TSD File Inventory Index

Date: Oct. 11, 2014

Initial: C M Gerewao

Facility Name:	Marathon Petroleum, LLC (Detroit Facility) (Two Folder Site).
Facility Identification Number:	MID 005 506 359

A.1 General Correspondence		**B.2 Permit Docket (B.1.2)**	
A.2 Part A / Interim Status	Y	.1 Correspondence	
.1 Correspondence	Y	.2 All Other Permitting Documents (Not Part of the ARA)	
.2 Notification and Acknowledgment	Y	**C.1 Compliance - (Inspection Reports)**	Y
.3 Part A Application and Amendments	X	**C.2 Compliance/Enforcement**	Y
.4 Financial Insurance (Sudden, Non Sudden)		.1 Land Disposal Restriction Notifications	
.5 Change Under Interim Status Requests		.2 Import/Export Notifications	
.6 Annual and Biennial Reports	Y	**C.3 FOIA Exemptions - Non-Releasable Documents** C.3	1
A.3 Groundwater Monitoring		**D.1 Corrective Action/Facility Assessment**	
.1 Correspondence		.1 RFA Correspondence	
.2 Reports		.2 Background Reports, Supporting Docs and Studies	
A.4 Closure/Post Closure		.3 State Prelim. Investigation Memos	
.1 Correspondence		.4 RFA Reports	
.2 Closure/Post Closure Plans, Certificates, etc		**D. 2 Corrective Action/Facility Investigation**	
A.5 Ambient Air Monitoring		.1 RFI Correspondence	
.1 Correspondence		.2 RFI Workplan	
.2 Reports		3 RFI Program Reports and Oversight	
B.1 Administrative Record		4 RFI Draft /Final Report	

Total - 2

.5 RFI QAPP		.7 Lab data, Soil Sampling/Groundwater	
.6 RFI QAPP Correspondence		.8 Progress Reports	
.7 Lab Data, Soil-Sampling/Groundwater		D.5 Corrective Action/Enforcement	
.8 RFI Progress Reports		.1 Administrative Record 3008(h) Order	
.9 Interim Measures Correspondence		.2 Other Non-AR Documents	
.10 Interim Measures Workplan and Reports		D.6 Environmental Indicator Determinations	
D.3 Corrective Action/Remediation Study		.1 Forms/Checklists	
.1 CMS Correspondence		E. Boilers and Industrial Furnaces (BIF)	
.2 Interim Measures		.1 Correspondence	
.3 CMS Workplan		.2 Reports	
.4 CMS Draft/Final Report		F Imagery/Special Studies (Videos, photos, disks, maps, blueprints, drawings, and other special materials.)	
.5 Stabilization		G.1 Risk Assessment	
.6 CMS Progress Reports		.1 Human/Ecological Assessment	
.7 Lab Data, Soil-Sampling/Groundwater		.2 Compliance and Enforcement	
D.4 Corrective Action Remediation Implementation		.3 Enforcement Confidential	
.1 CMI Correspondence		.4 Ecological - Administrative Record	
.2 CMI Workplan		.5 Permitting	
.3 CMI Program Reports and Oversight		.6 Corrective Action Remediation Study	
.4 CMI Draft/Final Reports		.7 Corrective Action/Remediation Implementation	
.5 CMI QAPP		.8 Endangered Species Act	
.6 CMI Correspondence		.9 Environmental Justice	

Note: Transmittal Letter to Be Included with Reports.
Comments: Two folder site – C.3 documents are in separate folders

A.2 Part A/
Interim Status

Michigan Department of Environmental Quality
Waste Management Division

Fax Transmittal

Date/Time: 9-21-99 Pages: 7

To: M. Capiro

Company: EPA

Department:

Phone: Fax: 312-353-4342

From: John Lappin

Section: MDEQ Notification

Unit:

Phone: 517-241-2441 Fax: 517-373-4797

Note: Entire Record faxed

MICHIGAN DEPARTMENT OF ENVIRONMENTAL QUALITY
WASTE MANAGEMENT DIVISION

NOTIFICATION OF REGULATED WASTE ACTIVITY

Required under authority of the Natural Resources and Environmental Protection Act, 1994 PA 451, as amended. Failure to submit this information may result in civil or criminal penalties.

DEQ

MAIL THE COMPLETED FORM TO:

WASTE MANAGEMENT DIVISION
MICHIGAN DEPARTMENT OF
ENVIRONMENTAL QUALITY
PO BOX 30241
LANSING MI 48909-7741

MDEQ USE ONLY

RECEIVED
NOV 12 1998
WASTE MGMT. DIV.

I. Facility's EPA ID Number (see instructions on page 5) PRINT CLEARLY

A. First Notification: ☐ B. Subsequent Notification (Complete C): ☒

C. U.S. EPA Identification (ID) Number: MID 005 506 357

II. Name of Facility (see instructions on page 5) PRINT CLEARLY

Include company and specific site name

MARATHON ASHLAND PETROLEUM L.L.C.

III. Location of Facility (see instructions on pages 5 & 6) PRINT CLEARLY

Street Address: 1300 SOUTH FORT STREET

City or Town: DETROIT State: MI

County Name: WAYNE Zip Code: 48217-1294

IV. Facility Mailing Address (see instructions on page 6) PRINT CLEARLY

Street or P. O. Box: SAME

City or Town:

State: Zip Code:

V. Facility Contact (see instructions on page 6) PRINT CLEARLY

Person to be contacted regarding waste activities

Name (Last): BRUESTLE Name (First): JEFFERY L.

Job Title: ENVIRONMENTAL COORDINATOR Phone: (313) 297-6356

VI. Facility Contact Person's Address (see instructions on page 6) PRINT CLEARLY

Same as Location address: ☒ Same as Mailing address: ☐

DO NOT complete the rest of the information in VI. if same address as location or mailing.

Street, P.O. Box, or Route No.:

City or Town: State: Zip Code:

VII. Ownership (see instructions on pages 6 & 7) PRINT CLEARLY

A. Name of Facility's Legal Owner MARATHON ASHLAND PETROLEUM L.L.C.

Name (Last): Name (First):

Street, P.O. Box, or Route No.: 539 SOUTH MAIN STREET

City or Town: FINDLAY State: OHIO

ZIP Code: 45840 Phone: (419) 421-2121

B. Land Type: P C. Owner Type: P

D. Change of Ownership Indicator Yes ☐ No ☒ If yes, date changed:

E. Property Owner SAME

Name (Last): Name (First):

Street, P.O. Box, or Route No.:

City or Town: State:

ZIP Code: Phone:

U.S. EPA Form 8700-12 is replaced by the Michigan Notification Form EQP5150 (rev. 03/98)

DEQ/WASTE MANAGEMENT Fax:517-373-4797 Sep 21 '99 9:44 P.02

VIII. Type of Regulated Waste Activity (Mark 'X' in the appropriate boxes. Refer to instructions on pages 7-10)

A. Hazardous Waste Activity (at this location)

1. Generator
   - a. Greater than 1,000 kg/mo (2,200 lbs.) LQG
     OR
   - X b. 100 to 1,000 kg/mo (220 - 2,200 lbs.) SQG
     OR
   - c. Less than 100 kg/mo CESQG
2. Transporter (indicate mode in boxes 1-5 below)
   - a. For own waste only, OR
   - b. For commercial purposes
   - c. Commingle
   - d. Transfer Facility
   - [ ] 1. Air [ ] 2. Rail [ ] 3. Highway
   - [ ] 4. Water [ ] 5. Other - specify:
3. Treatment, Storage, Disposal Facility at this facility
4. Hazardous Waste Fuel
   - a. Generator Marketing to Burner, OR
   - b. Other Marketer
   - c. Burns fuel in Boiler and/or Industrial Furnace
     - i. Smelter Deferral
     - ii. Small Quantity Exemption
   - Indicate Type of Combustion Device(s)
     - i. Utility Boiler
     - ii. Industrial Boiler
     - iii. Industrial Furnace
5. Underground Injection Control
6. Temporary waste generation (non-emergency)

B. Used Oil Activities

1. Used Oil Fuel Marketer
   - a. Marketer Directs Shipment of Used Oil to Off-Specification Burner, OR
   - b. Marketer who first Claims the Used Oil Meets the Specifications
2. Used oil burner - indicate device(s)
   - a. Utility Boiler
   - b. Industrial Boiler
   - c. Industrial Furnace
3. Used Oil Transporter - Indicate Type(s) of Activity(ies)
   - a. Transporter
   - b. Transfer Facility
4. Used Oil Processor and/or Re-refiner
   - a. Process
   - b. Re-refine

C. Generation of Hazardous Waste Ceased or Facility Closed

- No longer generating hazardous waste; still in business
- No longer generating hazardous waste; out of business
- Date:

D. Universal Waste

1. Large Quantity Handler of Universal Waste and are accumulating more than 5,000 Kilograms of: (check box(es))
   - [ ] batteries, [ ] pesticides,
   - [ ] thermostats, [ ] mercury switches,
   - [ ] mercury thermometers, [ ] electric lamps
   - [ ] devices containing elemental mercury.
2. Destination Facility of Universal Waste

IX. Description of Regulated Wastes (Mark 'X' in the appropriate boxes. Refer to instructions on page 10)

A. Characteristics of Non-listed Hazardous Wastes. See R 299.9217 -R 299.9218. Use page 4 of 4 if more spaces are needed for waste codes. (put an "X" in box(es) - list code(s) for Toxicity Characteristic Leaching Procedure (TCLP))

1. Ignitable (D001) X	2. Corrosive (D002) X	3. Reactive (D003) X	4. TCLP (list code(s) below)

D004	D005	D006	D007	D008	D009	D010	D011	D012	D013

B. Listed Hazardous Wastes. See R 299.9220 - R 299.9226. Use page 4 of 4 if more spaces are needed for waste codes. (list code(s) below)

K048	K049	K050	K051	K052	K169	K170	K171	F002	F003

X. Certification. I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Signature of owner, operator, or an authorized representative	Name and Official Title (type or print)	Date Signed (ccyy-mm-dd)
	LLOYD J. NORDHAUSEN MICHIGAN REFINING DIVISION MANAGER MARATHON ASHLAND PETROLEUM LLC	NOV 10, 1998

DEQ/WASTE MANAGEMENT Fax:517-373-4797 Sep 21 '99 9:45 P.03

IX. Description of Regulated Wastes Continued (additional sheet)

B. Listed or Characteristic TCLP Hazardous Wastes.

D014	P006	P050	P102	U001	U043	U085	U127	U168	U213
D015	P007	P051	P103	U002	U044	U086	U128	U169	U214
D016	P008	P054	P104	U003	U045	U087	U129	U170	U215
D017	P009	P056	P105	U004	U046	U088	U130	U171	U216
D018	P010	P057	P106	U005	U047	U089	U131	U172	U217
D019	P011	P058	P108	U006	U048	U090	U132	U173	U218
D020	P012	P059	P109	U007	U049	U091	U133	U174	U219
D021	P013	P060	P110	U008	U050	U092	U134	U176	U220
D022	P014	P062	P111	U009	U051	U093	U135	U177	U221
D023	P015	P063	P112	U010	U052	U094	U136	U178	U222
D024	P016	P064	P113	U011	U053	U095	U137	U179	U223
D025	P017	P065	P114	U012	U055	U096	U138	U180	U225
D026	P018	P066	P115	U014	U056	U097	U140	U181	U226
D027	P020	P067	P116	U015	U057	U098	U141	U182	U227
D028	P021	P068	P118	U016	U058	U099	U142	U183	U228
D029	P022	P069	P119	U017	U059	U101	U143	U184	U234
D030	P023	P070	P120	U018	U060	U102	U144	U185	U235
D031	P024	P071	P121	U019	U061	U103	U145	U186	U236
D032	P026	P072	P122	U020	U062	U105	U146	U187	U237
D033	P027	P073	P123	U021	U063	U106	U147	U188	U238
D034	P028	P075	P127	U022	U064	U107	U148	U189	U239
D035	P029	P076	P128	U023	U066	U108	U149	U190	U240
D036	P030	P077	P188	U024	U067	U109	U150	U191	U243
D037	P031	P078	P189	U025	U068	U110	U151	U192	U244
D038	P033	P081	P190	U026	U069	U111	U152	U193	U246
D039	P034	P082	P191	U027	U070	U112	U153	U194	U247
D040	P036	P084	P192	U028	U071	U113	U154	U196	U248
D041	P037	P085	P194	U029	U072	U114	U155	U197	U249
D042	P038	P087	P196	U030	U073	U115	U156	U200	U271
D043	P039	P088	P197	U031	U074	U116	U157	U201	U278
	P040	P089	P198	U032	U075	U117	U158	U202	U279
F005	P041	P092	P199	U033	U076	U118	U159	U203	U280
F037	P042	P093	P201	U034	U077	U119	U160	U204	U328
F038	P043	P094	P202	U035	U078	U120	U161	U205	U353
	P044	P095	P203	U036	U079	U121	U162	U206	U359
P001	P045	P096	P204	U037	U080	U122	U163	U207	U364
P002	P046	P097	P205	U038	U081	U123	U164	U208	U367
P003	P047	P098		U039	U082	U124	U165	U209	U372
P004	P048	P099		U041	U083	U125	U166	U210	U373
P005	P049	P101		U042	U084	U126	U167	U211	U387

DEQ/WASTE MANAGEMENT Fax:517-373-4797 Sep 21 '99 9:45 P.04

IX. Description of Regulated Wastes Continued (additional sheet)

B. Listed or Characteristic TCLP Hazardous Wastes.

U389									
U394									
U395									
U404									
U409									
U410									
U411									

DEQ/WASTE MANAGEMENT Fax:517-373-4797 Sep 21 '99 9:46 P.05

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

Certified Mail
Return Receipt # P 608 152 393

RECEIVED

NOV 1 2 1998

Waste Management
Division

November 10, 1998

Mr. Don Clingersmith
Notification Project Coordinator
Waste Management Division
Michigan Department of Environmental Quality
P.O. Box 30241
Lansing, Michigan 48909-7741

RE: Amended Notification of Regulated Waste Activity
MID 005 506 357

Dear Mr. Clingersmith:

Enclosed please find an amended Notification of Regulated Waste Activity Form for the Marathon Ashland Petroleum L.L.C. facility located at 1300 South Fort Street, Detroit, Michigan. The form has been amended to add three new waste codes (K169, K170 and K171) for waste generated at the refinery which will become listed hazardous wastes on February 8, 1999. In addition, the form has been amended to add all "P" and "U" listed waste codes.

If you have any questions, please contact me at (313) 297-6356.

Sincerely,

Jeffery L. Bruestle

Jeffery L. Bruestle
Environmental Coordinator

n:\environmental\wasteship\waste correspondance\11_98NRWAForm.doc

STATE OF MICHIGAN

JOHN ENGLER, Governor

DEPARTMENT OF ENVIRONMENTAL QUALITY

"Better Service for a Better Environment"

HOLLISTER BUILDING, PO BOX 30473, LANSING MI 48909-7973

INTERNET: www.deq.state.mi.us

RUSSELL J. HARDING, Director

REPLY TO:

WASTE MANAGEMENT DIVISION
PO BOX 30241
LANSING MI 48909-7741

November 16, 1998

Mr. Jeffery L. Bruestle
Marathon Ashland Petroleum LLC
1300 South Fort Street
Detroit, MI 48217-1294

Dear Mr. Bruestle:

SUBJECT: Notification of Regulated Waste Activity
Identification Number **MID 005 506 357**

The Michigan Department of Environmental Quality (MDEQ) has received a Notification of Regulated Waste Activity dated November 10, 1998, which you submitted pursuant to Section 3010 of the federal Resource Conservation and Recovery Act, 42 U.S.C. 6930 and Part 111, Hazardous Waste Management, of Michigan's Natural Resources and Environmental Protection Act, 1994 PA 451, as amended, MCL 32.111-01 et seq. for Marathon Ashland Petroleum LLC located at 1300 South Fort Street, Detroit, Michigan.

This subsequent submittal updated the following information:

Contact person, Regulated Waste codes.
Generator status is Large Quantity Generator.

If you have any questions, please contact me at 517-335-5139, or Elaine Sellek at 517-335-5035, or John Loeffler at 517-241-2441.

Sincerely,

Don Clingersmith

Don Clingersmith
Notification Project Coordinator
Waste Management Division

cc: S.E. Michigan District, WMD, MDEQ
File

SEP 2 8 1982

UNITED STATES
ENVIRONMENTAL PROTECTION AGENCY
REGION V
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

FILE COPY

REPLY TO ATTENTION OF:
RCRA ACTIVITIES

BLUM SYDNEY CIVIC AFFAIR COORD
MARATHON OIL COMPANY
1300 S FORT
DETROIT MI 48217
FACILITY: 1300 S FORT
LOCATION: DETROIT MI 48217
ID NO.: MID005506357

RE: TSD Notification without Part A Application

Dear Notifier:

The United States Environmental Protection Agency (U.S. EPA) has received your notification of hazardous waste activity. On that form, by checking the "treat/store/dispose" (TSD) box, you indicated that you are a hazardous waste management facility (HWMF). To date, however, we have no record of having received Part A application for a hazardous waste permit which is required for all HWMFs.

Federal regulations require owners and operators of existing HWMFs (installations which treat, store, or dispose of hazardous waste) to have submitted a Part A permit application to the Regional Administrator by November 19, 1980, in accordance with 40 CFR 122.22. This requirement applied to HWMFs which were in existence on or before November 19, 1980. New facilities (those established after November 19, 1980) are required to submit Part A and Part B of their permit application, and receive a Resource Conservation and Recovery Act (RCRA) permit before beginning physical construction.

If your facility treats, stores, or disposes of hazardous waste, then your facility is operating without a hazardous waste permit, in violation of Section 3005 of RCRA, as amended. This violation is considered serious by the U.S. EPA, and may subject you to Federal enforcement under Section 3008 of RCRA for past and continued non-compliance.

Please submit your completed Part A application to the address below within fifteen days of receipt of this letter:

RCRA ACTIVITIES
P. O. Box A3587
Chicago, Illinois 60690-3587

We are aware that some hazardous waste handlers may have marked the TSD box on the notification form as a precaution or as a result of misunderstanding the May 19, 1980, hazardous waste regulations. If you notified us as a TSD in error, or if your status as a treatment, storage, or disposal facility has changed, please advise us in writing immediately.

Please contact Arthur Kawatachi of my staff at (312) 353-2197, if you have any questions regarding this letter.

Sincerely yours,

William H Miner for

Karl J. Klepitsch, Jr., Chief
Waste Management Branch

Refining

MD 005 506357

Marathon Petroleum Company

Findlay, Ohio 45840
Telephone 419/422-2121

January 6, 1983

Name Changed 2-8-83

RCRA Activities (5HW)
Region 5, U.S. Environmental Protection Agency
P. O. Box A-3587
Chicago, IL 60690

Attention: Mr. Arthur Kawatachi

Re: "RCRA" Generator I.D. Numbers and Marathon Corporate Name Change - Refining Operations

Dear Sirs:

Pursuant to a recent telephone conversation between yourself and our Mr. John Connor concerning RCRA generator I.D. numbers, this is to advise you of a recent corporate name change wherein effective July 9, 1982, Marathon Oil Company, owner and operator of two refineries in Region 5, changed its corporate name to Marathon Petroleum Company. [There was no transfer of ownership of the refineries.] On the same date, USS Holdings Company, the holder of all of Marathon Petroleum Company's stock, changed its name to Marathon Oil Company. Marathon Petroleum Company has retained its main offices at 539 South Main Street, Findlay, Ohio 45840.

The "RCRA" generator I.D. numbers for refining facilities owned and operated by Marathon Petroleum Company in Region 5 are shown below:

State	Name & Mailing Address	Facility Type	I.D. Number
Illinois	Marathon Petroleum Company Refinery Office Building Robinson, IL 62454	Refinery	ILD005476882 F4, G, TSD
Michigan	Marathon Petroleum Company 1300 South Fort Street Detroit, MI 48217	Refinery	MID005506357 G, I, TSD

Your records should be changed to reflect the corporate name change and we understand that as a standard procedure Region 5 will send copies of this notice to the appropriate state agencies.

Should you have any further questions regarding this matter, please contact me or Mr. John Connor at (419) 422-2121.

Sincerely,

MARATHON PETROLEUM COMPANY

N. F. Seppi

N. F. Seppi
Technical Representative

NFS:dg

WASTE MANAGEMENT BRANCH (5HW)
ENVIRONMENTAL PROTECTION AGENCY
10 JAN 1983

Terminal & Transport Department

Marathon Oil Company

539 South Main Street
Findlay, Ohio 45840
Telephone 419/422-2121

VIA CERTIFIED MAIL

January 16, 1991

U.S. EPA Region V
RCRA Activities
Waste Management Division
P. O. Box A3587
Chicago, IL 60690

RE: NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

Please be advised that Marathon Petroleum Company merged into its parent company, Marathon Oil Company effective January 1, 1991. The merger requires that the Name of Installation for the following Installation EPA identification numbers be changed to Marathon Oil Company:

I.D. Number	Location of Installation
ILD084311059	Champaign, IL
ILD000666271	Hartford, IL
ILD059430298	Mt. Prospect, IL
ILD000815183	Robinson, IL
ILD000666263	Rockford, IL
ILD000814715	Willow Springs, IL
IND000715169	Griffith, IN
IND000715177	Hammond, IN
IND000714956	Mt. Vernon, IN
IND000714964	Muncie, IN
IND005417126	Speedway, IN
IND175804780	Waterloo, IN
MID005506357	Detroit, MI
MID985574573	Detroit, MI
MID000724823	Flint, MI
MID000724815	Jackson, MI
MID000724799	Mackinaw City, MI
MID000724807	Niles, MI
MID092954098	North Muskegon, MI
OHD000723643	Brecksville, OH
OHD981088552	Cleveland, OH
OHD075037374	Columbus, OH
OHD000723635	Lebanon, OH
OHD000817148	Lima, OH

OHD000723619	Oregon, OH
OHD000723627	Oregon, OH
OHD980902415	Steubenville, OH
OHD980903124	Youngstown, OH
WID054923925	Green Bay, WI
WID000821702	Milwaukee, WI

Yours truly,

R. A. Richard

R. A. Richard
Environmental & Safety

/rr
MPCMOC1

Please refer to the *Instructions for Filing Notification* before completing this form. The information requested here is required by law (*Section 3010 of the Resource Conservation and Recovery Act*).

EPA Notification of Regulated Waste Activity

N 7937

United States Environmental Protection Agency

GSA No. 0246-EPA-C

Date Received (For Official Use Only)

I. Installation's EPA ID Number (*Mark 'X' in the appropriate box*)

[X] A. First Notification

[ ] B. Subsequent Notification (*complete item C*)

C. Installation's EPA ID Number: MID005506357

II. Name of Installation (*Include company and specific site name*)

MARATHON PETROLEUM CO

III. Location of Installation (*Physical address not P.O. Box or Route Number*)

Street: 301 S FORT ST

Street (continued):

City or Town: DETROIT | State: MI | ZIP Code: 48217-

County Code: 163 | County Name: WAYNE

IV. Installation Mailing Address (*See Instructions*)

Street or P.O. Box: 539 S MAIN ST

City or Town: FINDLAY | State: OH | ZIP Code: 45840-

V. Installation Contact (*Person to be contacted regarding waste activities at site*)

Name (*last*): SHEELY | (*first*): GERALD

Job Title: MGR ENVIRONMENT | Phone Number (*area code and number*): 419-422-2121

VI. Installation Contact Address (*See Instructions*)

A. Contact Address: Location [ ] Mailing [X]

B. Street or P.O. Box: 539 S MAIN ST

City or Town: FINDLAY | State: OH | ZIP Code: 45840-

VII. Ownership (*See Instructions*)

A. Name of Installation's Legal Owner: MARATHON PETROLEUM CO

Street, P.O. Box, or Route Number: 539 S MAIN ST

City or Town: FINDLAY | State: OH | ZIP Code: 45840-

Phone Number (*area code and number*): 419-422-2121

B. Land Type: [ ]

C. Owner Type: P

D. Change of Owner Indicator: Yes [ ] No [ ] (Date Changed) Month Day Year

EPA Form 8700-12 (01-90) Previous edition is obsolete.

Continue on reverse

ID - For Official Use Only

VIII. Type of Regulated Waste Activity *(Mark 'X' in the appropriate boxes. Refer to instructions.)*

A. Hazardous Waste Activity

1. Generator (See Instructions)
   - [ ] a. Greater than 1000kg/mo (2,200 lbs.)
   - [ ] b. 100 to 1000 kg/mo (220 - 2,200 lbs.)
   - [X] c. Less than 100 kg/mo (220 lbs.)
2. Transporter (Indicate Mode in boxes 1-5 below)
   - [ ] a. For own waste only
   - [ ] b. For commercial purposes

   Mode of Transportation
   - [ ] 1. Air
   - [ ] 2. Rail
   - [ ] 3. Highway
   - [ ] 4. Water
   - [ ] 5. Other - specify
3. [ ] Treater, Storer, Disposer (at installation) Note: A permit is required for this activity; see instructions.
4. Hazardous Waste Fuel
   - [ ] a. Generator Marketing to Burner
   - [ ] b. Other Marketers
   - [ ] c. Burner - indicate device(s) - Type of Combustion Device
     - [ ] 1. Utility Boiler
     - [ ] 2. Industrial Boiler
     - [ ] 3. Industrial Furnace
5. [ ] Underground Injection Control

B. Used Oil Fuel Activities

1. Off-Specification Used Oil Fu
   - [ ] a. Generator Marketing to Burner
   - [ ] b. Other Markerer
   - [ ] c. Burner - indicate device(s) - Type of Combustion Device
     - [ ] 1. Utility Boiler
     - [ ] 2. Industrial Boiler
     - [ ] 3. Industrial Furnace
2. [ ] Specification Used Oil Fuel Marketer (or On-site Burner) Who First Claims the Oil Meets the Specification

IX. Description of Regulated Wastes *(Use additional sheets if necessary)*

A. Characteristics of Nonlisted Hazardous Wastes. Mark 'X' in the boxes corresponding to the characteristics of nonlisted hazardous wastes your installation handles. *(See 40 CFR Parts 261.20 - 261.24)*

1. Ignitable *(D001)*	2. Corrosive *(D002)*	3. Reactive *(D003)*	4. EP Toxic *(D000)*
X			

(List specific EPA hazardous waste number(s) for the EP Toxic contaminant(s))

B. Listed Hazardous Wastes. (See 40 CFR 261.31 - 33. See instructions if you need to list more than 12 waste codes.)

1	2	3	4	5	6
7	**8**	**9**	**10**	**11**	**12**

C. Other Wastes. (State or other wastes requiring an I.D. number. See instructions.)

1	2	3	4	5	6

X. Certification

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fines and imprisonment.

Signature	Name and Official Title *(type or print)*	Date Signed
	D. A. Ross, Manager Terminal & Transport Dept.	6/16/90

XI. Comments

Note: Mail completed form to the appropriate EPA Regional or State Office. (See Section III of the booklet for addresses.)

Michigan Refining Division

Marathon Petroleum Company

1300 South Fort Street
Detroit, Michigan 48217-1294
Telephone 313/843-9100

MID005566357

October 15, 1982

Waste Management Branch
U.S.E.P.A. Region V
230 South Dearborn
Chicago, Illinois 60604

Attention: Mr. Arthur Kawatachi

Dear Sir:

On October 13, a letter was received from your office stating that we had checked the treat/store/dispose box on the notification of hazardous waste activity form 8700-12 (6-80) and also that we are involved in transportation of hazardous wastes.

The above information is incorrect. The Detroit Refinery is a generator of hazardous waste, not a treat, store, dispose, nor transporter.

If I can be of further assistance, please contact me.

Sincerely yours,

Sydney Blum
Civic Affairs Coordinator

SB:tk

RECEIVED
OCT 19 1982
WASTE MANAGEMENT BRANCH
EPA. REGION V

EPA

ACKNOWLEDGEMENT OF NOTIFICATION OF HAZARDOUS WASTE ACTIVITY
(VERIFICATION)

This is to acknowledge that you have filed a Notification of Hazardous Waste Activity for the installation located at the address shown in the box below to comply with Section 3010 of the Resource Conservation and Recovery Act *(RCRA)*. Your EPA Identification Number for that installation appears in the box below. The EPA Identification Number must be included on all shipping manifests for transporting hazardous wastes; on all Annual Reports that generators of hazardous waste, and owners and operators of hazardous waste treatment, storage and disposal facilities must file with EPA; on all applications for a Federal Hazardous Waste Permit; and other hazardous waste management reports and documents required under Subtitle C of RCRA.

EPA I.D. NUMBER → • MID005506357 REACKNOWLEDGEMENT

MARATHON OIL COMPANY
1300 S FORT
DETROIT MI 48217

INSTALLATION ADDRESS → 1300 S FORT
DETROIT MI 48217

EPA Form 8700-12B (4-80) 10/03/81

Please print or type with ELITE type (12 characters/inch).

GSA No. 12345-XX
Form Approved OMB No. 158-R00XX

U.S. ENVIRONMENTAL PROTECTION AGENCY
GENERATOR ANNUAL REPORT – PART A
(Collected under the authority of Section 3002 of RCRA.)

FOR OFFICIAL USE ONLY (Items 1 and 2)

1. DATE RECEIVED: – – 19

2. TYPE OF REPORT:

X. GENERATOR'S EPA I.D. NO.: GMID005506357 (F/A) 1

XI. FACILITY'S EPA I.D. NO.: MID096963194

XII. FACILITY NAME (specify): CHEM-MET SERVICES

XIII. FACILITY ADDRESS (street or P.O. box, city, state, & zip code):
18550 Allen Road
Wyandotte, Michigan 48192

XIV. WASTE IDENTIFICATION

LINE NUMBER	A. DESCRIPTION OF WASTE	B. DOT HAZARD CLASS	C. EPA HAZARDOUS WASTE NUMBER (see instructions)	D. AMOUNT OF WASTE	UNIT OF MEASURE (enter code)
1	API Separator Sludge from Petroleum Refining Industry	01	K051	297	T
2					
3					
4					
5					
6					
7					
8					
9					
10					
11					
12					

XV. COMMENTS (enter information by line number — see instructions)

EPA Form 8700-13A (5-80)

BILLING CODE 6560-01-C

Please print or type with ELITE type (12 c[illegible]s/inch) in the unshaded areas only.

Form Approved OMB No. 15[illegible] S79016
GSA No. 0246-EPA-OT

EPA

U.S. EN[illegible]MENTAL PROTECTION AGENCY

NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

INSTALLATION'S EPA I.D. NO.	MID005506357
I. NAME OF INSTALLATION	MARATHON OIL COMPANY*
II. INSTALLATION MAILING ADDRESS	1300 S FORT DETROIT, MI 48217
III. LOCATION OF INSTALLATION	1300 S FORT 000095 AUG -8 80 DETROIT, MI 48217

INSTRUCTIONS: If you received a preprinted label, affix it in the space at left. If any of the information on the label is incorrect, draw a line through it and supply the correct information in the appropriate section below. If the label is complete and correct, leave Items I, II, and III below blank. If you did not receive a preprinted label, complete all items. "Installation" means a single site where hazardous waste is generated, treated, stored and/or disposed of, or a transporter's principal place of business. Please refer to the INSTRUCTIONS FOR FILING NOTIFICATION before completing this form. The information requested herein is required by law *(Section 3010 of the Resource Conservation and Recovery Act).*

DETACH

FOR OFFICIAL USE ONLY

COMMENTS: C

INSTALLATION'S EPA I.D. NUMBER	APPROVED	DATE RECEIVED (yr., mo., & day)	
F MID005506357 T/A 1	A	800808	MARATHON PETROLEUM CO 2-8-83 NCY

I. NAME OF INSTALLATION

MARATHON OIL COMPANY

II. INSTALLATION MAILING ADDRESS

STREET OR P.O. BOX: 3 1300 S FORT

CITY OR TOWN	ST.	ZIP CODE
4 DETROIT	MI	48217

III. LOCATION OF INSTALLATION

STREET OR ROUTE NUMBER: 5 SAME

CITY OR TOWN	ST.	ZIP CODE
6 SAME		

IV. INSTALLATION CONTACT

NAME AND TITLE (last, first, & job title)	PHONE NO. (area code & no.)
2 BLUM SYDNEY CIVIC AFFAIR COORD	313-843-9100

V. OWNERSHIP

A. NAME OF INSTALLATION'S LEGAL OWNER: 8 MARATHON OIL COMPANY

B. TYPE OF OWNERSHIP (enter the appropriate letter into box)

F = FEDERAL
M = NON-FEDERAL

M

VI. TYPE OF HAZARDOUS WASTE ACTIVITY (enter "X" in the appropriate box(es))

- [X] A. GENERATION
- [X] B. TRANSPORTATION (complete item VII)
- [X] C. TREAT/STORE/DISPOSE
- [ ] D. UNDERGROUND INJECTION

VII. MODE OF TRANSPORTATION (transporters only – enter "X" in the appropriate box(es))

- [ ] A. AIR
- [ ] B. RAIL
- [X] C. HIGHWAY
- [ ] D. WATER
- [ ] E. OTHER (specify):

VIII. FIRST OR SUBSEQUENT NOTIFICATION

Mark "X" in the appropriate box to indicate whether this is your installation's first notification of hazardous waste activity or a subsequent notification. If this is not your first notification, enter your Installation's EPA I.D. Number in the space provided below.

- [X] A. FIRST NOTIFICATION
- [ ] B. SUBSEQUENT NOTIFICATION (complete item C)

C. INSTALLATION'S EPA I.D. NO.: MID005506357

IX. DESCRIPTION OF HAZARDOUS WASTES

Please go to the reverse of this form and provide the requested information. AUG 08 1980

I.D. – FOR OFFICIAL USE ONLY

S													T/A	C
W	M	I	D	0	0	5	5	0	6	3	5	7	2	1

IX. DESCRIPTION OF HAZARDOUS WASTES *(continued from front)*

A. HAZARDOUS WASTES FROM NON–SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.31 for each listed hazardous waste from non–specific sources your installation handles. Use additional sheets if necessary.

1	2	3	4	5	6
7	**8**	**9**	**10**	**11**	**12**

B. HAZARDOUS WASTES FROM SPECIFIC SOURCES. Enter the four–digit number from 40 CFR Part 261.32 for each listed hazardous waste from specific industrial sources your installation handles. Use additional sheets if necessary.

13	14	15	16	17	18
K048	K049	K050	K051	K052	
19	**20**	**21**	**22**	**23**	**24**
25	**26**	**27**	**28**	**29**	**30**

C. COMMERCIAL CHEMICAL PRODUCT HAZARDOUS WASTES. Enter the four–digit number from 40 CFR Part 261.33 for each chemical substance your installation handles which may be a hazardous waste. Use additional sheets if necessary. *

31	32	33	34	35	36
P012	P022	P030	P098	P105	P110
37	**38**	**39**	**40**	**41**	**42**
P120	U002	U012	U013	U019	U031
43	**44**	**45**	**46**	**47**	**48**
U044	U056	U117	U122	U135	U144

D. LISTED INFECTIOUS WASTES. Enter the four–digit number from 40 CFR Part 261.34 for each listed hazardous waste from hospitals, veterinary hospitals, medical and research laboratories your installation handles. Use additional sheets if necessary.

49	50	51	52	53	54

E. CHARACTERISTICS OF NON–LISTED HAZARDOUS WASTES. Mark "X" in the boxes corresponding to the characteristics of non–listed hazardous wastes your installation handles. *(See 40 CFR Parts 261.21 – 261.24.)*

- [X] 1. IGNITABLE (D001)
- [ ] 2. CORROSIVE (D002)
- [ ] 3. REACTIVE (D003)
- [X] 4. TOXIC (D000)

X. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

SIGNATURE	NAME & OFFICIAL TITLE *(type or print)*	DATE SIGNED
William H. King	William H. King Division Manager	8/1/80

EPA Form 8700-12 (6-80) REVERSE

*Continued on attached sheet

Michigan Refining Division

Marathon Petroleum Company

1300 South Fort Street
Detroit, Michigan 48217-1294
Telephone 313/843-9100

RECEIVED

Certified Mail
Return Receipt #P 278 247 378

December 19, 1990

U.S. EPA, Region V
230 South Dearborn Street
Chicago, Illinois 60604

Attn: RCRA Activities

RE: Generator No. MID005506357
Marathon Petroleum Company
Michigan Refining Division
Detroit, Michigan

Gentlemen:

Please be advised that Marathon Petroleum Company will merge into its parent corporation, Marathon Oil Company, effective January 1, 1991. The effect of the merger, pursuant to the corporate statutory and case law applicable to both companies, does not involve a transfer of ownership or control. Therefore, a permit modification, revocation, or reissuance is not required. However, your records should be updated to indicate that future communication should be directed to Marathon Oil Company at the same address.

Please contact me if you have any questions or require additional information.

Sincerely,

Jeffery L. Bruestle

Jeffery L. Bruestle
Environmental Engineer

JLB/sjb

Central Engineering Department

Marathon Petroleum Company

539 South Main Street
Findlay, Ohio 45840
Telephone 419/422-2121

7937

June 22, 1990

RCRA Activities
U.S. EPA Region V
Waste Management Division
P. O. Box A3587
Chicago, IL 60690

SUBJECT: NOTIFICATION OF HAZARDOUS WASTE ACTIVITY

Gentlemen:

Enclosed is our completed Notification of Hazardous Waste Activity form. If you have any questions or require additional information, I can be reached at the above number on extension 2019.

Yours truly,

R. A. Richard

R. A. Richard
Environmental & Regulatory Compliance

/rr
RCRAID

Enclosure

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
230 SOUTH DEARBORN ST.
CHICAGO, ILLINOIS 60604

REPLY TO THE ATTENTION OF:

5HE-12

APR 24 1987

Marathon Petroleum Co. (Refining)
1300 S. Fort St.
Detroit, MI 48217

Re: Waste-As-Fuel Notification
Requirements for Generators,
Marketers and Burners.
Letter of Warning.

This letter is to notify you that the United States Environmental Protection Agency (U.S. EPA) believes that you may be regulated under the Resource Conservation and Recovery Act (RCRA) because of new waste-as-fuel regulations finalized on November 29, 1985. These regulations are discussed in the Federal Register of November 29, 1985, and are codified in 40 Code of Federal Regulations (CFR) Part 266, Subparts D and E. These regulations apply to: (1) persons who generate hazardous waste that is used to produce a fuel, (2) persons who generate, transport, store, market or burn hazardous waste fuel, and (3) persons who market or burn off-specification used-oil fuel in utility boilers, industrial boilers or furnaces for energy recovery. These persons previously qualified for a recycling exemption under RCRA and were not required to notify the U.S. EPA. New regulations removed this exemption and required generators, marketers and burners to notify the U.S. EPA of their waste-as-fuel activities by January 29, 1986.

Please review the first few pages of the enclosed booklet, and within 30 days of this letter's date, submit a completed Notification of Hazardous Waste Activity Form, if applicable. If you do not believe you are a generator, marketer or burner required to notify, please sign the certification below and return this letter to the U.S. EPA. Signing the certification and returning this letter will remove you from the U.S. EPA regulated facilities list. Failure to respond within the required period may result in additional enforcement action.

If you store hazardous waste fuel prior to marketing or burning for energy recovery, you are also regulated under other provisions of RCRA and are required to submit an application for a hazardous waste permit.

Michigan Refining Division

Marathon Petroleum Company

1300 South Fort Street
Detroit, Michigan 48217-1294
Telephone 313/843-9100

January 25, 1984

RCRA Activities
EPA, Region V
P. O. Box A-3587
Chicago, Illinois 60690-3587

Attention: Biennial Report

Dear Sir or Madam:

Enclosed is the completed Hazardous Waste Generator Report for 1983 for Marathon Petroleum Company.

If you have any questions, please contact Sydney Blum, Civic Affairs Coordinator, at the above address.

Yours truly,

Sydney Blum
Civic Affairs Coordinator

SB/jmm
attachment

Do not make entries in shaded areas

OMB#: 2050-0024 Expires: 12-31-86

ENVIRONMENTAL PROTECTION AGENCY

GENERATOR BIENNIAL HAZARDOUS WASTE REPORT FOR 1983

This report is for the calendar year ending December 31, 1983.
Read All Instructions Carefully Before Making Any Entries on Form

I. NON-REGULATED STATUS

Complete this section only if you did not generate regulated quantities of hazardous waste at any time during the 1983 calendar year. Circle the one code at right that best describes your status during the entire year (see instructions for explanation of codes).

1 Non-handler
2 Small Quantity Generator
4 Exempt
5 Beneficial Use
9 Closed

Please print/type with elite type (12 characters per inch)

II. GENERATOR'S EPA I.D. NUMBER

T/A C

F M I D 0 0 5 5 0 6 3 5 7 1

1 2 13 14 15

This Installation's Non-Regulated Status is Expected to Apply:

☐ For 1983 Only ☐ Permanently

☐ Other _____

C303 ENTRY (OFFICIAL USE ONLY): ☐

III. NAME OF INSTALLATION

Marathon Petroleum Company

30 69

IV. INSTALLATION MAILING ADDRESS

3 1 3 0 0 South Fort

15 16 45

Street or P.O. Box

4 Detroit MI 48217

15 16 41 42 47 51

City or Town State Zip Code

V. LOCATION OF INSTALLATION (if different than section IV above)

5

15 16 45

Street or Route number

6

15 16 41 42 47 51

City or Town State Zip Code

VI. INSTALLATION CONTACT

2 Blum Sydney

15 16 45

Name (last and first)

313-843-9100

46 55

Phone No. (area code & no.)

VII. CERTIFICATION

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this and all attached documents, and that based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the submitted information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Sydney Blum - Civic Affairs Coordinator — Sydney Blum — 1/25/84

Print/Type Name | Title | Signature of Authorized Representative | Date Signed

EPA Form 8700-13A(5-80) (Revised 11-83)

Do not make entries in shaded areas

ENVI NMENTAL PROTECTION AG CY

Generator Biennial Hazardous Waste Report for 1983 (cont.)

This report is for the calendar year ending December 31, 1983.

Date rec'd: _____ Rec'd by: _____

VIII. GENERATOR'S EPA I.D. NO.

T/A C

G M I D 0 0 5 5 0 6 3 5 7 1

1 2 13 14 15

IX. FACILITY NAME (specify facility to which all wastes on this page were shipped)

Chem-Met Services

X. FACILITY'S EPA I.D. NO.

F M I D 0 9 6 9 6 3 1 9 4

16 28

XI. FACILITY ADDRESS

18550 Allen Road
Wyandotte, Michigan 48192

XII. TRANSPORTATION SERVICES USED

Great Lakes Waterblasting MID087484556
163 N. Morrell Street
Detroit, Michigan

XIII. WASTE IDENTIFICATION

Sequence #	Line #	A. Description of Waste	B. DOT Hazard code	C. EPA Hazardous Waste No. (see instructions)		D. Amount of Waste	E. Unit of Measure
29 32	1	API Separator Sludge *	T 33 34	K 0 5 1 35 38 43 46	39 42 47 50	5 5 8 0 0 51 59	G 60
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						

XIV. COMMENTS (enter information by section number—see instructions)

*DAF Float (K048) waste is removed with the API Separator sludge.

ENVIRONMENTAL PROTECTION AGENCY

Generator Biennial Hazardous Waste Report for 1983 (cont.)

This report is for the calendar year ending December 31, 1983.

