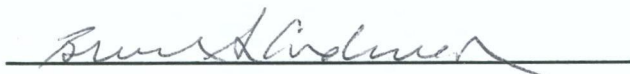


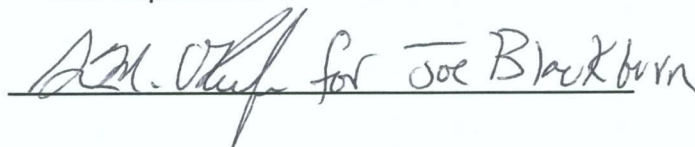
Sign-In Sheet for HSERC Members Or their Voting Representatives

August 26, 1997


Dr. Bruce Anderson
Deputy Director, Environmental Health
Department of Health
Department of Health



Joseph Blackburn
Maui Representative/LEPC Chair
Maui Fire Department
Maui Representative



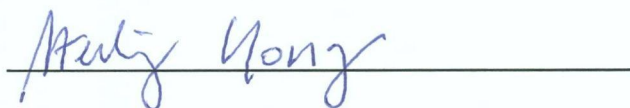
Robert A. Boesch
Pesticides Program Manager
Pesticides Branch, Department of Agriculture
Board of Agriculture



Mr. Russel Charlton
Manager
Occupational Health Branch
Department of Labor and Industrial Relations



Gilbert S. Coloma-Agaran
Deputy to the Chairperson
Department of Land and Natural Resources
Department of Land and Natural Resources



for Capt. Carter Davis
Honolulu Representative/LEPC Chair
Honolulu Fire Department
Honolulu Representative



Mr. Gary Gill
Director
Environmental Quality Control Office
Environmental Quality Control Office



Dr. John Harrison
Environmental Coordinator
UH Environmental Center
University of Hawaii Environmental Center



Sign-In Sheet for HSERC Members Or their Voting Representatives

August 26, 1997

Mr. Clifford Ikeda
Kauai Representative/LEPC Chair
Kauai Civil Defense
Kauai Representative



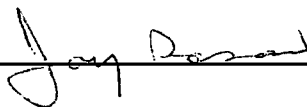
Mr. Glen Lockwood
Manager, Emergency Services
American Red Cross
American Red Cross

Prema Menon
Faculty
University of Hawaii, School of Public Health
School of Public Health, University of Hawaii



Mr. Roy C. Price, Sr.
Vice Director
Civil Defense Division
Department of Defense

Mr. Jay Sasan
Hawaii Representative
Industrial Safety Division
Hawaii Representative



Thomas J. Smyth
Business Services Division
Dept. of Business, Economic Dev. & Tourism
Department of Business, Economic Development & T

Chris Takeno
Hazardous Materials Officer
Department of Transportation
Department of Transportation

Sign-In Sheet for the August 26, 1997 HSERC Meeting

Name	Organization	Phone	Fax	E-mail
Sean O'Keefe	HC+S	877-859	871-7663	
Michael Arditi	US EPA	415-744-2328	415-744-7916	
Jim Vinton	BHP HAWAII	547-3414		
Alden Kang	SCD	733-4300	737-4287	
ALAN SUGIHARA	NOVSTA PERMITS HARBOR	471-9274		
Cynthia Pang	COMNAVBASE PH	471-9786	474-2328	
James Bac	DBEDT	587-3803	587-3839	For Tom Smyth
Helen M. Wasel	Compliance Consultant	674-3303	674-3365	hwessele@aloha.net
John Harbo	UH Env. Ctr	956-7361	956-3980	
Senator Rod Tam	State Senate	586-6450	586-6450	

DEPARTMENT OF ACCOUNTING AND GENERAL SERVICES
Automotive Management Division
Parking Control Branch

Lot WA

Date: August 14, 1997

MEMORANDUM

TO: **DAGS, Automotive Management Division**
Parking Control Branch Phone: 586-0344 Fax: 586-0354

FROM: **Health/Env. Health Admin./HEER Office**
DEPT., DIVISION Fax: 586-4444

SUBJECT: **REQUEST FOR SPECIAL FUNCTION PARKING**

PURPOSE: Hawaii State Emergency Response Commission Meeting

No. of Permits Requested: 15 Preferred Parking Lot: WA

Date(s) of Function: August 28, 1997 Time: 9:00 a.m. to 12:00 p.m.

Place of Function: AAFES Building, 919 Ala Moana Blvd., 5th Floor
(address)

Participants arriving from: Downtown Honolulu

Contact Person: Ariana Akana Phone: 586-4249 Fax: 586-7537

SUBMITTED BY: Bryce Hataoka, Acting Manager, EHA/HEER Office *BY*

Account No. to charge: 0.011 H 371 HTH 849

APPROVED FOR DIRECTOR: 

- NOTE.
- 1) **SUBMIT ONE REQUEST FOR EACH FUNCTION.**
 - 2) **REQUESTS MUST BE RECEIVED BY PARKING CONTROL AT LEAST THREE (3) WORKING DAYS, BUT NO MORE THAN 30 DAYS PRIOR TO THE DATE OF THE FUNCTION.**
 - 3) **PARTICIPANTS WHO ARE ISSUED SPECIAL FUNCTION PERMITS MUST BE ARRIVING FROM LOCATIONS OUTSIDE THE STATE CAPITAL COMPLEX.**
 - 4) **THIS SPECIAL FUNCTION PERMIT SHALL BE PROMINENTLY DISPLAYED, FACED UP, ON YOUR DASHBOARD ON THE DRIVER'S SIDE.**

PARKING CONTROL USE ONLY

AUG 14 1997
DATE RECD: _____

APPROVED BY: DM

LOT AUTHORIZED: 15 WA, METERS

No. of Validated Tickets: _____

AMD-PC-001
REV. 6/92

**Unmarked Reverse
Stalls**

Attendees

07-Aug-97

<u>Attendee</u>		<u>ApptTitle</u>	<u>ApptOrg</u>	<u>PHONE</u>	<u>FAX</u>
Dr. Bruce Anderson	<i>Yes</i>	Director	Department of Health	586-4424	586-4444
Joseph Blackburn	<i>Yes</i>	LEPC	Maui Representative	8-1(808)242-1478	242-4479
Robert A. Boesch	<i>Yes</i>	Chairperson	Board of Agriculture	973-9404 <i>243-7911</i>	973-9418
Mr. Russel Charlton	<i>Yes</i>	Director	Department of Labor and Industrial Relations	586-9090	586-9104
Gilbert S. Coloma-Agaran	<i>Stirling Yes</i>	Chairperson	Department of Land and Natural Resources	587-0402	587-0390
Capt. Carter Davis	<i>Yes Zeland</i>	LEPC	Honolulu Representative	523-4826	422-9691
Mr. Gary Gill	<i>Yes</i>	Director	Environmental Quality Control Office	586-4185	586-2452
Dr. John Harrison		Director	University of Hawaii Environmental Center	956-7361	
Mr. Clifford Ikeda	<i>Yes</i>	LEPC	Kauai Representative	8-1(808)241-6336	241-6335
Mr. Glen Lockwood		Manager, Emergency Services	American Red Cross	739-8114	735-8626
Prema Menon	<i>Yes</i>	Dean	School of Public Health, University of Hawaii	8089565744	8089564585
Mr. Roy C. Price, Sr.	<i>No</i>	Adjutant General	Department of Defense	733-4300	733-4287
Mr. Jay Sasan	<i>Yes</i>	LEPC	Hawaii Representative	8-1(808)961-8215	961-8248
Thomas J. Smyth		Director	Department of Business, Economic Development & Tourism	586-2591	587-3833
Chris Takeno		Director	Department of Transportation	587-2164	587-2168

Date sent: **Wed, 06 Aug 1997 08:01:37 -1000**
From: **Clifford Ikeda <ikeda@hawaiian.net >**
To: **Marsha Graf <mgraf@eha.health.state.hi.us >**
Subject: **RE: August HSERC Meeting**

There will be representation from Kauai LEPC at the August 26 HSERC meeting in Honolulu.



P. O. BOX 3378
HONOLULU, HAWAII 96801

**STATE OF HAWAII
DEPARTMENT OF HEALTH**

**HAZARD EVALUATION
AND
EMERGENCY RESPONSE OFFICE**

DATE: 2 NO. OF PAGES: 8/22/97

TO: Al Kang

COMPANY: SCD

TELEPHONE: 733-4300 FAX: 733-4288

FROM: Marsha Gray

TELEPHONE: (808) 586-4249 FAX: (808) 586-7537

COMMENTS:

Parking for HSERC Mtg

From: "Bryce Hataoka - HEER" <EHANVL1/BHATAOKA>
Organization: Environmental Health Administration
To: mgraf
Date sent: Wed, 20 Aug 1997 07:25:27 GMT-10
Subject: HSERC Meeting

Marsha,

Arlene spoke with Rusty yesterday and was told that Bruce would attend the meeting if there was a quorum. Rusty said that she spoke with you previously, but we don't know if there was a quorum at the time. Can you please call Rusty today to inform her that there are 9 members attending? You must call Rusty today, before she goes on leave. Thanks!

Bryce

Bryce will attend.

From: <N424@cnbgw.cnbph.navy.mil >
Date sent: Tue, 29 Jul 97 14:00:51 HST
To: eaa0002@co.honolulu.hi.us (Leland Nakai),
mmealey@eha.health.state.hi.us (Marsha Mealey)
Subject: Military Sealift Command (MSC) Briefing

Dr. John Austin from MSC in Washington D.C. will be conducting a briefing on MSC's oil spill response procedures. We would like to extend an invitation to your command to hear Dr. Austin's presentation.

Date/Time: 15 Aug 1230 - 1400

Place: Pearl Harbor Palms Windjammer Room

If you have any questions, please call me at 471-9786.

Thank You, Cynthia



COMNAVBASE Pearl Harbor
Box 110, Code N424
Pearl Harbor, HI 96860-5020
Phone: (808) 471-9786
Fax: (808) 474-2328

Fax

To: **SERC**
Marsha Graf

Fax Number:
586-7537

From: Cynthia Pang

Date: 7-31-97

Number of Pages: 1

TRAINING

Navy On-Scene Coordinators (NOSC) Incident Command System Training

Date/Time: 14 Aug 0730 - 1600
15 Aug 0730 - 1130

Place: Pearl Harbor Palms Windjammer Room

Military Sealift Command Oil Spill Response Briefing by Dr. John Austin

Date/Time: 15 Aug 1230 - 1400

Place: Pearl Harbor Palms Windjammer Room

Please RSVP by August 6

Date sent: **Sat, 9 Aug 1997 08:25:28 -1000 (HST)**
To: **mgraf@eha.health.state.hi.us**
From: **dowaldpm@pixi.com**
Subject: **August HSERC Meeting**

TO: Marsha Graf, HEPCRA Coordinator, HEER Office

FROM: Sterling Yong, DLNR

SUBJECT: Attendance at August HSERC Meeting

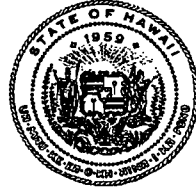
Mr. Gilbert Coloma Agaran will not be attending. I will be attending.

I will also need a parking pass for the HSERC Meeting. Please make arrangements to obtain one for me. Thanks.

Date sent: Fri, 15 Aug 1997 11:11:57 -1000
From: "Joseph G. Blackburn II" <joeb@maui.net>
Send reply to: joeb@maui.net
Organization: Pacific Rim Fire Equipment Supply
To: Marsha Graf HEPCRA Coordinator <mgraf@eha.health.state
Subject: HSERC Meeting

Marsha, I will be able to attend. Please put on agenda, FEMA Grants, Discussion. Also need airline tickets. Aloha, Joe B

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

IN REPLY, PLEASE REFER TO:
HEER OFFICE

HAWAII STATE EMERGENCY RESPONSE COMMISSION
MEETING #28

Tuesday, August 26, 1997 from 9:00 a.m. to 12:00 noon.

Department of Health
919 Ala Moana Boulevard, Conference Room 215
Honolulu, Hawaii 96814

AGENDA

- 1) 9:00 Call to Order
Opening Remarks and Discussion
Approval of Minutes from Mtg #27
- 2) 9:15 EPA Updates Mike Ardito, USEPA Region IX
Chemical Accident Investigation Program
Campbell Industrial Park-EPCRA Compliance
- 3) 10:15 Budget Outline and Grants Update Marsha Graf, HEER Office
10:45 Break
- 4) 11:00 LEPC Updates and Membership Changes Jay Sasan, Hawaii LEPC Representative
Clifford Ikeda, Kauai LEPC Representative
Carter Davis, Oahu LEPC Representative
Joe Blackburn, Maui LEPC Representative
- 5) 11:45 Other Business
- 6) 11:55 Schedule next HSERC meeting

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

IN REPLY, PLEASE REFER TO:
HEER OFFICE

HAWAII STATE EMERGENCY RESPONSE COMMISSION
MEETING #28

Tuesday, August 26, 1997 from 9:00 a.m. to 12:00 noon.

Department of Health
919 Ala Moana Boulevard, Conference Room 215
Honolulu, Hawaii 96814

AGENDA

- 1) 9:00 Call to Order Bruce Anderson, DOH, Env. Health Admin.
Opening Remarks and Discussion
Approval of Minutes from Mtg #27
- 2) 9:15 EPA Updates Mike Ardito, USEPA Region IX
- Chemical Accident Investigation Program
- Campbell Industrial Park - EPCRA Compliance
- 3) 9:45 → Operation Ko'olanu Review EPA & State Agencies
- 4) 10:00 Black Market for Farm Chemicals Carter
- 10:45 Break
- 6) 11:00 LEPC Updates and Membership Changes Jay Sasan, Hawaii LEPC Representative
Clifford Ikeda, Kauai LEPC Representative
Carter Davis, Oahu LEPC Representative
Joe Blackburn, Maui LEPC Representative
- 7) 11:30 Report on Fed/Fac conf. Cynthia Pang
- 8) 11:45 Other Business
- 9) 11:55 Schedule next HSERC meeting

File: 28AGENDA
Type: FAX
Phone #: 94742328
User ID:
Name: Cynthia Pang
Time: 3:47 PM
Date: 8/19/97
Pages: 0
Duration: 0:00
Speed:
Status: No Answer

OK by fax machine not by computer

File: 28AGENDA
Type: FAX
Phone #: 8089356460
User ID:
Name: Harry Kim
Time: 3:46 PM
Date: 8/19/97
Pages: 0
Duration: 0:00
Speed:
Status: Busy

*Vacant # Series
OK by fax machine but not by computer*

File: 28AGENDA
Type: FAX
Phone #: 94742328
User ID:
Name: Cynthia Pang
Time: 3:36 PM
Date: 8/19/97
Pages: 0
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Speed:
Status: No Answer

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Phone #: 8089356460
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Name: Harry Kim
Time: 3:35 PM
Date: 8/19/97
Pages: 0
Duration: 0:00
Speed:
Status: Busy

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Phone #: 8089732941
User ID:
Name: John Naughton
Time: 3:34 PM
Date: 8/19/97
Pages: 2
Duration: 1:10

(35) (34)

Speed: 14400
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 18088717663
User ID: 808 871 7663
Name: Sean O'Keefe
Time: 3:32 PM
Date: 8/19/97
Pages: 2
Duration: 2:07
Speed: 9600
Status: Sent

(34) (33)

File: 28AGENDA
Type: FAX
Phone #: 8087334287
User ID:
Name: Roy C. Price, Sr.
Time: 3:30 PM
Date: 8/19/97
Pages: 2
Duration: 1:37
Speed: 9600
Status: Sent

(33) (22)

File: 28AGENDA
Type: FAX
Phone #: 8086743365
User ID: 808 6743365
Name: Helen Mary Wessel
Time: 3:18 PM
Date: 8/19/97
Pages: 2
Duration: 1:19
Speed: 14400
Status: Sent

(32) (31)

File: 28AGENDA
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User ID:
Name: Cynthia Pang
Time: 3:16 PM
Date: 8/19/97
Pages: 0
Duration: 0:00
Speed:
Status: No Answer

File: 28AGENDA
Type: FAX
Phone #: 8089356460
User ID:
Name: Harry Kim
Time: 3:15 PM

(31)

Date: 8/19/97
Pages: 0
Duration: 0:00
Speed:
Status: Busy

File: 28AGENDA
Type: FAX
Phone #: 14157441796
User ID: 1 415 744 1796
Name: Mike Ardito (9)
Time: 3:14 PM
Date: 8/19/97
Pages: 2
Duration: 1:20
Speed: 14400
Status: Sent

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User ID: 8085473010
Name: James N. Vinton (9)
Time: 3:12 PM
Date: 8/19/97
Pages: 2
Duration: 1:25
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085411216
User ID: 808 541 1216 (28)
Name: Ron Walker
Time: 3:10 PM
Date: 8/19/97
Pages: 2
Duration: 1:23
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085216841
User ID: 8085216841
Name: Sierra Club Legal Defense Fund (27)
Time: 3:08 PM
Date: 8/19/97
Pages: 2
Duration: 1:37
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085379019

User ID: 53
Name: Hawaii Chapter Sierra Club (28)
Time: 3:06 PM
Date: 8/19/97
Pages: 2
Duration: 1:36
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085873077
User ID: 808 587 3077 (25)
Name: Kathy Ho
Time: 3:04 PM
Date: 8/19/97
Pages: 2
Duration: 1:24
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8087338332
User ID: 7338332 (24)
Name: Donna Maiava
Time: 3:02 PM
Date: 8/19/97
Pages: 2
Duration: 1:38
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085437023
User ID: 808 543 7023 (23)
Name: Pat Wong
Time: 3:00 PM
Date: 8/19/97
Pages: 2
Duration: 1:09
Speed: 14400
Status: Sent

File: (Coversheet)
Type: FAX
Phone #: 14157441916
User ID: 415 744 1916
Name: Kathleen Shimman (22)
Time: 2:58 PM
Date: 8/19/97
Pages: 1
Duration: 1:31
Speed: 4800
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8089564585
User ID: 8089564585
Name: Prema Menon
Time: 2:56 PM
Date: 8/19/97
Pages: 2
Duration: 1:37
Speed: 9600
Status: Sent

(2)

File: 28AGENDA
Type: FAX
Phone #: 8085873833
User ID: 5873833
Name: Thomas J. Smyth
Time: 2:53 PM
Date: 8/19/97
Pages: 2
Duration: 1:37
Speed: 9600
Status: Sent

(3)

File: 28AGENDA
Type: FAX
Phone #: 8085866451
User ID:
Name: Senator Rod Tam
Time: 2:51 PM
Date: 8/19/97
Pages: 2
Duration: 1:10
Speed: 14400
Status: Sent

(19)

File: 28AGENDA
Type: FAX
Phone #: 8084742328
User ID: 8084742328
Name: Carolyn Winters
Time: 2:50 PM
Date: 8/19/97
Pages: 2
Duration: 1:37
Speed: 9600
Status: Sent

(18)

File: 28AGENDA
Type: FAX
Phone #: 8085228270
User ID:
Name: Lt. Cmdr. Ken Hertzler
Time: 2:47 PM
Date: 8/19/97
Pages: 2
Duration: 1:24

(17)

Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085870390
User ID: 8085870390
Name: Gilbert Coloma-Agaran (16)
Time: 2:45 PM
Date: 8/19/97
Pages: 2
Duration: 1:20
Speed: 14400
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085872168
User ID: 587 2167
Name: Chris Takeno (15)
Time: 2:44 PM
Date: 8/19/97
Pages: 2
Duration: 1:03
Speed: 14400
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8089732941
User ID:
Name: John Naughton
Time: 2:42 PM
Date: 8/19/97
Pages: 0
Duration: 0:00
Speed:
Status: Busy

File: 28AGENDA
Type: FAX
Phone #: 8085293948
User ID:
Name: Captain Terry Yuen (14)
Time: 2:42 PM
Date: 8/19/97
Pages: 2
Duration: 1:19
Speed: 14400
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085293312
User ID: 808 529 3312
Name: Capt. Terry Yuen (13)
Time: 2:40 PM

Date: 8/19/97
Pages: 2
Duration: 1:20
Speed: 14400
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085869104
User ID: 8085869104
Name: Russel Charlton (12)
Time: 2:38 PM
Date: 8/19/97
Pages: 2
Duration: 1:02
Speed: 14400
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8087358626
User ID:
Name: Glen Lockwood (11)
Time: 2:36 PM
Date: 8/19/97
Pages: 2
Duration: 1:36
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8089563980
User ID: 8089563980
Name: Dr. John Harrison (10)
Time: 2:34 PM
Date: 8/19/97
Pages: 2
Duration: 1:38
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8089739418
User ID: 33
Name: Bob Boesch (9)
Time: 2:32 PM
Date: 8/19/97
Pages: 2
Duration: 1:25
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 18088717663

User ID:
Name: Sean O'Keefe
Time: 2:30 PM
Date: 8/19/97
Pages: 0
Duration: 0:00
Speed:
Status: Busy

File: (Coversheet)
Type: FAX
Phone #: 8087334287
User ID:
Name: Roy C. Price, Sr.
Time: 2:30 PM
Date: 8/19/97
Pages: 1
Duration: 1:19
Speed: 7200
Status: Failed

File: 28AGENDA
Type: FAX
Phone #: 8085864444
User ID: 8085864444
Name: Dr. Bruce Anderson (8)
Time: 2:28 PM
Date: 8/19/97
Pages: 2
Duration: 1:37
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 18082424479
User ID: 18008358417
Name: Captain Joe Blackburn (9)
Time: 2:26 PM
Date: 8/19/97
Pages: 2
Duration: 1:39
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 18089618248
User ID: 8089618248
Name: Jay Sasan (6)
Time: 2:23 PM
Date: 8/19/97
Pages: 2
Duration: 1:36
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 18082416335
User ID: 808 241 6335
Name: Clifford Ikeda (5)
Time: 2:21 PM
Date: 8/19/97
Pages: 2
Duration: 1:37
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8087356829
User ID: 8087356829
Name: Capt. Carter Davis (4)
Time: 2:19 PM
Date: 8/19/97
Pages: 2
Duration: 1:38
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085864186
User ID: 808 586 4186
Name: Gary Gill (3)
Time: 2:17 PM
Date: 8/19/97
Pages: 2
Duration: 1:38
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085867537
User ID: 808 586 4249
Name: HEER Hawaii DOH (2)
Time: 2:15 PM
Date: 8/19/97
Pages: 2
Duration: 1:36
Speed: 9600
Status: Sent

File: 28AGENDA
Type: FAX
Phone #: 8085243439
User ID: 808 524 3439
Name: Leland Nakai (1)
Time: 2:13 PM
Date: 8/19/97
Pages: 2
Duration: 1:24

Speed: 9600
Status: Sent



P. O. BOX 3376
HONOLULU, HAWAII 96801

**STATE OF HAWAII
DEPARTMENT OF HEALTH**

**HAZARD EVALUATION
AND
EMERGENCY RESPONSE OFFICE**

DATE: 8/21/97 NO. OF PAGES: 2

TO: Harry Kim

COMPANY: Hawaii CD

TELEPHONE: _____ FAX: 935-6460

FROM: Marsha Gray

TELEPHONE: (808) 586-4249 FAX: (808) 586-7537

COMMENTS:

ASERO Mtg #28 Agenda
Please note room change



P. O. BOX 3378
HONOLULU, HAWAII 96801

**STATE OF HAWAII
DEPARTMENT OF HEALTH**

**HAZARD EVALUATION
AND
EMERGENCY RESPONSE OFFICE**

DATE: 08/21/97 NO. OF PAGES: 2

TO: Cynthia Pang

COMPANY: ComNAVBASE

TELEPHONE: _____ FAX: 474-2328

FROM: _____

TELEPHONE: (808) 586-4249

FAX: (808) 586-7537

COMMENTS:

File: 27DMIN
Type: FAX
Phone #: 8085873833
User ID: 5873833
Name: Thomas J. Smyth
Time: 5:13 PM
Date: 8/23/97
Pages: 6
Duration: 6:39
Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 8089564585
User ID: 8089564585
Name: Prema Menon
Time: 5:06 PM
Date: 8/23/97
Pages: 6
Duration: 6:38
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Type: FAX
Phone #: 8085870390
User ID: 8085870390
Name: Gilbert Coloma-Agaran
Time: 4:59 PM
Date: 8/23/97
Pages: 6
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Phone #: 8085872168
User ID: 587 2167
Name: Chris Takeno
Time: 4:53 PM
Date: 8/23/97
Pages: 6
Duration: 4:19
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Phone #: 8089739418
User ID: 33
Name: Bob Boesch
Time: 4:48 PM
Date: 8/23/97
Pages: 6
Duration: 6:12

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Phone #: 8089563980
User ID: 8089563980
Name: Dr. John Harrison
Time: 4:42 PM
Date: 8/23/97
Pages: 6
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Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 8087358626
User ID:
Name: Glen Lockwood
Time: 4:35 PM
Date: 8/23/97
Pages: 6
Duration: 6:39
Speed: 9600
Status: Sent

File: 27DMIN
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Phone #: 8085869104
User ID: 8085869104
Name: Russel Charlton
Time: 4:27 PM
Date: 8/23/97
Pages: 6
Duration: 4:15
Speed: 14400
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 8085864186
User ID: 808 586 4186
Name: Gary Gill
Time: 4:23 PM
Date: 8/23/97
Pages: 6
Duration: 6:44
Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 8087356829
User ID: 8087356829
Name: Capt. Carter Davis
Time: 4:16 PM

Date: 8/23/97
Pages: 6
Duration: 6:39
Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 18082416335
User ID: 808 241 6335
Name: Clifford Ikeda
Time: 4:08 PM
Date: 8/23/97
Pages: 6
Duration: 6:39
Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 18089618248
User ID: 8089618248
Name: Jay Sasan
Time: 4:01 PM
Date: 8/23/97
Pages: 6
Duration: 6:39
Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 18082424479
User ID: 18008358417
Name: Captain Joe Blackburn
Time: 3:54 PM
Date: 8/23/97
Pages: 6
Duration: 6:43
Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 8085864444
User ID: 8085864444
Name: Dr. Bruce Anderson
Time: 3:46 PM
Date: 8/23/97
Pages: 6
Duration: 6:39
Speed: 9600
Status: Sent

File: 27DMIN
Type: FAX
Phone #: 8087334287

User ID:
Name: Roy C. Price, Sr.
Time: 3:39 PM
Date: 8/23/97
Pages: 6
Duration: 6:41
Speed: 9600
Status: Sent

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

IN REPLY, PLEASE REFER TO:
HEER OFFICE

HAWAII STATE EMERGENCY RESPONSE COMMISSION
MEETING #28

Tuesday, August 26, 1997 from 9:00 a.m. to 12:00 noon.

Department of Health
919 Ala Moana Boulevard, Conference Room 215
Honolulu, Hawaii 96814

AGENDA

- 1) 9:00 Call to Order
Opening Remarks and Discussion
Approval of Minutes from Mtg #27
- 2) 9:15 EPA Updates Mike Ardito, USEPA Region IX
Chemical Accident Investigation Program
Campbell Industrial Park-EPCRA Compliance
- 3) 10:15 Budget Outline and Grants Update Marsha Graf, HEER Office
10:45 Break
- 4) 11:00 LEPC Updates and Membership Changes Jay Sasan, Hawaii LEPC Representative
Clifford Ikeda, Kauai LEPC Representative
Leland Nakai, Oahu LEPC Representative
Joe Blackburn, Maui LEPC Representative
- 5) 11:45 Other Business
- 6) 11:55 Schedule next HSERC meeting

'97 AUG 18 P2:59

LIEUTENANT GOVERNOR'S
OFFICE

BRIEF

HAWAII STATE EMERGENCY RESPONSE COMMISSION MEETING

Tuesday, August 26, 1997 from 9:00 p.m. to 12:00 p.m.

Department of Health
919 Ala Moana Boulevard, Conference Room 215
Honolulu, Hawaii 96814

AGENDA

(DR. BRUCE ANDERSON, CHAIR)

▼ (CHECK FOR A QUORUM)

1 **9:00** Call to Order

▼ THE MEETING WILL PLEASE COME TO ORDER.

Time: _____

Welcome

I'D LIKE TO WELCOME MEMBERS, SPEAKERS AND OTHERS WHO ARE ATTENDING.

Opening Remarks

ONE ITEM OF OLD BUSINESS WAS TO HAVE A SPEAKER FROM THE EPA ATTEND THIS MEETING TO HELP ESTABLISH AN ENFORCEMENT PROGRAM. IT IS KATHY HO'S INTENTION THAT THE HEER OFFICE WRITE RULES FOR 128E FOR THE 1998 LEGISLATIVE SESSION. ENFORCEMENT CONSIDERATIONS WILL BE A PART OF THIS EFFORT. THE FIRST STEP IS TO OBTAIN POLICY FROM THE EPA AND MODEL OUR RULES ON THAT. AS A FOLLOW UP, LAUREN VOLPINI HAS OFFERED SEND AN EPA LAWYER TO VISIT IN THE HEER OFFICE FOR A COUPLE OF WEEKS TO HELP US WRITE OUR ENFORCMENT POLICY. I SUGGEST THAT WE TRY TO HAVE HIM SPEAK AT AN HSERC MEETING DURING HIS VISIT.

IT WAS SUGGESTED LAST MEETING THAT CARTER DAVIS ADDRESS THE COMMISSION ON THE PESTICIDE BLACK MARKET. SINCE HE WAS UNABLE TO ATTEND TODAYS MEETING, PERHAPS THIS TOPIC CAN BE INCLUDED ON THE NEXT MEETING AGENDA.

ALSO, MEMBERS RECEIVED FAXs OF THE PIPELINE SAFETY COMMITTEE BYLAWS FOR REVIEW. THERE ARE ADDITIONAL COPIES ON THE TABLE AT THE ENTRANCE.

Discussion/Approval of Minutes from Meeting #26.

MEMBERS RECEIVED COPIES OF THE MINUTES BY FAX.

THERE ARE COPIES OF THE MINUTES ON THE TABLE AT THE ENTRANCE. PLEASE TAKE SOME TIME TO REVIEW THE DRAFT MINUTES.

▼DO I HEAR A MOTION TO ACCEPT THE MINUTES?

▼DOES ANYONE WANT TO SECOND THE MOTION?

▼THE MOTION TO ACCEPT THE MINUTES HAS BEEN SECONDED. IT'S NOW OPEN TO DISCUSSION. ARE THERE ANY CHANGES?

▼THE CHAIR RECOGNIZES...

▼THOSE IN FAVOR OF ACCEPTING THE MINUTES *AS PRINTED/WITH THE CHANGES DISCUSSED* SAY YES. (PAUSE FOR THE YES VOTES) THOSE OPPOSED SAY NO.

THE MOTION IS CARRIED. THE MINUTES ARE ACCEPTED.

- 2) **9:15** THE SECOND ITEM ON THE AGENDA IS AN EPA UPDATE FROM **Mike Ardito** OF REGION IX. MIKE WILL UPDATE US ON THE CHEMICAL ACCIDENT INVESTIGATION PROGRAM, EPCRA COMPLIANCE IN THE CAMPBELL INDUSTRIAL PARK, AND THE H3 TUNNEL EXERCISE HELD LAST WEEK.
- 3) **10:15** NEXT, **Marsha Graf** WILL PRESENT AN OUTLINE OF BUDGET ISSUES INCLUDING EXPECTED FILING FEE MONIES AND GRANT ALLOCATIONS.

10:45 A BREAK IS SCHEDULED FROM 10:45 to 11:00.

- 4) **11:00** THE NEXT ITEM ON THE AGENDA ARE THE PRESENTATIONS BY THE LEPCS.

Jay Sasan, Hawaii
Clifford Ikeda, Kauai
Leland Nakai, Oahu
Joe Blackburn, Maui

5) **11:45** OTHER BUSINESS

IS THERE ANY OTHER BUSINESS TO DISCUSS?

9 **11:55** Schedule next HSERC meeting

THE CHAIR PROPOSES THAT THE NEXT MEETING BE HELD IN THE BEGINNING OF NOVEMBER.

▼DO I HEAR A MOTION TO SCHEDULE THE NEXT HSERC MEETING IN NOVEMBER?

▼DOES ANYONE WANT TO SECOND THE MOTION?

▼THE MOTION HAS BEEN SECONDED.

▼THOSE IN FAVOR SAY YES. (PAUSE FOR THE YES VOTES)

▼THOSE OPPOSED SAY NO.

▼THE MOTION IS CARRIED.



▼DO I HEAR A MOTION TO ADJOURN THE MEETING?

▼DOES ANYONE WANT TO SECOND THE MOTION?

▼THE MOTION TO ADJOURN HAS BEEN SECONDED.

▼THOSE IN FAVOR SAY YES. (PAUSE FOR THE YES VOTES)

▼THOSE OPPOSED SAY NO.

▼THE MOTION IS CARRIED. THE MEETING IS ADJOURNED UNTIL NOVEMBER.

Time: _____

9:08 time

Put Carter Davis on the agenda for next meeting

changes
LN August not July
MMST

unanimously accepted with changes

2.0 Mike Ardito

2.1 h01 Fact Sheet - Chemical Accident Investigation Program

h02 Letter to OSHA

h03 MOU between USEPA & OSHA

- pg 2 Form core team Jan 1, '97
keep HSERC, LERCs^{etc} apprised...

- pg 10 contents

- State Plan State - Hawaii is one.

Russel is ready to cooperate

1999 risk management plan

June so MOU will probably be revisited then

- pg 5 Criteria for triggering investigation

- Risk Management Training under 1125
Spring 1998 RMP workshop

no4 - International Conf on Risk Analysis on
Oct 21-24 1997 Atlanta Process Safety

no5 for official members
2.2 CIP Compliance

2.2.1 Integrated search for industries
actually at CIP ABD, D&D, Tenement
Campbell list

2.2.2 Survey to find found

2.2.3 chosen

inspected

2.2.4 end workshops were held following site visits

findings: ^{① EPCRA} ^{② SPCC}
violations of ^{③ Uniform} fire codes

2.3 Operation Koolau

Aug 20 Full scale ^{most} complicated scenario
in Hawaii to date

EPA
\$100,000

7 fed

MCBKB

5 state

5 local

and private

Scenario 230 people involved

gasoline diesel

Haiter Kanoehe bound

chlorine 1/2 way through

and a pesticide spill

Objectives ① validate DOT Tunnel EOP

② build ^{1 day area Plan} Unified Command System

③ familiarize locality with tunnel

Also Filled
OPA 90
FEMA
requirements

tested communications

Support from EMS
BHP
gaspro
Prewer
Menehune water

Summary

① Communications

- new tunnel
- cellular don't work

② Incident command

Unified

Not enough time to allow
it to develop and
function

③ Notifications

④ Training

⑤ Planning

also - need more training
so that participants
are familiar with ICS

Good

agency coordination - both prior and during

- Report will come out end of 1997

- Training video will be out beginning of 1998

AK? Will EPA cease to coord yearly exercises
MA will do Hawaii - committed

but then will stop no longer take lead

JS ~~MA~~ Observers from HSERC might have benefited
MA No grand stand, safety concerns
limited no. of observers

hoo Video

AK began planning last Nov.

gg. would the ventilation system clear a

1
Regional plume?

Smoke generator - tunnel didn't
fill with smoke?

CI Cellular had gaps - will add boosters
Nation guard filled in communication
gaps

- Senator Tam was introduced

- Kathy Ho
128E

- DOH is increasing enforcement

- 128E.11 consequences

- 687 shall adopt rules

- in order to enforce, then we must have

- ~~rules~~ ^{rules must}

fit chemical inventory form

BA \$10,000 for rulemaking
hearing & travel

3.0 budget

9V Oahu status same as Maui

BA Hawaii exercise next year will be funded

PM RMP Training

next spring

after that no - that's
how the other states
run

99 stable income

statutory change to change filing fee structure

JV 25% increase possible if full reporting
gg? BA
fines go into ~~ERF~~ ~~for response~~
general Fund

BA want to avoid a "bounty hunting" situation
Retroactive filing fees

RT filing fees at discretion of the dept. - more autonomy
could "unlink" it from the statute

May want to restructure filing fees
to support program
Purposive enforcement
Pin down \$ from fees

JH: long term planning with stakeholders
BA Put long term budget and fee restructuring on

Hawaii no.

