

PD-ABL-577

**PACIFIC VINITEX EVALUATION OF
WASTEWATER TREATMENT TECHNOLOGY**

**United States of America
August 12-20, 1994**

Prepared for:

US - ASIA ENVIRONMENTAL PARTNERSHIP



WORLD ENVIRONMENT CENTER

DISCLAIMER

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I. EXECUTIVE SUMMARY

Boon Tat Chua and Eng Chuan Lim of Pacific Vinitex traveled in the United States August 12-20, 1994, to participate in the Environmental Business Exchange (EBE) program. The purpose of this EBE was for the representatives of Pacific Vinitex to evaluate various wastewater treatment technologies. In addition to the evaluation of U.S. wastewater technologies, an organizational meeting was held for the Zero Discharge Consulting Group, Ltd. - an international corporate group of environmental consultants. This meeting helped establish a preliminary agreement to create a joint-venture to manufacture industrial wastewater treatment systems in Malaysia. Partners to the potential joint-venture are Pacific Vinitex, Blue Pacific Environmental Services (Blue Pacific), and Hoffland Environmental of Conroe, Texas.

Pacific Vinitex Pte Ltd of Singapore, founded in 1982, is a firm which focuses on the following activities: environmental engineering, laboratory engineering and trading, clean room engineering, and vacuum coating technology. Pacific Vinitex and Blue Pacific have been working together since 1993 to bring U.S. environmental technologies to Singapore. Blue Pacific Environmental Services, Inc. of Keaau, Hawaii, was founded in 1990 as Blue Pacific Distributors, Inc. to export environmental technologies overseas, primarily to Asia and nations of the Pacific Rim. Blue Pacific has since expanded their business to include environmental consulting and project management.

Funding for this project was provided through a Cooperative Agreement between the World Environment Center and the United States-Asia Environmental Partnership (US-AEP), United States for International Development (USAID).

II. INTRODUCTION

From August 12-20, 1994 Messrs. B.T. Chua and E.C. Lim of Pacific Vinitex took part in an Environmental Business Exchange (EBE). The participants traveled to the United States in order to evaluate U.S. wastewater treatment technologies and identify potential joint-venture partners.

The EBE allowed for the participants to have the opportunity to hold an organizational meeting for the Zero Discharge Consulting Group, Ltd. (Zero Discharge). Zero Discharge is an international corporate group of environmental consultants composed of Pacific Vinitex, Blue Pacific Environmental Services and Hoffland Environmental.

In addition to holding preliminary meetings with the joint-venture partners of Zero Discharge, the representatives of Pacific Vinitex visited Hoffland Environmental headquarters in Texas. The participants also held meetings with U.S. wastewater treatment equipment manufacturers to establish business relationships. In particular, the participants met with Aquatech International of Canonsburg, Pennsylvania, manufacturers of large-scale industrial pure water systems and industrial wastewater systems. The EBE participants visited a solid waste recycling facility in Medina, Ohio as well.

Lastly, the participants met with representatives of the National Association of State Development Agencies (NASDA) in Washington, DC. Among the subjects discussed was the possibility of obtaining a grant for a wastewater treatment and heavy metal recovery demonstration project.

III. MEETINGS

August 13-14, 1994 -- Zero Discharge Consulting Group, Ltd, organizational meeting at Hoffland Environmental, Canoe, Texas

Present: Robert O. Hoffland, President, Hoffland Environmental
Paul L. Murad, International Sales Manager, Hoffland Environmental
Bob Lavin, Reverse Osmosis Engineer, Hoffland Environmental
Michael Clark, Blue Pacific
Francisco Paz Adane, ACS Medio Ambiente, Mexico
Jose Luis Morales Cruz, ACS Medio Ambiente, Mexico
Albert Wakim, Environmental Manager, H₂Flow Systems, Toronto, Canada
R.S. Legore, Ph.D., Marine Biologist, Mote Environmental Services, Sarasota, FL

Topics discussed were: corporate organization, long term goals, development strategies, capitalization, fund raising strategies, marketing, and publication of corporate qualifications brochure.

Proposed Corporate Organization

The proposed organization structure is to consist of the following:

Chairman: Chua Boon Tat
President: Michael Clark
Director: Paul Murad
Members: Albert Wakim
Francisco M. Paz Adame
Jose L.M. Cruz
Linn Eng Chuan

The host of the meeting was Hoffland Environmental. Hoffland Environmental, previously known as ACS Environmental, was established 16 years ago. The company specializes in the treatment of wastewater, primarily for the electroplating industry, for which it has developed a compact treatment system called the ALERT 2000. Hoffland Environmental has decided that in order to cut costs, the company should begin to manufacture units such as the ALERT 2000 outside of the U.S. Thus, Hoffland Environmental has agreed to set up a joint-venture company with Pacific Vinitex to begin manufacturing in Malaysia and Singapore.