Date rec'd: _____ Rec'd by: _____

VIII. GENERATOR'S EPA I.D. NO.

T/A C

|G|M|I|D|0|0|5|5|0|6|3|5|7| |1|

1 2 13 14 15

IX. FACILITY NAME (specify facility to which all wastes on this page were shipped)

Chem-Met Services

X. FACILITY'S EPA I.D. NO.

|F|M|I|D|0|9|6|9|6|3|1|9|4|

16 28

XI. FACILITY ADDRESS

18550 Allen Road
Wyandotte, Michigan 48192

XII. TRANSPORTATION SERVICES USED

Paul O. Sellars Company
MID980793350

XIII. WASTE IDENTIFICATION

Sequence # (29–32)	Line #	A. Description of Waste	B. DOT Hazard code * (33–34)	C. EPA Hazardous Waste No. ** (see instructions) (35–38, 39–42, 43–46, 47–50)	D. Amount of Waste (51–59)	E. Unit of Measure (60)
	1	Hydrochloric Acid Mix with Water	C		500	G
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					

XIV. COMMENTS (enter information by section number—see instructions)

* C= Corrosive

**D.O.T. Identification Number UN1789

ENVIRONMENTAL PROTECTION AGENCY

Generator Biennial Hazardous Waste Report for 1983 (cont.)

This report is for the calendar year ending December 31, 1983.

Date rec'd: _____ Rec'd by: _____

VIII. GENERATOR'S EPA I.D. NO.

T/A C

G	M	I	D	0	0	5	5	0	6	3	5	7	1
1	2											13	14 15

IX. FACILITY NAME (specify facility to which all wastes on this page were shipped)

Gold Shield Solvents

X. FACILITY'S EPA I.D. NO.

F	M	I	D	0	9	1	6	0	5	9	7	2
16												28

XI. FACILITY ADDRESS

12866 Eaton Avenue
Detroit, Michigan 48227

XII. TRANSPORTATION SERVICES USED

Gold Shield Solvents

XIII. WASTE IDENTIFICATION

Sequence #	Line #	A. Description of Waste	B. DOT Hazard code	C. EPA Hazardous Waste No. (see instructions)	D. Amount of Waste	E. Unit of Measure
29 32	1	Waste Trichloroethylene	T (33 34)	F 0 0 1 (35 38) (39 42) (43 46) (47 50)	2 0 0 (51 59)	G (60)
	2					
	3					
	4					
	5					
	6					
	7					
	8					
	9					
	10					
	11					
	12					

XIV. COMMENTS (enter information by section number—see instructions)

Do not make entries in shaded areas

ENV NMENTAL PROTECTION AC CY

Generator Biennial Hazardous Waste Report for 1983 (cont.)

This report is for the calendar year ending December 31, 1983.

Date rec'd: _____ Rec'd by: _____

VIII. GENERATOR'S EPA I.D. NO.

GMID005506357 (T/A C: 1)

IX. FACILITY NAME (specify facility to which all wastes on this page were shipped)

Michigan Disposal

X. FACILITY'S EPA I.D. NO.

FMID000724831

XI. FACILITY ADDRESS

49350 North Service Drive
Belleville, Michigan

XII. TRANSPORTATION SERVICES USED

Great Lakes Waterblasting
163 N. Morrell Street
Detroit, Michigan

MID087484556

XIII. WASTE IDENTIFICATION

Sequence #	Line #	A. Description of Waste	B. DOT Hazard code	C. EPA Hazardous Waste No. (see instructions)		D. Amount of Waste	E. Unit of Measure
	1	API Separator Sludge *	T	K051		600	G
	2						
	3						
	4						
	5						
	6						
	7						
	8						
	9						
	10						
	11						
	12						

XIV. COMMENTS (enter information by section number—see instructions)

*DAF Float (K048) waste is removed with the API Separator sludge.

Marathon Oil Company

1300 South Fort Street
Detroit, Michigan 48217
Telephone 313/843-9100

January 12, 1981

United States
Environmental Protection Agency
Region V
230 South Dearborn Street
Chicago, Illinois 60604

Gentlemen:

Attached is completed Hazardous Waste Report/Generator Annual Report (EPA Forms 8700-13 and 13A) for the year ending December 31, 1980.

Yours very truly,

Sydney Blum
Civic Affairs Coordinator

vh
Attachment

RECEIVED
JAN 15 1981
WASTE MANAGEMENT BRANCH
EPA, REGION V

2/3/81

C.2 Compliance And Enforcement

7thFL
Copy

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 05 2010

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

LR-8J

Mr. Joseph F. Marra
Health, Environmental, Safety and Security Manager
Marathon Petroleum Company, LLC
Michigan Refining Division
1300 South Fort Street
Detroit, Michigan 48217

Re: RCRA Compliance Evaluation Inspection
EPA I.D. No.: MID005506357

Dear Mr. Marra:

On September 9 and 10, 2009, a representative of the U.S. Environmental Protection Agency inspected the Michigan Refining Division ("MRD") of the Marathon Petroleum Company, LLC located in Detroit, Michigan. In response to violations of the Michigan Administrative Code and the United States Code of Federal Regulations identified during the inspection, a Notice of Violation was issued to you on December 2, 2009. Subsequent to the Notice of Violation, you submitted information regarding the identified violations in written correspondence dated December 23, 2009.

This letter is to inform you that EPA has reviewed the referenced response and does not plan additional enforcement action at this time. This letter does not limit the applicability of the requirements evaluated, or of other federal or state statutes or regulations. EPA and the Michigan Department of Environmental Quality will continue to evaluate your facility in the future.

If you have any questions or concerns regarding this matter, please contact Brenda Whitney at 312-353-4796.

Sincerely,

Mike Berdie

for Willie H. Harris, P.E.
Chief, RCRA Branch
Land and Chemicals Division

cc: Larry AuBuchon – Southeast Michigan District Office

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (50% Postconsumer)

Land and Chemicals Division
RCRA Branch
Inspection Letter Signoff

Type of Document:
- ☐ Notice of Violation and Inspection Report/Checklist
- ☐ No Violation Letter and Inspection Report/Checklist
- ☐ Letter of Acknowledgment
- ☐ Pre-Filing/Opportunity to Confer Letter
- ☑ Returned to Compliance Letter

Facility Name: Marathon Petroleum Company, LLC
Location: 1300 South Fort Street
Detroit, Michigan 48217
EPA Id: MID005506357
Assigned Staff: Brenda Whitney **Phone:** 312-353-4796

Name	Signature	Date
Author Brenda Whitney	Brenda Whitney	12-30-09
Regional Counsel N/A		
Section Chief Paul Little	for Paul Little	12-30-09
Branch Chief Willie Harris	for WHH	12-30-09

Directions/Request for Clerical Support:
After the Section Chief signs this sheet and original letter:
1. Date stamp the cover letter;
2. Make four copies of the contents of this folder:
   - One copy for the assigned staff;
   - One copy for the section file; and
   - One copy for the official file; Note: original inspection report goes into file room.
3. Make any additional copies for cc's or bcc's.
4. Mail the original certified mail and distribute office copies and cc's and bcc's.

Once the certified mail receipt is returned:

5. File the certified mail receipt (green card), with this sign-off sheet and the official file copy, and take to 7th floor RCRA file room.

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 1 1 2010

REPLY TO THE ATTENTION OF:

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

LR-8J

Mr. Joseph F. Marra
Health, Environmental, Safety and Security Manager
Marathon Petroleum Company, LLC
Michigan Refining Division
1300 South Fort Street
Detroit, Michigan 48217

Re: RCRA Compliance Evaluation Inspection
EPA I.D. No.: MID005506357

Dear Mr. Marra:

On September 9 and 10, 2009, a representative of the U.S. Environmental Protection Agency inspected the Michigan Refining Division ("MRD") of the Marathon Petroleum Company, LLC located in Detroit, Michigan. In response to violations of the Michigan Administrative Code and the United States Code of Federal Regulations identified during the inspection, a Notice of Violation was issued to you on December 2, 2009. Subsequent to the Notice of Violation, you submitted information regarding the identified violations in written correspondence dated December 23, 2009.

This letter is to inform you that EPA has reviewed the referenced response and does not plan additional enforcement action at this time. This letter does not limit the applicability of the requirements evaluated, or of other federal or state statutes or regulations. EPA and the Michigan Department of Environmental Quality will continue to evaluate your facility in the future.

If you have any questions or concerns regarding this matter, please contact Brenda Whitney at 312-353-4796.

Sincerely,

for Willie H. Harris, P.E.
Chief, RCRA Branch
Land and Chemicals Division

cc: Larry AuBuchon – Southeast Michigan District Office

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 100% Recycled Paper (50% Postconsumer)

Marathon Petroleum Company LLC

1300 South Fort Street
Detroit, MI 48217
Telephone 313/843-9100

Federal Express Ground

December 23, 2009

Ms. Brenda Whitney
RCRA Branch – Land and Chemicals Division
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard, LR-8J
Chicago, IL 60604

RE: Notice of Violation dated December 2, 2009
EPA ID#: MID005506357

Ms. Whitney:

In response to the U.S. Environmental Protection Agency ("USEPA") Notice of Violation dated December 2, 2009 (the "NOV"), Marathon Petroleum Company LLC's Michigan Refining Division ("MRD") provides the following responses and descriptions of subsequent compliance measures for each of the individual findings in the NOV relating to your inspection on September 9 and 10, 2009. MRD appreciates this opportunity to provide additional information regarding these findings and MRD's resulting corrective actions, as MRD makes every effort to ensure compliance with the applicable regulatory requirements and will continue to do so. Please note, MRD's responses are organized according to the item number as referenced in the NOV.

USEPA Finding No. 1:
At the time of the inspection, Marathon was accumulating hazardous waste on the Bundle Cleaning Pad in Complex 1 of the East Plant. One 55-gallon drum containing lead paint, one 6-gallon bucket containing sulfur cups, one 6-gallon bucket containing waste vials, and one 6-gallon bucket containing toluene, isopropyl alcohol and potassium hydroxide were not marked with hazardous waste numbers. See, MAC R. 299.9306(1)(b).

MRD Response:
The words "Hazardous Waste" and the date upon which the period of accumulation began were clearly marked on each container identified above, as required under the regulations. However, MRD acknowledges that, at the time of the inspection, the referenced containers were not marked with hazardous waste numbers. Immediately following the inspection, MRD wrote the hazardous waste numbers on the labels for these containers. Further, to ensure compliance with the labeling requirements, MRD has developed a tool-kit that provides examples of labels for commonly-generated wastes. These labels identify all the information required by regulation, including the hazardous waste number, and are available to MRD employees for reference when completing hazardous waste labels for the 90-day containers.

USEPA Finding No. 2:
At the time of the inspection, several satellite containers of waste were located in the Research Laboratory. One 5-gallon container and two 6-gallon buckets in the Flux Lab, and one 6-gallon bucket in the Sulfur Lab were not marked with the hazardous waste number or the chemical name of the wastes therein. See, MAC R. 299.9306(2).

MRD Response:
The words "Hazardous Waste" were marked on each container identified above, as required by the referenced regulation, but MRD acknowledges that, despite its efforts to ensure compliance with RCRA labeling requirements, at the time of the inspection the referenced containers were not marked with the hazardous waste number or the chemical name of the wastes therein. This issue was immediately corrected following the inspection by labeling each container with the appropriate hazardous waste number. Additionally, because the same types of waste are consistently accumulated in the laboratories, MRD now provides pre-printed labels for each laboratory's use at the point of accumulation. The pre-printed "Satellite Accumulation Area" labels contain the words "Hazardous Waste" and the hazardous waste number. The only information that the laboratory employee must write on the label is the accumulation start date and the container full date.

USEPA Finding No. 3:
At the time of the inspection, Marathon was managing two 55-gallon containers of hazardous waste outside, on the north side of the Research Laboratory, as satellite containers. These containers were neither at or near the point of generation, nor were they under the control of the operator generating the wastes. Therefore, these containers were not satellite accumulation containers, but were 90-day storage containers. Marathon personnel were not performing weekly inspections on these containers. Therefore, Marathon failed to comply with the conditions for a hazardous waste operating license exemption and violated the hazardous waste treatment, storage, and disposal facility container management and recordkeeping requirements. See, MAC R. 299.9306(1)(a)(i); 40 CFR part 265, subpart I [40 CFR § 262.34(a)(1)(i); 265.174].

MRD Response:
At the time of the inspection, MRD respectfully believed that the satellite accumulation area was at the point of generation, the laboratory facility, and under control of the operator. However, immediately following the inspection, MRD followed the suggested path forward by USEPA. MRD re-labeled the referenced 55-gallon containers with the same type of hazardous waste labels as found on its other 90-day containers. Aattached are pictures of the hazardous waste labels on the current containers and pictures of this container storage area. Also, immediately following the inspection, MRD added this container storage area to its list of locations to be inspected weekly. Attached is a completed copy of the inspection report for the week of October 19, 2009. As noted in USEPA's compliance evaluation inspection report, MRD complies with the recordkeeping requirements by maintaining the weekly inspection logs at the facility for at least three years.

USEPA Finding No. 4:
On failing to comply with the conditions for a license exemption referenced in items 1-3, above, Marathon became an operator of a hazardous waste storage facility, and was required to apply for and obtain a hazardous waste storage license. Marathon's failure to apply for and obtain a storage operating license violated the licensing requirements of MAC R. 299.9502(1), 299.9508, and 299.9510 [40 CFR §§ 270.1(c); 270.10(a), (d)].

MRD Response:
USEPA noted in the NOV that it would not require MRD to obtain a storage license so long as MRD immediately established compliance with the conditions for an exemption referenced in USEPA Finding Nos. 1–3. As noted above, MRD addressed each of USEPA's findings immediately following the inspection and has established compliance with the referenced conditions for an exemption. Further, MRD has established a tool-kit and revised its procedures to ensure continued compliance with the conditions for a license exemption.

MRD makes every effort to ensure compliance with the applicable regulatory requirements and will continue to do so. To the extent USEPA believes alternate or additional steps may be necessary, MRD welcomes the opportunity to discuss the matter with USEPA at any time in order to resolve these remaining issues, if any.

Thank you for your attention to this matter. We look forward to working with USEPA to resolve these issues in a fair and efficient manner. If you should have questions with regards to this response, please do not hesitate to call me at 313-297-6351 or Honor Sheard at 313-297-6248.

Regards,

Joseph F. Marra

Joseph F. Marra
Health, Environmental, Safety and Security Manager
Marathon Petroleum Company, LLC
Michigan Refining Division, Detroit, MI

Enclosures

cc: Sherry L. Hesselbein – Contract Attorney, Marathon Petroleum Company
Honor Sheard – Environmental Coordinator, Marathon Petroleum Company MRD
George P. Shaffner – Refinery Division Manager, Marathon Petroleum Company MRD

Inspector: Nicole Tanker

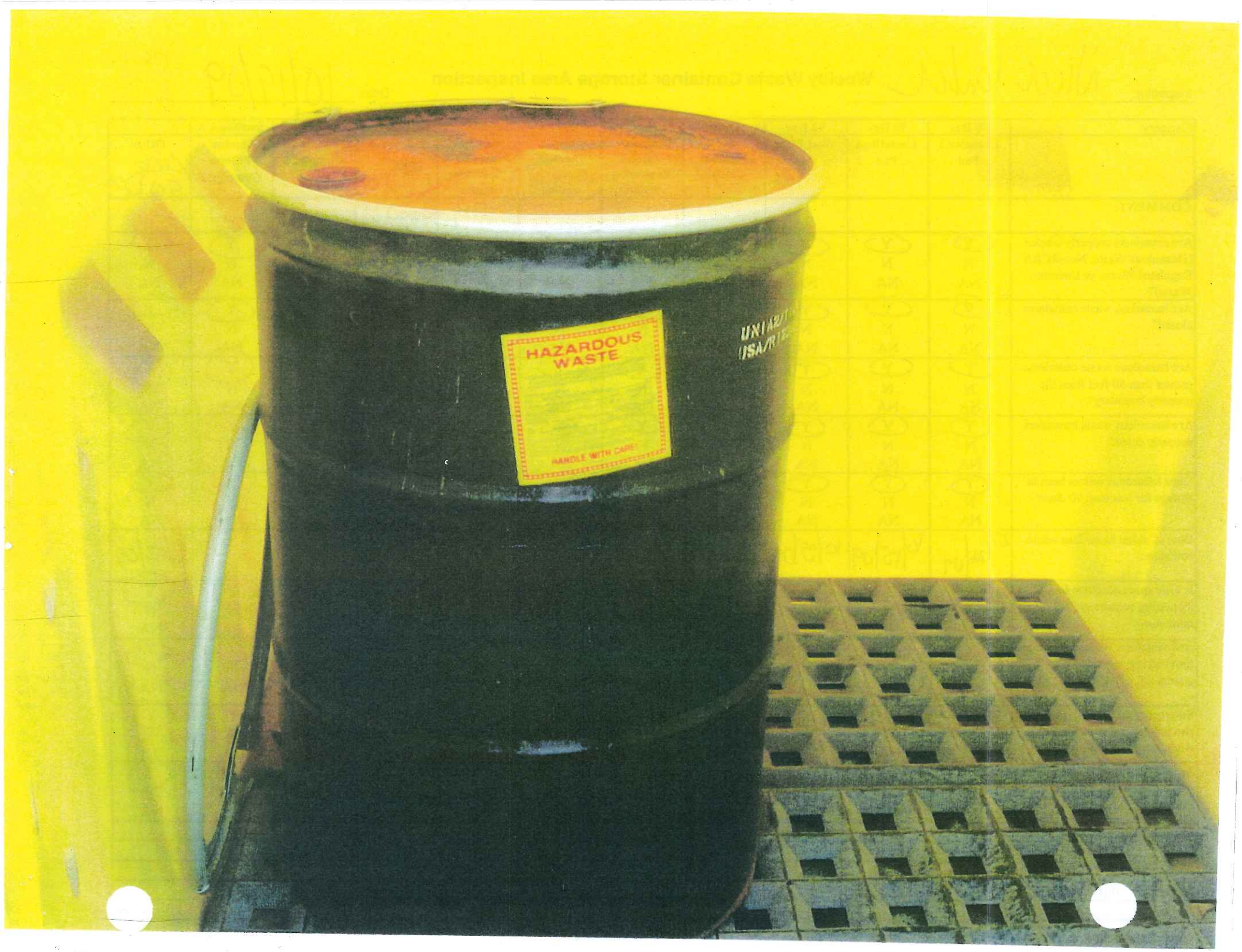
Weekly Waste Container Storage Area Inspection

Date: 10/19/09

Category:	90 Day Complex 1 Pad	90 Day Centrifuge Pad	90 Day West Plant Pad	Other CCR Platnium Catalyst	Satellite A A Area 1 Aerosol Puncturing station	Satellite A A Area 3 Aerosol Puncturing station	Satellite A A West Plant Aerosol Puncturing station	Satellite A A Lab Waste	Satellite A A Slurry solids, Complex 3	Satellite A A Amine Filters, Complex 2	Other Lab 90 Day
COMMENT:								Good!!			
Are containers properly labeled (Hazardous Waste, Non-RCRA Regulated Waste, or Universal Waste)?	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Are hazardous waste containers closed?	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Are hazardous waste containers greater than 50 feet from the property boundary?	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Are hazardous waste containers properly dated?	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Have hazardous wastes been in storage for less than 90 days?	Y N NA	Y N NA	Y N NA	~~Y~~ N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Date of oldest hazardous waste container:	9/24/09	10/15/09	10/5/09								10/12/09
Is aisle space adequate for inspecting containers (2-ft minimum)?	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Are containers in good condition (not leaking, corroded, punctured, or badly damaged)?	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Emergency equipment present and in good condition? (Fire extinguishers, Spill response kit)	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA
Are waste storage areas clean and free of debris and standing waste?	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA	Y N NA

CORRECTIVE ACTION:

Inspector Signature


HAZARDOUS
WASTE
HANDLE WITH CARE!

HAZARDOUS WASTE

FEDERAL LAW PROHIBITS IMPROPER DISPOSAL.

IF FOUND, CONTACT THE NEAREST POLICE OR PUBLIC SAFETY AUTHORITY OR THE U.S. ENVIRONMENTAL PROTECTION AGENCY.

GENERATOR INFORMATION:

NAME MARATHON PETROLEUM COMPANY LLC

ADDRESS 1300 SOUTH FORTH STREET PHONE 313-843-9100

CITY DETROIT STATE MI ZIP 48217

EPA ID NO. / MANIFEST DOCUMENT NO. MID005506357 / D001

ACCUMULATION START DATE 11/25/09 EPA WASTE NO.

Lab Waste Ethanol

D.O.T. PROPER SHIPPING NAME AND UN OR NA NO. WITH PREFIX

HANDLE WITH CARE!

STYLE WM6P

LABELMASTER® (800) 621-5808 www.labelmaster.com

FLAMMABLE LIQUID
3

mail 11-30-09

Land and Chemicals Division
RCRA Branch
Inspection Letter Signoff

Type of Document:
- [x] Notice of Violation
- [x] Inspection Report/Checklist
- [ ] Letter of Acknowledgment
- [ ] Pre-Filing/Opportunity to Confer Letter
- [ ] State Notification

Facility Name: Marathon Petroleum Company, LLC
Location: 1300 South Fort Street
Detroit, Michigan 48217-1294
EPA Id: MID005506357
Assigned Staff: Brenda Whitney **Phone:** 312-353-4796

Name	Signature	Date
Author Brenda Whitney	Brenda Whitney	11-24-2009
Regional Counsel	[illegible]	11-24-2009
Section Chief Paul Little	PL	11-25-09
Branch Chief Willie Harris	Willie H. Harris	12/1/09

RTC MG 12/1

MG 12/1

Directions/Request for Clerical Support:
After the Section Chief signs this sheet and original letter:
1. Date stamp the cover letter;
2. Make four copies of the contents of this folder:
   - One copy for the assigned staff;
   - One copy for the section file; and
   - One copy for the official file; Note: original inspection report goes into file room.
3. Make any additional copies for cc's or bcc's.
4. Mail the original certified mail and distribute office copies and cc's and bcc's.

Once the certified mail receipt is returned:
5. File the certified mail receipt (green card), with this sign-off sheet and the official file copy, and take to 7th floor RCRA file room.

SENDER: *COMPLETE THIS SECTION*

- Complete items 1, 2, and 3. Also complete item 4 if Restricted Delivery is desired.
- Print your name and address on the reverse so that we can return the card to you.
- Attach this card to the back of the mailpiece, or on the front if space permits.

1. Article Addressed to:

Mr. Joseph F. Marra
Health, Environmental, Safety and Security Manager
Marathon Petroleum Company, LLC
Michigan Refining Division
1300 South Fort Street
Detroit, Michigan 48217

COMPLETE THIS SECTION ON DELIVERY

A. Received by *(Please Print Clearly)*

B. Date of Delivery

C. Signature

X Richard Nixon

☑ Agent
☐ Addressee

D. Is deli... address different from item 1? ☐ Yes
...r delivery address below: ☐ No

RIVER ROUGE, MI 48218
JAN 13
USPS

☐ Certified Mail ☐ Express Mail
☐ Registered ☑ Return Receipt for Merchandise
☐ Insured Mail ☐ C.O.D.

4. Restricted Delivery? *(Extra Fee)* ☐ Yes

2. Article Nu...
(Transfer ...

7001 0320 0006 0185 5237

PS Form 3811, March 2001 Domestic Return Receipt 102595-01-M-1424

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

DEC 0 3 2009

REPLY TO THE ATTENTION OF:
LR-8J

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Mr. Joseph Marra
Health, Environmental, Safety and Security Manager
Marathon Petroleum Company, LLC
1300 South Fort Street
Detroit, Michigan 48217

Re: Notice of Violation
Compliance Evaluation Inspection
EPA ID#: MID005506357

Dear Mr. Marra:

On September 9 and 10, 2009, a representative of the U. S. Environmental Protection Agency inspected the Marathon Petroleum Company, LLC ("Marathon" or "Facility") located in Detroit, Michigan. The purpose of the inspection was to evaluate Marathon's compliance with certain provisions of the Resource Conservation and Recovery Act (RCRA); specifically, those regulations related to the generation, treatment and storage of hazardous waste. Please find enclosed, a copy of the inspection report and checklists for your reference.

Based on information provided by Marathon personnel, a review of records, and personal observations by the inspector while inspecting the Facility, EPA finds that Marathon is engaged in the management of hazardous waste without a hazardous waste storage license, and is in violation of certain requirements of the Michigan Administrative Code (MAC) and the United States Code of Federal Regulations (CFR). To be eligible for the exemption from the requirement to obtain a hazardous waste storage license, Marathon must be in compliance with the conditions of MAC R. 299.9306(1)-(2) [40 CFR § 262.34(a)-(c)]. Specifically, we find that Marathon is in noncompliance with the following conditions for a storage license exemption and is in violation of the following requirements:

1. In order to avoid the need for a hazardous waste operating license, a large quantity generator in the State of Michigan who accumulates hazardous waste in containers must mark each container with a hazardous waste number. See, MAC R. 299.9306(1)(b).

   At the time of the inspection, Marathon was accumulating hazardous waste on the Bundle Cleaning Pad in Complex 1 of the East Plant. One 55-gallon drum containing lead paint, one 6-gallon bucket containing sulfur cups, one 6-gallon bucket containing waste vials,

and one 6-gallon bucket containing toluene, isopropyl alcohol and potassium hydroxide were not marked with hazardous waste numbers. Marathon, therefore, failed to comply with the above-mentioned condition for a hazardous waste operating license exemption.

2. In order to avoid the need for an operating permit and without complying with full generator container management requirements of MAC R. 299.9306(1), a generator in the State of Michigan who accumulates hazardous waste at or near the point of generation and under the control of the operator generating the waste must mark the containers of waste with the words "Hazardous Waste" and with either the hazardous waste number or chemical name of the waste. See, MAC R. 299.9306(2).

   At the time of the inspection, several satellite containers of waste were located in the Research Laboratory. One 5-gallon container and two 6-gallon buckets in the Flux Lab, and one 6-gallon bucket in the Sulfur Lab were not marked with the hazardous waste number or the chemical name of the wastes therein. Marathon, therefore, failed to comply with the above-mentioned condition for a hazardous waste operating license exemption.

3. In order to avoid the need for an operating permit, a generator of hazardous waste who accumulates waste in containers must inspect, at least weekly, the areas where containers are stored. See, MAC R. 299.9306(1)(a)(i); 40 CFR part 265, subpart I [40 CFR § 262.34(a)(1)(i); 265.174]. This condition is also a requirement of owners and operators of hazardous waste storage, treatment, and disposal facilities under MAC R. 299.9601(2)(g); 299.9614(1)(a); 40 CFR part 264, subpart I [40 CFR § 264.174]. In the State of Michigan, the generator shall maintain the inspection records for at least 3 years from the date of the inspection. See, MAC R. 299.9306(1)(a)(i).

   At the time of the inspection, Marathon was managing two 55-gallon containers of hazardous waste outside, on the north side of the Research Laboratory, as satellite containers. These containers were neither at or near the point of generation, nor were they under the control of the operator generating the wastes. Therefore, these containers were not satellite accumulation containers, but were 90-day storage containers. Marathon personnel were not performing weekly inspections on these containers. Therefore, Marathon failed to comply with the above-mentioned conditions for a hazardous waste operating license exemption and violated the above-mentioned hazardous waste treatment, storage, and disposal facility container management and recordkeeping requirements.

4. A generator of hazardous waste who accumulates hazardous waste on-site and who does not meet the other conditions for an operating license exemption of MAC R. 299.9306(1)-(2) [40 CFR § 262.34(a)-(c)], is an operator of a hazardous waste storage facility, and is required to obtain a hazardous waste storage operating license. See, MAC R. 299.9502(1), 299.9508, and 299.9510 [40 CFR §§ 270.1(c), 270.10(a), (d)].

   On failing to comply with the conditions for a license exemption referenced in items 1-3, above, Marathon became an operator of a hazardous waste storage facility, and was

required to apply for and obtain a hazardous waste storage license. Marathon's failure to apply for and obtain a storage operating license violated the licensing requirements of MAC R. 299.9502(1), 299.9508, and 299.9510 [40 CFR §§ 270.1(c); 270.10(a), (d)].

At this time, EPA is not requiring Marathon to apply for a storage license so long as Marathon immediately establishes compliance with the conditions for an exemption outlined above. Under Section 3008(a) of the Resource Conservation and Recovery Act (RCRA), 42 U.S.C. § 6928, EPA may issue an order assessing a civil penalty for any past or current violation and requiring compliance immediately or within a specified time period. Although this letter is not such an order, we request that you submit a response in writing to this office no later than thirty (30) days after receipt of this letter documenting the actions, if any, which have been taken since the inspection to establish compliance with the above conditions and requirements.

You should submit your response to Brenda Whitney, U. S. Environmental Protection Agency, Region 5, 77 West Jackson Boulevard, LR-8J, Chicago, Illinois 60604. If you have any questions regarding this letter, please contact Ms. Whitney, of my staff, at (312) 353-4796.

Sincerely,

Willie H. Harris

Willie H. Harris, P.E.
Chief, RCRA Branch
Land and Chemicals Division

Enclosure

cc:

John Craig, MDEQ - Lansing
Larry AuBuchon, MDEQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, ILLINOIS 60604

Compliance Evaluation Inspection Report

Date of Inspection:	September 9, 2009
Facility Name:	Marathon Petroleum Company, LLC
Facility Address:	1300 South Fort Street Detroit, Michigan 48217-1294
EPA RCRA ID Number:	MID005506357
Generator Status:	Large Quantity Generator
SIC Code:	2911
Facility Contact:	Mr. Joseph Marra – Health, Environmental, Safety and Security (HESS) Manager
U.S. EPA RCRA Inspector:	Brenda Whitney - Environmental Engineer Compliance Section 2 RCRA Branch Land and Chemicals Division
Prepared By:	Brenda Whitney Brenda Whitney – Environmental Engineer
Date Completed:	10-7-2009 Month / Day / Year
Accepted By:	P. L. Little Paul Little – Chief, Compliance Section 2
Date Accepted:	10-8-09 Month / Day / Year

Purpose of Inspection

I conducted an unannounced Compliance Evaluation Inspection (CEI or "Inspection") of Marathon Petroleum Company, LLC ("Marathon" or "Facility") located in Detroit, Michigan, on September 9 and 10, 2009. This CEI was an evaluation of Marathon's compliance with the RCRA hazardous waste regulations codified in the Michigan Administrative Code and the Code of Federal Regulations. The Facility was operating as a large quantity generator of hazardous waste at the time of the CEI.

Participants

Brian Hunter – HESS Professional	Marathon
Honor Sheard, P.E., CHMM – Environmental Supervisor	Marathon
Joseph Marra – HESS Manager	Marathon
Brenda Whitney – Environmental Engineer	U.S. EPA

Introduction

I displayed official credentials to the Facility security personnel upon arrival at the Facility at approximately 8:45 a.m. After I explained the purpose of my visit, security personnel attempted to locate Mr. Hunter, who was listed on the hazardous waste biennial reports as the Facility contact person. After several minutes of not being able to reach Mr. Hunter, security attempted to contact Honor Sheard and other personnel in the HESS Department. We discovered that these employees were participating in a training exercise at that time. At approximately 9:15 a.m., I was directed to a second Facility entrance, whereupon I was introduced to Mr. Hunter. Mr. Hunter provided me with the proper visitor's badge so that I could be granted access to the Facility. He also provided me with fire retardant-treated outerwear, goggles, and a hydrogen sulfide monitor. Other personal protective equipment used during the inspection included safety boots, a hard hat, hearing protection, and safety glasses.

Upon entering the Marathon main office building, Mr. Hunter introduced me to Ms. Sheard and Mr. Marra. During an introductory briefing, I provided three informational handouts: *P2 Technical Assistance Contacts; U.S. EPA Small Business Resources*; and *Managing Used Oil – Advice for Small Businesses*. The purpose and logistics of the inspection were delineated and permission for me to take photographs in the plants was discussed. In order to take photographs in each Complex in the Facility, of which there are five, one is required to check in and sign temporary work permits that specify that photographs may be taken. During the Inspection, Ms. Sheard also took photos with a Marathon-issued camera as a Facility record. Mr. Hunter and Ms. Sheard provided a description of the Facility processes and led the tour of Complexes 1 through 4. Complex 5 is a tank farm and was not included in the Inspection.

Site Description

The following information about Marathon is based on the personal observations of the EPA inspector and on representations made during the Inspection by the Facility personnel identified above or within the text. When referring to directional headings for the Facility, this report will be written relative to Global Plant North as depicted on the General Layout and Plot Plan drawing No. D25-1431, Rev. 3, dated 8/2/06.

Marathon is a petroleum refinery that was built circa 1940 and occupies an area of 200 acres. Approximately 350 people at this Facility are employed directly by Marathon. A majority of the employees on site, perhaps as many as 1,000 people, are contractors. The refinery operates continuously 24 hours a day, seven days a week.

The Facility consists of an East Plant and a West Plant, which are separated by Norfolk Southern Rail Road property; and the Melvindale Tank Farm, which is across Schaefer Highway to the south of the Facility. The East Plant consists of Complexes 1 and 2 as well as the Control Room, Maintenance buildings, and Laboratory. The West Plant includes Complexes 3 and 4, and the Melvindale Tank Farm is Complex 5.

Complex 1 includes the crude unit, the waste water treatment system (WWTS), an oil recovery centrifuge operation ("Centrifuge"), two 90-day hazardous waste accumulation areas (HWAA) and a tank farm. The crude unit does not have any satellite accumulation areas. The WWTS is designed to handle all of the wastewater generated at this Facility. According to Facility personnel, hazardous waste is generated at the WWTS only at the point of the Centrifuge. The Centrifuge processes oil-bearing secondary materials from the WWTS and generates solids that have been determined by Marathon to be included under the F037 hazardous waste listing for petroleum refinery primary oil/water/solids separation sludge generated from gravitational separation. The sludge is stored in roll-off boxes in the 90-day accumulation area hereinafter referred to as "HWAA-East; Centrifuge". The second 90-day accumulation area in Complex 1 is located west of the WWTS and will hereinafter be referred to as "HWAA-East; Bundle Cleaning Pad". It is named Bundle Cleaning Pad because heat exchange bundles are cleaned in this area. When this cleaning process takes place, satellite accumulation drums for the waste, which has been determined to carry the K050 listing, would also be in this area. Hazardous waste is not generated (outside of a leak or spill) in the tank farm in this Complex.

Complex 2 includes the distillate hydtrotreater (DHT), gas oil hydrotreater (GOHT), alkylation unit ("Alky"), sulfur recovery unit (SRU) and an in-ground molten sulfur collection tank. Sulfur (and other impurities) is removed from oil as hydrogen sulfide in the DHT and GOHT using catalysts and hydrogen under high temperature and pressure. The sulfur is removed early in the refining process because sulfur has an adverse affect on catalysts used in downstream processes. The hydrogen sulfide is directed to the SRU, where it is converted to elemental sulfur. The filters used in the SRU have been determined to be hazardous for ignitability (D001) and the benzene characteristic (D018). Sulfuric acid, which is used as a catalyst in the Alky, is sent to Marcelex, Inc., in Ohio, for regeneration and is not managed as a solid waste. Caustic waste from the Alky is sent to Merichem as a process feedstock, and is no longer managed as hazardous waste at the Facility.

The Laboratory, Maintenance shops, and Control Room are also located in the East Plant, south of Complexes 1 and 2. Solvent and reagent wastes and used wipes are generated in the Laboratory. Satellite containers are maintained in each individual area of the Laboratory where hazardous waste is generated. Outside of the Laboratory, hazardous waste is consolidated into 55-gallon drums. The Maintenance shops generate oily rags, aerosol cans, used oil, and universal waste. Hazardous waste is not generated in the Control Room.

Complex 3 is part of the West Plant and includes the fluidized-bed catalytic cracking unit (FCCU), a 90-day HWAA, a propylene unit, and a gas concentration unit ("Gas Con"). The FCCU uses a fine, granular catalyst that mixes with oil vapor under high heat in order to crack larger hydrocarbon molecules into smaller, lighter molecules. The catalyst efficacy diminishes as coke builds up on the surface of the granules. The catalyst is regenerated in a separate vessel as the coke is burned off under high heat and pressure. The spent catalyst, which is typically a synthetic crystalline silica-alumina, has been determined to be non-hazardous. The FCCU catalyst regeneration column is outfitted with an electrostatic precipitator (ESP) that uses an anhydrous ammonia injection that keeps nitrogen oxides to a minimum. The waste generated from cleanouts of the ESP has been determined to be non-hazardous.

Distillation of light ends such as propane and propylene occurs at the propylene unit in Complex 3. This unit is associated with two boilers and cooling towers. One boiler runs strictly on natural gas and the second runs on a combination of refining fuel gas and natural gas.

Hazardous Waste that is generated in the West Plant accumulates on a pad in Complex 3. The HWAA in this part of the Facility will hereinafter be referred to as "HWAA-West; Bundle Cleaning Pad".

Complex 4 includes the naptha hydrotreater (NHT), the kerosene hydrotreater (KHT), and the continuous catalytic reformer (CCR). The CCR utilizes a platinum catalyst that, when spent, is collected for recovery of the platinum. This waste is managed under the precious metals recovery exemption and is not managed on-site as a hazardous waste. Documents demonstrating that the material, which is sent off-site once a year, is not speculatively accumulated are kept at the Facility. The materials are manifested off-site to Saben Metals as hazardous for benzene (D018).

All hydrotreating units (DHT, GOHT, NHT and KHT) use cobalt or molybdenum oxide on alumina as a catalyst. The spent catalyst has been determined to carry the K171 listing. The catalysts are cleaned out on a yearly shut-down schedule and are sent off-site for recovery.

Other wastes generated at the Facility include aerosol cans, universal waste, used oil and slop oil. Slop oil is generated from leaks or sample ports in the process equipment. Used oil is generated in the maintenance shop or from motor equipment repairs. All captured oil is returned to the process for refining.

This Facility no longer uses a methyl-tertiary-butyl-ether (MTBE) unit. Caustic waste generated at the Alkylation Unit and from scrubber blowdown is no longer being managed as a hazardous

waste, but rather as a saleable feedstock for an off-site process. At the time of this Inspection, the Facility was being expanded to include, among other things, a new coking system and hydrogen generation plant. These systems were not operational and were not inspected. Also, Complex 5 was not inspected. The liquid-filled hole located to the west of Complex 5 that was the subject of an NEIC sampling event in 1998, had been filled with concrete at that time. According to Marathon personnel, hazardous waste is not generated in the Complex 5 outside of tank clean outs and spills.

Site Tour

The tour began in the East Plant – Complex 1. In the crude unit, crude oil begins its journey through the refining process. The oil is processed through three desalting cylinders. Desalter solids build up in the cylinders and are emptied into one or two 55-gallon drums during turn around. The solids have been determined to be hazardous for benzene (D018). From the desalters, the oil goes to a heater and then to a pre-flash tower. Light ends are flashed off of the heavier gas oil and asphalt according to boiling point and are directed to the atmospheric distillation tower. The bottoms from the distillation tower are processed through a vacuum unit to pull off more light ends under very low pressure. Heavy ends that cannot be cracked at this stage are processed downstream. A third tower in this area is the benzene flash tower. Benzene is flashed off and condensed elsewhere to be inserted in fuel gas.

Slop oil drums were located near this process. As explained by Ms. Sheard and Mr. Hunter, the slop oil is vacuumed out of containers and containment areas by a vacuum truck and is reinserted into the refining process. These containers are labeled as "Slop Oil".

The WWTS is located across a service road to the south of the crude unit. The WWTS includes an American Petroleum Institute oil/water separator ("API") that has an east and a west cell (Appendix A: Picture 1). The separator has a floating roof on the liquid layer. When the forebay is taken off-line, a vacuum truck removes the oil fraction and places it in black tanks that are part of the WWTS. Water drains from these tanks back to the forebay and the sludge is directed back to the crude unit. The water fraction from the API is pumped to induced gas floatation (IGF) units, which have replaced the dissolved air floatation (DAF) unit. Flocculation agents are added to the water in decanter units. Marathon has installed sand filters to further clean the water; however, the City of Detroit will accept the effluent without the filtration step. The sand filters were off-line at the time of the Inspection. The sludge generated from the IGF unit is transferred to a blue "frac" tank, from where it is pumped back into the crude unit for further processing (Appendix A: Picture 2). Air emission units, mainly carbon canisters, are associated with the black tanks storing the oil skimmed from the API (Appendix A: Picture 3). The carbon is returned to the vendor, Calgon, Inc., for regeneration. The carbon, per analysis, has been non-hazardous. All other oil-bearing waste removed from the WWTS goes back into the crude unit for reprocessing via the Centrifuge.

The HWAA–East; Bundle Cleaning Pad is located west of the WWTS. The pad was constructed of concrete and was surrounded on all sides by a 6-inch curb (Appendix A: Picture 4). The concrete is sloped toward the Facility drain system that leads to the WWTS. The containers on

the pad are exposed to weather; however, the containers appeared to be in good condition. Each container was elevated on wood pallets. At the time of the Inspection, five 55-gallon drums, three 6-gallon buckets, and one 5-gallon container of hazardous waste; eight 55-gallon drums of non-hazardous waste containers; and two yard sacks of waste flux (heavy oil, like asphalt) samples were stored on the pad. The non-hazardous wastes included sulfur cleaned out of equipment pipes and petrolite 698 polymer. Each hazardous waste container was closed, marked with the words "Hazardous Waste," and marked with a start date of accumulation. Many of the containers were not marked with the hazardous waste number. All containers were within 90 days of their accumulation start dates (Appendix A: Pictures 5-13).

Container	Label	Hazardous Waste Number	Closed	Start Date of Accumulation
55-Gallon Drum	Hazardous Waste Rich Amine Filters	D018	Yes	8-20-09
55-Gallon Drum	Hazardous Waste Lead Paint	None	Yes	9-08-09
55-Gallon Drum	Hazardous Waste Paper Towels - Xylene	U239, U200	Yes	9-01-09
55-Gallon Drum	Hazardous Waste Waste Ethanol	D001, D018	Yes	9-07-09
55-Gallon Drum	Hazardous Waste Unknown Product Needs Sampling	Unknown	Yes	9-04-09
6-Gallon Bucket	Hazardous Waste Flux Lab – Sulfur Cups	None	Yes	9-09-09
6-Gallon Bucket	Hazardous Waste Oils Lab – Waste Vials	None	Yes	9-09-09
6-Gallon Bucket	Hazardous Waste Toluene/Isopropyl Alcohol/Potassium Hydroxide	None	Yes	9-04-09
5-Gallon Container	Hazardous Waste Unknown Found in Complex 1	Unknown	Yes	8-21-09

Also on the HWAA-East; Bundle Cleaning Pad was a lean-to structure built to protect universal waste and other materials from the weather. A cylinder of used fluorescent lamps was labeled as "Universal Waste" and dated from 7/10/09 (Appendix A: Picture 14). A bucket of used batteries was also labeled as "Universal Waste" and was dated from 7/27/09 (Appendix A: Picture 15).

North of the HWAA-East; Bundle Cleaning Pad are the Centrifuges for oil-bearing hazardous secondary materials and the HWAA-East; Centrifuge. The Centrifuges separate water from solids and oil. The water is discharged to the sewer. The liquid oil is pumped off to a "frac" tank and then is eventually pumped back into the refining process. The solids are removed from the Centrifuge and collected in a 15-20 y^3 roll-off box in the HWAA-East; Centrifuge. Two roll-offs contained waste at the time of the Inspection. Both were covered with retractable metal panels, labeled as "Hazardous Waste," marked with the F037 waste number, and marked with

accumulation start dates of 9/2/09 and 9/4/09, respectively (Appendix A: Pictures 16-18). As the tour exited Complex 1, we passed a boiler-water pretreatment building. In order to prolong the life of the equipment, the water supplied to the boilers is pretreated for alkalinity and hardness. We also passed the booster pump building which houses a pump that adds pressure to the water supply in order to fight fires. Each Complex is equipped with a booster pump.