Kauai no.

Oahu Haymal training
technician

operation wastewater management

LEPC conf

Continuing Challenge

NBC \$300,000 proposal for contract

Health & HS

Sept

Pharm
plan
exercise

MMST

15 months

July 7 Training assistance program

1998 - Train the Trainers

Fire will be lead for DOD training initiatives

Tunnels - discussed

ESF 10 Table Top Aug 21

Direct Hurricane hit - chemical releases

Seen ① Propane @ CIP

② liquid ^{Sand Island} Hono Harbor ←

③ human and animal waste from
Old Wai

CHEAD

Public Notification and Education
and Response Project - Sept will begin
will be ongoing for the next couple
of years

Maui

- EOP came back with comments
so the approved draft will be signed
by the mayor in the next couple
of weeks

- will begin to meet again

- Joe is entering facilities

BA Two Issues

① HPCRA rules

BA? focus on enforcement? Yes

vs management such as requiring management
plans from facilities (over)

Can we
JJB Provide a Technical consultation
function like HIOSH.

② Budget task force [✓] HRCs, [✓] HRCRA
coordinator, [✓] EPA, [✓] BHPens., [✓] SED [✓] HIOSH
_{Mike Jim Al}
Support training and exercise

✱

AK ^{SED has} HMEP training
Anson
Terrorism

contact
other
industry

FF
Cynthia
Pang

and whoever
the Dept would like

MA says \$20,000 - \$30,000 is the usual
cost for running an exercise

RT Don't forget what the private sector
can contribute. Balance between
what the State and private do for
safe chemical use.

RC ^{OSHA} Has a requirement for ERP plans
Has tech consultation, but doesn't have tech
expertise

✱ Send releases for Hawaii from the
last year.

gg motion
RC second

RT Identify types of responses, oil etc
Want to fund health and safety

* CG Threat assessment
pass this along to the Reg.

A Carried Report next Nov.

Schedule on Friday mid Nov.
adjourned @
11:15

in Joint Armed Services CD Disaster
Plan ~~55~~ 655-5253 Coord
Suizo Comm

99 enforcement
include retro filing fees
late fees > ERF
as well as fines.

JH Where does

**CAMPBELL INDUSTRIAL PARK
KAPOLEI, OAHU, HAWAII**

**An Industry Profile
and
Review of Selected U.S. EPA Compliance Evaluations**



Revised August 1997

**EPCRA/CERCLA Compliance and Enforcement Program
U.S. Environmental Protection Agency - Region IX
75 Hawthorne Street
San Francisco, California 94105**





UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

REGION IX

**75 Hawthorne Street
San Francisco, CA 94105-3901**

Briefing for Representative Terry Nui Yoshingaga

11 August 1997

USEPA Region 9 Offices

Session

10-11 AM Room 1912

Topic: Campbell Industrial Park/Emergency Planning & Community Right To Know (EPCRA)

Contact

Lauren Volpini, Program Mgr.

EPCRA/CERCLA Compliance & Enforcement

Superfund Division

T# 415.744.2333

Volpini.Lauren @epamail.epa.gov

USEPA Multi-Agency Team Compliance Assessment Evaluations

Increased facility compliance with multiple statutes at federal, state and local levels

Increased facility awareness and potential implementation of solutions to other hazmat concerns (non-regulatory)

Direct compliance assistance to and among federal, state and local agencies

Compliance assistance to Industry (and Federal Facilities) via the on-sites and Workshops

Pearl Harbor EPCRA Compliance Investigations

BHP Investigation



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ATTACHMENTS

- Attachment 1 Campbell Industrial Park Site Map
- Attachment 2 Campbell Industrial Park Facilities List Sorted by SIC Code and Alphabetical Listing
- Attachment 3 Campbell Industrial Park Industry Groups Most Likely To Have Hazardous Substances Present



INTRODUCTION

The Comprehensive Environmental Response, Compensation and Liability Act of 1980 (CERCLA) was established to provide for liability, compensation, cleanup, and emergency response for hazardous substances released into the environment and the cleanup of inactive hazardous waste disposal sites. In December of 1984, a release of methyl isocyanate gas, a hazardous chemical, occurred at the Union Carbide facility in Bhopal, India that caused at least 2,500 deaths and more than 10,000 injuries. Shortly after the Bhopal incident a release occurred at a facility in West Virginia which was not nearly as serious but caused Americans to question whether existing regulations would protect against a "Bhopal" in our own country. In response, EPA established the voluntary Chemical Emergency Preparedness Program (CEPP) to raise state and local awareness of the potential for accidents involving extremely hazardous substances. The Chemical Manufacturers Association (CMA) set up a voluntary program called Community Awareness and Emergency Response (CAER), which encourages plant managers to become more involved in their local community. Most states have now passed laws giving workers and citizens access to information about the chemical substances in their work places and communities.

In 1986, the Superfund Amendments and Reauthorization Act of 1986 (SARA) was established by congress to extend and amend CERCLA. With the public concern over Bhopal and the proactive efforts of EPA, the CMA and various state actions in mind, Congress enacted SARA Title III, the Emergency Planning and Community Right To Know Act (EPCRA). This action provided for a mandatory release notification and reporting program and removed it from the realm of voluntary compliance. EPCRA also provided a mechanism to compel businesses to submit chemical inventories to State Emergency Response Commissions (SERCs) and Local Emergency Planning Committees (LEPCs) for use in preparing Chemical Emergency Response Plans. Most importantly, EPCRA chemical inventory and release information is to be easily accessible to the public.

In August 1995, the Hawaii State Legislature promulgated regulations adopted pursuant to the Hawaii Environmental Response Law, Chapter 128D and E, Hawaii Revised Statutes. One of the aspects of the State Contingency Plan established under these regulations requires notification of releases of reportable quantities of hazardous materials to the Hazard Evaluation and Emergency Response (HEER) Office of the Hawaii Department of Health and to the Local Emergency Planning Committee.

In the wake of several, significant and well publicized hazardous material releases from Campbell Industrial Park (CIP) facilities in 1995, the U.S. Environmental Protection Agency, Region IX (EPA), worked with the HEER office, the Hawaii SERC, the Oahu LEPC, the Honolulu Fire Prevention Bureau and the Honolulu Fire Department's Kapolei Station, to identify possible non-complying facilities and to increase regulatory compliance with EPCRA. Special emphasis was placed on businesses located within CIP.



EPA proposed a three pronged approach to meet Hawaii's needs:

- Campbell Industrial Park Profile: The CIP Profile is a report which summarizes a compilation of available information on businesses operating in the Park, with a focus on characterizing those facilities which use or store hazardous materials. The profile is intended to help governmental agencies set priorities, target increased regulatory presence and compliance assistance, identify steps to reduce the risks for releases from CIP and facilitate emergency response. It is also intended to assist interested government parties to develop and undertake a similar profile for industry in other areas.
- Multi-media and multi-agency compliance evaluations: Based on information obtained from a variety of sources, facilities likely to store or use hazardous materials were targeted for compliance evaluations. A multi-agency team was assembled and during the week of May 20, 1996, conducted compliance evaluations within CIP. The evaluations were intended as an outreach activity to increase facility awareness of existing regulations and potential implementation of solutions, and to provide a cross-training opportunity for federal, state and local agencies in conducting compliance evaluations.
- EPCRA/CERCLA Compliance Training Workshops: Also in May 1996, EPA, in conjunction with the Hawaii SERC and LEPC, conducted two eight hour EPCRA/CERCLA Compliance Training Workshops at the University of Hawaii East-West Center. A variety of available research tools were used to develop a mailing list of industries likely to store or use hazardous materials state-wide. Approximately 1,300 facilities were identified and received invitations to attend the compliance outreach workshops. The target audience of the first workshop was the federal facility community in the state; the second workshop targeted the regulated industrial community across the state. Special emphasis was made to encourage CIP facilities to attend.



CAMPBELL INDUSTRIAL PARK PROFILE

Based on several factors, including the history of releases, the geographic area, public concern, increasing adjacent residential development and the high concentration of industrial facilities, EPA and HEER identified a need to profile CIP industry for compliance with CERCLA and EPCRA as well as to identify facilities that might pose a threat of exposure to hazardous materials to the public including CIP employees, the environment and to first responders during an emergency.

CIP covers an approximately two square mile area on the southwest shore of the island of Oahu, Hawaii. It is bordered on two sides by the Pacific Ocean. A map showing the location of CIP and street names located within CIP is provided as Attachment 1. The broad streets of CIP are clean and neat and are lined with trees and flowers in many areas. On entering CIP, the first impression is one of an orderly and well laid-out business park with a mixture of business and industrial tenants. CIP, in fact, houses the largest concentration of industrial facilities in the State of Hawaii and employs approximately 7,000 people (American Business Directory [ABD], March 1996). The types of business and industry in CIP are varied, and include a stockyard and slaughter house, oil refining, chemical manufacturing and high-tech manufacture and machining. A majority of the property in CIP is managed by the Campbell Estate; the remaining portion of CIP is owned and managed by several different parties.

In the past, CIP was bordered by military facilities and agricultural land, including sugar cane fields; however, in recent years, construction of residential housing developments has grown significantly. This development has greatly increased the potential for public exposure to accidental releases from CIP facilities.

As a result of the growing awareness of the need for a coordinated emergency response plan for the area, a group of CIP businesses have formed an organization known as the Campbell Local Emergency Action Network (CLEAN). CLEAN is a voluntary, non-profit organization made up of nine CIP Businesses, a very small percentage of all Park tenants. The group was formed to help facilitate relationships among industry, the Honolulu LEPC, the SERC, emergency responders and the surrounding community, and to address emergency planning issues including public health and safety. The goal of CLEAN is to work with and assist emergency management and response organizations (including the State Department of Health, the Oahu Civil Defense Agency, the Honolulu Police Department, the Honolulu Fire Department and Emergency Medical Services) so that CIP businesses and neighbors are protected if an emergency should occur. As of the date of publication of this report, participating CLEAN member businesses are:

AES Barbers Point
BHP Hawaii, Inc.
Brewer Environmental

Hawaiian Cement
Hawaiian Electric Company
Marisco, Ltd.



Chevron
The Estate of James Campbell

Oahu Gas Service, Inc.

CIP Definition/Boundaries

In preparing the search language of the various data sources, several parameters were defined to establish the boundaries and definition of CIP. These parameters included geographic boundaries for the initial identification of all CIP tenants, and standardized industry classification (SIC) codes, number of employees and annual sales for development of the tenant profile.

Geographic Boundaries: In order to establish parameters for searches of the various data sources, CIP geographic boundaries had to be defined. However, during preliminary review of available Park information, it became obvious that little understanding of the number and types of business within CIP existed, and discrepancies were discovered in the available information on the definitions of CIP's geographic boundaries. With the assistance of the local emergency responders, the LEPC, and Campbell Estates, the geographic boundaries for CIP were verified and identified as follows (see Attachment 1):

North by Malakole Road
South by the Pacific Ocean
East by U.S. Navy Air Station, Barber's Point
West by the Pacific Ocean

The Park is comprised of the following streets:

Hanua Street	Kalaeloa Boulevard
Kaomi Loop	Kauhi Street
Kuhela Street	Komohana Street
Malakole Road	Oihana Street
Olai Street	

In looking at historical records, EPA found that CIP facilities had been located in two zip codes, 96706 and 96707. The zip code for all of CIP addresses at the time of this study had been consolidated into 96707.

Information Resources

In order to develop the profile of CIP industry and identify facilities to be evaluated during the compliance evaluation phase of the project, EPA utilized a variety of information resources including EPA's Integrated Data Enforcement Access (IDEA) system which tracks information from eight individual EPA programs, information received from OSHA on enforcement actions, and the Dun and Bradstreet (D&B) public access business directory. The American Business Directory



(ABD), a public access business directory and state and local sources provided key information as well. The information resources utilized are further described below:

EPA IDEA System

- ✓ RCRIS: Resource Conservation and Recovery Information System is the national program management and inventory system of RCRA hazardous waste handlers
- ✓ CERCLIS: Comprehensive Environmental Response, Compensation, and Liability Information System contains the official inventory of CERCLA Sites, and integrates data from the Superfund removal, site assessment, remedial, and enforcement programs
- ✓ AIRS/AFS: Aerometric Information Retrieval System/Air Facility Subsystem contains emissions, compliance, and enforcement data on stationary sources of air pollution
- ✓ WATER: Permit Compliance Systems (PCS) an automated information management system maintained to track permit compliance and enforcement status of facilities regulated by the National Pollutant Discharge Elimination System (NPDES)
- ✓ NCD: National Compliance Database tracks compliance and enforcement data under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), Emergency Planning and Community Right to Know Act (EPCRA) Section 313
- ✓ DOCKET: Civil Enforcement Docket System is a case activity tracking and management system for civil, judicial, and administrative federal EPA enforcement cases
- ✓ TRIS: Toxic Release Inventory System is a national database containing information on hazardous material use and releases by manufacturing industries and other industrial sectors.
- ✓ ERNS: Emergency Response Notification System is a national database and retrieval system used to store information on release notifications of oil and hazardous substances

OSHA

- ✓ Occupational Health and Safety data system for the reporting of health and/or safety violations.

Public Access Business Directories

- ✓ ABD: American Business Directory, containing information on over 10 million businesses, is updated daily using yellow and business white pages, Securities Exchange Commission (SEC) information, postal service information and federal, state and municipal government data sources, and verified by 14 million calls per year.
- ✓ D&B: Dun and Bradstreet, a public access business information directory (accessed through EPA's information management resources)

State and Local Sources



- ✓ HEP CRA: Hawaii Emergency Planning and Community Right Know Act, TIER II reporting database
- ✓ SERC: State Emergency Response Commission
- ✓ LEPC: Local Emergency Planning Committee
- ✓ HFD: Honolulu Fire Department
- ✓ Campbell Estate: CIP Tenant List, dated April 18, 1996

Summarizing the Data Sources

Using all of these information sources, a CIP tenant profile was developed and lists of a wide variety of environmental and business information on the tenants were generated.

The development of the CIP profile of facilities began with a search of the two public-access information databases, ABD and D&B. As discussed, parameters used for the initial search were the defined zip codes and street addresses. There were overlaps and discrepancies between these databases. The ABD search yielded a list of 214 CIP facility names within the defined boundaries. The D&B query yielded a list of 171 CIP facility names using these same parameters. The Campbell Estates list contained 274 facility names including tenants and subtenants. An evaluation of the data showed that 112 facilities were listed in all three of the sources; 61 were listed in both the ABD and the tenant list; 27 were listed in both the D&B and the tenant list; and 16 were listed in both the ABD and the D&B. There were 86 facilities listed only in the tenant list, 33 listed only in the D&B and 30 listed only in the ABD (Figure 1).

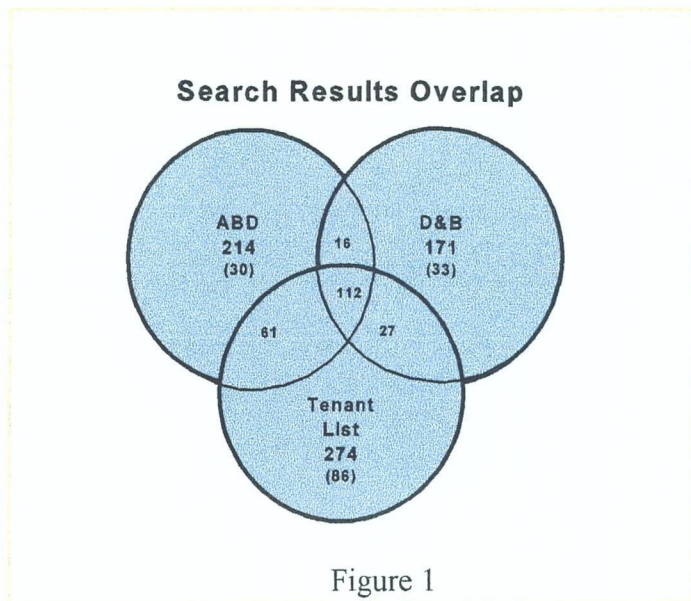


Figure 1

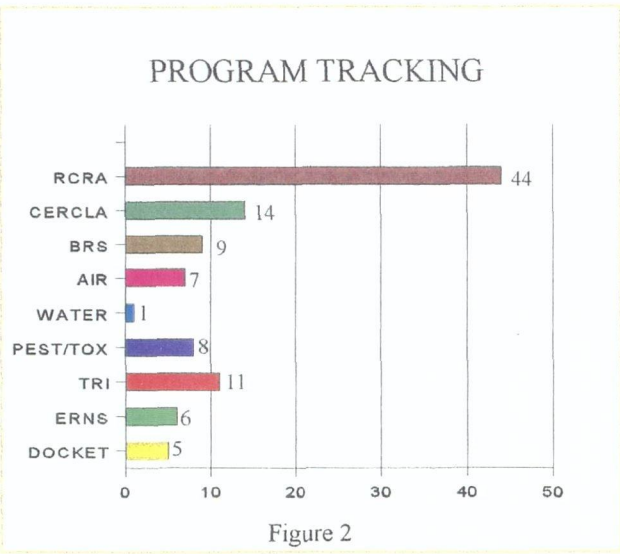
Effective hazardous materials management (prevention, preparedness, response) requires knowledge of the potential risks posed by given facilities. This is made more difficult when there is no clear accounting of what facilities actually operate in CIP.

Attachment 2 contains a CIP tenant list in order by SIC code which includes information on the primary SIC code for the facility, company size, number of employees and address. This information was collected by searching the ABD and D&B. The SIC codes, employee number and



company financial information was not available through the public information sources for some of the facilities that were identified from the Campbell Estates Tenant List.

EPA program searches contained information on 105 facilities in CIP. Figure 2 illustrates the break-down by program of these 105 CIP facilities. The compiled information showed that more of the facilities at CIP are being tracked by the RCRA hazardous waste program than any of the other programs.



Compilations of the information gathered from the public information sources, the HEPCRA information, and the various EPA Program Office information databases were made to evaluate the CIP facilities by industry type (SIC code), business size and, where applicable and available, the regulatory history. The compilations of data on the CIP facilities offered EPA insight into the possible

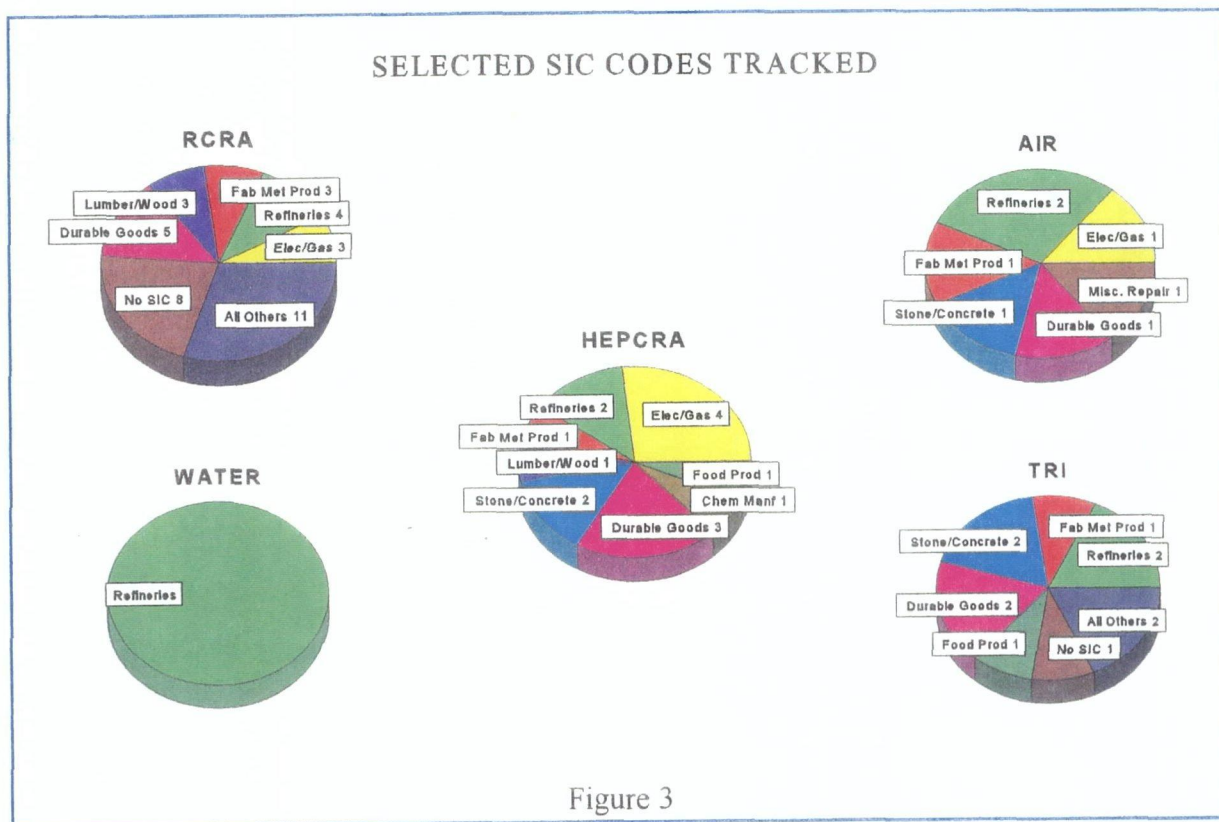
types and volumes of chemicals at each of the facilities, the types of industrial operations conducted and the potential for impact on the community of a release from each of the facilities. EPA then used this information to evaluate which of the CIP facilities were likely to be regulated under EPCRA.

The breakdown of CIP facilities within industry groups (SIC codes) judged most likely to use, store or generate regulated substances on site was developed utilizing the compiled information and is illustrated in Attachment 3. In Attachment 3, each industry sector is identified by the first two numbers of its SIC code. The number of each industry sector found at CIP is given in parentheses following the sector title. The largest sector of facilities (10) falls into the trucking and warehousing industry group. The two second largest (8) groups are the fabricated metal products group and the electric, gas, and sanitary services group. The breakdown of industry groups is based on an evaluation of all the information gleaned from the available data sources described; however, the categorization of the facilities cannot be completed and considered accurate without additional input from state and local agencies and on-site verification at each facility.

An analysis of the number of CIP facilities for which regulatory information was available either through one of the EPA tracked programs or HEER is presented in Figure 3. Based on the



evaluation of information from the EPA data sources, several facilities/industry groups within CIP are being tracked or have in the past been tracked by more than one of the programs. The refineries located within CIP are regulated under all five programs; fabricated metal product manufacturers and durable goods manufacturers are tracked by four of the five programs; stone/clay/glass (concrete products) manufacturing and electric/gas facilities are tracked by three of the five programs; and lumber/wood and food products facilities are included in two programs' data. Other groups tracked, such as chemical manufacturing and repair industry facilities, were found in one program.



CIP FACILITIES MULTI-AGENCY COMPLIANCE EVALUATIONS

Facility Selection

In order to determine the level of compliance among CIP facilities with requirements under EPCRA, a plan of action was developed. After defining the geographic boundaries for CIP, collecting lists of businesses operating in CIP, and compiling lists of facilities with regulatory histories, a master list of facilities likely to be subject to EPCRA was prepared. This list was compared to the HEPCRA reporting list to identify those facilities that had never reported under HEPCRA (non-reporters).

Next, using the list of HEPCRA reporters and non-reporters, EPA utilized available public and agency information resources to profile the industry at CIP and to choose a sampling of facilities for possible on-site compliance evaluations. EPA used a team approach in order to prioritize and choose which of these facilities to evaluate with on-site visits. To gain state and local insight for facility selection, EPA contacted the Hawaii Department of Health (DOH), the Oahu Civil Defense Agency, and the local Honolulu fire department for input and to invite the agencies' participation in a Multi-Agency Compliance Evaluation team (the "Team"). Following selection, EPA notified each facility of its intent to visit and provided the facility a series of questions. Each facility was asked to prepare information for review by the Team, such as a facility plot plan, organizational chart, environmental permit information, excess air emission reports, copies of onsite chemical inventories for the last three years, documentation of notifications made to federal, state and local agencies for hazardous materials releases and the facility's emergency response procedures. Subsequent telephone contacts with the facilities were made to confirm appointments, dates, and times and to inform the facilities of the agencies to be represented on the Team.

On-Site Compliance Evaluation Procedures

Compliance evaluations were conducted by the Team at CIP facilities on May 20 - 22, 1996.

The primary goals of the team effort were to increase facility compliance with federal, state and local EPCRA requirements and to alert the facilities of other environmental problems as noted. EPA also intended to facilitate interagency cooperation at federal, state and local levels and assist

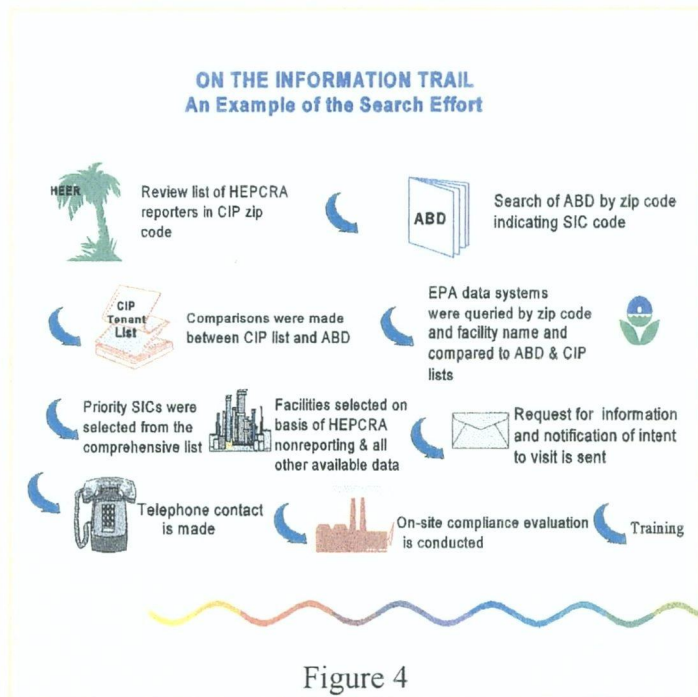


Figure 4



the state and local agencies to undertake their own multi-agency compliance evaluations in the future.

Upon arrival at each facility, the EPA Team leader conducted an opening briefing during which each of the Team members was introduced and the intent of the compliance evaluation and the procedures that would be followed to complete the evaluation were explained. Following the opening briefing, the Team split into two groups: the EPA Team leader and half of the Team conducted the document review and interviews; and the field Team conducted the visual evaluation of the storage areas and operations areas at the facilities. At the close of the document reviews, interviews and field survey, the Team convened to discuss its findings. When a consensus had been reached by the Team on the results of the evaluation, an exit briefing was conducted to present the Team's finding to the facility representatives and to advise them of actions that should be taken to correct any problems or potential problems noted by the Team.

Although the focus of the evaluations was compliance with EPCRA and the Comprehensive Environmental Response, Compensation, and Liabilities Act (CERCLA), the Team also noted compliance issues relating to other federal, state, or local regulations (e.g., Spill Prevention, Control, and Countermeasure [SPCC], Resource Conservation and Recovery Act [RCRA], and the Uniform Fire Code). Pollution prevention opportunities were suggested by Team members where appropriate. The facilities were provided with guidance information and offered information on how to obtain further assistance.

General Observations of the Compliance Evaluation Team

Specific concerns arose based on the Team's observations and related to CIP's geographic location and the mix of industry versus residential development:

- The relatively small acreage with the heavy concentration of industrial activities has resulted in an inherently increased danger to the immediate local environment.
- The proximity of the facilities to the Pacific Ocean, some with beach access and operations actually located on the water, provides an obvious pathway for releases to impact the environment.
- The proximity of CIP to the expanding residential area has resulted in a shrinking buffer zone between CIP and the residential area. This proximity, along with the continued growth of the residential developments, will magnify effects on human health of serious or catastrophic releases.

Generally, facilities seemed unaware that an inventory of >10,000 pounds of *any* substance requiring a material safety data sheet (MSDS) pursuant to OSHA, such as petroleum and



MULTI-AGENCY COMPLIANCE EVALUATION TEAM

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Figure 5



petroleum based products, is reportable on the Tier II chemical inventory. This lack of understanding has resulted in the non-reporting of storage tanks containing feedstock and fuels (such as diesel or Crude No. 6) and lubrication, cutting, or hydraulic oils stored in 55-gallon drums for general operations, and oil in electrical transformers

Several of the facilities evaluated provided site plans to the Team that were inaccurate and incomplete. Some were out-of-date due to changes in operations at the facilities, while some reflected planned or proposed new operations and construction. In some cases, these inaccurate plans had been submitted to HEER with Tier II inventories and in several instances were found in facilities' emergency response or contingency plans. A serious problem may be created if an emergency responder tries to rely on inaccurate site plans during an emergency.

In most cases, facilities seemed unaware of their neighbors' chemical inventories, yet expressed concern regarding risks posed to their employees by potential release incidents. However, none of the facilities evaluated had developed a coherent plan to guard their employees or operations from being impacted by an emergency at a neighboring facility and to prevent a chain-reaction type emergency from developing at CIP. There had been little dialogue among facilities on alert procedures or mutual aid provisions. While many of the facilities were aware of the CLEAN organization, they themselves were not members.

The on site evaluations conducted by the Team at CIP showed that a large percentage of the facilities had multiple EPCRA, HEPCRA, SPCC, and the Uniform Fire Code violations. Several of the facilities, including cement manufacturing, precast cement construction, ship building/maintenance and petroleum industries, stored quantities of hazardous materials that require Tier II chemical inventory submittals to the SERC, LEPC and local fire department, but few had submitted these notifications. A significant percentage of the facilities evaluated were subject to the requirements of SPCC, but were unaware of the requirements and/or were non-compliant. Some of the facilities were identified as having Uniform Fire Code compliance issues, such as lack of required permits for storage tanks (e.g. sulfuric acid), incompatible storage of materials, and poor housekeeping.

Of the facilities found to be subject to EPCRA, only one had filed a Tier II Chemical Inventory with the HEPCRA program, which was submitted upon notification of the Team's upcoming site visit. Upon reviewing the Tier II Chemical Inventory for this facility, the Team determined that the submittal was incomplete and did not accurately reflect the facility's chemical inventory. Nor did the site plan accompanying the Tier II submittal match the physical configuration of the facility at the time of the on-site visit.

Of the businesses found to be subject to the requirements of SPCC, none had prepared a SPCC Plan. One business provided a copy of a Plan prepared in 1988 by a previous owner which no longer reflected the volume or configuration of the facility's oil storage.



One of the businesses was found not to be subject to EPCRA, HEPCRA or SPCC and had no Uniform Fire Code violations. This business, a printing operation, was chosen for an on site evaluation because a business of this type normally uses large volumes of hazardous chemicals. However, during the on site evaluation the Team found that the company had modernized their operation utilizing new waste minimizing equipment and “cleaner” chemicals and processes. The business was obviously well-managed and proactive with regards to environmentally conscious business practices.

Another business, listed as a brewery or beverage manufacturer, was chosen for evaluation and was found to be nonoperational. The property was developed with two large warehouse-size buildings. At the time of the on site evaluation one of the buildings was being used to store a dismantled, previously unused medical waste incinerator. According to the property owners, the incinerator was being stored temporarily at the CIP location and no operation of the unit was planned at CIP. In the second building, the Team noted the presence of a fibrous insulation material of unknown composition. The insulation material was friable and in poor condition and some had fallen to the floor. The building was well ventilated by ceiling vents and open windows. The Team noted that depending on the content of the insulation material, the condition of the material and the ventilation, the building may have posed a potential immediate friable asbestos threat. No sampling was done at the time of the evaluation, and the case was referred to the State Department of Health Clean Air Branch for follow-up.

On-Site Compliance Evaluation Accomplishments

Increased facility awareness and potential implementation of solutions to other hazmat concerns (non-regulatory): EPA’s more compliance assistance-oriented approach to these on-site evaluations (vs. traditional enforcement inspections) proved to be very effective in facilitating an open communication between the facilities and the state and local regulators. The Team provided direct on-site compliance assistance, guidance documents and a wide range of risk-reducing recommendations that went beyond the facilities’ regulatory requirements, such as observed emergency planning inadequacies, pollution prevention opportunities and problematic hazardous waste storage practices. The facility owners and operators were encouraged to attend the upcoming EPCRA compliance training held at the University of Hawaii campus. The increased spirit of cooperation and willingness of the facilities to work with the agencies was demonstrated when all non-compliant facilities did send participants to this EPCRA training.

Compliance assistance to and among federal, state and local agencies. EPA provided the impetus to various local and state entities to work together on mutual, programmatic responsibilities. The multi-agency team concept established new working contacts among all members and increased understanding of each other’s responsibilities, limitations and resources. By participating in the on-site evaluations as part of the Team, HEPCRA, LEPC and local Fire Department Team members are now better prepared to identify HEPCRA compliance violations and assist industry to comply. For example, the Fire Department representatives learned new uses for right-to-know chemical inventory information in their prevention, planning and response activities.



They also now have tools to ask EPCRA compliance questions during routine inspections at industrial facilities. The SERC and LEPC Team members learned that local Fire Departments need better access to Tier II reports which have been submitted to the SERC.

On-Site Compliance Evaluation Follow-up

Following the evaluations, reports were prepared detailing the Team's findings for each facility. A copy of the reports and, where appropriate, Notices of Noncompliance (NONs) were sent to each facility. The SERC, LEPC and Fire Department have worked with each facility to ensure regulatory compliance and collect appropriate State fees. Each facility has submitted copies of documents verifying completion of action items listed in the NONs to the EPA, SERC and LEPC in order to come into compliance with EPCRA. Each of the EPCRA cases has been successfully closed at the time of this report.

The SERC requested EPA assistance with the on-site compliance evaluations and took an active role in gathering information, conducting on-site inspections and joining EPA on the EPCRA training agenda. As a result of these investigations, the HEPCRA program has indicated its interest to schedule state/local on-site compliance evaluations throughout the Islands, and has requested EPA assistance to develop a formal compliance assurance program and to set up another multi-agency team to evaluate selected Federal Facilities.¹

EPCRA/CERCLA COMPLIANCE TRAINING WORKSHOPS

Targeted Outreach

During a targeted outreach campaign, a list of potentially regulated facilities was compiled and approximately 1,300 invitations to attend EPCRA/CERCLA Compliance Training workshops were sent out to facilities across the Islands. The mailing list created for these workshops was developed using the latest business directories and by selecting facilities based on SIC codes where the use of hazardous substances is most likely. This list has been requested by and provided to State and other EPA program staff for their uses.

Following the targeted outreach campaign to encourage appropriate attendance at these workshops, EPA, along with State and local counterparts, conducted two 8-hour EPCRA Workshops at the East-West Center on the University of Hawaii campus on May 23-24, 1996.

The workshops were presented in two segments, Federal Facilities on May 23rd and Industry on May 24th. The workshops were presented separately in order to tailor the presentation material

¹In March 1997, the Team reconvened to conduct three more multi-agency inspections at three Naval installations at Pearl Harbor Naval Station. Reports detailing the results of these federal facility inspections were recently made available by EPA.



to each group's specific needs. The Federal Facilities workshop was attended by 85 individuals representing all sectors of the military and numerous civilian federal agencies around the Islands including a large contingent from Pearl Harbor. The Industry workshop was attended by 79 individuals representing 46 private sector facilities and included each of the non-compliant facilities visited. One refinery sent 13 representatives to the workshop.

