is being driven by go e government backs atture, away

"Ethanol could in fact power America's vehicle fleet, if we dou

Pennington Avenue in the Curti Bay area of Baltimore. Roy said the plant would pro

talking about building ethanol plants one on the Eastern Shore.



nol if that happens, the plants could stand idle and people would lose their shirts. "I think there is definitely a risk [ethanol plants] will get over-said Gardner. "I think there oversupply of

some environmentation des ethanol because when burned it produces about 15 percent less carbon dioxide than does gasoline, which could help slow global early slow global early slow global produce 70 percent less carbon di-oxide than gasoline, he said. advocacy group for the ment and other causes. other plants could potentially anol made from switch Union of Concerned Scientists, advocacy group for the enviro warming, said Jason Mark, direc-tor of vehicle programs at the i's a step in the right direction global warming," Mark said. Using 20/20 Vision. ethanol advocacy ing to Tom Collina, d run on either gasoline costs only about \$100 more designed to handle 85 mixed with up to 10 percent nol. But only about 2.5 perce seals. which can corrod Making a car that

fuel companies say they re to put more not enough there ethanol Service of the servic

From:

"Dontell, Amy L." < ADontell@Venable.com>

To:

"Debra Wiley" <dwiley@co.ba.md.us>

Date:

12/11/06 3:55:48 PM

Subject:

RE: Ecron

Debbie:

Here's what I've found....

Bill Roddy's zip code in Colwich, Kansas is 67030 Joe Zembles is at 28061 Haria Korey Hutchinson is at South Lemay Ave - no street number Dimitry Belyanov is the correct spelling

If there is anything else, let me know.

Amy

(410) 494-6244

-----Original Message-----

From: Debra Wiley [mailto:dwiley@co.ba.md.us] Sent: Monday, December 11, 2006 3:04 PM

To: Dontell, Amy L.; Kemp, Diana M.

Subject: Ecron

Hi Diana and Amy,

Per our telephone conversation, I need a little help with addresses for the Petitioners in reference to the above as follows:

Joe Zembles, Vice President of Ecron, 28061 (Harria?), Mission Viejo, Ca. 92692

Korey Hutchinson, (____) Lemay Ave., Fort Collins, CO 80537

Bill Roddy, 301 N. First, Colwich, KS (no zip code)

Dimitry (Belyanov?), 807 N. Lincoln St., Arlington, Va 22201

Thanks for any help you can provide and have a great day!!

Debbie Wiley Legal Administrative Secretary Office of the Zoning Commissioner 401 Bosley Avenue, Room 405 Towson, Md. 21204 410-887-3868

U.S. Treasury Circular 230 Notice: Any tax advice contained in this communication (including any attachments) was not intended or written to be used, and cannot be used, for the purpose of (a) avoiding penalties that may be imposed under the Internal Revenue Code or by any other applicable tax authority; or (b) promoting, marketing or recommending to another party any tax-related matter addressed herein.

PLEASE PRINT CLEARLY

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PETITIONER'S SIGN-IN SHEET

NAME	ADDRESS	CITY, STATE, ZIP	E- MAIL
Robert A. Hoffmen	240 Allenberg Are	Townson MD 21204	vatrafferm @ vorable. com
tatricie A. Malone	3		The Cover
TARVIDAC.	3	11	CAN O VEL
MICKEY CORNELIVS	9900 FRANKLIN SQ DR. STET	BALTIMORE MD 21236	rocornelius Otratheard
Mitch Kellman	200 East Remosyhama Due	70 2	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \
Antonio Moreira	1000 Hillton Girde	Baltiman, MD 21250	oreira o un bc. edu
BEISE VERIANU	3		BRIERNAW® DAW, CON
Koray Huchingon	S. Leman Dre.	is . No	Vartiking and Ching Con
Bill Roddy	301 N. First Column 25	11. K.S.	withan ratemine. com
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10C Zemble	\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	~ \\\	NOC. Lemble Occurre
Beris Maslow	दे		Bois, mislos A ecronus
Eric Hedrun-	1W 200€.	Tawsan MD	
Diwita Beljanor	807 N. Chinas 1/2 st	bull	dinitry, Belyan
(5 bry L. 88hy	2 Jessie ch	Reisherstun mo 21136	ary. Lipsky A ecron. L

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SASE N	SASE	DATE

CITIZEN'S SIGN-IN SHEET

guarraccia (a) nebenesco				
BACKO MD 21222 BALTO MD 21219 BALTO, 100, 21219				
POZI SHOKE RD 214 OAK RIND 906 GLESAPERKE AVE.				
NOPE JANICKI RUSE/ S. DOWNE/H HAKKI WWENC				

Case No.:	7-	192	-SPH
	 `		

Exhibit Sheet

Petitioner/Developer

Protestant

No. 1	Site PLAN	Earth quake Epicenter Sukvey
NI ₂ 2		20160 E 9
No. 2	AERIAL PHOTO	
No. 3	1000 Scale ZONING MAP	
No. 4	ETHANOL PRODUCTION CHART	
No. 5	ECRON-Community 1 Q+A	
No. 6	+o PDM	
No. 7	DEFINITION - HEAVY CHEMICAL Websters ->	
No. 8	ERIC HADAWAY RESUME	
No. 9	MitcHall KellmAN CHESAFEARE BAY CRITURALIA	
No. 10	Mitietter FELLMAN RESUME	
	ZONING REVIEW LETTER 10-24-06	
No. 12	MIMORANDUM DE SUPPO ECONOMIC DEPT ECONOMIC DEVELOPMENT	

Case No.:	07-192-5PH	
<u> </u>	, or a second se	

Exhibit Sheet - Continued

Petitioner/Developer

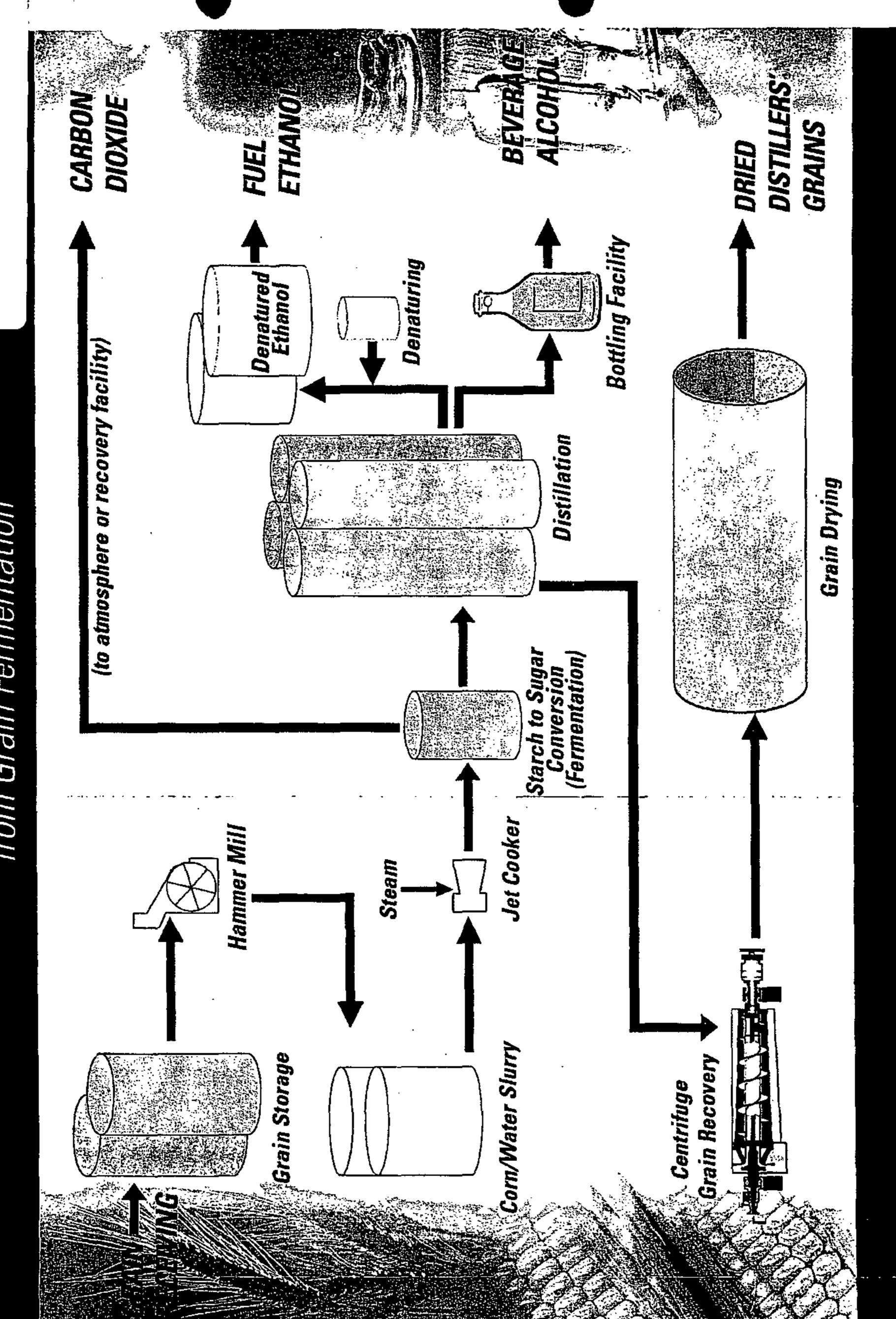
Protestant

No. 13 PESUME ANTONIO MORRIRA CHEMICAL ENGINEER No. 15 No. 16 No. 17 No. 18 No. 19 No. 20 No. 21	No. 13	RESUME_				
No. 14 No. 15 No. 16 No. 17 No. 18 No. 19 No. 20 No. 21		ANTONIO MOREIRA CHEMICAL ENGINDER				
No. 16 No. 17 No. 18 No. 19 No. 20 No. 21	No. 14					
No. 17 No. 18 No. 19 No. 20 No. 21	No. 15				-	<u> </u>
No. 17 No. 18 No. 19 No. 20 No. 21	No. 16					
No. 19 No. 20 No. 21	No. 17				<u>, , , , , , , , , , , , , , , , , , , </u>	
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No. 21	No. 19					<u> </u>
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No. 22	No. 21			<u>, , , , , , , , , , , , , , , , , , , </u>	<u></u> .	
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No. 24	No. 24			·		<u>.</u>

Grain Fermentati

PETITIONER

NO NO EXHIBIT





PETITIONER'S

EXHIBIT NO. 5

August 15, 2006

HAND-DELIVERED

Mr. Donald T. Rascoe, Deputy Director Baltimore County Department of Permits and Development Management County Office Building 111 West Chesapeake Avenue Towson, Maryland 21204

Re: Ethanol Plant – Sparrows Point Shipyard

Dear Mr. Rascoe:

I am writing to provide you with additional information regarding the proposal of Ecron SP Corporation ("Ecron") to build a manufacturing plant that produces fuel grade ethanol – a clean renewable domestic alternative to imported oil – from corn grains. The proposed facility will be capable of producing 100 million gallons of ethanol per year, satisfying about 70% of total current demand of Baltimore City and Baltimore County combined. Ethanol is "ethyl alcohol," a clear, colorless liquid, and the term "ethanol" can mean either pure ethanol, a fuel blend of 10% ethanol with 90% gasoline called E10, or a fuel blend of 85% ethanol with 15% gasoline called E85. At this time, Ecron's intentions are to produce ethanol for use in E10. All motor vehicles are capable of running on E10.

Ecron proposes to locate this facility at the Sparrows Point Shipyard within the limits of the North Point Enterprise Zone established by Baltimore County to attract high-paying jobs and significant investment to the area. We are honored to have an opportunity to participate in this development and to bring the latest technologies and their associated economic benefits to the Zone and Baltimore County as a whole.

First and foremost, Ecron wants to be a good corporate citizen, a supporter of the community, and a great neighbor. We hope that our actions to this point speak for us and differentiate us in a positive way. At the outset, we went to the Sparrows Point community and held meetings and made presentations of our early ideas and listened to the feedback. In an effort to educate the community further about ethanol, we arranged for five representatives of different community groups to travel to Iowa to visit a similar ethanol plant for a tour. As a result of this trip, we have received strong praise for the quality of our engineering and construction, the advanced level of technology, and the environmental safety and soundness of our proposed plant.

In addition to educating the community, we have listened to the community's concerns and have attempted, to the extent possible, to address those concerns in our plans. In response to

community comments, we have made several important and material changes to the proposed design, layout, and operation of the plant, which combined significantly increase the cost of the plant. We firmly believe that these changes have improved the facility beyond compare. Ecron proposes to use the latest and most advanced biotechnology developed by ICM, Inc. – premiere, largest, and most respected ethanol plant designer and builder whose designs account for more than 60% of all the ethanol plants built – and to use this company for the design, construction, and subsequent maintenance of the plant. As a result, we anticipate that this facility will be the cleanest ethanol manufacturing plant in the world.

Why Ethanol:

We are all aware of global warming and climate changes, depletion of the ozone layer, excessive use of fossil fuels, and America's addiction to oil. Energy dependency is now, more than ever, related to the nation's security. Former ways of manufacturing have left land contaminated, water and river bottoms full of hazardous sediments, and air polluted. There is still a lot of such old manufacturing in Greater Baltimore and even more so in the Enterprise Zone. It needs to be gradually replaced with new clean technologies, converted to environmentally friendly ways or operations.

The worst air pollutant of all is our cars and gasoline burning on the roads day and night. Gasoline contains the additive called MTBE – the substance known to cause cancer, destroy ozone, and – most disturbingly – forever pollute ground waters and bay waters, killing fish and aquatic life. The only viable, clean, non-polluting replacement for MTBE is ethanol, which burns clean, does not cause cancer or other negative effects and, in fact, when mixed with it, makes the gasoline burn more efficiently. For this reason, many states have already mandated ethanol blends, and the federal government has mandated a minimum ethanol blending for all states.

Domestic production of ethanol addresses the most sensitive and most important issues and concerns of national security and energy independency. It creates an alternative to the oil and natural gas, which are fossil fuels that need to be imported from politically instable areas of the word, that pollute our waters and air, and that shift our nation's trade balance into deficit costing us almost \$2 billion every day to keep fueling our cars. Renewable nature of ethanol makes tremendous impact on global warming and ozone depletion. The domestic nature of ethanol makes tremendous economic impact in the areas engaged in the value-added chain of it – the areas that need it most.

By bringing a profitable business to Sparrows Point, we can remediate the land and waters left to us by prior owners; these prior owners are long gone but we can and shall do it for our future. It is always a choice of what people want to see on the land, and we should choose a clean future for our children and our planet.