The tour continued in Complex 2 of the East Plant. During the work-permit sign in procedure, we were issued sulfur dioxide monitors in addition to the hydrogen sulfide monitors that we were to wear throughout the plant. Mr. Hunter was also given a continuous gas monitoring device in order to monitor the lower explosive limit of the areas where pictures were to be taken to ensure a safe environment.

The GOHT and DHT are located in this Complex. The GOHT processes gas oil, which is a heavy fraction of the oil but is slightly lighter than asphalt. The DHT processes diesel distillates. In both hydrotreaters, the oil is heated up in a reactor with a catalyst and hydrogen gas under high temperature and pressure in order to remove sulfur by creating hydrogen sulfide, which is directed to the SRU. Spent catalyst from these processes is emptied via a dump chute when the catalyst can no longer be regenerated. The spent catalyst has been determined to carry the K171 listing. Located by the GOHT catalyst dump chute was another "frac" tank. Mr. Hunter explained that this tank held non-hazardous soapy wash water used to wash off fin fans on the GOHT. The tank was labeled with a non-hazardous waste sticker.

Containers of slop oil were scattered around the GOHT, as they are throughout the Facility. One 5-gallon bucket of slop oil was located on concrete that was stained with oil (Appendix A: Picture 19). The concrete is sloped toward drains that lead to the WWTS. Two 5-gallon buckets were located next to a pump station. One bucket was labeled as "Used Oil" and the other as "Slop Oil". The used oil bucket was for oil that was removed from the pump. The slop oil bucket was for other oil that came out of the process. Mr. Hunter explained that Marathon has tried to maintain the distinction between the two types of oil, but has recently began moving toward labeling everything as slop oil because it all is processed through the WWTS.

The Alky is located in the southeast corner of Complex 2. Alkylation is the process of joining low molecular weight olefins, such as propylene and butylene, with an isoparrafin, such as isobutane, in the presence of a catalyst to form alkylates, which are high-octane branched paraffins such as propane and butane. In the summer months, because of new requirements for gasoline with low vapor pressure fractions, the material is processed through a depropanizer ("DP") and a deisobutanizer ("DIB"). Under these conditions, the octane can still be increased without the butane. Marathon uses sulfuric acid as the catalyst in the Alky. The acid is collected in a tank to be sent off-site for regeneration. Caustic solutions are used in the process as well. Spent caustics are no longer stored in a tank but are vacuumed directly out of the process on an as-needed basis to be shipped off-site as a feedstock in a process.

The SRU is also located in Complex 2. In order to meet emissions requirements and to protect catalysts further down the process line, sulfur must be removed from the crude oil. Chemical reactions that take place in the hydrodtreaters and catalytic cracking units in the presence of excess hydrogen force the sulfur into hydrogen sulfide. The hydrogen sulfide-contaminated off-

gas is directed to the SRU. Fuel gases (methane, ethane) are separated from the hydrogen sulfide by dissolving the hydrogen sulfide in an amine solution within an amine absorption system in the SRU. The fuel gases are recovered for use in one of the on-site boilers. The hydrogen sulfide-laden amine solution ("rich amine") is then heated in the presence of a catalyst in order to remove the hydrogen sulfide gas from the amine. Elemental sulfur is recovered from the hydrogen sulfide in a two-step process (Marathon uses the Claus Process followed by the SCOT Process) and is sold in molten form as a product. Three 55-gallon satellite drums were positioned near amine filter removal ports in the SRU and by the SCOT tail-gas treating unit. One drum was empty at the time of the Inspection. The second drum was closed and labeled as "Hazardous Waste" and "Spent Amine Filters" (Appendix A: Picture 20). The third drum was closed and labeled as "Rich Amine Filters" and "Hazardous Waste" (Appendix A: Picture 21).

The Laboratory is located on the south end of Facility near the southeast corner of Complex 2. From what could be observed during the Inspection, the Laboratory is split between eight different research areas. Hydrocarbon wastes that are generated in the Laboratory are poured down dedicated sinks located in each research area. These sinks drain directly to the WWTS. Xylene and acetone are used to clean equipment. The rags and paper towels contaminated with these solvents are managed as hazardous waste. Wastes specific to each research area are also generated. Each area that generates hazardous waste maintains its own satellite accumulation containers (Appendix A: Pictures 22-31). The following table associates waste containers observed during the Inspection with their respective generation areas.

Research Laboratory	Waste Container	Label	Closed
Flux	• 6-gallon container	• Hazardous Waste Flux Lab x-ray sulfur cups	• Yes
	• 5-gallon container	• Hazardous Waste Solid waste rags	• Yes
	• Two 6-gallon buckets	• Hazardous Waste Flux Lab vials	• Yes
	• 4-liter amber bottle of "Doctor Waste"	• Hazardous Waste Benzene / lead / corrosive	• Yes
Octane	No Waste was Observed in this Area		
Catalyst	No Waste was Observed in this Area		
Oils	• 6-gallon bucket	• Hazardous Waste Gas oil / kerosene / cat naptha / platformate / fuel oil	• Yes
	• 6-gallon bucket	• Hazardous Waste Diesel fuel, gasoline waste	• Yes
GC	No Waste was Observed in this Area		
Waters	• 6-gallon bucket of ammonia testing kits containing mercury	• Hazardous Waste Ammonia ampules	• Yes
Waste Water	• 6-gallon bucket of ammonia testing kits containing mercury	• Hazardous Waste Spent ammonia test ampules D002/D009	• Yes
Sulfur	• 6-gallon bucket of paper towels and rags	• Hazardous Waste Sulfur Lab	• Yes

Universal waste containers were also located in the Laboratory as well as in a shelter outside of the Laboratory. Inside the Laboratory, in the bottle-washer room, was a 6-gallon bucket of mercury containing equipment. The container was closed, and labeled as "Universal Waste" and "Sealed Mercury" (Appendix A: Picture 32). In the shelter was one container of batteries that was labeled as "Universal Waste" and was closed.

In addition to the satellite accumulation areas inside the Laboratory, an outdoor storage area for wastes generated in the Laboratory was located north of the building. Two 55-gallon drums of hazardous waste were stored in unlocked plastic secondary containment units. The first container was closed, dated from 9/1/09, labeled as "Hazardous Waste" and "Xylene" and carried the U239 and U002 waste codes (Appendix A: Picture 33). The second drum was closed, dated from 9/7/09, labeled as "Hazardous Waste" and "Waste Ethanol" and carried the D001 and D018 waste numbers (Appendix A: Picture 34). According to Facility personnel, these drums were considered to be satellite accumulation containers. The tour of the Laboratory concluded the tour of the site for the first day. After a review of records inside the Marathon main office, I departed the site at 4:45 p.m.

Day 2 of the Inspection began at 8:05 a.m. After signing in and acquiring a visitor's badge, I completed my review of records that had begun the previous day. Before beginning the second half of the site tour, Mr. Hunter provided me with the necessary safety equipment. Ms. Sheard and Mr. Hunter accompanied me through the site.

The tour began in Complex 3. When signing in for the temporary work permits, Mr. Hunter was issued another continuous monitor to ensure safe environments for photos. He also used this monitor for the tour of Complex 4. Complex 3 includes the FCCU, the gas concentration unit ("Gas Con"), the propylene unit, and the HWAA-West; Bundle Cleaning Pad.

The FCCU processes gas oil, which had been stripped of sulfur in the GOHT, into lighter materials, such as gasoline. The gas oil consists of long hydrocarbon chains, which when reacted with an alumina-based catalyst, is to be broken into smaller chains in a fractionation tower. Methane and ethane by-products are created and are considered fuel gas, which can be used on-site. The catalyst becomes contaminated with coke, which must be burned off in a regenerator vessel. Catalyst fines (broken-down catalyst) blow out of the vessel into an electrostatic precipitator (ESP) where they are dropped out into a 15 y^3 roll-off box. The fines have been determined to be non-hazardous and are sent to a solid waste landfill for disposal. The roll-off box was labeled as "Catalyst Fines" and "Non-Hazardous Waste". The spent catalyst, when it can no longer be regenerated, is sent off-site to be added as an ingredient to cement. Near the catalyst tower and the fractionation tower was a 55-gallon satellite accumulation container for slurry oil sediment generated from the FCCU. The drum was labeled as "Slurry Oil Solids," "Hazardous Waste," and marked with the K170 listing number (Appendix A: Picture 35).

A maintenance shed ("Area 2") is located behind the FCCU. Universal waste lamps were accumulating in this area. The lamps were contained in closed boxes that were labeled as "Universal Waste" and dated from 7/1/09 (Appendix A: Picture 36).

The Gas Con unit is fed the light fraction of the refined oils including methane, ethane, and butane. The Gas Con separates and concentrates the gases into distinct fractions. The fractions are treated with amines in order to remove hydrogen sulfide, but the volume of residual hydrogen sulfide is limited because the oil had already been processed through the GOHT in Complex 2. The amines that are removed from the Gas Con as waste have been determined to be non-hazardous. This process does not generate waste amine filters.

The propylene unit consists of three towers used to concentrate the propylene fraction. Hazardous waste is not regularly generated from this process. At the time of the Inspection, the operation was shut down for routine maintenance and cleanout. Hazardous waste may be generated from the unit at this time.

Other towers in this Complex include a gasoline stripper, which removes the light ends from gasoline, and a debutanizing tower to remove butane.

The HWAA-West; Bundle Cleaning Pad is located between Complexes 3 and 4. The concrete pad appeared to be in good condition and was similar in design to that in the East Plant. Eight non-hazardous containers were on the pad. One container held spent glycol, six held sandblast media, and the eighth held non-contaminated soil. The six drums of sandblast media had non-hazardous waste stickers over hazardous waste stickers. The drums were labeled as hazardous waste and marked with a start date of accumulation as they were awaiting sampling. The sample analysis results were non-hazardous and the label was changed. Four 55-gallon drums of hazardous waste were also on the pad. Three drums were elevated on pallets and the fourth, a satellite container, was located in a plastic shelter (Appendix A: Pictures 37-40). The following table illustrates the management of the hazardous waste drums in the area.

Container	Label	Hazardous Waste Number	Closed	Start Date of Accumulation
55-Gallon Drum	Hazardous Waste Unknown Product	Unknown	Yes	9-9-09
55-Gallon Drum	Hazardous Waste	D001	Yes	9-9-09
55-Gallon Drum	Hazardous Waste Unknown Waste	Unknown	Yes	7-30-09
55-Gallon Drum (Satellite Drum)	Hazardous Waste Aerosol Solvents	D001, F003, F005	Yes	3-5-09

The tour continued into Complex 4, which houses the NHT, KHT, and CCR. The NHT and the KHT are hydrotreating units meant to remove the sulfur fraction from naptha and kerosene (jet fuel). The KHT was not in operation at the time of the Inspection. As with all of the hydrotreaters at the Facility, hydrogen is needed to force the sulfur off of these gas streams and into hydrogen sulfide that can be diverted to the SRU in Complex 2 and converted into elemental sulfur. The hydrogen needed for this process is generated in the CCR.

The CCR takes heavy chain hydrocarbons, such as the naptha from the NHT, and converts them to light aromatics including benzene. During this process, hydrogen is released. A platinum

catalyst is used to drive this reaction. In order to regenerate this catalyst, the coke build-up must be removed. In order to promote dispersion of the catalyst for the coke removal, tetrachloroethylene is added to the regenerator. When the regenerated catalyst is reintroduced into the CCR bed, the chlorine from the tetrachloroethylene is pulled in with it. The hydrogen that is generated in the process becomes entrained with chlorine, which must be pulled off of the hydrogen using another catalyst known as chloride-treater catalyst. The used chloride-treater catalyst is removed from the process via a vacuum truck on an as-needed basis and has been determined to carry the D018 waste number.

The platinum catalyst from the CCR is sampled on a regular basis. The fines are deposited in a 55-gallon drum at a drop point. Three 55-gallon drums were located at the drop point at the time of the Inspection. The drums were labeled with the words "Excluded Recyclable Material For Reclamation" (Appendix A: Picture 41). The drums were closed and were marked with start dates of accumulation from 7/16/09, 8/12/09, and 8/27/09. These drums were to be brought to a shed specifically used for the storage of used platinum catalyst and fines (Appendix A: Picture 42). At the time of the Inspection, 19 drums were located in this area, of which the oldest drum was dated from 5/5/08. Each drum was labeled with the words "Excluded Recyclable Material for Reclamation". The CCR is shut down once a calendar year to remove the catalyst from the beds. The amount removed at these times is roughly equivalent to 50 flow bins of material each weighing approximately 6,000 pounds, or a total of approximately 300,000 pounds. This material is sent off-site on hazardous waste manifests for platinum reclamation.

To wrap up the second day of the Inspection, we toured two maintenance areas ("Area 1" and "Area 3") located to the south of Complex 2. Area 1 houses motor-pool. A 5-gallon bucket of batteries in this Area was closed and marked as "Universal Waste," and a 55-gallon drum and a 10-gallon container of used oil were marked as "Used Oil" (Appendix A: Picture 43). Area 3 is a separate building. A citrus parts washer was in use in this Area. Outside of Area 3 were two 55-gallon drums. An aerosol can puncturing mechanism was mounted on the first drum, which was located in a plastic containment shed and was labeled as "Hazardous Waste" with the D001, F003, and F005 hazardous waste numbers (Appendix A: Picture 44). The second drum , located on a containment pallet next to the plastic shed was labeled as "Non-Hazardous Rags" and contained oily rags from Area 3 (Appendix A: Picture 45). I departed the Facility at approximately 2:30 p.m.

Records and Emergency Preparedness Review

Training: An extensive training program is in place at this Facility. Training modules include, among other things, HAZWOPER Awareness, Operations, Technician and Incident Command [29 CFR 1910.120(q)(6)(i, ii, iii, v)]; RCRA training; Emergency Action Plan training; and Contingency Plan/SPCC training. Some of the training is administered as a computer-based program that requires updates on an annual basis. Other portions of the training include hands-on drills and classroom instruction. Each employee has a detailed electronic training record that logs the course title, date, and test score (if applicable) of each training course completed by the employee.

Preparedness and Prevention: The Facility is equipped with communication systems, fire suppression systems, spill control equipment and decontamination equipment. The Facility has an emergency response team and fire department on site. Equipment is tested on a scheduled basis. Teams from local fire departments and hospitals train at this Facility. Emergency arrangements with local and state authorities have been made. Aisle space appeared adequate throughout.

Contingency Plan: The Facility Emergency Response Plan (ERP) was last revised on 8/3/09. Incident Commanders are the emergency coordinators for the Facility. The primary commander is George Shaffner and the alternates are Joe Marra and Jon Herlevich, Jr. Phone numbers are listed for the commanders. Addresses are not listed. Emergency communication equipment along with the testing schedule for the equipment is listed in the ERP. All other emergency equipment, including fire suppression systems and rescue equipment, is also listed with locations, descriptions of capabilities, and testing schedules. Phone numbers for emergency responders were listed, including fire and police departments, hospitals, the city of Detroit, MEDEVAC, Wayne County, the Water Department, Michigan Department of Environmental Quality; and other emergency responders. Arrangements with the Local Emergency Planning Committee (LEPC) were outlined. The distribution list for the ERP includes incident command centers, and the LEPC also has a copy. An evacuation plan including a map, primary and alternate routes, and signals is delineated.

Manifests: Marathon maintains a record of manifests for at least three years from the date of shipment. Each record that was inspected was complete and all required copies were attached. Land disposal restriction forms were attached as needed. For more recent shipments, if the copy signed by the receiving facility had not yet been received, the original signed copy was place in a suspense folder. Universal waste shipping papers were also included in the manifests. The last shipment of universal waste to EQ Transfer and Processing was made on 1/8/09.

Waste Export Documentation: Marathon exports F037 centrifuge solids to Canada through Clean Harbors. Because Clean Harbors is considered the primary exporter, the Notifications of the Intent to Export ("pre-notes") are completed by Clean Harbors. Copies of those pre-notes are kept at the Facility as well as the EPA Acknowledgement of Consent letters that are issued if the pre-note request is granted. The latest Acknowledgement letter allows Marathon to export F037 waste to Canada from 5/11/09 to 5/8/10.

The Canadian disposal route may not be fiscally feasible in the future. For that reason, Marathon occasionally ships loads of F037 waste to Ross Incineration Services, Inc., in Ohio and maintains a profile with that facility.

Weekly Inspections: Weekly inspection logs are maintained at the Facility for at least three years. The inspections are conducted at the HWAA-East; Bundle Cleaning Pad, HWAA-East; Centrifuge, HWWA-West; Bundle Cleaning Pad, and at the CCR shed (platinum catalyst containers). The inspections include the name of the inspector, the time and date

of the inspection, and cover the following topics: condition of drums/containers (properly closed, labeled); emergency equipment; aisle space; waste compatibility; and containment. The hazardous waste accumulation area outside of the Laboratory was not included in the inspections.

Waste Profiles: An extensive record of waste profiles is kept at Marathon. Generator knowledge is used for wastes that carry hazardous waste listings. Wastes that may have variable constituents over time, such as sandblast media, are tested with each shipment. Unknown materials, such as spill clean-up materials or drums of product for which the label fell off, are considered hazardous waste until testing proves otherwise. Routinely generated wastes, such as amine filters and Laboratory wastes are tested initially and maintain the original designation.

Closing Conference

The following items were discussed with Marathon personnel at the close of the inspection:

- When labeling satellite accumulation containers, the words "Hazardous Waste" must appear with a chemical description of the waste or the waste number.
- The accumulation area outside of the Laboratory may not be considered a satellite accumulation area and would require weekly inspections to be performed there.
- Containers in 90-day accumulation status must be marked not only with the words "Hazardous Waste," but also with the hazardous waste number.
- Even though containers of waste were in good condition, they were not protected from weather. Marathon personnel indicated that a new hazardous waste warehouse was going to be built to the north of the Laboratory.

APPENDIX A

PHOTO LOG

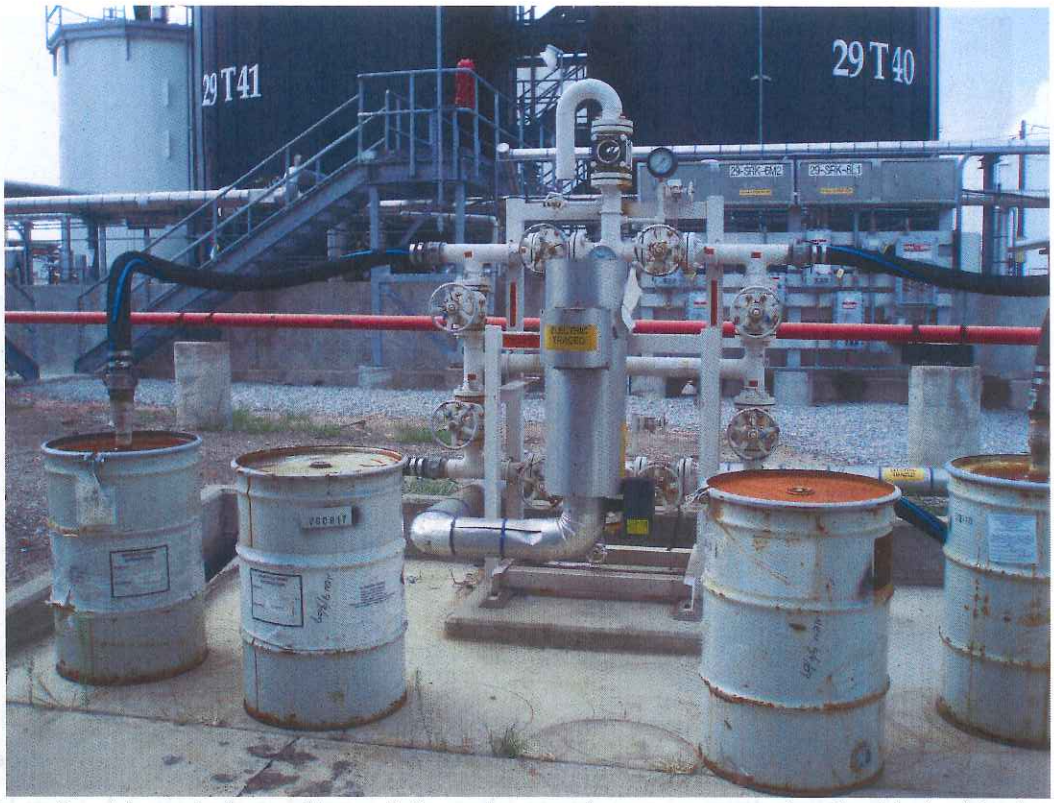
Inspection Date:
September 9 and 10, 2009

Facility Name:
Marathon Petroleum Company, LLC
EPA ID: MID005506357

Inspector and Photographer:
Brenda Whitney
Compliance Section 2
RCRA Branch
Land and Chemicals Division

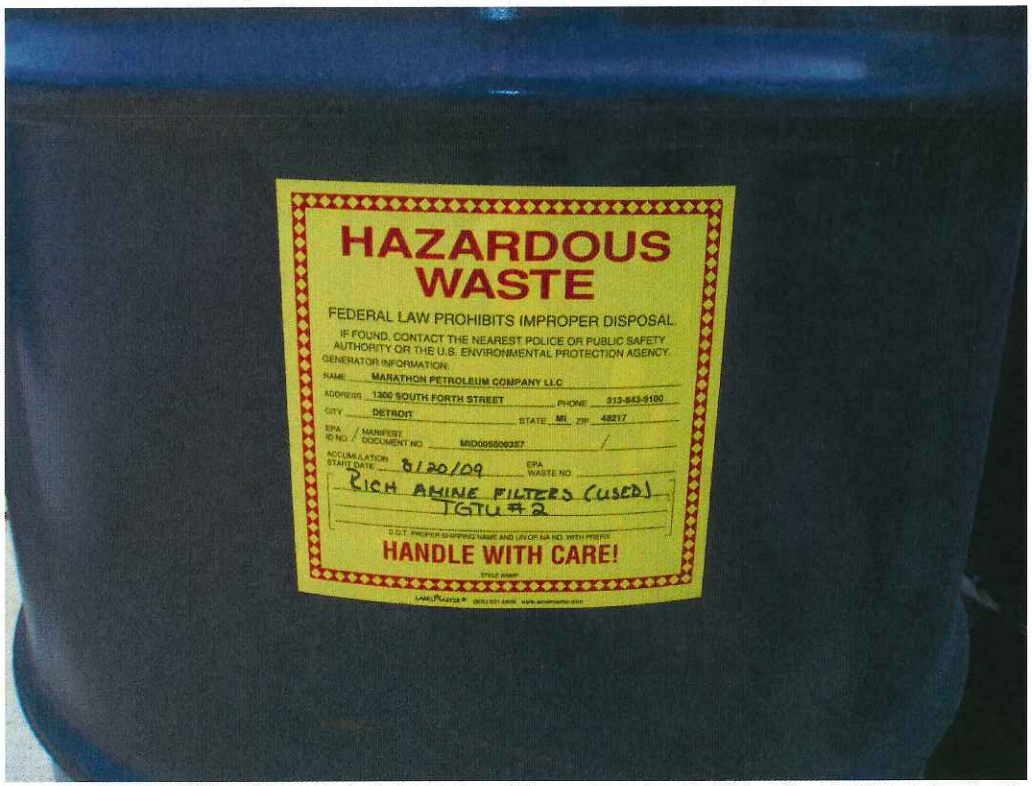
Picture 1 – The waste water treatment system (WWTS) is located across a service road to the south of the Crude Unit. The WWTS includes an American Petroleum Institute oil/water separator ("API") that has an east and a west cell.

Picture 2 – This blue tank is an example of what is referred to at Marathon as a "frac" tank. This tank was located near the WWTS.

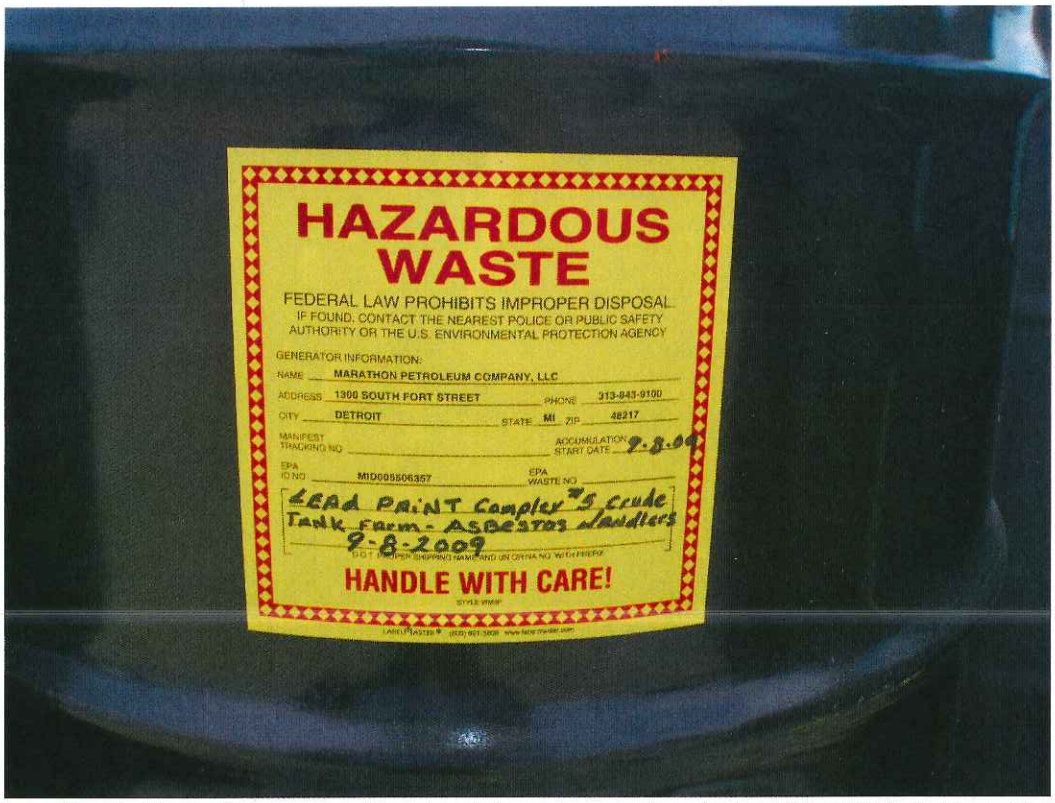


Picture 3 – Air emission units, mainly carbon canisters, are associated with the black tanks storing the oil skimmed from the API. The carbon is returned to the vendor for regeneration.

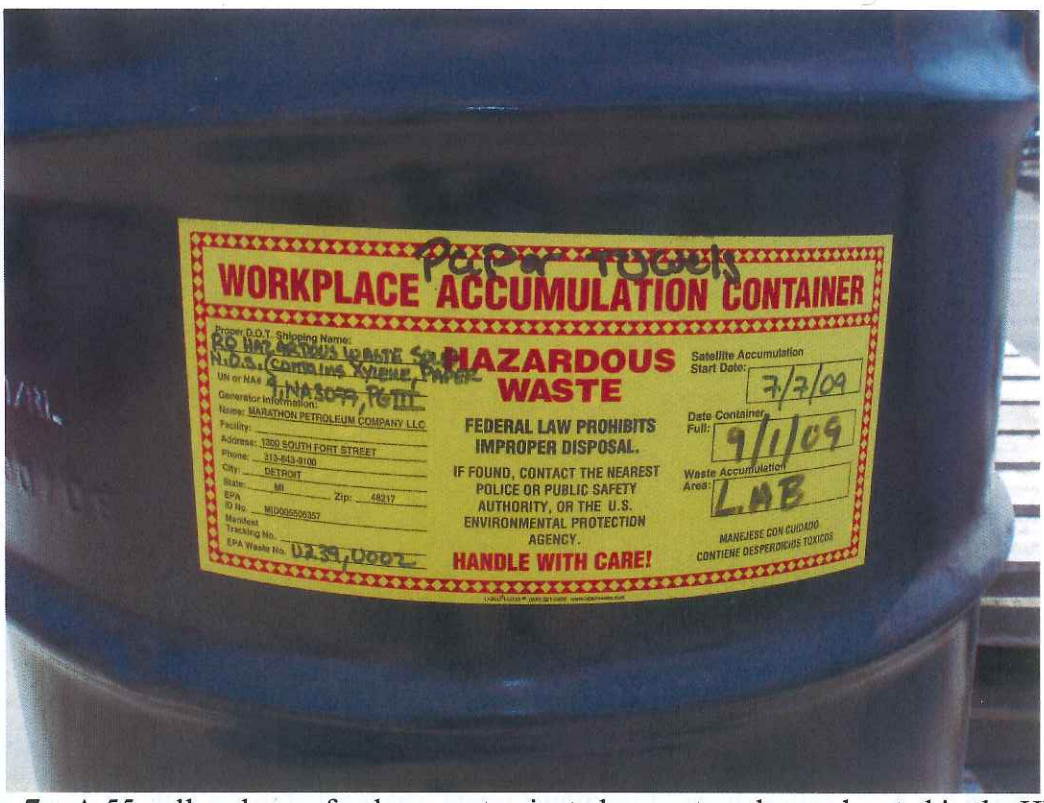
Picture 4 – A 90-day hazardous waste accumulation area (HWAA) for containers is located west of the WWTS and is referred to as the HWAA-East; Bundle Cleaning Pad. This picture shows the concrete pad and the curb surrounding the pad. The pipe pictured is filled with sulfur and will be cleaned out here.



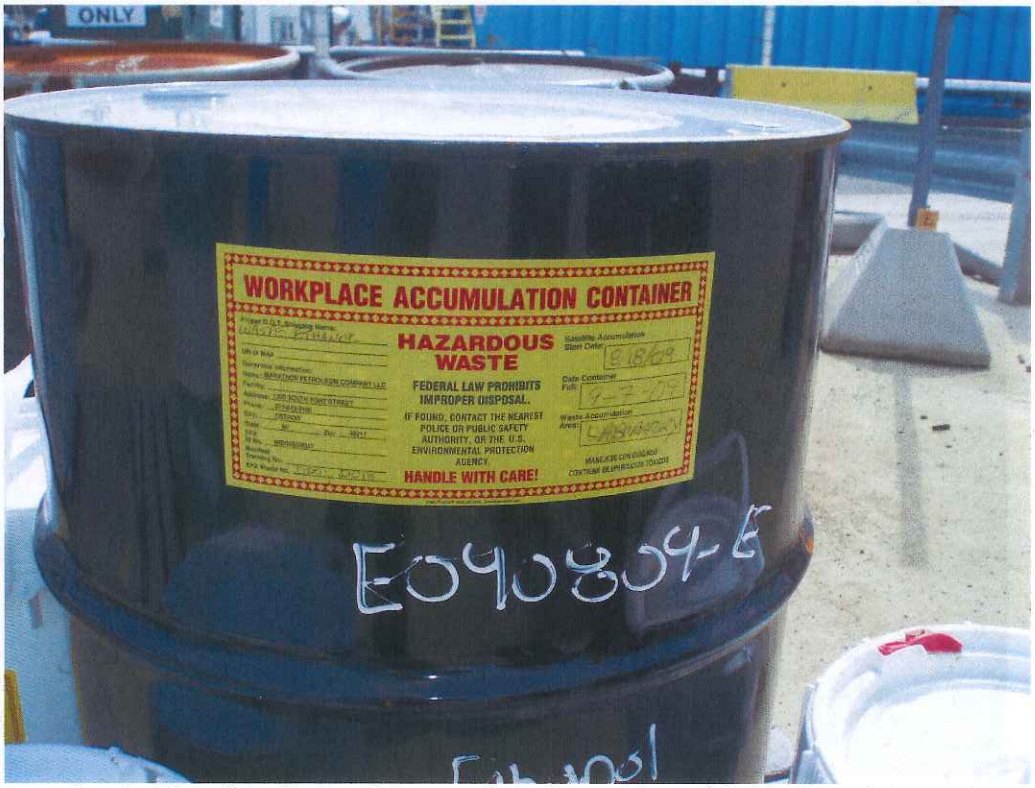
Picture 5 – A 55-gallon drum of rich amine filters was located in the HWAA-East; Bundle Cleaning Pad. The drum is not marked with a hazardous waste number.



Picture 6 – A 55-gallon drum of lead paint waste was located in the HWAA-East; Bundle Cleaning Pad. The drum is not marked with a hazardous waste number.



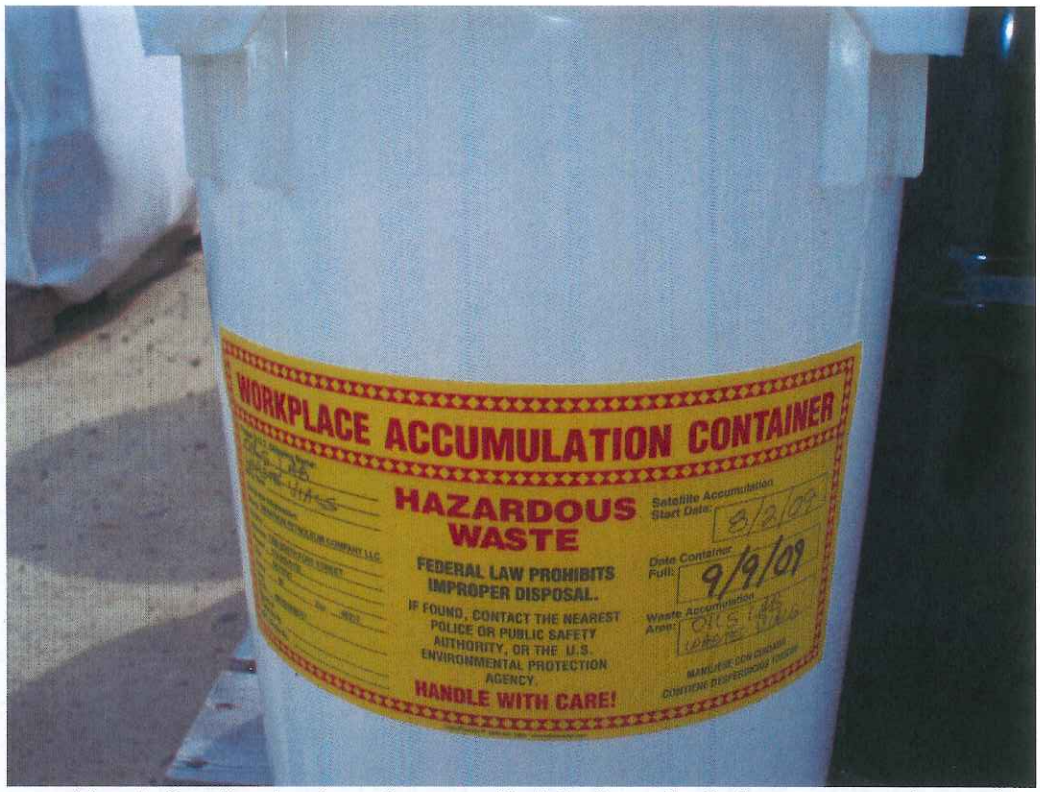
Picture 7 – A 55-gallon drum of xylene-contaminated paper towels was located in the HWAA-East; Bundle Cleaning Pad. The drum is marked with the U239 and U002 hazardous waste numbers.



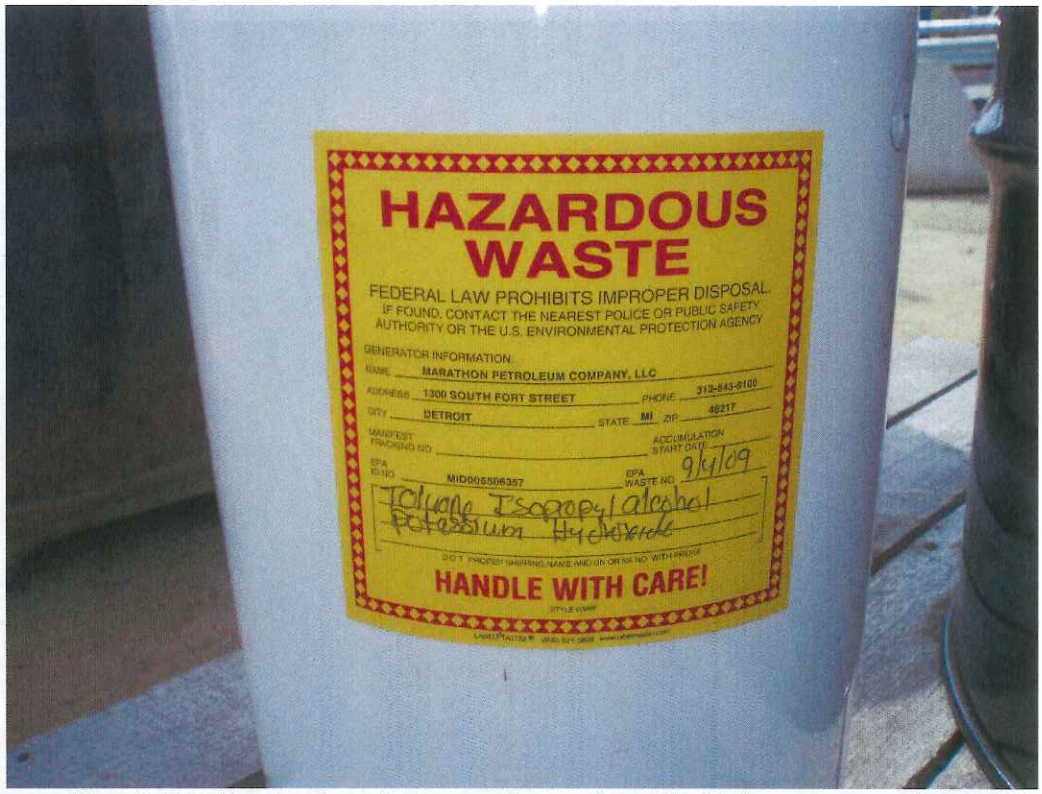
Picture 8 – A 55-gallon drum of waste ethanol was located in the HWAA-East; Bundle Cleaning Pad. The drum is marked with the D001 and D018 hazardous waste numbers.

Picture 9 – A 55-gallon drum of unknown waste was located in the HWAA-East; Bundle Cleaning Pad. The material will be sampled and analyzed to determine whether or not it is a hazardous waste.

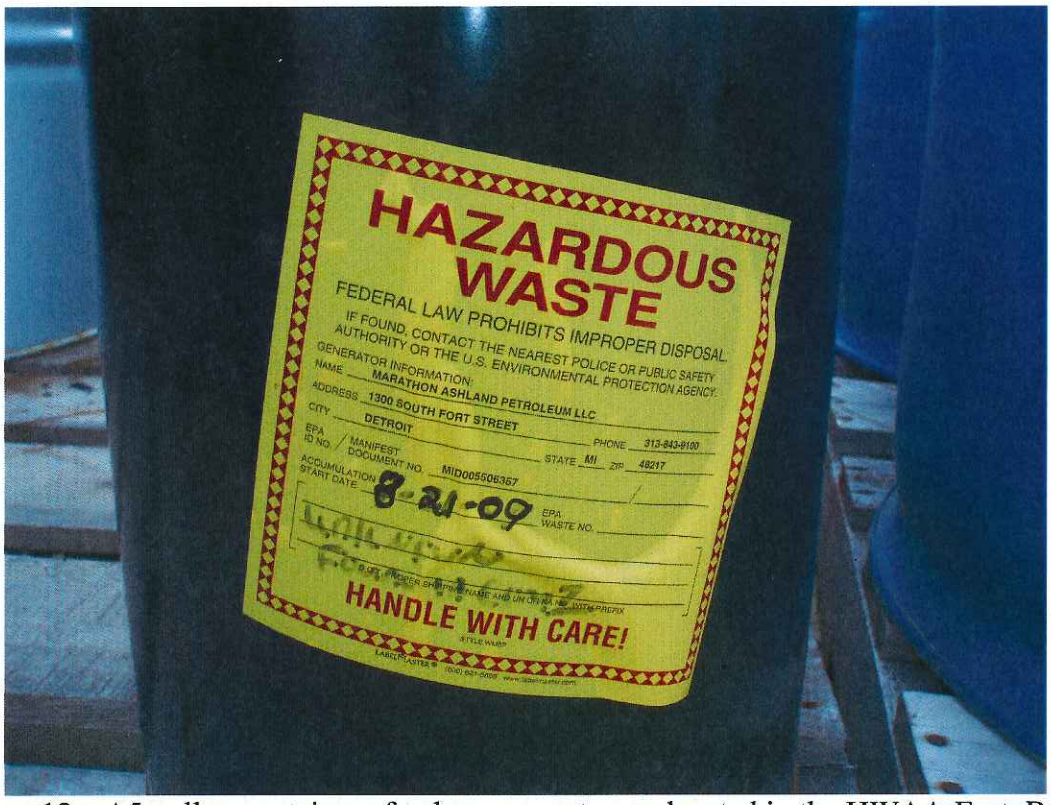
Picture 10 – A 6-gallon bucket of waste sulfur cups from the Laboratory was located in the HWAA-East; Bundle Cleaning Pad. The container is not marked with a hazardous waste number.



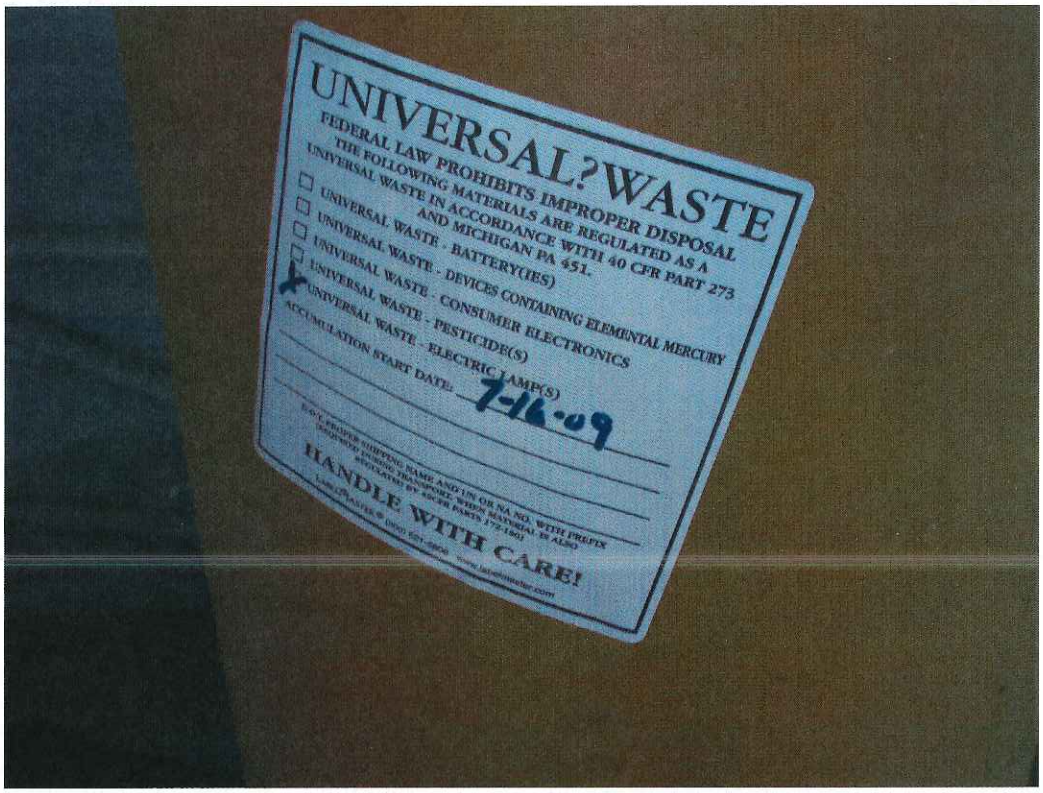
Picture 11 – A 6-gallon bucket of waste oil vials from the Laboratory was located in the HWAA-East; Bundle Cleaning Pad. The container was not marked with a hazardous waste number.