Targeted Community Response

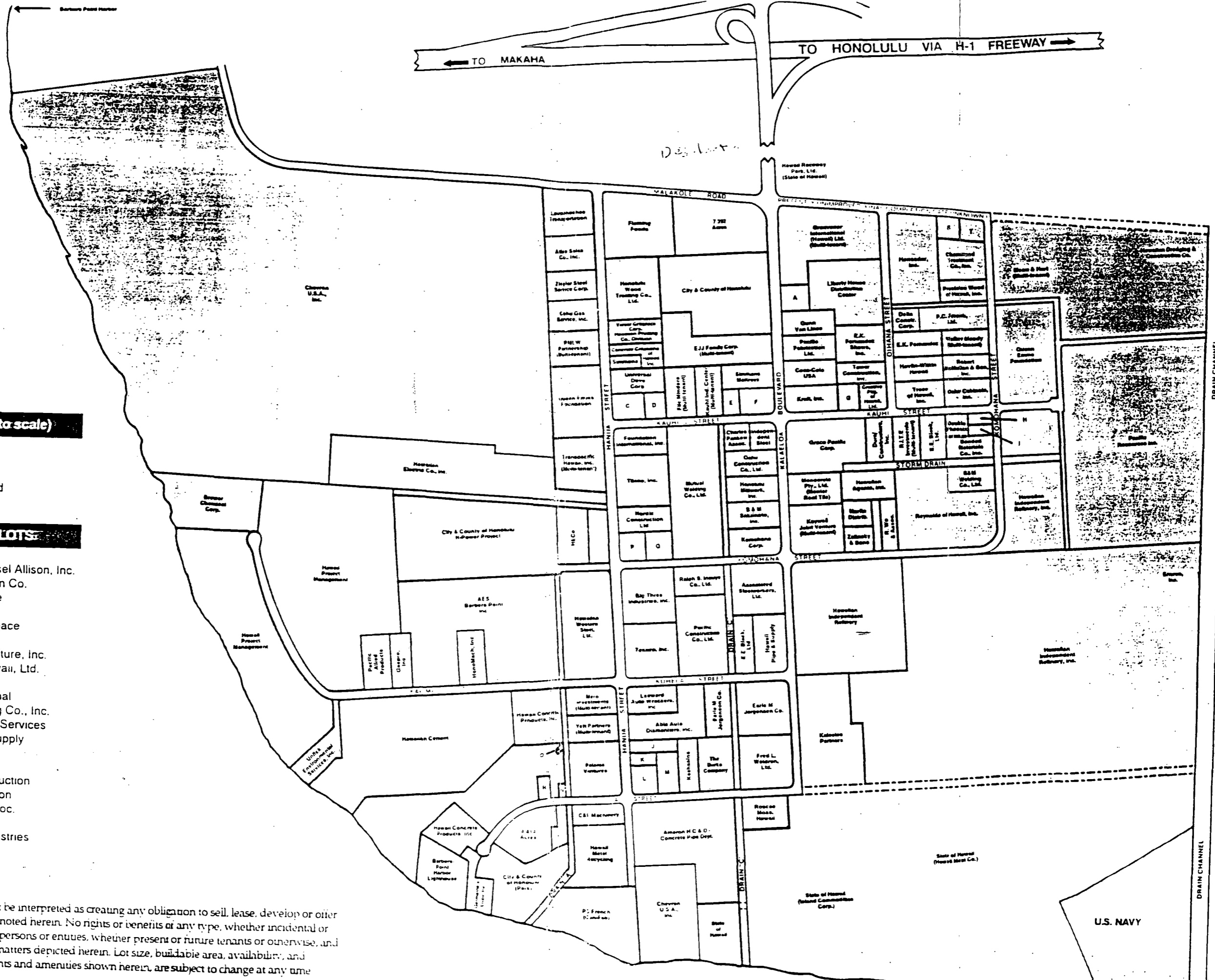
Feed-back from the targeted community on the content of the workshops has been excellent. Individuals who attended the Industry Workshop have contacted Team members requesting additional information and guidance documents recommended during the training. All have voiced their appreciation for the information provided during and after the workshops. Federal facilities representatives have requested that they be included in any future on-site compliance evaluations and training workshops. Pearl Harbor representatives have offered to sponsor a training workshop for federal facilities.

Overall, the response from the state and local agencies, including the SERC, LEPC and Fire Department, and the regulated community has been very positive. An atmosphere of cooperation and mutual assistance has been fostered and nurtured by the Team's compliance assistance approach, between the agencies themselves, as well as within the regulated community. Future efforts utilizing lessons learned in this program, should reap even greater results for the Islands' industries and citizens.





ATTACHMENT 1
CAMPBELL INDUSTRIAL PARK
SITE MAP



LEGEND (Not to scale)

- Available Lots
- Occupied Lots
- Temporary Road

LETTERED LOTS

- A - Hicklin Detroit Diesel Allison, Inc.
- B - Kaikor Construction Co.
- C - Lahaina Pier & Pile
- D - R & H Machinery
- E - Hawaii Modular Space
- F - Fritz of Hawaii
- G - South Pacific Furniture, Inc.
- H - Smith Service Hawaii, Ltd.
- I - P & S Pacific, Inc.
- J - Islander International
- K - Specialty Surfacing Co., Inc.
- L - Diversified Energy Services
- M - Valve Service & Supply
- N - Hawaii Fabricators
- O - Honolulu Cellular
- P - Pan-Pacific Construction
- Q - Associated Insulation
- R - John Groark & Assoc.
- S - Morrow Crane Co.
- T - Brazier Forest Industries

NOTICE
 This map is not intended to and shall not be interpreted as creating any obligation to sell, lease, develop or offer any of the Campbell Industrial Park lots noted herein. No rights or benefits of any type, whether incidental or direct, are conferred by this map on any persons or entities, whether present or future tenants or otherwise, and such parties shall not rely on any of the matters depicted herein. Lot size, buildable area, availability, and configuration, as well as the improvements and amenities shown herein, are subject to change at any time without notice. Maps are not to scale.

U.S. NAVAL AIR STATION BARBER'S POINT

DRAIN CHANNEL

U.S. NAVY



**ATTACHMENT 2
CAMPBELL INDUSTRIAL PARK
FACILITIES LIST SORTED BY SIC CODE
AND
ALPHABETICAL LISTING**

CAMPBEL INDUSTRIAL PARK, OAHU, HI
TENANT LIST
SIC ORDER

NAME	ADDRESS	PHONE-NO.	EMPS	SALES	SIC1	BUSINESS DESCRIPTION
BIG THREE INDUSTRIES (see Air Liquide)	-----	-----	-----	-----	-----	-----
GROARK DESIGN INC	91-170 OLAI ST	682-1020	20-49	\$1 - \$2.5 M	078103	LANDSCAPE DESIGNERS
AMERICAN LAWN SVC INC	91-120 HANUA ST # B	682-5536	20-49	\$500,00000 - \$1 M	078206	LAWN MAINTENANCE
HAWAIIAN EARTH PRODUCTS LTD	91-400 MALAKOLE ST	682-5895	5-9	\$1 - \$2.5 M	078207	WOOD PRODUCTS
TREES OF HAWAII INC	91-326 KAUHI ST	682-5771	50-99	\$2.5 - \$5 M	078301	TREE SERVICE
S C PACIFIC CORP	91-178 KALAELOA BLVD	682-4334	20-49	\$2.5 - \$5 M	152105	REMODELING & REPAIRING BLDG CONT
CALIFORNIA GLASS	91-291 KALAELOA BLVD #	682-1900	5-9	\$1 - \$2.5 M	152110	SOLARIUMS, SUNROOMS & ATRIUMS
LTM FURNITURE & CABINETS	91-178 KALAELOA BLVD	682-5681	1-4	Less than \$500,000	152117	KITCHEN REMODELING & PLANNING SV
E.E. BLACK, LTD.	91-252 KULELA ST.	682-2085	N/A	N/A	154100	INDL BLDNGS WRHSES
ACI GLASS PRODUCTS	91-235 OIHANA ST	682-5724	10-19	\$1 - \$2.5 M	154203	STORE FRONTS
HAWAII MODULAR SPACE INC	91-252 KAUHI ST	682-5559	10-19	\$2.5 - \$5 M	154212	BUILDINGS PRE-CUT PREFABRICATED
HONSADOR INC	91-151 MALAKOLE ST	682-2011	50-99	\$20 - \$50 M	154212	BUILDINGS PRE-CUT PREFABRICATED
CREATIVE BUILDING CONCEPTS	91-252 KAUHI ST	682-8222	1-4	\$500,00000 - \$1 M	154213	BUILDING CONTRACTORS
OAHU CONSTRUCTION CO	91-202 KALAELOA BLVD	836-2981	20-49	\$5 - \$10 M	154213	BUILDING CONTRACTORS
OCEANIC CONSTRUCTION INC	91-110 HANUA ST # 201	682-3771	1-4	\$500,00000 - \$1 M	154213	BUILDING CONTRACTORS
RCI ENVIRONMENTAL INC	91-059 HANUA ST	682-1067	5-9	\$1 - \$2.5 M	154213	BUILDING CONTRACTORS
FRANK COLUCCIO CONSTRUCTION C	91-141 KALAELOA BLVD	682-4477	20-49	\$1 - \$2.5 M	162307	SEWER CONTRACTORS
ABHE & SVOBODA, INC.	91-218A OLAI ST.	682-4833	2	N/A	162900	HEAVY CONSTR.
FOUNDATION INTERNATIONAL INC	91-227 HANUA ST	682-2800	20-49	\$1 - \$2.5 M	162901	PILE DRIVING
SPECIALTY SURFACING CO	91-087 HANUA ST	682-2021	10-19	\$1 - \$2.5 M	162907	TENNIS COURT CONSTRUCTION
DORVIN D LIES CO	91-195 HANUA ST	682-7241	1-4	Less than \$500,000	171105	PLUMBING CONTRACTORS
ROBERT MCMULLAN & SON INC	91-430 KOMOHANA ST	682-1308	50	N/A	1721	PRINTING PAPER
D ZELINSKY & SONS OF HAWAII	91-310 KOMOHANA ST	682-1321	50-99	\$2.5 - \$5 M	172101	PAINTERS
AMERICAN TECHNOLOGIES, INC.	91-220 KALAELOA BLVD.	682-8282	70	N/A	1731	ELECTRICAL WORK
CURTIN PACIFIC CO.	91-195 HANUA ST. #B21	682-7188	10-19	\$1 - \$2.5 M	1731	ELEC. CON.
MD-PAC ELECTRIC INC	91-086 KAOM LOOP	682-7267	1-4	Less than \$500,000	173101	ELECTRIC CONTRACTORS
WALL FABRICS SYSTEMS OF HAWAI	91-310 KOMOHANA ST	682-1536	50-99	\$5 - \$10 M	174201	ACOUSTICAL MATERIALS
V & C DRYWALL CONTRACTORS	91-444 KOMOHANA ST # A	682-4784	20-49	\$1 - \$2.5 M	174202	ACOUSTICAL CONTRACTORS
FINE KITCHEN & BATHROOM INC	91-329 KAUHI ST # 5	682-3021	10-19	\$500,00000 - \$1 M	175103	CABINET MAKERS
OAHU CABINETS LTD	91-424 KOMOHANA ST	682-2434	20-49	\$1 - \$2.5 M	175103	CABINET MAKERS
TRANSBUILT OF HAWAII	91-329 KAUHI ST A	682-4784	1-4	Less than \$500,000	175103	CABINET MAKERS
AMERICAN TRUSS CO	91-259 OLAI ST	682-5300	10-19	\$2.5 - \$5 M	176108	ROOF STRUCTURES
ARIEL TRUSS HAWAII INC	91-227 HANUA ST	682-5859	20-49	\$5 - \$10 M	176108	ROOF STRUCTURES
OAHU TRUSS & PANEL CO	91-445 KOMOHANA ST	682-7272	1-4	Less than \$500,000	176108	ROOF STRUCTURES
ROSCOE MOSS HAWAII INC	91-259 OLAI ST # A	682-5856	20-49	\$2.5 - \$5 M	178101	WATER WELL DRILLING & SERVICE
SOIL SAMPLING SVC-PACIFIC	91-195 HANUA ST	682-4456	5-9	\$500,00000 - \$1 M	178102	DRILLING & BORING CONTRACTORS
SOUTH PACIFIC STEEL CORP.	91-178 KALAELOA BLVD.	682-4766	30	\$5 M	1791	STRUCTURAL STEEL ERECTION

CAMPBEL INDUSTRIAL PARK, OAHU, HI
TENANT LIST
SIC ORDER

NAME	ADDRESS	PHONE-NO.	EMPS	SALES	SIC1	BUSINESS DESCRIPTION
HISECO	91-267 HANUA ST.	682-0351	1-4	Less than \$500,000	179103	STEEL FABRICATORS
MUTUAL WELDING CO	739 AHUA ST.	839-5111	20-49	\$1 - \$2.5 M	179103	STEEL FABRICATORS
ISLAND MECHANICAL CORP.	91-039 HANUA ST.	682-5353	16	\$1.3 M	1799	SPCL TRD CNTRS NEC
SGB CONSTRUCTION SERVICES, IN	91-229 KOMOHANA ST.	682-5534	N/A	N/A	1799	SPECIAL TRADE
ATLAS SALES CO	91-302 HANUA ST	682-4680	20-49	\$1 - \$2.5 M	179905	RAILINGS
HAWAII FABRICATORS	91-119 OLAI ST	682-3005	1-4	Less than \$500,000	179905	RAILINGS
HI-TECH COATINGS	91-080 HANUA ST	682-2000	5-9	\$500,00000 - \$1 M	179911	SANDBLASTING
INDUSTRIAL TECHNOLOGY	91-313 KAUHI ST	682-5858	20-49	\$2.5 - \$5 M	179912	PUMPING CONTRACTORS
P & S PACIFIC INC	91-410 KOMOHANA ST	682-5794	5-9	Less than \$500,000	179912	PUMPING CONTRACTORS
FUEL OIL POLISHING CO	91-225 HANUA ST	682-0091	10-19	\$1 - \$2.5 M	179923	TANKS-REPAIRING
NEIGHBOR FRIENDLY WALLS LTD	91-326 KAUHI ST	682-4816	1-4	Less than \$500,000	179938	FENCE CONTRACTORS
LAND O'LAKES INC	91-254 OLAI ST	682-2022	10-19	\$5 - \$10 M	204803	FEED MANUFACTURERS
ISLAND COMMODITIES CORP	91-269 OLAI ST	682-5844	10-19	\$2.5 - \$5 M	207601	TALLOW
COCA-COLA FOUNTAIN	91-233 KALAELOA BLVD	682-5778	10-19	\$2.5 - \$5 M	208601	BOTTLERS
ALOHA ICE CO.	91-110 HANUA ST #302	682-8999	1-4	\$250K	2097	MANUFACTURED ICE
DIVERSIFIED GLASS CORP.	91-291 KALOELOA BLVD.	682-1071	10	\$640K	2221	FABRIC MLLS
HONOLULU WOOD TREATING CO LTD	91-291 HANUA ST	682-5704	20-49	\$5 - \$10 M	242999	SPECIAL PRODUCT SAWMLLS NEC
PACIFIC ISLE WOODS INC	91-188 KALAELOA BLVD	682-5584	5-9	\$500,00000 - \$1 M	243102	MLLWORK
PRECISION WOOD OF HAWAII INC	91-466 KOMOHANA ST	682-2055	10-19	\$5 - \$10 M	243102	MANUFACTURE WOOD PALLETS
TRU-DOOR HAWAII	91-310 KAUHI ST # A	682-0307	5-9	\$2.5 - \$5 M	243104	DOORS MANUFACTURING
PINE VILLAGE INC.	91-178 KALAELOA BLVD	N/A	N/A	N/A	251100	N/A
SIMMONS CO	91-489 KOMOHANA ST	682-7233	20-49	\$10 - \$20 M	251598	MATTRESSES/FOUNDATIONS/CONV BEDS
SOUTH PACIFIC FURNITURE INC	91-294 KAUHI ST	682-3913	5-9	\$500,00000 - \$1 M	259901	FURNITURE MANUFACTURERS
CREATIVE PACKAGING OF HAWAII	91-310 KAUHI ST	682-1502	10-19	\$500,00000 - \$1 M	265201	BOXES PAPER
PACIFIC CONCESSION SUPPLY INC	91-312 KOMOHANA ST # B	682-4221	5-9	\$2.5 - \$5 M	265601	PAPER & PLASTIC CUPS CONTAINERS
AMERICAN MAIL WELL ENVELOPE C	91-280 HANUA ST	682-3055	20-49	\$5 - \$10 M	267801	STATIONERY MFRS
VANIER GRAPHICS FORMS & SUPLS	91-275 HANUA ST	682-5774	50-99	\$2.5 - \$5 M	275202	PRINTERS
HONBLUE INC	91-291 KALAELOA BLVD #	674-0866	1-4	Less than \$500,000	278903	MOUNTING & FINISHING
AIR LIQUIDE AMERICA CORP(Big 3 Ind.)	91-163 HANUA ST.	682-2100	50	N/A	2813	INDUSTRIAL GASSES
BOC GROUP, INC.	91-102 KAOMI IOOP	N/A	N/A	N/A	281300	N/A
CHEVRON USA INC	91-480 MALAKOLE ST	682-5711	100-249	\$100 - \$500 Mll	281999	INDUSTRIAL INORGANIC CHEMCALS N
PACIFIC AGRICULTURAL SALES	91-270 HANUA ST # B15	682-5113	5-9	\$2.5 - \$5 M	287301	FERTILIZERS MANUFACTURERS
TESTRON INTERNATIONAL	91-329 A. KAUHI ST.	682-1381	10-19	\$10 - \$20 M	289905	CHEMCALS MANUFACTURERS
CHEVRON PRODUCTS CO.	91-480 MALAKOLE ST.	682-2372	215	N/A	2911	PETROLEUM REFINING
BHP PETROLEUM AMERICAS REFINI	91-325 KOMOHANA ST.	547-3913	100-249	\$100 - \$500 Mll	291101	OIL REFINERS
ALLWASTE OF HAWAII LTD	91-416 KOMOHANA ST	682-3600	5-9	\$5 - \$10 M	291102	OILS RE-REFINED
MONIER ROOF TILES	91-185 KALAELOA BLVD	682-4523	10-19	\$2.5 - \$5 M	295201	ROOFING MATERIALS MFRS

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PACIFIC ALLIED PRODUCTS LTD	91-110 KAOM LOOP	682-2038	10-19	\$1 - \$2.5 M	308601	PLASTICS-FOAM
FIBERGLASS FANTASTIC (C & E P	91-291 KALOELOA BLVD.	682-5887	3	\$250K	3088	PLASTICS/PLUMBING FIXTURES
A J SALES INC	91-267 HANUA ST	682-4342	1-4	Less than \$500,000	308902	PLASTICS & PLASTIC PRODUCTS
GRACE PACIFIC CONCRETE PRODS.	91-205 KALAELOA BLVD	682-4556	10-19	\$1 - \$2.5 M	327101	CONCRETE BLOCKS & SHAPES MANUFAC
TILECO INC	91-209 HANUA ST	682-5737	20-49	\$5 - \$10 M	327101	CONCRETE BLOCKS & SHAPES MANUFAC
BONDED MATERIALS CO.	91-400 KOMOHANA ST.	673-2000	N/A	\$13 M	3272	CONCRETE PRODUCTS
HAWAII CONCRETE PRODUCTS INC	91-027 KAOM LOOP	682-5639	20-49	\$5 - \$10 M	327208	CONCRETE PIPE
AMERON HC & D	91-059 HANUA ST	832-9200	50-99	\$5 - \$10 M	327209	CONCRETE PRODUCTS EXCEPT BLOCK &
HAWAIIAN CEMENT	91-055 KAOM LOOP	673-4200	100-249	\$10 - \$20 M	327209	CONCRETE PRODUCTS EXCEPT BLOCK &
HAWAIIAN DREDGING & CONSTR CO	91-063 MALAKOLE ST	682-5761	50-99	\$5 - \$10 M	327209	CONCRETE PRODUCTS EXCEPT BLOCK &
FIBERGLASS SHOP	91-291 KALAELOA BLVD #	682-5233	5-9	\$500,00000 - \$1 M	329601	FIBER GLASS FABRICATORS
HAWAIIAN WESTERN STEEL LTD	91-150 HANUA ST	682-5731	1-4	\$500,00000 - \$1 M	331201	STEEL MLLS
VALVE SERVICE & SUPPLY INC	91-210 OLAI ST	682-3800	20-49	\$10 - \$20 M	331202	TUBING
BRASS & GLASS	91-444 KOMOHANA ST #H	682-1084	1-4	Less than \$500,000	336501	FOUNDRIES MANUFACTURING
REYNOLDS METALS CO	91-320 KOMOHANA ST	682-1202	50-99	\$20 - \$50 M	341101	CAN MANUFACTURERS
GEMNI WINDOW CORP	91-444 KOMOHANA ST # B	682-7177	1-4	\$500,00000 - \$1 M	344204	JALOUSIES MANUFACTURERS
HAWAII PIPE & SUPPLY	91-130 KALAELOA BLVD	673-7600	10-19	\$2.5 - \$5 M	344603	GRATINGS
INDUSTRIAL HARD CHROME	91-291 KALAELOA BLVD #	682-4224	1-4	Less than \$500,000	347106	CHROME
H & H SERVICE ENGINEERING LTD	91-291 KALAELOA BLVD #	682-2859	10-19	\$1 - \$2.5 M	347198	ELECTROPLATING & POLISHING & ANO
JORGENSEN STEEL & ALUMNUM	91-104 KALAELOA BLVD	682-2020	50-99	\$50 - \$100 Milli	347902	GALVANIZING
INTER-PACIFIC SUPPLY INC.	91-310 KOMOHANA ST	682-1533	50-99	\$10-\$20 M	347904	COATINGS- PROTECTIVE
SUPERIOR COATING INC	91-210 KAUHI ST	682-3881	1-4	\$1 - \$2.5 M	347904	COATINGS-PROTECTIVE
HAWAII DETROIT DIESEL	91-265 KALAELOA BLVD	682-2400	20-49	\$5 - \$10 M	351901	INTERNAL COMBUSTION ENGINES NEC
INDUSTRIAL PARTS HAWAII INC	91-165 KALAELOA BLVD	682-2047	10-19	\$2.5 - \$5 M	351901	INTERNAL COMBUSTION ENGINES NEC
R & H MACHINERY INC.	91-200 KAUHI ST.	682-4949	10-19	\$2.5 - \$5 M	351901	INTERNAL COMBUSTION ENGINES NEC
HONOMACH INC	91-060 HANUA ST	682-5701	20-49	\$1.2 - \$5 M	355903	MACHINE SHOP, IND. & COMM.
MARISCO LIMTED	91-607 MALAKOLE RD.	682-1333	1-4	Less Than \$500,000	359903	MACHINE SHOPS
MARLIN DISTRIBUTORS INC	91-312 KOMOHANA ST	682-4314	10-19	\$5 - \$10 M	394402	TOYS MFRS
MERCHANDISE INTERNATIONAL	91-246 OIHANA ST	682-2821	10-19	\$500,00000 - \$1 M	394402	TOYS MFRS
ISLAND FIN DESIGN, INC.	91-270 HANUA ST., #1	682-5346	5	\$320K	3949	SPRTG AHLTC GDS NE
LAMNATION HAWAII	91-270 HANUA ST # 2	682-4335	20-49	\$5 - \$10 M	394907	SURFBOARDS MANUFACTURERS
INDUSTRIAL MANUFACTURING & SERV	91-226 KAUHI ST # 1B	682-5173	5-9	\$500,00000 - \$1 M	399903	MANUFACTURERS
UNIVERSAL TRUCKING INC	91-255 HANUA ST	682-2440	1-4	Less than \$500,000	421210	TRUCKING DUMP
HAWAII AKAU ENTERPRISES, INC.	91-080 HANUA ST	682-5090	5-9	\$500,00000 - \$1 M	421304	TRUCKING
MARTIN WAREHOUSING & DISTR	91-110 HANUA ST	673-1420	5-9	\$500,00000 - \$1 M	421304	TRUCKING
BEKINS HAWAIIAN MOVERS, INC.	91-241 KALAELOA BLVD	N/A	N/A	N/A	4214	N/A
COLEMAN AMERICAN MOVING SVC	91-242 KALAELOA BLVD	682-1576	50-99	\$5 - \$10 M	421401	MOVERS

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FILE MNDERS INC	91-238 KAUHI ST	682-5151	5-9	\$500,00000 - \$1 M	421401	MOVERS
HAWAII INTERNATIONAL MOVERS	91-120 HANUA ST	682-2425	20-49	\$1 - \$2.5 M	421401	MOVERS
ISLANDER INTERNATIONAL MOVING	91-210 HANUA ST # B	682-4499	5-9	Less than \$500,000	421401	MOVERS
MOBETA SERVICE CORP	91-241 KALAELOA BLVD	682-0776	50-99	\$5 - \$10 M	421401	MOVERS
SUNVAN HAWAII MOVING & STORAG	91-029 MALAKOLE ST	682-2811	20-49	\$1 - \$2.5 M	421401	MOVERS
WORLDWIDE MOVING & STORAGE IN	91-313 KAUHI ST	682-3722	1-4	Less than \$500,000	421401	MOVERS
LIBERTY HOUSE DISTRIBUTION CE	91-262 OIHANA ST.	941-2345	325	N/A	4225	GENERAL WAREHOUSING STORAGE
AMFAC JMB HAWAII, INC.	91-262 OIHANA ST.	945-5005	325	N/A	4225	WAREHOUSE
BRIGGS PACIFIC INDUSTRIES, IN	91-650 MALAKOLE ST.	682-4113	N/A	N/A	4491	MARINE CARGO HANDLING
PACIFIC AEROSPACE SVC	91-238 KAUHI ST	682-3030	5-9	Less than \$500,000	458102	AIRCRAFT ENGINES SERVICING & MAI
WALDRON STEAMSHIP CO LTD	91-607 MALAKOLE ST	682-1053	5-9	\$500,00000 - \$1 M	472904	STEAMSHIP AGENCIES
PAC WEST TELECOM HAWAII, INC.	91-238 KALAELOA BLVD.,	682-5266	8	48000000	4813	TELEPHONE COMMUNICATIONS
HONOLULU CELLULAR	500 KAHELU AVE	627-8899	20-49	\$2.5 - \$5 M	481604	TELEPHONE CO. EQUIP. & SUPP.
AES BARBERS POINT, INC.	91-086 KAOM LOOP	682-3416	50-99	N/A	491101	ELECTRIC COMPANIES
SOUTHERN ELECTRIC INTL INC	91-111 KALAELOA BLVD	682-0705	20-49	\$5 - \$10 M	491101	ELECTRIC COMPANIES
BHP GAS CO. SNG PLANT	91-390 KAUHI ST.	808-547-386	41	N/A	4928	GAS PRODUCTION & DISTRIBUTION
PACIFIC CONTROLS INC.	91-220 KOMOHANA ST	N/A	N/A	N/A	4953	N/A
OHM REMEDIATION SERVICES CORP	91-238 KALAELOA BLVD.	682-1800	25	N/A	4953	REFUSE SYSTEMS
RED RIVER SVC CORP	91-310 KOMOHANA ST #B	682-8424	5-9	\$500,00000 - \$1 M	495302	GARBAGE COLLECTION
WASTE MANAGEMENT INC	91-310 HANUA ST	682-0900	20-49	\$2.5 - \$5 M	495302	GARBAGE COLLECTION
INSURANCE AUTO AUCTIONS INC	91-240 KOMOHANA ST	682-2858	5-9	\$20 - \$50 M	501204	AUTOMOBILE AUCTIONS
MARCO TRUCK BODY	91-119 OLAI ST	682-4844	1-4	\$2.5 - \$5 M	501213	TRUCK BODIES
MAXI TRUCK & VAN INC	91-238 KALAELOA BLVD	682-8123	5-9	\$10 - \$20 M	501213	TRUCK BODIES
WEAVER SPRINGS	91-226 KAUHI ST # 2C	682-0812	1-4	Less than \$500,000	501302	TRUCK EQUIPMENT & PARTS
PURE SPORTS DISTR INC	91-235 OIHANA ST # A	682-4344	5-9	\$1 - \$2.5 M	501308	MOTORCYCLES SUPLS & PARTS WHOLES
OAK DISTRIBUTORS INC	91-280 HANUA ST BLDG A	682-0623	5-9	\$1 - \$2.5 M	501309	AUTOMOBILE BODY SHOP EQUIPMENT &
SPACEMAKER PARKPLUS HAWAII	91-110 HANUA ST # 312	545-7275	1-4	\$1 - \$2.5 M	501309	AUTOMOBILE BODY SHOP EQUIPMENT &
HAWAII TIRE WHOLESALERS	91-270 HANUA ST # B8	847-1331	1-4	Less than \$500,000	501401	TIRE DISTRIBUTORS
SEALY MATTRESS MFG.	91-291 KALAELOA BLVD.,	682-4577	1-4	N/A	5021	FURNITURE MANUFACTURERS
ISLAND QUALITY HARDWARE	91-329 KAUHI ST # G	682-4244	1-4	\$1 - \$2.5 M	502101	BATHROOM FIXTURES & ACCESSORIES
FLEMNG FOODS CO	91-315 HANUA ST	682-7300	100-249	\$100 - \$500 Mil	502314	HOUSEWARES WHOLESALE
ALOHA PRECAST INC	91-195 HANUA ST	682-3069	5-9	\$1 - \$2.5 M	503208	CONCRETE PRODUCTS
CON-FAB HAWAII	91-008 HANUA ST.	682-2811	20-49	\$10 - \$20 M	503208	CONCRETE PRODUCTS
CONCRETE CREATIONS OF HAWAII	91-267 HANUA ST	682-4300	5-9	\$1 - \$2.5 M	503208	CONCRETE PRODUCTS
GRACE PACIFIC CORP.	91-341 HANUA ST	487-7916	20-49	\$5 - \$10 M	503208	CONCRETE PRODUCTS
ISLAND READY-MX CONCRETE	91-469 KOMOHANA ST	682-1305	20-49	\$5 - \$10 M	503208	CONCRETE PRODUCTS
P C FRENCH LTD	91-008 HANUA ST	682-2811	1-4	\$500,00000 - \$1 M	503208	CONCRETE PRODUCTS

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PRO-PAK	91-400 KOMOHANA ST	673-2000	50-99	\$10 - \$20 M	503208	CONCRETE PRODUCTS
TROPICAL CARTS OF HAWAII INC	91-291 KALAELOA BLVD #	682-4411	1-4	\$500,00000 - \$1 M	504638	CARTS (DISPLAY)
ASSOCIATED STEEL WORKERS LTD	91-156 KALAELOA BLVD	682-5588	50-99	\$20 - \$50 M	505106	STEEL DISTRIBUTORS & WAREHOUSES
ZIEGLER STEEL SVC CORP	91-300 HANUA ST	682-3000	10-19	\$10 - \$20 M	505106	STEEL DISTRIBUTORS & WAREHOUSES
EXIDE CORPORATION	91-291 KALAELOA BLVD #	682-4600	1-4	\$1 - 2.5M	5063	BATTERIES STORAGE WHOLESALE
ALUMA SYSTEMS	91-222 OLAI ST.	682-1311	10	\$2 M	5082	CONSTRUCTION MNING EQUIPMENT
ABB ENERGY SERIVICE, INC.	91-111 KALAELOA BLVD	682-5344	5-9	\$1 - \$2.5 M	506302	POWER TRANSMSSION EQUIPMENT
MAGUIRE BEARING CO LTD	91-291 KALAELOA BLVD #	847-3531	1-4	\$1 - \$2.5 M	506302	POWER TRANSMSSION EQUIPMENT
GRINNELL FIRE PROTECTION SYST	91-444 KOMOHANA ST.	682-5556	20-49	\$2.5 - \$5 M	506315	FIRE PROTECTION SYSTEMS
MEL RAE SALES INC.	91-329 KAUHI ST #B1	682-4466	5-9	\$1 - \$2.5 M	506335	ELECTRONIC MFRS REPS
BAY STANDARD INC	91-291 KALAELOA BLVD #	682-1033	1-4	\$500,00000 - \$1 M	507201	BOLTS & NUTS
HAWAII STATE DISTRIBUTORS INC	91-291 KALAELOA BLVD #	682-2044	10-19	\$5 - \$10 M	507207	HARDWARE WHOLESALE
OAHU GAS SVC	91-290 HANUA ST	682-5796	20-49	\$50 - \$100 Milli	507413	GAS EQUIPMENT
REFRIGERANT RECYCLING INC	91-120 HANUA ST # D	682-7362	5-9	\$1 - \$2.5 M	507505	AIR CONDITIONING SUPPLIES & PART
HYDRA-AIR PACIFIC, INC.	91-291 KALELOA BLVD	N/A	N/A	N/A	5084	N/A
MORROW CRANE CO	91-127 MALAKOLE ST	682-2458	1-4	\$1 - \$2.5 M	508412	CRANES
HI-WAY TRANSPORTATION & CNTRC	91-178 KALAELOA BLVD	682-5592	20-49	\$5 - \$10 M	508414	ENGINES DIESEL
C & F MACHINERY CORP	91-060 HANUA ST	682-1541	5-9	\$1 - \$2.5 M	508425	MACHINE TOOLS
ALBERTO-CULVER CO	91-033 MALAKOLE ST # 1	682-0309	5-9	\$500,00000 - \$1 M	508702	BEAUTY SALONS EQUIPMENT & SUPPLI
UNISOURCE PAPER CORP	91-210 HANUA ST	673-1300	20-49	\$20 - \$50 M	508724	JANITORS SUPPLIES
SPORTS WORKS INC	91-291 KALAELOA BLVD #	682-8418	1-4	\$500,00000 - \$1 M	509104	BOWLING LANE EQUIPMENT & SUPPLIE
HAWAII WATERWORKS	91-444 KOMOHANA ST # A	682-5488	1-4	\$1 - \$2.5 M	509138	SKIN & SCUBA DIVING EQUIPMENT-WH
OCEANIC INTERNATIONAL INC	91-444 KOMOHANA ST # A	682-5488	1-4	\$1 - \$2.5 M	509138	SKIN & SCUBA DIVING EQUIPMENT-WH
CDR HAWAII	91-270 HANUA ST # 2	682-4788	1-4	Less than \$500,000	509142	SURFBOARDS WHOLESALE
HONOLULU RESOURCE RECOVERY	91-174 HANUA ST	682-0201	100-249	\$20 - \$50 M	509305	WASTE REDUCTION & DISPOSAL RECYC
UNITEK SOLVENT SVC	91-125 KAOM LOOP	682-8284	5-9	\$5 - \$10 M	509305	WASTE REDUCTION & DISPOSAL RECYC
ALLWASTE OF HAWAII LTD	91-410 KOMOHANA ST	839-4600	1-4	Less than \$500,000	509308	OILS WASTE
HAWAII METAL RECYCLING CO	91-056 HANUA ST	682-5810	20-49	\$5 - \$10 M	509312	RECYCLING CENTERS
RETURN INC	91-291 KALAELOA BLVD #	682-5532	1-4	\$500,00000 - \$1 M	509312	RECYCLING CENTERS
HAWAIIAN AGENTS INC	91-314 KOMOHANA ST	682-7377	20-49	\$10 - \$20 M	509908	MANUFACTURERS-AGENTS & REPRESENT
S & K SALES CO	91-033 MALAKOLE ST # 3	682-0899	10-19	\$5 - \$10 M	509908	MANUFACTURERS-AGENTS & REPRESENT
INGRAM PAPER CO	91-291 KALAELOA BLVD #	682-2451	20-49	\$20 - \$50 M	511101	PAPER PRODUCTS
HAWAII SCHOOL & HEALTH SUPPLY	91-041 MALAKOLE ST # 2	682-3914	5-9	\$1 - \$2.5 M	511213	SCHOOL SUPPLIES
A & D PLASTICS HAWAII INC	91-041 MALAKOLE ST	682-1081	5-9	\$2.5 - \$5 M	511314	PLASTIC CONTAINERS
OLIVIA SACHETS OF HAWAII	91-291 KALAELOA BLVD #	682-4490	1-4	\$2.5 - \$5 M	512213	PERFUME WHOLESALE
HO'AI	91-110 HANUA ST # 317	682-1010	5-9	\$2.5 - \$5 M	514101	FOOD PRODUCTS
KRAFT GENERAL FOODS	91-290 KAUHI ST	979-3000	20-49	\$10 - \$20 M	514101	FOOD PRODUCTS