The positive economic impacts of this plant proposal are many. More state taxes from sales revenues will be generated, and employment will be created. The total project construction costs of 160 million dollars will increase the County's tax base, and the addition of 50 high-paying jobs will benefit this part of Baltimore County. Finally, we expect that an ethanol facility, at this

location, will result in a reduction in gasoline prices for all in the Baltimore Metropolitan region because of its proximity to the pumps.

How Ethanol is Made:

The ethanol manufacturing process itself is most similar to brewery operations. It involves grinding the corn, cooking it with enzymes to convert starch into sugars, fermenting sugars, and distilling ethanol from the fermented mix. The remains of the mix are dried and used as food additives for animal food in agricultural production. Carbon dioxide, which forms at the fermentation stage, is captured, liquefied, and sold to local beverage, food, and dry ice operations. The whole process uses only domestically grown renewable crops and creates animal food, fuel for cars, and food grade carbon dioxide, by-products which we hope to market to businesses within the limits of the City, County, and/or the State.

Environmental Issues:

Ecron is aware that the community is sensitive to the environmental situation on the site and the surrounding land and the condition of the Chesapeake Bay. Ecron has had an "open door policy" with the community and intends to continue this policy. Ecron has already expressed a commitment to addressing certain environmental concerns raised by the community.

In relation to water, we will repair and remediate the existing pier, which is currently deteriorating. Only small barges for local traffic within the Bay will use the pier in the same manner they currently do in the rest of the harbor, and, therefore, no dredging will be required. There will be no discharge of any nature to the Bay from the proposed operations.

In relation to land, only minimal disturbance is expected. To address community concerns, most utilities will be placed above-ground; piles will be used for foundations of the buildings to be erected on the property; and we anticipate that the rest of the property will be remediated in full compliance with all applicable laws and regulations and encapsulated as the best available environmental remediation to it.

In relation to air, several major steps were undertaken to ensure that this facility will be the cleanest plant ever. All carbon dioxide resulting from the fermentation process is captured and processed into liquid form to be sold to the food industry. The distilled dry grain, which results from the process, will be stored in a totally encapsulated vertical storage system. Overall, we expect that the proposed facility will emit four times less emissions than any other facility ever built.

I hope this information proves helpful to you, and, if we can answer any questions you might have regarding our proposal, please feel free to contact us.

Most Sincerely, The Ecron Team



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EXHIBIT	NO.	
EXHIBIT	NO.	

June 26, 2006

Dear Sparrows Point Community Members:

Thank you for taking the time to attend the community meeting and sharing your interest in the proposed ethanol plant at the Sparrows Point Shipyard. We appreciate your community's input and would like to work very closely with you to make this project a success.

During the meeting, members of the community raised issues and asked questions about the project and, specifically, asked that Ecron put some information in writing for the community. We have tried to consolidate answers to these questions with the following analysis. This document is not intended to be the final word on any of these issues. We will be scheduling follow-up meetings to help you further understand and explore the project.

As always, we appreciate your input. Please feel free to contact any one of the following members of our team: Bebe Kernan with Daft-McCune-Walker, Inc., site engineers for the project [(410) 296-3333], Robert Hoffman with Venable LLP, land use attorney [(410) 494-6262], or Boris Maslov with Ecron SP, Developer and Operator [(202) 337-1665].

General Questions regarding Ethanol:

What is ethanol?

Ethanol is "ethyl alcohol," a clear, colorless liquid. An ethanol plant produces ethanol, which is then blended with gasoline to make motor fuel. The term "ethanol" can mean either pure ethanol, a fuel blend of 10% ethanol with 90% gasoline called E10, or a fuel blend of 85% ethanol with 15% gasoline called E85. At this time, Ecron's intentions are to produce ethanol for use in E10.

All motor vehicles are capable of running on E10, a blend of 10% ethanol. The alternative fuel, E85, may be used in specially equipped Flexible Fuel Vehicles, which may run on any blend of ethanol up to 85% or straight unleaded gasoline.

What is ethanol used for?

Most of Ecron's production is targeted for automobile use. E10 may also be used in some small engines, although there is not much research on the effects of ethanol-blended fuel for boating applications. The limited data of which Ecron is aware suggests that ethanol might only affect older boats with fiberglass tanks, mostly built before the mid 1980s. Newer boats and boat engines should have no problems running on ethanol blended fuel.

How is ethanol made? Where can I learn more about ethanol?

The majority of the ethanol produced is made from corn, but it can also be made from many other crops, grasses, and forestry materials. Our plant will use corn. Ethanol is produced by taking the starch or sugar portion of the corn and fermenting it. The fermented starch is then distilled into alcohol. The excess water is removed leaving the pure alcohol or ethanol.

Only the starch of the corn is made into ethanol. The remaining material, known as "distillers grain," is a highly nutritious animal feed. Even the carbon dioxide (CO2) emissions produced during the process can be captured and sold for use in carbonated beverages.

For additional information about ethanol, visit <u>www.ethanol.org</u> (The American Coalition for Ethanol (ACE)) or <u>www.eere.energy.gov</u> (United States Department of Energy Efficiency and Renewable Energy Homepage).



How much ethanol is produced in the United States?

By the end of 2005, ethanol production in the United State reached more than four billion gallons. There are over 100 ethanol production facilities currently operating in the United States with more than 30 other facilities under construction. For a list of such facilities, visit www.ethanol.org/productionlist.htm.

Is it cost-effective to use ethanol?

Ethanol is viable and cost-effective when the price of oil remains above \$30 per barrel. All current forecasts suggest that oil is more likely to go to \$100 per barrel than back down to \$30 per barrel.

Is there sufficient corn to satisfy demand? What will happen if corn prices go up?

Historical data suggests that corn will continue to be abundant, and prices will remain stable. The United States is the world's largest grower of corn, accounting for over 56% of the total world production. The United States currently produces much more corn than it can use. Consequently, nearly 20% of production is exported overseas. According to the National Corn Growers Association, the United States has and will continue to have an abundant supply of corn, more than meeting the demand for food use, export, livestock feed, and increased production of ethanol.

Questions Regarding Operations of the Ecron Plant:

Who will own and operate the plant?

The ethanol plant will be owned and operated by Ecron SP. Ecron has brought together an experienced team of industry professionals to build and operate the plant. For the design and construction of this project, Ecron has enlisted the assistance of ICM, Inc., one of the premier design/engineering firms on ethanol plants in the world. ICM has built over 40 plants and is involved with over two-thirds of the ethanol plants currently being constructed in the United States. Additional information about ICS can be found at www.icminc.com.

What is the anticipated output of the facility?

Ecron expects to produce 100 million gallons per year of ethanol, with a daily production of approximately 280,000 gallons.

When does Ecron expect to start producing ethanol?

Ecron seeks to start production in Late 2007.

How many jobs will be created?

We expect that approximately 300 jobs will be created during the construction phase and 50 jobs will be generated from the operation of the plant itself. The plant is high-tech, and the production process is almost completely automated. Ecron will need skilled equipment operators and will have a variety of other positions. The jobs will be good paying jobs, and all of our staff will receive extensive training, which will make them in high demand.

How is product transported in and out of the facility?

The Sparrows Point shippard is an ideal location for the ethanol plant because of availability of railroad and shipping transport facilities and the proximity to the gasoline blenders at Curtis Bay, where the ethanol is mixed with gasoline.

The corn used in processing is transported into the facility by railcar. We expect to have two in-bound unit trains delivering grain per week. The co-products produced during processing will also shipped out by railcar. We anticipate several railcars leaving the facility per day with these outbound products, which railcars will be attached

3303 Water Street NW, Suite 5H, Washington, DC 20007 • Phone. (202) 337-1665 • Fax: (202) 337-1778 • E-mail: info@eeron.us



to trains already coming into and leaving from the Steel Plant. The trains will run on the existing track infrastructure. The exact scheduling of trains is up to the railroad, although we will work closely with the railroad to minimize any possible disruptions to the community.

We expect to have an average of one barge shipment of ethanol per day. We will be using local barge operators that have extensive experience working with shipments in the Baltimore Harbor and the Chesapeake Bay. A barge needs approximately 12 feet of water in order to operate. No dredging will be necessary as the existing shipping channel depth is over 35 feet, which is more than sufficient to accommodate barge traffic. Barge routes should also not affect Bear Creek in any way.

Will the product be transported by way of pipeline?

Ecron has no plan to transport the ethanol by way of pipeline at this time.

What will the ethanol plant look like?

Ecron is still evaluating the design of the plant. Ecron will present detailed plant drawings when they are completed. Ecron is exploring several options for the design of the grain storage silos. They will likely look similar to stainless steel silos that you would typically see on a farm. Photographs of similar plants can be found at www.fageninc.com (Project Gallery – Ethanol).

Are there any safety issues for nearby communities?

We do not believe there are any safety issues for any of the nearby communities or schools. Ethanol is a safe, natural, biodegradable product. Ecron will be using state of the art equipment with constant monitoring to make sure that the plant operates safely and efficiently.

Is there an existing ethanol plant of a similar size built by ICM and located close to a residential community that the community can visit?

We have identified several ICM facilities located adjacent to residential communities, including Vera Sun, Fort Dodge, Iowa. Ecron has invited several community leaders to take a tour of an operational ethanol plant.

Questions regarding Environmental Impacts or Health Effects:

Ecron would be happy to provide relevant detailed scientific data on the topics of emissions and environmental impacts if requested.

Are there any adverse environmental or health effects?

Ecron will use the latest proven ethanol production technology, and this plant will be the cleanest ethanol plant built to date. We will be investing several million dollars more than required by existing standards to implement the latest environmental controls and have the lowest emission profile of any other ethanol plant in operation. Our engineering firm has built over 60% of all ethanol plants in the United States. These plants are currently in operation and are in full compliance with all applicable regulations.

What types of emissions will your plant produce?

Ecron will be using state of the art equipment to meet and exceed all regulatory requirements and will operate the cleanest possible ethanol plant possible. Total emissions from the Ecron plant are anticipated to be less than 25 tons per year, which would make this facility the cleanest ethanol plant in the country. Because Ecron's estimated emissions are below applicable limits, Ecron will not need to purchase offsets. New ethanol plants, such as the proposed Ecron plant, utilize the best emission-control technology available with regenerative thermal oxidizers controlling the vast majority of emissions and odors that might be emitted otherwise.



The plant emissions would be constantly monitored both within the plant operations center as well as by regulatory agencies. Monitoring information will be transmitted to the appropriate regulatory agencies. Agencies will also do periodic regulatory reviews to make sure that the plant is operating within allowable permit guidelines.

How does this plant compare in terms of emissions?

Ecron's anticipated emissions of 25 tons per year should be compared with most ethanol plants, which emit 100 tons of pollutants per year on average. This figure also compares favorably to the emissions from an average-sized power plant, which may emit more than 20,000 tons per year.

How will you deal with any odors produced?

In order to reduce odors from the plant, Ecron will use state of the art thermal oxidizers, which heat evaporating gases to 1300 degrees and destroy 98% of drying DDGS odors/emissions. Ecron will also use a closed system to prevent, to the extent possible, venting of gases. By way of comparison, we suggest that community leaders visit or research the Vera Sun plant in Fort Dodge, Iowa, which was built by ICM and has the same production capacity. This plant is located approximately two miles from the city of Fort Dodge.

Are there positive environmental impacts from using ethanol?

Boris D. Moster

Using ethanol-blended fuel has a positive impact of air quality because the oxygen in ethanol helps the fuel burn more cleanly and more completely, reducing tailpipe emissions. Ethanol reduces the emissions of carbon monoxide, volatile organic compounds, and toxic air emissions.

How will you deal with the Brownfields issue with regard to the construction of the plant?

Ecron will work with the appropriate regulatory agencies and our environmental engineers to assess the condition of the site and make appropriate remediation to it.

How does Ecron respond to questions about problems with other ethanol plants?

Ecron declines to comment on problems experienced with other ethanol plants or on the incident on the Bow Mariner as it does not believe these problems are relevant to the proposed facility, which will be a state of the art facility with the latest safety and monitoring equipment.

Sincerely,

Boris Maslov CEO, Ecron SP

a sublime or exaited condition (the ~s of a transcendent cosmos or domain; specif it or eternal forms or entities (a Platonic ~ 15 pl but sing in constr ; a canopy or covertage in some Elizabethan theaters 6: a addition of immortality in the doctrine of which sin is absent and all manifestations tiously ordered under the divine Principle A : universal law b : NATURE C : cosmic inexorable fate e : a supreme personal nows : CERTAINLY, UNDOUBTEDLY - used even knows we need advice) (our efforts, accomplished little enough) - in heaven dy: among innumerable possibilities: EVER sive (where in heaven were you) (what in (what under heaven possessed you to do ender heaven would have done such a thing) heavens or to high heaven or to high unusual and often an exaggerated or excese (the muddy tide flat smelled to high

ed to heaven about the tax burden) ivened; heavened; heavening \-v(2)nin. wens I obs: to place in happiness or bliss ake heavenly or utterly happy in character adj : of heavenly birth or origin : CELESn-born compassion)

Na, slang : COCAINE adj : having no heaven : having no part en of the Deity (heathens worshiping their

adv (or adj) : HEAVENLY fends, -lin-\ n -Es : the quality or state of

ale, hi also -eveml- or -ebeml-\ adj, sometherenly, ir. OE heofonlic, ir. heofon heaven if HEAVEN 1: of or relating to the spatial ig the earth 2: of, relating to, or dwelling God or of a god : CELESTIAL (~ spirits) acteristic of the divine heaven : appropriate GEBLESSED, DIVINE (the ~ music of an angel sthoughts to ~ matters) b : eminently FUL: ENCHANTING : remarkably pleasant (a \(\text{had a \sime \text{\text{what a \sime necklace}}\)

IME hevenly, ir. OE heofonlice, ir. heofoner or to a degree resembling that of heaven ICEEDINGLY (a maid most ~ pure) (were ~ by the influence or agency of heaven (our il climb -John Milton)

CELESTIAL BODY Massiss adj : DEVOUT, GODLY, PIOUS -

mess n it'n, usu cap H&P [trans. of Chin (Pek) Scendant of Chang Tao-ling chosen as the organization - called also celestial teacher;

adj : sent from heaven : PROVIDENTIAL appropriate (a heaven-sent opportunity)