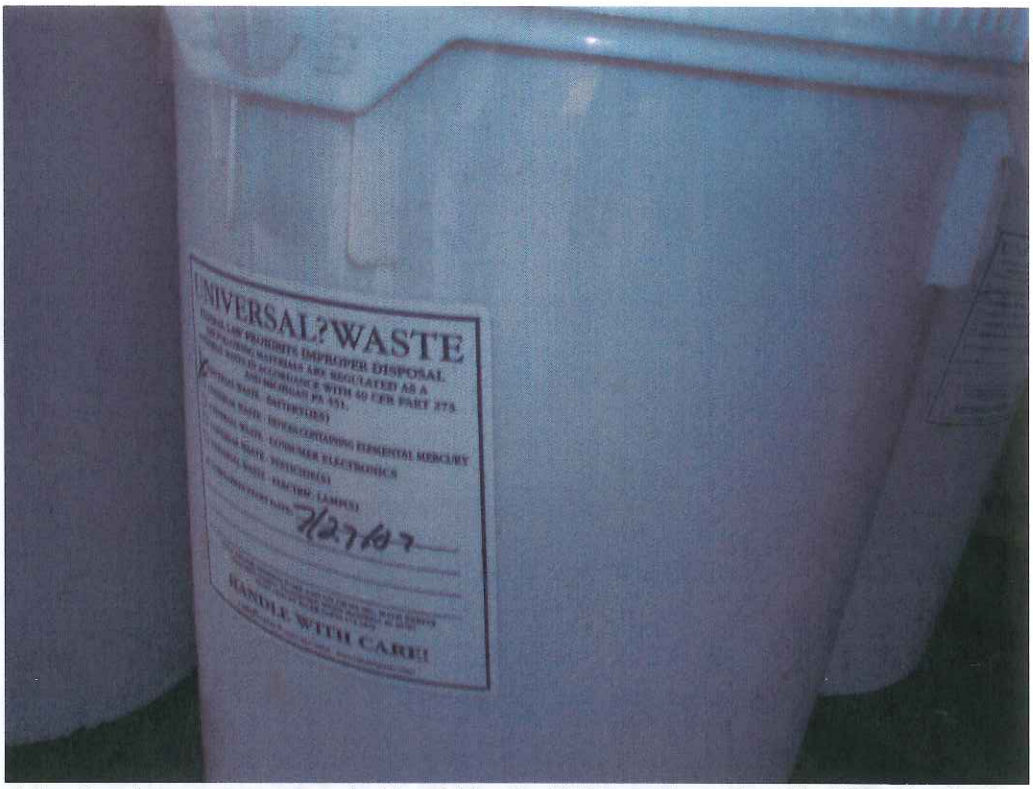
Picture 12 – A 6-gallon bucket of waste solvents from the Laboratory was located in the HWAA-East; Bundle Cleaning Pad. The container is not marked with a hazardous waste number, but was labeled with the words "Toluene/Isopropyl Alcohol/Potassium Hydroxide".



Picture 13 – A5-gallon container of unknown waste was located in the HWAA-East; Bundle Cleaning Pad. The material will be sampled and analyzed to determine whether or not the material is a hazardous waste.

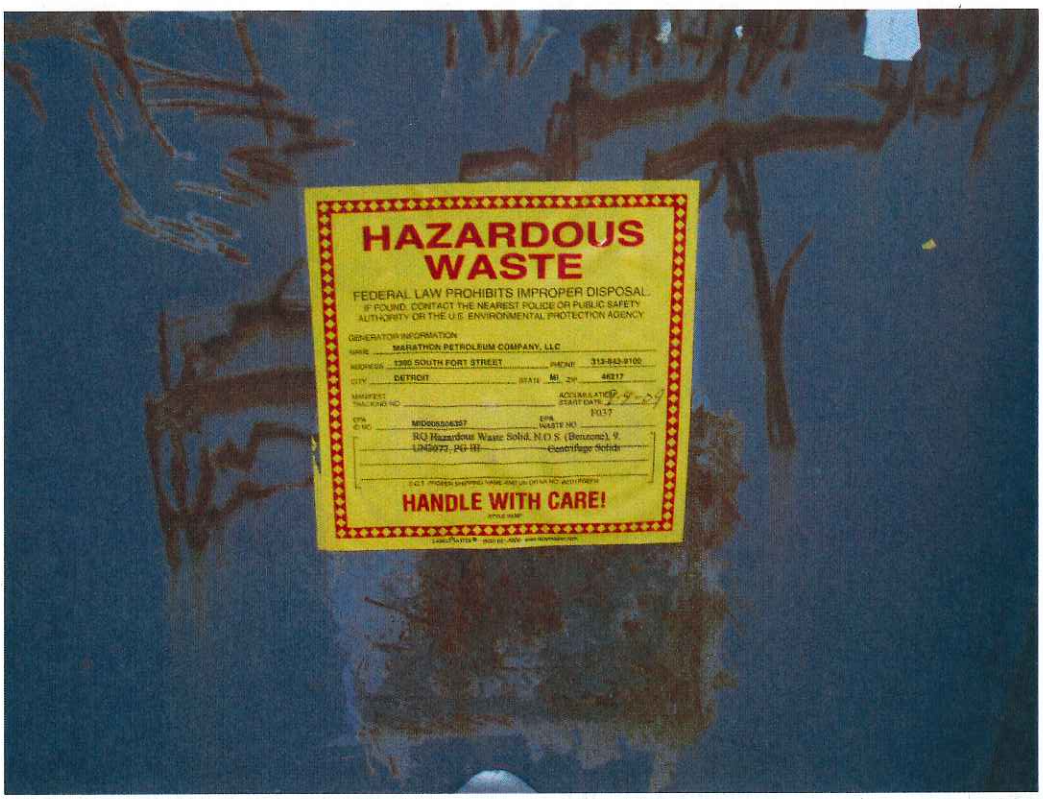


Picture 14 – In a lean-to structure built within the HWAA-East; Bundle Cleaning Pad to protect universal waste and other materials from the weather, a cylinder of used fluorescent lamps was labeled as "Universal Waste".



Picture 15 – In a lean-to structure built within the HWAA-East; Bundle Cleaning Pad to protect universal waste and other materials from the weather, a bucket of batteries was labeled as "Universal Waste".

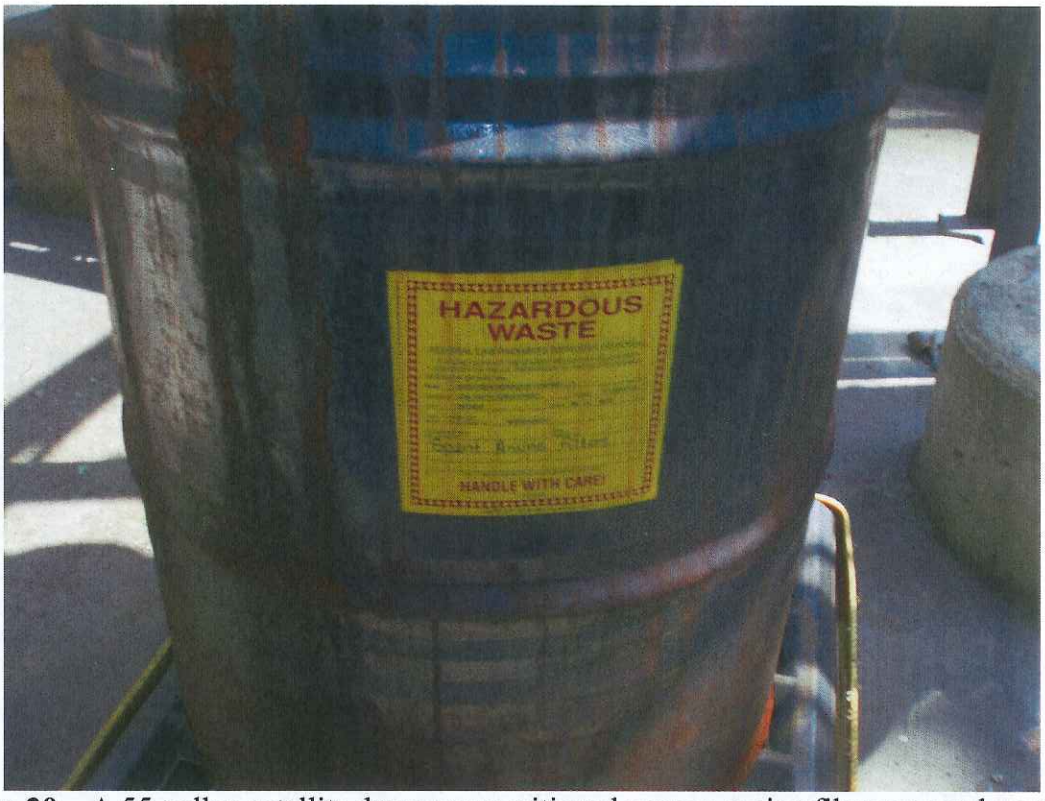
Picture 16 – In the HWAA-East; Centrifuge, two roll-off boxes were used to store F037 waste. The second box is identified in Picture 17.



Picture 17 – In the HWAA-East; Centrifuge, two roll-off boxes were used to store F037 waste. The first box is identified in Picture 16.

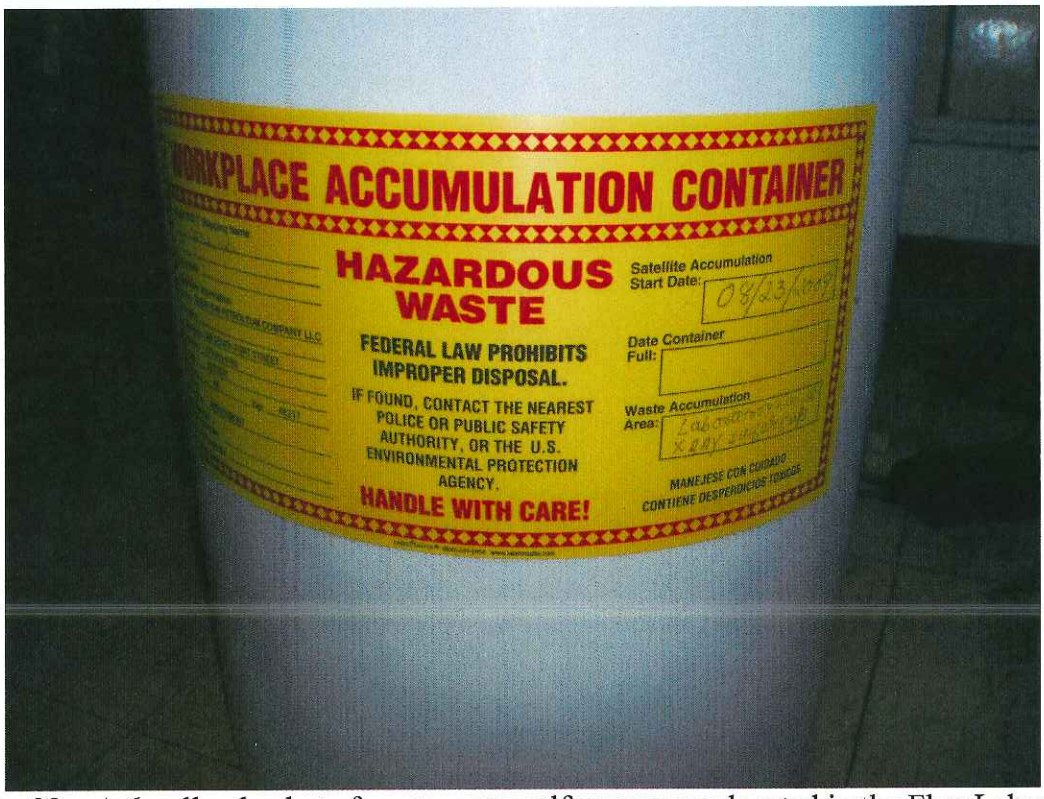
Picture 18 – The roll-off boxes used for storing F037 in the HWAA-East; Centrifuge have solid lids that slid horizontally on rails to open and close the container.

Picture 19 – One 5-gallon bucket of slop oil was located on concrete that was stained with oil near the gas-oil hydrotreater (GOHT).

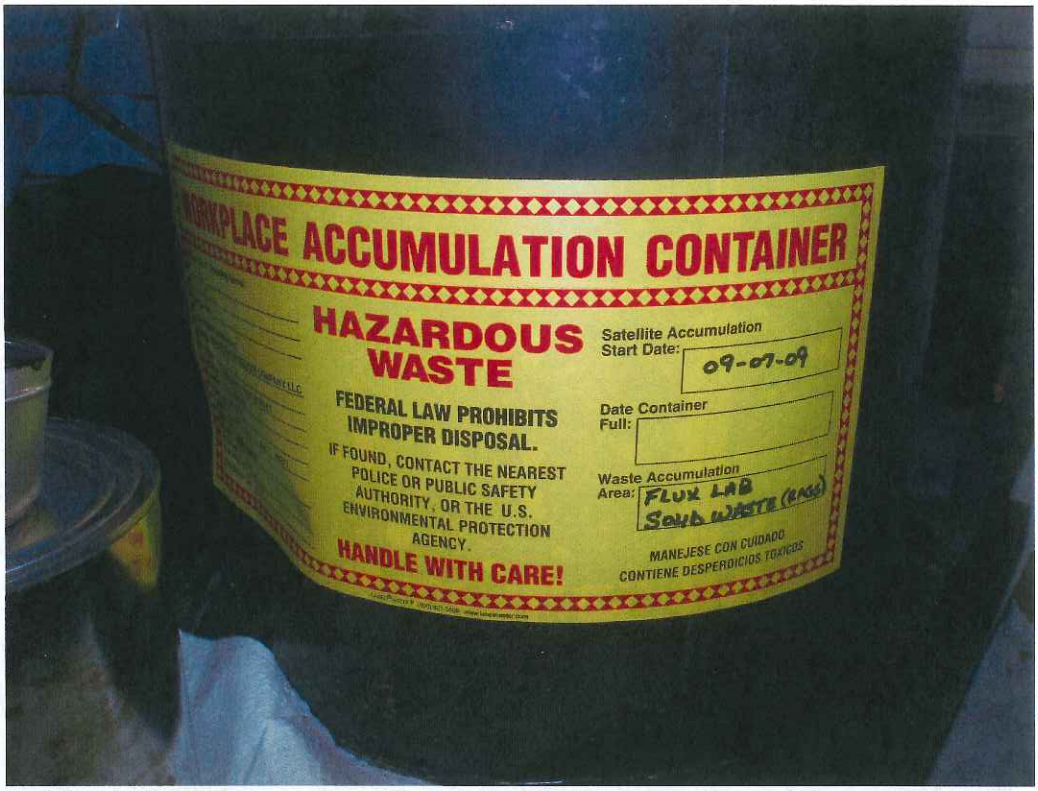


Picture 20 – A 55-gallon satellite drum was positioned near an amine filter removal port in the sulfur recovery unit (SRU). This container was not marked with a hazardous waste number but was marked with the words "Spent Amine Filters".

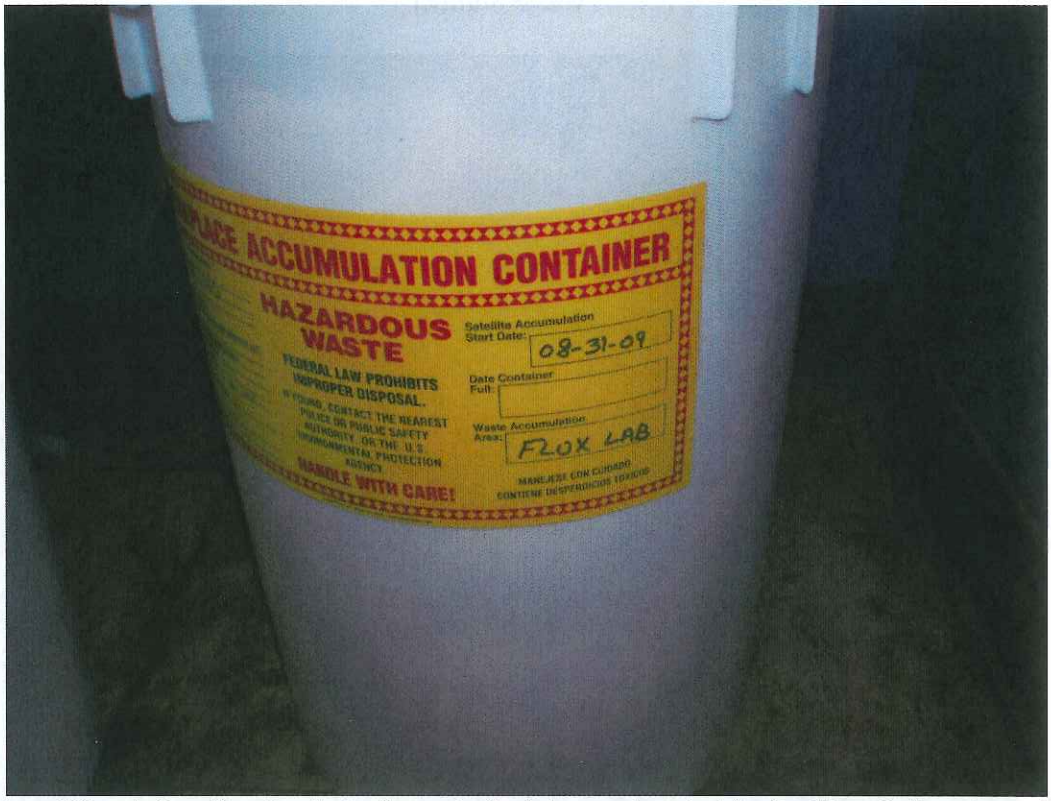
Picture 21 – A 55-gallon satellite drum was positioned near an amine filter removal port in the SCOT tail-gas treating unit. This container was not marked with a hazardous waste number but was marked with the words "Rich Amine Filters".



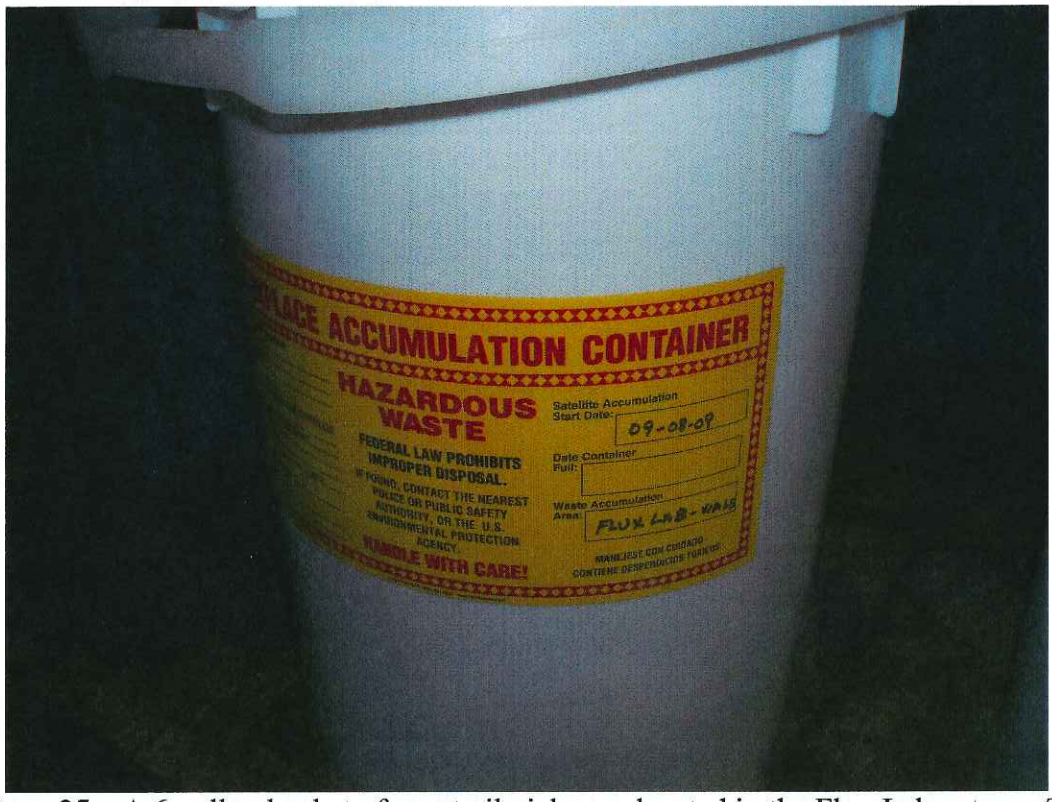
Picture 22 – A 6-gallon bucket of waste x-ray sulfur cups was located in the Flux Laboratory. This container was marked neither with the chemical name of the waste, nor with the hazardous waste number.



Picture 23 – A 5-gallon container of waste solvent rags was located in the Flux Laboratory. This container was marked neither with the chemical name of the waste, nor with the hazardous waste number.

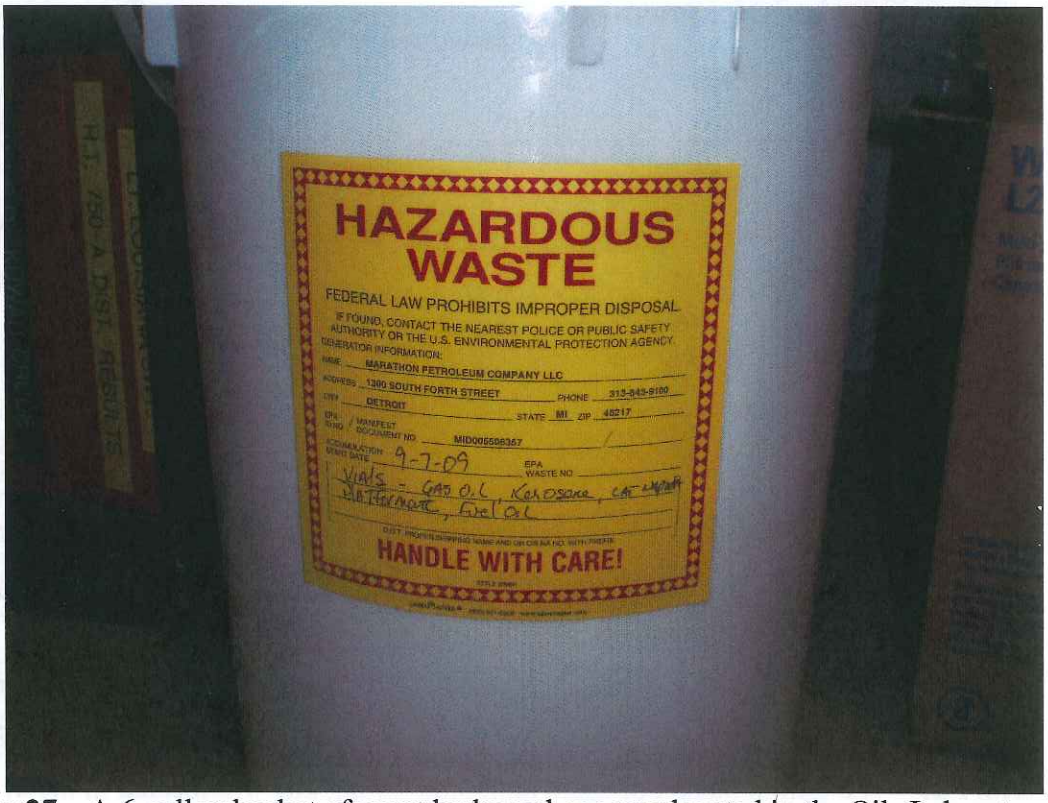


Picture 24 – A 6-gallon bucket of spent oil vials was located in the Flux Laboratory. This container was marked neither with the chemical name of the waste, nor with the hazardous waste number.

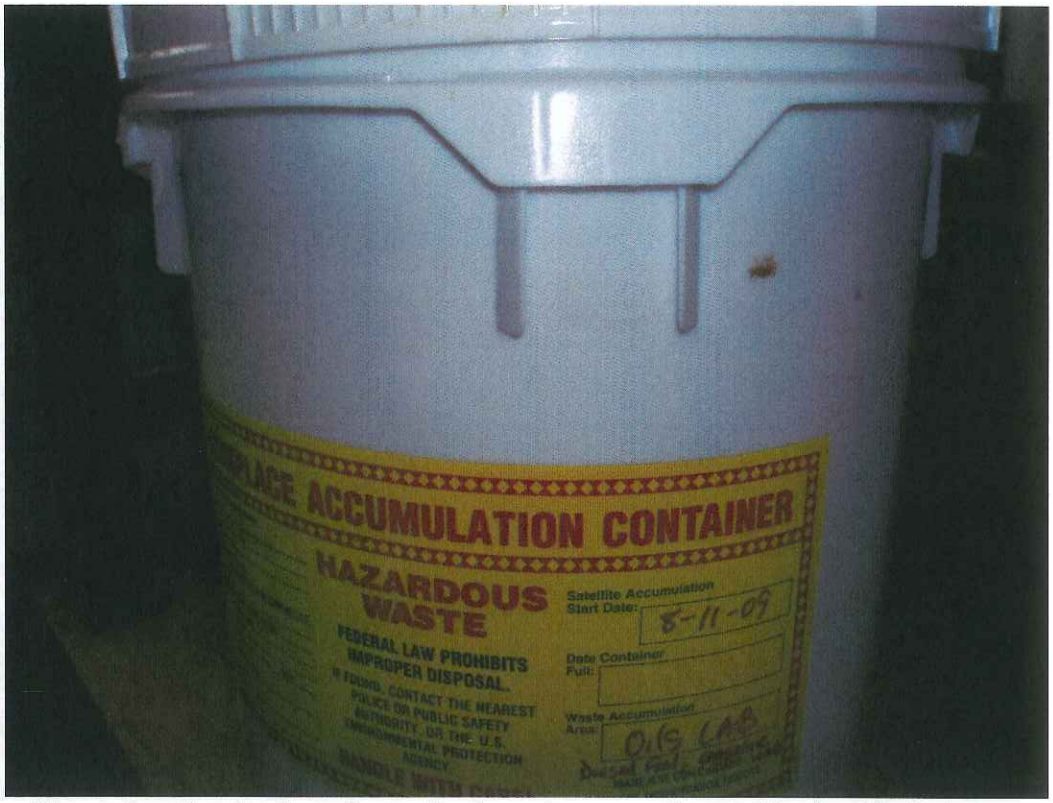


Picture 25 – A 6-gallon bucket of spent oil vials was located in the Flux Laboratory. This container was marked neither with the chemical name of the waste, nor with the hazardous waste number

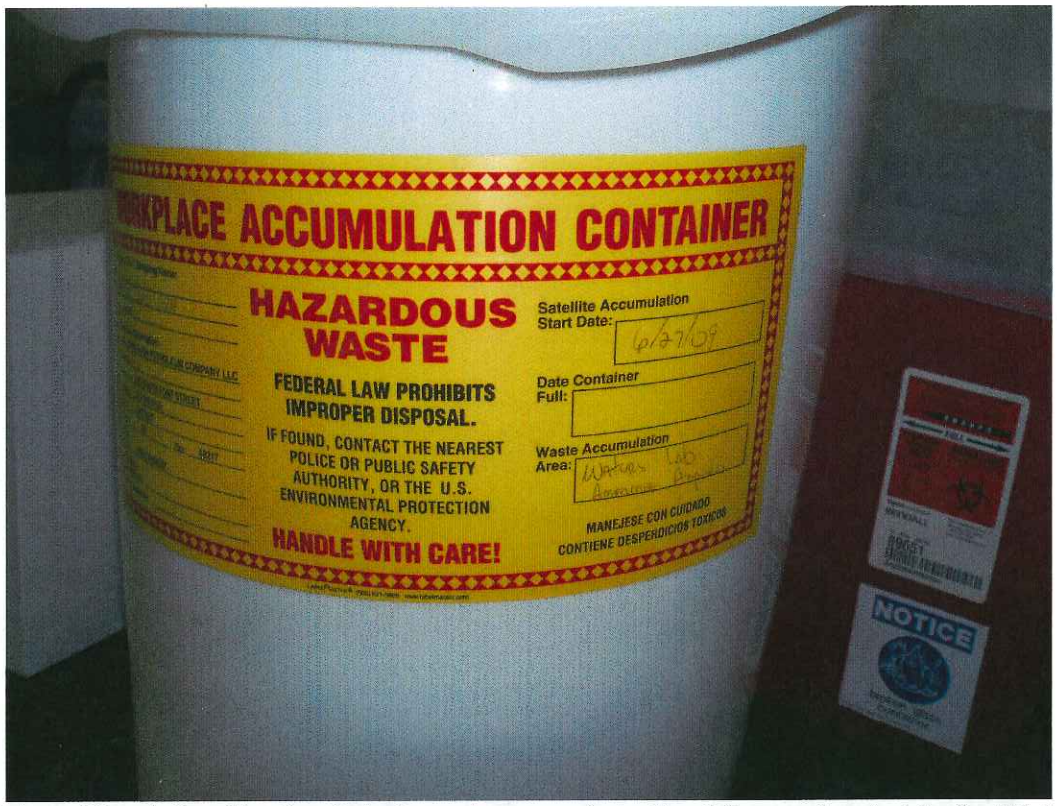
Picture 26 – A 4-liter amber bottle of spent "doctor waste" was located in a hood in the Flux Laboratory. This container was marked with the words "Benzene," "Lead," and "Corrosive".



Picture 27 – A 6-gallon bucket of spent hydrocarbons was located in the Oils Laboratory. This container was marked with the words "Gas oil, kerosene, cat naptha, platformate, fuel oil".

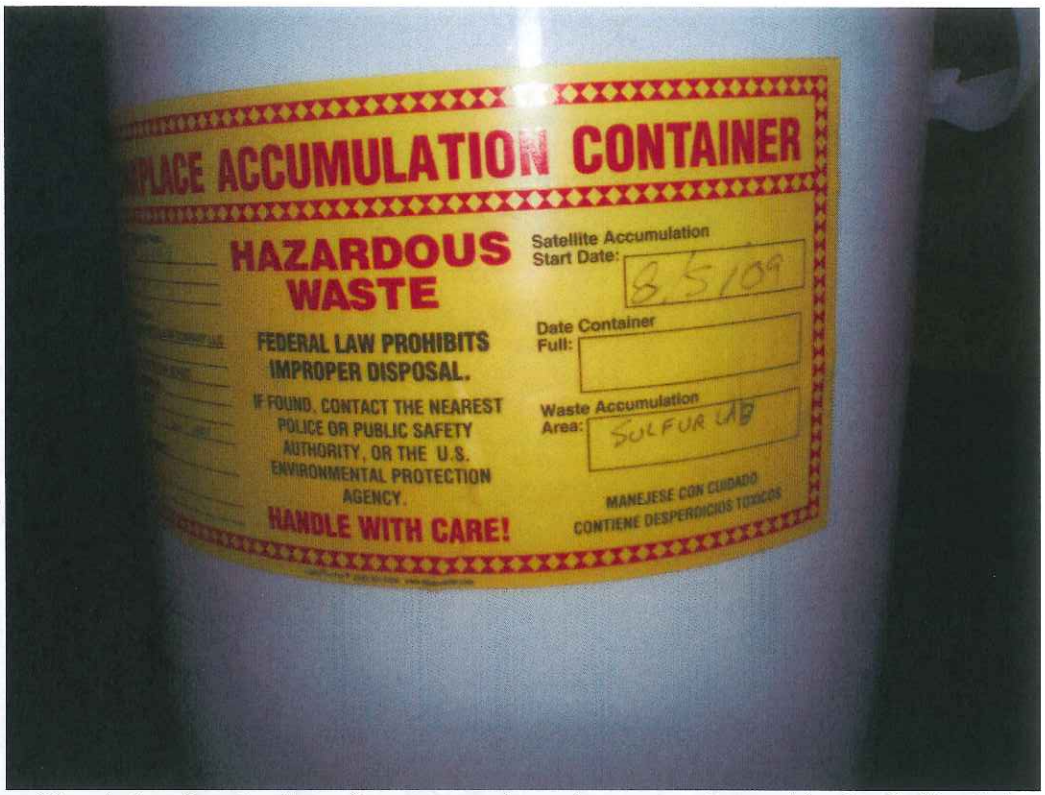


Picture 28 – A 6-gallon bucket of spent hydrocarbons was located in the Oils Laboratory. This container was marked with the words "Diesel fuel, gasoline waste".



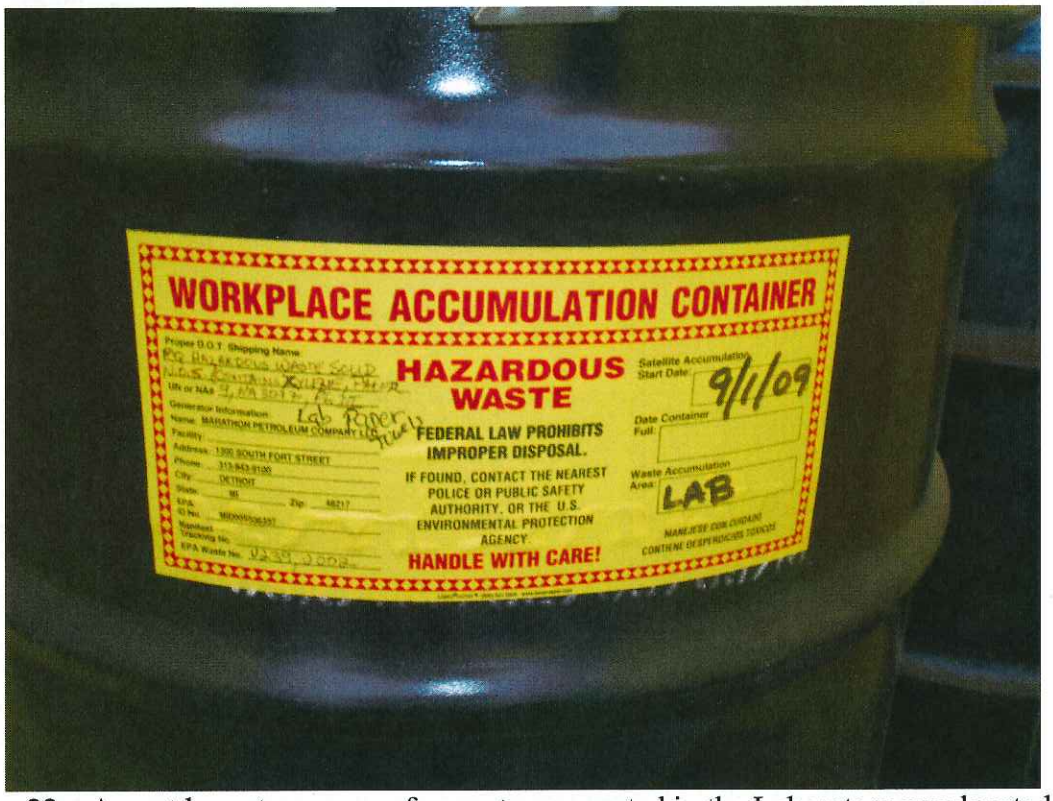
Picture 29 – A 6-gallon bucket of spent ammonia testing kits was located in the Waters Laboratory. This container was marked neither with the chemical name of the waste, nor with the hazardous waste number. This waste is hazardous for mercury.

Picture 30 – A 6-gallon bucket of spent ammonia testing kits was located in the Waste Water Laboratory. This container was marked with the D009 and D002 hazardous waste numbers.

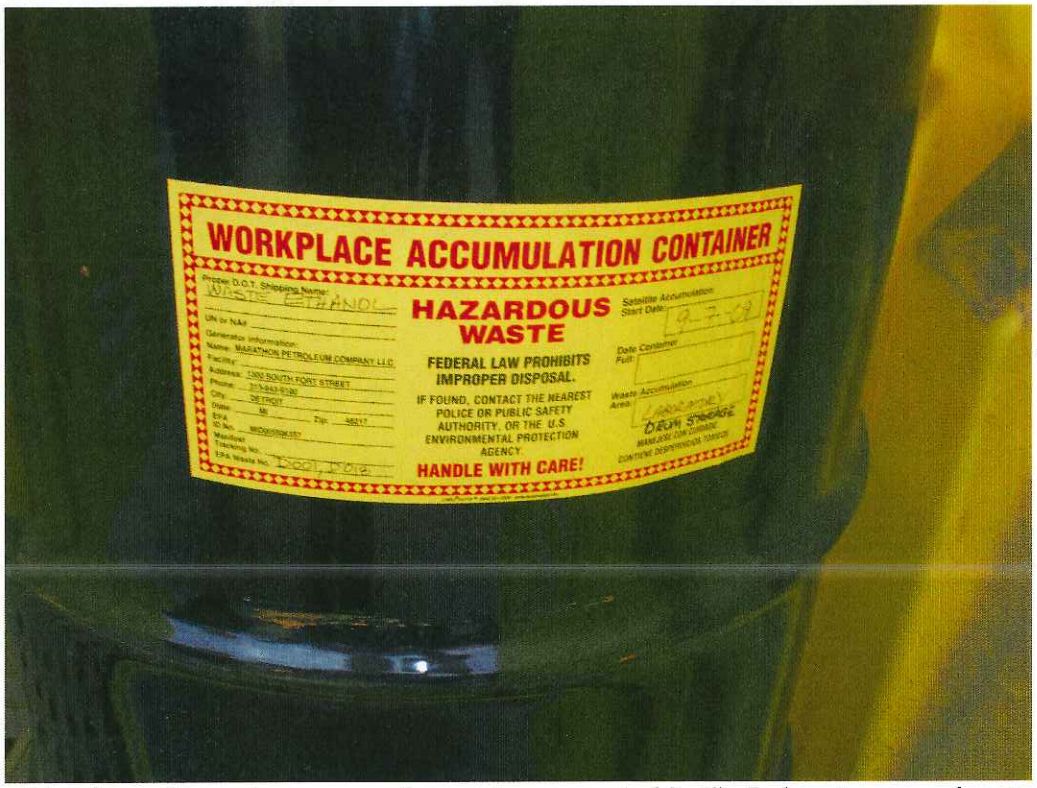


Picture 31 – A 6-gallon bucket of paper towels and rags was located in the Sulfur Laboratory. This container was marked neither with the chemical name of the waste, nor with the hazardous waste number.

Picture 32 – A 6-gallon bucket of universal waste mercury-containing equipment was located in the bottle-washer room of the Laboratory. This container was marked as "Universal Waste" and "Sealed Mercury".



Picture 33 – An outdoor storage area for wastes generated in the Laboratory was located north of the building. A 55-gallon drum of waste xylene was closed; labeled as "Hazardous Waste" and "Xylene;" marked with the U239 and U002 waste numbers; and dated from 9/01/09.



Picture 34 – An outdoor storage area for wastes generated in the Laboratory was located north of the building. A 55-gallon drum of waste ethanol was closed; labeled as "Hazardous Waste" and "Waste Ethanol," marked with the D001 and D018 waste numbers; and dated from 9/7/09, .

Picture 35 – Near the catalyst tower and the fractionation tower was a 55-gallon satellite accumulation container for slurry oil sediment generated from the fluidized-bed catalytic cracking unit (FCCU). The drum was labeled as "Slurry Oil Solids," "Hazardous Waste," and marked with the K170 listing number.

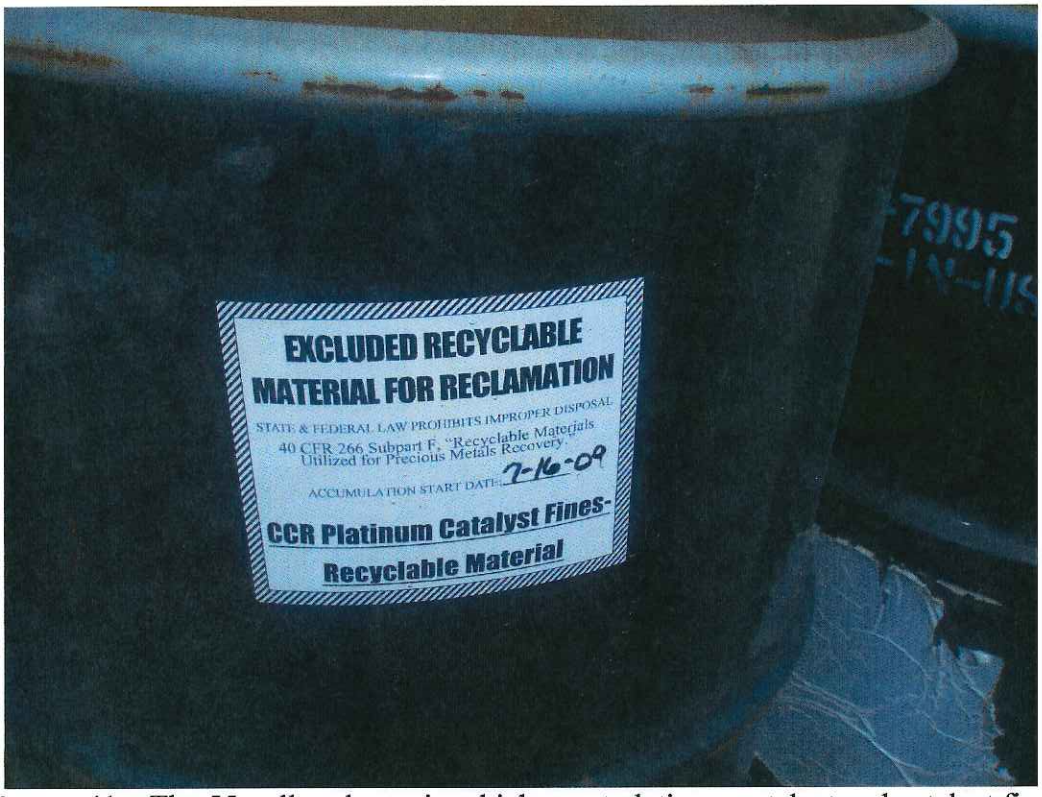
Picture 36 – A maintenance shed ("Area 2") is located behind the FCCU. Universal waste lamps accumulating in this area were contained in closed boxes labeled as "Universal Waste".

Picture 37 – A 55-gallon drum was located in the HWAA-West; Bundle Cleaning Pad. The drum contained unknown product. The material would be sampled and analyzed to determine whether or not it is a hazardous waste.

Picture 38 – A 55-gallon drum of ignitable waste was located in the HWAA-West; Bundle Cleaning Pad. The drum was marked with the D001 waste number.

Picture 39 – A 55-gallon poly drum was located in the HWAA-West; Bundle Cleaning Pad. The drum contained unknown product. The material would be sampled and analyzed to determine whether or not it is a hazardous waste.

Picture 40 – This A 55-gallon drum of aerosol can waste was located in the HWAA-West; Bundle Cleaning Pad. The drum was marked with the D001, F003, and F005 hazardous waste numbers.



Picture 41 – The 55-gallon drums in which spent platinum catalyst and catalyst fines accumulate are labeled with the words "Excluded Recyclable Material For Reclamation" and are marked with start dates of accumulation.

Picture 42 – The 55-gallon drums of platinum catalyst and catalyst fines are stored in a shed near the continuous catalytic reformer (CCR).

Picture 43 – A 55-gallon drum and a 10-gallon container of used oil were located in the Area 1 maintenance shed and were marked as "Used Oil".

Picture 44 – In a plastic containment shed located near the Area 3 maintenance shed was a 55-gallon satellite accumulation drum for waste aerosols, which was labeled as "Hazardous Waste" and marked with the D001, F003, and F005 hazardous waste numbers.