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PAN PACIFIC MARKETING	91-226 KAUHI ST.	N/A	N/A	N/A	5149	N/A
TEXACO INC	91-119 HANUA ST	533-1886	5-9	\$20 - \$50 M	517210	GASOLINE WHOLESALE
FARM & FEED INC	91-319 OLAI ST	682-0318	5-9	\$2.5 - \$5 M	519111	FEED WHOLESALE
MLO NURSERY	91-341 HANUA ST	682-4633	5-9	\$500,00000 - \$1 M	519306	NURSERIES PLANTS TREES & ETC WHO
COMMERCIAL INDUSTRIES CORP.	91-313 KAUHI ST.	682-3700	4	\$\$380000	5199	NONDURABLE GOODS
KAMLIBASE HAWAII CO. LTD.	91-446 KOMOHANA ST	N/A	N/A	N/A	5199	N/A
IMUA INDUSTRIES INC	91-255 KALAELOA BLVD #	682-8288	5-9	\$1 - \$2.5 M	521126	BUILDING MATERIALS
JOHN GLEESON LTD	91-210 OLAI ST	841-8766	1-4	Less than \$500,000	521140	INSULATION MATERIALS COLD & HEAT
CENTURY GLASS INC.	91-255 KALAELOA BLVD	682-3699	10-19	\$1 - \$2.5 M	523110	GLASS AUTO PLATE & WINDOW & ETC
PARTS PLUS	91-226 KAUHI ST # 2B	682-8091	1-4	Less than \$500,000	553111	AUTOMOBILE PARTS & SUPPLIES RETA
SCHUMAN AUTOMOTIVE INC	91-291 MALAKOLE ST # A	536-3488	10-19	\$1 - \$2.5 M	553111	AUTOMOBILE PARTS & SUPPLIES RETA
MOTOR SUPPLY LTD	91-349 KAUHI ST	682-4455	20-49	\$1 - \$2.5 M	553123	TIRE DEALERS RETAIL
COURTAULDS COATINGS, INC.	91-291 KALAELOA BLVD	N/A	N/A	N/A	5231	N/A
50TH STATE COIN-OP	91-246 OIHANA ST	682-4561	5-9	\$500,00000 - \$1 M	573112	VIDEO GAMES
WOODY'S HOT DOG INC	91-291 KALAELOA BLVD #	682-4411	1-4	Less than \$500,000	581212	CATERERS
KELACO HAWAII INC	91-270 HANUA ST # 2	682-5539	1-4	Less than \$500,000	594106	WATER SKIING EQUIPMENT & SUPPLIE
ISLAND EQUIPMENT INC.	91-238 KALAELOA BLVD	N/A	N/A	N/A	5999	N/A
CAMPBELL ESTATE	1001 KAMOKILA BLVD FL	674-6674	118	\$125 M	6519	REAL PROPERTY LESSORS
MAC ENVIRONMENTAL CORP.	91-313 KAUHI ST.	N/A	N/A	N/A	6719	N/A
IHILANI RESORT & SPA	92-1001 OLANI ST.	679-0079	400-500	\$10 - \$15 M	7011	
TROPICAL FORMALS INC.	91-226 KAUHI ST	682-2421	10-19	\$500,00000 - \$1 M	729908	FORMAL WEAR RENTAL
MCLEANS RESTORATION SERVICES	91-294 KAUHI ST.	N/A	N/A	N/A	7349	N/A
ASTRO PAK CORP	91-329 KAUHI ST # D	682-7242	1-4	Less than \$500,000	734913	CHEMICAL CLEANING INDUSTRIAL
BRADY PHOTO	91-310 KAUHI ST # A	682-4451	1-4	Less than \$500,000	735904	AUDIO-VISUAL EQUIPMENT RENTING &
CHEM-LAV CHEM-TOI	91-255 HANUA ST	682-2466	10-19	\$1 - \$2.5 M	735922	TOILETS PORTABLE
GEORGE CAMBRA MOVIE PRODUCTIO	91-226 KAUHI ST	682-5799	1-4	Less than \$500,000	735934	MOVING SUPPLIES & EQUIPMENT RENT
HERCULES CONSTRUCTION CO	91-300 KOMOHANA ST	682-2474	1-4	Less than \$500,000	735949	CONTRACTORS-EQUIPMENT & SUPLS RE
CREED, CLEAR WATER POOL SERVICE	91-210 KALAELOA BLVD.	N/A	N/A	N/A	7389	N/A
KAHALA-KAI PHOTO SVC	91-291 KALAELOA BLVD	682-4459	1-4	Less than \$500,000	738999	BUSINESS SERVICES NEC
PENSKE TRUCK LEASING & RENTAL	91-265 KALAELOA BLVD	682-5200	1-4	\$500,00000 - \$1 M	751303	TRUCK RENTING & LEASING
RYDER TRUCK RENTAL INC	91-220 KALAELOA BLVD #	682-5530	1-4	\$500,00000 - \$1 M	751303	TRUCK RENTING & LEASING
M & R TRUCK & AUTO CONCEPTS	91-210 KAUHI ST	682-4114	1-4	Less than \$500,000	753201	AUTOMOBILE BODY REPAIRING & PAIN
PEACEWORK	91-341 HANUA ST	682-5803	1-4	Less than \$500,000	753801	AUTOMOBILE REPAIRING & SERVICE
SMALL REVS AUTOMOTIVE	91-201 MALAKOLE ST	682-4440	1-4	Less than \$500,000	753801	AUTOMOTIVE REPAIRING & SERVICE
ALBERT'S TOWING & AUTO REPAIR	91-209 KUHELA ST	682-4060	1-4	Less than \$500,000	754901	WRECKER SERVICE
FAMLY TOWING	91-175 OLAI ST	677-0612	5-9	Less than \$500,000	754901	WRECKER SERVICE
R D S WELDING	91-080 HANUA ST	682-7362	1-4	Less than \$500,000	769203	WELDING

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DILLINGHAM CONSTRUCTION PACIF	91-063 MALAKOLE RD.	682-5761	N/A	N/A	7699	REPAIR SERVICES
SAITO'S TRUCK & LIFT REPAIR	91-2296 KAUHI ST. #A21	682-5599	1-4	Less than \$500,000	769909	INDUSTRIAL TRUCK REPAIR
ALLWASTE OF HAWAII LTD	91-320 KOMOHANA ST	682-3033	1-4	Less than \$500,000	769934	TANK CLEANING
HAWAII RACEWAY PARK	91-201 MALAKOLE ST	682-4994	1-4	Less than \$500,000	799601	AMUSEMENT PLACES
E K FERNANDEZ SHOWS	91-246 OIHANA ST	682-5767	50-99	\$2.5 - \$5 M	799919	CARNIVALS
HAWAII INTERNATIONAL RACING S	91-201A MALAKOLE ST.	673-1600	1-4	\$500,00000 - \$1 M	829902	DRIVING INSTRUCTION
DELTA CONSTRUCTION CORP	91-255 OIHANA ST	682-1315	50-99	\$5 - \$10 M	871105	CONTRACTORS-ENGINEERING GENERAL
HOWARD ENGINEERS & CONSTRUCTORS	91-110 HANUA ST. #201	682-5788	10-19	\$1 - \$2.5 M	871105	CONTRACTORS-ENGINEERING GENERAL
DIVERSIFIED ENERGY SVC.	91-083 HANUA ST	682-8215	20-49	\$2.5 - \$5 M	871115	ENGINEERS-ELECTRICAL
HAWAIIAN REMEDIATION & RECYCL	91-383 KAUHI ST.	682-4757	10-19	\$1 - \$2.5 M	873111	ENVIRONMENTAL & ECOLOGICAL SERVI
UNITEK ENVIRONMENTAL SVC	91-125 KAOM LOOP	834-1444	5-9	\$500,00000 - \$1 M	873114	POLLUTION CONTROL
BREWER ENVIRONMENTAL INDS. IN	91-150 KAOM LOOP	532-7400	5-9	Less than \$500,000	873402	FERTILIZERS MANUFACTURERS
LEAHEY FOODS INC.	31-315 HANUA ST.	682-1002	5-9	\$500,00000 - \$1 M	874214	LCL TRCKG W/O STORAGE
MCCLELLAN & SMTH INC	91-110 HANUA ST # 706	682-1010	5-9	\$500,00000 - \$1 M	874214	MARKETING CONSULTANTS
TEL-NET HAWAII INC	91-238 KALAELOA BLVD B	682-5266	1-4	Less than \$500,000	874815	TELECOMMUNICATIONS CONSULTANTS
ALCAL HAWAII	91-444 KOMOHANA ST.	682-5222	N/A	N/A	N/A	N/A
ALOHA INTERNATIONAL MOVING SE	91-210 HANUA ST.	682-2500	N/A	N/A	N/A	N/A
AMERICAN PIPING & BOILER CO.	92-252 KUHELA ST.	682-4205	N/A	N/A	N/A	N/A
ANUENUE ROLLOFF, INC.	91-210 KALAELOA BLVD.	682-4445	N/A	N/A	N/A	N/A
APPLIED ENERGY SYSTEMS	91-086 KAOM LOOP	682-5330	N/A	N/A	N/A	N/A
ARKO SALES	91-291 A KALAELOA BLVD	682-3693	N/A	N/A	N/A	N/A
BIERMAN, DENNIS H.	91-195 HANUA ST.	682-4198	N/A	N/A	N/A	N/A
BRIDGESTONE/FIRESTONE, INC.	91-270 HANUA ST. UNIT	682-4567	N/A	N/A	N/A	MANUFACTURE
CURTIS GUM AND CANDY	91-110 HANUA ST. #318	682-1400	N/A	N/A	N/A	N/A
dba Mayes Co.	91-110 HANUA ST., #20	N/A	N/A	N/A	N/A	N/A
DELUXE INVESTMENT CORP	852 MAPUNAPUNA ST.	839-5181	N/A	N/A	N/A	N/A
DIAMONG FLOORSHINE SYSTEMS	1037 MAUNANANI ST.	396-3345	N/A	N/A	N/A	N/A
ENERCO, INC.	91-390 KAUHI ST.	682-5012	N/A	N/A	N/A	N/A
FOUNDATIONS HAWAII	91-110 HANUA ST., #202	N/A	N/A	N/A	N/A	N/A
GARY'S WELDING INC	91-165 KALAELOA BLVD.	682-8190	N/A	N/A	N/A	WELDING
GASPRO	91-102 KAOM LOOP	682-3065	N/A	N/A	N/A	N/A
GUNN VAN LINES	91-242 KALAELOA BLVD	682-1576	N/A	N/A	N/A	N/A
HAWAII MEAT COMPANY, LTD.	91-319 OLAI ST.	682-5791	N/A	N/A	N/A	MEAT PRODUCTS
HAWAII TRANSFER CO., LTD.	91-280 HANUA ST.	682-7287	N/A	N/A	N/A	N/A
HONMLL	91-188 KALAELOA BLVD	682-4553	N/A	N/A	N/A	N/A
HO'S ENTERPRISES	91-178 KALAELOA BLVD #	682-5565	N/A	N/A	N/A	N/A
INDUSTRIAL TRACTOR & EQUIPMENT	91-165 KALAELOA BLVD.	682-1533	N/A	N/A	N/A	N/A

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INTERNATIONAL PAINT	91-291 KALAELOA BLVD.,	682-0331	N/A	N/A	N/A	N/A
INTRASPECT	91-607 MALAKOLE ST., #	682-5422	N/A	N/A	N/A	N/A
KAYWALL JOINT VENTURES	91-300 KOMOHANA ST.	682-2474	N/A	N/A	N/A	N/A
LEEWARD AUTO WRECKERS, INC.	91-209 KUHALA ST.	682-4060	N/A	N/A	N/A	N/A
LEVOLOR HOME FASHIONS	91-110 HANUA ST., #313	682-6020	N/A	N/A	N/A	N/A
MLLER WELDING SUPPLY	205 KALIHI ST.	N/A	N/A	N/A	N/A	N/A
MONTEREY CASKET CO.	91-110 HANUA ST., #325	N/A	N/A	N/A	N/A	N/A
MORRISON KNUDSEN CORP.	91-252 KUHELA ST.	682-2085	N/A	N/A	N/A	ENGINEERING
PACIFIC CUSTOM BOAT BUILDING	91-313 KAUHI ST	682-3911	N/A	N/A	N/A	N/A
PACIFIC FORMS CORP.	91-229 KOMOHANA ST.	682-7213	N/A	N/A	N/A	N/A
PARADOX SALES AND TRADING	PO BOX 66210	988-2638	N/A	N/A	N/A	N/A
PROFESSIONAL TRUCK SERVICES, INC.	91-209 KUHELA ST.	682-4285	N/A	N/A	N/A	N/A
QUAKER OATS CO.	91-110 HANUA ST., #203	682-0196	N/A	N/A	N/A	WHOLESALE FOOD
RAY HIGDON CONSTRUCTION, INC.	91-110 HANUA ST., #324	682-7188	N/A	N/A	N/A	N/A
TRITON MARINE CONSTRUCTION CO	91-165 KALAELOA BLVD.	682-4411	N/A	N/A	N/A	N/A
TWOMEY FLOORING	91-041 MALAKOLE ST.	682-0904	N/A	N/A	N/A	N/A

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50TH STATE COIN-OP	91-246 OIHANA ST	682-4561	5-9	\$500,00000 - \$1 M	573112	VIDEO GAMES
A & D PLASTICS HAWAII INC	91-041 MALAKOLE ST	682-1081	5-9	\$2.5 - \$5 M	511314	PLASTIC CONTAINERS
A J SALES INC	91-267 HANUA ST	682-4342	1-4	Less than \$500,000	308902	PLASTICS & PLASTIC PRODUCTS
ABB ENERGY SERIVICE, INC.	91-111 KALAELOA BLVD	682-5344	5-9	\$1 - \$2.5 M	506302	POWER TRANSMSSION EQUIPMENT
ABHE & SVOBODA, INC.	91-218A OLAI ST.	682-4833	2	N/A	1629	HEAVY CONSTR.
ACI GLASS PRODUCTS	91-235 OIHANA ST	682-5724	10-19	\$1 - \$2.5 M	154203	STORE FRONTS
AES BARBERS POINT, INC.	91-086 KAOM LOOP	682-3416	50-99	N/A	491101	ELECTRIC COMPANIES
AIR LIQUIDE AMERICA CORP(Big 3 Ind.)	91-163 HANUA ST.	682-2100	50	N/A	2813	INDUSTRIAL GASSES
ALBERT'S TOWING & AUTO REPAIR	91-209 KUHELA ST	682-4060	1-4	Less than \$500,000	754901	WRECKER SERVICE
ALBERTO-CULVER CO	91-033 MALAKOLE ST # 1	682-0309	5-9	\$500,00000 - \$1 M	508702	BEAUTY SALONS EQUIPMENT & SUPPLI
ALCAL HAWAII	91-444 KOMOHANA ST.	682-5222	N/A	N/A	N/A	N/A
ALLWASTE OF HAWAII LTD	91-320 KOMOHANA ST	682-3033	1-4	Less than \$500,000	769934	TANK CLEANING
ALLWASTE OF HAWAII LTD	91-410 KOMOHANA ST	839-4600	1-4	Less than \$500,000	509308	OILS WASTE
ALLWASTE OF HAWAII LTD	91-416 KOMOHANA ST	682-3600	5-9	\$5 - \$10 M	291102	OILS RE-REFINED
ALOHA ICE CO.	91-110 HANUA ST #302	682-8999	1-4	\$250K	2097	MANUFACTURED ICE
ALOHA INTERNATIONAL MOVING SE	91-210 HANUA ST.	682-2500	N/A	N/A	N/A	N/A
ALOHA PRECAST INC	91-195 HANUA ST	682-3069	5-9	\$1 - \$2.5 M	503208	CONCRETE PRODUCTS
ALUMA SYSTEMS	91-222 OLAI ST.	682-1311	10	\$2 M	5082	CONSTRUCTION MNING EQUIPMENT
AMERICAN LAWN SVC INC	91-120 HANUA ST # B	682-5536	20-49	\$500,00000 - \$1 M	078206	LAWN MAINTENANCE
AMERICAN MAIL WELL ENVELOPE C	91-280 HANUA ST	682-3055	20-49	\$5 - \$10 M	267801	STATIONERY MFRS
AMERICAN PIPING & BOILER CO.	92-252 KUHELA ST.	682-4205	N/A	N/A	N/A	N/A
AMERICAN TECHNOLOGIES, INC.	91-220 KALAELOA BLVD.	682-8282	70	N/A	1731	ELECTRICAL WORK
AMERICAN TRUSS CO	91-259 OLAI ST	682-5300	10-19	\$2.5 - \$5 M	176108	ROOF STRUCTURES
AMERON HC & D	91-059 HANUA ST	832-9200	50-99	\$5 - \$10 M	327209	CONCRETE PRODUCTS EXCEPT BLOCK &
AMFAC JMB HAWAII, INC.	91-262 OIHANA ST.	945-5005	325	N/A	4225	WAREHOUSE
ANUENUE ROLLOFF, INC.	91-210 KALAELOA BLVD.	682-4445	N/A	N/A	N/A	N/A
APPLIED ENERGY SYSTEMS	91-086 KAOM LOOP	682-5330	N/A	N/A	N/A	N/A
ARIEL TRUSS HAWAII INC	91-227 HANUA ST	682-5859	20-49	\$5 - \$10 M	176108	ROOF STRUCTURES
ARKO SALES	91-291 A KALAELOA BLVD	682-3693	N/A	N/A	N/A	N/A
ASSOCIATED STEEL WORKERS LTD	91-156 KALAELOA BLVD	682-5588	50-99	\$20 - \$50 M	505106	STEEL DISTRIBUTORS & WAREHOUSES.
ASTRO PAK CORP	91-329 KAUHI ST # D	682-7242	1-4	Less than \$500,000	734913	CHEMICAL CLEANING INDUSTRIAL
ATLAS SALES CO	91-302 HANUA ST	682-4680	20-49	\$1 - \$2.5 M	179905	RAILINGS
BAY STANDARD INC	91-291 KALAELOA BLVD #	682-1033	1-4	\$500,00000 - \$1 M	507201	BOLTS & NUTS
BEKINS HAWAIIAN MOVERS, INC.	91-241 KALAELOA BLVD	N/A	N/A	N/A	4214	N/A
BIERMAN, DENNIS H.	91-195 HANUA ST.	682-4198	N/A	N/A	N/A	N/A
BHP GAS CO. SNG PLANT	91-390 KAUHI ST.	808-547-386	41	N/A	4928	GAS PRODUCTION & DISTRIBUTION
BHP PETROLEUM AMERICAS REFINI	91-325 KOMOHANA ST.	547-3913	100-249	\$100 - \$500 MII	291101	OIL REFINERS

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BIG THREE INDUSTRIES (see Air Liquide)	-----	-----	-----	-----	-----	-----
BOC GROUP, INC.	91-102 KAOMI IOOP	N/A	N/A	N/A	2813	N/A
BONDED MATERIALS CO.	91-400 KOMOHANA ST.	673-2000	N/A	\$13 M	3272	CONCRETE PRODUCTS
BRADY PHOTO	91-310 KAUHI ST # A	682-4451	1-4	Less than \$500,000	735904	AUDIO-VISUAL EQUIPMENT RENTING &
BRASS & GLASS	91-444 KOMOHANA ST #H	682-1084	1-4	Less than \$500,000	336501	FOUNDRIES MANUFACTURING
BREWER ENVIRONMENTAL INDS. IN	91-150 KAOM LOOP	532-7400	5-9	Less than \$500,000	873402	FERTILIZERS MANUFACTURERS
BRIDGESTONE/FIRESTONE, INC.	91-270 HANUA ST. UNIT	682-4567	N/A	N/A	N/A	MANUFACTURE
BRIGGS PACIFIC INDUSTRIES, IN	91-650 MALAKOLE ST.	682-4113	N/A	N/A	4491	MARINE CARGO HANDLING
C & F MACHINERY CORP	91-060 HANUA ST	682-1541	5-9	\$1 - \$2.5 M	508425	MACHINE TOOLS
CALIFORNIA GLASS	91-291 KALAELOA BLVD #	682-1900	5-9	\$1 - \$2.5 M	152110	SOLARIUMS, SUNROOMS & ATRIUMS
CAMPBELL ESTATE	1001 KAMOKILA BLVD FL	674-6674	118	\$125 M	6519	REAL PROPERTY LESSORS
CDR HAWAII	91-270 HANUA ST # 2	682-4788	1-4	Less than \$500,000	509142	SURFBOARDS WHOLESALE
CENTURY GLASS INC.	91-255 KALAELOA BLVD	682-3699	10-19	\$1 - \$2.5 M	523110	GLASS AUTO PLATE & WINDOW & ETC
CHEM-LAV CHEM-TOI	91-255 HANUA ST	682-2466	10-19	\$1 - \$2.5 M	735922	TOILETS PORTABLE
CHEVRON PRODUCTS CO.	91-480 MALAKOLE ST.	682-2372	215	N/A	2911	PETROLEUM REFINING
CHEVRON USA INC	91-480 MALAKOLE ST	682-5711	100-249	\$100 - \$500 Mil	281999	INDUSTRIAL INORGANIC CHEMCALS N
CREED, CLEAR WATER POOL SERVICE	91-210 KALAELOA BLVD.	N/A	N/A	N/A	7389	N/A
COCA-COLA FOUNTAIN	91-233 KALAELOA BLVD	682-5778	10-19	\$2.5 - \$5 M	208601	BOTTLERS
COLEMAN AMERICAN MOVING SVC	91-242 KALAELOA BLVD	682-1576	50-99	\$5 - \$10 M	421401	MOVERS
COMMERCIAL INDUSTRIES CORP.	91-313 KAUHI ST.	682-3700	4	\$380000	5199	NONDURABLE GOODS
CON-FAB HAWAII	91-008 HANUA ST.	682-2811	20-49	\$10 - \$20 M	503208	CONCRETE PRODUCTS
CONCRETE CREATIONS OF HAWAII	91-267 HANUA ST	682-4300	5-9	\$1 - \$2.5 M	503208	CONCRETE PRODUCTS
COURTAULDS COATINGS, INC.	91-291 KALAELOA BLVD	N/A	N/A	N/A	5231	N/A
CREATIVE BUILDING CONCEPTS	91-252 KAUHI ST	682-8222	1-4	\$500,00000 - \$1 M	154213	BUILDING CONTRACTORS
CREATIVE PACKAGING OF HAWAII	91-310 KAUHI ST	682-1502	10-19	\$500,00000 - \$1 M	265201	BOXES PAPER
CURTIN PACIFIC CO.	91-195 HANUA ST. #B21	682-7188	10-19	\$1 - \$2.5 M	1731	ELEC. CON.
CURTIS GUM AND CANDY	91-110 HANUA ST. #318	682-1400	N/A	N/A	N/A	N/A
D ZELINSKY & SONS OF HAWAII	91-310 KOMOHANA ST	682-1321	50-99	\$2.5 - \$5 M	172101	PAINTERS
dba Mayes Co.	91-110 HANUA ST., #20	N/A	N/A	N/A	N/A	N/A
DELTA CONSTRUCTION CORP	91-255 OIHANA ST	682-1315	50-99	\$5 - \$10 M	871105	CONTRACTORS-ENGINEERING GENERAL
DELUXE INVESTMENT CORP	852 MAPUNAPUNA ST.	839-5181	N/A	N/A	N/A	N/A
DIAMONG FLOORSHINE SYSTEMS	1037 MAUNANANI ST.	396-3345	N/A	N/A	N/A	N/A
DILLINGHAM CONSTRUCTION PACIF	91-063 MALAKOLE RD.	682-5761	N/A	N/A	7699	REPAIR SERVICES
DIVERSIFIED ENERGY SVC.	91-083 HANUA ST	682-8215	20-49	\$2.5 - \$5 M	871115	ENGINEERS-ELECTRICAL
DIVERSIFIED GLASS CORP.	91-291 KALOEOA BLVD.	682-1071	10	\$640K	2221	FABRIC MLLS
DORVIN D LIES CO	91-195 HANUA ST	682-7241	1-4	Less than \$500,000	171105	PLUMBING CONTRACTORS
E K FERNANDEZ SHOWS	91-246 OIHANA ST	682-5767	50-99	\$2.5 - \$5 M	799919	CARNIVALS

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E.E. BLACK, LTD.	91-252 KULELA ST.	682-2085	N/A	N/A	1541	INDL BLDNGS WRHSES
ENERCO, INC.	91-390 KAUHI ST.	682-5012	N/A	N/A	N/A	N/A
EXIDE CORPORATION	91-291 KALAELOA BLVD #	682-4600	1-4	\$1 - 2.5M	5063	BATTERIES STORAGE WHOLESALE
FAMLY TOWING	91-175 OLAI ST	677-0612	5-9	Less than \$500,000	754901	WRECKER SERVICE
FARM & FEED INC	91-319 OLAI ST	682-0318	5-9	\$2.5 - \$5 M	519111	FEED WHOLESALE
FIBERGLASS FANTASTIC (C & E P	91-291 KALOELOA BLVD.	682-5887	3	\$250K	3088	PLASTICS/PLUMBING FIXTURES
FIBERGLASS SHOP	91-291 KALAELOA BLVD #	682-5233	5-9	\$500,00000 - \$1 M	329601	FIBER GLASS FABRICATORS
FILE MNDERS INC	91-238 KAUHI ST	682-5151	5-9	\$500,00000 - \$1 M	421401	MOVERS
FINE KITCHEN & BATHROOM INC	91-329 KAUHI ST # 5	682-3021	10-19	\$500,00000 - \$1 M	175103	CABINET MAKERS
FLEMNG FOODS CO	91-315 HANUA ST	682-7300	100-249	\$100 - \$500 Mii	502314	HOUSEWARES WHOLESALE
FOUNDATION INTERNATIONAL INC	91-227 HANUA ST	682-2800	20-49	\$1 - \$2.5 M	162901	PILE DRIVING
FOUNDATIONS HAWAII	91-110 HANUA ST., #202	N/A	N/A	N/A	N/A	N/A
FRANK COLUCCIO CONSTRUCTION C	91-141 KALAELOA BLVD	682-4477	20-49	\$1 - \$2.5 M	162307	SEWER CONTRACTORS
FUEL OIL POLISHING CO	91-225 HANUA ST	682-0091	10-19	\$1 - \$2.5 M	179923	TANKS-REPAIRING
GARY'S WELDING INC	91-165 KALAELOA BLVD.	682-8190	N/A	N/A	N/A	WELDING
GASPRO	91-102 KAOM LOOP	682-3065	N/A	N/A	N/A	N/A
GEMNI WINDOW CORP	91-444 KOMOHANA ST # B	682-7177	1-4	\$500,00000 - \$1 M	344204	JALOUSIES MANUFACTURERS
GEORGE CAMBRA MOVIE PRODUCTIO	91-226 KAUHI ST	682-5799	1-4	Less than \$500,000	735934	MOVING SUPPLIES & EQUIPMENT RENT
GRACE PACIFIC CONCRETE PRODS.	91-205 KALAELOA BLVD	682-4556	10-19	\$1 - \$2.5 M	327101	CONCRETE BLOCKS & SHAPES MANUFAC
GRACE PACIFIC CORP.	91-341 HANUA ST	487-7916	20-49	\$5 - \$10 M	503208	CONCRETE PRODUCTS
GRINNELL FIRE PROTECTION SYST	91-444 KOMOHANA ST.	682-5556	20-49	\$2.5 - \$5 M	506315	FIRE PROTECTION SYSTEMS
GROARK DESIGN INC	91-170 OLAI ST	682-1020	20-49	\$1 - \$2.5 M	078103	LANDSCAPE DESIGNERS
GUNN VAN LINES	91-242 KALAELOA BLVD	682-1576	N/A	N/A	N/A	N/A
H & H SERVICE ENGINEERING LTD	91-291 KALAELOA BLVD #	682-2859	10-19	\$1 - \$2.5 M	347198	ELECTROPLATING & POLISHING & ANO
HAWAII AKAU ENTERPRISES, INC.	91-080 HANUA ST	682-5090	5-9	\$500,00000 - \$1 M	421304	TRUCKING
HAWAII CONCRETE PRODUCTS INC	91-027 KAOM LOOP	682-5639	20-49	\$5 - \$10 M	327208	CONCRETE PIPE
HAWAII DETROIT DIESEL	91-265 KALAELOA BLVD	682-2400	20-49	\$5 - \$10 M	351901	INTERNAL COMBUSTION ENGINES NEC
HAWAII FABRICATORS	91-119 OLAI ST	682-3005	1-4	Less than \$500,000	179905	RAILINGS
HAWAII INTERNATIONAL MOVERS	91-120 HANUA ST	682-2425	20-49	\$1 - \$2.5 M	421401	MOVERS
HAWAII INTERNATIONAL RACING S	91-201A MALAKOLE ST.	673-1600	1-4	\$500,00000 - \$1 M	829902	DRIVING INSTRUCTION
HAWAII MEAT COMPANY, LTD.	91-319 OLAI ST.	682-5791	N/A	N/A	N/A	MEAT PRODUCTS
HAWAII METAL RECYCLING CO	91-056 HANUA ST	682-5810	20-49	\$5 - \$10 M	509312	RECYCLING CENTERS
HAWAII MODULAR SPACE INC	91-252 KAUHI ST	682-5559	10-19	\$2.5 - \$5 M	154212	BUILDINGS PRE-CUT PREFABRICATED
HAWAII PACIFIC LUMBER INC	91-255 KALAELOA BLVD #	682-4414	5-9	\$500,00000 - \$1 M	521126	BUILDING MATERIALS
HAWAII PIPE & SUPPLY	91-130 KALAELOA BLVD	673-7600	10-19	\$2.5 - \$5 M	344603	GRATINGS
HAWAII RACEWAY PARK	91-201 MALAKOLE ST	682-4994	1-4	Less than \$500,000	799601	AMUSEMENT PLACES
HAWAII SCHOOL & HEALTH SUPPLY	91-041 MALAKOLE ST # 2	682-3914	5-9	\$1 - \$2.5 M	511213	SCHOOL SUPPLIES

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HAWAII STATE DISTRIBUTORS INC	91-291 KALAELOA BLVD #	682-2044	10-19	\$5 - \$10 M	507207	HARDWARE WHOLESale
HAWAII TIRE WHOLESALERS	91-270 HANUA ST # B8	847-1331	1-4	Less than \$500,000	501401	TIRE DISTRIBUTORS
HAWAII TRANSFER CO., LTD.	91-280 HANUA ST.	682-7287	N/A	N/A	N/A	N/A
HAWAII WATERWORKS	91-444 KOMOHANA ST # A	682-5488	1-4	\$1 - \$2.5 M	509138	SKIN & SCUBA DIVING EQUIPMENT-WH
HAWAIIAN AGENTS INC	91-314 KOMOHANA ST	682-7377	20-49	\$10 - \$20 M	509908	MANUFACTURERS-AGENTS & REPRESENT
HAWAIIAN CEMENT	91-055 KAOM LOOP	673-4200	100-249	\$10 - \$20 M	327209	CONCRETE PRODUCTS EXCEPT BLOCK &
HAWAIIAN DREDGING & CONSTR CO	91-063 MALAKOLE ST	682-5761	50-99	\$5 - \$10 M	327209	CONCRETE PRODUCTS EXCEPT BLOCK &
HAWAIIAN EARTH PRODUCTS LTD	91-400 MALAKOLE ST	682-5895	5-9	\$1 - \$2.5 M	078207	WOOD PRODUCTS
HAWAIIAN REMEDIATION & RECYCL	91-383 KAUHI ST.	682-4757	10-19	\$1 - \$2.5 M	873111	ENVIRONMENTAL & ECOLOGICAL SERVI
HAWAIIAN SEALIFE INC	91-446 KOMOHANA ST	682-7287	1-4	\$1 - \$2.5 M	519939	TROPICAL FISH WHOLESale
HAWAIIAN WESTERN STEEL LTD	91-150 HANUA ST	682-5731	1-4	\$500,00000 - \$1 M	331201	STEEL MLLS
HERCULES CONSTRUCTION CO	91-300 KOMOHANA ST	682-2474	1-4	Less than \$500,000	735949	CONTRACTORS-EQUIPMENT & SUPLS RE
HI-TECH COATINGS	91-080 HANUA ST	682-2000	5-9	\$500,00000 - \$1 M	179911	SANDBLASTING
HI-WAY TRANSPORTATION & CNTRC	91-178 KALAELOA BLVD	682-5592	20-49	\$5 - \$10 M	508414	ENGINES DIESEL
HISECO	91-267 HANUA ST	682-0351	1-4	Less than \$500,000	179103	STEEL FABRICATORS
HO'AI	91-110 HANUA ST # 317	682-1010	5-9	\$2.5 - \$5 M	514101	FOOD PRODUCTS
HO'S ENTERPRISES	91-178 KALAELOA BLVD #	682-5565	N/A	N/A	N/A	N/A
HONBLUE INC	91-291 KALAELOA BLVD #	674-0866	1-4	Less than \$500,000	278903	MOUNTING & FINISHING
HONMLL	91-188 KALAELOA BLVD	682-4553	N/A	N/A	N/A	N/A
HONOLULU CELLULAR	500 KAHELU AVE	627-8899	20-49	\$2.5 - \$5 M	481604	TELEPHONE CO. EQUIP. & SUPP.
HONOLULU RESOURCE RECOVERY	91-174 HANUA ST	682-0201	100-249	\$20 - \$50 M	509305	WASTE REDUCTION & DISPOSAL RECYC
HONOLULU WOOD TREATING CO LTD	91-291 HANUA ST	682-5704	20-49	\$5 - \$10 M	242999	SPECIAL PRODUCT SAWMLLS NEC
HONOMACH INC	91-060 HANUA ST	682-5701	20-49	\$1.2 - \$5 M	355903	MACHINE SHOP, IND. & COMM.
HONSADOR INC	91-151 MALAKOLE ST	682-2011	50-99	\$20 - \$50 M	154212	BUILDINGS PRE-CUT PREFABRICATED
HOWARD ENGINEERS & CONSTRUCTORS	91-110 HANUA ST. #201	682-5788	10-19	\$1 - \$2.5 M	871105	CONTRACTORS-ENGINEERING GENERAL
HYDRA-AIR PACIFIC, INC.	91-291 KALELOA BLVD	N/A	N/A	N/A	5084	N/A
HWS FEDERAL CREDIT UNION	91-150 HANUA ST	682-5731	5-9	\$5 - \$10 M	606101	CREDIT UNIONS
IHILANI RESORT & SPA	92-1001 OLANI ST.	679-0079	400-500	\$10 - \$15 M	7011	
IMUA INDUSTRIES INC	91-255 KALAELOA BLVD #	682-8288	5-9	\$1 - \$2.5 M	521126	BUILDING MATERIALS
INDUSTRIAL HARD CHROME	91-291 KALAELOA BLVD #	682-4224	1-4	Less than \$500,000	347106	CHROME
INDUSTRIAL MANUFACTURING & SERV	91-226 KAUHI ST # 1B	682-5173	5-9	\$500,00000 - \$1 M	399903	MANUFACTURERS
INDUSTRIAL PARTS HAWAII INC	91-165 KALAELOA BLVD	682-2047	10-19	\$2.5 - \$5 M	351901	INTERNAL COMBUSTION ENGINES NEC
INDUSTRIAL TECHNOLOGY	91-313 KAUHI ST	682-5858	20-49	\$2.5 - \$5 M	179912	PUMPING CONTRACTORS
INDUSTRIAL TRACTOR & EQUIPMENT	91-165 KALAELOA BLVD.	682-1533	N/A	N/A	N/A	N/A
INGRAM PAPER CO	91-291 KALAELOA BLVD #	682-2451	20-49	\$20 - \$50 M	511101	PAPER PRODUCTS
INSURANCE AUTO AUCTIONS INC	91-240 KOMOHANA ST	682-2858	5-9	\$20 - \$50 M	501204	AUTOMOBILE AUCTIONS
INTER-PACIFIC SUPPLY INC.	91-310 KOMOHANA ST	682-1533	50-99	\$10-\$20 M	347904	COATINGS- PROTECTIVE