EE OF HEAVEN wo(r)d\ adv (or adj) [ME hevenward, fr. ard]: toward or directed or tending toward i-ward-ly adv - heav-en-ward-ness n -ES dz\ adv : HEAVENWARD

la separated portion of an ancient Israelite hat was ceremonially raised and lowered in and that afterward was reserved for the use

n -s : one that heaves: as a : a laborer ling freight or bulk goods (a coal ~) b:a

raas in twisting rope)

glof HEAVE, pl of HEAVE to bring (a ship) by the wind with after Isails aback so as to make no headway but Roept for drift ~ vi : to heave a ship to (deuntil daylight before attempting to pass the

AVY A sees of adj, of an aircraft : having greater icement

Y, pres 3d sing of HEAVY Fil adv [ME hevily, fr. OE hefiglice, fr. gel-ly] 1: in a heavy manner: with great t bore ~ on the beams) 2: as if burdened it: slowly and laboriously: DULLY (read the gic : SORROWFULLY, DEJECTEDLY, GRIEVOUSLY grace'so ~ today? —Shak.) 4: to a great JSLY, SEVERELY (~ punished for his fault) d by frost)

gos, :-vin-\ n -es [ME hevynesse, fr. OE beavy + -nes -ness]: the quality or state of etal of surprising ~> (the produce markets nal~> -

Of HEAVE [Serund of theave]: a light line that has a send and the other end attached to a heavier) and that can be thrown across intervening I draw the heavier line to a desired position iship at a wharf)

beavy pile on a wharf to which are led tackles ds of a ship to be hove down hevē,sīd-\ n, usu cap H [alter Oliver] Eng. physicist]: 10NOSPHERE

(pdj eR/-EST [ME hevy, fr. OE helig, OS hebig; ic heavy, ON höfugr heavy, OE hebban to lift, EAVE 1 1 a : having great weight : being such moved only with effort : WEIGHTY, PONDERhaving a high specific gravity and great to bulk - opposed to light (gold is one of Que (1) of an isotope: having or being atoms formal mass (carbon 13 and carbon 14 are 2) of a compound: characterized by heavy Pila) (~ ice) 2 a obs : HARSH, OPPRESSIVE endure, accomplish, or fulfill : BURDENSOME the wexactions of this tyrant); often : GRIEVsorrow) 3: of weighty import: SERTOUS, with meaning) IND. INTENSE (a ~ silence) (~ late frosts D) 5 a : laden or borne down by something essive ENCUMBERED, BURDENED (returned the conference) (today's world is ~ with [cs -J.P. Jones): bowed down (as with care, ight wife doth make a ~ husband -Shak.) win; esp: approaching parturition - used ase heavy with young 6 a : slow or dull from of vitality or resiliency; SLUGGISH, INACTIVE Ma Countenancel. h . lacking enorble or

stituents and use k in color (~ ale) 1: of large capacity or output (a ~ pump) m: having a high boiling point — used esp. of distillates (as of petroleum) (~ hydrocarbons) (~ ends present in gasoline n (1); set or printed in boldface (2) : made with too much pressure of the sheet against the printing surface (a ~ impression) (3) : 11 points thick — used of the metal of an unmounted printing surface (as a copper engraving, stereotype, or electrotype) of a domino: having a comparatively large number of pips (the 6-6 is heavier than the 6-3> 9 a : digested slowly or with difficulty usu, because of excessive richness or seasoning (a ~ fruitcake) b: not properly raised or leavened (~ bread): lacking in lightness (rich dark cakes often tend to be ~> 10 a : belonging to or concerned with a class above a certain usual weight (~ woolens) (~ trunk lines) (~ breeds) b: producing metal, mineral, oil, or other basic substances and products derived from them (~ industries); specif; producing products on which other industries function 11 a: heavily armed with guns of large caliber (~ dragoons) b; having maximally concentrated firepower often from a battery of medium-caliber guns (~ antiaircraft emplacements) C: heavily armored 12 a: having stress or conspicuous sonority (~ rhythm) used esp. of syllables in accentual verse; contrasted with light b: being the strongest of three degrees of stress in speech (the ~ stress on the first syllable of basketball) C of a consonant : VOICED - used esp. in connection with shorthand symbolization 13: relating or assigned to theatrical parts or scenes of a grave or somber nature (played ~ roles for years) SYN WEIGHTY, PONDEROUS, CUMBROUS, CUMBERSOME, HEFTY:

HEAVY implies literally of greater weight than the average of its kind or class and figuratively more or less depressing, effort-taking, or unendurable to the mind or spirits, or depressed or dispirited (a heavy bag) (a heavy child) (a heavy volume of literary criticism) (a heavy scent of lilacs) (a heavy heart) weighty implies actually and not relatively heavy; figuratively it implies of serious import (a boy carrying weighty packages) (a weighty series of international decisions) (weighty questions about our future domestic policy) PONDERous implies literally a weighty massiveness, usu, difficult to maneuver, or figuratively something complicatedly labored, usu, suggesting a certain slow and dull deliberateness of mental effort (a ponderous elephant) (heavy concentrations of troops and weapons for ponderous operations overland -H.H.Martin) (a sober and somewhat ponderous analysis of the police work -Anthony Boucher) (a book dealing with the necessity for world organization and the fundamentals of world law might be dull or at least ponderous reading -A.E. Stevenson † 1965) CUMBROUS and CUMBERSOME imply literally a heaviness and bulkiness difficult to move, carry, or otherwise deal with; figuratively, they apply to what is ponderous and unwieldy (cumbrous old-fashioned wagons -Eddie Doherty) (one long and cumbrous sentence after another -M.W.Straight) (the camel . . . that lumbering and cumbersome beast -Story of Camel Hair) (the cumbersome amendment procedure of the outworn constitution -F.L.Paxson) HEFTY implies, literally, heaviness or solid weightiness usu: as estimated by picking up in one's arms, holding in one's hand, or measuring by the eye against an imagined norm or, figuratively, weighty (a hefty rock) (a hefty burden -A.J.Bruwer) (hefty peasants -- Time) (hefty but handsome in her wedding dress -W.S.Maugham) (embodying so hefty a theme in a book $-Time\rangle$

theavy \"\ vb -ED/-ING/-ES [ME hevyen, fr. OE hefigian, fr. hefig, adj.] vt, abs: to make burdensome; weigh down: OP-PRESS, BURDEN ~ vi: to play the role of a heavy

sheavy \"\ adv -ER/-EST [ME hevy, fr. OE hefige, fr. hefig, adj.]: in a heavy manner: HEAVILY (time hung ~ on their hands) (a heavy-laden wagon)

theavy \"\ n -ES [theavy] 1 heavies pl a : heavy cavalry b : HEAVY ARTILLERY C : heavy tanks of an' army or other military force d: HEAVY BOMBERS 2 a: HEAVYWEIGHT la b: a theatrical role or an actor representing a dignified or imposing person c: VILLAIN 4 3: something (as underwear or cloth) heavy in comparison with typical members of its kind sheavy \heve, -vi\ adj -er/-est [sheave + -y] of a horse : affected with heaves

heavy-armed \: ** adj: having or carrying heavy arms heavy artillery n 1 a : cannon of large caliber and great weight b or heavy field artiflery; guns of 155 mm, or guns or howitzers of larger caliber 2: troops that serve heavy guns heavy bomber n: a large long-range bomber designed primarily to carry large and heavy bomb loads to distant strategic tar-

gets - compare LIGHT-BOMBER, MEDIUM BOMBER heavy chemical n: a chemical produced and handled in large lots (as a ton or more a day) and often in a more or less crude state - used esp. of acids (as sulfuric acid), alkalies, and salts (as aluminum sulfate) - compare FINE CHEMICAL.

heavy concrete n: concrete in which the usu. rock aggregates are partially or wholly replaced by aggregates of metal (as steel) and which is used esp. for counterweights or in shielding nuclear reactors

heavy cream n: cream that is markedly thick; esp: cream that by law contains not less than 36 percent butterfat

heavy cruiser n: a large naval cruiser whose principal armament usu. consists of 8-inch guns - compare LIGHT CRUISER heavy dactyl n: a spondee resulting from substitution of a long syllable for the two short syllables in the thesis of a dactyl heavy-duty \ :== adj : able or designed to withstand unusual strain (as from heat, exposure, or wear) (heavy-duty equipment) (a sturdy heavy-duty glove)

heavy-footed \:== adj 1: ponderous in or as if in movement (a tired heavy-footed walk) (a heavy-footed literary style) (the conductor's rendering of the concerts was very heavyfooted) 2 dial : PREGNANT 3: inclined to drive an automobile at excessive speeds (issuing a few tickets to heavy. footed drivers -Robert Latimer)

heavy going n: difficult travel or progress heavy-handed \: ** adj 1: awkward or clumsy in or as if in the use of the hands: as a : having the hands seem heavy esp. from fatigue b dial, of a cook or server : inclined to be overgenerous (heavy-handed with the potatoes) (much too heavy-handed with salt) c: lacking or deficient in lightness. grace, or sparkle (a heavy-handed didactic style) 2: inclined to punish severely (grandfather was heavy-handed with his own children but very indulgent with us grandchildren); broadly : harshly oppressive (heavy-handed tyranny) - heavyhandedly adv - heavy-handedness n -Es

heavy-headed \: ** ** adj 1: having a large or heavy head (heavy-headed wheat) 2 a : DULL, STUPID b : DROWSY neavyhearted \: ** ** adj [ME hevy herted] : SADDENED, DISPIRITED, MELANCHOLY - heavy-heart-ed-ly adv heavy-heart-ed-ness n -ES

heavy hydrogen n: an isotope of hydrogen having a mass number greater than 1; esp : DEUTERIUM heavy-laden \'zz'zz\ adi: weighted down with or as if with a hebraizing- --

liquid of high density (as a solution of heavy solution Rassium iodide or of the cadmium salt of a mercury iodide I borotungstic acid) used esp. in determining the specific gravities of minerals and in separating them when mechanically mixed neavy spar # : BARITE

heavy water n: water containing more than the usual proportion of heavy hydrogen, heavy oxygen, or both; esp; water that is enriched in deuterium so that it consists either wholly or in larger than normal proportion of deuterium oxide and that is used in tracer studies and as a moderator in nuclear reactors heavy weapons company n: an infantry company usu. equipped with mortars, heavy machine guns, and recoilless rifles in addition to lighter weapons

heavyweight \'**, a\ n, often attrib 1: one that is above average in weight: as a: a participant (as a boxer or wrestler) in a sport or athletic contest who belongs to the heaviest of the classes into which contestants are divided; esp: a boxer weighing not less than 175 pounds - compare FEATHER WEIGHT b: an exceptionally massive or heavy object (as a truck or naval vessel) 2: one that carries unusual weight (as an outstanding writer or philosopher or a political leader) (the ~s of the party gathered in New York)

hea.zle.wood.ite \'hczəl,wu,dit\ n -s usu cap [Hearlewood, Tasmania, its locality + E-ite]: a mineral Ni₃S₂ consisting of sulfide of nickel

heb abbr, usu cap Hebrew he-balsam \'s!ss\ n 1 : BLACK SPRUCE 1 2 : RED SPRUCE heb-do-mad \'hebdo,mad\ n -s [L hebdomad-, hebdomas, fr. Gk hebdomad-, hebdomas, fr. hebdomos seventh (ir. hepta seven) + -ad-, -as fem. suffix denoting connection with or descent from — more at SEVEN] 1: a group of seven (a ~ of heavenly bodies) 2: a period of seven days: WEEK 3 gnosticism: a group of seven aeons derived from the seven planetary deities who in most systems were half-hostile powers

that created the world 1heb-dom-a-dal \(')heb;daməd'l\ adj (LL hebdomadalis, fr. L hebdomad-, hebdomas + -alis -al] 1 obs: consisting of seven days : lasting seven days 2 : meeting or appearing once a

week : WEEKLY 2hebdomadal \"\ n -s: a weekly newspaper or magazine heb.dom.a.dal-ly \-d'le\ adv : every week (contributes ~ to

the magazine) theb.dom.a.dary \heb'damə,dere\ n -Es [ME ebdomadary, fr. LL hebdomadarius, fr. L hebdomad-, hebdomas + -arius -ary (n. suffix)]: a member of a Roman Catholic chapter or convent appointed for the week to sing the chapter mass and lead the recitation of the canonical hours

2hebdomadary \"\ adj [ML hebdomadarius, fr. L hebdomad-, hebdomas + -arius -ary (adj. suffix)]: occurring every seven

heb-dom-a-der $\- do(r)\$ n -s [alter. of !hebdomadary] : a member of a Scottish university formerly appointed for the week to superintend student discipline

the be \'he(,)be\ n [NL, after Hebe, goddess of youth, fr. Gk Hēbē, fr. hebē youth; akin to Lith pajegà power, ability] 1 cap, in some classifications: a genus comprising the shrubby evergreen veronicas of the southern hemisphere 2 -s: any veronica that can be placed in the genus Hebe including several of considerable horticultural interest

2hebe \'heb\ n -s often cap [short for 2Hebrew] : JEW — often taken to be offensive

hebe- comb form [Gk hebe youth, pubes] : puberty (hebephrenia : downy: hairy: pubescent (hebeanthous) he-be-phre-nia \,heb-\frace, ,heb-\ n -s [NL, fr. hebe- + -phrenia]: a schizophrenic reaction that is characterized by silliness, delusions, hallucinations, and regression and that has an early insidious onset and a usu, unfavorable prognosis

- he-be-phrenic \; ** trenik also -ren-\ adj or n heb-er-den's node \'heba(r)d'nz-\ n, usu cap H [after William Heberden †1801 Eng. physician]: any of the bony knots at joint margins (as at the terminal joints of the fingers) commonly associated with degenerative arthritis

heb-e-tate \'heb-,tat\ vb -ED/-ING/-s [L hebetatus, past part. of hebetare to make dull (lit. & fig.), fr. hebet-, hebes dull] vt : to blunt the sensitivity or keenness of : make dull or obtuse (desultory reading ... ~s the brain -J.R.Lowell) ~ vi : to become duli or obtuse - heb-e-ta-tion \. ** tashon\ n -s

heb-e-tude \-a,tild, -a-,tylid\ n -s [LL hebetudo, fr. hebere to be dull + -tudo -tude; akin to L hebes dull]: the absence of mental alertness or physical sensitivity : DULLNESS, LETHARGY (her natural ~ must disgust him and eventually destroy all affection —Hugh McCrae — heb-e-tu-di-nous \:--:*(*)nas\

hebona n [origin unknown] obs : a plant having a poisonous juice (with juice of cursed ~ in a vial —Shak.) he-brae-an \(')he'breen, hi'b-, (')he'b-, he'b-\ n -s usu cap [L Hebraeus Hebrew + E -an - more at HEBREW! archaic ? a

Hebrew scholar he-bra-ie \-raik,-raek\ adj, usu cap [ME Ebrayke, It. LL Hebraicus, fr. Gk Hebraikos, fr. Hebraios, adj., Hebrew + -ikos -ic'- more at HEBREW] 1 : of, relating to, or characteristic of the Hebrews or of their language, literature, or religion (those early Christians who were of Hebraic blood instead of Greek or Roman -C.J.Bulliet) (a Jewish house of worship ought to be ... Hebraic -A.R.Katz) 2; characterized by preoccupation with conscience and conduct (was ardently Hebraic, exalting righteousness above love -V.L. Parrington) (the Hellenic and the Hebraic ways of looking at God, man, and the universe -Will Herberg) - he-bra-i-cal-

ly \-aak(a)lē, -aek-, -li\ adv he-bra-i-ca \-'-bkə, -ēkə\ n pl, usu cap [NL, fr. LL, neut. pl. of Hebraicus]: things Hebraic; esp: Hebraic literary or historical materials (a collection of Hebraica)

hebraic granite n, usu cap H [so called fr. its supposed resemblance to letters of the Hebrew alphabet]: GRAPHIC GRANITE

he-bra-ism \'he(,)bra|,izam, -bre|, -bre|\ n -s usu cap [Hebraic + -ism] 1 : a characteristic feature of Hebrew occurring in another language or dialect (the first half of the book of Acts ... is replete with Hebraisms -- S.M. Gilmour) 2 a: the thought, spirit, or practice characteristic of the Hebrews (Hebraism related itself to centuries of literary and -:--1-creativity -- J.L. Teller -- compare HELLENISM 4

PETITIONER'S

EXHIBIT NO.

of

nt



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Towson, Maryland 21204
Phone 410 296 3333
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ehadaway@dmw.com

A Team of Land Planners,

Iardscape Architects,

Golf Course Designers,

Engineers, Surveyors &

Environmental Professionals

Eric C. Hadaway, PWS

Vice President and

Director of Environmental

Services



Eric Hadaway ensures that DMW projects are planned and developed to address environmental concerns and meet environmental regulatory standards.