Picture 45 – Located near the plastic containment shed identified in Picture 44 was a 55-gallon accumulation drum for rags contaminated with oil. The rags have been determined to be non-hazardous.

DEQ

Department of Environmental Quality, Waste and Hazardous Materials Division

GENERATOR INSPECTION FORM

acility's Name Marathon Petroleum LLC Part 3 Rules

Date 9-9-09 / 9-10-09 ID# MID005506357 1994 PA 451

HAZARDOUS WASTE AND WASTE #	SOURCE	HOW MUCH
WWT Sludge F037	Wastewater treatment System	15 y^3/week
LAB Waste D001, F003, F005, D018, D008, D002	Laboratory	110 gal/week
Hydrotreater Catalyst K171 D001	Hydrotreaters - Cleanouts	Annual Cleanouts several tons
Bundle Cleaning Sludge K050	Cleaning Heat Exchanger Bundles	110 gal/month
Desalter Solids D018	Cleaning out Desalters	55-110 gal/year
Amine Filters D001 D018	Sulfur recovery unit	165 gal/month

___ abbreviated

FACILITY COMPLIANCE REQUIRED IN ALL AREAS

NI - Not Inspected N/A - Not Applicable)

WASTE DETERMINATION (Rule 302: 40 CFR 262.11

		YES	NO	
1. Determined if waste streams are hazardous waste? (Rule 302: 40 CFR 262.11))	GGR	[X]	___	NI N/A
a) copy of waste evaluation on-site 3 years? (Rule 307(1): 40 CFR 262.40(c))	GRR	[X]	___	NI N/A
b) re-evaluated waste when changes in materials or process? (Rule 302(3))	GGR	[X]	___	NI N/A
2. Did generator have written waste analysis plan if treating wastes on-site? (Rule 306)(1)(d):40 CFR 268.7(a)(5))	GPT	[ ]	___	NI N/A

IDENTIFICATION NUMBER (Rule 303: 40 CFR 262.12)

3. Has the generator obtained an identification number? (Rule 303: 40 CFR 262.12)	GGR	[X]	___	NI N/A

MANIFEST REQUIREMENTS (Rule 304: 40 CFR 262.20)

4. Copies of the manifest readily available for review & inspection? (Section 11138(1)(f))	GMR	[X]	___	NI N/A
5. Manifests kept for the past 3 years? (Rule 307(3): 40 CFR 262.40(a))	GRR	[ ]	___	NI N/A
6. Manifests, prepared by the generator (Rule 304(1)(a): 40 CFR 262.20(a)), contain the following?	GMR	[ ]	___	NI N/A
a) manifest document number. (Rule 304(2)(a): 40 CFR 262.20(a))	GMR	[ ]	___	NI N/A
b) generator's name, address, phone & ID # (Rule 304(2)(b): 40 CFR 262.20(a))	GMR	[ ]	___	NI N/A
c) name & ID # of the transporter. (Rule 304(2)(c): 40 CFR 262.20(a))	GMR	[ ]	___	NI N/A
d) name, address & ID # of TSDF. (Rule 304(2)(d): 40 CFR 262.20(b)&(c))	GMR	[ ]	___	NI N/A
e) DOT description of waste(s). (Rule 304(2)(e): 40 CFR 262.20(a))	GMR	[ ]	___	NI N/A
f) quantity of waste, type & # of containers. (Rule 304(2)(f): 40 CFR 262.20(a))	GMR	[ ]	___	NI N/A
g) hazardous waste number of the wastes. (Rule 304(2)g): 40 CFR 262.20(a))	GMR	[ ]	___	NI N/A
h) generator signature, initial transporter & date of acceptance?(Rule 304(4)(a)&(b): 40 CFR 262.23(a)(1)&(2))	GMR	[ ]	___	NI N/A
7. Submitted copy of manifests to Director no later than 10 days after month shipment was made? (Rule 304(4)(d))	GMR	[ ]	___	NI N/A
8. For out-of-state manifests, was copy of 3rd signature manifest submitted to Director? (Rule 304(4)(f)) GHO	GMR	[ ]	___	NI N/A
9. Is the transporter used properly registered &/or permitted under Act 138, Section (2)&(3)? (Rule 304(1)(c))	GPT	[X]	___	NI N/A

NOTE: *For shipments of hazardous waste solely by water or rail shipments, within United States see Rule 304(4)(g or h).*

10. Using manifest that has expired? (Rule 304(2)(i) : 40 CFR 262.20(a))	GMR	___	[X]	NI N/A
11. Reportable exceptions. (Rule 308(3): 40 CFR 262.42))				
a) number of manifests generator HASN'T receive signed copy from TSD w/in 35 days:	GRR			N/A
b) number of manifests generator HASN'T submitted exception reports to RA & DEQ after 45 days:	GRR			
12. Facility has written program to reduce volume/toxicity/recycle wastes? (Rule 304(2)(i):40 CFR 262.20(a))	GMR	[X]	___	NI N/A

OR

13. Facility discusses program in place to reduce volume/toxicity/recycle of waste (Rule 304(2)(i): 40 CFR 262.20(a))	GMR	[ ]	___	NI N/A

LAND DISPOSAL RESTRICTION REQUIREMENTS
WASTE ANALYSIS AND RECORDKEEPING (Rule 311(1): 40 CFR 268.7))

		YES	NO
14. Did the generator determine if the waste is restricted from land disposal? (Rule 311(1): 40 CFR 268.7(a)(1))			
a) all listed waste	GLB	[X]	NI N/A
b) all characteristic wastes?	GLB	[X]	NI N/A

NOTE: *If waste has both listed & characteristic waste codes, the treatment standard for the listed waste is sufficient if the treatment standards for the listed waste includes a standard for the constituent that caused the waste to exhibit the characteristic, except for D001 and D002. (40 CFR 268.9(b))*

15. If restricted waste exceeds treatment standards or prohibitions did notice go w/ initial shipment? (Rule 311(1):40 CFR 268.7(a)(2))	GLB	[X]	NI N/A

OR

16. If restricted waste does not exceed treatment standards or prohibitions did a notice and certification statement go with initial shipment? (Rule 311(1): (40 CFR 268.7(a)(3))	GLB	[ ]	NI N/A

OR

17. If waste has exemption from prohibition on the type of land disposal method utilized for the waste, did a notice go with initial shipment? (Rule 311(1): 40 CFR 268.7(a)(4))	GLB	[ ]	NI N/A

OR

18. If facility choose alternative treatment standard for lab pack that contains none of the waste in appendix IV, did a notice & certification go with initial shipment? (Rule 311(1): 40 CFR 268.7(a)(9))	GLB	[ ]	NI N/A
19. Did the notice include: (Rule 311(1): 40 CFR 268.7(a)(1) or 268.7(a)(2) or 268.7(a)(3)			
a) EPA hazardous waste #?	GLB	[X]	NI N/A
b) if wastewater or non-wastewater as defined in 268.2(d&f)?	GLB	[ ]	NI N/A
c) subcategory of the waste (such as D003 reactive cyanide) if applicable?	GLB	[ ]	NI N/A
d) manifest number associated with the shipment?	GLB	[ ]	NI N/A
e) waste analysis data, where available?	GLB	[ ]	NI N/A
f) waste constituents that the treater will monitor, if monitoring will not include all regulated constituents, for F001- F005, F039, D001, D002, D012-D043? (treatment standards for hazardous waste in table in 268.40 for the waste code under regulated constituents)	GLB	[X]	NI N/A

UNLESS

g) did generator/treater claim they are going to monitor for ALL regulated constituents in the waste in lieu of the generator indicating same in the notice? (Rule 311(1): 40 CFR 268.7(a)(1) & 268.9)	GLB	[ ]	NI N/A
h) did generator/treater claim they are going to monitor for underlying hazardous waste constituents (except vanadium and zinc), reasonably expected to be present at the generation point, above UTS standards for D001, D002 & TCLP organics? (Rule 311(1): 40 CFR 268 Subpart D & 268.48)	GLB	[ ]	NI N/A
20. Other than notices for waste exceeding treatment standards, did notices include: (Rule 311(1): 40 CFR 268.7(2)(3)			
a) if the notice is for shipments that meet the standards does the notice include the certification?	GLB	[ ]	NI N/A
b) if the notice is for shipments under prohibitions does the notice include a statement that the waste isn't prohibited from land disposal & date the waste is subject to prohibition?	GLB	[ ]	NI N/A

NOTE: *An alternate treatment standard may be used after approval from the Administrator. (40 CFR 268.44)*
NOTE: *Hazardous waste debris see 40 CFR 268.7(a)(1)(iv) for the notice requirements which must be followed by the statement "This hazardous debris is subject to alternative treatment standards of 40 CFR 268.45."*

21. Generator retain on-site records to support determination from knowledge or results from tests? (40 CFR 268.7(a)(6)	GLB	[X]	NI N/A
22. If the restricted waste is excluded from being a hazardous waste or solid waste did the generator place a one- time notice stating same in the facility file? (40 CFR268.7(a)(7))	GLB	[X]	NI N/A
23. All notices/certifications/demonstrations/other documents retained for 3 years on-site? (40 CFR 268.7(a)(8).	GLB	[X]	NI N/A

NOTE: *This requirement (268.7(a)(8)) applies to solid waste even when the hazardous waste characteristic is removed prior to disposal or when the waste is excluded from the definition of hazardous waste or solid waste.*

DILUTION PROHIBITED AS SUBSTITUTE FOR TREATMENT (RULE 311(1):40 CFR 268.3)

24. Generator dilute hazardous waste or treatment residue of a hazardous waste to avoid prohibition? (40 CFR: 268.3(a))	GLB	[X]	NI N/A

TREATMENT STANDARDS (RULE 311(1):40 CFR 268.40)

25. If wastes exceeding treatment standards are mixed, was the most stringent standards selected? (40 CFR268.40(c))	GLB	[X]	NI N/A

BIENNIAL REPORT (Rule 308: 40 CFR 262.41)

		YES	NO	
26. Generator submitted biennial report by 3/1 (even years)? (Rule 308(1): 40 CFR 262.41)	GRR	[X]	___	NI N/A
27. Were copies of the report retained at least 3 years? (Rule 307(4): 40 CFR 262.40(b))	GRR	[X]	___	NI N/A

PRE-TRANSPORTER REQUIREMENTS (Rule 305: 40 CFR 262.30)

		co.said__obsrvd__		
28. Waste packaged according to DOT regulations (required before shipping waste off-site)? (Rule 305(1)(a): 40 CFR262.30))	GPT	[X]	___	NI N/A
29. Are waste packages marked & labeled according to DOT concerning hazardous materials (required before shipping waste off-site)?(Rule 305(1)(b)(c): 40 CFR 262.32(a))	GPT	[X]	___	NI N/A
30. On containers 110 gallons or less, is there a warning, generator's name, address, manifest document # & waste code; 49 CFR 172.304? (Rule 305(1)(d): 40 CFR 262.32(b))	GPT	[X]	___	NI N/A
31. If required (>1000 #'s), are placards available to the transporter? (Rule 305(1)(e): 40 CFR 262.33)	GPT	[X]	___	NI N/A

ACCUMULATION TIME (Rule 306: 40 CFR 262.34)

32. If hazardous waste accumulated in containers: (If no, skip to #35)				
a) containers have accumulation date & visible? (Rule 306(1)(b): 40 CFR 262.34(a)(2))	GPT	[X]	___	NI N/A
b) container have words "Hazardous Waste"? (Rule 306(1)(c): 40 CFR 262.34(a)(3))	GPT	[X]	___	NI N/A
c) is each container clearly marked with the hazardous waste number? (Rule 306(1)(b))	GPT	[ ]	X	NI N/A
d) has more than 90 days elapsed since date marked? (Rule 306(1)	GPT	___	[X]	NI N/A

UNLESS

e) the generator applied for & received an extension to accumulate longer? (Rule 306(3): 40 CFR 262.34(b))	GPT	[ ]	X	NI N/A

The following Subpart I, 265.170 to 265.177 requirements are referred to by Rule 306(1)(a) and 40 CFR 262.34(a)(1).

f) are containers in good condition? (265.171)	GPT	[X]	___	NI N/A
g) are containers compatible with waste in them (265.172)	GPT	[X]	___	NI N/A
h) are containers stored closed? (265.173(a))	GPT	[X]	___	NI N/A
i) containers handled/stored in a way which may rupture it or cause leaks? (265.173(b)	GPT	___	[X]	NI N/A
j) ignitable & reactive wastes stored 15 meters (50 feet) from property line? (265.176)	GPT	[X]	___	NI N/A
k) are containers inspected weekly for leaks and defects? (265.174) (Yes, except for Storage outside of Laboratory)	GPT	[ ]	X	NI N/A
l) did the generator document the inspections in 32(k)? (Rule 306(1)(a)(i))	GPT	[X]	___	NI N/A
m) inspection documents maintained on-site 3 years? (Rule 306(1)(a)(i))	GPT	[X]	___	NI N/A
n) are incompatible wastes stored in separate containers? (265.177(a))	GPT	[X]	___	NI N/A
o) hazardous wastes put in unwashed containers that previously held incompatible waste. (265.177(b))	GPT	___	[X]	NI N/A
p) incompatible waste separated/protected from each other by physical barriers or sufficient distance? (265.177(c))	GPT	[X]	___	NI N/A

Rule 306(2) & 40 CFR 262.34(c)(1)(I) both refer to 40 CFR 265.171, 265.172 & 265.173(a).

33. If hazardous waste is being accumulated at the point of generation:				
a) container(s) <55 gal or 1 qt acutely/severely toxic? (Rule 306(2):40 CFR 262.34(c)(1))	GPT	[X]	___	NI N/A
b) container(s) under operator control & near the point of generation? (Rule 306(2): 40 CFR 262.34(c)(1)) outside of lab	GPT	[ ]	X	NI N/A
c) container(s) have words "Hazardous Waste"? (Rule 306(2): 40 CFR 262.34(c)(1)(ii))	GPT	[X]	___	NI N/A
d) are the container(s) marked with the hazardous waste number or chemical name? (Rule 306(2))	GPT	[ ]	X	NI N/A
e) are container(s) in good condition? (265.171)	GPT	[X]	___	NI N/A
f) are container(s) compatible with waste in them? (265.172)	GPT	[X]	___	NI N/A
g) container(s) closed when not in use & managed to prevent leaks? (265.173(a))	GPT	[X]	___	NI N/A
34. If generator exceeds 55 gallons or 1 quart, w/in 3 days does generator, w/respect to that amount of excess waste: Did not observe				
a) mark the container with the date the excess amount began accumulating? (Rule 306(2): 40 CFR 262.34(c)(2))	GPT	[ ]	___	NI (N/A)
b) move to an area with secondary containment?	GPT	[ ]	___	NI (N/A)

Rule 306(1)(a) refers to containment requirements in 40 CFR 264.175.

35. If accumulating free liquids or any F020, F021, F022, F023, F026, F027, does the hazardous waste storage area include				
a) impervious base free of cracks? (264.175(b)(1)) :	GPT	[X]	___	NI N/A BW

		YES	NO		
b) sloped or otherwise designed to elevate/protect containers from contact with liquids? (264.175(b)(2))	GPT	[X]	___	NI	N/A
c) hold 10% of volume of containers or volume of the largest container, whichever is greater? (264.175(b)(3))	GPT	[X]	___	NI	N/A
d) run-on prevented unless sufficient capacity? (264.175(b)(4))	GPT	[X]	___	NI	N/A
e) accumulated liquids removed in a timely manner to prevent overflow? (264.175(b)5)) did not observe overflow	GPT	[X]	___	NI	N/A

NOTE: *Closure of Accumulation Area covered under # 53.*

36. If accumulating solids, (other than F020,F021,F022, F023, F026, F027), is haz waste accumulation area sloped or otherwise designed, or containers elevated or otherwise protected from contact with liquids? (264.175(c)(1 & 2))	GPT	[X]	___	NI	N/A
37. Is hazardous waste accumulated in other than tanks or containers? Or, is hazardous waste generated but not accumulated, i.e.: process tank? *Explain any yes answer.*		___	X	NI	N/A
38. Waste area protected from weather, fire, physical damage & vandals? (Rule 306(1)(e)) Not Under Cover	GPT	[ ]	X	NI	N/A
39. Hazardous waste accumulated so no hazardous waste or hazardous waste constituent can escape by gravity into soil, directly or indirectly, into surface, ground-waters, drains or sewers, and such that fugitive emissions do not violate Act 451, Part 55? (Rule 306(1)(f)) As far as I could observe, yes.	GPT	[X]	___	NI	N/A
40. Is hazardous waste accumulated in tanks? *If so, complete Tank System inspection form.*		___	X	NI	N/A
41. Is hazardous waste placed on drip pads? *If so, complete Wood Preserving inspection form*		___	X	NI	N/A

- shovel
- de-ice
- maintain

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refers to 265.16

PERSONNEL TRAINING (265.16)

42. Did personnel receive training? (265.16)	GPT	[X]	___	NI	N/A
43. Do personnel training records contain the following:					
a) job title? (265.16(d)(1))	GPT	[ ]	___	NI	N/A
b) job descriptions? (265.16(d)(2))	GPT	[ ]	___	NI	N/A
c) name of employee filling each job? (265.16(d)(1))	GPT	[ ]	___	NI	N/A
d) description of type & amount of both introductory & continued training? 265.16(d)(3))	GPT	[ ]	___	NI	N/A
e) training designed so facility personnel can respond to emergencies? (265.16(a)(3)	GPT	[ ]	___	NI	N/A
f) records of training? (265.16(d)(4))	GPT	[ ]	___	NI	N/A
g) do new personnel receive required training within 6 months? (265.16(b)	GPT	[ ]	___	NI	N/A
h) do training records show personnel have taken part in annual training? (265.16(c))	GPT	[ ]	___	NI	N/A
i) training by person trained in hazardous waste management procedures? (265.16(a))	GPT	[X]	___	NI	N/A

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to 265, Subpart C, 265.30-265.37.

PREPAREDNESS AND PREVENTION (265.30-265.37)

44. Facility maintained/operated to minimize possibility of fire, explosion, release of hazardous waste or hazardous waste constituent which could threaten human health/environment? (265.31)	GPT	co.said__ [X]	obsrvd_ ___	NI	N/A
45. If required, does this facility have the following::					
a) internal communications or alarm systems? (265.32(a))	GPT	[X]	___	NI	N/A
b) telephone or 2-way radios at the scene of operations? (265.32(b))	GPT	[X]	___	NI	N/A
c) portable fire extinguishers, fire control, spill control equipment and decontamination equipment? (265.32(c))	GPT	[X]	___	NI	N/A
d) adequate volume of water and/or foam available for fire control? (265.32(d)) Fixed Foam System 8-9000 gal on site.	GPT	[X]	___	NI	N/A
46. Testing and Maintenance of Emergency Equipment					
a) owner/operator test & maintain emergency equipment to assure operation? (265.33)	GPT	[X]	___	NI	N/A
b) has owner/operator provided immediate access to internal alarms? Access to alarm system is applicable **only** if required (40 CFR 265. 32)					
i) when hazardous waste is being poured, mixed, etc. (265.34(a))	GPT	[X]	___	NI	N/A
ii) one employee on the premises while facility is operating. (265.34(b))	GPT	[ ]	___	NI	N/A
c) aisle space for unobstructed movement of personnel/emergency equipment? (265.35)	GPT	[X]	___	NI	N/A
47. Has the facility made arrangements with local authorities? (265.37(a)&(b))	GPT	[X]	___	NI	N/A

- Haz Mat trailer

training with Oakwood
LEPC
EMTs / MSDS

Rule 306(1)(d) & 40 CFR 262.34(a)(4) refer to Subpart D, 265.50-265.56.

CONTINGENCY PLAN AND EMERGENCY PROCEDURES (265.50-265.56)

		YES	NO		
48. Plan implemented whenever fire/explosion/release could threaten human health or the environment? (265.51(b))	GPT	[X]	___	NI	N/A
49. Does the contingency plan contain the following:					
a) actions personnel must take responding to fires/explosions/unplanned release of hazardous waste? (265.52(a & b))	GPT	[X]	___	NI	N/A
b) describe arrangements w/ local police, fire, hospitals, contractors, state & local emergency responders for emergency services; (265.52(c)) & (265.37(a)&(b))?	GPT	[X]	___	NI	N/A
c) name, addresses & phone (office & home) of emergency coordinator? (265.52)(d))	GPT	[ ]	X	NI	N/A
d) list emergency equipment at the facility, including location, physical description & capabilities? (265.52(e))	GPT	[X]	___	NI	N/A
e) evacuation plan for personnel w/ signal(s), evacuation routes & alternate evacuation routes. (265.52(f))	GPT	[X]	___	NI	N/A
50. Does the facility have an Emergency Coordinator? (265.55)	GPT	[X]	___	NI	N/A
Emergency Coordinator and Emergency Procedures:					
a) emergency coordinator familiar with site operation & emergency procedures? (265.55)	GPT	[X]	___	NI	N/A
b) emergency coordinator has the authority to carry out the contingency plan? (265.55)	GPT	[X]	___	NI	N/A
c) if emergency occurred, did the emergency coordinator follow emergency procedures? (265.56)	GPT	[ ]	___	NI	N/A
d) fire/explosion/other release of hazardous waste/haz. waste constituents, could threaten human health or environment or generator has knowledge spill reached surface or ground water, did generator notify MDEQ? (Rule 306(1)(d))	GPT	[X]	___	NI	N/A
51. Contingency plan Amendments and Copies					
a) amended: fails in emergency; changes in regulations/emergency coordinators/emergency equipment? (265.54)	GPT	[X]	___	NI	N/A
b) copies of plan on site and sent to local emergency organizations? (265.53)	GPT	[X]	___	NI	N/A

Rule 309 refers to 262, Subpart E except 262.54 & 262.55

INTERNATIONAL SHIPMENTS (Rule 309 & 310: 40 CFR 262.50-262.60)

52. Has the facility imported or exported hazardous waste?	GEX	X	___	NI	N/A
a) exporting, has the generator:					
i) notified the Administrator in writing <12 months prior to shipment? (Rule 309(1): 40 CFR 262.53(a))	GEX	[X]	___	NI	N/A
ii) receiving country consented to accept waste. (Rule 309(1): 40 CFR 262.52(b))	GEX	[X]	___	NI	N/A
iii) has copy of EPA Acknowledgment of Consent. (Rule 309(1): 40 CFR 262.52(c))	GEX	[X]	___	NI	N/A
iv) complied with manifest requirements in Rule 309(2)(a-i).	GEX	[X]	___	NI	N/A
v) if required, was an exception report filled. (309(3)(a-c))	GEX	[ ]	___	NI	N/A
b) importing, has the generator met manifest requirements? (Rule 310: 40 CFR 262.60)	GIX	[ ]	___	NI	N/A

Rule 306(1)(g) and 40 CFR 262.34(a)(1) refers to 40 CFR 265.111 & 265.114

ACCUMULATION AREA CLOSURE (265.111 & 265.114)

53. The accumulation area must be closed in a manner that:					
a) minimizes need for further maintenance (Rule 306(1)(g): 40 CFR 265.111(a)) Closed Caustic Tank	GPT	[X]	___	NI	N/A
b) controls/minimizes/eliminates, to protect human health & environment, the escape of haz. waste or haz. waste constituents, leachate, run-off to ground/surface waters and air. (Rule 306(1)(g): 40 CFR 265.111(b))	GPT	[X]	___	NI	N/A
c) all contaminated equipment, structures, and soil properly disposed of. (Rule 306(1)(g): 40 CFR 265.114)	GPT	[X]	___	NI	N/A

COMMENTS:

DEQ

Department of Environmental Quality, Waste and Hazardous Materials Division

UNIVERSAL WASTE
SMALL QUANTITY HANDLER (SQH) INSPECTION FORM

Facility's Name MARATHON PETROLEUM LLC Part 2 Rules

Date 9/9/09 - 9/10/09 ID# MID 005506357 1994 PA 451

UNIVERSAL WASTE	QUANTITY (< 5000 kg or 11,000 lbs/year)
Lamps	< 5,000 kg/yr
Batteries	
Mercury-Containing equipment	

Examples: ***batteries, various pesticides, thermostats, mercury switches, mercury thermometers, waste devices containing only elemental Mercury, electric lamps (fluorescent, high intensity discharge (HID), sodium vapor, mercury vapor, neon, metal halide, incandescent lamps, and cathode ray tubes (CRTs) from computers, televisions, etc.***

NI - Not Inspected **N/A - Not Applicable**

PROHIBITIONS (Rule 228(4): 40 CFR 273.11)

		YES	NO		
1. SQH disposed of universal waste? (Rule 228(4): 40 CFR (273.11(a))	UWR		[X]	NI	N/A
2. SQH diluted or treated universal waste, except responding to releases or managing certain waste? (Rule 228(4): 40 CFR 273.11(b))	UWR		[X]	NI	N/A

WASTE MANAGEMENT (Rule 228(4): 40 CFR 273.13)

Universal Waste Batteries: (Rule 228(4): 273.13(a))

3. Are batteries that show evidence of leakage, spillage, or damage that could cause leaks contained? (Rule 228(4): 40 CFR 273.13(a)(1)) did not observe damaged batteries		[ ]		NI	N/A
4. If batteries are contained, are containers closed & structurally sound, compatible w/ contents of battery & lack evidence of l leakage, spillage or damage that could cause leakage? (Rule 228 (4): 40 CFR 273.13(a)(1))	UWR	[X]		NI	N/A
5. Are only the following activities allowed: sorted by type, mixed types in container, discharging to remove electric charge, regenerated, disassembled into individual batteries or cells, removed from consumer products or removed electrolyte, & castings of each battery not breached & remain intact & closed (except to remove electrolyte)? (Rule 228(4): 40 CFR 273.13(a)(2))	UWR	[X]		NI	N/A
6. If electrolyte is removed or other wastes generated, is it determined whether it is hazardous waste? (Rule 228 (4): 40 CFR 273.13(a)(3))	UWR	[ ]		NI	N/A
a. If electrolyte or other waste is characteristic is it managed in compliance with Part 260-272? (Rule 228 (4): 40 CFR 273.13(a)(3)(i))	UWR	[ ]		NI	N/A
b. If electrolyte or other waste is not characteristic is it managed in compliance with Part 115 of 451? (Rule 228 (4): 40 CFR 273.13(a)(3)(ii))	UWR	[ ]		NI	N/A
7. Are batteries or containers of batteries labeled w/ either: "UNIVERSAL WASTE-BATTERIES" or "WASTE BATTERIES" or "USED BATTERIES". (Rule 228 (4): 40 CFR 273.14(a))	UWR	[X]		NI	N/A

Universal Waste Pesticides: (Rule 228(4): 273.13(b))

8. Handler prevents releases by containing pesticides in containers that are closed, structurally sound & compatible w/ the pesticide? (Rule 228 (4): 40 CFR 273.13(b)(1))	UWR	[ ]		NI	N/A
9. If original container is in poor condition, is it over-packed in acceptable container? (Rule 228 (2): 40 CFR273.13(b)(2)	UWR	[ ]		NI	N/A
10. If stored in tank, are requirements of 40 CFR Part 265, Subpart J met? (Rule 228 (2): 40 CFR 273.13(b)(3)) **[USE TANK CHECKLIST]**	UWR	[ ]		NI	N/A
11. If stored in transport vehicle, is it closed, structurally sound & compatible w/ pesticides? (Rule 228(a): 40 CFR 273.13(b)(4))	UWR	[ ]		NI	N/A
12. Are pesticides in container, tank or transport vehicle labeled either "UNIVERSAL WASTE-PESTICIDES" or "WASTE-PESTICIDES" ? (Rule 228(2): 40 CFR 273.14(b)) **[See 273.14(c) if 273.14(b) not possible]**	UWR	[ ]		NI	N/A

Universal Waste Mercury Devices
(Thermostats, Mercury switch, Mercury thermometer, or a waste device which contains only elemental mercury):

(Rule 228(4); 273.13(c))

		YES	NO		
13. Are mercury devices that show evidence of leakage, spillage, or damage that could cause leaks contained? (Rule 228(4): 40 CFR 273.13(c)(1)) None damaged	UWR	[ ]		NI	N/A
14. If mercury devices are contained, are containers closed, structurally sound, compatible w/ contents or thermostats & lack evidence of leakage, spillage or damage that could cause leakage? (Rule 228(4): 40 CFR (273.13(c)(1))	UWR	[X]		NI	N/A
15. If ampules are removed:					
a does facility try to prevent breakage & is removal done over containment device? (Rule 228(4): 40 CFR 273.13(c)(2)(i &ii))	UWR	[ ]		NI	N/A
b. is clean-up system available to transfer spilled material to another container & used immediately? (273.13(c)(2)(iii& iv))	UWR	[ ]		NI	N/A
c. is area well ventilated & monitored? (Rule 228 (4): 40 CFR 273.13(c)(2)(v))	UWR	[ ]		NI	N/A
d. are employees familiar w/ proper waste handling & emergency procedures? (Rule 228(4): 40 CFR 273.13(c)(2)(vi))	UWR	[ ]		NI	N/A
e. removed ampules stored in closed, non-leaking container? (Rule 228(4): 40 CFR 273.13(c)(2)(vii))	UWR	[ ]		NI	N/A
f. removed ampules packed in container w/ packing material? (Rule 228 (4): 40 CFR 273.13(c)(2)(vii))	UWR	[ ]		NI	N/A
16. If mercury or clean-up residues are generated is it determined whether it is hazardous waste? (Rule 228(4): 40 CFR 273.13(c)(3)(i)(A&B))	UWR	[ ]		NI	N/A
a. If waste is characteristic, is it managed in compliance w/ part 260-272? (Rule 228(4): 40 CFR 273.13(c)(3)(ii)	UWR	[ ]		NI	N/A
b. Of waste that isn't characteristic, is it managed in compliance with Part 115 and 121 of Act 541? (Rule 228(4): 40 CFR 273.13(c)(3)(iii))	UWR	[ ]		NI	N/A
17. Are mercury devices or containers of mercury devices labeled either "UNIVERSAL WASTE or WASTE or USED MERCURY (with type e.g., thermostat, switch, thermometer, device](s)"? (Rule 228(4): 40 CFR 273.14(d))	UWR	[X]		NI	N/A

Universal Waste Electric Lamps: (Rule 228(4))

		YES	NO		
18. Are lamps crushed or broken? **(electric lamps shall not be crushed or broken)** (Rule 228(4)(c)(i))	UWR	[ ]	[X]	NI	N/A
19. Are lamps managed in a manner to prevent breakage or the release of any universal waste or components of universal waste by containing unbroken lamps in structurally sound packaging that is compatible w/ contents of lamps & will prevent breakage? (Rule228(4)(c)(ii))	UWR	[X]		NI	N/A
20. Are lamp fragments or residues, & all lamps that show evidence of breakage, leakage, or damage that could cause release of mercury or other hazardous constituents to the environment immediately contained in packaging that is structurally sound & compatible w/ content ? (Rule 228(4)(c)(iii)(A)) did not observe	UWR	[ ]		NI	N/A
21. If lamp fragment or residues are generated is it determined whether it is hazardous waste? (Rule 228(4)(c)(iii)(B))	UWR	[ ]		NI	N/A
a. If waste is characteristic is it managed in compliance w/ 40 CFR Part 260-272 & Part 111 of Act 451?	UWR	[ ]		NI	N/A
b. If waste isn't characteristic is it managed in compliance w/ Part 115 of Act 451?	UWR	[ ]		NI	N/A
22. Are lamps or packaging in which the lamps are contained labeled either "UNIVERSAL WASTE or WASTE or "USED ELECTRIC LAMP(s)". (Rule 228(4)(c)(iv))	UWR	[X]		NI	N/A

ACCUMULATION TIME LIMITS (Rule 228(4): 40 CFR 273.15)

		YES	NO		
23. Accumulated less than one year? (Rule 228(4): 40 CFR 273.15(a)) **OR** (if no go to question 24)	UWR	[X]		NI	N/A
24. If accumulated over one year, is accumulation necessary to facilitate proper recovery, treatment or disposal (burden on handler to demonstrate)? (Rule 228(4): 40 CFR 273.15(b))	UWR	[ ]		NI	N/A
25. Is the length of time universal wastes stored documented by one of the following:					
a. mark or label container with earliest date when universal waste became a waste? (Rule 228(4): 40 CFR 273.15(c)(1))	UWR	[X]		NI	N/A
b. mark or label individual items of universal waste w/ earliest date it became a waste? (Rule 228(4): 40 CFR 273.15(c)(2))	UWR	[ ]		NI	N/A
c. maintain an inventory system on-site that identifies date an item became a universal waste? (Rule 228(4): 40 CFR 273.15(c)(3))	UWR	[ ]		NI	N/A
d. maintain an inventory system on-site that identifies earliest date items in a group or group of containers became a universal waste? (Rule 228(4): 40 CFR 273.15(c)(4))	UWR	[ ]		NI	N/A
e. placed universal waste in a specific accumulation area & identifying start date or date received? (Rule 228(4): 40 CFR 273.15(c)(5))	UWR	[ ]		NI	N/A
f. other method with length of time universal waste accumulated and date it became a waste or received? (Rule 228(4): 40 CFR 273.15(c)(6)) Pm' Maintain Bills of Lading	UWR	[X]		NI	N/A

EQP5186 (Rev 4/03) Page 2

EMPLOYEE TRAINING (Rule 228(4): 40 CFR 273.16)

		YES	NO		
3. Are employees familiar w/ universal waste handling/emergency procedures, relative to their responsibilities? (Rule 228(4): 40 CFR 273.16))	UWR	[X]	___	NI	N/A

RESPONSE TO RELEASE (RULE 228(4): 40 CFR 273.17)

27. Are releases of universal waste and other residue immediately contained? (Rule 228(4): 40 CFR 273.17(a))	UWR	[ ]	___	NI	N/A
28. Is material from a release characterized? (Rule 228(4): 40 CFR 273.17(b))	UWR	[ ]	___	NI	N/A
29. If released material is hazardous waste is it managed as required under Parts 260 – 271? (Rule 228(4): 40 CFR273.17(b))	UWR	[ ]	___	NI	N/A

OFF-SITE SHIPMENTS (Rule 228(4): 40 CFR 273.18)

30. Is waste sent to another handler, destination facility or foreign destination? (Rule 228(4): 40 CFR 273.18(a))	UWR	[X]	___	NI	N/A
31. If waste is a hazardous material are DOT requirements met w/ regard to package/labels/placards/shipping papers? (Rule 228(4): 40 CFR 273.18(c))	UWR	[X]	___	NI	N/A
32. Prior to shipping universal waste off-site does receiver agree to receive shipment? (Rule 228(4):40 CFR 273.18(d))	UWR	[X]	___	NI	N/A
33. If the SQH self-transports waste does it comply w/ the universal waste transporter requirements? (Rule 228(4)(b): 40 CFR 273.18(b))	UWR	[ ]	___	NI	N/A
34. If universal waste shipped off-site is rejected by other handler or destination facility, does the originating handler either:					
a. receive the waste back? Rule 228(4): 40 CFR 273.18(e)(1))	UWR	[ ]	___	NI	N/A
b. agree to where shipment will be sent? (Rule 228(4): 40 CFR 273.18(e)(2))	UWR	[ ]	___	NI	N/A
35. If handler rejects part or full load from another handler, does the receiving handler contact the originating handler & discuss either:					
a. sending waste back to originating handler (Rule 228(4): 40 CFR 273.18(f)(1))	UWR	[ ]	___	NI	N/A
b. agree to where shipment will be sent? (Rule 228(4): 40 CFR 273.18(f)(2))	UWR	[ ]	___	NI	N/A
36. If handler receives shipment of hazardous waste that isn't universal waste, is MDEQ immediately notified? (Rule 228(4):40 CFR 273.18(g))	UWR	[ ]	___	NI	N/A
37. If handler receives a shipment of non-hazardous, non-universal waste is the waste managed in accordance w/ solid waste regulations? (Rule 228(4): 40 CFR 273.18(h))	UWR	[ ]	___	NI	N/A

EXPORTS (Rule 228(4): 40 CFR 273.20)

38. Of waste that is sent to a foreign destination do they:					
a. comply w/ primary exporter requirements in 40 CFR 262.53, 262.56(a)(1-4 &6) and(b) and 262.57? (Rule 228(4): 40 CFR 273.20 (a))	UWR	[ ]	___	NI	N/A
b. export w/ consent of receiving country and in compliance with Acknowledgment of Consent, Subpart E, .262? (Rule 228(4): 40 CFR 273.20(b))	UWR	[ ]	___	NI	N/A
c. provide copy of Acknowledgement of Consent to transporter? (Rule 228(4): 40 CFR 273.20 (c))	UWR	[ ]	___	NI	N/A

COMMENTS:

EQP5186

MARATHON PETROLEUM
MI D005506357

Inspection Checklist for Subpart CC: Air Emission Standards (Containers)

Item # 40 CFR:

CC-1	265. 1080	Do any of the following exclusions apply? If yes, please circle.	YES	NO

Applicability: The air emission requirements apply to units subject to subpart I * unless the following apply (circle if applicable):

1. Waste was placed in unit prior to Oct. 6, 1996, and none has been added since.
2. The container capacity is less than .1 cubic meter (26 gallons)
3. A unit (e.g. tank) has stopped adding waste and is undergoing closure
4. The unit is used solely for onsite treatment or storage as a result of remedial activities required under corrective action, Superfund, or other similar state program
5. The unit is used solely to manage radioactive mixed waste
6. The unit is regulated by and operates in accordance with Clean Air Act regulations

***Note: 1. Satellite containers are exempt 2. CESQG's and SQG's are exempt**

CC-2	265.1083	Do any of the following exemptions apply? If yes, please circle	YES	NO

General Standards: The owner/operator must control air emissions from waste management units except the unit is exempt if (please circle if applicable):

1. All hazardous waste entering the unit has an average VO concentration at the point of origination less than 500 parts per million by weight (waste determination required)
2. The organic content of all waste entering the unit has been reduced by one of the 8 acceptable destruction or removal processes.
3. The unit is a tank used for certain biological treatment
4. The hazardous waste placed in the unit meets the LDR numerical concentration limits or has been treated using the specified LDR treatment technology (for organics)
5. The unit is a tank used for bulk feed to an incinerator and meets certain requirements

CC-3	265.1084	Waste Determination:	Determination Not Needed	Determination Needed

Was the VO concentration properly determined for each waste which the facility manages in a unit which does not meet Subpart CC requirements? The concentration must be determined by either direct measurement or knowledge. Please see 265.1084 for specific requirements for measurement and knowledge. Determination is not needed for waste managed in containers which meet standards. It may be necessary to evaluate container management prior to requiring VO concentration determination.

#	NA=Not Applicable, NI=Not Inspected, OK= In Compliance, DF= Deficiency	NA	NI	OK	DF

CONTAINER MANAGEMENT 265.1087

Level 1	Level 2	Level 3
Larger than 26.4 gallons and less than or equal to 122 gallons, or larger than 122 gallons and do not manage H.W. in light material service	Larger than 122 gallons and manage H.W. "in light material service" (definition at 265.1081)	Larger than 26.4 gallons and treat H.W. by a stabilization process

CC-4	265.1087	OK Controls	NA	NI	OK	DF

One of the following: -Use containers that meet DOT requirements -Use a cover and control with no visible gaps, holes or other open spaces into the interior of the container -Use organic vapor suppression on or above the container 265.1087(c)	One of the following: -Use containers that meet DOT requirements -Use containers that operate with no detectable emissions (method 21) -Use containers that are demonstrated to be vapor-tight within the last 12 months (method 27) 265.1087(d)	-Containers used to stabilize H.W. with volatile organics greater than 500 ppm -For waste stabilized in a container either: 1.container must be vented directly to a control device; or 2.container is vented inside an enclosure which is exhausted through a closed vent to a control device -Conservation vents are not allowed 265.1087(b)(2)

Level 1 (N/A)			Level 2	Level 3			
#	NA=Not Applicable, NI=Not Inspected, OK= In Compliance, DF= Deficiency			NA	NI	OK	DF
CC -5	**265.1087**	**Waste transfer requirements**					
No waste transfer requirements apply			-Waste transfer requirements apply regardless of container alternative used in level 2 -Transfer waste into or out of a container in such a manner as to minimize exposure of the waste to the atmosphere. Acceptable methods include a submerged fill pipe, vapor recovery system, or fitted opening with a line purge 265.1087(b)(3)	Not applicable			
CC-6	**265.1087**	(OK) **Operating requirements**		**NA**	**NI**	**OK**	**DF**
The covers, openings, and closure devices should be closed except: 1. When transferring H.W. in and out of the containers 2. between batch transfer not exceeding 15 minutes between transfer (note: if the person performing the transfer leaves the area, or the process shuts down, the container must be closed) 3. While performing sampling and equipment access 4. Conservation and safety vents are allowed -Containers may be open while performing sampling or equipment access -Safety valves and conservation vents may be used if normally left in close position -A cover need not to be on a RCRA empty container, as defined in 40 CFR 261.7 265.1087(c)(3), (d)(3)				-If the vapors are directly vented to a control device, there are specific design and operating criteria that must be met same as tanks that have closed vent and control device systems -If an enclosure is used, the enclosure must meet the design and operating criteria specified in "Procedure T-Criteria for and Verification of a Permanent or Temporary Total Enclosure" under 40 CFR 52.741 The container, enclosure, control device or closed vent system may have safety relief devices.			
CC-7	**265.1089**	(N/A) **Inspection requirements**		**NA**	**NI**	**OK**	**DF**
Minimal inspection required: - when facility accepts container and it is not emptied within 24 hours -if wastes are stored greater than a year, then visually inspect once a year If inspections are required, facility must develop written plan and schedule to perform inspection 265.1087(c)(4), (d)(4)				Inspection requirements are the same as for tanks			
CC- 8	**265.1087**	(N/A) **Repair requirements**		**NA**	**NI**	**OK**	**DF**
When a defect is detected; attempt to repair within 24 hours must be made and: 1. Repair within 5 calendar days or empty and remove the container from service 2. Do not use until defect is repaired 265.1087(c)(4), (d)(4)				Necessary corrective measures shall be immediately implemented to ensure that the control device is operated in compliance			
CC- 9	**265.1090**	(N/A) **Recordkeeping requirements**		**NA**	**NI**	**OK**	**DF**
-If container exceeds 122 gallons and does not meet DOT standards, records indicating that the container is not managing H.W. in light material service			Since Level 2 waste is "in light material service", no records need to be kept	Depends upon how the organic emissions are vented: -If an enclosure is used, records must be maintained for the most recent set of calculations and measurements performed to verify that the enclosure meets the criteria of a permanent total enclosure (Procedure T) -Records for the closed vent and control device system are the same for those used on tanks(265.1090)(e)			

DEQ

Department of Environmental Quality, Waste and Hazardous Materials Division

USED OIL INSPECTION FORM – GENERATORS

ility's Name MARATHON PETROLEUM, LLC Part 8 Rules

Date 9/9/09 - 9/10/09 ID# MID005506357 1994 PA 451

Note: *Used oil is defined as "any oil which has been refined from crude oil, or any synthetic oil which has been used and as a result of use, is contaminated with physical or chemical impurities." R 299.9109*

APPLICABILITY (Rule 809)

NI – Not Inspected, N/A – Not Applicable

maintenance shops / pump oil. Otherwise not used.