CAMPBELL INDUSTRIAL PARK, OAHU, HI

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ALPHABETICAL ORDER

NAME	ADDRESS	PHONE-NO.	EMPS	SALES	SIC1	BUSINESS DESCRIPTION
INTERNATIONAL PAINT	91-291 KALAELOA BLVD.,	682-0331	N/A	N/A	N/A	N/A
INTRASPECT	91-607 MALAKOLE ST., #	682-5422	N/A	N/A	N/A	N/A
ISLAND COMMODITIES CORP	91-269 OLAI ST	682-5844	10-19	\$2.5 - \$5 M	207601	TALLOW
ISLAND EQUIPMENT INC.	91-238 KALAELOA BLVD	N/A	N/A	N/A	5999	N/A
ISLAND FIN DESIGN, INC.	91-270 HANUA ST., #1	682-5346	5	\$320K	3949	SPRTG AHLTC GDS NE
ISLAND MECHANICAL CORP.	91-039 HANUA ST.	682-5353	16	\$1.3 M	1799	SPCL TRD CNTRS NEC
ISLAND QUALITY HARDWARE	91-329 KAUHI ST # G	682-4244	1-4	\$1 - \$2.5 M	502101	BATHROOM FIXTURES & ACCESSORIES
ISLAND READY-MX CONCRETE	91-469 KOMOHANA ST	682-1305	20-49	\$5 - \$10 M	503208	CONCRETE PRODUCTS
ISLANDER INTERNATIONAL MOVING	91-210 HANUA ST # B	682-4499	5-9	Less than \$500,000	421401	MOVERS
JOHN GLEESON LTD	91-210 OLAI ST	841-8766	1-4	Less than \$500,000	521140	INSULATION MATERIALS COLD & HEAT
JORGENSEN STEEL & ALUMNUM	91-104 KALAELOA BLVD	682-2020	50-99	\$50 - \$100 Mili	347902	GALVANIZING
KAHALA-KAI PHOTO SVC	91-291 KALAELOA BLVD	682-4459	1-4	Less than \$500,000	738999	BUSINESS SERVICES NEC
KAMLIBASE HAWAII CO. LTD.	91-446 KOMOHANA ST	N/A	N/A	N/A	5199	N/A
KAYWALL JOINT VENTURES	91-300 KOMOHANA ST.	682-2474	N/A	N/A	N/A	N/A
KELACO HAWAII INC	91-270 HANUA ST # 2	682-5539	1-4	Less than \$500,000	594106	WATER SKIING EQUIPMENT & SUPPLIE
KRAFT GENERAL FOODS	91-290 KAUHI ST	979-3000	20-49	\$10 - \$20 M	514101	FOOD PRODUCTS
LAMNATION HAWAII	91-270 HANUA ST # 2	682-4335	20-49	\$5 - \$10 M	394907	SURFBOARDS MANUFACTURERS
LAND O'LAKES INC	91-254 OLAI ST	682-2022	10-19	\$5 - \$10 M	204803	FEED MANUFACTURERS
LEAHEY FOODS INC.	31-315 HANUA ST.	682-1002	5-9	\$500,00000 - \$1 M	874214	LCL TRCKG W/O STORAGE
LEEWARD AUTO WRECKERS, INC.	91-209 KUHALA ST.	682-4060	N/A	N/A	N/A	N/A
LEVOLOR HOME FASHIONS	91-110 HANUA ST., #313	682-6020	N/A	N/A	N/A	N/A
LIBERTY HOUSE DISTRIBUTION CE	91-262 OIHANA ST.	941-2345	325	N/A	4225	GENERAL WAREHOUSING STORAGE
LTM FURNITURE & CABINETS	91-178 KALAELOA BLVD	682-5681	1-4	Less than \$500,000	152117	KITCHEN REMODELING & PLANNING SV
M & R TRUCK & AUTO CONCEPTS	91-210 KAUHI ST	682-4114	1-4	Less than \$500,000	753201	AUTOMOBILE BODY REPAIRING & PAIN
MAC ENVIRONMENTAL CORP.	91-313 KAUHI ST.	N/A	N/A	N/A	6719	N/A
MAGUIRE BEARING CO LTD	91-291 KALAELOA BLVD #	847-3531	1-4	\$1 - \$2.5 M	506302	POWER TRANSMSSION EQUIPMENT
MARCO TRUCK BODY	91-119 OLAI ST	682-4844	1-4	\$2.5 - \$5 M	501213	TRUCK BODIES
MARISCO LIMITED	91-607 MALAKOLE RD.	682-1333	1-4	Less Than \$500,000	359903	MACHINE SHOPS
MARLIN DISTRIBUTORS INC	91-312 KOMOHANA ST	682-4314	10-19	\$5 - \$10 M	394402	TOYS MFRS
MARTIN WAREHOUSING & DISTR	91-110 HANUA ST	673-1420	5-9	\$500,00000 - \$1 M	421304	TRUCKING
MAXI TRUCK & VAN INC	91-238 KALAELOA BLVD	682-8123	5-9	\$10 - \$20 M	501213	TRUCK BODIES
MCLEANS RESTORATION SERVICES	91-294 KAUHI ST.	N/A	N/A	N/A	7349	N/A
MCCLELLAN & SMTH INC	91-110 HANUA ST # 706	682-1010	5-9	\$500,00000 - \$1 M	874214	MARKETING CONSULTANTS
MEL RAE SALES INC.	91-329 KAUHI ST #B1	682-4466	5-9	\$1 - \$2.5 M	506335	ELECTRONIC MFRS REPS
MERCHANDISE INTERNATIONAL	91-246 OIHANA ST	682-2821	10-19	\$500,00000 - \$1 M	394402	TOYS MFRS
MD-PAC ELECTRIC INC	91-086 KAOM LOOP	682-7267	1-4	Less than \$500,000	173101	ELECTRIC CONTRACTORS
MLLER WELDING SUPPLY	205 KALIHI ST.	N/A	N/A	N/A	N/A	N/A

CAMPBEL INDUSTRIAL PARK, OAHU, HI
TENANT LIST
ALPHABETICAL ORDER

NAME	ADDRESS	PHONE-NO.	EMPS	SALES	SIC1	BUSINESS DESCRIPTION
MLO NURSERY	91-341 HANUA ST	682-4633	5-9	\$500,00000 - \$1 M	519306	NURSERIES PLANTS TREES & ETC WHO
MOBETA SERVICE CORP	91-241 KALAELOA BLVD	682-0776	50-99	\$5 - \$10 M	421401	MOVERS
MONIER ROOF TILES	91-185 KALAELOA BLVD	682-4523	10-19	\$2.5 - \$5 M	295201	ROOFING MATERIALS MFRS
MONTEREY CASKET CO.	91-110 HANUA ST., #325	N/A	N/A	N/A	N/A	N/A
MORRISON KNUDSEN CORP.	91-252 KUHELA ST.	682-2085	N/A	N/A	N/A	ENGINEERING
MORROW CRANE CO	91-127 MALAKOLE ST	682-2458	1-4	\$1 - \$2.5 M	508412	CRANES
MOTOR SUPPLY LTD	91-349 KAUHI ST	682-4455	20-49	\$1 - \$2.5 M	553123	TIRE DEALERS RETAIL
MUTUAL WELDING CO	739 AHUA ST.	839-5111	20-49	\$1 - \$2.5 M	179103	STEEL FABRICATORS
NEIGHBOR FRIENDLY WALLS LTD	91-326 KAUHI ST	682-4816	1-4	Less than \$500,000	179938	FENCE CONTRACTORS
OAHU CABINETS LTD	91-424 KOMOHANA ST	682-2434	20-49	\$1 - \$2.5 M	175103	CABINET MAKERS
OAHU CONSTRUCTION CO	91-202 KALAELOA BLVD	836-2981	20-49	\$5 - \$10 M	154213	BUILDING CONTRACTORS
OAHU GAS SVC	91-290 HANUA ST	682-5796	20-49	\$50 - \$100 Milli	507413	GAS EQUIPMENT
OAHU TRUSS & PANEL CO	91-445 KOMOHANA ST	682-7272	1-4	Less than \$500,000	176108	ROOF STRUCTURES
OAK DISTRIBUTORS INC	91-280 HANUA ST BLDG A	682-0623	5-9	\$1 - \$2.5 M	501309	AUTOMOBILE BODY SHOP EQUIPMENT &
OCEANIC CONSTRUCTION INC	91-110 HANUA ST # 201	682-3771	1-4	\$500,00000 - \$1 M	154213	BUILDING CONTRACTORS
OCEANIC INTERNATIONAL INC	91-444 KOMOHANA ST # A	682-5488	1-4	\$1 - \$2.5 M	509138	SKIN & SCUBA DIVING EQUIPMENT-WH
OHM REMEDIATION SERVICES CORP	91-238 KALAELOA BLVD.	682-1800	25	N/A	4953	REFUSE SYSTEMS
OLIVIA SACHETS OF HAWAII	91-291 KALAELOA BLVD #	682-4490	1-4	\$2.5 - \$5 M	512213	PERFUME WHOLESALE
P & S PACIFIC INC	91-410 KOMOHANA ST	682-5794	5-9	Less than \$500,000	179912	PUMPING CONTRACTORS
P C FRENCH LTD	91-008 HANUA ST	682-2811	1-4	\$500,00000 - \$1 M	503208	CONCRETE PRODUCTS
PAC WEST TELECOM HAWAII, INC.	91-238 KALAELOA BLVD.,	682-5266	8	48000000	4813	TELEPHONE COMMUNICATIONS
PACIFIC AEROSPACE SVC	91-238 KAUHI ST	682-3030	5-9	Less than \$500,000	458102	AIRCRAFT ENGINES SERVICING & MAI
PACIFIC AGRICULTURAL SALES	91-270 HANUA ST # B15	682-5113	5-9	\$2.5 - \$5 M	287301	FERTILIZERS MANUFACTURERS
PACIFIC ALLIED PRODUCTS LTD	91-110 KAOM LOOP	682-2038	10-19	\$1 - \$2.5 M	308601	PLASTICS-FOAM
PACIFIC CONCESSION SUPPLY INC	91-312 KOMOHANA ST # B	682-4221	5-9	\$2.5 - \$5 M	265601	PAPER & PLASTIC CUPS CONTAINERS
PACIFIC CONTROLS INC.	91-220 KOMOHANA ST	N/A	N/A	N/A	4953	N/A
PACIFIC CUSTOM BOAT BUILDING	91-313 KAUHI ST	682-3911	N/A	N/A	N/A	N/A
PACIFIC FORMS CORP.	91-229 KOMOHANA ST.	682-7213	N/A	N/A	N/A	N/A
PACIFIC ISLE WOODS INC	91-188 KALAELOA BLVD	682-5584	5-9	\$500,00000 - \$1 M	243102	MLLWORK
PAN PACIFIC MARKETING	91-226 KAUHI ST.	N/A	N/A	N/A	5149	N/A
PARADOX SALES AND TRADING	PO BOX 66210	988-2638	N/A	N/A	N/A	N/A
PARTS PLUS	91-226 KAUHI ST # 2B	682-8091	1-4	Less than \$500,000	553111	AUTOMOBILE PARTS & SUPPLIES RETA
PEACEWORK	91-341 HANUA ST	682-5803	1-4	Less than \$500,000	753801	AUTOMOBILE REPAIRING & SERVICE
PENSKE TRUCK LEASING & RENTAL	91-265 KALAELOA BLVD	682-5200	1-4	\$500,00000 - \$1 M	751303	TRUCK RENTING & LEASING
PILLOWS & POLY-FILL-PARADISE	91-291 KALAELOA BLVD #	682-4088	1-4	Less than \$500,000	571913	PILLOWS
PINE VILLAGE INC.	91-178 KALAELOA BLVD	N/A	N/A	N/A	2511	N/A
PRECISION WOOD OF HAWAII INC	91-466 KOMOHANA ST	682-2055	10-19	\$5 - \$10 M	243102	MANUFACTURE WOOD PALLETS

CAMPBEL INDUSTRIAL PARK, OAHU, HI

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NAME	ADDRESS	PHONE-NO.	EMPS	SALES	SIC1	BUSINESS DESCRIPTION
PRO-PAK	91-400 KOMOHANA ST	673-2000	50-99	\$10 - \$20 M	503208	CONCRETE PRODUCTS
PROFESSIONAL TRUCK SERVICES, INC.	91-209 KUHELA ST.	682-4285	N/A	N/A	N/A	N/A
PURE SPORTS DISTR INC	91-235 OIHANA ST # A	682-4344	5-9	\$1 - \$2.5 M	501308	MOTORCYCLES SUPLS & PARTS WHOLES
QUAKER OATS CO.	91-110 HANUA ST., #203	682-0196	N/A	N/A	N/A	WHOLESALE FOOD
R & H MACHINERY INC.	91-200 KAUHI ST.	682-4949	10-19	\$2.5 - \$5 M	351901	INTERNAL COMBUSTION ENGINES NEC
R D S WELDING	91-080 HANUA ST	682-7362	1-4	Less than \$500,000	769203	WELDING
RAY HIGDON CONSTRUCTION, INC.	91-110 HANUA ST., #324	682-7188	N/A	N/A	N/A	N/A
RCI ENVIRONMENTAL INC	91-059 HANUA ST	682-1067	5-9	\$1 - \$2.5 M	154213	BUILDING CONTRACTORS
RED RIVER SVC CORP	91-310 KOMOHANA ST #B	682-8424	5-9	\$500,00000 - \$1 M	495302	GARBAGE COLLECTION
REFRIGERANT RECYCLING INC	91-120 HANUA ST # D	682-7362	5-9	\$1 - \$2.5 M	507505	AIR CONDITIONING SUPPLIES & PART
RETURN INC	91-291 KALAELOA BLVD #	682-5532	1-4	\$500,00000 - \$1 M	509312	RECYCLING CENTERS
REYNOLDS METALS CO	91-320 KOMOHANA ST	682-1202	50-99	\$20 - \$50 M	341101	CAN MANUFACTURERS
ROBERT MCMULLAN & SON INC	91-430 KOMOHANA ST	682-1308	50	N/A	1721	PRINTING PAPER
ROSCOE MOSS HAWAII INC	91-259 OLAI ST # A	682-5856	20-49	\$2.5 - \$5 M	178101	WATER WELL DRILLING & SERVICE
RYDER TRUCK RENTAL INC	91-220 KALAELOA BLVD #	682-5530	1-4	\$500,00000 - \$1 M	751303	TRUCK RENTING & LEASING
S & K SALES CO	91-033 MALAKOLE ST # 3	682-0899	10-19	\$5 - \$10 M	509908	MANUFACTURERS-AGENTS & REPRESENT
S C PACIFIC CORP	91-178 KALAELOA BLVD	682-4334	20-49	\$2.5 - \$5 M	152105	REMODELING & REPAIRING BLDG CONT
SAITO'S TRUCK & LIFT REPAIR	91-2296 KAUHI ST. #A21	682-5599	1-4	Less than \$500,000	769909	INDUSTRIAL TRUCK REPAIR
SCHUMAN AUTOMOTIVE INC	91-291 MALAKOLE ST # A	536-3488	10-19	\$1 - \$2.5 M	553111	AUTOMOBILE PARTS & SUPPLIES RETA
SEALY MATTRESS MFG.	91-291 KALAELOA BLVD.,	682-4577	1-4	N/A	5021	FURNITURE MANUFACTURERS
SGB CONSTRUCTION SERVICES, IN	91-229 KOMOHANA ST.	682-5534	N/A	N/A	1799	SPECIAL TRADE
SIMMONS CO	91-489 KOMOHANA ST	682-7233	20-49	\$10 - \$20 M	251598	MATTRESSES/FOUNDATIONS/CONV BEDS
SMALL REVS AUTOMOTIVE	91-201 MALAKOLE ST	682-4440	1-4	Less than \$500,000	753801	AUTOMOTIVE REPAIRING & SERVICE
SOIL SAMPLING SVC-PACIFIC	91-195 HANUA ST	682-4456	5-9	\$500,00000 - \$1 M	178102	DRILLING & BORING CONTRACTORS
SOUTH PACIFIC FURNITURE INC	91-294 KAUHI ST	682-3913	5-9	\$500,00000 - \$1 M	259901	FURNITURE MANUFACTURERS
SOUTH PACIFIC STEEL CORP.	91-178 KALAELOA BLVD.	682-4766	30	\$5 M	1791	STRUCTURAL STEEL ERECTION
SOUTHERN ELECTRIC INTL INC	91-111 KALAELOA BLVD	682-0705	20-49	\$5 - \$10 M	491101	ELECTRIC COMPANIES
SPACEMAKER PARKPLUS HAWAII	91-110 HANUA ST # 312	545-7275	1-4	\$1 - \$2.5 M	501309	AUTOMOBILE BODY SHOP EQUIPMENT &
SPECIALTY SURFACING CO	91-087 HANUA ST	682-2021	10-19	\$1 - \$2.5 M	162907	TENNIS COURT CONSTRUCTION
SPORTS WORKS INC	91-291 KALAELOA BLVD #	682-8418	1-4	\$500,00000 - \$1 M	509104	BOWLING LANE EQUIPMENT & SUPPLIE
SUNVAN HAWAII MOVING & STORAG	91-029 MALAKOLE ST	682-2811	20-49	\$1 - \$2.5 M	421401	MOVERS
SUPERIOR COATING INC	91-210 KAUHI ST	682-3881	1-4	\$1 - \$2.5 M	347904	COATINGS-PROTECTIVE
TEL-NET HAWAII INC	91-238 KALAELOA BLVD B	682-5266	1-4	Less than \$500,000	874815	TELECOMMUNICATIONS CONSULTANTS
TESTRON INTERNATIONAL	91-329 A. KAUHI ST.	682-1381	10-19	\$10 - \$20 M	289905	CHEMCALS MANUFACTURERS
TEXACO INC	91-119 HANUA ST	533-1886	5-9	\$20 - \$50 M	517210	GASOLINE WHOLESALE
TFW DISTRIBUTORS	91-252 KAUHI ST	682-8221	1-4	\$500,00000 - \$1 M	554107	OILS LUBRICATING RETAIL
TILECO INC	91-209 HANUA ST	682-5737	20-49	\$5 - \$10 M	327101	CONCRETE BLOCKS & SHAPES MANUFAC

CAMPBEL INDUSTRIAL PARK, OAHU, HI

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ALPHABETICAL ORDER

NAME	ADDRESS	PHONE-NO.	EMPS	SALES	SIC1	BUSINESS DESCRIPTION
TRANSBUILT OF HAWAII	91-329 KAUHI ST A	682-4784	1-4	Less than \$500,000	175103	CABINET MAKERS
TREES OF HAWAII INC	91-326 KAUHI ST	682-5771	50-99	\$2.5 - \$5 M	078301	TREE SERVICE
TRITON MARINE CONSTRUCTION CO	91-165 KALAELOA BLVD.	682-4411	N/A	N/A	N/A	N/A
TROPICAL FORMALS INC	91-226 KAUHI ST	682-2421	10-19	\$500,00000 - \$1 M	729908	FORMAL WEAR RENTAL
TROPICAL CARTS OF HAWAII INC	91-291 KALAELOA BLVD #	682-4411	1-4	\$500,00000 - \$1 M	504638	CARTS (DISPLAY)
TRU-DOOR HAWAII	91-310 KAUHI ST # A	682-0307	5-9	\$2.5 - \$5 M	243104	DOORS MANUFACTURING
TWOMEY FLOORING	91-041 MALAKOLE ST.	682-0904	N/A	N/A	N/A	N/A
UNISOURCE PAPER CORP	91-210 HANUA ST	673-1300	20-49	\$20 - \$50 M	508724	JANITORS SUPPLIES
UNITEK ENVIRONMENTAL SVC	91-125 KAOM LOOP	834-1444	5-9	\$500,00000 - \$1 M	873114	POLLUTION CONTROL
UNITEK SOLVENT SVC	91-125 KAOM LOOP	682-8284	5-9	\$5 - \$10 M	509305	WASTE REDUCTION & DISPOSAL RECYC
UNIVERSAL TRUCKING INC	91-255 HANUA ST	682-2440	1-4	Less than \$500,000	421210	TRUCKING DUMP
V & C DRYWALL CONTRACTORS	91-444 KOMOHANA ST # A	682-4784	20-49	\$1 - \$2.5 M	174202	ACOUSTICAL CONTRACTORS
VALVE SERVICE & SUPPLY INC	91-210 OLAI ST	682-3800	20-49	\$10 - \$20 M	331202	TUBING
VANIER GRAPHICS FORMS & SUPLS	91-275 HANUA ST	682-5774	50-99	\$2.5 - \$5 M	275202	PRINTERS
WALDRON STEAMSHIP CO LTD	91-607 MALAKOLE ST	682-1053	5-9	\$500,00000 - \$1 M	472904	STEAMSHIP AGENCIES
WALL FABRICS SYSTEMS OF HAWAI	91-310 KOMOHANA ST	682-1536	50-99	\$5 - \$10 M	174201	ACOUSTICAL MATERIALS
WASTE MANAGEMENT INC	91-310 HANUA ST	682-0900	20-49	\$2.5 - \$5 M	495302	GARBAGE COLLECTION
WEAVER SPRINGS	91-226 KAUHI ST # 2C	682-0812	1-4	Less than \$500,000	501302	TRUCK EQUIPMENT & PARTS
WOODY'S HOT DOG INC	91-291 KALAELOA BLVD #	682-4411	1-4	Less than \$500,000	581212	CATERERS
WORLDWIDE MOVING & STORAGE IN	91-313 KAUHI ST	682-3722	1-4	Less than \$500,000	421401	MOVERS
ZIEGLER STEEL SVC CORP	91-300 HANUA ST	682-3000	10-19	\$10 - \$20 M	505106	STEEL DISTRIBUTORS & WAREHOUSES



**ATTACHMENT 3
CAMPBELL INDUSTRIAL PARK
INDUSTRY GROUPS MOST LIKELY TO
HAVE HAZARDOUS SUBSTANCES PRESENT**

INDUSTRY GROUPS IN CAMPBELL INDUSTRIAL PARK WHICH ARE MOST LIKELY TO HAVE HAZARDOUS SUBSTANCES PRESENT



- | | |
|--|---|
| 07: Landscape and Horticultural Services (4) | 34: Fabricated Metal Products (8) |
| 22: Textile Products (1) | 35: Industrial Machinery (5) |
| 24: Lumber and Wood Products (4) | 42: Trucking & Warehousing (15) |
| 25: Furniture (3) | 44: Water Transportation (1) |
| 26: Paper Products (3) | 45: Transportation by Air (1) |
| 27: Printing and Publishing (2) | 49: Electric, Gas & Sanitary Services (7) |
| 28: Chemicals and Allied Products (5) | 76: Repair Services (6) |
| 29: Petroleum Refining (4) | |
| 32: Stone/Clay/Glass Products (8) | |
| 30: Rubber and Plastics Products (4) | |
| 33: Primary Metal Industries (3) | |



MEMORANDUM OF UNDERSTANDING
between
THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Office of Solid Waste and Emergency Response
Office of Enforcement and Compliance Assurance
and
THE UNITED STATES DEPARTMENT OF LABOR
Occupational Safety and Health Administration
on
Chemical Accident Investigation

I. PURPOSE AND SCOPE

The purpose of this Memorandum of Understanding (MOU) is to set forth the principles of the working relationship between the United States Environmental Protection Agency (EPA) and the United States Department of Labor, Occupational Safety and Health Administration (OSHA) in the area of chemical accident investigation. This MOU establishes policy and general procedures for cooperation and coordination between the two agencies, in order to ensure the most effective possible investigation and reporting of major chemical accidents and to eliminate duplication to the maximum extent possible, and, in recognition of the importance of the public's right to learn the underlying causes of chemical accidents. Specific procedures for chemical accident investigation will be detailed in a joint Accident Investigation Protocol which is currently under development. This MOU implements OSHA's authority under the Occupational Safety and Health Act of 1970 (OSH Act), and EPA's authority under sections 103 and 112 of the Clean Air Act (CAA), and section 104 of the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA) to enter into agreements with other federal agencies to further the objectives of Congress and the President.

OSHA and EPA are developing a comprehensive strategy for coordinated enforcement of OSHA's Process Safety Management

(PSM) standard and EPA's Risk Management Programs (RMP) rule, and of OSHA's and EPA's general duty clauses. Consequently, this MOU does not address those requirements in any detail.

II. BACKGROUND AND RESPONSIBILITIES.

OSHA is the federal agency with primary responsibility for worker safety and health. The agency is authorized by the OSH Act, 29 U.S.C. 651 et seq., to promulgate and enforce mandatory safety and health standards for the purpose of assuring, so far as possible, safe and healthful working conditions for every worker in the nation. OSHA conducts inspections of workplaces to determine compliance with the OSH Act and with specific OSHA standards. When violations are found, OSHA is authorized to issue citations to employers, propose penalties, and require abatement of hazards. In cases involving imminent dangers, OSHA is authorized to seek injunctive relief in U.S. District Court.

Under section 18 of the OSH Act, states may elect to administer their own occupational safety and health programs, or "State Plans," which must be approved and monitored by federal OSHA. OSHA does not delegate authority to the states, but rather removes the bar of preemption through State Plan approval. OSHA exercises no enforcement authority in these states except in a few areas, such as coverage of federal agencies, offshore maritime facilities, and military bases. Thus, other government agencies must work with the State Plan in the same manner as they do with federal OSHA, because the State Plan is the authority responsible for occupational safety and health enforcement in that state.

The United States Environmental Protection Agency (EPA) is

the federal agency with primary responsibility for the protection of public health and the environment. EPA assures compliance with federal environmental statutes and regulations through standard-setting and rulemaking; technical reviews; audits and studies; public hearings; issuance of permits and licenses; investigations; enforcement of environmental laws; and evaluation of operating experience and research. EPA has authority to conduct investigations into chemical accidents under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 104(e), and CAA sections 103, 112, 114, and 307.

Pursuant to the authorities described above, the EPA currently has, and will retain in the future, statutory responsibility for conducting chemical accident investigations. This authority will not be delegated to the states. States may, however, undertake investigations under other authorities. EPA strongly supports the development of state legislation comparable to the accident prevention provisions of the Clean Air Act, and state participation in chemical accident investigations.

Both OSHA and EPA have a responsibility to investigate major chemical accidents to determine whether any violations of their laws occurred and, if so, to require correction of these violations and ensure compliance with their laws. In addition, the Administration asked OSHA and EPA, under their own statutory authorities, to undertake investigations to determine the root cause(s)¹ of chemical accidents and to issue public reports containing recommendations on what

¹Root causes are the underlying prime reasons, such as failure of particular management systems, that allow faulty design, inadequate training, or deficiencies in maintenance, which in turn lead to an unsafe act or condition and result in an accident.

government, industry, and other stakeholders could do to prevent similar accidents from occurring in the future. These functions are similar to some of the responsibilities of the Chemical Safety and Hazard Investigation Board created by the Clean Air Act Amendments of 1990.

Much of the information required to meet the objectives of the two agencies is similar. Therefore, it is in the best interests of the government and the public that investigations and information-gathering be conducted in the most efficient and effective manner possible, with minimum duplication of activities.

III. PRINCIPLES OF COORDINATION

There will be the fullest possible cooperation between OSHA and EPA in carrying out accident notification, data and information exchange, training, technical and professional assistance, and related activities to ensure the safety, health, and well-being of the nation's workforce and the general public, and to protect the environment. EPA and OSHA investigators will work with federal On-Scene Coordinators (OSCs) and other responders to ensure that investigation activities do not compromise the protection of public health, the environment, or worker safety and health, and that response activities do not unnecessarily compromise the accident investigation and the enforcement responsibilities of the respective agencies.

EPA and OSHA will coordinate and cooperate with other federal, state, and local investigatory bodies in order to minimize duplication of effort. Such bodies may include the OSHA State Plans, state environmental agencies, state fire marshals, local law enforcement agencies, and judicial bodies. In the case of transportation-related accidents,

OSHA and EPA may cooperate with the National Transportation Safety Board (NTSB) where it has elected to conduct an investigation, although NTSB will retain primary responsibility for investigating the cause of transportation-related accidents.

In recognition of the agencies' statutory authorities and responsibilities described above, the following procedures will be followed with respect to the investigation of major chemical accidents:

A. Notification of Accidental Releases of Chemicals

EPA and OSHA will usually be notified of chemical accidents or releases through the National Response Center (NRC). In addition, EPA will notify OSHA and the NRC of any major chemical accident or release of which it becomes aware through sources other than the NRC. Similarly, OSHA will notify EPA and the NRC of any major chemical accident or release reported by a party other than the NRC. Such notification will be made immediately after one of the agencies has received such a report.

A major chemical accident or release is defined for the purposes of this MOU as one which meets one or more of the following criteria:

1. results in one or more human fatalities;
2. results in the hospitalization of three or more workers or members of the public;
3. causes property damage (on- and/or off-site) initially estimated at \$500,000 or more in total;
4. presents a serious threat to worker health or safety, public health, property, or the environment;
5. has significant off-site consequences, such as large-

scale evacuations or protection-in-place actions, closing of major transportation routes, substantial environmental contamination or substantial effects (e.g., injury, death) on wildlife or domesticated animals; or

6. is an event of significant public concern.

When a major chemical accident occurs, EPA and OSHA will first determine whether they intend to go on-site, and will notify each other of their intent within 24 hours of receiving notification of the accident. If both agencies decide to go on-site, they will jointly determine, once they are both on-site and usually within the first 96 hours following the event, whether the event potentially merits a joint root-cause investigation and issuance of a public report. Until that decision is made, the agencies will act under the presumption that a joint investigation is being conducted. Not all events meeting the definition of major chemical accident as delineated above will be jointly investigated or will result in the issuance of a joint public report. In general, OSHA and EPA will select for joint investigation those events at which both agencies are present under their separate statutory responsibilities and which present the opportunity to learn and/or disseminate important lessons about chemical accident prevention. If one Agency elects not to investigate a chemical accident the other agency reserves the right to conduct an independent investigation and issue an independent report (the investigating agency may request technical assistance from the other agency). In any case, EPA and OSHA do not intend to conduct separate root-cause investigations and issue separate root-cause investigation reports on the same accident.

B. Investigation of Accidents

EPA and OSHA will each maintain a core team of chemical accident investigators directed by each agency's headquarters. These accident investigation teams will organize and coordinate the agencies' initial response to major chemical accidents. They will also ensure that OSHA and EPA investigation efforts are coordinated with the On-Scene Coordinator, the State Emergency Response Commission(s), the Local Emergency Planning Committee(s), responding Regional Response Team agencies, and other responding entities (e.g., corporate investigators, insurance companies, unions, state and local governments). This includes promptly establishing procedures for gaining access to evidence in cases where other entities (e.g., state and local criminal investigatory agencies, NTSB) have precedence in retaining evidence.

EPA and OSHA will develop and share assignment plans for headquarters, regional, area office, and state staff who will participate on the accident investigation teams. This will facilitate prompt contacts among the parties and provide a measure of predictability concerning who will be available at what times in each agency. The accident investigation team will be co-led by EPA and OSHA, and both agencies, recognizing the importance of each other's compliance investigations, will support each other's efforts to meet enforcement responsibilities. In the event of a dispute between EPA and OSHA lead investigators, the matter will be promptly referred to the appropriate individuals in the agencies' headquarters for resolution.

In addition to looking for the root cause(s) of the accident, OSHA and EPA will be investigating to determine compliance with their respective regulations. Because OSHA

has a statutory deadline for issuing citations, one of OSHA's primary goals during the first six months following an accident will be to determine if any violations of the OSH Act or OSHA regulations occurred. OSHA and EPA compliance investigators may or may not be the same personnel who conduct the root-cause investigation; however, compliance and enforcement activities will be coordinated with the accident investigation activities. Specific procedures for such coordination will be contained in the Accident Investigation Protocol.

This MOU is not intended to, and does not, affect or govern any federal criminal investigation, whether such criminal investigation is conducted by EPA, OSHA, or another federal law enforcement agency. In the event that the potential for criminal case development exists related to a particular accident, OSHA and EPA will coordinate with each other on a case-by-case basis to ensure the maximum cooperation with criminal investigators.

C. Information and Data Sharing

OSHA and EPA will share any records, reports, data, or information obtained by their investigators, subject to applicable law and privileges. The two agencies may make joint requests for information. Neither agency will enter into any settlement agreement with any employer or potentially responsible party that would compromise the sharing of information between the agencies or the use of information that may be lawfully disclosed in the development of a public report. Both agencies will have access to all factual data gathered by either agency, and will collaborate on determining causation and on developing recommendations to enhance chemical safety.

Employees who participate in an accident investigation will be provided protection under section 11(c) of the OSH Act from discrimination or reprisal for filing reports of unsafe or unhealthful working conditions. In addition, employees involved in accident investigations are entitled to protection from discrimination pursuant to CAA section 322 and CERCLA section 110. These provisions are administered by the Department of Labor. In particular, OSHA and EPA may remove personal identifiers from their investigative files before releasing them in order to protect witness confidentiality.

Each agency will be responsible for the public release of its documents and for maintaining the information which it has collected. Each agency will respond to requests for disclosure of material originated by the other agency only after consultation between the agencies, and will apply disclosure criteria (e.g., CBI, trade secret, enforcement-sensitive, FOIA) which would have been applicable had the material been requested from the originating agency.

OSHA and EPA recognize the importance of sharing information with the public to the extent possible during the investigation and will work out procedures for doing so in the Accident Investigation Protocol.

D. Training, Technical and Professional Assistance

EPA and OSHA will make their chemical accident and related training programs available to each agency's personnel, as well as to OSHA State Plan personnel. OSHA and EPA will provide technical and professional assistance to each other during chemical accident investigations upon request and as resources permit.

E. Joint Accident Investigation Reports

The product of joint on-scene accident investigations will be a public report containing at least the following:

1. a description of the accident;
2. a description of the response to the accident (may be done by reference to another official report);
3. observations and findings;
4. laboratory test results, if applicable;
5. discussion of the probable root cause(s) of and contributing factors to the accident;
6. further planned activities, where appropriate; and
7. recommendations for enhancing chemical safety, emergency preparedness, and prevention of chemical accidents (both facility-specific and industry-wide).

Investigation reports resulting from joint accident investigations will not be finalized until all issues and comments are resolved to the satisfaction of both agencies.

Final versions of major joint investigation reports may then be reviewed by independent experts in order to assess the scope, approaches, and methods used in the reports. The results of such reviews will be used to guide and improve future studies, investigations and reports. The two agencies will consult upon review mechanisms. The results of reviews and the agencies' written responses will be made available to the public. An investigation report may be amended or supplemented after review, if both agencies agree that it is necessary. Any issues or comments will be resolved to the satisfaction of both EPA and OSHA before any revision or supplement is finalized, taking into account the public's interest in learning the underlying causes of

chemical accidents through public reports.