A specialist in wetland and forest delineations, forest buffer analysis, environmental assessments and Chesapeake Bay Critical Areas, Eric is a forest conservation expert, Professional Wetland Scientist, and is certified by the Army Corps of Engineers to perform wetland delineations. He has published numerous reports of endangered plant species occurrences in the state.

Significant Projects

Hopewell Pointe
Wetland Delineation,
Permitting, Mitigation
Design, Critical Areas
Compliance
Baltimore County, Maryland

Sparks Corporate Center
Wetland and Stream
Delineations, Forest
Conservation Planning
Baltimore County, Maryland

Crossroads at I-95
Wetland Delineation,
Permitting, Mitigation
Design, Forest
Conservation Planning
Baltimore County, Maryland

Waterview
Wetland Delineation,
Permitting, Mitigation,
Stream Restoration, Forest
Conservation, Critical Areas
Compliance
Baltimore County, Maryland

Bonnie View Wetland Delineation, Permitting, Mitigation Design, Forest Conservation Planning Baltimore County, Maryland

Greenspring Quarry
Wetland Delineation,
Permitting, Mitigation
Design, Forest
Conservation Planning
Baltimore County, Maryland

Professional Background

Daft-McCune-Walker, Inc. Towson, Maryland 1994 - Present

PMT & Associates, Inc. Timonium, Maryland 1991 - 1994

Education

Graduate Study in Environmental Sciences Towson University

B.S. - Biology Towson University

<u>Associations</u>

Society of Wetland Scientists

Member - Upper Eastern Shore Tributary Strategy Team

Maryland Daffodil Society

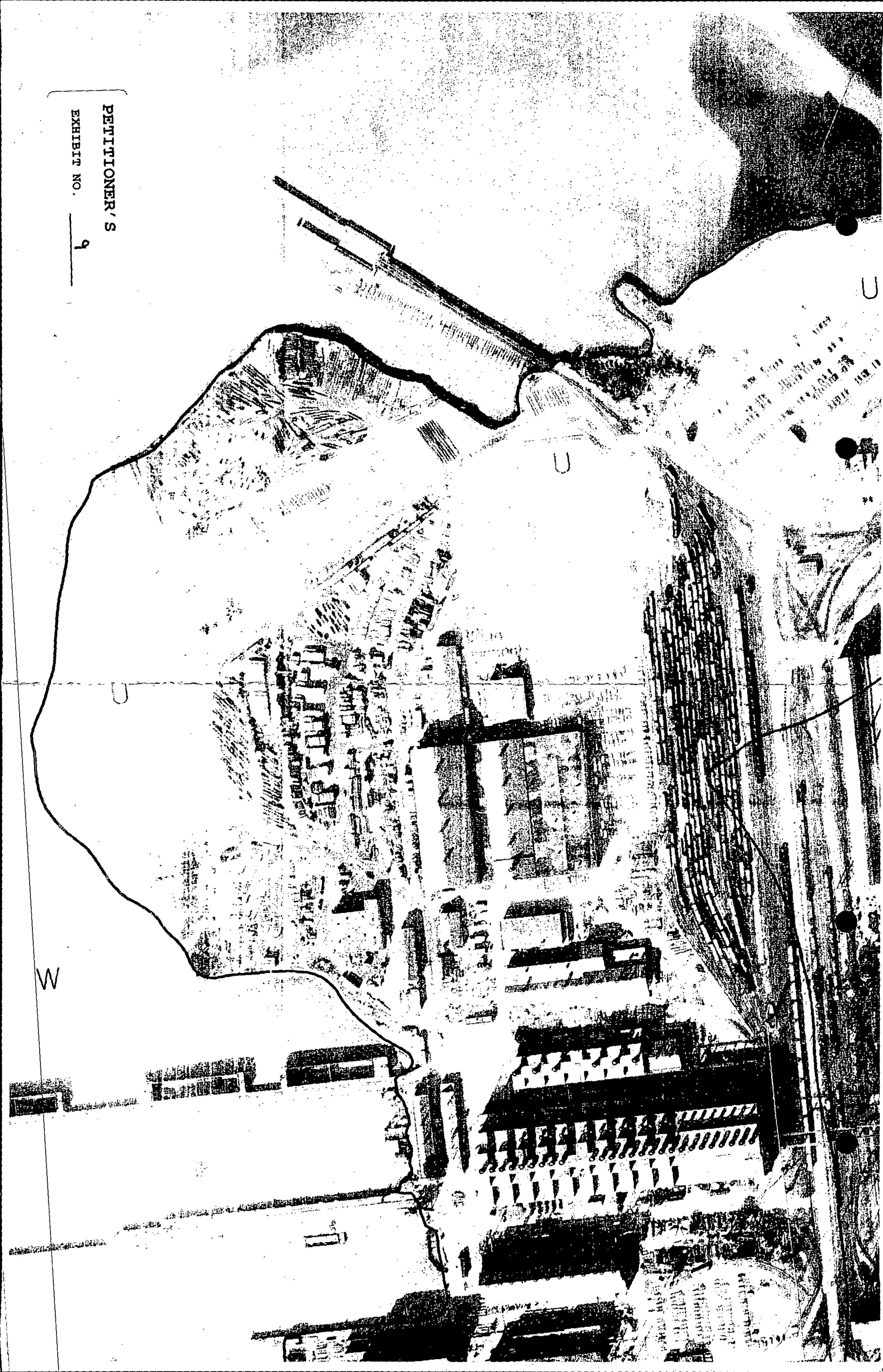
Civic Involvement

Leadership Baltimore County Class of 2003

Chester River Association

HBAM "Builders for the Bay"

PETITIONER'S
EXHIBIT NO. 8



Mitchell J. Kellman Director of Zoning Services



200East Pennsylvania Avenue Towson, Maryland 21204 Phone 410 296 3333 Fax 410 296 4705 mkellman@chmw.com

A Team of Land Planners,

Landscape Architects,

Golf Course Designers,

Engineers, Surveyors &

Environmental Professionals



Mr. Kellman has over 11 years of experience working in zoning administration and subdivision regulation for the public sector; 9 of those years were with the Baltimore County Office of Planning and Zoning. His responsibilities included review, approval and signatory powers on behalf of the Director of Final Development Plans and Record Plats. He represented the Zoning Office on the County Development Review Committee, a body reviewing the procedural compliance of all development submissions. Review of petitions and site plans filed for zoning hearing approvals were within his authority. Additionally, he supervised county review staff, met with professionals and public on development project matters, and made determinations regarding developments and their compliance with county regulations. In working for DMW, he has extensive experience in testifying before the Baltimore County Zoning Commissioner, Hearing Officer, and Board of Appeals. He also regularly represents the company at the Baltimore County Development Review Committee meetings.

Sign	<u>ificant</u>	Pro	<u>iects</u>
 _			

Waterview Baltimore County, Maryland

Hopewell Pointe Baltimore County, Maryland

GBMC Baltimore County, Maryland

Sheppard and Enoch Pratt Hospital Baltimore County, Maryland

Charlestown Retirement Community Baltimore County, Maryland

Oakcrest Village Retirement Community Baltimore County, Maryland

Goucher College Baltimore County, Maryland

Notre Dame Preparatory School Baltimore County, Maryland

Professional Background

Daft-McCune-Walker, Inc. Towson, Maryland 2000 - Present

Baltimore County Office of Permits and Development Management - Development Control 1988 - 2000

Education

B.A. Towson University Geography and Environmental Planning -Urban Planning 1983

Masters Geography and Environmental Planning -Urban Planning 1987

Associations

Gama Theta Epsilon (International Graphic Honor Society)

American Planning Association

PETITIONER'S

EXHIBIT NO.

10



JAMES T. SMITH, JR. County Executive

TIMOTHY M. KOTROCO, Director
Department of Permits and
Development Management

October 26, 2006

Robert A. Hoffman, Esquire Venable LLP 210 Allegheny Avenue P.O. Box 5517 Towson, Maryland 21285-5517

Re:

Proposed Ethanol Plant-600 Shipyard Road PDM No. XV-547-DRCNo. 090506G 15th Election District Councilmanic District

Dear Mr. Hoffman:

The Zoning Review Office has reviewed Ecron SP Corporation's proposal to construct an ethanol manufacturing plant on a portion of the Sparrows Point Shipyard property. The property is zoned MH-IM (Manufacturing, Heavy - Industrial, Major). Based on the information provided with the DRC application, it is the position of this office that the proposed ethanol manufacturing plant is permitted by right in the MH-IM zone within the "any other industrial or manufacturing use" category, pursuant to Section 256.3 of the Baltimore County Zoning Regulations.

Sincerely,

W. Carl Richards, Jr., Supervisor

Zoning Review Office

PETITIONER'S

EXHIBIT NO.



MEMORANDUM

TO:

Robert Hoffman, Venable LLP

FROM:

David Iannuca Director, DED

RE:

Ecron Ethanol facility Special Hearing

DATE:

November 28, 2006

Boris Maslov and Alex Clemens from Ecron SP Corporation, and Bebe Kernan from Daft, McKune Walker met with members of our department concerning this project. We understand that Ecron SP Corporation seeks to lease approximately 54 acres located at 600 Shipyard Road in Dundalk to build and operate an ethanol manufacturing facility.

We understand that Ecron will build a state of the art ethanol manufacturing plant. Ecron will contract with Cargill Corporation and Perdue Foods to transport raw materials to and from the plant by truck and rail. Ecron will use barges to deliver ethanol produced at the plant to the Canton ethanol facility in Baltimore Harbor for local product distribution.

Ecron has met with the local political and community leaders on this project, has held several public meetings and hosted a trip to lowa to view a representative ethanol facility.

Our department endorses Ecron's request to utilize this site. The location is zoned MH, is underutilized former industrial land located in the North Point Enterprise Zone, and exists directly on the shoreline and docks of the former BethShip shipyard. The project will create over 200 construction jobs, 60 full-time positions with salaries from \$40,000 and above, and a capital investment of \$200 million.

400 Washington Avenue Mezzanine Towson MD 21204-4665 | phone 410.887.8000 | fax 410-887-8017 www.baltimorecountyonline.info/business

PETITIONER'S

EXHIBIT NO.

12



ANTONIO R. MOREIRA, Ph.D. University of Maryland Baltimore County Baltimore, MD 21250

Phone: 410-455-6576 (Office)

410-455-1107 (Fax) 443-254-3696 (Cell)

email: moreira@umbc.edu

PROFESSIONAL EXPERIENCE

1997-Present University of Maryland Baltimore County

Vice Provost for Academic Affairs

Responsible for academic affairs matters within the Provost's Office. The following units/individuals currently report through this position: Library and Gallery, Center for Health Program Development and Management, Interdisciplinary Studies Program, International Education Services, Assistant to the Provost, Executive on Loan (IPA) from the Social Security Administration, and Executive Administrative Assistant. Other units that have reported at certain times include: Office of

Information Technology, Division of Continuing Education, International Programs,

Engineering Management.

1999-Present

SPI USA, Inc. (Baltimore, MD)

Executive Vice President

Responsible for leadership of small international consulting company focusing on

science and technology innovation.

1995-1997

University of Maryland Baltimore County

Associate Provost for Academic Affairs

Responsible for the following units: Continuing Education, Instructional Technology,

Strategic Alliances and Partnerships, Interdisciplinary Studies, International Education Services, International Programs, Engineering Management.

1995

University of Maryland Baltimore County

Associate Dean of Engineering

Responsible for Engineering Management program, curriculum issues, ABET

accreditation.

1992-1995

University of Maryland Baltimore County

Chair and Professor, Department of Chemical and Biochemical Engineering

Responsible for all department activities (position was re-named; no change in

responsibilities).

1990-1992

University of Maryland Baltimore County

Director and Professor, Chemical and Biochemical Engineering Program

Responsible for all department activities.

PETITIONER'S

EXHIBIT NO.