		YES	NO
1. Does the facility generate used oil and any of the following materials which are subject to regulation as used oil:		X	
a) mixture of used oil and hazardous waste generated by a CESQG regulated pursuant to Rule 205? (Rule 809(1)(a))	UOA		X
b) material that contains or is otherwise contaminated w/ used oil & is burned for energy recovery? (Rule 809(1)(b))	UOA		X
c) used oil that is drained/removed from materials that contain or contaminated w/ used oil? (Rule 809(1)(c))	UOA	X	
d) mixture of used oil and fuel? (Rule809(1)(d))	UOA	X	
e) material which is produced from used oil & is burned for energy recovery? (Rule 80991)(e))	UOA		X
f) used oil that is burned for energy recovery & any fuel produced from used oil by processing, blending or other treatment & exceeds the following: (Rule 809(1(f))			
i) maximum arsenic concentration of 5ppm	UOA		X
ii) maximum cadmium concentration of 2ppm	UOA		X
iii) maximum chromium concentration of 10ppm	UOA		X
iv) maximum lead concentration of 100ppm	UOA		X
v) minimum flash point of 100 degrees Fahrenheit	UOA		X
vi) maximum total halogen concentration of 4,000ppm	UOA		X
g) recycled and a hazardous waste solely because it exhibits a hazardous characteristic? (Rule 809(1)(g))	UOA		X
h) used oil contains PCB's at any concentration of 50ppm or less? (May also be subject to 40 CFR Part 761) (Rule 809(2)(l))	UOA		X
2. Does the facility generate any of the following which exempts it from regulation as used oil: (may be subject to regulation as a hazardous waste)			
a) mixture of used oil and hazardous waste except as specified in Rule 809(1)(a)? (See question 1.a.) (Rule 809(2)(a))	UOA		X
b) used oil including metalworking oils/fluids containing chlorinated paraffin w/ > 1000 ppm total halogens which hasn't been successfully rebutted by demonstrating that it does not contain significant concentrations of halogenated hazardous constituents in 40 CFR Part 261, Appendix VIII? (Rule 809(2)(b))	UOA		X
c) metalworking oils/fluids w/ chlorinated paraffin reclaimed through a tolling agreement? (Rule 809(2)(b)(i))	UOA		X
d) used oil w/ chlorofluorocarbons from refrigeration units going for reclaim? (Rule809(2)(b)(ii)) filters	UOA		X
e) material that contains or is otherwise contaminated w/ used oil from which the oil has been removed?(Rule 809 (2)(c))	UOA	X	
f) mixture of used oil/diesel fuel that is mixed on used oil generator's site & used in their own vehicles? (Rule 809(2)(d))	UOA		X
g) used oil & material derived from used oil that are disposed of or used in a manner constituting disposal? (Rule 809(2)(e))	UOA		X
h) used oil re-refining distillation bottoms used as feed stock to manufacture asphalt products? (Rule 809(2)(f))	UOA		X
i) wastewater, the discharge of which is subject to §402 or §307(b) of the CWA & is contained w/ de minimis quantities of used oil? (Rule 809((2)(g))	UOA		X
j) mixture of used oil/crude or natural gas liquid for insertion into a crude oil pipeline? (Rule 809(2)(h))	UOA		X
k) mixture of oil/crude or nature gas liquid w/ less than 1% used oil if being stored/transported to crude oil pipeline or petroleum refinery for insertion into process before crude distillation or catalytic cracking? (Rule 809(2)(i))	UOA		X
l) used oil for insertion into petroleum refining process before crude distillation or catalytic cracking w/out prior mixing if used oil constitutes less than 1% of crude oil feed? (Rule 809 (2)(j))	UOA		X
m) used oil, unintentionally introduced, is captured by a hydrocarbon recovery system or wastewater treatment system at a petroleum refinery & inserted into the refining process? (Rule 809(2)(l))	UOA		X
n) tank bottoms from stock tanks w/mixture of used/crude oil or nature gas liquids? (Rule 809(2)(m) not mixed w/ used	UOA		X
o) used oil produced on vessels from normal shipboard operations while on-ship? (Rule 809(2)(n))	UOA		X
o) specification used oil fuel once the facility demonstrates compliance w/ R 299.9815(3)(b),(c)&(f)? (Rule809(2)(o))	UOA		X
q) used oil containing polychlorinated biphenyls at 50 ppm or greater? (Rule 809(2)(p))	UOA		X

GENERATOR REQUIREMENTS (Rule 810)

NOTE: *Used oil generator requirements do not apply to: (1) farmers who generate, in a calendar year, an average of 25gallons per month or less from vehicles or machinery used on the farm, or (2) household do-it-yourselfer*

		YES	NO
3. Is the used oil stored in units other than containers or tanks? (Rule 810(4)	UOA		[X] NI N
a) in good condition? (40 CFR 279.22(b)(1))	UOA	[X]	NI N/A
b) not leaking (no visible leaks)? (40 CFR 279.22(b)(2))	UOA	[X]	NI N/A
4. Are all containers & above ground tanks storing used oil labeled/marked "Used Oil"? (40 CFR 279.22(c)(1))	UOA	[X]	NI N/A
5. Are fill pipes used to transfer used oil into underground tanks labeled/marked "Used Oil"? (40 CFR 279.22(c)(2))	UOA	[ ]	NI N/A
6. Upon detection of a release does the facility: ~~No~~ releases not inspected/observed			
a) stop the release? (40 CFR 279.22(d)(1))	UOA	[ ]	NI N/A
b) contain the released used oil? (40 CFR 279.22(d)(2))	UOA	[ ]	NI N/A
c) clean-up and manage the released used oil & other material? (40 CFR 279.22(d)(3))	UOA	[ ]	NI N/A
d) if necessary to prevent future release, repair/replace any leaking oil containers or tanks? (40 CFR 279.22(d)(4))	UOA	[ ]	NI N/A

GENERATOR REQUIREMENTS FOR ON-SITE BURNING IN SPACE HEATER

(Rule 810 refers to 40 CFR 279.23)

7. Does facility that burns used oil in oil-fired space heater(s):			
a) burn only used oil generated by the owner/operator or from household do-it-yourselfers? (40 CFR 279.23(a))	UOA	[ ]	NI N/A
b) burn in heaters designed to have a maximum capacity of not more than 0.5 million BTU per hour?(40 CFR 279.23(b))	UOA	[ ]	NI N/A
c) have combustion gases vented to the ambient air? (40 CFR 279.23(c))	UOA	[ ]	NI N/A

GENERATOR REQUIREMENTS FOR OFF-SITE SHIPMENTS OF USED OIL

(Rule 810 refers to 40 CFR 279.24)

8. Does the facility use a transporter with an EPA identification number? (Rule 810 refers to 40 CFR 279.24) Do not transport off-site.	UOA	[ ]	NI N/A

OR

9. If the facility does not use a transporter w/ an EPA identification number, does it meet one of the following exemptions?			
a) self transportation of small amounts to approved collection centers provided that the generator transports:			
i) the used oil in a vehicle owned by the generator or an employee of the generator? (40 CFR 279.24(a)(1))	UOA	[ ]	NI N/A
ii) no more than 55 gallons of used oil at one time? (40 CFR 279.24(a)(2))	UOA	[ ]	NI N/A
iii) to a used oil collection center that is registered, licensed, permitted or recognized by government? (40 CFR 279.24(a)(3))	UOA	[ ]	NI N/A
b) self transportation of small amounts to aggregation point owned by the generator provided that the generator transports: (40 CFR 279.24(b))			
i) the used oil in a vehicle owned by the generator or an employee of the generator? (40 CFR 279.24(b)(1))	UOA	[ ]	NI N/A
ii) no more than 55 gallons of used oil at one time? (40 CFR 279.24(b)(2))	UOA	[ ]	NI N/A
iii) the used oil to a used oil aggregation point that is owned/operated by the same generator? (40 CFR 279.24(b)(3))	UOA	[ ]	NI N/A
c) used oil is reclaimed and the processor returns the oil to the generator under tolling for use as lubricant, cutting oil, or coolant? (40 CFR 279.24(c))	UOA	[ ]	NI N/A
i) the contract indicates the type and amount of used oil and frequency? (40 CFR 279.24(c)(10))	UOA	[ ]	NI N/A
ii) the contract indicates the vehicle used to transport both ways is owned by the processor? (40 CFR 279.24(c)(2))	UOA	[ ]	NI N/A
iii) the contract indicates the oil will be returned to the generator? (40 CFR 279.24(c)(3))	UOA	[ ]	NI N/A

USED OIL DISPOSAL (Rule 816)

10. Is used oil that cannot be recycled & is being disposed of & is not a hazardous waste managed in accordance w/ applicable federal & state regulations? (Rule 816(2))	UOA	[ ]	NI N/A
11. Is the used oil used as a dust suppressant? (Rule 816(3))	UOA	[ ]	NI N/A

COMMENTS:-

All oil (used or slop) generated at the facility is reprocessed through the refinery.

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

CERTIFIED MAIL
Return Receipt # 608 152 262

February 2, 1999

Ms. Mirtha Capiro
Enforcement and Compliance Assurance Branch (DE-9J)
United States Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, Illinois 60604

RE: Section 3007 Information Requests
Marathon Ashland Petroleum LLC
1300 South Fort Street, Detroit, MI 48217
U.S. EPA ID No. MID 005 506 357

Dear Ms. Capiro:

Marathon Ashland Petroleum LLC (MAP) is responding to your Section 3007 Information Requests, dated January 14, 1999 and January 22, 1999. The responses provided below follow the format of the January 14, 1999 information request. Responses to the information requested on January 22, 1999 are provided in the appropriate sections of this letter.

Request No.	EPA Information Request:	MAP Response:
1	Provide the following information regarding spent caustic tank 21V-47:	
1a	Date of installation:	January 14, 1997 (date tank was lifted into place)
1b	Date spent caustic was first placed in the tank:	April 30, 1997
1c	Date of Subpart CC applicability determination:	April 30, 1997
1d	Date of initial Subpart CC inspection:	On February 20, 1997, a representative from the City of Detroit Department of Buildings and Safety Engineering visually inspected the spent caustic tank (21V47) for the purpose of issuing an installation permit (as required for a pressure tank under City of Detroit codes). The spent caustic tank was inspected and found to be acceptable by the City of Detroit (A copy of Installation Permit No. A01890 is provided as Attachment 1). In addition, MAP operation personnel visually inspected the spent caustic tank on April 30, 1997

		as part of the pre-startup safety check. The visual inspection included checking the tank walls, roof, closure devices, joints, seams, connections and seals for defects (A copy of the completed inspection checklist is provided as Attachment 2). Also included in Attachment 2 is a copy of the 1998 inspection that was provided to the NEIC at the time of their inspection.
1e	Maximum organic vapor pressure determination and/or calculation for spent caustic, and operating temperature assumed:	See Attachment 3: Intracompany Correspondence dated August 8, 1995 regarding spent caustic vapor pressures.
1f	Component number corresponding to the missing tag (discovered to be missing during an inspection of the tank by the NEIC on October 20, 1998) or equipment associated with the pressure relief valve on top of the tank:	A list of the valves on the spent caustic tank monitored as part of the VOC monitoring program is provided as Attachment 4. This list also includes the results of monitoring performed in 1998. Pressure relief valves are not included in the VOC monitoring program; therefore, there are no component or tag numbers associated with the pressure relief valve located on the top of tank 21V47. MAP would like to note that Subpart CC does not require the tagging of equipment that is monitored pursuant to Subpart CC requirements.
1/22/99 request	Describe and document how the spent caustic tank 21V-47 is filled and what overfill prevention controls are in place, such as a high level alarm. If the tank is not equipped with a high level alarm, provide the basis for a high level alarm not being required.	Spent caustic is placed into 21V47 in accordance with MAP's standard operating procedure for *Dump/Fill North/South Scrubbers* (Procedure Number 03-21-329; Attachment 5). Overfill prevention controls consist of a level gauge and a sightglass on the side of the tank which are constantly monitored when spent caustic is placed into 21V47. In addition, the level of the tank is determined manually prior to placing any spent caustic into the tank. Pursuant to 40 CFR 265.194(b)(2) overfill prevention controls are not limited to high level alarms; rather other types of controls including level sensing devices are acceptable means of preventing overfills.
2	Provide the following information regarding the Blue Sludge Trailer at the wastewater treatment plant, used for dewatering dissolved air floatation (DAF) float and sludge:	MAP would like to reiterate that the blue sludge trailer meets the three criteria in the definition of a wastewater treatment unit: (1) it meets the definition of a tank (in accordance with 40 CFR 260.10 and related EPA directives and guidance documents); (2) it treats or stores a wastewater treatment sludge which is a hazardous waste as defined in 40 CFR 260.3; and, (3) it is part of a wastewater treatment unit which is subject to regulation under the Clean Water Act. Therefore, the tank is exempt from RCRA permitting requirements under 40 CFR 270.1(c)(2)(v), 40 CFR 265.1(c)(10) and the less than 90-day accumulation requirements. This position was previously set forth in the December 2, 1998 letter to Ms. Margo Dusenbury, U.S. EPA, National Enforcement Investigations Center. A copy of the December 2, 1998 letter (without attachments) is provided as Attachment 6. In 52 Fed.Reg. 20914, 20919 (June 3, 1987), U.S. EPA acknowledged: "Several members of the regulated community has (sic) asked whether a mobile unit could ever qualify as a tank, because Sec. 260.10 defines tanks as 'stationary devices'. EPA confirms that a mobile tank would qualify as a tank under Sec. 260.10 and would be subject to the Subpart J tank standards of Part 264, as long as it was intended to be

		stationary during operation and it otherwise met the definition of tank."
2a	DOT inspection records for the trailer:	Not applicable; the tank is not used for transportation of material outside of the MAP facility.
2b	Capacity of the trailer:	3,500 gallons
2c	Date of Subpart CC applicability determination:	The blue sludge tank is part of the wastewater treatment unit which is exempt from RCRA permitting requirements under 40 CFR 270.1(c)(2)(v), 40 CFR 265.1(c)(10) and the less than 90-day accumulation requirements; therefore, Subpart CC is not applicable (see response to 2 above).
2d	Maximum organic vapor pressure determination and/or calculation for the trailer contents, and operating temperature assumed:	The blue sludge tank is part of the wastewater treatment unit which is exempt from RCRA permitting requirements under 40 CFR 270.1(c)(2)(v), 40 CFR 265.1(c)(10) and the less than 90-day accumulation requirements; therefore, Subpart CC is not applicable (see response to 2 above).
2e	Monitoring records for the trailer:	Although this request does not specify Subpart CC monitoring records, MAP presumes that this request is referring to monitoring records which would be required if the tank were subject to regulation pursuant to Subpart CC. As stated previously, it is MAP's position that Subpart CC does not apply to the blue sludge tank because it is a wastewater treatment unit exempt from RCRA permitting requirements under 40 CFR 270.1(c)(2)(v), 40 CFR 265.1(c)(10) and the less than 90-day accumulation requirements. Therefore, MAP does not have Subpart CC monitoring records for the blue sludge tank.
2f	Results of any testing of the trailer using Method 27 or other methods:	Testing of the blue sludge tank using Method 27 or any other method has not been conducted.
3	Provide the following information regarding the frac tank with the hazardous waste label on the T-12 pad:	
3a	The date the centrifuge was used to place material from T12 into the frac tank. If exact date is not available, confirm information provided during the inspection that the date the material was placed into the frac tank was on or before July 8, 1998, when the last shipment of API sludge went out:	In June 1998, MAP removed sludge from Tank 29T12 and placed it in the centrifuge. Solids were removed from the centrifuge and placed in a roll-off box for disposal off-site (the last shipment of API sludge was on July 8, 1998). Liquid resulting from dewatering the sludge in the centrifuge was placed in the frac tank for ultimate disposal into the wastewater treatment unit. Based on the U.S. EPA's interpretation of its RCRA regulations, this liquid did not constitute a derived from waste, and was not a listed hazardous waste. U.S. EPA stated in 55 Fed.Reg. 46354, 46372 (November 2, 1990): "The 'derived from' rule (40 CFR 261.3(c)) states that any waste derived from the treatment, storage or disposal of a listed hazardous waste is itself a hazardous waste. Often water from dewatering of wastewater treatment sludges is recycled to process operation or returned to the treatment system. It is the Agency's position that such a wastewater is not a 'derived from' hazardous waste if it can be demonstrated that the water removed from the sludge is no more contaminated than the original influent to the treatment unit from which the sludge was removed for dewatering."

		The frac tank contained liquid from the dewatering of the sludges, and not the sludges themselves. This API liquid was returned to the wastewater treatment unit prior to subsequent use of the frac tank. The liquid from the centrifuge is no more contaminated that the original influent to the treatment unit, so the liquid is not a derived from waste. Holly Construction personnel have indicated that the frac tank was emptied prior to subsequent use for the nonhazardous spill cleanup material, which is described below. Holly Construction personnel have further indicated that the tank capacity is 11,500 gallons, and could contain a maximum of approximately 10 gallons of liquid after it is emptied. Therefore, in July 1998, the frac tank contained a maximum of 10 gallons of nonhazardous wastewater prior to its use for the nonhazardous spill cleanup material described below. In July 1998, after removing the above-described API liquid from the frac tank, operations personnel attempted to remove solids/sediments from a non-hazardous liquid, which was generated during spill cleanup activities by running the liquid through the centrifuge. Due to the nature of the solids and sediments in the spill cleanup liquid (which was not a hazardous waste) the centrifuge did not prove to be feasible and the operation was discontinued. However, approximately 4,000 gallons of the spill cleanup liquid were placed into the frac tank. In the course of characterizing the material and evaluating disposal, operations personnel indicated that the tank had previously been used for wastewater from the API sludge centrifuging operations described above (but not the sludge itself). Based on this prior use, the spill liquid in the frac tank was characterized as a listed hazardous waste (API wastewater codes K048, K049, K051, F037 and F038) due to the possibility that the nonhazardous spill cleanup liquid had been mixed with a listed hazardous waste. MAP now believes that this characterization was overly conservative, since the small amounts of API wastewater which might have been present in the frac tank were not a listed hazardous waste for the reasons set forth above. Moreover, MAP's analytical results show that the material did not exhibit a characteristic of a hazardous waste. It should be noted that if the frac tank were considered a container, whatever residue may have remained in the frac tank would not be considered a hazardous waste for the additional reason that they would fall within 40 CFR 261.7(b)(1). This provision excludes residues remaining in containers, which would otherwise be considered to be a hazardous waste, as long as all wastes have been removed that can be removed using the practices commonly employed to remove material from this type of container (which was done), and no more than 0.3 percent by weight of the total capacity of the container remains in the container, if the container is greater than 110 gallons in size. If the frac tank is considered to be a tank, the minor amount of residue which might have remained in the tank would not have caused the spill cleanup liquid to be considered a hazardous waste under the mixture rule. In amending the regulations governing 90-day generator accumulation tanks, U.S. EPA responded to questions concerning

		when such tanks were to be considered "empty": "Questions have been raised concerning the applicability of the 90-day accumulation provisions to accumulation in tanks. As with accumulation in containers, the 90-day period begins the moment the generator first places wastes in the 'empty' tank. A tank will be considered 'empty' when its contents have been drained to the fullest extent possible. Since many tank designs do not allow for complete drainage due to flanges, screens or siphons, it is not expected that 100% of the waste will always be removed. As general guidance, a tank should be considered empty when the generator has left the tank's drainage system open until a steady continuous flow has ceased." 47 Fed. Reg. 1248 (January 11, 1982). Under this interpretation, the frac tank was empty before it was used for the spill cleanup material. In summary, the liquid from sludge dewatering which was stored in the frac tank prior to return to the wastewater treatment system was not a hazardous waste. Moreover, the frac tank was emptied before it was used for spill cleanup material (itself a nonhazardous waste). Therefore, the spill cleanup material was not a listed hazardous waste as a result of the mixture rule, and MAP analytical results show that it did not exhibit a characteristic of a hazardous waste and MAP's prior characterization of the material as K048, K051, F037 and F038 was overly conservative.
3b	Date and results of Subpart CC applicability determination for the contents of the frac tank:	As described above, the spill cleanup liquid in the frac tank was a non-hazardous waste; therefore, Subpart CC requirements were not applicable (analytical results are provided in Attachment 7).
1/22/99 request	Describe and document the ownership status of the frac tank with the hazardous waste label on the T-12 pad.	The frac tank is owned by Holly Construction and rented on an as-needed basis by MAP.
3c	Inspection records for the frac tank required by the DOT:	As stated above MAP does not own the frac tank, and therefore, does not have any DOT inspection records. According to Holly Construction, the frac tank is not used to transport liquids; therefore, DOT inspections are not applicable.
3d	Capacity of the frac tank:	11,500 gallons
3e	Maximum organic vapor pressure determination and/or calculation for the frac tank contents, and temperature assumed:	The spill cleanup liquid in the frac tank was a non-hazardous waste; therefore, Subpart CC requirements were not applicable (analytical results are provided in Attachment 7).
3f	Any testing, inspection or monitoring results for the frac tank:	The frac tank was located on the Complex 1 29T12 Bundle Pad which is inspected on a weekly basis. Copies of the inspection forms from July 1998 to October 1998 are provided in Attachment 8.

If you have any questions regarding the information provided in this response, please contact Mr. Jeffery Bruestle, Environmental Coordinator, at (313) 297-6356.

Sincerely,

Lloyd J. Nordhausen
Division Manager

attachments

cc: Larry AuBuchon, Livonia District, MDEQ
JoAnn Merrick, MDEQ

ATTACHMENT 1

City of Detroit Installation Permit for Tank 21V47

ATTACHMENT 1

City of Detroit Installation Permit for Tank 21V47

A01890 MAR 1997

Installation Permit
Form C of D—5-PE (Rev. 5-72)

City of Detroit

DEPARTMENT OF BUILDINGS AND SAFETY ENGINEERING
4th Floor City-County Building Detroit, Michigan 48226 224-3200

Permit Number

Location [illegible] (House Number) [illegible] (Street) Detroit, Mich., [illegible], 19[illegible]

THIS APPLICATION, when properly signed and numbered serves as a permit

To [illegible] Address 1375 [illegible]

To install boilers or pressure vessels (air tanks) at above location.

Owner [illegible] Address [illegible]

Is Boiler or Pressure Vessel constructed and marked in accordance with the A.S.M.E. Standard? Yes ☑ No ☐

Number to be Installed 1

Manufacturer of Boiler or Pressure Vessel [illegible]

BOILERS

Steel ☐ Cast Iron ☐
Steam ☐ Hot Water { Space Heating ☐ / Water Supply ☐
Other Medium
High Pressure ☐ Low Pressure ☐
Heating Surface BTU per hour Output

PRESSURE VESSELS [illegible]

Unfired ☑ Unheated ☑ Heated ☐
Fired ☐ If heated, how?
Diameter Pressure
Use [illegible]
Steam, Air, CO_2, Jacketed Kettle, etc.

Remarks Fee $70.00 [illegible]

Signature of Applicant [illegible] Phone No. [illegible]

BUREAU OF LICENSES AND PERMITS

Clerk

FEE $ 70.00

DO NOT FILL IN

This permit is issued conditionally on the observance of Ordinances regulating the installation of pressure vessels and boilers in the City of Detroit and may be revoked at any time upon violation of the rules and regulations relating thereto.

The issuance of this permit does not constitute an approval of the equipment herein described.

A 0925[illegible]001 8 $70.00
03-19-97 P 12-08

ATTACHMENT 2

Pre-Startup Safety Review- 21V47
1998 Inspection

α I V 7.7

MICHIGAN REFINING DIVISION

DOCR No: 1997 - 21 - 003

DESIGN AND OPERATING CHANGE REQUEST

SOP/SMP No: _____

SECTION 1

PRELIMINARY INFORMATION

NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED.

INITIATOR: Anthony J. Ploucha DATE: 1-28-97

PRESENT DESCRIPTION AND TECHNICAL BASIS FOR CHANGE

Refer to the attached, approved Authority for Expenditure AFE No. 662-0093877. Placement of spent caustic vessel into service.

TYPE OF CHANGE

CHECK ALL APPLICABLE

- ☐ TEMPORARY CHANGE — EFFECTIVE UNTIL _____
- ☐ EMERGENCY CHANGE — (COMPLETE SECTION 2)
- ☐ PROTECTIVE SYSTEM BYPASS — (COMPLETE SECTION 3)
- ☐ CATALYST OR CHEMICAL CHANGE — (COMPLETE SECTION 4)
- ☑ INSTRUMENT/CONTROL CHANGE — (COMPLETE SECTION 5)
- ☑ EQUIPMENT/PIPING/TECHNOLOGY CHANGE — (COMPLETE SECTION 6)
- ☑ PROCEDURAL CHANGE — (COMPLETE SECTION 7)

RECEIVED JUL 1 3 1997

AREA TEAM REVIEW RISK LEVEL = 1 (ATTACH "RISK ASSESSMENT WORKSHEET)

AUTHORIZATION

APPROVAL TO PROCEED TO SECTIONS 3-9 AS REQUIRED

Brian C. Vandenoff (Envir. Rep) DATE: 1/28/97

Von J. Meeks (Safety Rep.) DATE: 4/30/97

Joseph Morrow (Area Team Leader) DATE: 1/28/97

ASSIGNMENT

CHANGE COORDINATOR Tony Ploucha. (assigned by Area Team Leader)

UPDATE

X YES ___ NO MASTER MOC LOG UPDATED TO INCLUDE THIS CHANGE (MUST BE "YES" AND TYPICALLY COMPLETED WITHIN 24 HOURS OF AUTHORIZATION TO PROCEED

UPDATED BY (Area Team Leader): Joseph Morrow DATE: 1/29/97

APPROVAL TO IMPLEMENT

APPROVAL TO IMPLEMENT THE REQUESTED CHANGE (SECTIONS 1 AND 3-9 COMPLETED)

Joseph Morrow (Area Team Leader) DATE: 4-29-97

[illegible] (Environmental Coordinator) DATE: 4/30/97

Von J. Meeks (Safety Supervisor) DATE: 4/30/97

[illegible] (Operations Manager) DATE: 4/30/97

Gregory W. [illegible] (Engineering Manager) DATE: 4/30/97

_____ (Division Manager Temporary) DATE: _____

SECTION 2	
EMERGENCY CHANGE NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED.	1. IS CHANGE REQUIRED IMMEDIATELY TO AVOID PERSONNEL INJURY, EQUIPMENT DAMAGE OR UNIT SHUTDOWN? YES ____ NO ____ 2. IS CHANGE REQUIRED IMMEDIATELY TO AVOID ENVIRONMENTAL OR COMMUNITY IMPACT? YES ____ NO ____ 3. IS CHANGE REQUIRED IMMEDIATELY TO AVOID SEVERE OPERATING EFFICIENCY LOSS? YES ____ NO ____ IF *ALL* QUESTIONS ARE ANSWERED "NO," *DO NOT* IMPLEMENT THIS CHANGE AS AN EMERGENCY CHANGE. NOTE: AN EMERGENCY CHANGE AUTHORIZES IMPLEMENTATION WITHOUT FORMAL DOCUMENTATION OF A PROCESS HAZARD ANALYSIS, PROCESS SAFETY INFORMATION AND PRE-STARTUP SAFETY REVIEW. THESE MUST BE COMPLETED AS SOON AS THE EMERGENCY IS OVER. AUTHORIZATION BY THREE (3) KNOWLEDGEABLE PEOPLE IS REQUIRED BEFORE THE CHANGE CAN BE IMPLEMENTED. AUTHORIZATION TO IMPLEMENT CHANGE Name _____ Date: _____
AUTHORIZATION	Name _____ Date: _____ Name _____ Date: _____ FORWARD DESIGN AND OPERATING CHANGE REQUEST PACKAGE TO AREA TEAM LEADER

SECTION 3 PROTECTIVE SYSTEM BYPASS NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED. REF. NO. _____	CHECK PROTECTIVE SYSTEM TYPE: ☐ PRESSUE SAFETY DEVICE (RELIEF VALVE) ☐ SAFETY SHOWER OR EYE WASH STATION ☐ EMERGENCY SHUTDOWN DEVICE (ESD) ☐ FIXED GAS DETECTOR ☐ FIRE WATER SYSTEM ☐ EMERGENCY ALARM SYSTEM ☐ FLARE ☐ OTHER DESCRIPTION OF THE PROTECTIVE SYSTEM TO BE BYPASSED _____ WHAT ALTERNATIVE MEANS OF PROTECTION ARE PROVIDED AND/OR WHAT PROCEDURAL CHANGES WILL BE MADE TO INSURE SAFETY? _____ COMPLETE SECTIONS 8-12
SECTION 4 CATALYST AND CHEMICAL CHANGE NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED. REF. NO. _____	___YES ___ NO IS THIS A CATALYST OR CHEMICAL DELETION? IF "YES," O ATTACH A COPY OF CATALYST AND CHEMICAL DELETION FORM (SAFETY RULES AND PROCEDURE #26). O LINES 1-13 MUST BE COMPLETED. ___YES ___ NO IS THIS A CATALYST OR CHEMICAL ADDITION? IF "YES," O ATTACH A COPY OF CATALYST AND CHEMICAL ADDITION FORM (SAFETY RULES AND PROCEDURE #26). O LINES 1-16 MUST BE COMPLETED. COMPLETE SECTIONS 8-12
SECTION 5 INSTRUMENT/CONTROL CHANGE NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED REF. NO. _____	DESCRIPTION OF CHANGE _____ Install one D/P Cell (& Display), one float transmitter (& display), and two sight glasses in accordance with the enclosed construction packages ___YES X NO FOR ALARM SETPOINT CHANGES, METER RANGE CHANGES AND SIMILAR SINGLE INSTRUMENT CHANGES, IS THE CHANGE WITHIN THE WELL DOCUMENTED, E.G., CRITICAL OPERATING VARIABLES, SAFE OPERATING LIMITS OF THE PROCESS? IF YES, SECTION 10 DOES NOT HAVE TO BE COMPLETED AS THERE IS NO INCREASED RISK TO THE SAFETY AND HEALTH OF EMPLOYEES. COMPLETE SECTIONS 8-12
SECTION 6 EQUIPMENT, PIPING AND TECHNOLOGY CHANGES NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED REF. NO. _____	DESCRIPTION OF CHANGE _____ Install one pressure vessel (21V47), inlet/outlet piping for caustic, flare piping, and nitrogen piping in accordance with the enclosed construction packages. COMPLETE SECTIONS 8-12
SECTION 7 PROCEDURAL CHANGES NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED REF. NO. _____	DESCRIPTION _____ Update procedures to operate the new vessel in accordance with the attached procedure. COMPLETE SECTIONS 10-12

SECTION 8

PROCESS HAZARD ANALYSIS AND PROCESS SAFETY INFORMATION

REF. NO. _____

1. COMPLETE SECTION 9 "WHAT-IF ANALYSIS" AS REQUIRED

TEAM LEADER: Joseph McGuire DATE: 4-30-97

TEAM MEMBER: [illegible] DATE: 4-30-97

TEAM MEMBER: [illegible] DATE: 4-30-97

2. HAS THE NECESSARY INFORMATION ON THE PROPOSED CHANGE BEEN PROVIDED TO EMPLOYEES/CONTRACTORS INVOLVED IN THE OPERATION AND/OR MAINTENANCE OF THE PROCESS? (MUST BE COMPLETED) YES ✓

3. PROCESS SAFETY INFORMATION MODIFICATION REQUIREMENT

NOTE: FOR AN ITEM TO BE SIGNED OFF AS "COMPLETED," THE REQUIRED INFORMATION MUST BE PLACED IN ITS DESIGNATED LOCATION OR IT MUST BE PROVIDED TO THE RESPECTIVE DEPARTMENT FOR FUTURE UPDATING.

ITEM	MODIFICATION REQUIRED YES/NO	DEPARTMENT ASSIGNMENT	DATE COMPLETED AND INITIALS
A. MATERIAL SAFETY DATA SHEETS	NO		
B. REVISION TO CHEMICAL COMPATIBILITY MATRIX	NO		
C. PROCESS FLOW DIAGRAMS	YES	Engineering	4/30/97 [illegible]
D. MODIFICATIONS TO PROCESS CHEMISTRY	NO		
E. MODIFICATION TO MAXIMUM INTENDED INVENTORY LIST	~~YES~~ NO	~~Operations~~	~~3/28/97~~
F. MODIFICATION TO CRITICAL PROCESS VARIABLE LIST	NO	~~[illegible]~~	~~[illegible]~~
G. MODIFICATION TO OPERATING PROCEDURES	YES	Operations	GTH 4-30-97
H. MATERIALS OF CONSTRUCTION	YES	Engineering	3/28/97 [illegible]
I. P & ID'S	YES	Engineering	3/28/97 [illegible]
J. ELECTRICAL CLASSIFICATION	NO		
K. ELECTRICAL ONE-LINE DRAWINGS	YES	Engineering	3/28/97 [illegible]
L. RELIEF SYSTEM DESIGN AND/OR DESIGN BASIS	YES	Engineering	1/28/97 [illegible]
M. HEAT AND MATERIAL BALANCE	NO		
N. SAFETY SYSTEMS INCLUDING INTERLOCK, DETECTION OR SUPPRESSION SYSTEMS	NO		
O. REVIEW OF DESIGN FOR COMPLIANCE WITH DESIGN CODE AND STANDARDS EMPLOYED	YES	Engineering	3/25/97 [illegible]
P. EQUIPMENT FILES	YES	Engineering	3/30/97 [illegible]
Q. PMIC RECORDS	YES	Maint.	3/25/97 [illegible]
R. QC/QA REQUIREMENTS	YES	Engineering	3/25/97 [illegible]
S. ENVIRONMENTAL PROGRAMS (FUGITIVE EMISSIONS)	YES	OPS/Environmental	4-30-97 GTH
T. EQUIPMENT SPARE PARTS/TOOLS	YES	Engineering	3/25/97 [illegible]

SECTION 9	WHAT-IF ANALYSIS WORKSHEET
WHAT IF .....?	REF. NO. _____
POTENTIAL CONSEQUENCES	Refer to the attached Process Hazard Review
EXISTING PROTECTION	memo for 21V47 from Dennis Kappers dated 2/5/97
ACTION	Action Item 10 is complete.
ASSIGNMENT	ASSIGNED TO: Engineering INITIAL/DATE WHEN RESOLVED DKP 2/5/97 WHEN COMPLETED 4/30/97
RESOLUTION AND COMPLETION	
WHAT IF .....?	REF. NO. _____
POTENTIAL CONSEQUENCES	
EXISTING PROTECTION	
ACTION	
ASSIGNMENT	ASSIGNED TO: _____ INITIAL/DATE WHEN RESOLVED _____ WHEN COMPLETED _____
RESOLUTION AND COMPLETION	
WHAT IF .....?	REF. NO. _____
POTENTIAL CONSEQUENCES	
EXISTING PROTECTION	
ACTION	
ASSIGNMENT	ASSIGNED TO: _____ INITIAL/DATE WHEN RESOLVED _____ WHEN COMPLETED _____
RESOLUTION AND COMPLETION	

SECTION 10

PRE-STARTUP SAFETY REVIEW (PSSR)

NOTE: ATTACHMENTS MAY BE ADDED IF ADDITIONAL SPACE IS REQUIRED.

CONSTRUCTION AND EQUIPMENT			YES	NO	N/A
1		CONSTRUCTION, PIPING, EQUIPMENT IS IN ACCORDANCE WITH DESIGN SPECIFICATIONS	✓		
	A	THE ACTUAL CONSTRUCTION, PIPING EQUIPMENT HAS BEEN COMPLETED AS IT WAS PRESENTED DURING THE PROCESS HAZARD ANALYSIS (WHAT-IF) OR ANY CHANGES TO THE ORIGINAL CONSTRUCTION PACKAGE HAVE SINCE BEEN INCORPORATED INTO THIS REVIEW PROCESS AND WERE DETERMINED NOT TO CREATE ANY UNSAFE CONDITIONS.	✓		
	B	COMPUTER/SOFTWARE INSTALLATION HAS BEEN COMPLETED WITH THE SAME REQUIREMENTS AS SECTION 1-A ABOVE.			✓
	C	CRITICAL PUNCH LIST ITEMS HAVE BEEN CLEARED.		✓	
	D	NDT COMPLETED AND RECORDS AVAILABLE	✓		
	E	HYDROTESTING COMPLETE AND RECORDS AVAILABLE	✓		
	F	HIGH POINT VENTS/LOW POINT DRAINS REMOVED, PLUGGED OR BACKWELDED AS REQUIRED PER LINE CLASS SPECIFICATIONS	✓		
	G	BLINDS HAVE BEEN REMOVED AND LISTS CHECKED	✓		
	H	RELIEVING DEVICE ISOLATION VALVES HAVE BEEN CHAINED AND LOCKED OPEN.	✓		
	I	INSTRUMENT LOOP CHECKING COMPLETE		✓	
	J	OPERATOR INTERFACES (BOARD SCHEMATICS) ARE UPDATED			✓
	K	SHUTDOWN DEVICES, INSTRUMENTATION, ALARMS HAVE BEEN FUNCTIONALLY TESTED THROUGH THE FINAL ELEMENT.			✓
	L	FAIL SAFE POSITION OF ALL CONTROL VALVES/MOVs HAVE BEEN CONFIRMED AS CORRECT			✓
	M	ALL INSTRUMENTATION AND ELECTRICAL EQUIPMENT IS PROPERLY GROUNDED	✓		
	N	EQUIPMENT CAN BE ISOLATED AND CLEARED FOR MAINTENANCE	✓		
	O	ALL JUNCTION BOXES AND ELECTRICAL SWITCH BOXES HAVE BEEN CLOSED	✓		
	P	THE APPROPRIATE MAINTENANCE PERSONNEL HAVE BEEN NOTIFIED OF CHANGES IN ORDER TO UPDATE MAINTENANCE TRAINING, PREVENTATIVE MAINTENANCE (PM) AND/OR INSPECTION PROGRAMS (MECHANICAL INTEGRITY)	✓		
	Q	P&IDs AND PFDs IN THE DCS AND SATELLITE CONTROL ROOMS HAVE BEEN REDLINED Drawings Permanently Updated.	✓		
	R	PROCESS OVERVIEWS IN THE DCS AND SATELLITE CONTROL ROOMS HAVE BEEN REDLINED			✓
	S	ALL "NO" ANSWERS HAVE BEEN LISTED AS EXCEPTIONS	✓		
2		A PLAN AND DATE HAS BEEN ESTABLISHED TO ELIMINATE THIS CHANGE IF IT IS TEMPORARY. NOTE PLAN AND DATE IN "COMMENTS" SECTION OF THE PSSR			

PROCESS HAZARD ANALYSIS (WHAT-IF)		YES	NO	N/A
3	ALL RECOMMENDATIONS RESULTING FROM THE PROCESS HAZARD ANALYSIS (WHAT-IF) HAVE BEEN RESOLVED OR IMPLEMENTED	✓		
4	THE REQUIRED PROCESS SAFETY INFORMATION MODIFICATIONS HAVE BEEN ASSIGNED TO THE RESPECTIVE DEPARTMENTS IN SECTION 8	✓		

SECTION 10
(CONTINUED)

		PROCEDURES			
5		THE FOLLOWING OPERATING PROCEDURES HAVE BEEN CREATED FOR NEW FACILITIES OR REVISED PER THE MODIFICATION(S) TO EXISTING FACILITIES, ARE AVAILABLE TO OPERATIONS PERSONNEL AND HAVE BEEN PROVIDED TO THE APPROPRIATE PERSONNEL FOR FUTURE UPDATING OF THE OPERATING PROCEDURES MANUALS	✓		
	A	UNIT/EQUIPMENT STARTUP PROCEDURES (INITIAL, FOLLOWING A TURNAROUND, AFTER EMERGENCY SHUTDOWN).			✓
	B	NORMAL OPERATING PROCEDURES, PARAMETERS AND ROUTINE DUTIES	✓		
	C	EMERGENCY SHUTDOWN PROCEDURES (INCLUDING THE CONDITIONS UNDER WHICH AN EMERGENCY SHUTDOWN IS REQUIRED).			✓
	D	EMERGENCY OPERATING PROCEDURES			✓
	E	TEMPORARY OPERATING PROCEDURES			✓
	F	UNIQUE SAMPLING AND/OR LAB ANALYSIS PROCEDURES			✓
	G	ESD TESTING PROCEDURES			✓
6		THE FOLLOWING HES PROCEDURES/CONSIDERATIONS ARE IN PLACE	✓		
	A	THE SAFETY DEPARTMENT HAS APPROVED OF CHANGES TO FIXED SAFETY EQUIPMENT AND WILL UPDATE THE FIXED SAFETY EQUIPMENT PROGRAM	✓		
	B	MECHANICAL SAFETY EQUIPMENT IS INSTALLED, e.g., GUARD RAILS, LADDER CAGES, FIRE EXTINGUISHERS ETC.	✓		
	C	WARNING SIGNS, UCC CHEMICAL HAZARD IDENTIFICATION SYMBOLS AND/OR COLOR CODINGS ARE IN PLACE		✓	
	D	ENVIRONMENTAL REPRESENTATIVE NOTIFIED OF CHANGES SO THAT ENVIRONMENTAL AND FUGITIVE EMISSIONS PROGRAMS CAN BE UPDATED.	✓		
	E	ALL "NO" ANSWERS HAVE BEEN LISTED AS EXCEPTIONS	✓		
7		NEW MAINTENANCE PROCEDURES HAVE BEEN DEVELOPED, EXISTING PROCEDURES HAVE BEEN REVISED OR A PROGRAM IS IN PLACE TO DEVELOP/REVISE MAINTENANCE PROCEDURES	✓		
		TRAINING			
			YES	NO	N/A
8		A PROGRAM IS IN PLACE FOR PROVIDING TRAINING TO OPERATIONS, MAINTENANCE AND/OR SUPERVISORY PERSONNEL ON THE FOLLOWING BEFORE THEY ARE ALLOWED TO WORK ON THE NEW OR MODIFIED PROCESS	✓		
	A	ALL APPLICABLE PROCEDURES LISTED UNDER SECTION 9-5 ABOVE	✓		
	B	THE NEW OR REVISED OPERATIONAL PARAMETERS AND CRITICAL PROCESS VARIABLES			N/A
	C	NEW OR REVISED CONTROL BOARD SCHEMATICS AND SOFTWARE			N/A
	D	NEW PROCESS EQUIPMENT	✓		
	E	TRAINING RECORDS (CONTENT, SIGN-OFF SHEETS ETC.) WILL BE FORWARDED TO THE TRAINING COORDINATOR OR DESIGNEE UPON COMPLETION	✓		
9		ADEQUATE PROVISIONS HAVE BEEN MADE FOR TECHNICAL AND/OR SUPERVISORY SUPPORT DURING INITIAL STARTUP/OPERATION	✓		

SECTION 10 (CONTINUED)	COMMENTS:

EXCEPTIONS
(EXCEPTIONS *DO NOT* REPRESENT ACTIVITIES WHICH COULD AFFECT THE SAFE OPERATION OF THE UNIT)

	SIGNATURE AND DATE COMPLETED
Fugitive Emissions Monitoring to be modified to include all valves in Hydrocarbon service.	SFM 7-13-97
GROUND CABLE NEEDS ATT, FINISHED INSULATION	GTH 6-17-97
LADALGAGE NEED CALIBRATION, WARING LABELS FROM ENVIRONMENTAL	→ SFM 6-17-97
NEED BSAND TRAINING FILES TO TRAINING COORDINATOR	SFM 6-17-97

AREA TEAM LEADER TO SELECT APPLICABLE PSSR TEAM MEMBERS
(PSSR TEAM MEMBERS TO SIGN AND DATE WHEN PSSR IS COMPLETE AND THE PROCESS IS READY TO STARTUP)

☑ CHANGE COORDINATOR	[signature]	DATE: 4-30-97
☑ UNIT FOREMAN	[signature]	DATE: 4-30-97
☐ MAINTENANCE		DATE:
☐ HOURLY EMPLOYEE		DATE:
☐ PROCESS ENGINEER		DATE:
☒ PROJECT ENGINEER	[signature]	DATE: 4-30-97
☐ CONTROL ENGINEER		DATE:
☐ INSPECTION		DATE:
☐ ENVIRONMENTAL		DATE:
☐ SAFETY		DATE:

SECTION 11 APPROVAL TO STARTUP			
	AREA TEAM LEADER	Joseph Marra	DATE: 4-30-97
	OPERATIONS MANAGER	[signature]	DATE: 4/30/97

SECTION 12

CLOSURE

ALL PHA ACTION ITEMS, PSSR EXCEPTIONS AND PSI MODIFICATIONS ARE COMPLETE and the Master DOCR LOG UPDATED

AREA TEAM LEADER Joseph Marra DATE: 7-13-97

THE DOCR WAS PROVIDED TO THE ENGINEERING FILE RECORDS PROCESSOR FOR FILING

CHANGE COORDINATOR [signature] DATE: 7/14/97

RISK ASSESSMENT WORKSHEET

DOCR # 1997 - 21 - 003 REF. NO. _____

INSTRUCTIONS: Fill in MOC #. Answer each question under Degree of Hazard and Significance of Change either 'Yes (Y)" or "No (N)." Determine the Degree of Hazard to be minimal (M), low or high. Determine the significance of change to be minimal (M), low or high. Determine the assessed risk level using the assessed risk level matrix. Obtain proper signatures. Attach to DOCR Form.