F. Independent Accident Investigation Reports

In the interest of consistency and to ensure the maximum utility of reports prepared by a single agency, EPA and OSHA will each provide the other with an opportunity to review and comment on any investigative report determining causation or making recommendations before such report becomes final. In order to protect the integrity of the investigation, and the confidentiality of internal deliberative processes, such review will be in confidence, and the draft report will not be released to or discussed with anyone outside the agencies, consistent with applicable law. Review privileges will be granted for all accident investigation reports which arise from major chemical accidents which either agency investigated.

IV. OSHA STATE PLANS

A. Background

OSHA-approved State Plans operate under authority of state law. State standards, interpretations, regulations, and policies are adopted under state occupational safety and health acts and state law, and are required to be "at least as effective" as federal equivalents. State freedom of information policies are also governed by state law.

There are currently 23 approved State Plans that cover both public and private employment sectors. (Two additional State Plans cover public employees only.) OSHA has suspended or relinquished its concurrent enforcement authority in 22 of the states with OSHA-approved State Plans. All 23 State Plans have adopted a Process Safety

Management standard which is identical to or at least as effective as the federal standard.

B. State Supplemental Agreements

For most chemical accident investigations covered by this MOU and occurring in states with OSHA-approved State Plans, the state occupational safety and health agency has primary enforcement authority and jurisdiction. EPA will work with the State Plan officials in the same manner as with federal OSHA officials.

OSHA will ask each State Plan to establish a point of contact concerning chemical accidents, and will make the resources of its accident investigation team available to the State Plans. State experts may be asked to participate on the team.

EPA will negotiate individual supplemental agreements with each of the State Plans, incorporating the terms of this MOU to the extent possible, and addressing state-specific issues of coordination and law. The appropriate OSHA Regional Administrator will facilitate the negotiations and countersign the resulting agreement. It is EPA's goal to negotiate supplemental agreements with the states by the end of FY 1997.

V. RESOURCES

The resource requirements of joint accident investigation and report writing responsibilities arising from this agreement could not be accurately estimated at the time the agreement was executed. Therefore, both agencies will reexamine resource requirements at the end of the first 12 months following the signing of this agreement, and make

whatever adjustments may be necessary to ensure the continued, effective exchange of resources pursuant to the fulfillment of this agreement.

VI. PERIOD OF AGREEMENT

This MOU shall continue in effect unless modified in writing by mutual consent of both parties or terminated by either party upon 30 days' advance written notice to the other.

It is expressly understood that this MOU will need to be reexamined and may be modified or superseded once full compliance with EPA's rule on Risk Management Programs is required, in June 1999.

This MOU does not preclude either agency from entering into separate agreements setting forth procedures for other programs which can be addressed more efficiently and expeditiously by special agreement.

VII. IMPLEMENTATION

Nothing in this agreement is intended to diminish or otherwise affect the authority of either agency to implement its respective statutory functions, nor is it intended to create any right or benefit, substantive or procedural, enforceable at law by a party against the United States, its agencies, its officers, or any other person. This agreement is effective upon signature by both parties.

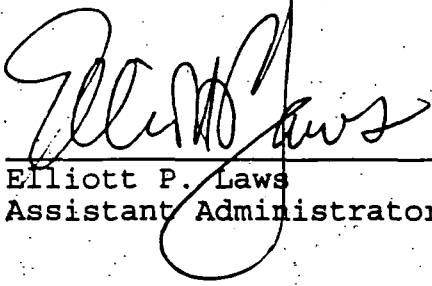
U.S. Environmental Protection Agency
Office of Enforcement and Compliance Assurance



Steven A. Herman
Assistant Administrator

Date: 12/9/96

U.S. Environmental Protection Agency
Office of Solid Waste and Emergency Response



Elliott P. Laws
Assistant Administrator

NOV 21 1996

Date: _____

U.S. Department of Labor
Occupational Safety & Health Administration

Joseph A. Dear

Joseph A. Dear
Assistant Secretary

Date: 4/29/96



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

MAR 24 1997

OFFICE OF
SOLID WASTE AND EMERGENCY
RESPONSE

Dear OSHA State Plan Designee:

In January 1995, EPA and OSHA were directed by the Administration to establish a program to jointly investigate major chemical accidents and to determine root causes. In addition, both agencies were directed to issue public reports containing recommendations on what government, industry, and other stakeholders could do to prevent similar accidents from occurring in the future. The functions are similar to the ones envisioned by Congress for the Chemical Safety and Hazard Investigation Board (CSHIB) created by the Clean Air Act (CAA) Amendments of 1990, which was never established or funded. Instead, OSHA and EPA were directed to jointly conduct similar investigations under their respective authorities.

Over the past two years, EPA, Federal OSHA, and a few of the State Plan States have been working together to investigate several major incidents. At the same time, the EPA and Federal OSHA have developed a memorandum of understanding (MOU) that formally establishes a joint chemical accident investigation program. A copy of the MOU, which was finalized in December 1996, is enclosed. EPA and OSHA will initiate joint chemical accident investigations to determine the root causes of chemical accidents that result in fatalities, injuries, environmental damage, property loss, evacuation, and/or consequences of significant public concern. EPA has agreed to support OSHA in meeting its enforcement deadlines and may also pursue enforcement actions where violations of EPA regulations are found. Additionally, EPA and OSHA will publicly report on these investigations.

We understand that the participation of the OSHA State Plan States is critical to successfully carry out this vital mission. Therefore, we would like to enter into a supplemental agreement with your OSHA-approved State program and to work in full partnership with your State to investigate similar incidents. We hope that the federal EPA/OSHA MOU will serve as a prototype, which can be modified as necessary to reflect our respective agencies' legal and procedural requirements. The purpose of a supplemental agreement would be to establish the policy and general procedures for cooperation and coordination between EPA and your State OSHA program. The agreement will ensure the most effective possible investigation of major chemical accidents and minimize duplication of effort. Such cooperation furthers the public's and workers' right to learn the underlying causes of chemical accidents and will lead to greater



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protection for them. Our proposed agreement would include accident notification, criteria and procedures to decide whether to jointly investigate a particular accident, data and information exchange, coordination of enforcement activities, training, technical and professional assistance, and development of public investigation reports. The investigative experience and occupational safety and health expertise of your OSHA program will complement the CERCLA/CAA authorities and the chemical process expertise of EPA for determining the root causes of chemical-related accidents.

EPA realizes that the States have a range of options and that this should be a very flexible agreement. A State that agrees to supplement its enforcement activities by participating in a joint root cause investigation can reserve its right to withdraw from this commitment at any time, defer these joint activities to Federal OSHA, or vary its level of involvement on a case by case basis. We encourage your OSHA State program to enter into a supplemental agreement with us even if you do not plan to participate actively at this time in the extended root cause analysis aspect. The agreement then will help to share information, minimize duplication and prevent conflicting findings during the occupational safety and health compliance investigation phase. Your State supplemental agreement can contain specific language that preserves your options and ensures a flexible State response.

EPA and Federal OSHA are currently developing a protocol which will contain more specific procedures for accident investigation. Representatives from two OSHA State Plan States are participating in this process. EPA will provide and share training and federal resources and expertise to the greatest extent possible with your State Plan personnel. For example, EPA could make available its pool of outside technical experts to assist in investigations and arrange for special analytical capabilities (in addition to EPA laboratories), if needed. We also understand that the Federal OSHA chemical accident team will be available to assist the States (to the extent requested) in the accident investigation phase by providing technical assistance for enforcement activities and participating in the joint root cause analysis. EPA already agreed to fund accident investigation training through federal OSHA and will continue working with Federal OSHA to explore other ways we can assist State Plan States in this effort.

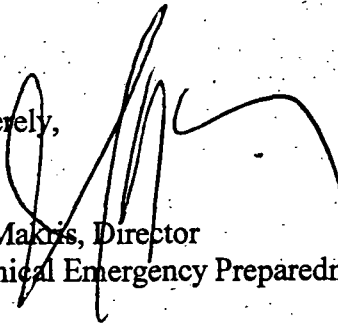
We look forward to hearing about your interest in pursuing joint accident investigations with EPA. We are already participating in activities intended to provide more information on this new initiative to State Plan State representatives. For example, in September 1996 and again in February 1997, EPA and Federal OSHA briefed the Occupational Safety and Health State Plan Association (OSHSPA) on the status of this accident investigation program. At the February 1997 meeting, EPA also met individually with some interested States concerning development of their supplemental agreements.

Please provide your designated point of contact for this effort to Kathy Jones, Associate Director of CEPPPO's Program Implementation and Coordination Division. We would like to hear from you by the end of April, so that we can schedule an early meeting. You may contact Kathy by mail, fax, phone or E-mail (below). Regional representatives from EPA and OSHA

will be helping to coordinate the development of a joint State Plan MOU for chemical accident investigations that meet our respective agencies' requirements. David Speights, Associate Director of CEPPPO's Program Development Division (202-260-4492) will continue to have the responsibility for managing accident investigations. Please feel free to contact either of them if you have any questions.

Kathy Jones
USEPA, CEPPPO (mailcode 5104)
401 M Street, SW
Washington, DC 20460
Phone: 202-260-8353
FAX: 202-260-7906
E-mail: jones.kathy@epamail.epa.gov

Sincerely,



Jim Makris, Director
Chemical Emergency Preparedness and Prevention Office

cc: State Plan Program Directors
OSHA Regional Administrators
EPA Regional CEPP Division Directors
SERC Chairpersons
Harvey E. Harris, Director, Office of Training and Education, OSHA Training Institute

Enclosure



EPA/OSHA JOINT ACCIDENT INVESTIGATION PROGRAM

Prevention of Chemical Accidents

FACTSHEET

WHAT IS THE PURPOSE OF THE JOINT ACCIDENT INVESTIGATION PROGRAM?

In a 1992 incident, lightning struck a fiberglass storage tank, setting off a series of explosions that released toxic fumes and spread thick smoke over town. More than 1,000 people were evacuated, and there were minor injuries, including nausea, skin irritation, and shortness of breath. Major chemical accidents and releases like this happen too often.

The purpose of the Environmental Protection Agency (EPA)/Occupational Safety and Health Administration (OSHA) Joint Accident Investigation Program is to determine the root causes and contributing factors of major chemical accidents and releases and provide recommendations on what industry, communities, the government, and other stakeholders can do to prevent similar events from occurring in the future. The program was initiated in January 1995, when the Administration asked OSHA and EPA, under their own existing authorities, to jointly investigate major chemical accidents and releases at fixed facilities. This function is similar to what was envisioned for the Chemical Safety and Hazard Investigation Board (CSHIB), which was created by the Clean Air Act (CAA) Amendments of 1990. The CSHIB was to have been an independent government investigative agency modeled after the National Transportation Safety Board. The Board was never funded. However, EPA and OSHA will conduct

their joint investigations under their own authorities.

EPA will conduct these investigations using its authority under the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) section 104 and CAA sections 103, 112, 114, and 307. Likewise, OSHA has authority to conduct accident investigations under the OSH Act, which also allows them to promulgate and enforce mandatory safety and health standards for the purpose of assuring safe and healthful working conditions for every worker in the nation.

To initiate the joint agency investigation effort, OSHA and EPA have developed a Memorandum of Understanding (MOU) that establishes the policy and general procedures for cooperation and coordination between the two agencies, to ensure the most effective possible investigation of chemical accidents and to limit duplication of efforts. Major chemical accidents and releases that meet certain criteria will be chosen for joint agency investigation. As specified in the MOU, major chemical accidents and releases are those that result in fatalities, serious injuries, significant property damage, environmental damage, or serious off-site impacts such as evacuation. Other less severe accidents or releases with the potential for grave losses may also be investigated. Although the primary focus of each joint accident investigation will be to determine the root cause(s) of the accident or release, EPA and OSHA may take enforcement actions if violations of OSHA and EPA regulations have occurred.

In addition to the MOU between EPA and OSHA, EPA is pursuing individual MOUs with states having OSHA-approved State Plans.

To support activities under the MOU, OSHA and EPA are developing other critical program components:

- ◆ A joint accident investigation protocol is currently under development. The protocol will define specific procedures that accident investigators will follow in conducting investigations.
- ◆ EPA and OSHA are fostering coordination and cooperation with other federal, state, and local investigatory bodies in order to further increase the efficiency of investigations.
- ◆ Major accident investigation reports may be reviewed by independent experts. The results of such reviews, which will be publicly available, will be used to guide and improve future studies, investigations and reports and revise reports if appropriate.
- ◆ EPA is coordinating with OSHA to develop an outreach program to stakeholders to familiarize them with the program, share progress and results of investigations, and provide alerts about particular hazards identified in the course of investigations.

Beyond establishing these components of the program, several accident investigations are underway. One investigation report (Terra Industries in Port Neal, IA), along with its expert review, has been completed. Prior to the release of a full investigation report, EPA intends to publish hazard alerts as promptly as possible to increase awareness of possible hazards. Alerts may also be issued when EPA becomes aware of a significant hazard. EPA has already published four hazard alerts based on the findings from previous accidents. Please refer to CEPPO's Home Page or call the hotline for copies of these or any CEPPO documents.

FOR MORE INFORMATION...

Contact the Emergency Planning and
Community Right-to-Know Hotline

(800) 424-9346 or (703) 412-9810
TDD (800) 553-7672

Monday-Friday, 9 AM to 6PM, eastern time



Visit the CEPPO Home Page on the World Wide
Web at:

<http://www.epa.gov/swercepp>



Center for Chemical
Process Safety of the
American Institute of
Chemical Engineers



Environmental Protection
Agency, USA



Health & Safety Executive,
UK



European Federation of
Chemical Engineering

International Conference and Workshop on Risk Analysis in Process Safety



Atlanta Airport Marriott Hotel • Atlanta, GA • October 21-24, 1997

This conference and workshop brings together experts worldwide from the chemical industry, regulatory bodies, risk assessment companies, and institutions. Opportunities for learning how to make risk-based decisions using quantitative methods and how regulatory organizations impact the decision making process are investigated.

Quantitative risk assessments provide a recognized method for the identification, elimination, and/or control of hazards in the most practical (cost beneficial) manner. The conference concentrates on the present state of risk assessment from an array of industry and regulatory viewpoints and introduces discussion of the recent US EPA RMP interpretation tools. The workshops present papers and case studies that are meant to elicit open discussion of risk assessment methods and issues.

The Registration fee will be U.S. \$795 per person (\$695 per person for multiple registrants from the same company). The fee includes admission to each day's sessions; the Tuesday evening, October 21, welcoming reception (cash bar); lunch on October 21, 22, 23, 24; and refreshments during each day's morning and afternoon breaks. Each registrant will receive a hard-cover book containing all of the papers presented in the plenary sessions and at the workshops, as well as papers from the poster area.

PLANNING COMMITTEE

William K. Lutz, Union Carbide Corp. (Co-chair)
Hans Pasman, TNO (Co-chair)
Keith Cassidy, Health & Safety Executive, UK

Lyse Helsing, US Environmental Protection Agency
William G. Bridges, JBF Associates, Inc.
Sanford Schreiber, CCPS (AIChE)

PROGRAM (ADMISSION BY BADGE)

TUESDAY, OCTOBER 21, 1997

7:15-8:15 a.m.

REGISTRATION

8:15-8:30 a.m.

WELCOME AND INTRODUCTIONS

WILLIAM K. LUTZ
Union Carbide Corporation

HANS PASMAN
TNO

8:30-11:45 a.m.

**RISK ACCEPTANCE CRITERIA AND RISK
BASED JUDGMENT**

PLENARY CO-CHAIRS

ARTHUR DOWELL, III, Rohm and Haas
WILLIAM G. BRIDGES, JBF Associates, Inc.

8:30-9:00 a.m.

**Training in Support of Process Hazards Analysis:
A Specialty Chemicals Manufacturer's Approach**

TOM HOPPE and H. RAY WHEELER, Ciba Specialty Chemicals
Corporation

A team's or individual's ability to set realistic limits and ranking can be significantly improved with a better understanding of the basic data and of the methodologies used in the overall assessment of risk. For this reason, a number of workshops in basic data interpretation and process safety engineering standards using case studies and accepted process hazards methodologies have been provided to our engineers and chemists over the last seven years. An overview of this three stage training program is presented

along with an analysis of the successes and failures of the program in providing Ciba with consistent results in establishing uniform judgment of risk.

9:00-9:30 a.m.

**Layer of Protection Analysis: A New PHA Tool
after Hazop, before Fault Tree Analysis**

A. M. DOWELL, III, Rohm and Haas Company

Building on concepts from the CCPS *Guidelines for Safe Automation of Chemical Processes*, this paper shows how to extend the HAZOP data and analysis to determine if additional safeguards are needed. This approach is called Layer of Protection Analysis (LOPA). LOPA is a new, supplemental Process Hazard Analysis (PHA) tool that goes beyond HAZOP, but is much more streamlined than FTA (Fault Tree Analysis) or QRA (Quantitative Risk Analysis). This paper gives the results of more than five years' use of the LOPA technique. LOPA focuses greater risk reduction efforts on impact events with high severity and high likelihood. It ensures that all the identified initiating causes are considered, and it confirms which independent protection layers are effective for each initiating cause.

9:30-10:00 a.m.

Risk Criteria for Use in Quantitative Risk Analysis

BRIAN GREENWOOD, LOUISE SEELEY,
and JOHN SPOUGE, Det Norske Veritas

This paper presents individual and societal risk criteria used around the world to make judgments on the acceptability of new and existing processing facilities. Concluding remarks are made to summarize the various criteria and to generalize the findings into a single, suggested set of risk criteria. Many international regulatory agencies as well as international companies have established risk criteria for use in land planning and/or managing industrial risks.

Since many major corporations have made a commitment to use Chemical Process Quantitative Risk Analysis (CPQRA) and to abide by the results of the analyses, many processing sites across the US and abroad are already taking action to meet their internal risk criteria.

10:00-10:45 a.m.

COFFEE BREAK (Exhibitors and Posters)

10:45-11:15 a.m.

Practical Risk and Operability Analysis for New Products during Research and Development

BRIAN R. CUNNINGHAM and MARY PICKNER,
The Lubrizol Corporation

Addressing process safety, pollution prevention, and product stewardship issues early in the research and development stage of new chemicals increases total life cycle savings opportunities. A two-step process has been developed to assess and communicate opportunities for improvements starting at the invention stage and continuing through commercialization. Developing a comprehensive list of issues and establishing levels of concern for them based on the desired operating culture of the company are keys to its success. Significant benefits of this approach include its simplicity and its ability to feed manufacturing plant concerns into preliminary R&D and commercialization decisions. Development work to improve levels of inherent safety and pollution prevention can also be supported by providing a basis for comparing life cycle costs with and without the proposed improvements. This approach is also suitable for assessment and prioritization of existing plant-scale processes that may be candidates for process improvement efforts.

11:15-11:45 a.m.

**Playing the Killer Slot Machine
(A Tutorial on Risk)**

DONALD K. LORENZO and WILLIAM G. BRIDGES,
JBF Associates, Inc.

A new casino has opened in Las Vegas, and its slot machines pay well on every pull of the handle—except for the chance that on one pull of the handle, the machine is charged with 50,000 volts and the player is fried. Would you play the game? This paper explores how the acceptability of risk changes under a variety of circumstances, and how these same principles apply to hazard analysis teams who are judging the acceptability of existing engineered and administrative controls (safeguards), and deciding whether or not to recommend additional or improved safeguards.

12:00 Noon-1:00 p.m.

LUNCHEON PRESENTATION

JIM MAKRIS, *Director of Chemical Emergency and Preparedness Office, U.S. Environmental Protection Agency*

1:15-5:30 p.m.

PARALLEL WORKSHOPS

There are six workshops. Each workshop will be conducted twice, once in the afternoon of October 21st and once in the afternoon of October 23. Attendees can choose four out of the six workshops. Please indicate your choices in the appropriate boxes on the registration form. (Summaries of all workshops will be presented in the afternoon plenary session on Friday, October 24.)

1:15-3:15 p.m.
WORKSHOPS A, B, C

WORKSHOP A

Regulations (EPA and OSHA)

CRAIG MATTHIESSEN, *US Environmental Protection Agency*

The Occupational Safety and Health Administration (OSHA) and the Environmental Protection Agency (EPA) have an ongoing role in chemical accident prevention for the protection of workers, the public and the environment. This workshop will address three current topics related to OSHA and EPA efforts in this area: activities related to facility siting under the OSHA Process Safety Management Standard; what's happening under EPA's Risk Management Program recently promulgated under the Clean Air Act of 1990; and EPA's and OSHA's plans to investigate major chemical accidents. The current status of any regulatory activities will also be discussed.

WORKSHOP B

Root Causes and Failure Data Bases

BRIAN D. BERKEY, *Hercules, Inc.*

This workshop will include four presentations related to incident investigations and the capture and use of the information from the investigations. The papers presented in this session will cover:

1. The identification of appropriate data fields for failure modes and equipment attributes to allow an equipment reliability database to support analysis of equipment failures.
2. A discussion of available "lessons learned" databases and other information related to safety incidents in the chemical process industries.
3. A description of an incident database structure and how macro-analysis of the collected incident data can be used to set the direction of safety efforts.
4. A case study of a particular incident that demonstrates some lessons learned as well as the dynamics of incident investigation procedures.

In addition to the presentations, the workshop authors will participate in a panel discussion to entertain questions related to their presentations and the general subject of root causes and failure databases.

WORKSHOP C

Risk Acceptance Criteria (Including Cost/Benefit) versus Corporate Liabilities

DAVID MOORE, *AcuTech Consulting, Inc.*

While there are regulations governing risk management implementation, this workshop explains how a successful program comes from management acceptance of risk management's importance; their participation in defining the company's objectives; and the creation of a consistent, formal, and defensible system for making risk management decisions. The workshop begins with a discussion outlining in broad strokes the formation of a risk management program and the technical basis for decision-making, and later develops various themes with industry examples. Featured topics include establishing risk tolerability criteria for personnel injury and economic loss (with risk-based and cost-benefit approaches), improved rules for hazard analysis, risk ranking systems for ranking hazard scenarios (with a practical scoring methodology now used at a major chemical company), and a decision process for addressing recommendations. But what are the implications of deciding the risk is acceptable? Should companies admit they consider risk to be tolerable below a certain limit? And how might regulators and liability courts respond to a company's establishment of a tolerable risk level? This workshop will explore these issues as well.

TUESDAY, OCTOBER 21, 1997 (Continued)

3:30-5:30 p.m.
WORKSHOPS D, E, F

WORKSHOP D

Methodology for Comparing Risk Assessment

PATRICK J. McNULTY, *Wharton School*

A wide divergence of risk assessment terminology and practice exist. These variations are observable when one examines the processes used to determine risks associated with major accidental chemical releases. When these differences in terminology and content are compounded by differences in language, culture and legal jurisdiction, significant barriers exist to the OECD's goal of learning from the experiences of different countries and cooperating to address common problems. As a result, the OECD and the EPA's Chemical Emergency Preparedness and Prevention Office have undertaken to develop a generic structure to facilitate understanding the processes used by different practitioners to determine the risks from major accidental chemical releases. This workshop presents an overview of the OECD's Dictionary/Thesaurus, its operation on the Internet, and its application to three practical situations involving risk assessment: an analysis of an industrial chlorine unloading facility, Delaware's regulations under the Extremely Hazardous Substances Risk Management Act, and New Jersey's regulations under the Toxic Catastrophe Prevention Act.

WORKSHOP E

**Risk Perceptions and Communications
(Regulatory, Industry, Public)**

VIN BOYEN, *Mallinckrodt Chemicals*

This workshop will draw heavily on the experiences of the chemical industry and other organizations in communicating with the public on risk issues. Discussions will include the various factors used by the public in establishing risk perceptions and how those perceptions may vary by community and by individual. Different approaches to communicating risk so as to

be both credible and understandable will also be covered. Suggestions for how to involve the community in helping establish criteria for risk based decisions will be reviewed as will the broader issue of building a communications bridge between a facility and the local community. How the latter can be instrumental in achieving more realistic risk perceptions will be examined. A concise summary of experiences to date with risk communications will be provided along with recommendations for addressing the communication challenges of the EPA's Risk Management Plan regulation.

WORKSHOP F

Technical Considerations in Choosing Multiple Levels of Safeguards

JAN WINDHORST, *Novacor Chemicals*

The workshop covers different but analogous risk-based approaches towards reconciling potentially conflicting requirements, which can be caused by prescriptive standards. Such standards, which can deal with issues as diverse as occupational health, process safety, environment, vessel design, explosion venting, etc., have often grown over time and are sometimes narrowly focused and restrictive. The approaches presented here aim at a "common-sense" approach whereby responsible operations and designs are achieved by considering all possible contributors to safety such as management systems, human factors and instrumentation. Furthermore there is an effort to optimize the risk performance by considering suites of measures as well as the singular "silver bullet" measure. Suites of measures have the benefit that an optimum cost-effective solution can be found by selecting an optimum combination of measures that satisfy responsible operation requirements. Responsible operation is a facility's responsibility to the public at large and part of its "social contract" or license to operate. The trend away from prescriptive standards and towards performance based standards as discussed in the workshop is also present in the development of some of today's industrial standards.

6:30-7:30 p.m.

WELCOMING RECEPTION (cash bar)

WEDNESDAY, OCTOBER 22, 1997

8:30-11:45 a.m.
**RISK ACCEPTANCE CRITERIA
AND RISK BASED JUDGMENT**

PLENARY CO-CHAIRS

ARTHUR DOWELL, III, *Rohm and Haas Company*

WILLIAM G. BRIDGES, *JBF Associates, Inc.*

8:30-9:00 a.m.

**Rhône-Poulenc N.A. Process Hazard Analysis
and Risk Assessment Methodology**

GARY YORK and RODGER EWBANK, *Rhône-Poulenc*

Rhône-Poulenc N.A. is the North American unit of Rhône-Poulenc S.A. which is based in Paris, France. RPNA uses a process hazard analysis methodology that is consistent with the RPSA recommended methodology and also incorporates features specific to the needs of the North American business enterprises. The paper will describe the key features of this combined process hazard analysis and risk assessment methodology. The RPNA methodology includes the selection and

utilization of different hazard identification techniques, the ranking of the hazard according to defined guidelines and a qualitative risk assessment of potential scenarios. Guidelines for analysis of existing units and for new projects have been established and integrated across the organization.

9:00-9:30 a.m.

Finding an Appropriate Level of Safeguards

MICHAEL D. MOOSEMILLER and WILLIAM H. BROWN,
Det Norske Veritas

There is much discussion of the appropriate level of safeguards for given situations during process design reviews, process hazards analyses, etc. In principle, the type and number of safeguards should be made on a risk basis, which would include consideration of the reliability/availability of the safeguards, and the consequences of their failure. This paper describes appropriate criteria for decision making, and attempts to topple some of the more arbitrary rules that companies commonly use. It also gives some typical reliability values for protective devices.

9:30-10:00 a.m.

Resource Optimization by Risk Mapping

ROBERT W. JOHNSON, THOMAS I. McSWEENEY,
and JEFFREY S. YOKUM, *Battelle Memorial Institute*

A new approach to providing risk management input, called risk mapping, is presented in this paper. Risk mapping shows how to correctly determine the increase in net liability if a task or safeguard is eliminated. By ranking tasks and safeguards by their net elimination liability, the risk manager has two valuable inputs that a traditional risk analysis does not give: What tasks and safeguards are most critical to safety; i.e., "critical devices" and "critical tasks"; and, What tasks or safeguards may be able to be eliminated with minimal liability increase. The four factors that combine to give the net elimination of liability are performance cost (budgeted cost of performing or maintaining an activity or safeguard), performance risk (from a traditional risk analysis), elimination cost (short-term impact of discontinuing an activity), and elimination risk (long-term risk increase if a safeguard is removed). This paper demonstrates how these factors were determined for hazardous waste management activities at the Pantex Plant, using an order-of-magnitude approach that also considered environmental and business liabilities and employed database and project management software.

10:00-10:45 a.m.

COFFEE BREAK (Exhibitors and Posters)

10:45-11:15 p.m.

A Risk Assessment Methodology for Evaluating The Effectiveness of Safeguards and Determining Safety Instrumented System Requirements

ANDREW M. HUFF and RANDAL L. MONTGOMERY, *JBF Associates, Inc.*

Many companies in the chemical and hydrocarbon process industries are increasing efforts to determine the number and effectiveness of safeguards required to protect against potential accident scenarios at their facilities. These efforts result from a desire to fulfill internal requirements and/or external requirements such as the ISA standard ISA-S84.01-1996, Application of Safety Instrumented Systems for the Process Industries. To accomplish this, a methodology for analyzing the effectiveness of safeguards and determining the need for additional safeguards is needed. Several critical steps must be performed to determine safeguard effectiveness and to determine if company risk acceptance criteria are being met. Because these critical steps involve making risk-based decisions, companies need to develop and implement systematic risk assessment methodologies to provide the information and basis for each decision. Applying these methodologies will help companies determine if their risk acceptance criteria are being met and will help to effectively implement the necessary safeguards. This paper discusses some of the issues to consider when establishing corporate or plant risk acceptance criteria; a semiquantitative risk methodology that can be used as an effective, risk-based decision-making tool; and an approach for combining information from a process hazard analysis (PHA) with the described risk-based decision-making tool to determine the effectiveness of safeguards and the need for additional safeguards or safety instrumented systems (SIS).

11:15-11:45 a.m.

A Simple Problem to Explain and Clarify the Principles of Risk Calculation

DENNIS HENDERSHOT, *Rohm and Haas Company*

Many texts and case studies on quantitative risk analysis have been published. They often describe frequency and consequence calculations in detail, but do not explain how these results are combined to produce specific measures of risk. The risk estimates seem to appear from the underlying data as if by magic. In this example problem, the background, frequency, and consequence data for a risk analysis are highly simplified, so that the actual risk calculations can be understood easily. The example has been extremely useful in explaining the principles of chemical process quantitative risk analysis (CPQRA) calculations to engineers, plant management, and other customers of CPQRA studies. The example also illustrates the complexity of risk. Even though the problem is extremely simple and uses trivial models, several valid, but numerically different, risk estimates can be generated. Even for this very simple example, there is no single answer to the question "What is the risk?"

12:00 Noon-1:00 p.m.

LUNCHEON PRESENTATION

JACK WEAVER, *Center for Chemical Process Safety of the American Institute of Chemical Engineers*

1:00-5:15 p.m.

RISK ANALYSIS AND RISK MANAGEMENT

PLENARY CO-CHAIRS

DENNIS HENDERSHOT, *Rohm and Haas Company*

KEITH CASSIDY, *Health & Safety Executive, UK*

1:00-1:30 p.m.

A Context-Specific Approach Toward Human Reliability Assessment

JOSEPH R. FRAGOLA, *SAIC New York*

As individual pieces of equipment become more and more reliable and as maintenance improvements extend their life, the human contribution to the risk of system operation that has always been significant is becoming evermore important. Approaches which address the assessment of human reliability have been around since the late sixties, and they have made significant and useful contributions to the identification of the significance of human errors in the risk of operation of nuclear facilities in particular. However there have been significant problems in using these approaches to determine where and to what degree changes in human impacting elements would be cost effective. The reason for this problem is that, just as in the case of early equipment failure assessments, conventional Human Reliability Analysis (HRA) approaches are, to a great degree, context independent. The approach in this paper attacks the problem of context by separating it into two, to some degree independent, perspectives. That of the accident condition, and that of the plant specific interface. From this point of view the conditions imposed upon the operator in terms the accident process conditions become process specific and therefore somewhat independent of the specific human interface. And, correspondingly, the human performance relevant features of the specific human interface can be evaluated as to their quality in terms of their capability of fulfilling the requirements imposed upon the operator by the accident process. Thus, from these two perspectives human interface capabilities can be discriminated according to the risk importance of their human relevant features in addressing a specific accident sequence of interest.

1:30–2:00 p.m.

Risk Based Evaluation and Human Factors Review for Petrochemical Unit Startup Options

PHILIP M. MYERS and PHILIP BRABEZON,
Four Elements Inc.

Nearly twenty-five percent of the largest process industry financial losses occur during startup. Human factors clearly play a significant role in the startup process where many human actions and interactions take place. A risk based evaluation and human factors review was conducted for startup of an upgraded petrochemical process unit in a large complex. This unit previously had been started up and operated from a local control room with analog displays and pneumatic controls. As part of a facility wide automation project, the controls were to be upgraded and the unit controlled with a Honeywell TDC 3000. Ultimately, this petrochemical unit would be controlled from a remote central control room to address facility siting concerns. The question remained if startup risks would be lower with startup directly from the remote central control room or utilizing a familiar, "local" team-based startup with future "hot cut-over" to the central control room. A methodology was developed to specifically identify the startup option differences which were then quantified in terms of the potential for and magnitude of financial loss.

2:00–2:30 p.m.

New Consequence Modeling Chapter for Guidelines for Chemical Process Quantitative Risk Analysis, 2nd Edition

DANIEL A. CROWL, *Michigan Technological University*

The upcoming 2nd edition of *Guidelines for Chemical Process Quantitative Risk Analysis* will contain a new Chapter 2 on Consequence Analysis. The reasons for a major update to this chapter are: to provide much more detail than available in the original edition; to update the models based on improvements in modeling technology; to provide many more worked examples; and to provide spreadsheet implementation of the examples, available on a disk. The chapter discusses the theoretical basis for the models, and provides a "how to" framework for application of the models to risk analysis. The expanded chapter is a valuable resource for meeting EPA Risk Management Plan (RMP) consequence modeling requirements. The chapter is also an excellent supplement to more detailed CCPS books on vapor cloud dispersion, explosions, etc. This paper will discuss the new changes, and show some of the example spreadsheets.

2:30–3:15 p.m.

COFFEE BREAK (Exhibitors and Posters)

3:15–3:45 m.

Benefits of Plant Layout Based on Realistic Explosion Modeling

JAN WINDHORST, *Novacor Chemicals*

Some of the more serious hazards facing NOVA Chemicals' ethylene plants are vapor cloud explosions. Designs for new ethylene facilities require that the risks from such explosions do not exceed levels considered intolerable by the corporation.

This requires an "explosion control" design effort that needs to be timely and realistic so that results can be incorporated into such things as plant layout, designs and risk analyses. Explosion control designs in NOVA Chemicals are based on two types of models: the TNO multi-Energy method or equivalent and computational fluid dynamics or CFD. CFD is used where warranted by risk, dollar investment or complexity. This paper describes a design study where based on preliminary results from multi-Energy type studies the decision was made to employ the more sophisticated CFD explosion model. It also shows some of the benefits in the siting and design of buildings, equipment layout and potentially relaxed worst case scenarios that can be accrued with this approach.

3:45–4:15 p.m.

Consequence Modeling for the Insurance Industry—New Philosophies and Methods

S. MOHINDRA, *Arthur D. Little, Inc* and
D. SCOTT, *J&H Marsh & McLennan*

The fire, explosion and other property damage incidents that occur in the process industries often result in large insurance claims. The insurance industry has been relatively slow to develop the computer tools necessary to allow hazard assessment in terms of financial loss. Whilst a few are now available, they tend to be based on a single scenario or use simple methodologies. All still require the use of significant engineering judgment to accurately interpret the output. The development of a new set of software models designed to meet the needs of the more sophisticated insurance underwriters is described in this paper. These models differ from those already existing by the use of improved calculation methods allowing a detail of calculation which is impractical without the aid of a computer. These tools will also be useful to plant designers by allowing them to look in more detail at the potential financial consequences of plant layout decisions.

4:15–4:45 p.m.