13

PROFESSION	IAL EXPERIENCE (CONTINUED)
1990-1993	Maryland Biotechnology Institute Acting Co-Director, Center for Biotechnology Manufacturing Responsible for planning and start-up of new center.
1989-1990	Schering-Plough Corporation, Union, New Jersey Manager, Bioisolation Pilot Plant Responsible for Bioisolation Pilot Plant Operations; this responsibility was in addition to the previous responsibility.
1988-1989	Schering-Plough Corporation, Union, New Jersey Associate Director, Biotechnology Department Responsible for Technical and Regulatory Affairs for Fermentation, Cell Culture, Purification and Bioanalytical.
1984-1988	Schering-Plough Corporation, Union, New Jersey Associate Director, Fermentation Process Development Responsible for Bioengineering Laboratory and Fermentation Pilot Plant.
1982-1984	International Flavors & Fragrances, Inc., Union Beach, New Jersey Group Leader, Flavor R&D Head, Flavor Pilot Plant Process Development Group.
1983-1985	Colorado State University, Fort Collins, Colorado Faculty Affiliate, Department of Agricultural and Chemical Engineering
1982	Colorado State University, Fort Collins, Colorado Associate Professor (with tenure), Department of Agricultural and Chemical Engineering
1978-1982	Colorado State University, Fort Collins, Colorado Assistant Professor, Department of Agricultural and Chemical Engineering
1977-1978	University of Waterloo, Ontario, Canada Research Associate, Department of Chemical Engineering
1973-1974	University of Oporto, Portugal. Lecturer, Department of Chemical Engineering
1971-1972	SPLS (Gist-Brocades), Oporto, Portugal Research Engineer. Obtained experience on the production of baker's yeast and antibiotics.

EDUCATION

- B.S. University of Oporto, Portugal, Chemical Engineering, 1973.
- M.S. University of Pennsylvania, Chemical and Biochemical Engineering, 1975.
- Ph.D. University of Pennsylvania, Chemical and Biochemical Engineering, 1977.

COURSES TAUGHT

Colorado State University:

CH304 - Unit Operations I (undergraduate course)

CH305 - Unit Operations II (undergraduate course)

CH306 - Unit Operations Laboratory (undergraduate course)

CH504 - Biochemical Engineering (graduate course)

CH553 - Separations (graduate course)

University of Maryland Baltimore County:

ENCH215 - Chemical Engineering Analysis (sophomore undergraduate course)

ENCH450 - Chemical Process Development (senior undergraduate course)

ENCH482/682 - Biochemical Engineering (senior undergraduate/graduate course)

ENCH609 - Graduate Seminar

ENCH 660 - Regulatory Issues in Biotechnology (graduate course)

ENCH662 - Good Manufacturing Practices for Bioprocesses (graduate course)

ENCH664 – Quality Control and Quality Assurance for Biotechnology Products (graduate course)

ENCH666 - Biotechnology GMP Facility Design, Construction and Validation (graduate course)

STUDENTS SUPERVISED

Robert A. Lewis (M.S.)

Steven Lindberg (M.S.)

Jeanine M. Costa (M.S.)

Michael R. Sierks (M.S.)

Michael G. Doremus (M.S.)

Frederick A. Blum (M.S.)

Nikhil Mehta (Ph.D., jointly with Dr. V.G. Murphy)

Wei Huang (M.S.)

Weidong Liu (M.S.)

Kim Lemaster (M.S.)

Santosh Noronha (Ph.D. May '96)

Gan Wei (Ph.D. May '99)

Mariquit Manuel (Ph.D., May '00)

Sanjeev Ahuja (Ph.D., August '00)

Jingjin Harms (M.S., December '00)

Gisela Ferreira (Ph.D., May '01)

Eduardo Cardoso (M.S., December '03)

Namratha Rajagopalan (M.S., August '05)

Michael Hanson (Ph.D., on-going)

Savidra Lucatero (M.S., May '06)

All Engineering Management M.S. Students (12-15/year; 1995-2000)

All Engineering Management M.S. Students in the Biochemical Engineering track (2001-Present)

POST-DOC/RESEARCH ASSOCIATES

James C. Linden
Duane C. Ulmer
Natarajan Ramasubramanyan
Usama Beshay
Murat Elibol

RESEARCH AREAS

Recombinant DNA processes; cell culture; control of biotechnology processes; microbial kinetics; antibiotics, steroids and biotransformations; bioisolation technology; regulatory-engineering issues; product comparability.

INDUSTRIAL EXPERIENCE

I.F.F. - Responsible for process development and pilot plant operations for the flavor division. Scale up of chemical and biological flavor processing. Technology transfer to manufacturing sites in the U.S. and overseas. Processes developed for meat (MID), cheese and dairy, fruits, beverages, bakery, pet foods and specialty chemicals.

Schering-Plough - Responsible for fermentation group which developed alpha interferon and scaled process up to manufacturing capacity. Developed additional biologics, such as gamma interferon, GM-CSF and interleukin-4. Process improvements and technology transfer to manufacturing for antibiotics, steroids and other biotransformations, animal vaccines.

Responsible for operating FDA/CBER approved CGMP large scale manufacturing facility for biologics. Handled all technical regulatory matters for Biotechnology group (INDs, ELA/PLAs, international registrations).

Development of large scale bioisolation processes and responsible for bioisolation pilot plant operations.

PROFESSIONAL, SCIENTIFIC, AND HONORARY SOCIETIES

American Institute of Chemical Engineers (and FPBE Division)

American Chemical Society (and BIOT Division)

Society for Industrial Microbiology

Sigma Xi

American Society for Engineering Education

Parenteral Drug Association

International Society for Pharmaceutical Engineering

Regulatory Affairs Professionals Society

Tau Beta Pi

American Biological Safety Association

Leadership Maryland (Class '98)

Society for Biological Engineering

PROFESSIONAL ORGANIZATION ACTIVITIES

Member Editorial Committee, Developments in Industrial Microbiology (1979-1983)

AIChE, Chairman of Research Subcommittee for Non-conventional Food Production (1979-1981)

AIChE, Associate Editor for the FPBE Newsletter (1980-1982)

Member, National Academy of Sciences Panel to advise Indonesia on alcohol production (1981)

AIChE, Member Continuing Education Committee (1980-1984)

AIChE, Member Research Committee (1981-1984)

Chairman, ASCE Specialty Conference "Energy in the Man-Built Environment: The Next Decade", session on Biomass, Vail, Colorado, August 3, 1981.

Chairman, ACS National Meeting, session on "Biochemical Reactor Design", New York, New York, August 25, 1981

AIChE, Member Education Committee of FPBE Division (1980-1984)

Invited Panelist, Session on "Present and Future World Developments of Unconventional Foods: Process and Product Design Criteria", 2nd World Congress of Chemical Engineering, Montreal, Canada, October 4-9, 1981

AIChE, Member Research Subcommittee for Non-conventional Food Production (1981-1982)

Chairman, AIChE Annual Meeting, sessions on "Non-conventional Food Production", New Orleans, Louisiana, November 9-10, 1981

Chairman, AIChE Annual Meeting, session on "Immobilized Cell and Enzyme Systems-Recent Developments", New Orleans, Louisiana, November 11, 1981

Chairman, AIChE Winter Meeting, sessions on "Fuels and Chemicals from Hemicellulose", Orlando, Florida, February 28 - March 3, 1982

Chairman, 4th Symposium on Biotechnology in Energy Production and Conservation, session on "Unit Processes in Biotechnology", Gatlinburg, Tennessee May 5-11, 1982

ACS, Councilor for MBTD Division (1983-1985)

ACS, Member Executive Committee for Monmouth County Section (1983-1985)

Member, National Academy of Sciences Panel to advise Portugal on Biotechnology Research (1983)

Chairman, ACS National Meeting, session on "Solid State Fermentation", Washington, D.C., August 29 - September 2, 1983

PROFESSIONAL ORGANIZATION ACTIVITIES (CONTINUED)

AIChE, Member Research Subcommittee of FPBE Division (1982-1985)

Chairman, AIChE Summer Meeting, session on "Food Processing Waste Treatment", Philadelphia, Pennsylvania, August 19-22, 1984

Co-Chairman, AIChE Central New Jersey section, Symposium on "Batch Processing", Fall 1984

U.S. Coordinator for the Joint US-Portugal Biotechnology/Food Science and Technology Program (1986-1997)

Member Editorial Board, Journal of Industrial Microbiology (1987-1995)

Member, US-Japan Business Council Biotechnology Forum (1988-1990)

Chairman, Working Group on Biotechnology Development, US/Japan Business Council (1988-1990)

Chairman, W. H. Peterson Award Committee, American Chemical Society, MBTD Division (1988-1990)

Member, National Academy of Sciences Panel to Workshop on "Biotechnology in the Agro-Food Industries", Oporto, Portugal, April 25-29, 1989

Chairman, ACS National Meeting, session on "Technology of rDNA E. coli Fermentation Processes", Miami Beach, Florida, September 10-15, 1989

Member, Executive Committee, AIChE Maryland Chapter (1990-1991)

Member, Technical and Facilities Committee, Maryland Bioprocessing Facility (1990-1993)

Member, Regulatory Committee, Maryland Bioprocessing Facility (1990-1993)

Member, National Science Foundation Presidential Young Investigator Awards Panel (1990)

Invited Panelist, Workshop on "The Role of Biotechnology in Solving Environmental Problems", Guatemala City, Guatemala, May 17, 1991

Member, U.S. Agency for International Development Biomass Panel (1991)

Chairman, 2nd International Marine Biotechnology Conference, sessions on "Bioprocessing, Biocorrosion and Biofouling", Baltimore, Maryland, October 13-16, 1991

Member, Program Committee, 2nd International Marine Biotechnology Conference, Baltimore, Maryland, October 13-16, 1991

Director, NATO Advanced Study Institute on "Use of Computer and Informatic Systems in Bioprocess Engineering", Ofir, Portugal, May 17-29, 1992

Invited Lecturer, Society for Industrial Microbiology Workshop on "Controlling Biotechnology Risks: A Holistic Approach to Safety and Environmental Protection", San Diego, CA, August 8/9, 1992

Chairman, Session on "Regulatory Issues in Biotechnology and Bioprocessing", 9th International Biotechnology Congress, Crystal City, Virginia, August 16-21, 1992

Chairman, Session on "Biotechnology", Joint Southeast-Mid Atlantic Regional Meeting of the American Chemical Society, Crystal City, Virginia, December 6-9, 1992

Member of the Executive Committee (North America), International Organization of Biotechnology and Bioengineering (1992-2003)

Workshop Director, "Production Technology for Biopharmaceuticals", School of Biotechnology, Porto, Portugal, June 28 - July 1, 1993

Member, Working Group on Bioprocessing, Scoping Workshop for the Engineering Research Program of the U.S. Department of Energy, July 1993-January 1994

Co-Chairman, Session on "Biodownstream Processing", 13th Southern Biomedical Engineering Conference, Washington, D.C., April 16-17, 1994

Chairman, Mid-Atlantic Biochemical Engineering Consortium Annual Meeting (MABEC), Baltimore, Maryland, May 27, 1994

PROFESSIONAL ORGANIZATION ACTIVITIES (CONTINUED)

- Chairman, Steering Committee, Chesapeake Bay Area Chapter of the International Society for Pharmaceutical Engineering (1994-1996)
- Lecturer, Merck & Co. In-Plant Training Program on "Pharmaceutical Manufacturing", April 27-June 29, 1994
- Member Organizing committee, COBIOTECH North-South American Conference on Biotechnology in the Western Hemisphere, Cuernavaca, Mexico, 1995
- Lecturer, Massachusetts Institute of Technology Summer Course on "Analytical Biochemistry in Process Monitoring and Validation", Boston, Massachusetts, August 1-5, 1994
- Invited Panelist on "Process Validation", National Institute of Standards and Technology, Gaithersburg, Maryland, August 5, 1994
- Lecturer, Parenteral Drug Association Workshop on "Controlling Biotechnology Risks: A Holistic Approach to Safety and Environmental Protection", Raleigh, North Carolina, September 26/27, 1994
- Lecturer, American Biological Safety Association Workshop on "Controlling Biotechnology Risks: A Holistic Approach to Safety and Environmental Protection", Williamsburg, Virginia, October 23, 1994
- Lecturer, Massachusetts Biologics Laboratory In-Plant Training Program on "Process Validation for Biotechnology Products", January 12-13, 1995
- Lecturer, Parenteral Drug Association Workshop on "Biotechnology GMP Facility Design and Validation", New Brunswick, New Jersey, April 11-13, 1995
- Lecturer, Parenteral Drug Association Workshop on "GMPs for Biotechnology Processes", San Diego, California, September 11-12, 1995
- Chairman, Session on "Role of Pilot Plants in Biologics Manufacturing", ACS Meeting, New Orleans, LA, March 24-28, 1996
- President, Chesapeake Bay Area Chapter of the International Society for Pharmaceutical Engineering (1996-1998)
- Lecturer, Parenteral Drug Association Workshop on "CBER Regulations for Biotechnology", Raleigh, NC, October 6-7, 1997
- Lecturer, Parenteral Drug Association Workshop on "Biotechnology GMP Facility Design and Validation, Baltimore, MD, February 2-4, 1998
- Lecturer, Parenteral Drug Association Workshop on "CBER Regulations for Biotechnology", San Francisco, CA, March 16-17, 1998
- Lecturer, "CBER Regulations for Biotechnology" Workshop presented at Wyeth-Lederle Laboratories, Pearl River, NY, June 24, 1998
- Lecturer, Parenteral Drug Association Workshop on "GMPs for Bioprocesses", Baltimore, MD, June 6-8, 1999
- Lecturer, Parenteral Drug Association Workshop on "Biotechnology GMP Facility Design and Validation", Baltimore, MD, February 15-17, 2000
- Lecturer, American Society of Mechanical Engineering, Workshop on "Design and Validation of Biotechnology Facilities", San Francisco, CA, April 10-12, 2000
- Chair, Council of Biotechnology Centers, BIO Industry Organization (2001-2003)
- Member, Emerging Companies Section Governing Board, BIO Industry Organization (2001-2005)
- Co-Chair, Session on "Entrepreneurial Activities for Biotechnology Centers", BIO 2001 Conference, San Diego, CA, June 24, 2001
- Immediate past-Chair, Council of Biotechnology Centers, BIO Industry Organization (2003-2006)
- Co-Chair, BioParks 2003, Baltimore, MD, June 20-21

PROFESSIONAL ORGANIZATION ACTIVITIES (CONTINUED)

Co-Chair, Session on "Creating, Identifying, and Capturing Value of Biotechnology Winners", BIO 2003 Conference, Washington, DC, June 24, 2003

Member, Educational and Outreach Committee, BIO Conference 2003

Member, Academic Advisory Committee, BIO Conference, 2003

Member, Standing Program Committee, BIO Conference 2004

Course Director, ASME course on "Validation of Biotechnology Facilities and Processes", New Orleans, LA, October 20-22, 2003

Lecturer, Parenteral Drug Association Workshop on "GMPs for Bioprocesses", Basel, Switzerland, February 19-20, 2004

Member, Board of Directors, Amulet Pharmaceuticals, Baltimore, Maryland (2002-2004)

Chair, Scientific Advisory Committee, Cambrex Bio Science Baltimore Corp., (2003-2004)

Course Director, ASME course on "Validation of Biopharmaceutical Facilities and Processes", Atlanta, Georgia, October 25-27, 2004

Lecturer, Parenteral Drug Association Workshop on "Principles and Applications of CGMP's in Biopharmaceutical Manufacturing", Rome, Italy, March 4, 2005

Member, Standing Program Committee, BIO Conference 2005

Lecturer, Parenteral Drug Association Workshop on "Biotechnology: Principles, Tools, and Applications", Baltimore, MD, August 10-12, 2005

Member, Standing Program Committee, BIO Conference, 2006

AWARDS AND DISTINCTIONS

C.U.F. Award (Portugal), 1973

Halliburton Outstanding Young Faculty Award, 1980

Member of the Scientific Board for the School of Biotechnology, Catholic University of Porto, Portugal (1990-1996)

Nato Senior Guest Fellow at the School of Biotechnology, Portugal (June 1991)

Member, Scientific Advisory Board, BioScience Contract Production Corp., Beltsville, Maryland (1991-2004)

Member, Institutional Biosafety Committee, BioScience Contract Production Corp., Beltsville, Maryland (1991-2004)

Visiting Professor, Institute of Biotechnology, National Autonomous University, Cuernavaca, Mexico (October 1991)

External Examiner, Ph.D. thesis on ""Steroid Bioconversion with Immobilized Cells of Arthrobacter simplex in Organic Solvent Systems" for Miss Helena Maria R. V. Pinheiro, Technical University of Lisbon, January 27, 1993.