DEGREE OF HAZARD

YES H-1 Does the proposed change introduce or affect a significant source of potential chemical, mechanical, thermal or electrical energy?

NO H-2 Does the proposed change result in an inventory increase of toxic, flammable, regulatory listed or reactive material? Consider raw material, intermediates, addatives, catalysts products and by-products.

NO H-3 Will the changed process system contain any materials known or suspected to be thermally, chemically or physically unstable?

NO H-4 Could the proposed change significally increase the potential for personal exposure to hazardous materials?

NO H-5 Could the proposed change significally increase the potential for community impact from a process related incident?

NO H-6 Does the proposed change necessiate a change or variance to a Safety Rule or Procedure, Engineering Specification, regulatory permit or Emergency Response Plan?

Degree of Hazard Evaluation

___	MINIMAL	No "Yes" answers
✓	LOW	Only one "Yes" answer
___	High	Two or more "Yes" answers or H-2, H-4, H-5 or H-6 answered "Yes"

SIGNIFICANCE OF CHANGE

NO S-1 Does the proposed change take the process or system outside the well understood and documented "safe operating envelope" during steady state or transient conditions?

NO S-2 Does the proposed change introduce new molecules? Consider raw material, intermediates, addatives, catalysts products and by-products.

NO S-3 Does the proposed change reorder or alter the processing sequence with the same process and equipment?

NO S-4 Does the proposed change significantly impact the energy or mass balance?

NO S-5 Does the proposed change alter, affect and/or bypass a safety device or a control/logic device or component?

NO S-6 Does the proposed change involve a tank, vessel, exchanger, pump, compressor or piping change of service that differs from approved service?

NO S-7 Does the proposed change involve production of chemicals in equipment not designed for that service or create a potential for equipment limitations being exceeded?

YES S-8 Does the proposed change necessitate significant or unique training for operators, maintenance or technical personnel or is operator interface needed for normal and/or emergency operation of the changed system?

NO S-9 Does the new system handle reactively incompatible materials in the same equipment during different operating sequences or phases?

Significance of Change Evaluation

___	MINIMAL	No "Yes" answers
✓	LOW	Only one "Yes" answer and it is to any question other than S-1
___	High	Question S-1 answered "Yes" or two or more questions answered "Yes."

ASSESSED RISK LEVEL

HAZARD		SIGNIFICANCE		
		MINIMAL	LOW	HIGH
	MINIMAL	M	1	2
	LOW	1	1	2
	HIGH	2	2	3

RISK LEVEL: 1

COMPLETED BY: [signature] DATE 1/28/97

REVIEWED BY: Joseph Moore DATE 1/28/97

Area Team Leader

MARATHON OIL COMPANY

Authority For Expenditure

(1) REFINING DIVISION Michigan

(4) A.F.E. NO. 662-0093877

(2) UNIT Cracking Plant Treaters NO. 21 (3) DATE 9/17/96 (5) BUDGET NO. D617

Request Authority to Perform the Following Work: (Process Flow and P&ID Diagrams, Plot Plan, Project Schedule, Etc. Attached)

(6) PROJECT TITLE: RCRA Organic Emissions

DESCRIPTION: The scope of this project is to erect a pressure vessel for the storage of spent caustic in order to comply with the U.S, EPA published Organic Air Emission Stnadard for Hazardous Waste Tanks, Surface Impoundments, and Containers. Please refer to the attached project cost estimate, schedule, marked-up P&ID and plot plan.

PROJECT CATEGORY (7)

Capital Replacement
Operating or Process Improvements
Expansion of Markets or Facilities
Safety and Security
Other
X Environmental*
X Air
Water
Solid Waste
Remediation
Spill Cleanup
Other

BENEFITS EXPECTED

*Reviewed with Environmental Coord.

Total Original Installed Cost of Item Replaced $_____

(8) APPROVED PROJECT BUDGET $ 150,000

	Approved Budget	AFE	Variance Over/(Under) Budget
This AFE	$ 150,000	$ 150,000	$ 0
Cost Schedule: Current Year	$ 150,000	$ 150,000	$ 0
	0	0	0
19	0	0	0
Total	$ 150,000	$ 150,000	$ 0

AFE Amount Supported by Attached Detailed Cost Estimate

(9) PROJECT SCHEDULE

Starting Date 9/23/96

Completion Date 12/31/96

Comments:

Est. By A. J. Ploucha 9/17/96

(10) ECONOMIC JUSTIFICATION (After Tax) DCF Return on Investment _____%

Profit (000's) $ _____ DCF/DI Ratio $ _____ Payout Years _____

(11) FOR ACCOUNTING DEPARTMENT ONLY

	Recommended Analysis	Final Analysis
Expense	$	$
Investment	150,000	
Total	$ 150,000	$

Division Controller 9/19/96.

Financial Analysis Section

(12) REVIEW AND APPROVALS - REFINING DIVISION

TECH. SERVICES MGR. N/A

PROD. CONTROL MGR.

PROJ. ENGR./COORD. 9/17/96

ENGR. DEPT. MGR.

OPER. DEPT. MGR.

MAINT. DEPT. MGR. 9-23-96

REFINING DIV. MGR.

FINDLAY OFFICE

MGR. OF ENGR.

V.P. OF REFINING

MEMORANDUM to File

No detectable organic emission testing for the spent caustic tank

Seven openings are present on the caustic tank, the openings are described in the table below. The closures devices are either a mating flange or plate, bolted on with a gasket between them. Method 21 was used to monitor the gap between the flange faces. Monitoring was conducted over the entire circumference of the flange. The background level was not determined and no allowance was made for background conditions (conservative approach). Below is the readings per opening taken by the complex III outside operator on 10/20/98.

Opening	Size	Reading
Top inspection port	6"	27 ppm
Inlet / outlet line	3"	10 ppm
Relief flange	3"	16 ppm
Nitrogen connection	2"	19 ppm
Top level gauge flange	3"	15 ppm
Bottom Level gauge flange	3"	14 ppm
Manway	20"	16 ppm

ATTACHMENT 3

Spent Caustic Vapor Pressure

INTRACOMPANY CORRESPONDENCE

TO B. VanderHoff

DATE August 8, 1995

OFFICE Engineering

FROM P. G. Frendo

CAUSTIC VAPOR PRESSURES

(USE THIS LINE FOR FILE REFERENCE OR SUBJECT)

OFFICE Supervisor, Laboratory

cc: J. Bruestle, File 5133

The following table illustrates the Vapor Pressure of the Complex III Caustics:

I.D.	DATE	VP @ 70° kPa	VP @ 100° kPa
#1 Merox	8-2-95	35.9	53.1
#2 Merox	8-2-95	11.0	19.3
#3 Merox	8-2-95	<1.25	<1.25
PP North	8-2-95	<1.25	<1.25
PP South	8-2-95	<1.25	<1.25

PGF/lmz

ATTACHMENT 4

Valves on Spent Caustic Tank Monitored in VOC Monitoring Program

KLRA-038

ANNUAL 0VA-108 MO RING WORKSHEET

Unit	Tag ID	Description	Run ID	Monitor Date	Mon Time	ppm	Lkr	Eqp	Repair
21	21-0-0343	21V47	1038	10/01/98	11:05:04	9	No	VLV	
21	21-0-0353	21V47 Inlet	0938	09/24/98	08:45:35	13	No	VLV	
21	21-0-0363	21V47 Top sight glass	1038	10/01/98	11:05:18	9	No	VLV	
21	21-1-0342	Top of 21V47	0938	09/25/98	10:39:32	19	No	VLV	
21	21-1-0352	Top of 21V47	0938	09/25/98	10:38:44	8	No	VLV	
21	21-1-0362	21V47 top sight glass	0938	09/25/98	10:35:26	10	No	VLV	
21	21-2-0347	21V47	0938	09/25/98	12:20:19	12	No	VLV	
21	21-2-0357	21V47 Top sight glass	0938	09/25/98	10:36:22	8	No	VLV	
21	21-3-0346	21V47	0938	09/25/98	12:19:35	9	No	VLV	
21	21-3-0356	Top of 21V47	0938	09/25/98	10:37:30	13	No	VLV	
21	21-3-0366	21V47 Bottom sight glass	1038	10/01/98	11:05:41	9	No	VLV	
21	21-4-0341	Top of 21V47	1038	10/01/98	11:09:48	8	No	VLV	
21	21-4-0351	21V47 Top sight glass	0938	09/25/98	12:24:10	13	No	VLV	
21	21-4-0361	21V47	1038	10/01/98	11:10:02	8	No	VLV	
21	21-5-0348	21V47 0.75" GATE OFF BTM SG	0938	09/25/98	12:21:12	16	No	VLV	
21	21-5-0358	21V47	1038	10/01/98	11:10:20	8	No	VLV	
21	21-6-0349	21V47 btm. sight glass	0938	09/25/98	12:22:27	12	No	VLV	
21	21-6-0359	21V47 Bottom sight glass	0938	09/25/98	12:22:57	12	No	VLV	
21	21-7-0345	21V47	0938	09/25/98	12:18:25	9	No	VLV	
21	21-7-0355	21V47 Top sight glass	0938	09/25/98	12:14:22	10	No	VLV	
21	21-7-0365	21V47 Bottom sight glass	0938	09/25/98	10:44:42	19	No	VLV	
21	21-8-0350	21V47 Inlet	0938	09/24/98	08:46:26	12	No	VLV	
21	21-8-0360	21V47	0938	09/25/98	10:32:55	18	No	VLV	
21	21-9-0344	Top of 21V47	0938	09/25/98	10:28:30	13	No	VLV	
21	21-9-0354	Top of 21V47	0938	09/25/98	10:30:42	20	No	VLV	
21	21-9-0364	21V47 Top sight glass	0938	09/25/98	10:31:57	13	No	VLV	

ATTACHMENT 5

Standard Operating Procedure
Dump/Fill North/South Scrubbers

NOTE: DUMPING AND FILLING THE SCRUBBERS IS A TWO PERSON JOB WITH ONE PERSON STATIONED AT THE MIX BOXES AND ONE PERSON STATIONED AT THE SCRUBBERS. PERSONAL PROTECTIVE EQUIPMENT MUST BE WORN INCLUDING GOGGLES, FACE SHIELD, RAIN SUIT AND RUBBER BOOTS. BLOW DOWN THE SIGHTGLASSES ON THE SCRUBBERS BEFORE DUMPING THE LEVEL OUT OF THE SCRUBBER AND BEFORE REFILLING THE SCRUBBER.

A RESTRICTION ORIFICE HAS BEEN INSTALLED DOWN STREAM OF THE SCRUBBERS ON THE DUMP AND FILL LINE TO RESTRICT THE VOLUME OF CAUSTIC BELOW THE CAPACITY OF THE RELIEF VALVE ON THE SPENT TANK. RELIEF VALVE IS SET FOR 110#. DO NOT OPEN THE VALVES ON THE BOTTOM OF THE SCRUBBERS MORE THAN 25%.

1. Preparing to dump and fill the scrubbers.

   A. Close the bypass around the relief valve on the Spent Tank. Make sure the N2 to the tank is blocked in.

   B. Hand gauge the Spent Tank. **DO NOT USE THE SIDE GAUGE.**

   C. Mix caustic in the Mix Box to a 17 Baume per Procedure #3-21-305

1. Dumping the PP Scrubbers.

   A. Line up the valves on the dump and fill line from the Spent Tank to the North and South PP Scrubber. Leave the dump valve on the bottom of the scrubber closed until you are ready to dump the scrubber.

   B. Slowly open the valve on the bottom of the scrubber until you see the level in the sightglass begin to drop.

   C. Monitor the 3/4" drain to the sewer to ensure that you do not allow any hydrocarbon to go the Spent Tank.

   D. When the scrubber level is down to the desired level block in the valve on the bottom of the scrubber.

   E. Line up steam to the dump and fill line and displace the remaining Spent

Caustic to the Spent Caustic Tank.

F. When steaming is complete block in the dump and fill line to the Spent Tank and open the bypass around the Spent Tank relief valve and allow the Spent Tank to float on flare pressure. Record the new level in the Spent Tank on the Area 3 Log Sheet.

3. Preparing to refill the PP Scrubber.

A. Line up the dump and fill line from the Mix Box to the scrubber to be refilled. Leave the valve on the bottom the scrubber closed.

B. Start the pump and ensure that there is 250# of discharge pressure. When the pump pressure is at 250# contact the person at the scrubber to slowly open the valve on the bottom of the scrubber.

C. Monitor the level in the scrubber and when the desired level is reached block in the bottom of the scrubber. Notify the person at the Mix Box to stop the pump.

D. Line up steam to the dump and fill line and displace any remaining caustic to the Mix Box.

E. If the other scrubber is to be dumped and filled repeat all the above steps.

F. When dumping and filling is complete block in all valves on the dump and fill line.

ATTACHMENT 6

Correspondence to Ms. Margo Dusenbury (dated December 2, 1998)

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

CERTIFIED MAIL
Return Receipt: P 608 152 456

December 2, 1998

Ms. Margo Dusenbury
U.S. Environmental Protection Agency
National Enforcement Investigations Center
Bldg. 53, Box 25227
Denver Federal Center
Denver, Colorado 80225

RE: Additional Information and Clarification of Issues from October EPA Inspection
Marathon Ashland Petroleum L.L.C.
MID 005 506 357

Dear Ms. Dusenbury:

The purpose of this letter is to provide the EPA with additional information related to issues raised by the EPA during the multimedia inspection conducted at the Detroit Refinery in October 1998.

Sludge Thickening Tank

As discussed during the inspection, MAP uses a blue sludge thickening tank to process material skimmed from the dissolved air flotation unit (DAF) as part of the on-site wastewater treatment unit. The blue sludge thickening tank is constructed of steel, and although the tank has wheels on it, the tank remains stationary when in operation. Material skimmed from the DAF is conveyed via piping to the blue sludge thickening tank where the material is allowed to settle. Wastewater from the blue sludge thickening tank goes to the API forebay, while the sludge is vacuumed out and transferred to tank 29T12. Material is conveyed into the blue sludge thickening tank through piping and is removed from the tank either by a vacuum truck (sludge) or through piping (wastewater).

During the inspection the regulatory status of the blue sludge tank was questioned - is it a tank or a container? The definition of a tank pursuant to §260.10 is as follows: "Tank means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support."

The definition of a tank has been further clarified by the U.S. EPA in several directives and guidance documents, the relevant portions of which, are summarized below:

- *OSWER Directive 9503.51-1A(85) RD&D Permit for Sludge Drying Process in a Wastewater System (December 24, 1985).* "The Agency has clarified the definition of a "tank", for the purposes of the wastewater treatment unit definition in §260.10, to cover unit operations which are not obviously tanks such as presses, filters, sumps and many other types of processing equipment."

- *OSWER Directive 9503.52-1A Permit-Exempt Status of Sludge Dryers Added to Wastewater Treatment Units (January 2, 1986).* Definition of a tank ..."it is designed to contain hazardous waste and is constructed primarily of nonearthen materials that provide structural support. Furthermore, the Agency has clarified the definition of tank -- for this exemption -- to include unit operations such as presses, filters, sumps and many other types of processing equipment. In addition, the preamble of the November 17, 1980, proposed rule (45 FR 76077-76078) clarified the definition of a wastewater treatment unit as follows: This definition .... covers ... the sludge digesters, thickeners, dryers and other sludge processing tanks ... in which hazardous wastewater treatment sludge is treated; and any.... tanks used for the storage of such sludge."

- *RCRA/Superfund Hotline Monthly Summary - June 1987*
  5. Mobile Wastewater Treatment Units: "A mobile treatment unit could be a tank as defined in §260.10. Although §260.10 defined a tank as a "stationary device", EPA has determined that a mobile tank could be a "tank" provided that it is intended to be stationary when in operation and that it meets the definition of a tank in all other aspects (See 52 FR 20919)."

Based on this information, the blue sludge tank clearly meets the definition of a tank pursuant to §260.10. The blue sludge tank is stationary at all times when in use, it is designed to contain an accumulation of hazardous waste (DAF sludge) and it is constructed of primarily nonearthen materials (i.e., steel) which provide structural support. Furthermore, EPA guidance specifically allows for the definition of a tank in a wastewater treatment unit to cover unit operations including sludge thickening. Because the tank is part of a wastewater treatment unit subject to regulation under the Clean Water Act, it is exempt from RCRA permitting requirements pursuant to 40 CFR 270(c)(2)(v).

Manifest Issues

During the October 1998 inspection, the EPA noted as a potential noncompliance issue that for shipments of hazardous waste being exported to a treatment, storage and disposal facility (TSDF) located in Canada, a copy of the EPA Acknowledgement of Consent was not attached to the appropriate manifest in the file. A copy of the EPA Acknowledgement of Consent accompanies each exported shipment of hazardous waste, as required. This is documented in Section 16 of the manifest (Generator's Certification) by the words "...and conforms to the terms of the attached EPA Acknowledgement of Consent." In addition to providing a copy of the EPA

Acknowledgement of Consent and documenting that a copy is provided with each exported shipment of hazardous waste, the original EPA Acknowledgement of Consent is retained in MAP files for three years. To clarify the regulatory requirement, MAP contacted the Michigan Department of Environmental Quality (MDEQ), Waste Management Division. According to Ms. Lynn King with the Waste Management Division in the MDEQ's Southeast Michigan District Office, the regulations require that a copy of the EPA Acknowledgement of Consent accompany each exported shipment of hazardous waste. Ms. King agreed that MAP adequately documents that the EPA Acknowledgement of Consent accompanies each exported shipment of hazardous waste by the note in Section 16 of the manifest and by retaining the original in files on-site. Therefore, it is not necessary to attach a copy of the EPA Acknowledgement of Consent to the appropriate manifest in the file.

U.S. EPA identified several manifests which did not have corresponding land disposal restriction forms (LDRs) and several export shipments of hazardous waste which did not have the cosignee copy of the Canadian manifest. The table below summarizes the information which was not in the manifest file at the time of the inspection:

Manifest Number	**Shipment Date**	**Necessary Information**	**Comment**
MI 3518044	7/18/96	Cosignee copy	Copy attached (CC 35346-6)
MI 3146656	10/18/96	LDR	Copy attached
TX 00143410	6/13/97	LDR	Copy attached
MI 3146718 (see note below)	9/26/97	LDR	Three materials shipped: 11a. Non hazardous material - no LDR 11b. LDR notice on 7/30/97 with manifest MI 3146714 (attached) 11c. LDR notice on 8/29/97 with manifest MI 3146717 (attached)
MI 3146738	11/13/97	LDR	Copy attached
MI 7053255	7/8/98	LDR	Copy attached
MI 7209510	8/31/98	Cosignee copy	Copy attached (AA78248-9)
MI 7209508	9/4/98	Cosignee copy	Copy attached (AA78484-0)
MI 7209517	9/16/98	Cosignee copy	Copy attached (AA78740-5)
MI 7209519	9/24/98	Cosignee copy	Copy attached (AA78886-6)
MI 7209530	9/28/98	Cosignee copy	Copy attached (AA78881-7)
MI 7209531	9/29/98	Cosignee copy	Copy attached (AA78969-0)
MI 7209533	9/30/98	Cosignee copy	Copy attached (AA79761-0)

It should be noted that the Phase IV LDR provisions went into effect on August 11, 1997; after this date copies of the LDR are no longer required to accompany every hazardous waste shipment if an initial notification has been provided to the disposal facility. As discussed during the inspection, a copy of a LDR from a previous shipment satisfies the initial notification requirement. Therefore, copies of the LDRs which accompanied previous shipments of the same material are provided for manifest MI 3146718. The referenced copies are provided in Attachment 1.

Contractor Training

MAP has contracted with Horizon Environmental to provide on-site RCRA consulting services at the Detroit Refinery. The contract employee's services have included reviewing and commenting on RCRA generator compliance issues. This has included reviewing and modifying, as necessary, waste management practices, the Contingency Plan, and training programs. The contract employee is knowledgeable and experienced in the RCRA issues that apply to the Detroit Refinery. The contract employee, in addition to her RCRA experience, has received 40 Hour HAZWOPER training and the required annual refresher courses (Copies of HAZWOPER training certificates were provided to the EPA during the inspection). In addition, the contract employee has received the Refinery Contractor Employee Training which addresses safety, health, and environmental matters relevant to the Refinery. The contract employee RCRA training as a consultant has been enhanced by on the job training pertaining to the specific hazardous wastes generated at the Refinery by MAP Environmental Department employees.

Inspection of Safety Equipment

A copy of the inspection schedule for safety and emergency response equipment is provided in Attachment 2. In addition, the available 1998 inspection records for safety shower/eyewash units located at the refinery are included in Attachment 2.

Sandblast Material

During the EPA inspection a drum of sandblast material was observed in the pump shop located in Complex 2. It was noted by MAP that the sandblast material was characterized as non-hazardous based on generator knowledge and analytical results from similar material generated in the maintenance shop at Complex 3. A representative sample of the sandblast material was collected on October 27, 1998 and analyzed for volatile compounds, semi-volatile compounds and metals via the toxicity characteristic leaching procedure (TCLP), pH, sulfide and cyanide reactivity, and flashpoint. As shown by the results, the sandblast material is properly characterized as a non-hazardous waste (Analytical results are provided in Attachment 3).

Former Sewer System

During the inspection a sewer system was identified in the contractor yard at the Melvindale Tank Farm. Water was observed in the sewer system at the time of the inspection. A sample of

the water in the sewer was collected and split with the EPA during the inspection. The water was analyzed for volatile organic compounds, semivolatile organic compounds and metals. As shown on the attached analytical data sheets, barium (0.11 mg/L) and chromium (0.02 mg/L) were the only analyzed parameters detected in the water sample (Attachment 4).

The sewer system opening has been plugged with cement. Further, it has been identified to be part of a former wastewater sewer system used by a former site owner. The former site owner, a government defense contractor, used the property during World War II to produce armored tanks.

Manifest Exemption for Transporting of Hazardous Waste

We have provided a copy of the U.S. EPA Federal Register notice pertaining to the Manifest Exemption for Transport of Hazardous Waste in Right-of-Ways on contiguous properties (Attachment 5).

Underground Storage Tank

The underground storage tank regulatory standard pertaining to spill and overfill protection (40 CFR 280.20(c)) has an effective date of December 22, 1998 for existing tanks.

If you have any questions regarding this information, please contact me at (313) 297-6248.

Sincerely

Von J. Meeks

Von J. Meeks
Environmental & Safety Manager

ATTACHMENT 7

Analytical Results for Sample From Frac Tank (Spill Cleanup Material)

LABORATORY TESTS RESULTS
10/23/98

JOB NUMBER: 119234 CUSTOMER: Marathon Ashland Petroleum ATTN: Jeffery Bruestle

CLIENT I.D.....: Frat Tank
DATE SAMPLED.....: 10/15/98
TIME SAMPLED.....: 00:00
WORK DESCRIPTION...:

LABORATORY I.D...: 119234-0003
DATE RECEIVED....: 10/15/98
TIME RECEIVED....: 16:33
REMARKS.....:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
TCLP Volatile Contaminants		*1		EPA 8021	10/21/98	ELI
Benzene	< 0.5	0.5	mg/L	Reg. Limit 0.5 mg/L		
Carbon tetrachloride	< 0.5	0.5	mg/L	Reg. Limit 0.5 mg/L		
Chlorobenzene	< 10	10	mg/L	Reg. Limit 100 mg/L		
Chloroform	< 0.6	0.6	mg/L	Reg. Limit 6.0 mg/L		
1,2-Dichloroethane	< 0.5	0.5	mg/L	Reg. Limit 0.5 mg/L		
1,1-Dichloroethene	< 0.5	0.5	mg/L	Reg. Limit 0.7 mg/L		
Methyl ethyl ketone	< 20	20	mg/L	Reg. Limit 200 mg/L		
Tetrachloroethene	< 0.5	0.5	mg/L	Reg. Limit 0.7 mg/L		
Trichloroethene	< 0.5	0.5	mg/L	Reg. Limit 0.5 mg/L		
Vinyl chloride	< 0.5	0.5	mg/L	Reg. Limit 0.2 mg/L		
TCLP Semi-Volatiles (BNAs)		*1		EPA Method 8270	10/19/98	JB
Pentachlorophenol	< 10	10	mg/L	Reg. Limit 100 mg/L		
2,4,5-Trichlorophenol	< 40	40	mg/L	Reg. Limit 400 mg/L		
2,4,6-Trichlorophenol	< 0.2	0.2	mg/L	Reg. Limit 2.0 mg/L		
2,4-Dinitrotoluene	< 0.1	0.1	mg/L	Reg. Limit 0.13mg/L		
Hexachlorobenzene	< 0.1	0.1	mg/L	Reg. Limit 0.13mg/L		
Hexachlorobutadiene	< 0.1	0.1	mg/L	Reg. Limit 0.5 mg/L		
Hexachloroethane	< 0.3	0.3	mg/L	Reg. Limit 3.0 mg/L		
Nitrobenzene	< 0.2	0.2	mg/L	Reg. Limit 2.0 mg/L		
Pyridine	< 0.5	0.5	mg/L	Reg. Limit 5.0 mg/L		
2-Methylphenol	< 20	20	mg/L	Reg. Limit 200 mg/L		
3&4 Methylphenol	< 20	20	mg/L	Reg. Limit 200 mg/L		
1,4-Dichlorobenzene	< 0.75	0.75	mg/L	Reg. Limit 7.5 mg/L		
TCLP RCRA Metals		*1		EPA 1311/various	10/21/98	ELI
Barium (TCLP)	11	10	mg/L	EPA 6010		
Cadmium (TCLP)	< 0.1	0.1	mg/L	EPA 6010		
Chromium (TCLP)	< 0.5	0.5	mg/L	EPA 6010		
Lead (TCLP)	< 0.5	0.5	mg/L	EPA 6010		
Mercury (TCLP)	< 0.05	0.05	mg/L	EPA 245.1		
Silver (TCLP)	< 0.5	0.5	mg/L	EPA 7760		
Arsenic (TCLP)	< 0.5	0.5	mg/L	EPA 6010		
Selenium (TCLP)	< 0.5	0.5	mg/L	EPA 6010		
Corrosivity by pH	7.0	0.1	Std. Units	USEPA 9045	10/16/98	DTM
Cyanide (Reactivity)	0.23	0.10	mg/kg	EPA 335.4	10/16/98	DTM
Ignitability, (Flash Point)	> 200	1	Deg F	USEPA 1010	10/19/98	DKM

12649 Richfield Court
Livonia, MI 48150
(734) 462-3900

This report shall not be reproduced except in full, without written authorization of Paragon Laboratories, Inc.
12649 Richfield Court • Livonia, MI 48150 • (734) 462-3900 • Fax (734) 462-3911

LABORATORY TESTS RESULTS
10/23/98

JOB NUMBER: 119234 CUSTOMER: Marathon Ashland Petroleum ATTN: Jeffery Bruestle

CLIENT I.D.....: Frat Tank
DATE SAMPLED.....: 10/15/98
TIME SAMPLED.....: 00:00
WORK DESCRIPTION...:

LABORATORY I.D...: 119234-0003
DATE RECEIVED....: 10/15/98
TIME RECEIVED....: 16:33
REMARKS.....:

TEST DESCRIPTION	FINAL RESULT	LIMITS/*DILUTION	UNITS OF MEASURE	TEST METHOD	DATE	TECHN
Sulfide,Reactive	32	10	mg/kg	Std Mth 4500-S2- D	10/16/98	DTM

12649 Richfield Court
Livonia, MI 48150
(734) 462-3900

This report shall not be reproduced except in full, without written authorization of Paragon Laboratories, Inc.
12649 Richfield Court • Livonia, MI 48150 • (734) 462-3900 • Fax (734) 462-3911

ATTACHMENT 8

Inspection Forms (July through October 1998)

Hazardous Waste Storage Area Inspection Checklist

Date: July 1, 1998

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas [1]		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material *	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments: COMPLEX 2 HAS NO CONTAINERS ON SITE

Hazardous Waste Storage Area Inspection Checklist

Date: 7/8/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
Inspection Item:	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓		NONE	✓		NONE
All containers have date when storage for disposal began clearly marked.	✓		NONE	✓		NONE
All containers have been stored in the unit for less than 90 days.	✓		NONE	✓		NONE
All containers are free of leaks or stains possibly caused by leaks.	✓		NONE	✓		NONE
All containers are tightly closed with all bungs in place.	✓		NONE	✓		NONE
All containers are free of dents and/or corrosion.	✓		NONE	✓		NONE
Minimum of 2 feet of aisle space is maintained between rows.	✓		NONE	✓		NONE
Containment area is free of water or other liquids.	✓		NONE	✓		NONE
Floor/base of storage area is free of cracks or gaps.	✓		NONE	✓		NONE

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: K. Boyd

Comments: Complex II has no containers on site

n:\waste\CONTINSP.XLS: inspect.form

Hazardous Waste Storage Area Inspection Checklist

Date: July 17, 1998

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓		NONE	✓		NONE
All containers have date when storage for disposal began clearly marked.	✓		"	✓		"
All containers have been stored in the unit for less than 90 days.	✓		"	✓		"
All containers are free of leaks or stains possibly caused by leaks.	✓		"	✓		"
All containers are tightly closed with all bungs in place.	✓		"	✓		"
All containers are free of dents and/or corrosion.	✓		"	✓		"
Minimum of 2 feet of aisle space is maintained between rows.	✓		"	✓		"
Containment area is free of water or other liquids.	✓		"	✓		"
Floor/base of storage area is free of cracks or gaps.	✓		"	✓		"

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: K. Boyd

Comments: Complex I bundle pad has 1 drums of non-haz material

Complex II bundle pad has 1 roll-off box of dirt

Complex III has 2 drums of non-haz material

Hazardous Waste Storage Area Inspection Checklist

Date: 2/24/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
Inspection Item:	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓		NONE	✓		NONE
All containers have date when storage for disposal began clearly marked.	✓		NONE	✓		NONE
All containers have been stored in the unit for less than 90 days.	✓		NONE	✓		NONE
All containers are free of leaks or stains possibly caused by leaks.	✓		NONE	✓		NONE
All containers are tightly closed with all bungs in place.	✓		NONE	✓		NONE
All containers are free of dents and/or corrosion.	✓		NONE	✓		NONE
Minimum of 2 feet of aisle space is naintained between rows.	✓		NONE	✓		NONE
Containment area is free of water or other liquids.	✓		NONE	✓		NONE
Floor/base of storage area is free of cracks or gaps.	✓		NONE	✓		NONE

* provide an Inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: K Bold

Comments:

Hazardous Waste Storage Area Inspection Checklist

Date: July 30, 1998

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓		NONE	✓		NONE
All containers have date when storage for disposal began clearly marked.	✓		NONE	✓		NONE
All containers have been stored in the unit for less than 90 days.	✓		NONE	✓		NONE
All containers are free of leaks or stains possibly caused by leaks.	✓		NONE	✓		NONE
All containers are tightly closed with all bungs in place.	✓		NONE	✓		NONE
All containers are free of dents and/or corrosion.	✓		NONE	✓		NONE
Minimum of 2 feet of aisle space is naintained between rows.	✓		NONE	✓		NONE
Containment area is free of water or other liquids.	✓		NONE	✓		NONE
Floor/base of storage area is free of cracks or gaps.	✓		NONE	✓		NONE

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments:

n:\waste\CONTINSP.XLS: inspect.form

Hazardous Waste Storage Area Inspection Checklist

Date: 8/4/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓		Amine Filter drum needs haz waste sticker			
All containers have date when storage for disposal began clearly marked.	✓					
All containers have been stored in the unit for less than 90 days.	✓					
All containers are free of leaks or stains possibly caused by leaks.	✓					
All containers are tightly closed with all bungs in place.	✓					
All containers are free of dents and/or corrosion.	✓					
Minimum of 2 feet of aisle space is maintained between rows.	✓					
Containment area is free of water or other liquids.	✓					
Floor/base of storage area is free of cracks or gaps.	✓					

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: BB

Comments: Complex 2 Pad - 1 rolloff box - 1 yd soil (covered)

Complex 1 Pad - 2 baker box - empty
1 cousins box - empty

CP - 2 drums - Non haz - Refinery cont. material
1 cousins box - shirtblast material
1 Phillips - non haz
1 cousins - soil non haz

No hazardous waste stored in other areas

Amine filter drum labeled w/ name + date (no haz waste)

Hazardous Waste Storage Area Inspection Checklist

Date: 8/14/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments: All CONTAINERS ARE, CLEARLY LABELED IN ALL AREAS. STORAGE AREAS DOES NOT HAVE GAPS OR CRACKS.

Hazardous Waste Storage Area Inspection Checklist

Date: 8/21/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments:

Hazardous Waste Storage Area Inspection Checklist

Date: 8/28/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
Inspection Item:	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments:

Hazardous Waste Storage Area Inspection Checklist

Date: 9/4/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A.B.

Comments:

Hazardous Waste Storage Area Inspection Checklist

Date: September 11, 1998

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments: On Site Containers List Attached

Hazardous Waste Storage Area Inspection Checklist

Date: SEPT. 19, 1998

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
Inspection Item:	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments:

Hazardous Waste Storage Area Inspection Checklist

Date: 9/23/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety File.

	Martin Warehouse Hazardous Waste Storage Area			Other Areas (1)		
Inspection Item:	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓		
All containers are free of dents and/or corrosion.	✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓		
Containment area is free of water or other liquids.	✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓		

* provide an inventory of the material in the Martin Warehouse Storage Area in the comments section below.

(1) list storage area and provide an inventory of the material in each area in the comments section below

Inspectors Initial: A. Boyd

Comments:

Hazardous Waste Storage Area Inspection Checklist

Inspectors Initials: A. Boyd

Date: 10/2/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety file.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Complex 1 29T12 Pad			Complex 2 Bundle Cleaning Area			CP Bundle Cleaning Area		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓			✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓			✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓			✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓			✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓			✓			✓		
All containers are free of dents and/or corrosion.	✓			✓			✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓			✓			✓		
Containment area is free of water or other liquids.	✓			✓			✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓			✓			✓		

* provide an inventory of the material in the storage area in the comments section below.

Comments: HAZARDOUS WASTE LIST ATTACHED

Hazardous Waste Storage Area Inspection Checklist

Inspectors Initials: A. Boyd

Date: 10/19/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety file.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Complex 1 29T12 Pad			Complex 2 Bundle Cleaning Area			CP Bundle Cleaning Area		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓			✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓			✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓			✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓			✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓			✓			✓		
All containers are free of dents and/or corrosion.	✓			✓			✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓			✓			✓		
Containment area is free of water or other liquids.	✓			✓			✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓			✓			✓		

* provide an inventory of the material in the storage area in the comments section below.

Comments: C.P. Bundle pad being replaced
Waste list attached

n:\environmental\wasteship\CONTINSP.XLS: Inspect.form

Hazardous Waste Storage Area Inspection Checklist

Inspectors Initials: MB

Date: 10/15/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety file.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Complex 1 29T12 Pad			Complex 2 Bundle Cleaning Area			CP Bundle Cleaning Area		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓								
All containers have date when storage for disposal began clearly marked.	✓		Clarified accur start date on API drum	✓								
All containers have been stored in the unit for less than 90 days.	✓			✓								
All containers are free of leaks or stains possibly caused by leaks.	✓			✓								
All containers are tightly closed with all bungs in place.	✓			✓								
All containers are free of dents and/or corrosion.	✓			✓								
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓								
Containment area is free of water or other liquids.	✓			✓			✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓			✓			✓		

No hazardous waste storage

No hazardous waste storage

* provide an inventory of the material in the storage area in the comments section below.

Comments: Complex 2: 1 rolloff box - Tank 25 soil (nonhazardous)
4 drums - tar chips (Tank 317)

Complex 1: 2 baker boxes
1 frac tank

Complex 3/4: 1 rolloff - ~~soil~~ refinery cont. material - new bundle pad (non haz)
1 roll off - sand blast material (non haz)

Inspectors Initials: A. Boyd

Hazardous Waste Storage Area Inspection Checklist

Date: 10/23/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety file.

Inspection Item:	Martin Warehouse Hazardous Waste Storage Area			Complex 1 29T12 Pad			Complex 2 Bundle Cleaning Area			CP Bundle Cleaning Area		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓			✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓			✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓			✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓			✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓			✓			✓		
All containers are free of dents and/or corrosion.	✓			✓			✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓			✓			✓		
Containment area is free of water or other liquids.	✓			✓			✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓			✓			✓		

* provide an inventory of the material in the storage area in the comments section below.

Comments: CONTAINER LIST ATTACHED

Hazardous Waste Storage Area Inspection Checklist

Inspectors Initials: A. Boyd

Date: 10/30/98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any Item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety file.

	Martin Warehouse Hazardous Waste Storage Area			Complex 1 29T12 Pad			Complex 2 Bundle Cleaning Area			CP Bundle Cleaning Area		
Inspection Item:	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material	✓			✓			✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓			✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓			✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓			✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓			✓			✓		
All containers are free of dents and/or corrosion.	✓			✓			✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓			✓			✓		
Containment area is free of water or other liquids.	✓			✓			✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓			✓			✓		

* provide an inventory of the material in the storage area in the comments section below.

Comments: SEE ATTACHED LIST

Hazardous Waste Stor ea Inspection Checklist

Inspectors Initials: A.B.

Date: 11-6-98

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental and Safety file.

Inspection Item:	Martin Warehouse Hazardous Waste Accumulation Area			Complex 1 29T12 Pad			Complex 2 Bundle Cleaning Area			CP Bundle Cleaning Area			Laboratory		
	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material.	✓			✓			✓			✓			✓		
All containers have date when storage for disposal began clearly marked.	✓			✓			✓			✓			✓		
All containers have been stored in the unit for less than 90 days.	✓			✓			✓			✓			✓		
All containers are free of leaks or stains possibly caused by leaks.	✓			✓			✓			✓			✓		
All containers are tightly closed with all bungs in place.	✓			✓			✓			✓			✓		
All containers are free of dents and/or corrosion.	✓			✓			✓			✓			✓		
Minimum of 2 feet of aisle space is maintained between rows.	✓			✓			✓			✓			✓		
Containment area is free of water or other liquids.	✓			✓			✓			✓			✓		
Floor/base of storage area is free of cracks or gaps.	✓			✓			✓			✓			✓		

* provide an inventory of the material in the storage area in the comments section below.

Comments: See Attached List

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 22 1999

REPLY TO THE ATTENTION OF:

DE-9J

VIA FACSIMILE AND
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Jeffery L. Bruestle
Environmental Coordinator
Marathon Ashland Petroleum, LLC
Michigan Refining Division
1300 South Fort Street
Detroit, Michigan 48217

Re: Marathon Ashland Petroleum, LLC
1300 South Fort Street, Detroit, Michigan 48217
US EPA ID No. MID 005 506 357

Dear Mr. Bruestle:

As discussed during a January 20, 1999, conference call between Mirtha Capiro of my staff, Margo Dusenbury of the National Enforcement Investigations Center and your contractor representative Paula Bremer, we are requesting additional information pertaining to the January 14, 1999, information request from the United States Environmental Protection Agency (U.S. EPA) to Marathon Ashland Petroleum, LLC.

The additional information required is as follows:

1. Describe and document how the spent caustic tank 21V-47 is filled and what overfill prevention controls are in place, such as a high level alarm (refer to question 1. from the above-referenced information request). If the tank is not equipped with a high level alarm, provide the basis for a high level alarm not being required.

2. Describe and document the ownership status of the frac tank with the hazardous waste label on the T-12 pad (refer to question 3. from the above-referenced information request).

Please include your information in your response to the U.S. EPA's January 14, 1999, information request.

Printed on Recycled Paper

bcc: Andre Daugavietis, ORC (w/ enclosure)
Mary McAuliffe, ORC (w/ enclosure)
Margo Dusenbury, NEIC (w/ enclosure)
Mirtha Capiro (w/ enclosure)
Branch File
Section File

ENFORCEMENT AND COMPLIANCE ASSURANCE BRANCH

SECRETARY			SECRETARY	SECRETARY	
AUTHOR/ TYPIST	ORC		MICHIGAN/ WISCONSIN SECTION CHIEF	ECAB BRANCH CHIEF	
MC 1/22/99	PER E-MAIL COMMUNICATION		RL 1-22-99		

M. McAuliffe
&
A. Daugavietis
1/22/99

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

JAN 14 1999

REPLY TO THE ATTENTION OF:

DE-9J

VIA FACSIMILE AND
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Gregory W. Mullins
Acting Division Manager
Marathon Ashland Petroleum, LLC
Michigan Refining Division
1300 South Fort Street
Detroit, Michigan 48217-1294

Re: Section 3007 Information Request, Marathon Ashland Petroleum, LLC
1300 South Fort Street, Detroit, Michigan 48217
US EPA ID No. MID 005 506 357

Dear Mr. Mullins:

This is a request for information by the United States Environmental Protection Agency (U.S. EPA) pursuant to its authority under Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. § 6927. The issuance of this request serves to require Marathon Ashland Petroleum, LLC (the Company) to submit information relating to its management of solid and/or hazardous wastes at its refinery facility located in Detroit, Michigan.

The information requested herein must be provided to this office within twenty one (21) calendar days of receipt of this letter notwithstanding its possible characterization as confidential business information. You may, pursuant to 40 CFR 2.203(a), assert a business confidentiality claim covering all or part of the information in the manner described in 40 CFR 2.203(b). Information covered by such a claim will be disclosed by U.S. EPA only to the extent and by means of the procedures set forth in 40 CFR Part 2, Subpart B. Any requests for confidentiality must be made when the information is submitted, since any information not so identified may be made available to the public without further notice.

Printed on Recycled Paper

The written statements submitted pursuant to this request must be notarized and submitted under an authorized signature certifying that all statements contained therein are true and accurate to the best of the signatory's knowledge and belief. Any documents submitted to U.S. EPA Region 5 pursuant to this information request should be certified as true and authentic to the best of the signatory's knowledge or belief.

Should the signatory find, at any time after the submittal of the requested information, that any portion of the submitted information is false, misleading, or incomplete, the signatory should so notify Region 5. If any answer certified as true should be found to be untrue or misleading, the signatory can and may be prosecuted pursuant to 18 U.S.C. § 1001. U.S. EPA has the authority to use the information requested herein in an administrative, civil, or criminal action.