PSM Verification of Relief Device Sizing in the Case of Reactive Chemical Service

G. BRADLEY CHADWELL, *Battelle*

The OSHA PSM Standard requires compilation of process safety information, including information on the relief system design and design basis. Much more than assembling the appropriate equipment data and original design calculations is required for relief systems. Improvements in design methodologies and changes in process operating conditions since the original relief system specification could invalidate the original relief system design and design basis. Therefore, relief system verifications is necessary and includes: reassessing the relief system design basis against current operating conditions; and confirming that the existing relief system design is adequate for the revalidated design basis. This paper presents a stepwise approach for establishing relief system design basis requirements in the case of reactive chemical service and analyzing relief systems against this design basis. Our approach addresses two-phase flow and explicitly accounts for internal and external heat sources (e.g., heat generation from exothermic reactions and fire exposure).

4:45–5:15 p.m.

Accounting for Common Cause Failures When Assessing the Effectiveness of Safeguards

EMMA L. DAGGETT and HENRIQUE PAULA, *JBF Associates, Inc.*

Traditionally, companies in the chemical process industry (CPI) have provided multiple layers of protection (safeguards) to help ensure adequate protection against process hazards. The types and number of

safeguards for each process hazard depends on the nature of the hazard, but the number of safeguards generally increases with the frequency and/or consequences associated with a process upset. The very high reliability theoretically achievable through the use of multiple safeguards, particularly through the use of redundant components, can sometimes be compromised by single events that can fail multiple safeguards (e.g., functional failure of all temperature sensors in an ESD system attributable to a miscalibration error during maintenance

activities). Because these events that defeat multiple safeguards can typically be attributed to a single cause of failure, they are often called common-cause failures (CCFs). Other terminology used to describe CCFs include "systematic failure," "common-mode failure," and "dependent failure." Because CCFs have consistently proven to be significant contributors to risk, it is important to account for CCFs in assessing safeguards. This paper presents a method to account for CCFs when assessing the effectiveness of safeguards in a CPI facility.

THURSDAY, OCTOBER 23, 1997

8:30-11:45 a.m.
**RISK ACCEPTANCE CRITERIA
AND RISK BASED JUDGMENT**

PLENARY CO-CHAIRS

ARTHUR DOWELL, III, *Rohm and Haas Company*
WILLIAM G. BRIDGES, *JBF Associates, Inc.*

8:30-9:00 a.m.

Benefits of Quantifying Process Hazard Analyses

THOMAS I. McSWEENEY, *Battelle Memorial Institute*

This paper shows the range of ways that companies have, to a greater or lesser degree, of quantitatively evaluating accident scenario risks within the context of PHAs. Some of the many benefits that can be gained from using this risk information are then described, such as: providing the public with a balanced perspective on worst-case accident analysis results; prioritizing the maintenance of critical safety components and functions; evaluating the effect of a proposed change on the total process risk, with possible comparison to tolerable risk levels that must be considered on a whole-process basis instead of a scenario-by-scenario basis; justifying the funding of process improvements or alternate courses of action. Examples of each benefit are given.

9:00-9:30 a.m.

**An Integrated Quantitative Decision Approach
for Risk Management Problem Solving**

PAUL C. CHROSTOWSKI and SARAH A. FOSTER,
The Weinberg Group

Risk managers are presented with a plethora of techniques for assessing hazard, risk and consequences. Many of these techniques are capable of extension into chemical process quantitative risk analysis (CPQRA) through a variety of both deterministic and stochastic methods. CPQRA logically leads to consequence analyses that predict both the probability and outcomes of an event. A new group of analytical tools is emerging that is being used by scientists and engineers in product development areas, namely product life cycle analysis (LCA). LCA is a formal process to evaluate the environmental or societal burdens associated with a product, process, or activity and to identify opportunities for affecting environmental improvements or societal benefits associated with the activity being analyzed. Although these tools are widely applied, the linkages among them are weak and often nonexistent. Due to this, a substantial amount of information is lost when a risk manager attempts to make strategic decisions using information that is provided from the application of these tools. In order to facilitate the formation of linkages and full use of information, we have developed an Integrated Quantitative Decision Approach (IQDA). The first application of the

IQDA used stochastic conditional health risk assessment in conjunction with a limited life cycle analysis and engineering reliability analysis to optimize the selection of a complex environmental control strategy. Since that initial application, we have expanded on the components of the technique to encompass the risk assessment methods discussed above as incorporated into an overall risk management framework. This paper will discuss the development of the IQDA, its strengths and weaknesses, and some areas of application.

9:30-10:00 a.m.

CCPS Equipment Reliability Database:

A Solid Foundation

HAROLD W. THOMAS, *Air Products and Chemicals*

This paper details the current CCPS equipment reliability database effort, as well as the database design, including the overall data structure and relationships that exist. In addition, various examples are given which illustrate how the various data can be used to the benefit of participating companies. Potential analyses include estimation of equipment MTTF's for repairable and non-repairable systems, plant availability and/or reliability, optimization of maintenance schedules/strategies, and modeling of equipment failure distributions.

10:00-10:45 a.m.

COFFEE BREAK (Exhibitors and Posters)

10:45-11:15 a.m.

**Using Quantitative Risk Analysis in Decision Making:
An Example from Phenol-Formaldehyde Resin
Manufacturing**

DON SCHAECHTEL, *Borden Chemical, Inc.* and
DAVID MOORE, *EQE International*

An out of control phenol-formaldehyde resin reaction challenges traditional pressure relief systems. To prevent overpressure and the potential for a catastrophic failure of the reactor, Borden Chemical has followed strict manufacturing safety rules since 1974, when a reactor ruptured and killed two people.

With the advent of OSHA's process safety management standard, process hazard analyses were conducted to further improve reactor safety. As part of this work, a method was needed to assess operator safety as required by the "facility siting" clause in the standard. Since moving or reinforcing control rooms was not considered feasible, a quantitative risk assessment was used to assess operator safety. This paper will describe the approach that was used and the benefits derived: developing risk tolerance criteria for the phenol-formaldehyde resin manufacturing industry; determining the individual risk associated with the manufacturing process; identifying scenarios which could lead to reactor overpressure; conducting a risk assessment that included quantitative fault tree analysis; comparing the calculated risk to the pre-developed risk tolerance criteria; implementing risk reduction measures suggested by the fault tree analysis.

THURSDAY, OCTOBER 23, 1997 (Continued)

11:15-11:45 a.m.

The Synergy of Business Planning Process, Safety Management, and Acceptance of Risk

JOHN P. KIMBALL, *Safety InSites*

Too often, risk-based decisions on process safety and emergency management are not done in concert with the business management organization. This presentation will identify some of the potential problems and offer solutions. Questions that should be answered include the impact of business decisions on the above as well as the converse. Process safety risk mitigation decisions such as modification or elimination of processes chemicals or containers should be made in concert with the business planners. The issue of downsizing and its impact on emergency planning must be closely examined. The hidden costs of an emergency must be considered as well. The delay of critical product deliveries, damage to corporate reputation, loss of market share and long-term damage to client and community relationships must be quantified and analyzed. In order to be truly integrated into the business operation, process safety and emergency managers must be able to identify the return on

risk mitigation efforts and incorporate this into strategic planning. Discussion will include plan intergrations such as the National Response Team "One Plan" guidance document. This is a positive step at plan consolidation but does not include business interruption and generally focuses on hazardous material and oil related emergencies. Electronically assisted methods to develop unified contingency plans and risk identification and quantification will be examined.

12:00 Noon-1:00 p.m.

LUNCHEON PRESENTATION

HANS PASMAN, *European Federation of Chemical Engineering*

1:15-3:15 p.m.

WORKSHOPS A, B, C (Repeated)

3:30-5:30 p.m.

WORKSHOP D, E, F (Repeated)

FRIDAY, OCTOBER 24, 1997

8:30 a.m.- 2:30 p.m. RISK ANALYSIS AND RISK MANAGEMENT

PLENARY CO-CHAIRS

DENNIS HENDERSHOT, *Rohm and Haas Company*

KEITH CASSIDY, *Health & Safety Executive, UK*

8:30-9:00 a.m.

How Does the Public Perceive Risks from Major Industrial Hazard Sites?

ANN BRAZIER, *Health & Safety Executive,*

ALAN IRWIN, *Brunel University,*

PETER SIMMONS, *Lancaster Univeristy,*

GORDON WALKER, *Staffordshire University,* and

BRIAN WYNNE, *Lancaster University*

The UK Health & Safety Executive (HSE) provides expert technical advice to local planning authorities on risks that would be posed by new hazardous installations and pipelines and risks from existing installations to proposed development in their vicinity. HSE uses quantified risk assessment (QRA) to set a consultation distance around each of the major hazard sites; the risks may be derived from dispersion models which estimate concentration levels and exposure times for a range of loss of containment accidents. Forthcoming EC legislation will require information on safety measures and emergency planning to be made available to persons liable to be affected by a major accident originating from a major industrial hazard site. HSE has commissioned an interdisciplinary research project to inform the development of policies on the tolerability of risk, to aid in developing criteria for the siting of major hazards and the use of land within their vicinity and to guide the explanation of risk issues to local authorities and the public. The methodology and emerging results of this major 3 year research project will be discussed and the paper will also describe how HSE has piloted a Geographical Information System to support the decision making process and assist in communicating con-

sistent responses to local planning authorities within statutory deadlines.

9:00-9:30 a.m.

The General Duty Clause under the Clean Air Act: Issues of Implementation

JOHN FERRIS, *U.S. Environmental Protection Agency*

The goal of EPA's Chemical Emergency Preparedness and Prevention Office is to reduce or eliminate accidental chemical releases. The Clean Air Act Amendments of 1990 provided EPA with a new tool to accomplish this goal: The general duty clause. Sections 112 and 113 of the Clean Air Act provide EPA with the authority to implement and enforce the clause but do not require EPA to write regulations clarifying it. The challenge to EPA is to develop a proactive implementation strategy for the implementation of the general duty clause to foster owners and operators of facilities to know of their responsibilities to prevent accidents and minimize the consequences of accidents that occur. This paper will discuss the issues the EPA is facing regarding accident prevention and possible strategies for EPA and the chemical processing industry to implement the general duty clause.

9:30-10:00 a.m.

Development of Integrated Fixed Facility and Transportation Risk Criteria

LISA BENDIXEN, *Arthur D. Little, Inc.*

While a limited number of chemical companies and regulatory bodies are using some type of criteria for fixed facilities, very few have tackled criteria for transportation risks. Even fewer recognize that there are several ways in which to make risk criteria consistent for both transportation and fixed facilities. Having a common basis for evaluating different sources of risks encourages the full consideration of risks from all aspects and life cycle stages of a project or an activity. In turn, this full consideration of risks resonates better with decision-makers, and increases both the actual and the perceived value of the risk management function. This paper will explore the basics of devel-

oping, implementing and communicating risk criteria for decision-making in the framework of addressing both transportation and fixed facility risks.

10:00-10:45

COFFEE BREAK (Exhibitors and Posters)

10:45-11:15 a.m.

The RMP as a Tool for Risk-Based Decision Making

CRAIG MATTHIESSEN and LYSE HELSING,
U.S. Environmental Protection Agency

The elements in the RMP rule requirements and supporting guidance and tools have broader application to the assessment of, and decisions about, chemical and process hazards, worker and public safety, and environmental protection even before the risk management plan is prepared, and in an ongoing way afterward. Consequently, integration of the RMP elements into company safety, health, and environmental programs can help companies adopt and implement risk-based decision making approaches. The purpose of this paper is to briefly describe the final RMP rule and to discuss some of the questions and interpretations generated since. The status of some of the many tools (guidance and models) that support the RMP rule will also be provided followed by a brief description of the uses of the rule elements and tools that can support and stimulate risk-based decision making.

11:15-11:45 a.m.

Risk Management and Hazard Reduction Practices in the Ammonia Refrigeration Industry

DANIEL R. KUESPERT, *International Institute of Ammonia Refrigeration*

Industrial refrigeration using anhydrous ammonia as refrigerant provides essential cooling to a variety of industrial processes, cold storage warehouses, food processing facilities, and district energy systems. The substantial quantities of ammonia used (tens to hundreds of thousands of pounds in some cases) have spawned a wide variety of hazard reduction practices aimed at reducing risk to the facility and the surrounding community from ammonia's toxic and flammable properties. Design requirements are reflected much more comprehensively in local fire and mechanical codes than is common in the process industries, and ammonia refrigeration safety has drawn Congressional regulatory attention in the past few years. This paper discusses chemical exposure/release and explosion prevention in large industrial ammonia refrigeration facilities. Consequence analysis case studies under the new Clean Air Act Risk Management Program are presented, and the development of industry-standard Process Safety Management and Risk Management programs is discussed.

12:00 Noon - 1:00 p.m.

LUNCHEON PRESENTATION

JIM McQUAID, *Health & Safety Executive, U.K.*

1:00-1:30 p.m.

Improving Safety, Environmental Protection, and Reliability Through Integrated Operational Risk Management

GLENN DeWOLF and TERRI SHIRES, *Radian International*

This paper discusses an integrated approach to risk management relating various categories of technical and business risks. Process safety is one technical category. An understanding of this relationship can be used to develop a comprehensive,

operational risk management program that takes advantage of the synergism between common risk factors and data and information needed to analyze and control the risks. This paper examines commonalities between various types of risk management programs such as OSHA Process Safety Management, EPA Risk Management Plans, CMA Responsible Care, and DOT Pipeline Safety Risk Management and how these lead naturally to an integrated risk management approach. The paper discusses the role of performance measures and cost-benefit analysis in making resource allocation decisions and how risks can be monetized to place different risk categories on a common basis for comparison. It examines how an integrated risk management program can be developed and implemented within a facility or enterprise. The approach presented is based on experience in work performed within the context of the natural gas industry blending risk management concepts and practices from that industry and the chemical industry.

1:30-2:00 p.m.

Maximizing the Economic Value of Process Safety Management

JOSEPH FIKSEL and KENNETH H. HARRINGTON,
Battelle Memorial Institute

Process safety performance measurement has traditionally focused on incident tracking and compliance issues. This paper describes a "value-based management" approach that explicitly recognizes the contribution of process safety management toward achieving business objectives related to profitability, return on investment, and shareholder value. The value-based management approach involves identification of key aspects of value added, selection of economic performance indicators, and definition of appropriate performance metrics and targets corresponding to specific process safety activities. Examples will be drawn from the experiences of several major chemical manufacturers in the U.S., who have recently implemented this type of approach. By linking process safety to business objectives, these companies are able to move beyond a compliance-oriented posture, and make better-informed business decisions.

2:00-2:30 p.m.

Integrating Quality Management Principles into the Risk Management Process

KEVIN MITCHELL and JATIN N. SHAH, *Four Elements, Inc.*

A means to identify and establish Key Performance Indicators (KPIs) is essential to for effective monitoring of the risk management system. Follow-up inevitably focuses on high risk factors and reducing these to acceptable levels. Key safeguards and their relation to the overall objective are identified and enumerated in the quantitative risk assessment process. Often failures that place demands on safety critical systems are initially manifest as quality deficiencies, or excursions beyond the permitted environmental operating envelope. These operational targets form the basis of establishing KPIs to measure operational performance, thus ensuring that the risk management objectives are met. An approach that incorporates features of a quality program within the risk management framework has been developed to identify KPIs and monitor the effectiveness of the risk management process. A case study is included to demonstrate the effectiveness of this approach.

2:30-3:00 p.m.

COFFEE BREAK (Exhibitors and Posters)

3:00-5:00 p.m.

SUMMARY OF WORKSHOPS A, B, C, D, E, F (concluded)

5:00-5:30 p.m.

FINAL REMARKS AND Q&A

POSTER AREA

Methodology for Focusing a Transportation Risk Analysis

PAUL E. MCCLUER, *H&R Technical Associates*

Environmentally Sensitive Flares

JOHN F. STRAITZ III, *NAO Inc.*

PHAZER: An Intelligent System for Automated Process Hazards Analysis

RAJAGOPALAN SRINIVASAN and
VENKAT VENKATASUBRAMAIAN, *Purdue University*

Strategic Financial Risk Assessment for Railcar Business Acquisitions

PHILIP M. MYERS and RICHARD S. MORGAN,
Four Elements

Risk-Based Decision Making for Fire and Explosion Loss Control Strategies: A Practical Application

TOM F. BARRY, *HSB Professional Loss Control*

Pressure Relief System Documentation: Equipment-Based Analysis Ensures OSHA Compliance

PAT BERWANGER, *Berwanger*

Integrated Safety Analysis Project

ROBERT W. JOHNSON, *Battelle Memorial Insitute* and
MARK ELLIOTT, *Babcock & Wilcox*

Air Modeling Issues Associated with the Risk Management Program

GEOFFREY D. KAISER, *SAIC*

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Guidelines for Design Solutions to Process Equipment Failures

October 1997, G-39, 240 pp est., Price to be announced. ISBN 0-8169-0684-X

Easy-to-use TABLES OF COMMON EQUIPMENT FAILURES with descriptions and inherently safer and other potential solutions. Ideal for hazard assessments and process design.

Evaluating Process Safety in the Chemical Industry: A Manager's Guide to Quantitative Risk Assessment, 2nd edition

December 1997, pricing to be announced

A joint update of CMA's 1989 publication with the best ideas of both CCPS's Risk Assessment Subcommittee and CMA's Process Safety Task Group.

Guidelines for Chemical Process Quantitative Risk Analysis, 2nd edition

March 1998, G-42, 800 pp. est., Pricing to be announced, ISBN 0-8169-0720-X

An update of the definitive resource on conducting a quantitative risk analysis. Said of the original book, "must reading for anyone with responsibility in designing or operating chemical facilities." *Journal of Hazardous Materials*.

Guidelines for Safe Warehousing of Chemicals

October 1997, G-33, 150 pp est., Price to be announced. ISBN 0-8169-0659-9

Addresses potential health, environmental, fire and explosion risks. With its extensive references to consensus codes and standards for specific technical information, this book is a resource for company and third party warehouse operators, architects, designers and others concerned with safe warehousing of chemicals.

International Conference and Workshop on Risk Analysis in Process Safety

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WORKSHOPS on Tuesday afternoon, October 21, 1997.

Please choose one: ___A ___B ___C Please choose one: ___D ___E ___F

WORKSHOPS on Thursday afternoon, October 23, 1997.

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PLAN NOW TO ATTEND

LEPC Budget

~~XXXX~~

LEPC Budget Worksheet		1997-1998				HMEP	HMEP		
		Hawaii	Kauai	Maui	Oahu	Equipmen Grant	Planning Grant	Training Grant	Other
Travel									
	Airfare to HSERC Meetings	State	State	State	NA				
	Parking for HSERC Meetings	State	State	State	State				
	Per Diem for Interisland Tavel	200	200	200	NA				
	Interisland Meetings	600	600	600	NA				
	Mainland Meetings	2000	2000	2000	2000				
	Other								
Mail									
	Printing	2000	2000	2000	2000				
	Postage								
Office									
	Expenses								
	Equipment								
Communication									
	Interisland Phone Calls								
	Mainland Phone Calls								
	Answering Machine	60	60	60	60				
	Network								
	Pagers								
Salary									
		30,000	30,000	30,000	30,000				
Computer									
	Computer with Printer for Office	4000	4000	4000	4000				
	Computer with Printer for HazMat Rig			Equip.	Equip.	5000			
	CAMEO	Free	Free	Free	Free				
	Dedicated SCD Computer	SCD	SCD	SCD	SCD				
	Internet Connection	SCD	SCD	SCD	SCD				
	Other	800	800	800	800				
Other									
	Hazmat Lending Library								
	Full Scale Exercise	EPA	EPA	EPA	EPA				
	Weather Station		Equip.			2500			
	Assorted Response Gear	Equip.				2500			
Combined LEPC Projects									
	Web Site						3000		
	Video								
Total		\$39,660	\$39,660	\$39,660	\$38,860	\$10,000	\$3,000		\$170,840
Anticipated Limit		\$20,000	\$20,000	\$20,000	\$20,000	\$10,000	\$10,000		\$100,000
SCD=State Civil Defense.									
EPA=EPA supports this activity once every four years for each LEPC.									
NA=Not Applicable.									
State=HEER Office money has been used for this in the past.									
Equip.=1997-1998 Superfund Core/PASI Combined HazMat Equipment Grant									

Update on HAZMAT EQUIPMENT
as of 9:00 a.m. 8/25/97

- Paperwork process has begun; Awaiting approval

Hawai'i

overpack drums
absorbent

Purchase Order request sent to ERO -> ASO; awaiting approval
will be sent directly to Big Island Civil Defense office

Kauai

CES weather monitoring station

Purchase Order request awaiting approval from HEER Manager

Maui

laptop computer
printer

T-205 Computer software request approved
Purchase Order request initially denied due to availability of a bid list
PO resent

Oahu

laptop computer
printer

Nevada puts funding and responsibilities in the hands of LEPCs

By Bob Andrews

Title III of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act) caught Nevada largely unprepared. Sorting out precisely what it meant for Nevada and how it should be administered did not come easy.

The process began, as it undoubtedly did almost everywhere, with the development of a State Emergency Response Commission and Local Emergency Planning Committees. Beyond that fundamental first step were many unanswered questions on what needed to be done, who should do it, and how. It was the responsibility of the Nevada State Emergency Response Commission to answer questions such as:

- How would we define the SERC-LEPC relationship?
- What should the LEPC role be in Nevada?
- How would reporting requirements be handled? How would they be enforced?
- How could we best inform those that need to know about covered facilities and substances?
- What should be our relationship with regulated facilities?

- How would we define and implement training requirements?
- How would we best support the planning process? How would we handle the review process?
- Who would handle anticipated assistance requests from industry on compliance requirements and completing report forms?
- Should there be a central information repository? How should it be established?
- What was the extent of our responsibilities under community right-to-know provisions?
- How would we fund all of this?

After review of these and other related questions, two things became clear. First, successful implementation of SARA Title III is best handled at the local level. The Local Emergency Planning Committees would be the primary vehicles for much of SARA Title III implementation including planning, testing of plans, training, ongoing relationships with and assistance to facilities, and community right-to-know provisions. Second, it was imperative that funding be obtained to support LEPC activity.

Fee Structure

Nevada's Highway Patrol administers a permit fee for the transportation of hazardous materials within Nevada. It agreed to allocate a percentage of those fees to the State Emergency Response Commission for training and preparation efforts related to hazardous materials incident response. The decision was made to use most of the funds from the Highway Patrol to support Nevada's Local Emergency Planning Committees, retaining only what was necessary for SERC administration.

It was anticipated that the permit fees, which initially provided approximately \$300,000 annually for SERC-LEPC operations, would be reduced significantly following the passage of the Hazardous Materials Transportation Uniform Safety Act, and that a separate SERC fee would be necessary to sustain operations. By the early 1990s, considerable work had been done to build a strong public/private sector relationship among the SERC, LEPCs, and the regulated facilities. This partnership was successful to the point where private-sector representatives unanimously supported the adoption of SERC fees at public hearings, thus making the separate SERC fee structure a reality in 1992.

The fees are a combination of reporting and storage quantity fees paid by regulated facilities with a cap of \$5,000 per facility. Average revenue realized under this structure is about \$230,000 annually.

With various fee adjustments (permit fees were indeed reduced), Nevada SERC revenues are averaging \$450,000 annually. Approximately 75 percent is provided to LEPCs through grants, and the remainder is retained for SERC administration.

LEPC initiatives and grants projects

Nevada has three categories of LEPC grants:

1. LEPC Operations Grants.

Automatic grants are provided to all active LEPCs for operations supportive of local SARA Title III implementation.

2. Training/Equipment Grants. Grant amounts are determined by the nature and merit of individual LEPC grant applications. Their purpose is to support SARA Title III-related training and equipment.

3. Hazardous Materials Emergency Preparedness Grants. Administered by the U.S. Department of Transportation, these are being used primarily to support hazardous materials training and planning.

A wide range of LEPC grants projects have been completed to date. Of special interest are the following:

Computerized Simulation Training. This is an interactive software application that develops emergency scenarios based upon decisions input at various stages of the scenario.

Hazardous Materials Categorization Training. This training has been sponsored by several LEPCs with SERC grants. It focuses on identification and analysis of hazardous materials and has special application in situations of spills or illegal dumping.

Tanker Truck Accident Training. Clark County LEPC hosted a tanker truck accident course that provided hands-on training with collision and rollover situations involving hazardous materials. This course also addressed tanker truck design and safe off-loading procedure.

LEPC-Industry Training Initiatives. Many of Nevada's LEPCs use grant funds to conduct on-site training for regulated facilities. This training has ranged from basic SARA Title III compliance issues to awareness and operations level hazmat training.

Hospital Decontamination Study. Clark County LEPC, in cooperation with its hospital community, initiated a grants project to evaluate hospitals' decontamination capabilities and make recommendations for further improvement of their capabilities.

Hazmat Incident Command Training. Several LEPCs have emphasized the response side of training. Highlights of Incident Command Training programs are the Incident Command System format, proper identification, and safe response procedures.

Community Right-to-Know. Several grants projects that have been supportive of community right-to-know initiatives are the design and printing of SARA Title III brochures for public distribution, information workshops for industry and the public, and a current proposal to provide software packages to libraries in order to make local chemical information readily available to the public.

Nevada's LEPCs have provided the mechanism necessary to not only implement SARA Title III provisions locally, but also to make it relevant and useful to concerned people—whether they are the general public, first responders, or industry representatives. A good working partnership between the public and private sectors (the SERC, LEPCs, and facilities) is the essential ingredient for successful implementation of SARA Title III.

Partnering begins with providing an adequate support base for the LEPCs to carry out their mission locally. LEPC members are in the best position to determine the SARA Title III priorities that will best serve their communities. ■

Bob Andrews was executive director for Nevada's State Emergency Response Commission and one of the people responsible for implementing SARA Title III in Nevada. He is currently the director of the Clark County Office of Emergency Management.

- (2) Develop state contingency plans relating to the implementation of this chapter;
- (3) Supervise, coordinate, and provide staff support to the committees for the implementation of this chapter and EPCRA;
- (4) Develop a public information, education, and participation program for the public and facility owners covering the requirements of this chapter, and the interpretation of the chemical information collected pursuant to this chapter and the risks that these chemicals pose to the public health and environment;
- (5) Appoint the members of the committees;
- (6) Develop a state chemical inventory form to be used in lieu of the federal Tier II form and chemical list requirements; and
- (7) Do all other things necessary for the implementation of this chapter and the requirements of EPCRA. [L 1993, c 300, pt of § 1]

§128E-3 Powers; rulemaking; appointment of hearing officers. (a) The commission may adopt rules in accordance with chapter 91 to implement this chapter. The rules shall include, but not be limited to, requirements for reporting releases. Any person heard at a public hearing on the adoption of any rule shall be given written notice of the action taken by the commission with respect to the rule.

(b) In addition to other specific powers provided in this chapter, the commission may appoint, without regard to chapters 76 and 77, hearing officers to conduct public participation activities, including public hearings and public informational meetings. [L 1993, c 300, pt of § 1]

§128E-4 Establishment of emergency planning districts. Each county is designated as an emergency planning district for the purposes of this chapter; provided that the department shall be responsible for Kalawao county. [L 1993, c 300, pt of § 1]

§128E-5 Establishment and functions of local emergency planning committees. (a) A minimum of one local emergency planning committee shall be established in each county. The committee shall be subject to the requirements of this chapter and section 303 of EPCRA, 42 U.S.C. §11003.

(b) The members of a committee shall be appointed by the commission, based upon the recommendations of the respective mayor of a county. The list of recommended persons shall contain at least one person from each of the groups listed in subsection (c). The commission may reject any recommendation made by the mayor of a county and appoint persons who did not receive a recommendation from the mayor.

(c) A committee shall be composed of at least one person from each of the following groups:

- (1) Elected state and county officials;
- (2) Law enforcement, first aid, health, environmental, hospital, and transportation personnel;
- (3) Firefighting personnel;
- (4) Civil defense and emergency management personnel;
- (5) Broadcast and print media personnel;
- (6) Community groups not affiliated with emergency service groups;
- (7) Owners and operators of facilities subject to the requirements of EPCRA; and
- (8) Other groups recommended by the mayor and appointed by the commission.

(d) Not more than sixty days after the occurrence of a vacancy, the commission, based upon the recommendations of the mayor, shall appoint a successor member to the committee, unless the requirements of subsection (c) have been fulfilled.

(e) Upon the failure of the mayor of a county to submit a list of nominees to the commission not more than forty-five days after notice of a vacancy, the commission shall make the appointment on its own initiative unless the requirements of subsection (c) have been fulfilled.

(f) Each committee shall:

- (1) Adopt bylaws and other administrative procedures to carry out the duties, requirements, and responsibilities set forth in this chapter, and as required by the commission and EPCRA;
- (2) Take appropriate actions to ensure the preparation, implementation, and annual update and review of the local emergency response plan required by this chapter and EPCRA. The local emergency response plans shall include, but not be limited to, the following:
 - (A) Identification of each facility subject to the requirements of section 303 of EPCRA, 42 U.S.C. §11003 and within the emergency planning district; identification of routes likely to be used for the transportation of substances on the list of extremely hazardous substances; and identification of additional facilities contributing or subjected to additional risk due to their proximity to facilities subject to the requirements of this section, such as hospitals or natural gas facilities;
 - (B) Methods and procedures to be followed by facility owners and operators and local emergency and medical personnel in responding to any release of these substances;
 - (C) Designation of a community emergency coordinator and facility emergency coordinators, who shall make determinations necessary to implement the plan;

- (D) Procedures providing reliable, effective, and timely notification by facility emergency coordinators and the community emergency coordinator to persons designated in the emergency plan, and the public, that a release has occurred, consistent with the notification requirements of this chapter and section 304 of EPCRA, 42 U.S.C. §11004;
 - (E) Methods for determining the occurrence of a release, and the area or population likely to be affected by the release;
 - (F) A description of emergency equipment and facilities in the county and at each facility in the county subject to the requirements of this section, and the identification of the persons responsible for the equipment and facilities;
 - (G) Evacuation plans, including provisions for precautionary evacuation and alternate traffic routes;
 - (H) Training programs, including schedules for training of local emergency response and medical personnel; and
 - (I) Methods and schedules for exercising the emergency plan;
 - (3) Request additional information from the facilities, if necessary, to develop emergency response plans;
 - (4) Submit local emergency response plans to the commission for review, and to other affected agencies upon request;
 - (5) Report to the commission on alleged violations of this chapter;
 - (6) Prepare reports, recommendations, and other information related to the implementation of this chapter, as requested by the commission;
 - (7) Have the primary responsibility for receiving, processing, and managing hazardous chemical information forms and data, trade secrets, and public information requests pursuant to this chapter;
 - (8) Accept and deposit into the state treasury any grants, gifts, or other funds received for the purpose of carrying out this chapter; and
 - (9) Evaluate the need for resources necessary to develop, implement, and exercise the emergency plan, and make recommendations with respect to additional resources that may be required and the means for providing these additional resources.
- (g) The administrative and operational expenses of a committee may be paid by the State. [L 1993, c 300, pt of §1]

§128E-6 Reporting requirements. (a) The owner or operator of a facility in the State that stores, uses, or manufactures any hazardous substance shall comply with the following requirements:

- (1) Each owner or operator of a facility in the State shall comply with the emergency planning and notification requirements of sections 302 and 303 of EPCRA, 42 U.S.C. §§11002 and 11003, if an extremely hazardous substance is present at the facility in an amount in excess of the threshold planning quantity established for the substance;
 - (2) Each owner or operator of a facility in this State that is required to prepare or have available a material safety data sheet for a hazardous chemical under the Occupational Safety and Health Act of 1970, as amended, 15 U.S.C. §651 et seq., and regulations promulgated under that Act, for all hazardous substances present at the facility in amounts not less than 10,000 pounds, and extremely hazardous substances present at the facility in amounts not less than 500 pounds, or the threshold planning quantity for that substance, whichever is less, shall comply with the following reporting requirements:
 - (A) Complete a chemical list by March 1 of each year and submit material safety data sheets not more than thirty days after a request;
 - (B) Complete the state chemical inventory form by March 1 of each year; provided that a Tier II list shall be used until a state form is available;
 - (C) Submit facility diagrams and location area maps by March 1 of each year, and update the maps annually as needed; and
 - (D) Upon request, submit emergency response plans required under state or federal law. The information described in subparagraphs (A) through (D) shall be submitted to the commission, the respective committee, and the fire department upon request by the same;
 - (3) Each owner or operator of a facility in this State that is subject to section 313 of EPCRA, 42 U.S.C. §11023, shall comply with the toxic chemical release form requirements of section 323 of EPCRA by July 1 of each year; and
 - (4) Each owner or operator of a facility in this State covered under section 304 of EPCRA, 42 U.S.C. §11004, shall comply with the notification requirements of section 304 of EPCRA, and section 128E-7, if a release of an extremely hazardous substance occurs from the facility.
- (b) The commission shall adopt rules in accordance with chapter 91 establishing the specific information required on the state chemical inventory form. The chemical inventory form shall facilitate ease in complying with the requirements of HEPCRA by consolidating the necessary information into one form. The chemical inventory form may include, but is not limited to:
- (1) The chemical name;
 - (2) Quantity stored on the site;

- (3) Hazardous components;
- (4) Health and physical hazards; and
- (5) Storage information. [L 1993, c 300, pt of § 1]

[§128E-7] Emergency notification requirements. The commission shall adopt rules in accordance with chapter 91 establishing the contents of hazardous substance release reports. The rules shall address, but are not limited to, the following:

- (1) The quantities of designated hazardous substances that are deemed reportable pursuant to this chapter when released;
- (2) The specific periods of time within which these quantities are deemed reportable pursuant to this chapter after being released;
- (3) The agencies to which reports of releases must be made; and
- (4) The format in which the release is to be reported. [L 1993, c 300, pt of § 1]

[§128E-8] Funds for operation. (a) All moneys to meet the general operating needs and expenses of the emergency planning and community right-to-know program of the department shall be allocated by the legislature through appropriations out of the state general fund. The department shall include in its budgetary request for each upcoming fiscal period, the amounts necessary to effectuate the purposes of this chapter.

(b) The department of health, with the assistance of the department of budget and finance and department of accounting and general services, shall prepare a report for the legislature concerning the amount of moneys collected during the preceding fiscal year, the amount of moneys collected to date during the current fiscal year, and the amount of moneys to be collected during the upcoming fiscal year, pursuant to sections 128E-9 and 128E-11, and accruing to the credit of the state general fund. The department shall submit the foregoing report to the legislature not less than twenty days prior to the convening of each regular session of the legislature. [L 1993, c 300, pt of § 1]

[§128E-9] Filing fees. Facilities that are required to report according to section 128E-6(a)(2), shall remit \$100 with each submission of chemical inventory forms or Tier II forms to the commission by March 1 of each year. All moneys collected by the department pursuant to this section shall be deposited in the state treasury and accrue to the credit of the state general fund. [L 1993, c 300, pt of § 1]

[§128E-10] Immunity from civil liability. (a) No employee, representative, or agent of a state or county agency, or persons requested by a state or county agency to engage in any emergency service or response activities involving a hazardous material release at a facility or transportation accident site, shall be liable for the death of or any injury to persons, or the loss of or damage to property, resulting from that hazardous material release, except for any acts or omissions that constitute wilful misconduct.

(b) No commission or committee member shall be liable for the death of or any injury to persons, the loss of or damage to property, or any civil damages, resulting from any act or omission arising out of the performance of the functions, duties, and responsibilities of the commission or a committee, except for acts or omissions that constitute wilful misconduct. [L 1993, c 300, pt of § 1]

[§128E-11] Penalties and fines. (a) Any person who violates any of the emergency reporting, planning, or notification requirements of sections 128E-6 or 128E-7, or fails to pay the fees required by section 128E-9, shall be subject to a civil penalty of not less than \$1,000 but not more than \$25,000 for each separate offense. Each day of each violation shall constitute a separate offense.