Visiting Professor, Universidad Catolica de Valparaiso, Valparaiso, Chile (November 1993)

Outstanding Teaching Award, UMBC College of Engineering (1994)

Outstanding Advisement Student Award (received on behalf of the Chemical and Biochemical Engineering department, UMBC, 1994)

Expert Advisor, Junta Nacional de Investigação Cientifica e Tecnológica, Portugal for PRAXIS XXI (European Union) program in R&D Infrastructures (September 1995)

Member. Board of Directors, Greater Baltimore Committee High Technology Council (1996-2000)

James Agalloco Award, Parenteral Drug Association (1997)

Leadership Maryland, Class '98

Member, Board of Directors, Council of Biotechnology Centers, BIO (1998-2001)

AWARDS AND DISTINCTIONS (CONTINUED)

Member, Scientific Review Board, Institute of Biotechnology and Fine Chemistry, University of Minho, Portugal (1998-2003)

Member, Scientific Review Board, Center of Biochemical Engineering and Biotechnology, Technical University, Lisbon, Portugal (1998-2003)

Member, Board of Directors, Chesapeake Bay Area Chapter of the International Society for Pharmaceutical Engineering (1998-2002)

Listed in "Who's Who in Business Education", Baltimore Business Journal, April 2000

Member, Site Review Team, University of Waterloo, (Canada) project on "Cell Factory Bioprocessing Research Network", January 2001

Reviewer, Areas of Excellence Scheme of Hong Kong, Project on "Plant and Fungal Biotechnology", The Chinese University of Hong Kong (2000-Present)

Member, US delegation to FLAD/US Embassy Workshop on Innovation, Lisbon, Portugal, June 30-July 3, 2003

Member, External Scientific Advisory Board, Institute of Biotechnology, Autonomous University of Nuevo Leon, Monterrey, Mexico (2005-Present)

LANGUAGE PROFICIENCY

Portuguese:

Native

English:

Excellent

French:

Excellent

Spanish

Very Good

CONSULTING EXPERIENCE

Solar Energy Research Institute, Golden, Colorado (1979-1981)

E G & G, Inc., Idaho Falls, Idaho (1980)

Western Alfalfa Corporation, Hastings, Nebraska (1981)

Penta Post & Treating Company, Tuttle, Idaho (1981-1982)

Arco Coal Company, Denver, Colorado (1981)

Genex Corp., Gaithersburg, Maryland (1991)

National Cancer Institute, Frederick, Maryland (1991 and 1995)

The Weinberg Consulting Group (1991-2000)

BioScience Contract Production Corporation (1992-2004)

Alpha-1 Biomedicals, Inc. (1992)

Jupiter National, Inc. (1994-1995)

Human Genome Sciences, Inc. (1994-1996)

International Flavors and Fragrances, Inc. (1994-1995)

A. L. Shatto, Inc. (1995)

W. R. Grace Corp. (1995)

NeuralStem Biopharmaceuticals, Inc. (1998-2002)

SmithKline Beecham Pharmaceuticals (1999)

SPI USA, Inc. (1999-Present)

Insmed, Inc. (2000-2002)

REFEREE FOR TECHNICAL PUBLICATIONS/RESEARCH PROPOSALS

National Science Foundation

U.S. Department of Agriculture

Biotechnology and Bioengineering

Agricultural Wastes - An International Journal

Chemical Engineering Communications

Industrial and Engineering Chemistry

Bio/Technology

AIChE Journal

ACS Symposium Series

Journal of Industrial Microbiology

Journal of Chemical Technology and Biotechnology

U.S. A.I.D.

World Journal of Microbiology and Biotechnology

National Science and Engineering Research Council of Canada

UNIVERSITY OF MARYLAND SERVICE

Executive Committee, College of Engineering, UMBC (1990-1995)

Executive Committee, Molecular and Cell Biology Program, UMBC/UMAB (1990-1995)

Appointments, Promotion and Tenure Committee, College of Engineering, UMCP/UMBC (1990-1992)

Academic Affairs Committee, MBI (1991-1993)

Graduate Fellowship Committee, UMBC (1991-1994)

Search Committee, Continuing Education Director, UMBC (1991)

Search Committee, VP for Graduate Research and Dean of Graduate School, UMAB/UMBC (1991-1992)

Promotions and Tenure Committee, MBI (1991-1993)

Departmental Promotion and Tenure Committee, UMBC (1990-2004)

UMBC Meyerhoff Scholars Selection Committee (1992-Present)

Lecturer, Fermentation Workshop at the School of Biotechnology, Porto, Portugal, January 15-16, 1992.

Chairman, UMBC College of Engineering Bioengineering Faculty Search Committee (1993-1994)

UMBC Biosafety Committee (1993-1995)

University of Maryland Graduate School Baltimore Research Committee (1993-1995)

UMBC President's Advisory Council on Business Outreach Advisory Board (1993-1999)

Search Committee, Vice Provost, UMBC (1994)

Search Committee, Director of Media Relations, UMBC (1994)

UMBC Provost's Council (1995-2005)

UMBC President's Council (1997-Present)

UMBC Dean's/Academic Vice President's Council (1995-1999)

UMBC Institute for Global Electronic Commerce Advisory Board (1997-Present)

UMBC Technology Enhanced Learning Committee (1997-2001)

Chair, UMBC IT Steering Committee (1998-Present)

Chair, UMBC Search Committee for Chair of Chemical and Biochemical Engineering (1999-2000)

Chair, UMBC Program Committee on Entrepreneurial Studies (1999-2000)

UNIVERSITY OF MARYLAND SERVICE (CONTINUED)

Search Committee, UMBC Faculty Development Center Director (2000)

Chair, UMBC FaCT Steering Committee (1999-2003)

Chair, UMBC IT/E building design team (1999-2004)

Chair, UMBC Public Policy building design team (1999-2004)

Chair, UMBC Classroom Committee (2003-Present)

Chair, UMBC Search Committee for Executive Director of CHPDM (2003-2004)

Chair, UMBC Search Committee for Business Manager, Provost Office (2005)

Chair, UMBC Performing Arts & Humanities Facility design team (2004-Present)

Member, Advisory Board, UMBC Center for Mediation & Conflict Resolution (2005-Present)

FUNDING/CONTRACTS/GRANTS

- 2005 Parenteral Drug Association Pre-doctoral Fellowship for Michael Hanson on "Gene Arrays, Product Changes, and Comparability", \$10,000
- 4/05 6/06 European Commission 6th Framework Program NEST, "An Analysis of Synthetic Biology Research in Europe and North America", \$277,555 (Euros = 226,200); UMBC's share = \$41,275 (Co-PI).
- 2004 Pharmaceutical Research and Manufacturers of America, "Scientific Review of Quality and Process Changes for Biologics", \$28,726.14 (PI)
- 12/99-5/01 Maryland Higher Education Commission (MHEC) "Faculty Empowerment through Common Tools, FaCT", \$205,000 (Project oversight; P.I.: Dr. Roy Rada, IS department at UMBC)
- 4/99-3/02 Luso-American Foundation for Development (FLAD); "US-Portugal Young Scientist Exchange Program", \$72,000 (Co-Project Director and U.S. Coordinator)
- 8/98-5/99 Egyptian Math Teacher Training Program Egypt Embassy; \$284,558 (Co-Project Director)
- 8/98-5/99 Egyptian Science Teacher Training Program Egypt Embassy; \$284,558 (Co-Project Director)
- 6/96-5/98 NASA Goddard/UMBC Fellows Program, \$201,650 (Project Director)
- 2/98-12/98 Teaching English as a Foreign Language Training Program- Egypt Embassy; \$293,341 (Co-Project Director)
- 9/95-12/95 Food and Drug Administration; Training Program on "Bioreactors", \$16,650 (PI)
- 3/95-6/95 Food and Drug Administration; Training Program on "Bioreactors", \$16, 650 (PI)
- 2/95-8/97 Maryland Industrial Partnerships; GMP Training Program for Bioprocessing \$43,788 (PI)
- 1/95-12/97-Luso-American Foundation for Development (FLAD); "US-Portugal Program on Biotechnology" \$175,000 (U.S. Project Coordinator)
- 10/94-12/97-PRAXIS XXI (European Union-Portugal) Graduate Fellowship for Ph.D. student Gisela Ferreira \$120,000 (Program Director)
- 8/94-9/94 Food and Drug Administration: Training Program on "Cell Physiology and Biochemistry" \$9,275 (PI)
- 5/94-4/97 United States Department of Agriculture Bioprocess Engineering of Marine Shipworm Bacterium \$60,000 (PI)
- 1994 Industrial Sponsorship for Mid-Atlantic Biochemical Engineering Consortium \$1,500 (PI)
- 2/94-1/97 Maryland Industrial Partnerships; Scale up of a Purification Process for a Sialoprotein Obtained from Natural Sources \$110,500 (PI)

FUNDING/CONTRACTS/GRANTS (CONTINUED)

- 1993 SmithKline and Beecham Corp.: Fluidized Bed Cell Culture Equipment \$61,000 (PI)
- 7/93 8/93 The Whiting Turner Co.: Training Program in Bioprocess Engineering \$6,500 (PI)
- 2/93 12/93 Maryland Department of Economic and Employment Development: Survey and Assessment of Bioprocessing Engineering Needs in Biotech Companies in the State of Maryland \$10,000 (PI)
- 1991-1992 NATO Advanced Study Institute on "Use of Computer and Informatic Systems in Bioprocess Engineering" \$75,000 (PI)
- 1986 1993 Luso American Foundation for Development (FLAD): "U.S. Portugal Program on Food Science and Engineering" \$2.0 million (U.S. Project Coordinator)
- 1/80-12/81 Department of Energy: Enhanced Conversion of Lignocellulosic Residues to Liquid Fuels and Chemicals by Treatment with Geothermal Hot Water \$175,000 (Co-PI)
- 5/80-3/82 Solar Energy Research Institute: Effect of Ethanol and Butanol on Sugar Transport and Viability of *Clostridium sp.* Bacteria \$120,675 (PI)
- 7/81-6/82 Department of Energy: Methanol Production from Fermentor Off-Gases \$42,762 (PI)
- 2/81-8/81 Private Company: Studies on the Butylic Fermentation with Cl. Butyricum \$12,894 (PI)
- 6/81-10/81 Private Company: Microbial Assessment of UCG Groundwater -\$4,406 (PI)

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- A. E. Humphrey, A. R. Moreira, W. B. Armiger and D. W. Zabriskie. 1977. Production of single cell protein from cellulose wastes. *Biotechnology and Bioengineering Symposium*, 7:45-64.
- M. Moo-Young, A. R. Moreira, A. J. Daugulis, and C. W. Robinson. 1978. Bioconversion of agricultural wastes into animal feed and fuel gas. *Biotechnology and Bioengineering Symposium*, No. 8, p. 205-219.
- M. Moo-Young, A. R. Moreira, A. J. Daugulis, J. M. Scharer, and C. W. Robinson. 1978. Bioconversion of crop residues into feedstuffs. Proceedings of the Conference on Industrial Waste Treatment and Utilization, Waterloo, Canada, July 5-7.
- A. R. Moreira, J. A. Phillips, and A. E. Humphrey. 1978. Method for determining the concentration of adsorbed protein and cell biomass in cellulose fermentations. *Biotechnology and Bioengineering*, 20(9):1501-1505.
- W. B. Armiger, A. R. Moreira, J. A. Phillips, and A. E. Humphrey. 1979. Modeling cellulose digestion for single cell protein. *AIChE Symposium Series*, 184, Volume 75, p. 7-19.

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- A. R. Moreira, G. van Dedem, and M. Moo-Young. 1979. Process modeling based on biochemical mechanisms of microbial growth. *Biotechnology and Bioengineering Symposium*, Volume 9, p. 179-203.
- M. Moo-Young, A. R. Moreira, and A. J. Daugulis. 1979. Economics of fermentation processes for SCP production from agricultural wastes. *Can. J. Chem. Eng.*, 57(6):741-749.
- J. C. Linden, A. R. Moreira, D. H. Smith, W. S. Hendrick, and R. H. Villet. 1980. Enzymatic hydrolysis of the lignocellulose component from vegetative forage crops. *Biotechnology and Bioengineering Symposium No.* 10, p. 199-212.
- T. G. Lenz and A. R. Moreira. 1980. Economic evaluation of the acetone-butanol fermentation. Industrial and Engineering Chemistry Product Research and Development, 19(4):478-483, December.
- J. C. Linden, V. G. Murphy, and A. R. Moreira. 1981. Wheat straw autohydrolysis. In M. Moo-Young and C. W. Robinson (eds.) *Advances in Biotechnology*, Vol. II, Pergamon Press, p. 41-45.
- A. R. Moreira, J. A. Phillips, and A. E. Humphrey. 1981. Utilization of carbohydrates by *Thermomonospora* sp. grown on glucose, cellobiose, and cellulose. *Biotechnology and Bioengineering*, 23, 1325-1338.
- A. R. Moreira, J. A. Phillips, and A. E. Humphrey. 1981. Production of cellulases by *Thermomonospora* sp. *Biotechnology and Bioengineering*, 23, 1339-1347.
- A. R. Moreira, D. C. Ulmer, and J. C. Linden. 1981. Butanol toxicity in the butylic fermentation. Biotechnology and Bioengineering Symposium No. 11, p. 567-579.
- M. N. Karim, A. R. Moreira, and A. Grogan. 1982. Modeling and adaptive control of a fermentation system. Proceedings of the Joint Automatic Control Conference, Arlington, Virginia, June 14-16.
- A. R. Moreira, B. E. Dale, and M. G. Doremus. 1982. Utilization of the fermentor off-gases from an acetone-butanol fermentation. *Biotechnology and Bioengineering Symposium No.* 12, p. 263-277.
- A. R. Moreira and T. L. Donaldson. 1982. Unit Processes in Biotechnology. *Biotechnology and Bioengineering Symposium No. 12*, p. 203.
- J. M. Costa and A. R. Moreira. 1983. Growth inhibition kinetics for the acetone-butanol fermentation. ACS Symposium Series No. 207, p. 501-512.
- M. G. Doremus, J. C. Linden and A. R. Moreira. 1985. Agitation and Pressure Effects on the Acetone-Butanol Fermentation. *Biotechnology and Bioengineering*, 27, p. 852-860.