August 15, 1994 -- Visit to Solid Waste Management, Recycling and Volume Reduction Facility, Medina County, Ohio

Present: Ron Morgan, President, Morgan & Associates, Warren, OH
Steve Vir y, President, Norton Environmental, Independence, OH

The Medina County plant began operation two years ago in an effort to recover and recycle products such as newspaper, cardboard, metal cans, plastics, glass and food waste. Medina County owns and operates the facility and all related equipment. However, Norton Environmental, a subsidiary of the Dalad Group, designed and built the facility, which has been awarded a three year contract to operate the facility for the county. The total cost of land, building, equipment, and other related expenses is US\$8.2 million.

All residential, commercial, and industrial solid waste within Medina County, that is not special or hazardous waste, is brought to and processed at the Central Processing Facility. Recyclable materials that need to be removed and marketed include: newspaper, miscellaneous hi-grade paper, corrugated paper, household cans, aluminum cans, bi-metal cans, HDPE plastics, PET plastics, ferrous metal and miscellaneous copper and aluminum.

The participants from Pacific Vinitex were taken on a tour of the facility. Waste, collected from the county is first identified, videotaped, and then weighed before it is sent to the tipping floor. In total there are 12 stages, where in the last stage, the reclaimed material from the sorting stations is pushed into floor conveyors and then lifted to the bailer. Material is compressed into bales to be transported to market.

August 15, 1994 -- Meeting at Aquatech International Corporation (Aquatech), Canonsburg, PA

Present: V.N. Sharmer, President, Aquatech
F. Bryan Popp, Director, Corporate Planning, Aquatech
C.K. Tiwari, Sales Manager, Aquatech
Sachin kukade, Regional Sales Manager, Aquatech
Michael Clark, Blue Pacific

Aquatech specializes in the design, manufacture, installation and service of custom built water and wastewater systems for a wide range of industrial applications. In an effort to expand their business into the Far East, Aquatech has built manufacturing facility in India. Aquatech's president, V.N. Sharma plans to follow-up on the potential partnership with Pacific Vinitex and visit Singapore to assess the company's capabilities.

August 16, 1994 -- Meeting at National Association of State Development Agencies (NASDA), Washington, DC

Present: Brian R. Furr ess, Senior Program Manager, NASDA
Julie Pike, International Business Development Assistant, NASDA
Michael Clark, Blue Pacific

NASDA has supplied a grant to Michael Clark of Blue Pacific for a demonstration project in Thailand. The project involves the introduction of the ALERT 2000 for the treatment of electroplating waste on site in Thailand.

IV CONCLUSIONS

The participants were grateful for the opportunity to travel to the United States for the purpose of business development and technology assessment. Due to their participation in the Environmental Business Exchange program, the representative of Pacific Vinitex were able to organize the Zero Discharge Consulting Group first-hand as well as investigate other potential business opportunities in the form of possible joint-venture partners.

Negotiations are moving forward between Pacific Vinitex and Hoffland Environmental for the local production of the ALERT 2000 in either Singapore or Malaysia.

APPENDIX A

ITINERARY

August 12, 1994	Arrival in Houston, Texas
August 13, 1994	Meeting with Robert Hoffland, President, and Paul Murad, System Sales Manager, Hoffland Environmental. Zero Discharge preliminary organizational meeting.
August 14, 1994	Meeting of Zero Discharge members
August 15, 1994	Site visit to Medina County Solid Waste Facility
August 16, 1994	Meeting at Aquatech International Corporation
August 16, 1994	Meeting at National Association of State Development Agencies.
August 17, 1994	Meeting with Hoffland Environmental
August 18, 1994	Depart Houston for Singapore

APPENDIX B

BUSINESS CARDS OF PERSONS CONTACTED

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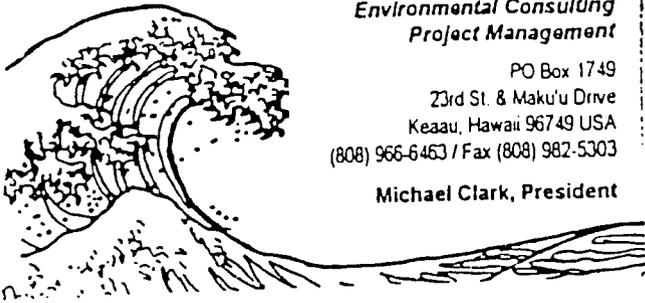
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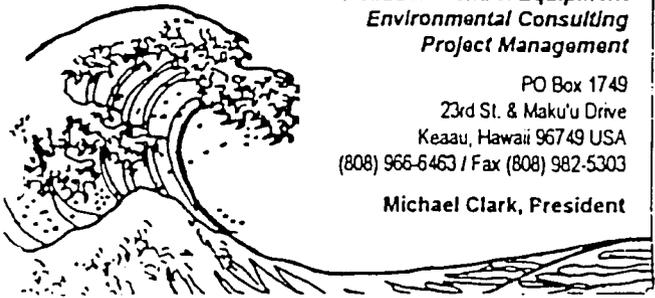
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