(b) Any person who:

- (1) Knowingly fails to report the release of a hazardous substance or extremely hazardous substance, as required by section 128E-7, shall be guilty of a misdemeanor and, upon conviction, be fined not less than \$1,000 but not more than \$25,000 for each separate offense, or imprisoned for not more than one year, or both. For the purposes of this paragraph, each day of each violation shall constitute a separate offense; or
- (2) Intentionally obstructs or impairs, by force, violence, physical interference, or obstacle, a representative of the department, a hazardous materials response team, or a committee attempting to perform the duties and functions set forth in section 128E-5, shall be guilty of a misdemeanor and, upon conviction, be fined not less than \$5,000 but not more than \$25,000 for each separate offense, or be imprisoned for not more than one year, or both.

(c) All moneys collected under this section shall be deposited in the state treasury and accrue to the credit of the state general fund. [L 1993, c 300, pt of § 1]

August 26, 1997

Activity Report

To: State Emergency Response Commission
From: Clifford Ikeda, Chairperson, Kauai-LEPC *U,*
Subject: Period of May-August 1997

1. **REORGANIZATION.** As of August 1, the Kauai Fire Department has an *officially recognized* HazMat/Rescue Team that operates out of the Lihue Fire Station with a staffing pattern of four (4) dedicated personnel on each shift. Assigned personnel are tasked with specific duties and are privileged with additional benefits.
2. **RESPONSE.** No major spills were reported.
 - Routine cleanup at vehicle accidents on highways
 - Gasoline spill at Kapaa High School: cleaned up area
 - Vehicle drove into Nawiliwili Harbor: area boomed
 - Five (5) gallons of latex paint spilled on Kapule Highway: cleaned up area
 - LP gas leak reported in Nawiliwili
3. **TRAINING.** Two (2) fire personnel to begin class in September for certification.

From The Desk of

Clifford Ikeda, Chairperson
Kauai Local Emergency Planning Committee

c/o Kauai Civil Defense Agency
4396 Rice Street 107
Lihue, HI. 96766
Bus: 808.241.6336
Fax: 808.241.6335
kcda@pdc.org

HAWAII FIRE DEPARTMENT • COUNTY OF HAWAII • HILO, HAWAII 96720

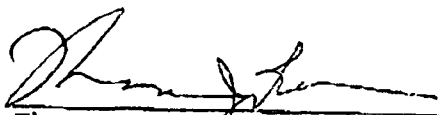
DATE: August 20, 1997


Memorandum

TO : JAY SASAN, COUNTY SAFETY COORDINATOR
FROM : TRAINING/SAFETY DIVISION
SUBJECT : FIRE DEPT. HAZMAT PROGRAM UPDATE (AUG97)

As of June 19, 1997:

1. 30 more firefighters received HAZWOPER refresher training, completing the 1996-97 refresher training sessions that began last Sept. Schedule for 1997-98 retraining sessions is being worked on.
2. (5) persons will begin Specialist level 4 training next month.
3. The new hazmat vehicle, body constructed by Marion Body Works on EME chassis, is on line at Station 4, Kaumana. A dedicated hazmat team is assigned to the vehicle. This year, the team has responded to 12 'hazmat situations' to include: (5) gas leak/smell, (2) noxious odd, and (1) each chemical spill, petroleum spill, hazardous material waste, chemical reaction, and liquid petroleum leak.
4. A medical surveillance program for hazmat team members is being researched and is before Dr. Bade for his recommendations. Preemployment physical examination ('baselines') will primarily be used as the member's pre-physical condition. Captain M. Yoshioka, of the hazmat team is presently gathering cost information on doing various types of blood work.
5. Arrangements have been made with County and State agencies, on replenishing the supply of absorbant materials on the HAZMAT truck, when such materials are deployed in their respective jurisdictions.
6. A second hazmat team is being organized to operate out of South Kohala Fire Station, located on Queen K HWY. It will eventually be as fully equipped as the first team in Hilo.


Thomas J. Bello, Battalion Chief

APPROVED

Deputy Chief Edward Bumatay

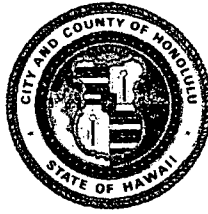
Handout Mtg #28

OAHU CIVIL DEFENSE AGENCY

CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813
PHONE: 523-4121

97 APR -1 1997



JEREMY HARRIS
MAYOR

JOSEPH D. REED
ADMINISTRATOR

March 31, 1997

Dr. Lawrence Miike, M.D., J.D.
Director of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

Dear Dr. Miike:

During our last meeting of the Honolulu Local Emergency Planning Committee (LEPC), there was a presentation by Ms. Lauren Volpini of EPA Region IX on the Emergency Planning and Community Right To Know Act (EPCRA) Compliance Assistance Visits to Pearl Harbor Facilities that took place March 10-13, 1997. There was discussion on the merit of continuing these compliance visits to other federal facilities and expanding the program to private facilities. It was generally felt that such a compliance program will bring more facilities into full EPCRA compliance and enhance local emergency management planning efforts.

The Honolulu LEPC recommends that the Hawaii State Emergency Response Commission (HSERC) formally consider establishing an EPCRA compliance program, led by the State Department of Health and augmented by local emergency response agencies, and that this topic be an agenda item for the next HSERC meeting. We believe that this is a necessary next step to ensure the full implementation of EPCRA.

Please call me or Mr. Leland Nakai, LEPC Coordinator, at 527-5397 if you have any questions.

Sincerely,

[Handwritten signature]
for Carter Davis
Chair, Honolulu LEPC

cc: HEER Office

Nevada puts funding and responsibilities *in the hands of LEPCs*

By Bob Andrews

Title III of the Superfund Amendments and Reauthorization Act of 1986 (Emergency Planning and Community Right-to-Know Act) caught Nevada largely unprepared. Sorting out precisely what it meant for Nevada and how it should be administered did not come easy.

The process began, as it undoubtedly did almost everywhere, with the development of a State Emergency Response Commission and Local Emergency Planning Committees. Beyond that fundamental first step were many unanswered questions on what needed to be done, who should do it, and how. It was the responsibility of the Nevada State Emergency Response Commission to answer questions such as:

- How would we define the SERC-LEPC relationship?
- What should the LEPC role be in Nevada?
- How would reporting requirements be handled? How would they be enforced?
- How could we best inform those that need to know about covered facilities and substances?
- What should be our relationship with regulated facilities?

- How would we define and implement training requirements?
- How would we best support the planning process? How would we handle the review process?
- Who would handle anticipated assistance requests from industry on compliance requirements and completing report forms?
- Should there be a central information repository? How should it be established?
- What was the extent of our responsibilities under community right-to-know provisions?
- How would we fund all of this?

After review of these and other related questions, two things became clear. First, successful implementation of SARA Title III is best handled at the local level. The Local Emergency Planning Committees would be the primary vehicles for much of SARA Title III implementation including planning, testing of plans, training, ongoing relationships with and assistance to facilities, and community right-to-know provisions. Second, it was imperative that funding be obtained to support LEPC activity.

Fee Structure

Nevada's Highway Patrol administers a permit fee for the transportation of hazardous materials within Nevada. It agreed to allocate a percentage of those fees to the State Emergency Response Commission for training and preparation efforts related to hazardous materials incident response. The decision was made to use most of the funds from the Highway Patrol to support Nevada's Local Emergency Planning Committees, retaining only what was necessary for SERC administration.

It was anticipated that the permit fees, which initially provided approximately \$300,000 annually for SERC-LEPC operations, would be reduced significantly following the passage of the Hazardous Materials Transportation Uniform Safety Act, and that a separate SERC fee would be necessary to sustain operations. By the early 1990s, considerable work had been done to build a strong public/private sector relationship among the SERC, LEPCs, and the regulated facilities. This partnership was successful to the point where private-sector representatives unanimously supported the adoption of SERC fees at public hearings, thus making the separate SERC fee structure a reality in 1992.

The fees are a combination of reporting and storage quantity fees paid by regulated facilities with a cap of \$5,000 per facility. Average revenue realized under this structure is about \$230,000 annually.

With various fee adjustments (permit fees were indeed reduced), Nevada SERC revenues are averaging \$450,000 annually. Approximately 75 percent is provided to LEPCs through grants, and the remainder is retained for SERC administration.

LEPC initiatives and grants projects

Nevada has three categories of LEPC grants:

1. *LEPC Operations Grants.* Automatic grants are provided to all active LEPCs for operations supportive of local SARA Title III implementation.
2. *Training/Equipment Grants.* Grant amounts are determined by the nature and merit of individual LEPC grant applications. Their purpose is to support SARA Title III-related training and equipment.
3. *Hazardous Materials Emergency Preparedness Grants.* Administered by the U.S. Department of Transportation, these are being used primarily to support hazardous materials training and planning.

A wide range of LEPC grants projects have been completed to date. Of special interest are the following:

Computerized Simulation Training. This is an interactive software application that develops emergency scenarios based upon decisions input at various stages of the scenario.

Hazardous Materials Categorization Training. This training has been sponsored by several LEPCs with SERC grants. It focuses on identification and analysis of hazardous materials and has special application in situations of spills or illegal dumping.

Tanker Truck Accident Training. Clark County LEPC hosted a tanker truck accident course that provided hands-on training with collision and rollover situations involving hazardous materials. This course also addressed tanker truck design and safe off-loading procedure.

LEPC-Industry Training Initiatives. Many of Nevada's LEPCs use grant funds to conduct on-site training for regulated facilities. This training has ranged from basic SARA Title III compliance issues to awareness and operations level hazmat training.

Hospital Decontamination Study. Clark County LEPC, in cooperation with its hospital community, initiated a grants project to evaluate hospitals' decontamination capabilities and make recommendations for further improvement of their capabilities.

Hazmat Incident Command Training. Several LEPCs have emphasized the response side of training. Highlights of Incident Command Training programs are the Incident Command System format, proper identification, and safe response procedures.

Community Right-to-Know. Several grants projects that have been supportive of community right-to-know initiatives are the design and printing of SARA Title III brochures for public distribution, information workshops for industry and the public, and a current proposal to provide software packages to libraries in order to make local chemical information readily available to the public.

Nevada's LEPCs have provided the mechanism necessary to not only implement SARA Title III provisions locally, but also to make it relevant and useful to concerned people—whether they are the general public, first responders, or industry representatives. A good working partnership between the public and private sectors (the SERC, LEPCs, and facilities) is the essential ingredient for successful implementation of SARA Title III.

Partnering begins with providing an adequate support base for the LEPCs to carry out their mission locally. LEPC members are in the best position to determine the SARA Title III priorities that will best serve their communities. ■

Bob Andrews was executive director for Nevada's State Emergency Response Commission and one of the people responsible for implementing SARA Title III in Nevada. He is currently the director of the Clark County Office of Emergency Management.

LEPC Budget

LEPC Budget Worksheet						1997-1998	HMEP	HMEP		
		Hawaii	Kauai	Maui	Oahu	Equipmen Grant	Planning Grant	Training Grant	Other	
Travel										
	Airfare to HSERC Meetings	State	State	State	NA					
	Parking for HSERC Meetings	State	State	State	State					
	Per Diem for Interisland Tavel	200	200	200	NA					
	Interisland-Meetings	600	600	600	NA					
	Mainland-Meetings	2000	2000	2000	2000					
	Other									
Mail		2000	2000	2000	2000					
	Printing									
	Postage									
Office										
	Expenses									
	Equipment									
Communication										
	Interisland Phone Calls									
	Mainland Phone Calls									
	Answering Machine	60	60	60	60					
	Network									
	Pagers									
Salary		30,000	30,000	30,000	30,000					
Computer										
	Computer with Printer for Office	4000	4000	4000	4000					
	Computer with Printer for HazMat Rig			Equip.	Equip.	5000				
	CAMEO	Free	Free	Free	Free					
	Dedicated SCD Computer	SCD	SCD	SCD	SCD					
	Internet Connection	SCD	SCD	SCD	SCD					
	Other	800	800	800	800					
Other										
	Hazmat Lending Library									
	Full Scale Exercise	EPA	EPA	EPA	EPA					
	Weather Station		Equip.			2500				
	Assorted Response Gear	Equip.				2500				
Combined LEPC Projects										
	Web Site							3000		
	Video									
Total		\$39,660	\$39,660	\$39,660	\$38,860	\$10,000	\$3,000			\$170,840
Anticipated Limit		\$20,000	\$20,000	\$20,000	\$20,000	\$10,000	\$10,000			\$100,000
SCD=State Civil Defense.										
EPA=EPA supports this activity once every four years for each LEPC.										
NA=Not Applicable.										
State=HEER Office money has been used for this in the past.										
Equip.=1997-1998 Superfund Core/PASI Combined HazMat Equipment Grant										

Update on HAZMAT EQUIPMENT
as of 9:00 a.m. 8/25/97

- Paperwork process has begun; Awaiting approval

Hawai'i

overpack drums
absorbent

Purchase Order request sent to ERO -> ASO; awaiting approval
will be sent directly to Big Island Civil Defense office

Kauai

CES weather monitoring station

Purchase Order request awaiting approval from HEER Manager

Maui

laptop computer
printer

T-205 Computer software request approved
Purchase Order request initially denied due to availability of a bid list
PO resent

Oahu

laptop computer
printer

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

IN REPLY, PLEASE REFER TO:
HEER OFFICE

Final Meeting Summary
HAWAII STATE EMERGENCY RESPONSE COMMISSION
MEETING #26

Thursday, December 5, 1996 from 9:00 a.m. to 12:00 noon.

Department of Health
919 Ala Moana Boulevard, 5th Floor Conference Room
Honolulu, Hawaii 96814

Attendees

Voting

Dr. Bruce Anderson, Chair, Department of Health, Environmental Health
Joe Blackburn, Maui LEPC Representative
Bob Boesch, Board of Agriculture
Russell Charlton, Department of Labor and Industry
Sterling Yong, Department of Land and Natural Resources
Capt. Carter Davis, Oahu LEPC Representative
Gary Gill, Environmental Quality Control Office
Dr. John Harrison, University of Hawaii Environmental Center
Clifford Ikeda, Kauai LEPC Representative
Prema Menon, University of Hawaii, School of Public Health
Thomas Smyth, Department of Business, Economic Development and Tourism

Non Voting

Jim Vinton, BHP Hawaii
Roydon Kobayashi, USCG MSO Honolulu
Marsha Mealey, Department of Health, Hazard Evaluation and Emergency Response Office
Mike Ardito, US EPA
Cyrus Lung for Mike Fuke, Board of Water Supply
Dave Hoffman, CLEAN
Bruce Schlieman, HECO
Leland Nakai, Oahu Civil Defense, Honolulu LEPC Administrative Contact
Byron Manipon, Unitek

- 1) The meeting was called to order at 9:12 by Bruce Anderson, DOH, Env. Health Admin..
 - 1.1 Opening Remarks and Discussion
 - 1.2 Approval of Minutes from Mtg #25. The minutes were approved with one change. A description of the changes to Proposals 1 and 2 was added.

- 2) LEPC Updates and Membership Changes
 - 2.1.1) Clifford Ikeda, the Kauai LEPC Representative, reported that Kauai had been quiet with respect to HazMat.

2.1.2) Clifford attended the CAMEO for Windows class. He is uncertain whether to stay with Mac or begin using Windows. The State will be using Windows. Clifford Ikeda and Carter Davis may be interested in using their old Macintoshes.

2.2) Carter Davis, the Oahu LEPC Representative, indicated that the next meeting of their LEPC would take place on Dec. 17 at Grovsnor Center. Items on the agenda follow.

2.2.1) CAMEO Windows Training

2.2.2) Chief Lopez has set training requirements for the HFD at a high level. The entire upper level will be trained to ICS HazMat Incident Command level.

2.2.3) Pearl Harbor requirements.

2.2.4) Environmental Crimes Workshop

2.2.4.1) Federal State and Local were all represented.

2.2.4.2) An increase in environmental crimes and a cavalier attitude about environmental crime has been noted.

2.2.4.3) The Federal attorney will establish a task force.

2.2.4.4) EPA criminal investigators were in town the week of the HSERC meeting and networked with Carter and Mark.

2.2.4.5) EPA plans more investigative work rather than mitigative activities.

2.2.4.6) Training will be provided to environmental professionals.

2.2.4.7) Proactive education for public and industry will present alternatives to hazardous materials that are easy to use.

2.2.4.8) Next workshop, have a draft recommendation for HSERC signature. This is a prime time since the new county prosecutor said that no environmental crime will go unprosecuted.

2.2.5) December 17th is the next county level meeting on the August HazMat exercise.

2.2.6) The Honolulu HazMat plan is published.

2.2.7) The CIP Coordinator will be introduced to the LEPC.

2.3) Sean O'keefe presented information for Joe Blackburn, the Maui LEPC Representative. There have been no Maui LEPC meetings since the last HSERC meeting.

3) Joe would like to have the plan approved by State Civil Defense then do facility profiles but Civil Defense wants the profiles done first and included as part of the plan. They intend to make some changes and use as a working plan to do the profiles. The LEPC will meet once preliminary or working changes are made.

Additional issue) Around Thanksgiving the Foodland Methane detectors went off as there was high BOD in the Maui Land and Pineapple injection well. HC&S will use as irrigation water pending Wastewater Branches approval of the permit.

1) Dames and Moore set up monitoring following an explosion. The HEER office wants an emergency plan to accompany the monitoring.

2) There is an enforcement action against Maui Land and Pineapple regarding their injection well.

4) Mike Ardito, of EPA Region IX handed out materials explaining:

4.1) CAMEO-Terms & Conditions for Free Copies and

4.2) Integrated One Plan Guidance for writing comprehensive emergency plans meeting Coast Guard, OSHA Process Safety, EPA RCRA Contingency and EPA CAA 112r requirements.

4.3) Sandy Carol of EPA emphasizes flexibility in Risk Management Plans under CAA 112r.

4.3.1) State or County may implement.

4.3.2) EPA would like to work cooperatively with SERCs and LEPCs.

4.3.3) Information will come out in the next 6 months. The final rule was published June 20, 1996 and describes new rules for handling hazardous materials.

The Risk Management Plan includes requirements for:

Hazard Assessments

Accident Prevention and
Emergency Response Programs.

4.3.4) The implementing agency will be responsible for verifying submittal, information and timetables, compliance reviews and enforcement actions.

4.3.5) There will be no new funds in the state for implementation.

4.3.6) Permit fees can be used.

4.4) The EPA OSC PREP Exercise '97 satisfies the requirements under EPA and the HazMat exercise for H3. The exercise will be videotaped by the Federal OSCs.

A break was held.

6) The Command Structure for OHSERP was presented by Curtis Martin of the HEER Office. Now that the structure is in place, specific positions and names will be added and those people will be activated upon need.

7) Activities during Operation Kokua were outlined by Steve Armann, HEER Office. With a cooperative effort by the National Guard, the Solid and Hazardous Waste Branch and the HEER Office, all items collected were labelled, given id numbers and identified with the property it came from. All items were properly disposed of. PENCO was the contractor for the hazardous waste consolidation. FEMA denied activation of the ESF 10.

Item 5 was moved in the schedule) Clandestine Labs was presented by Mike Cripps, HEER Office OSC.

5.1) The general feeling is that the clandestine lab activity we see here is just the ripple before the tip of the iceberg.

5.2) HPD, DEA, HazMat and the DOH are all involved in responding, cleaning up and making it safe to reenter.

5.3) Children are involved as they live in the apartments where the labs are set up.

5.4) Precursors are not regulated.

5.5) Crystal Meth is easy to make here. Recrystallizing is what we see now but synthesis labs will be brought in later if it follows trends in the mainland.

5.6) The presence of gangs, which have shown up in the last 6 years, will make the incidence increase.

8) Other Business

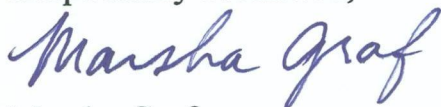
8.1) An administrative bill may be used to introduce the special fund for HEPCRA filing fees issue.

8.2) The pipeline safety program may be formed as a voluntary group but the state is not pursuing it.

9) The next HSERC meeting will be scheduled for February.

The meeting was adjourned at 12:05.

Respectfully submitted,



Marsha Graf

BENJAMIN J. CAYETANO
GOVERNOR OF HAWAII



LAWRENCE MIKE
DIRECTOR OF HEALTH

STATE OF HAWAII
DEPARTMENT OF HEALTH
P.O. BOX 3378
HONOLULU, HAWAII 96801

IN REPLY, PLEASE REFER TO:
HEER OFFICE

DRAFT MEETING SUMMARY
HAWAII STATE EMERGENCY RESPONSE COMMISSION
MEETING #27

Friday, June 20, 1997 from 9:00 a.m. to 12:00 noon.

Department of Health
919 Ala Moana Boulevard, 5th Floor Conference Room
Honolulu, Hawaii 96814

Attendees
Voting

Dr. Bruce Anderson, Chair, Department of Health, Environmental Health
Joseph Blackburn, Maui LEPC Representative
Russell Charlton, Department of Labor and Industry
Sterling Yong, Department of Land and Natural Resources
Capt. Carter Davis, Oahu LEPC Representative
Gary Gill, Environmental Quality Control Office
Dr. John Harrison, University of Hawaii Environmental Center
Clifford Ikeda, Kauai LEPC Representative
Roy Price, State Civil Defense
Jay Sasan, Hawaii LEPC Representative
Chris Takeno, Department of Transportation

Non Voting

Leland Nakai, Oahu Civil Defense
Jim Vinton, BHP Hawaii
Kathy Ho, Attorney Generals Office
Donna Maiava, Department of Health EMS
Steve Armann, Department of Health, Hazard Evaluation and Emergency Response Office
Marsha Graf, Department of Health, Hazard Evaluation and Emergency Response Office
Bryce Hataoka, Department of Health, Hazard Evaluation and Emergency Response Office
Ralph Fronczkowski, State Civil Defense
Cynthia Pang, COMNAVBASE Pearl Harbor
Alan Sugihara, NAVSTA Pearl Harbor
Ken Herzler, USCG MSO Honolulu
CPO Frank Prekel, USCG MSO Honolulu, Planning Office

1) The meeting was called to order at 9:15 by Bruce Anderson, DOH, Env. Health Admin.

- 1.1 The minutes from meeting #26 were **unanimously approved** without changes.
- 2) A legislative update was made by Steve Armann of the HEER Office. Three bills were summarized.
- 2.1. House Bill 1837
- 2.1.1 Filing fees collected for March 1, 1998 will be deposited into the Environmental Response Revolving Fund (ERRF).
- 2.1.2 All money in the ERRF can be used for oil or for other chemicals.
- 2.1.3 Previously, the HEER Office could only access what was budgeted. Now, the Governor may raise the ceiling.
- 2.1.4 Attempts have been made since 1993 to make this change for the filing fees.
- 2.1.5 If the filing fees collected amount to \$80,000, then HEER will request to raise the budget by \$80,000, then HEER can make purchases and sign them over to the LEPCs.
- 2.1.6 An allocation ratio for the fees collected will need to be determined.
- 2.1.7 (Discussion occurred between item 2.3.1 and 2.3.2.) JB requested that proposals for budgets be submitted before the next legislative session. The fee money could be allocated on merit, proportionately, or for projects centralized and beneficial to all LEPCs. To help determine the distribution scheme, BA asked that the LEPCs meet. A **motion** was made and carried to form a subcommittee of the LEPCs for this purpose.

2.2 House Bill 1250-Oil Pipeline Safety Committee

- 2.2.1 It is a formal committee attached to the DOH.
- 2.2.2 The Committee must report annually to the legislature.
- 2.2.3 HEER is an ex officio member which will provide oversight.
- 2.2.4 Members will include BWS, Navy (Chair), Chevron and BHP.
- 2.2.5 This is a trial. If there is no activity, we will see more strict legislation.
- 2.2.6 Military has sovereign immunity.
- 2.2.7 Roy Price offered the IMIS natural gas and liquid pipeline maps for use by the committee.
- 2.2.8 The IMIS system should satisfy the provision to maintain a central repository of all pipeline maps as public information.
- 2.2.9 The committee will determine if the off shore tanker terminal is covered by their committee.
- 2.2.10 The members of the HSERC will review the charter.
- 2.2.11 Although the legislature didn't approve HSERC oversight, a **motion** was made and carried to have the pipeline committee report routinely to the HSERC.
- 2.2.12 The overall goal of the committee is to coordinate cathodic protection.

2.3 Senate Bill 1581-Voluntary Clean Up

- 2.3.1 The bill provides a process and incentive for developers to clean contaminated sites.
- 2.3.2 Two years ago the "Asset Conservation Liability Act" was passed. Hawaii legislation adopted this by reference. The state owner/operator definition mirrors the federal definition. Therefore the lender liability issue is the same as federal. The state needed to make this definition consistent with the federal definition so that banks could use it.

Citizens for a Better Environment sued Chicago Steel for not reporting under EPCRA. Chicago Steel filed their Tier II forms and asked a lower court to dismiss, which the court did. The Citizens group refiled to sue for the historical non filing. This case is in the Supreme Court now.

BA mentioned that field citations may be an available tool for enforcement in the future. The department is considering using them for HEPCRA reporting violations, dust emissions, cess polls and UST rule violations. This proposal will be brought before the HSERC as it is furthered.

CD requested by letter to Lawrence Miike that the state develop an enforcement program. Again tickets may be useful. Please see the copy of the letter included with the minutes.

It was also suggested that a speaker from the EPA attend the next HSERC meeting to help establish enforcement policy.

3) An update on the LEPC/HSERC Homepage project was made by Marsha Graf of the HEER Office.

3.1 Since this is a reimbursable grant and Operation Kokua drained the budget until the fiscal year beginning on July 1, 1997, the purchase order for the Web Site Project will be cut between the beginning of July and the end of September when the funds must be obligated.

3.2 The finished web site will be posted on the PDC server at the State Civil Defense.

3.3 KH suggests including a disclaimer, dates of posting and good through dates, and a contact number on the web pages.

3.4 Each of the County Civil Defense agencies have the capability to hook up 5 computers to the State Civil Defense Server.

4) HazMat Response Equipment Funding through the "1997-1998 Superfund Core/PASI Combined Grant" was discussed by Steve Armann of the HEER Office.

4.1 This \$10,000 from the US EPA is allocated for equipment to be used during HazMat responses.

4.2 \$2500 will go to each county.

4.3 Maui requested a laptop computer for their hazmat rig.

Oahu requested a laptop computer for their hazmat rig.

Kauai requested a weather station.

Hawaii requested assorted basic equipment such as an overpak, adsorbants, boots, etc.

4.4 The HEER Office will procure the items and sign them over to the LEPCs. The LEPC Chair and the Fire Department will sign receipts for the items. The HEER Office manager will be responsible for the inventory.

4.5 DM says that the process used for them to transfer equipment to the counties is different for each county. On Oahu, a resolution is made in the county council to receive the goods. In Maui, they sign for it.

5) Reports on the Terrorism Exercise at Tripler and the Pacific Disaster Center (PDC) Restructuring were made by Roy Price of the State Civil Defense.

5.1 Tripler ran this table top exercise to prepare for response against terrorist activities using nuclear, biological or chemical weapons of mass destruction.

5.1.1 The "Emergency Medical Response Team" was originally developed to support demilitarization on Johnston Atoll.

5.1.2 Now, Tripler intends to make available and exercise this team for use after possible terrorist activities.

5.1.3 There were three scenarios.

Scenario 1 A Claymore with BX (a nerve agent) explodes at the Neil Blaisdale Center. Good issues were brought out and discussed during this scenario.

Scenario 2 A plague release in Hilo. Found that response for biologicals is limited.

Scenario 3 Airborne Plutonium or a rogue nuclear weapon. Didn't get to this scenario.

5.1.4 The following issues were brought out.

Issue 1 Who determines that it is a terrorist attack? This will depend on intelligence because injuries sustained in an NBC attack may look initially like a fire or explosion involving only common materials. Once it is established that it is terrorism, the FBI is in charge and FEMA has situation control. Ultimate decisions at that point are made in Washington.

Issue 2 How do we protect first responders? Basic recognition training is needed for them because it

may not be immediately obvious that NBC is involved.

Issue 3 How should contaminated Emergency Rooms be dealt with? This was not answered during the exercise.

Issue 4 The military Emergency Medical Response Team needs an MOA with the state to provide technical assistance. DM is drafting this and initiating the cooperation.

Issue 5 Federal teams need to be pre-staged to be really effective.

Issue 6 Current instrumentation for chemical agents is 75% false positive.

Issue 7 Under the Nunn-Leuger Act, Federal seed money is coming to Honolulu. Initial assessment is set for July 7th and 8th. The mayor has sent a proposal to establish an EHSS. RP comments that there is a problem with the approach. Its like we're going to war, but it needs to be integrated with the everyday hazmat response to be effective.

Issue 8 DM points out that the federal government wants the state to stockpile antidotes but we already have tunnels full of supplies from the 1940's. It is difficult and expensive to keep antidotes which are within their expiration dates.

Issue 9 RP reminded the commission (as discussed during HSERC Meeting #25) that the federal program that supplied the radiation detection units to the state is now unfunded. RP will maintain some detectors, calibrate them and train on them if the remaining units are kept on active availability by emergency response personnel, and not stored in warehouses. RP has sent a letter to the Civil Defense Administrator at each county informing them of this situation. State Civil Defense will not drive this process any longer, the HSERC must. CD pointed out that Noise and Radiation will be maintained at the current level.

5.2 PDC Imaging has a 1.8 million dollar budget. Use this resource.

A break was taken between 10:55 and 11:00.

6) LEPC Updates and Membership Changes were presented.

-Jay Sasan, Hawaii LEPC Representative

(Please see the handout in the meeting minutes.) The HazMat vehicle was received and some training was performed.

-Clifford Ikeda, Kauai LEPC Representative

There were no significant HazMat spills since the last report.

-Carter Davis, Oahu LEPC Representative

1 Another environmental crimes task force meeting was held. Mark Rectenwald of the Attorney Generals Office, has the lead. If there are issues to be discussed, contact Mark and he can convene a meeting.

2 CLEAN's networking efforts have been good.

3 A full scale hazmat exercise on H3 will be held on August 20, 1997 and will be followed by an ESF 10 exercise the next day.

4 CD sent a letter to the Director of Health requesting the development of an enforcement program as discussed in item 2 above.

5 A training plan is being drafted and will be brought to Leighton Au Cook, State Civil Defense's Training Director.

6 Three fire department personnel have taken the National Fire Academy's "Train the Trainer" Course on Weapons of Mass Destruction. Two are on Oahu and one is on Maui.

7 Honolulu Fire has trained all Captains on HazMat Incident Command. Training is in progress for relief captains.

8 CAMEO was received and installed.

9 City and County of Honolulu Tier II hazmat inventory is entered into CAMEO and is up to date. There are 506 facilities, 33 are new, 66 from before did not report.

10 The Mayor is sponsoring family day on July 4th. HazMat will have a display.

11 The next meeting of the Oahu LEPC will be in September or October.

Note For 128E rulemaking-Include a stipulation that facilities notify HSERC, LEPC and Fire when they will no longer be reporting.

-Joe Blackburn, Maui LEPC Representative

1 Maui has a working draft of their Emergency Operations Plan. Richard Hawking, Managing Director, is reviewing the plan. It will be signed by the Mayor as a draft.

2 Can run CAMEO again.

3 Mike Cripps has been helpful in his capacity as OSC for Maui county.

4 Grant applications are needed early enough to give time to reply.

5 County and private pools still use chlorine. Methyl Bromide is in heavy use.

7) An Update on Federal Coastal HazMat Plan activities was given by Lt. Cmdr. Ken Hertzler and CPO Frank Prekel of the USCG Marine Safety Office.

7.1 They are working on an addition to the Area Contingency Plan. It originally concentrated on oil but the MSO has been mandated to come up to speed on HazMat by 1998.

7.2 The Area Contingency Plan is generated by a committee headed by Whipple. A HazMat subcommittee has been meeting regularly.

7.3 The subcommittee has identified three goals: conduct county Hazard Assessments, identify response assets, and drill the response plan.

7.4 Generating a list of response references is a new objective.

7.5 The committee is considering using the NFPA fire diamond to rank threats. JB suggests IDLH. CD suggests IDLH/vp.

7.6 HEPCRA exempts agricultural use chemicals but CD indicates they have found that there is a black market for pesticides. It was suggested that CD address the next meeting on this topic.

8) Other Business

8.1 An update on CLEAN activities was presented by Jim Vinton of BHP.

8.1.1 Numbered copies of the Emergency Management Plan have been distributed.

8.1.2 The Community Participation Subcommittee is meeting regularly.

They will evaluate the plan and present recommendations on September 18, 1997.

How can smaller businesses be heard? Perhaps through a "Business Participation Subcommittee."

8.1.3 A Project Team is being formed, targeting July. At that time they will look into **early warning and education** systems.

8.1.4 Copies of the CLEAN plan were requested for neighbor island LEPCs. CD has the CLEAN plan on the HazMat truck.

8.2 City and County recently held a meeting on warning systems.

8.3 A **motion** was made and carried to write a letter from HSERC to CLEAN commending their efforts.

8.4 A **motion** was made and carried to write a letter from HSERC to Steve Armann commending his efforts as he leaves the HEER Office to join EPA Region IX RCRA.

8.5 CD acknowledges Cynthia Pang of COMNAVBASE for working closely with the LEPC to strengthen community/federal facility ties.

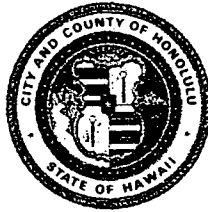
9) A motion was made and carried to schedule the next HSERC meeting on August 26, 1997 when Mike Ardito will be able to make a presentation.

The meeting was adjourned at 11:57.

MA

OAHU CIVIL DEFENSE AGENCY
CITY AND COUNTY OF HONOLULU

650 SOUTH KING STREET
HONOLULU, HAWAII 96813
PHONE: 523-4121



97 APP -1 10:15

JEREMY HARRIS
MAYOR

JOSEPH D. REED
ADMINISTRATOR

March 31, 1997

Dr. Lawrence Miike, M.D., J.D.
Director of Health
State of Hawaii
P.O. Box 3378
Honolulu, Hawaii 96801

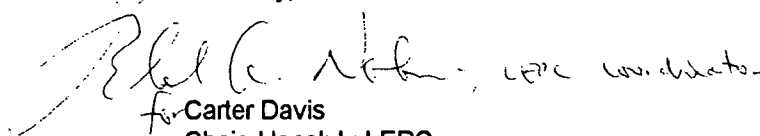
Dear Dr. Miike:

During our last meeting of the Honolulu Local Emergency Planning Committee (LEPC), there was a presentation by Ms. Lauren Volpini of EPA Region IX on the Emergency Planning and Community Right To Know Act (EPCRA) Compliance Assistance Visits to Pearl Harbor Facilities that took place March 10-13, 1997. There was discussion on the merit of continuing these compliance visits to other federal facilities and expanding the program to private facilities. It was generally felt that such a compliance program will bring more facilities into full EPCRA compliance and enhance local emergency management planning efforts.

The Honolulu LEPC recommends that the Hawaii State Emergency Response Commission (HSERC) formally consider establishing an EPCRA compliance program, led by the State Department of Health and augmented by local emergency response agencies, and that this topic be an agenda item for the next HSERC meeting. We believe that this is a necessary next step to ensure the full implementation of EPCRA.

Please call me or Mr. Leland Nakai, LEPC Coordinator, at 527-5397 if you have any questions.

Sincerely,


for Carter Davis
Chair, Honolulu LEPC

cc: HEER Office