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- N. DelaCruz, L. Randers, A. R. Moreira and G. F. Payne. 1991. Large scale production of plasmid DNA for use in medical diagnostic kits. Final report to the MIPS program under a joint project with Digene Diagnostics, Inc.
- R. T. Hatch, C. Goochee, A. Moreira and Y. Alroy. (eds.) 1991. Expression systems and processes for DNA products. ACS Symposium Series No. 477.
- A. R. Moreira, W. Huang and S. Noronha. 1992. Bioprocess Engineering for Successful Biotechnology. Proceedings 1992 U.S. Army Edgewood Research, Development and Engineering Center Scientific Conference on Chemical Defense Research, p.159-165.
- A. R. Moreira and K. K. Wallace. 1996. Computer and Information Science Applications in Bioprocess Engineering. *NATO ASI Series*, Vol. 305.
- A. R. Moreira and K. K. Wallace. 1998. Changes in Biologics Regulations: Impact on Development and Validation of Manufacturing Processes for Well-Characterized Products. *ACS Book Series*, Validation of Biopharmaceutical Manufacturing Processes, Vol. 698, p. 170-179.
- S. Ahuja, G. Ferreira, M. Sierks and A. R. Moreira. 2001. Pleomorphism of the marine bacterium Teredinobacter turnirae. Letters in Applied Microbiology, 32, p. 1-5.
- M. Elibol and A. R. Moreira. 2003. Production of extracellular alkaline protease by immobilization of the marine bacterium *Teredinobacter turnirae*. *Process Biochemistry*, 38, p. 1445-1450.
- U. Beshay and A. R. Moreira. 2003. Repeated batch production of alkaline protease using porous sintered glass as carriers. *Process Biochemistry*, 38, p. 1463-1469.
- U. Beshay and A. R. Moreira. 2003. Effect of medium composition on the production of alkaline protease by *Teredinobacter turnirae*. *Deutsche Lebensmittel-Rundschau*, 99, p. 319-323.
- S. K. Ahuja, G. M. Ferreira and A. R. Moreira. 2004. Application of Plackett-Burman Design and Response Surface Methodology to Achieve Exponential Growth for Aggregated Shipworm Bacterium. Biotechnology and Bioengineering, 85(6), p. 665-675.
- S. K. Ahuja, G. M. Ferreira and A. R. Moreira. 2004. Production of an endoglucanase by the shipworm bacterium *Teredinobacter turnirae*. *Journal of Industrial Microbiology and Biotechnology*, 31, p. 41-47.
- S. Ahuja, G. Ferreira and A. R. Moreira. 2004. Utilization of enzymes for environmental applications. Critical Reviews in Biotechnology, 24 (2-3), p. 125-154.
- U. Beshay and A. R. Moreira. 2005. Production of alkaline protease with *Teredinobacter turnirae* in controlled fed-batch fermentation. *Biotechnology Letters*, 27, p. 1457-1460.
- X. Ge, M. Hanson, H. Shen, Y. Kostov, K. Brorson, D. Frey, A. R. Moreira, G. Rao. 2006. Validation of an optical sensor-based high-throughput bioreactor system for mammalian cell culture. *Journal of Biotechnology*, 122: 293-306.

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- A. E. Humphrey, W. B. Armiger, A. R. Moreira and J. A. Phillips. 1976. Use of a computer-coupled fermentation system for on-line analysis and optimization of cellulose and related fermentations. 172nd ACS National Meeting. San Francisco, California. August 30 to September 2
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- A. E. Humphrey, A. R. Moreira, T. Ladisch, W. B. Armiger, and D. W. Zabriskie. 1976. Use of thermophilic fungi as SCP source using cellulosic material as a substrate. US/USSR Joint Conference on SCP. M.I.T., Cambridge, Massachusetts. March.
- A. E. Humphrey, W. B. Armiger, S. E. Lee, and A. R. Moreira. 1976. Production of single cell protein by growth of a *Thermoactinomyces* sp. on cellulosic materials. Abstract, 5th International Fermentation Symposium, Berlin, Germany. June 28 to July 3
- W. B. Armiger, A. R. Moreira, J. A. Phillips, and A. E. Humphrey. 1977. Modeling cellulose digestion to single cell protein. Proceedings PACHEC meeting, Denver, Colorado. August 28-31
- A. R. Moreira, J. A. Phillips, W. B. Armiger, and A. E. Humphrey. 1977. Modeling cellulose degradation by a *Thermoactinomyces* sp. 174th ACS National Meeting. Chicago, Illinois. August 28 to September 2
- M. Moo-Young, A. R. Moreira, A. J. Daugulis, and C. W. Robinson. 1978. Bioconversion of agricultural wastes into animal feed and fuel gas. Symposium on Biotechnology in Energy Production and Conservation. Gatlinburg, Tennessee. May 10-12
- M. Moo-Young, A. R. Moreira, A. J. Daugulis, and C. W. Robinson. 1978. Production of animal feed and fuel gas by biological conversion of agricultural residues. Abstract, 1st CHEMRAWN Conference, Toronto, Canada. July 10-13

- M. Moo-Young, A. R. Moreira, A. J. Daugulis, J. M. Scharer, and C. W. Robinson. 1978. Bioconversion of crop residues into feedstuffs. Industrial Waste Treatment and Utilization Conference. Waterloo, Canada. July 5-7
- A. R. Moreira and R. W. Hartel. 1979. Critical review of fermentation processes for single cell protein production. 87th AIChE National Meeting. Boston, Massachusetts. August 19-22.
- A. R. Moreira, G. van Dedem, and M. Moo-Young. 1978. Process modeling based on biochemical mechanisms of microbial growth. Second International Conference on Computer Applications in Fermentation Technology. Philadelphia, Pennsylvania. August 26-30
- M. Moo-Young and A. R. Moreira. 1978. Economics of fermentation processes for SCP production from agricultural wastes. 176th ACS National Meeting. Miami Beach, Florida. September 10-15.
- A. R. Moreira, A. J. Daugulis, and M. Moo-Young. 1978. Bioconversion of agricultural wastes into feed and fuel products. 28th Canadian Chemical Engineering Conference. Halifax, Nova Scotia. October 22-25.
- F. A. Blum and A. R. Moreira. 1979. Biochemical mechanisms of enzyme regulation. 9th Biochemical Engineering Symposium. Manhattan, Kansas. April 21.
- A. R. Moreira and F. A. Blum. 1979. Determination of the intracellular levels of key compounds associated with regulation of enzyme biosynthesis. 87th AIChE National Meeting. Boston, Massachusetts. August 19-22.
- J. C. Linden, V. G. Murphy, A. R. Moreira, and L. L. Henk. 1979. Combined autohydrolysis and organosolv treatment of wheat straw. 178th ACS National Meeting. Washington, D.C. September 9-14.
- J. C. Linden, W. S. Hendrick, A. R. Moreira, D. H. Smith and R. H. Villet. 1979. Enzymatic hydrolysis of the lignocellulose component from vegetative forage crops. Second Symposium on Biotechnology in Energy Production and Conservation. Gatlinburg, Tennessee. October 3-5.
- T. G. Lenz and A. R. Moreira. 1980. Economic evaluation of the acetone-butanol fermentation, 179th ACS National Meeting. Houston, Texas. March 23-28.
- A. R. Moreira. 1980. Production of alcohol fuels from renewable resources by fermentation. ASAE Rocky Mountain Regional Meeting. Las Cruces, New Mexico. March 29-30.
- F. A. Blum and A. R. Moreira. 1980. Determination of intracellular levels of ATP and C-AMP in microbial enzyme fermentations. VIth International Fermentation Symposium. London, Ontario, Canada. July 20-25.
- J. C. Linden, V. G. Murphy, and A. R. Moreira. 1980. Wheat Straw Autohydrolysis. VIth International Fermentation Symposium. London, Ontario, Canada. July 20-25.

- V. G. Murphy, J. C. Linden, A. R. Moreira and K. Dockrey. 1980. Use of geothermal hot water to pretreat lignocellulosic materials. Presented at the 2nd Chemical Congress of the North American Continent and 180th ACS National Meeting, Las Vegas, Nevada. August 24-29.
- A. R. Moreira, J. C. Linden, D. H. Smith and R. H. Villet. 1980. Economic outlook for the production of ethanol from forage plant materials. Presented at the 2nd Chemical Congress of the North American Continent and 180th ACS National Meeting. Las Vegas, Nevada. August 24-29.
- A. R. Moreira, J. C. Linden, D. H. Smith, and R. H. Villet. 1980. Preliminary process engineering evaluation of ethanol production from vegetative crops. First SERI International Workshop in Biotechnology to Produce Liquid Fuels and Chemicals. Vail, Colorado. October 1-3.
- A. R. Moreira and D. C. Ulmer. 1981. Utilization of Sorghum and Other Forage Crops. Presented at Conference on Update on Alcohol. Colorado State University, Fort Collins, Colorado. February 16-17.
- A. R. Moreira. 1981. Anaerobic Processes to Produce Liquid Fuels and Chemicals: Alternatives and Engineering Analysis. Presented at the Technical Workshop on Fuels and Chemicals from Biomass through Fermentation Processes. San Jose, Costa Rica. February 15-18.
- A. R. Moreira, D. C. Ulmer, and J. C. Linden. 1981. Butanol toxicity in the butylic fermentation. Third Symposium on Biotechnology in Energy Production and Conservation. Gatlinburg, Tennessee. May 12-15.
- R. S. Korn, J. M. Harper, A. R. Moreira, and V. G. Murphy. 1981. Extrusion of corn for alcohol production. Third Symposium on Biotechnology in Energy Production and Conservation. Gatlinburg, Tennessee. May 12-15.
- D. C. Ulmer, J. C. Linden, and A. R. Moreira. 1981. Solvent toxicity in the acetone-butanol fermentation. 28th I.U.P.A.C. Congress. Vancouver, British Columbia, Canada. August 16-22.
- R. A. Lewis, A. R. Moreira, V. G. Murphy, and J. C. Linden. 1981. Kinetics of hemicellulose autohydrolysis for wheat straw. Presented at 182nd ACS National Meeting. New York City, New York. August 23-28.
- J. C. Linden, D. C. Ulmer, and A. R. Moreira. 1981. A mechanism for aliphatic alcohol-induced toxicity in *Clostridium acetobutylicum*. Presented at 182nd ACS National Meeting. New York City, New York. August 23-28.
- A. R. Moreira, S. M. Barnett, V. Ragavan, A. E. Humphrey, N. Kosaric and F. Kramer. 1981. Overview on Research Needs for Unconventional Food Production. 2nd World Congress of Chemical Engineering. Montreal, Canada. October 4-9.
- A. R. Moreira. 1981. Single cell protein from cellulosic materials. International Symposium on: Problems and Perspectives of the Biology and Integral Use of Henequen and other Agaves. Merida, Yucatan, Mexico. November 18-20.

- J. M. Costa and A. R. Moreira. 1982. Kinetics of the Acetone-Butanol Fermentation. ACS/IEC 1982 Winter Symposium. Boulder, Colorado. January 17-20.
- V. G. Murphy, J. C. Linden, A. R. Moreira, R. A. Lewis and K. Dockrey. 1982. Effect of Aluminum Sulfate on the Autohydrolysis of Hemicellulose from Agricultural and Forest Residues. AIChE Meeting. Orlando, Florida. February 28-March 2.
- S. C. Lindberg and A. R. Moreira. 1982. Acetone-Butanol Fermentation of Cheese Whey. AIChE Meeting. Orlando, Florida. February 28-March 2.
- A. R. Moreira, B. E. Dale and M. G. Doremus. 1982. Utilization of the fermentor off-gases from an acetone-butanol fermentation. Fourth Symposium on Biotechnology in Energy Production and Conservation. Gatlinburg, Tennessee. May 10-14.
- A. R. Moreira and J. C. Linden. 1982. Anaerobic production of chemicals. Symposium on Biological Basis of New Developments in Biotechnology. Minneapolis, Minnesota. May 25-28.
- M. N. Karim, A. R. Moreira, and A. Grogan. 1982. Modeling and adaptive control of a fermentation system. Joint Automatic Control Conference. Arlington, Virginia. June 14-16.
- S. C. Lindberg and A. R. Moreira. 1982. Production of neutral solvents from cheese whey. Presented at the 184th National ACS Meeting. Kansas City, Missouri. September 12-17.
- V. G. Murphy, K. Dockrey, J. C. Linden and A. R. Moreira. 1982. Enzymatic hydrolysis of pine wood pretreated with aqueous ethanol solutions of aluminum sulfate. AIChE Annual Meeting. Los Angeles, California. November 14-19.
- A. Grogan, M. N. Karim, and A. R. Moreira. 1982. Mathematical modeling of the *Zymomonas mobilis* fermentation. AIChE Annual Meeting. Los Angeles, California. November 14-19.
- A. R. Moreira. 1982. Microbial Flavors. Seminar at the Biotechnology Research Center, Lehigh University, Bethlehem, Pennsylvania. November 5.
- A. R. Moreira. 1983. Energy and Chemicals from Biomass. Invited lecture at the NAS/JNICT Workshop on Biotechnical Research for Development in Portugal, Ericeira, Portugal. April 26-29.
- A. R. Moreira. 1989. The New Biotechnology: Principles, Techniques and Prospects. Invited opening lecture at the NAS/FLAD/JNICT Workshop on Biotechnology in the Agro-Food Industries, Porto, Portugal. April 26-28.
- A. R. Moreira. 1990. US/Japan Harmonization of Scientific Principles and Procedures Underlying the Regulations Related to Biotechnology. Presented at the PMA Biologics Section Meeting, Scottsdale, Arizona. May 2.

- A. R. Moreira. 1991. Growth of recombinant and revertant *S. cerevisiae*. Invited lecture at the International Course on Engineering of Biological Reactions and Processes, Guatemala City, Guatemala, May 13-25.
- A. R. Moreira. 1991. Hybridoma growth and immunoglobulin production. Invited lecture at the International Course on Engineering of Biological Reactions and Processes, Guatemala City, Guatemala, May 13-25.
- A. R. Moreira. 1991. Expression of heterologous proteins in *E. coli*. Invited lecture at the Advanced Course on Biotechnological Processes, Cuernavaca, Mexico, October 7-25.
- A. R. Moreira. 1991. Plasmid stability. Invited lecture at the Advanced Course on Biotechnological Processes. Cuernavaca, Mexico, October 7-25.
- A. R. Moreira. 1991. Technology for high cell density fermentations. Invited lecture at the Advanced Course on Biotechnological Processes, Cuernavaca, Mexico, October 7-25.
- A. R. Moreira. 1991. Concepts on process development and the regulatory approval of biotechnology products. Invited lecture at the Advanced Course on Biotechnological Processes, Cuernvaca, Mexico, October 7-25.
- A. R. Moreira. 1992. Recombinant DNA fermentations. Presented at NATO Advanced Study Institute on "Use of Computer and Informatic Systems in Bioprocess Engineering", Ofir, Portugal, May 17-29.
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- W. Huang, A. R. Moreira and T. T. Chen. 1992. Expression of striped bass growth hormone in *E. coli*. Presented at 9th International Biotechnology Symposium. Crystal City, VA, August 18, 1992.
- A. R. Moreira, W. Huang and S. Noronha. 1992. Bioprocess Engineering for Successful Biotechnology. Proceedings 1992 U.S. Army Edgewood Research, Development and Engineering Center Scientific Conference on Chemical Defense Research, November 17-20.
- A. R. Moreira. 1992. Invited Lecture on "Biotechnology" at the Johns Hopkins University Applied Physics Laboratory, November 30.
- A. R. Moreira. 1993. The Role of Bioprocess Engineering in Biotechnology. Presented at the Annual Retreat of the Maryland Biotechnology Institute, January 14.

- A. R. Moreira. 1993. Containment Biotechnology Facilities: Considerations on Design, Operation and Validation. Presented at the Society for Industrial Microbiology local chapter, Columbia, MD, January 19.
- A. R. Moreira and W. Huang. 1993. Fermentation of Recombinant *E. coli* for the Production of Striped Bass Growth Hormone. Guest Lecture at the Center for Chemical Technology and Biotechnology, Lisbon, Portugal, January 22.
- W. Huang, A. R. Moreira and T. T. Chen. 1993. Production of Striped Bass Growth Hormone in Recombinant *E. coli* Fermentation. Presented at the American Chemical Society National Meeting, Denver, Colorado, March 28-April 1.
- S. Noronha and A. R. Moreira. 1993. Bioconversion of Benzaldehyde by Yeast. Presented at the American Chemical Society National Meeting, Denver, Colorado, March 28-April 1.
- A. R. Moreira. 1993. Bioprocess Engineering: Recent Advances and Future Prospects. Keynote lecture at the 3rd Latin American Congress of Biotechnology, Santiago, Chile, November 18.
- A. R. Moreira. 1994. Expression of Striped Bass Growth Hormone in a rDNA *E. coli* Fermentation. Seminar at the department of Chemical Engineering, University of Maryland, College Park, April 5.
- A. R. Moreira. 1994. Production of Striped Bass Growth Hormone by rDNA E. Coli Fermentation. Invited seminar at University of Algarve, Faro, Portugal, June 9.
- A. R. Moreira. 1994. University-Industry Collaborations. Presented at PDA/SIM Joint Meeting, Baltimore, Maryland, October 18.
- S. Noronha, A. R. Moreira and P. McGraw. 1994. Metabolic Engineering of Benzaldehyde Bioconversion. Presented at AIChE Annual Meeting, San Francisco, California, November 13-18.
- W. Liu, B. Williams, A. R. Moreira, F. Taub, M. Larson and K. Patel. 1994. Practical Considerations on Scale-Up of a Purification Process for a Sialoglycopeptide. Presented at AIChE Annual Meeting, San Francisco, California, November 13-18.
- A. R. Moreira. 1994. Bioprocess Engineering of Biologically Active Proteins. Seminar at the Department of Chemical Engineering, Johns Hopkins University, Baltimore, Maryland, December 5.
- A. R. Moreira. 1994. Bioprocess Engineering of Biologically Active Proteins. Seminar at the Department of Chemical Engineering, Tufts University, Medford, Massachusetts, December 12.
- A. R. Moreira. 1995. Bioprocess Engineering. Seminar presented at AmVax Corp., Beltsville, MD, January 18.

- A. R. Moreira. 1996. Changes in Biologics Regulations: An Engineering Perspective. Presented at Conference on Well Characterized Biologicals, McLean, Virginia, October 28-30.
- A. R. Moreira, N. Ram, H. B. Herwig, and A. Ahmadi. 1997. Process Considerations in Scale-Up of Bioactive Protein Purification from Bovine Cerebral Cortex Tissues. Presented at ACS Meeting, San Francisco, California, April 13-17.
- A. R. Moreira, M. B. Herwig, and N. Ram. 1997. Evaluation of Pre-chromatography Sample Preparation Methods. Presented at ACS Meeting, San Francisco, California, April 13-17.
- A. R. Moreira and G. Wei. 1997. Fermentation of Recombinant *Escherichia Coli* Expressing a Striped Bass Growth Hormone Fusion Protein. Presented at ACS Meeting, San Francisco, California, April 13-17.
- A. R. Moreira and M. N. Manuel. 1997. Studies on the Aggregation of Recombinant Chinese Hamster Ovary (CHO) Cells Producing Tissue Plasminogen Activator (tPA). Presented at ACS Meeting, San Francisco, California, April 13-17.
- A. R. Moreira, G. M. Ferreira, and S. K. Ahuja. 1997. Production of Protease by a Shipworm Bacterium. Presented at ACS Meeting, San Francisco, California, April 13-17.
- A. R. Moreira, S. K. Ahuja and G. M. Ferreira. 1997. Production of Cellulase by a Shipworm Bacterium. Presented at ACS Meeting, San Francisco, California, April 13-17.
- K. K. Wallace and A. R. Moreira. Changes in biologics regulations: Impact on development and validation of manufacturing processes for well-characterized products. Presented at the Annual Meeting of the American Chemical Society, San Francisco, California, April 1997.
- A. R. Moreira and K. K. Wallace. Assessment of the potential impact of the new CBER regulations on the manufacturing processes for specified biologicals. Presented at the Conference on Specific Biological Products, Washington, D.C., October 1997.
- A. R. Moreira and K. K. Wallace. FDA biologics regulations and their impact on manufacturing processes. Presented at the First Ibero-American Meeting on Biotechnology, Guimaraes, Portugal, July 1998.
- A. R. Moreira, K. K. Wallace, W. Shewbridge and C. Harriger. GMP Training Programs at the University of Maryland, Baltimore County. Presented at the First Ibero-American Meeting on Biotechnology, Guimaraes, Portugal, July 1998.
- G. Wei and A. R. Moreira. 1998. A New Approach to Increase Protein Recovery Yield From Inclusion Body Refolding. Presented at ACS Meeting, Boston, Massachusetts, August 27.
- A. R. Moreira. 1998. Training in FDA Regulatory Issues. Invited paper at Biotechnology, Bioprocessing and Bioengineering Workshop, Ohio University, Athens, Ohio, September 25-26.

- G. Ferreira, S. Ahuja and A. R. Moreira. 1999. Characterization of a Protease Produced by a Clump-Like Morphology of a Shipworm Bacterium. Presented at MABEC Meeting, University of Virginia, Charlottesville, Virginia, March.
- G. Wei and A. R. Moreira. 1999. Process Improvement of High-Cell Density Fermentation of Recombinant *E. coli* and Inclusion Body Refolding. Proceedings of Conference on Protein Production, Cambridge Healthtech Institute, April 21-22, Washington, D.C.
- A. R. Moreira. 2000. Studies on the production of striped bass growth hormone by a recombinant *E. coli* system. Seminar in the department of Biochemical Engineering, Catholic University of Valparaiso, Valparaiso, Chile, January 20.
- A. R. Moreira. 2000. State of the Art in Biotechnology Development in the USA and Other Countries. Invited paper at conference on "Industrial Development of Biotechnology in Chile", Valparaiso, Chile, January 21-22.

NON-REFEREED JOURNALS AND PRESENTATIONS (CONTINUED)

- A. R. Moreira. 2000. University Research and Industry Relationships. Invited paper at the conference on "Industrial Development of Biotechnology in Chile", Valparaiso, Chile, January 21-22.
- A. R. Moreira. 2000. Analysis of High Cell Density Fermentation Processes for Heterologous Protein Production. Keynote lecture at NCI Bioprocess Technology MiniSymposium, Frederick, Maryland, May 15-16.
- A. R. Moreira. 2001. Good Manufacturing Practices for Biotechnology Products. Inivited lecture, Department of Chemical Engineering, University of Waterloo, Ontario, Canada, March 11.
- U. Beshay and A. R. Moreira. 2001. "Effect of medium composition on the production of alkaline protease by *Teredinobacter turnirae*", AIChE Annual Meeting, Reno, Nevada, November 4-9.
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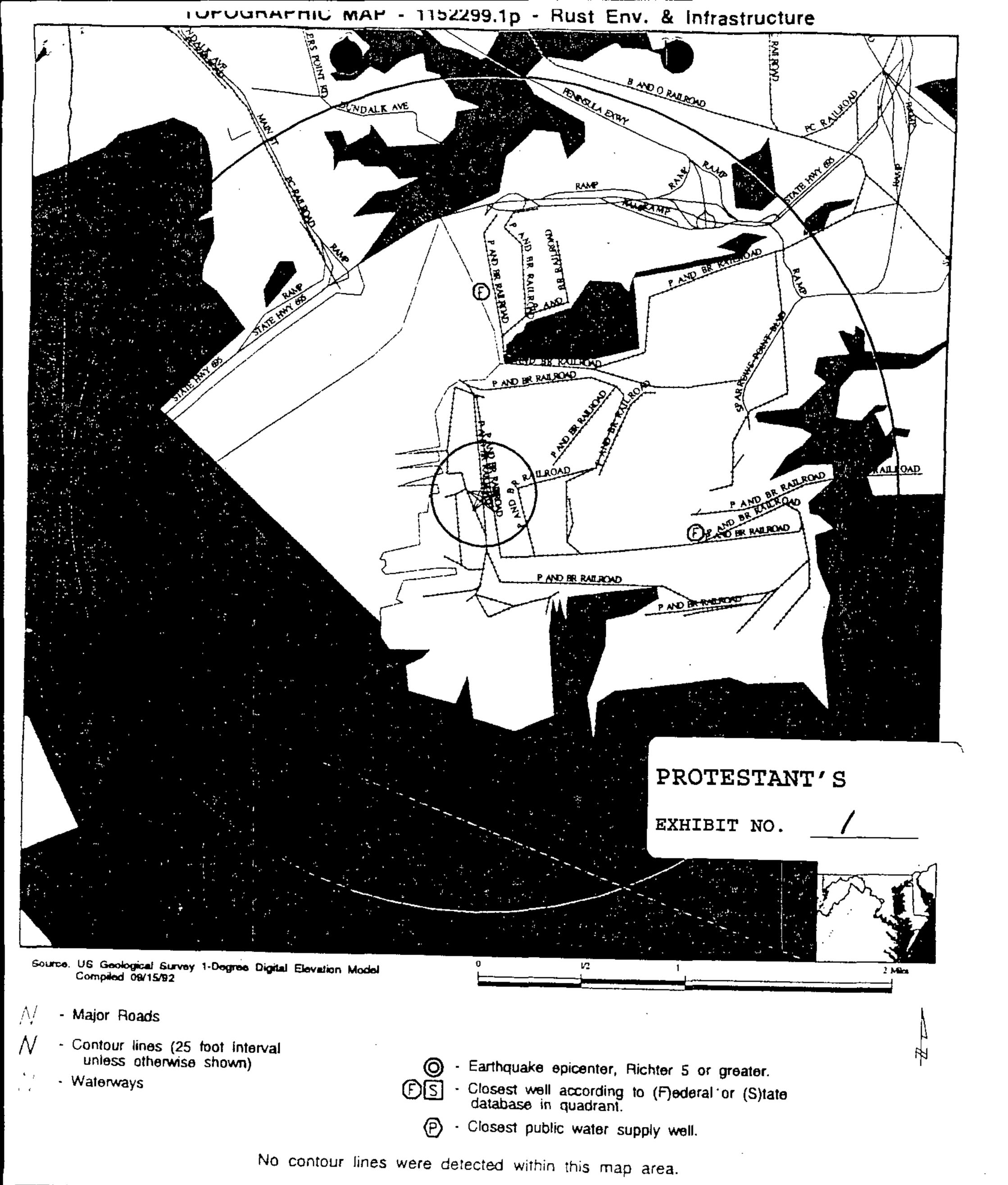
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Exhibit Sheet

Petitioner/Developer

Protestant

No. 1		Earth quake Eficanter
	SITE PLAN	Earth quake Eficanter Sukvey
No. 2	AERIAL PHOTO	
No. 3	1000 Scale ZONING MAP	
No. 4	ETHANOL PRODUCTION CHART	
No. 5	ECRON-Community 1 Q+A	
No. 6	Formols - SUBMITAL to PDM	
No. 7	DEFINITION - HEAVY CHEMICAL Websters ->	
No. 8	ERIC HADAWAY RESUME	
No. 9	MitcHock Kallman CHES AFRACE BAY CRITICAL	Ren
No. 10	MiticHAR FELLMAN	
	ZONING REVIEW LEHER 10-24-06	
No. 12	MORANDUM OF SUPPO ECONOMIC DEPT	0 P



TARGET PROPERTY: ADDRESS: CITY/STATE/ZIP:

LATILONG:

Bethlehem Steel, Sparrows Pt. Sparrows Pt., Shipyard Rd. Sparrows Point MD 21219 39.2182 / 76.4924


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
Aust Env. & Infrastructure Ms. Marty Costello

†: 1152299.1p

December 24, 1996 3:35 pm







PETITIONER'S
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