If you have any questions regarding this matter, please contact Mirtha Capiro, Enforcement and Compliance Assurance Branch, at (312) 886-7567, or Andre Daugavietis, Office of Regional Counsel, at (312) 886-6663. Your response should be sent to U.S. EPA, Region 5, at the address on the letterhead above, to the attention of Ms. Capiro.

Sincerely yours,

Paul Little

Paul Little, Chief
MI/WI Section
Enforcement and Compliance Assurance Branch
Waste, Pesticides and Toxics Division

Enclosure

cc: Larry Aubuchon, Livonia District, MDEQ
JoAnn Merrick, MDEQ

bcc: Andre Daugavietis & Mary McAuliffe, ORC (w/ enclosure)
Branch File
Section File

ENFORCEMENT AND COMPLIANCE ASSURANCE BRANCH

SECRETARY			SECRETARY	SECRETARY	
			Mi/Wi		
AUTHOR/ TYPIST			~~ILLINOIS~~/ ~~INDIANA~~ SECTION CHIEF	ECAB BRANCH CHIEF	
MC 1/6/99 REVISIONS MC 1/7/99			RL 1-14-99		

MJM, ORC 1/6/99 AD ORC 1/7/99

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:	)
	)
Marathon Ashland Petroleum, LLC Michigan Refining Division 1300 South Fort Street Detroit, Michigan 48217	)Information Request Pursuant)to § 3007 of the)Resource Conservation and)Recovery Act,)as amended, 42 U.S.C. § 6927.
	)
U.S. EPA ID NO. MID 005 506 357	)
	)
	)

This is a request by the United States Environmental Protection Agency (U.S. EPA) issued pursuant to § 3007 of the Resource Conservation and Recovery Act, as amended, 42 U.S.C. § 6927. The issuance of this request serves to require Marathon Ashland Petroleum, LLC (the Company) to submit information relating to its management of solid and hazardous wastes at its refinery facility (the Facility) located in Detroit, Michigan.

On October 30, 1986, the State of Michigan was granted final authorization by the Administrator of U.S. EPA, pursuant to § 3006 of RCRA, 42 U.S.C. § 6926, to administer a hazardous waste program in lieu of the Federal program. See 51 Federal Register 36804 (1986). As a result, facilities in Michigan qualifying for interim status under 40 Code of Federal Regulations ("C.F.R.") § 270.70 and facilities applying for a RCRA permit are regulated under the Michigan provisions found at Michigan Compiled Laws Annotated, §§ 299.501-506, 299.521-522, 299.532-535, 299.537, and

299.538-541 rather than the Federal regulations set forth at 40 C.F.R. Part 260 et seq., except for applicable requirements pursuant to the provisions of the Hazardous and Solid Waste Amendments of 1984 (HSWA), for which Michigan is not authorized. For those HSWA amendments, the federal regulations apply. Michigan has primary responsibility for enforcing its hazardous waste program. However, the U.S. EPA retains the authority to exercise its enforcement authorities under §§ 3007, 3008, 30013, and 7003 of RCRA, 42 U.S.C. §§ 6927, 6928, 6934, and 6973, as well as under other Federal laws and regulations. See 40 C.F.R. § 272.1151(a)(1)(ii) for Michigan Administrative Code (MAC) Rules.

I. INSTRUCTIONS

This request for information pertains to specific information the Company may have regarding the management of solid and hazardous waste at the Facility located at or near 1300 South Fort Street, Detroit, Michigan 48217.

The information must be provided notwithstanding its possible characterization as confidential business information or trade secrets. You are entitled to assert a claim of confidentiality pursuant to 40 C.F.R. § 2.203(b) for any information produced that, if disclosed to persons other than officers, employees, or duly authorized representatives of the United States, would divulge information entitled to protection as trade secrets. Any

information which the Administrator of this Agency determines to constitute methods, processes or other business information entitled to protection as trade secrets will be maintained as confidential pursuant to the procedures set forth in 40 C.F.R. Part 2. A request for confidential treatment must be made when information is provided since any information not so identified will not be accorded this protection by the Agency.

The written statements submitted pursuant to this request must be accompanied by an affidavit from a responsible company official or representative certifying that all statements contained therein are true and accurate to the best of the signatory's knowledge and belief. Should the signatory find at any time after submittal of the requested information that any portion of this submittal certified as true is false or misleading, the signatory should so notify U.S. EPA. If any information submitted under this information request is found to be untrue or misleading, the signatory can be prosecuted under § 1001 of Title 18 of the United States Code. U.S. EPA has the authority to use the information requested herein in an administrative, civil, or criminal action.

The information requested herein must be provided, within twenty one (21) calendar days following receipt of this request, to the United States Environmental Protection Agency, Region 5,

Attention: Mirtha Capiro, Enforcement and Compliance Assurance Branch (DE-9J), 77 West Jackson Boulevard, Chicago, Illinois 60604.

This Information Request is not subject to the Paperwork Reduction Act, See 44 U.S.C. §§ 3518(c)(1)(A) and (B).

II. DEFINITIONS

All terms shall have the meaning given to them in the Act and 40 C.F.R. Parts 260 through 266.

1. "Average volatile organic concentration" or "average VO concentration" means the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of MAC 299.9601(3) and (8) and 40 C.F.R. § 265.1084.

2. "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled, as defined in MAC 299.9102 and 40 C.F.R. § 260.10.

3. "Facility" means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them), as defined in MAC 299.9103 and 40 C.F.R. § 260.10.

4. "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in MAC 299.9104 and 40 C.F.R. §§ 261.10 through 261.33 or whose act first causes a hazardous waste to become subject to regulation, as defined in MAC 299.9202 and 40 C.F.R. § 260.10.

5. "Hazardous waste" means a hazardous waste as defined in MAC 299.9104 and 40 C.F.R. §§ 261.3 and 260.10.

6. "Person" means an individual, trust, firm, joint stock company, Federal Agency, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body, as defined in MAC 299.9106 and 40 C.F.R. § 260.10.

7. "Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant, as defined in MAC 299.9106 and 40 C.F.R. § 260.10.

8. "Solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from the industrial, commercial, mining, and agricultural operations, and from community activities, but does

not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by-product material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923), as defined in 1004 of the Solid Waste Disposal Act, as amended.

9. "Storage" means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere, as defined in MAC 299.9107 and 40 C.F.R. § 260.10.

10. "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid waste or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling and aeration pits, ponds, and lagoons, as defined in MAC 299.9107 and 40 C.F.R. § 260.10.

11. "Tank" means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic)

which provide structural support, as defined in MAC 299.9108 and 40 C.F.R. § 260.10.

12. "Treatment" means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character, or composition of any hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume, as defined in MAC 299.9108 and 40 C.F.R. § 260.10.

13. "Wastewater Treatment Unit" means a device which:

(1) Is part of a wastewater treatment facility that is subject to regulation under either § 402 or 307(b) of the Clean Water Act; and

(2) Receives and treats or stores an influent wastewater that is hazardous waste as defined in § 260.10 of this chapter, or that generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in § 261.3 of this chapter, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in § 261.3 of this chapter; and

(3) Meets the definition of tank or tank system in § 260.10 of this chapter.

14. "You" or "Respondent" shall mean the addressee of this Request, the addressee's officers, managers, employees, contractors, trustees, partners, successors, assignees, and agents.

III. REQUEST FOR INFORMATION AND THE PRODUCTION OF DOCUMENTS

In addition to providing responsive documents, Marathon Ashland Petroleum, LLC shall answer the following information requests:

1. Provide the following information regarding spent caustic tank 21V-47:

a) Date of installation;

b) Date spent caustic waste was first placed in the tank;

c) Date of Subpart CC applicability determination;

d) Date of initial Subpart CC inspection;

e) Maximum organic vapor pressure determination and/or calculation for spent caustic, and operating temperatures assumed; and

f) Component number corresponding to the missing tag (discovered to be missing during an inspection of the tank by the National Enforcement Investigations Center (NEIC) on October 20, 1998)

or equipment associated with the pressure relief valve on top of the tank.

2. Provide the following information regarding the Blue Sludge Trailer at the wastewater treatment plant, used for dewatering dissolved air flotation (DAF) float and sludge:

a) Department of Transportation inspection records for the trailer;

b) Capacity of the trailer;

c) Date of Subpart CC applicability determination;

d) Maximum organic vapor pressure determination and/or calculation for the trailer contents, and operating temperature assumed;

e) Monitoring records for the trailer; and

f) Results of any testing of the trailer using Method 27 or other methods (for information on Method 27, refer to 40 C.F.R. Part 60, Appendix A).

3. Provide the following information regarding the frac tank with the hazardous waste label on the T-12 pad:

a) The date the centrifuge was used to place material from T-12 into the frac tank. If exact date is not available, confirm information provided during the inspection that the date the material was placed into the frac tank was on or before

July 8, 1998, when the last shipment of American Petroleum Institute (API) sludge went out;

b) Date and results of Subpart CC applicability determination for the contents of the frac tank;

c) Inspection records for the frac tank required by the United States Department of Transportation;

d) Capacity of the frac tank;

e) Maximum organic vapor pressure determination and/or calculation for the frac tank contents, and temperature assumed; and

f) Any testing, inspection, or monitoring results for the frac tank.

4. Provide the following notarized certification by a responsible company officer:

I certify under penalty of law that I have personally examined and am familiar with the information submitted in responding to this information request. Based on my review of all relevant documents and inquiry of those individuals immediately responsible for providing all relevant information and documents, I believe that the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Issued this 14th day of January, 1999.

Paul Little

Paul Little, Chief
MI/WI Section
Enforcement and Compliance Assurance Branch
Waste, Pesticides, and Toxics Division
United States Environmental Protection Agency
Region 5

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

VIA OVERNIGHT DELIVERY

September 28, 1998

Ms. Mirtha Capiro
Enforcement & Compliance Assurance Branch (DRE-9J)
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604

RE: Section 3007 Information Request
Marathon Ashland Petroleum, L.L.C.
1300 South Fort Street
Detroit, Michigan 48217
U.S. EPA ID No. MID 005 506 357

Dear Ms. Capiro:

Marathon Ashland Petroleum L.L.C. (MAP) is responding to your Section 3007 Information Request, dated September 4, 1998. The responses provided below follow the format of the September 4, 1998 information request.

1. *Identify all products, co-products, by-products and solid wastes produced from the process units at the refinery, including hazardous wastes and their corresponding EPA Hazardous Waste Number, if applicable.*

A description of each process unit is included the Process Overviews in Tab 1. Section three (Stream Names) of each process overview provides a summary of the products, co-products and by-products produced at each process unit. Tables 1 summarizes the solid wastes streams generated at each process unit along with the EPA Hazardous Waste Number, if applicable, and is provided in Tab 1.

2. *Provide a narrative description of the manner in which all products, co-products, by-products and solid wastes identified in response to question 1, above, are managed (e.g., on-site storage, off-site shipping). Include plant diagrams showing the on-site storage locations.*

Products are stored in tanks at the refinery prior to being shipped off-site. Co-products and by-products are either stored in tanks prior to being processed in other units or are directly transferred to other units at the refinery for further processing. Table 2 provides a summary of the products, co-products and by-products stored in each tank at the refinery. Tank locations are shown on the figure provided in Tab 2 (Plot Plan - Interbattery Detroit Refinery). Solid wastes generated at the Detroit Refinery are managed as summarized on Table 3 provided in Tab 2 and waste accumulation areas are shown on the figure provided in Tab 2. Wastewater generated in each process unit is treated in the on-site wastewater treatment plant. The on-site wastewater treatment plant discharges treated water to the City of Detroit sewer system in accordance with Wastewater Discharge Permit No. 074-002 (issued by the Detroit Water and Sewerage Department on March 24, 1998). The wastewater treatment plant is illustrated on the figure provided in Tab 4 (Process Overview Waste Water Treating).

3. *Identify all waste streams at the Facility subject to the 40 CFR Parts 264 or 265 Subpart CC ("Subpart CC") air emissions standards, and explain how they are managed to meet the requirements of the applicable regulation. Include all waste streams managed in containers (drums, totes, rolloff boxes, etc.), tanks (fixed roof, open tanks within an enclosure, sumps, etc.), surface impoundments, or miscellaneous units (drum shredders, can crushers, etc.). For each waste stream, identify the average volatile organic concentration of the waste, and identify the basis for determination, as either direct measurement, or knowledge of the waste. If any waste streams have been determined to be exempt from regulation under Subpart CC, please identify those waste streams, and provide the basis for the determination.*

Table 4 summarizes the hazardous waste streams generated at the Detroit refinery, the type of container, tank, or miscellaneous unit in which they are managed, the average volatile organic concentration of the waste, the basis for the average volatile organic concentration (i.e., direct measurement or generator knowledge) and a determination of the applicability of Subpart CC. Table 4 is provided in Tab 3.

4. *Provide a diagram of the facility's waste water treatment units, including impoundments.*

A diagram of the Detroit Refinery's wastewater treatment unit is provided in Tab 4 (Process Overview Waste Water Treating).

If you have any technical questions regarding the information provided in this response, please contact Mr. Jeffery Bruestle, Environmental Coordinator at (313) 297-6356.

Sincerely,

Gregory W. Mullins

Gregory W. Mullins
Acting Division Manager

cc: Larry Aubuchon
Waste Management Division
Michigan Department of Environmental Quality
Southeast Michigan District Office
38980 Seven Mile Road
Livonia, MI 48152

m:\Bk7$\data\document\epawaste.doc

TABLE OF CONTENTS

Tab	Description of Contents
1	Process Unit Descriptions Table 1 - Summary of Solid Waste Generated in Each Process Unit
2	Table 2 - Summary of Storage Tanks Figure - Plot Plan- Interbattery Detroit Refinery Table 3 - Summary of Solid Waste Management Procedures
3	Table 4 - Summary of Applicability of Subpart CC
4	Figure - Process Overview Waste Water Treating

m:\Bk7$\data\document\epawaste.doc

1

Notes

TABLE OF CONTENTS

PURPOSE 2

SCOPE 2

REFERENCES 2

GENERAL DESCRIPTION 2

PROCESS OVERVIEWS
- Crude/Vacuum Unit 4
- Naphtha/Distillate Treaters 9
- Crude Boiler Feedwater (BFW) Treater 13
- Waste Water Treatment 17
- Alkylation Unit 21
- MTBE Unit 25
- Gas Oil/Distillate Hydrotreater Unit 29
- Sour Water Stripper Unit 33
- Sulfur Recovery Unit 37
- Tail Gas Treating Unit 41
- Fluid Catalytic Cracking Unit 45
- Gas Concentration, Propylene, and CP Treater Units 49
- BT Platformer 53
- Naphtha Hydrotreaters 56
- Unit SR Platformer 60
- Kerosene Hydrotreater 64
- CP Boilers and Boiler Feedwater 68
- Gasoline Blending Area 71
- LPG Area 74

PURPOSE

To provide information to employees and contractors on the known potential of fire, explosion, and/or toxic hazards related to each process unit at the Michigan Refining Division.

To standardize the format so that this information is consistent throughout the Michigan Refining Division.

SCOPE

This procedure applies to all covered process units at the Michigan Refining Division.

REFERENCES

- Occupational Safety and Health Administration 29 CFR 1910.119.
- Environmental Protection Agency 40 CFR Part 68.

GENERAL DESCRIPTION

- Unit description - This portion of the process overview describes the function that is performed by that particular unit. This section also provides a brief description of the process that is performed by this unit. This section should be consulted for any questions that you have concerning unit processes or how the unit functions.

- Unit Location This section of the process overview describes the physical location of the unit inside of the refinery. This section is helpful in locating the process unit that you will be working on.

3. Stream Names This part of the process overview provides information on feed streams that enter the unit and product streams that leave the unit.The term "streams" refers to the material that is being processed by the unit. This section also provides a short description of where the feed stream came from and where the product stream is being sent to. This is beneficial in gaining a better understanding of the process flows in the refinery.

4. Chemicals This segment refers to chemicals that are used during the processing operations, such as catalysts or additives.It informs the you on the location of the Material Safety Data Sheets (MSDS) as well as providing a list of chemicals that are found on that particular unit. A brief description of the chemical and it's use is also provided in this section. The chemicals section is useful in obtaining a brief description of the chemicals found on that unit however, the MSDS contains detailed information regarding the handling, use, storage, shipping, emergency response and first aid. The MSDS should be consulted whenever you have a question regarding a chemical.

5. Utilities This section lists all of the utilities that are present within the unit. If a single utility has more than one temperature, pressure, voltage, etc. they will also be listed. This section is useful in determining what utilities that you may be working near.

6. Hazards and Toxics This area lists specific hazards that you should be aware of. These may include items such as flammable hazards, extremes of temperatures, hazardous substances, etc... This section may also list the locations of these hazards or refer you to an additional source for more information regarding the hazard. You will find this section to include important information that should be reviewed before you begin work on that unit.

7. Special Precautions This part includes information on personal protective equipment and emergency procedures. This part may also include a notes section that provides additional information on a specific hazard associated with that unit. You will find this section to be valuable when you are selecting Personal Protective Equipment (PPE) or for learning the safety rules before starting a job on that unit.

8. Block Flow Diagram This page contains a diagram that illustrates how feed and product streams flow through the unit. The block flow diagram can be used to obtain a general understanding about the order of operations that are performed by that unit.

PROCESS OVERVIEW FOR CRUDE/VACUUM UNIT

1. Crude/Vacuum Unit Description

Crude oil is a complex mixture of chemical compounds known as hydrocarbons. Light crudes tend to have more gasoline and kerosene while heavy crudes have more gas oil and resid. Sweet crudes tend to have low amounts of sulfur and hydrogen sulfide (H_2S) while sour crudes are characterized by their high sulfur and hydrogen sulfide (H_2S) content.

The function of the Crude/Vacuum Unit is to separate the crude oil into various fractions based on their relative boiling points. These fractions are then sent to other units in the refinery for further processing. The separation of these fractions is done in the crude atmospheric, debutanizer, deisohexanizer (DIH), and vacuum columns.

Several heat exchangers are used to heat the incoming crude oil and to cool product streams going to storage. All heat in the unit is ultimately supplied by the Alcorn (Crude Unit) and the Foster Wheeler (Vacuum Unit) heaters.

The crude atmospheric column separates gases, naphthas, kerosene, distillate, atmospheric gas oil, and a bottom stream referred to as fractionator bottoms or reduced crude. The naphthas off the crude atmospheric column are further separated in the debutanizer and deisohexanizer (DIH) columns.

The fractionator bottoms (reduced crude) then goes to the vacuum column and is separated into light vacuum gas oil (LVGO), heavy vacuum gas oil (HVGO), and a bottoms product referred to as flux or resid. The flux is normally used to make asphalt but is occasionally sent to the Cat Cracking Unit depending on the type of crude oil being processed.

2. Crude/Vacuum Unit Location

The Crude/Vacuum Unit is located at the north end of the Crude-Alky side of the refinery, west of Northhampton. The Crude/Vacuum Unit is actually two separate process units. Since several pieces of equipment (mainly heat exchangers) are common to streams from both the Crude and Vacuum Units, we will treat the two units as one process unit for purposes of this process overview. However, Crude Unit equipment is numbered 5-X-X and is generally located at the south end of the unit. Vacuum Unit equipment is numbered 4-X-X and is generally located at the north end of the unit.

3. Stream Names

a. Normal feed streams to the Crude/Vacuum Unit are:

Crude Oil	-	Main feed to unit comes from Melvindale Tank Farm
Refinery Slop	-	Usually off-spec products that are re-run through the unit, comes from Tank 23
Condensate (Transmix)	-	LPG-type material from Tanks 190, 191

b. Normal product streams from the Crude/Vacuum Unit are:

Debutanizer off-gas	-	Sometimes referred to as release gas; goes to the Gas Con Unit
Debutanizer overhead liquid	-	Goes to Saturates Depropanizer (C_3-C_4)
Light Naphtha	-	Sometimes referred to as light straight run (LSR) gasoline or DIH overhead; goes to Merox Treaters
Heavy Naphtha	-	Sometimes referred to as DIH bottoms; goes to Low Pressure Pretreater and Reformers
Kerosene	-	Goes to product and/or KHT
Distillate	-	Goes to product and/or GO/DHT
Atmospheric gas oil (AGO)	-	Goes to FCCU feed and/or GO/DHT
Reduced crude	-	Sometimes referred to as fractionator bottoms; goes to vacuum tower.
Vacuum column off-gas	-	Usually referred to as seal drum vapors; normally goes to Gas Con Unit.
Light vacuum gas oil (LVGO)	-	Goes to FCCU feed and/or GO/DHT
Heavy vacuum gas oil(HVGO)	-	Goes to FCCU feed and/or GO/DHT
Flux	-	Sometimes referred to as resid or vacuum bottoms; goes to asphalt production of FCCU feed on particular crudes.

4. Chemicals

The following chemicals are used in the Crude/Vacuum Unit. Material Safety Data Sheets (MSDS's) for each chemical are located in the Crude Unit control room and are available upon request.

Methanol	-	Also known as methyl alcohol; added to slop system & DEB overhead system as an antifreeze..
Polyflo 140	-	An anti-oxident amine polymer; added to sour gas oil when sent to Melvindale storage
Caustic	-	Also known as sodium hydroxide; added to the crude oil coming from the desalters to help control pH in the fractionator overhead system.
Petrotec 1100	-	A water soluble liquid neutralizer used to control fractionator overhead water pH; added to the overhead wash water.
Petrotec 1200	-	An oil soluble, non-volatile, filming corrosion inhibitor; added to the debutanizer overhead vapor streams.
Petrotec 1300	-	A corrosion inhibitor added to the water wash to the crude overhead system.
Petrotec 7141	-	An oil soluble compound added to the desalters to help break the oil-water emulsion.
Betz 30K	-	A corrosion inhibitor added to cooling tower water; also contains deposit control agents (dispersants).
Tolad 511	-	A conductivity chemical added to kerosene product
Betz Slimicide C-31	-	A solvent-based microbiological control agent added to cooling tower water as a liquid.

Sodium hypochlorite	-	A microbiological control agent added to cooling tower (bleach) water in liquid form; oxidizing agent (see "Hazards and Toxics"). 12.5%
Sulfuric acid, 93.2%	-	H_2SO_4, added to cooling tower water to control the pH.
Halon 1301	-	A colorless, odorless vapor used to extinguish fires; located in the DCS satellite control trailer.

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature:

Electricity	-	110V, 480V, 4800V
Steam	-	150 psig @ 366°F
Fuel oil	-	150 psig @ 250°F
Refinery fuel gas	-	60 psig @ 100°F
City gas	-	60 psig @ 80°F
Instrument air	-	60 psig, dry (30 psig at inst.)
Plant air	-	100 psig, dry
Cooling water	-	60 psig @ 100°F
Potable water	-	60 psig @ 70°F

6. Hazards and Toxics

The following items are specific hazards you should be aware of in the Crude/Vacuum Unit. Refer to the Safety Rules & Procedures Manual for more detail.

H_2S (hydrogen sulfide)	-	Can be present in high concentrations in the debutanizer off gas, overhead liquid streams, and seal drum water. SEE NOTE 1 BELOW
Benzene	-	Present in all naphtha streams including debutanizer and deisohexanizer (DIH) streams.
Asbestos	-	Could be present in insulation throughout the unit
High temperature	-	Many streams in the unit are at temperatures from 200°F to 750°F
High pressure	-	Some streams in the unit can be at pressures up to 750 psig
Flammable	-	All hydrocarbon streams in the unit are flammable
Iron sulfide	-	Present in varying concentrations in any process area SEE NOTE 2 BELOW
Acid/Caustic	-	Many tanks in the unit contain highly acidic or highly alkaline materials; see "Special Precautions" below.
Oxidizing agents	-	Chemicals that release oxygen and are potentially dangerous around flammable hydrocarbons; can also release poisonous halogen gases when contaminated with moisture; i.e. Betz Slimicide C-77P.

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the Crude/Vacuum Unit. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

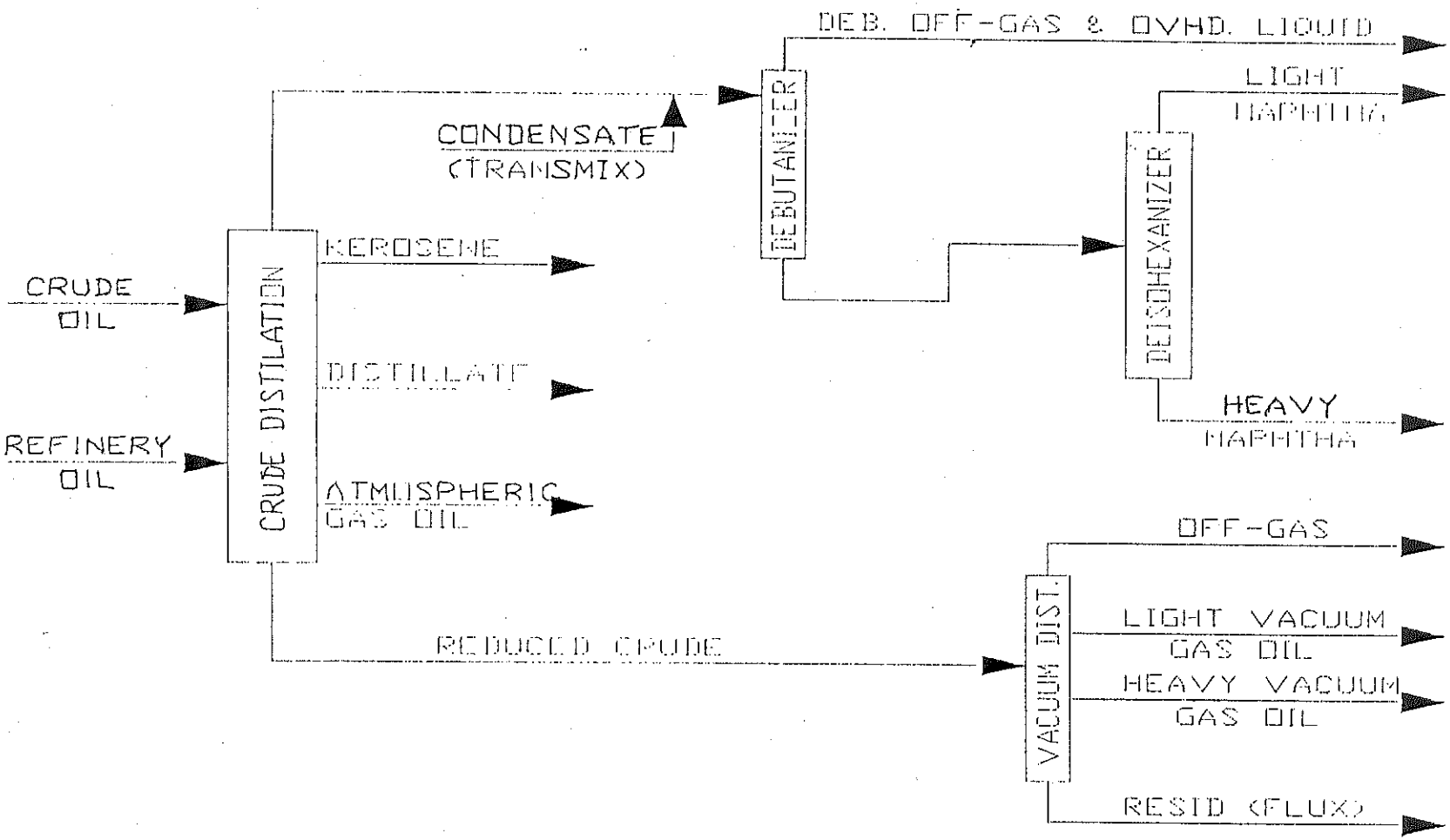
Acid and caustic areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Keys should be left in the ignition. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

NOTE 2 - Iron sulfide may be found in any lines or equipment that contain H_2S. When dry and exposed to air, iron sulfide can ignite, forming sulfur dioxide as a product.

CRUDE/VACUUM UNIT PROCESS OVERVIEW



PROCESS OVERVIEW
FOR NAPHTHA/DISTILLATE TREATERS

1. Naphtha/Distillate Treaters Description

The Naphtha (deisohexanizer overhead) Treaters use a patented UOP Merox process to convert mercaptan sulfur to disulfides. Mercaptan sulfur is undesirable because of its highly objectionable odor. Disulfides are practically odorless. Please note this process only changes the chemical form of the sulfur and does not reduce the total sulfur content of the naphtha stream (referred to as "sweetening).

The first step in sweetening the naphtha is to "wash" the naphtha with caustic. (Please refer to the Naphtha Treater Process Overview diagram.) The caustic wash removes hydrogen sulfide (H_2S) from the naphtha.

The naphtha is then mixed with controlled amounts of air and injected into the fixed Merox catalyst beds. The mercaptan sulfur in the naphtha is oxidized with air to form disulfides when in contact with the Merox catalyst. In addition, the Merox catalyst must be coated with caustic for the reaction to occur.

The naphtha and caustic leaving the Merox beds then go to a vessel where the caustic settles to the bottom and is recirculated back to the Merox beds via the recirculating caustic drum and pump. The naphtha goes overhead to a water wash drum. The water wash drum removes any entrained caustic from the naphtha before it is sent to storage.

The primary purpose of the Distillate Treater is to remove moisture from various selected distillate products.

2. Location

The Naphtha/Distillate Treating Unit is located southwest of the Crude Unit control room on the Crude-Alky side of the refinery. Equipment in the Naphtha/Distillate Treating Unit is numbered 6-X-X.

3. Stream Names

The streams entering the Naphtha/Distillate Treater Unit are:

Naphtha	-	Also known as deisohexanizer (DIH) overhead or light straight run gasoline (LSR); from Crude Unit's DIH tower; temperature approximately 100°F, pressure approximately 45 psig
Distillate	-	From Crude Unit, temperature can range from 35°F to 170°F depending on Crude Unit operation; 70°F is desirable.

4. Chemicals

Chemicals that may be used in the Naphtha/Distillate Treaters area are:

Caustic soda	-	Also known as sodium hydroxide; added to the Merox catalysts to promote the conversion of mercaptan sulfur to disulfides in light naphtha (DIH overhead).
Betz Corrshield K-9	-	A nitrite-based corrosion inhibitor added to the instrument air compressor closed-water cooling system.
Salt	-	Also known as sodium chloride (NaCl); used in the distillate salt filters to remove moisture from the distillate going to storage.

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4800V
Steam	-	150 psig @ 366°F
Plant air	-	100 psig, dry
Instrument air	-	60 psig, dry (30 psig at inst.)
Potable water	-	60 psig @ 70°F

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Benzene	-	Present in all of the naphtha (deisohexanizer overhead) streams in the unit.
H_2S(hydrogen sulfide)	-	Can be present in all of the naphtha streams in the unit especially upstream of the caustic wash drum (6V36). **SEE NOTE 1 BELOW**
Caustic	-	Caustic is used in the "sweetening" of naphtha and is present in several vessels in the unit; see "Special Precautions" below.
Asbestos	-	Could be present in insulation throughout the unit.
Flammable	-	All hydrocarbon streams in the unit are flammable.

7. Special Precautions

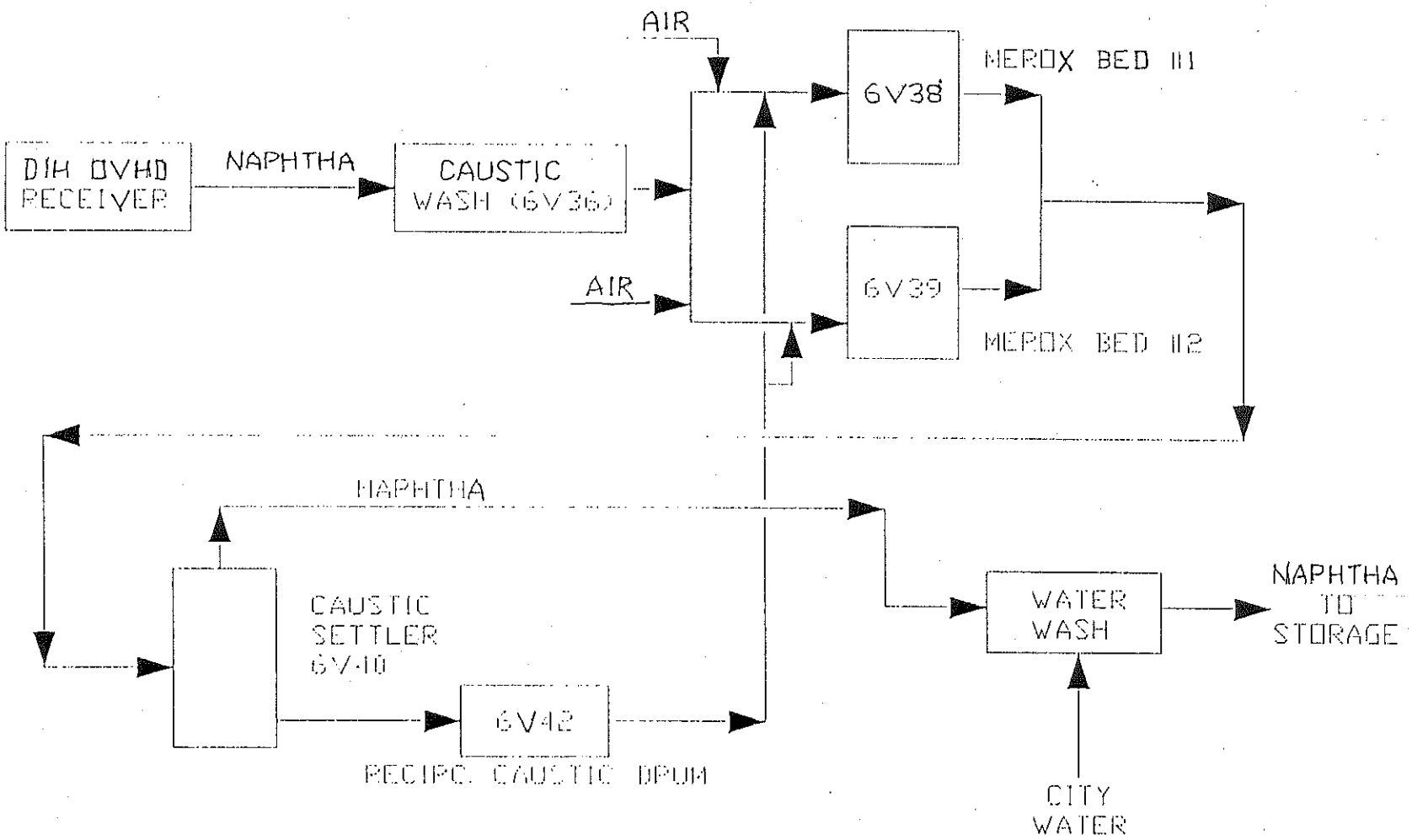
Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the Naphtha/Distillate Treating Unit, including the compressor building. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Caustic areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear; face shield, goggles, boots, and gloves as well as notifying an Operations Department representative upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Keys should be left in the ignition. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

NAPHTHA TREATER PROCESS OVERVIEW



PROCESS OVERVIEW
FOR CRUDE BOILER FEEDWATER (BFW) TREATER

1. Crude Boiler Feedwater (BFW) Treater Description

The purpose of the Boiler Feedwater (BFW) Treater is to remove impurities from water used for steam production. The impurities most often encountered in water are dissolved minerals and dissolved gases. Dissolved minerals will form a scale such as calcium carbonate on boiler tube surfaces when the water is evaporated into steam. Dissolved gases will cause corrosion in boilers and related piping when the water is heated to make steam.

The BFW Treater uses ion exchangers to purify the water. The ion exchangers contain resins which have the ability to remove undesirable ions from the water in exchanger for a preferential ion.

The sodium zeolite softeners remove calcium (Ca) and magnesium (Mg) ions from water by substituting them with sodium (Na) ions. The source of sodium ions is the salt water brine that is used to regenerate the softeners at regular intervals. (Refer to the attached Boiler Feedwater Process Overview diagram.)

The dealkalizers remove bicarbonate (HCO_3) and carbonate (CO_3) ions from the water by substituting them with chloride (Cl) ions. Similar to the softeners, the source of chloride ions is the salt water brine that is used to regenerate the dealkalizers at regular intervals.

After the BFW leaves the dealkalizers, it is sent to the deaerator where gases such as oxygen (O_2) and carbon dioxide (CO_2) are removed. The gases are removed from the BFW by a combination of mechanical agitation and steam stripping in the deaerator. The steam also heats the BFW up to 300°F.

Steam condensate from the Sulfur Recovery Unit and the Crude area is returned to the deaerator where it is re-used as boiler feedwater.

Once the water is softened and deaerated, it is distributed to the Crude/Vacuum and the Alky/Sulfur areas for steam production.

2. Crude Boiler Feedwater (BFW) Treater Location

The Crude BFW Treater is located northwest of the Crude/Vacuum Unit on the Crude-Alky side of the refinery. Most of the equipment is located in a building southwest of the "D" cooling tower. The BFW equipment is numbered 26-X-X.

3. Stream Names

a. Feeds to the BFW Treater are:

City Water	-	Main feed to the unit at 60 psig and 70°F
Condensate	-	Steam condensate returning from the Sulfur Recovery Unit and from the Crude area.

b. Product steam from the BFW Treater is:

Boiler Feedwater - Softened and deaerated water suitable for feed to steam-generating equipment

4. Chemicals

Chemicals that may be used in the BFW Treater are:

Betz Sulfite 3	-	A catalyzed, non-volatile, inorganic oxygen scavenger added to boiler feedwater
Betz Ultrasperse	-	A scale inhibitor and metal passivator added to boiler feedwater
Betz Optimeen	-	A corrosion inhibitor added to steam condensate to neutralize acid-forming gases such as Carbon dioxide (CO_2)
Caustic	-	Also known as sodium hydroxide (NaOH); added to boiler feedwater to control pH
Salt	-	Also known as sodium chloride (NaCl); used to regenerate the ion exchanger resins in the softeners and dealkalizers

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V
Steam	-	150 psig @ 366°F
Instrument air	-	60 psig, dry (30 psig at inst.)
Plant air	-	100 psig, dry
Potable water	-	60 psig @ 70°F

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Caustic	-	Also known as sodium hydroxide (NaOH); see "Special Precautions" below
High temperature	-	Water and condensate streams in this unit can be greater than 300°F.
Asbestos	-	Could be present in insulation throughout the unit.

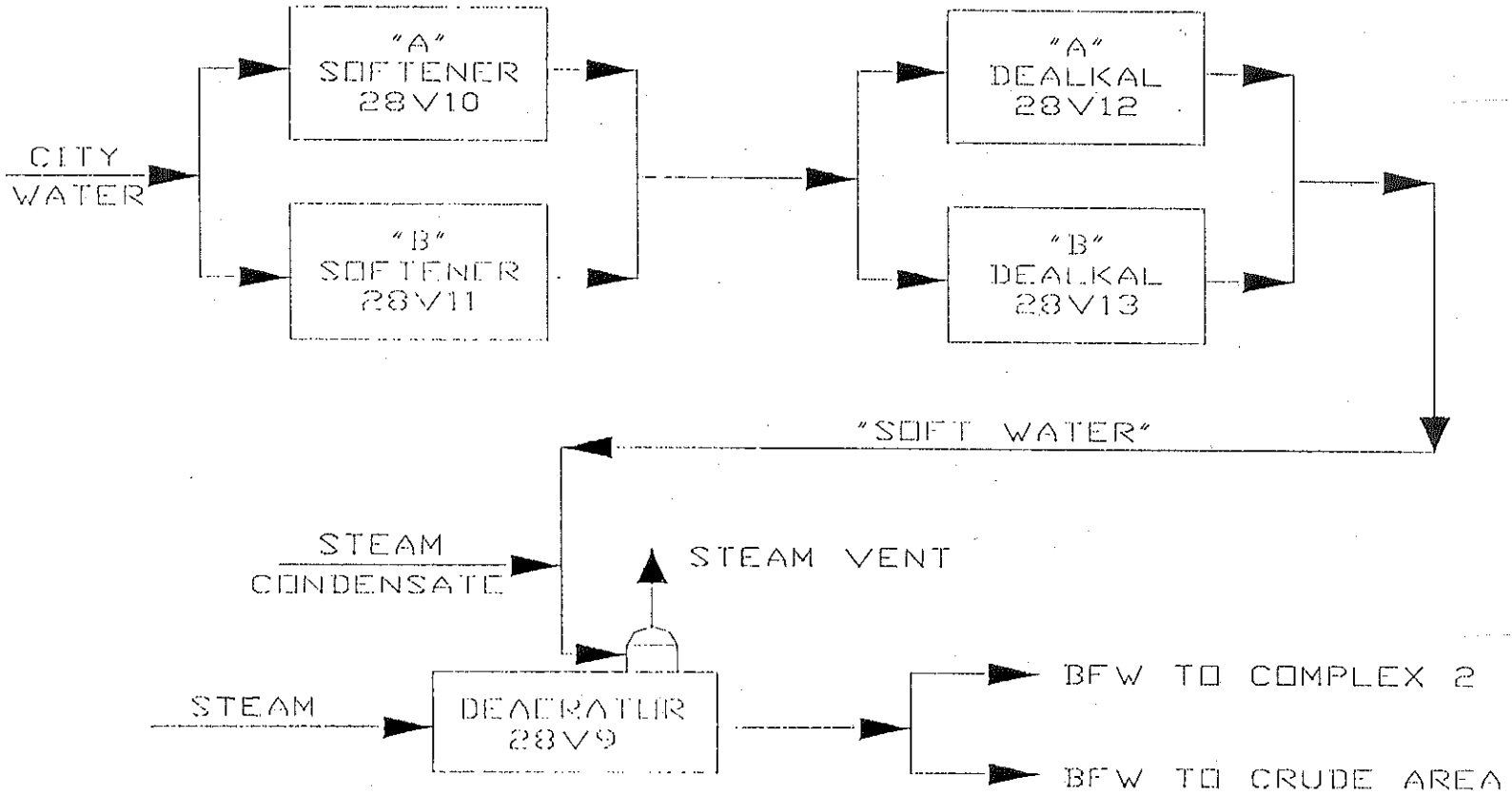
7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the Boiler Feedwater Treater. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before you enter the battery limits and begin work.

Caustic areas are identified by warning signs. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notifying an Operations Department representative upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Keys should be left in the ignition. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

CRUDE BOILER FEED WATER PROCESS OVERVIEW



PROCESS OVERVIEW FOR WASTE WATER TREATMENT

1. Waste Water Treatment Unit Description

Waste water from the refinery is discharged to the City of Detroit sewer system. The refinery's waste water in its untreated form can contain high concentrations of hydrocarbons and can also vary over a wide pH range.

The function of the Waste Water Treatment Unit, which receives all of the process and rain water from the entire refinery, is to ensure that the water discharged to the City of Detroit sewer system contains less than 100 parts per million (ppm) oil and has a pH between 5 and 10.

Water enters the unit through the refinery sewer system at the forebay of the API separator (see attached Waste Water Treatment Process Overview diagram). The forebay has facilities for skimming oil from the top of the waste water. The skimmed oil is then transferred to Tanks 29T6A-B where any water that may have been skimmed off with the oil is allowed to settle. The oil is ultimately transferred to the refinery slop Tank 23 where it is charged to the Crude/Vacuum Unit for reprocessing. The water that settles in Tanks 29T6A-B ultimately goes back into the Waste Water Treatment Unit.

When the flow of waste water to the Waste Water Treating Unit exceeds approximately 2,000 gallons per minute, the excess water overflows the forebay into a storm water sump and is pumped into Tanks 29T32-33 for temporary storage. Once the flow of waste water to the unit returns to normal, the water in Tanks 29T32-33 is slowly drained back into the system.

Water exiting the forebay flows into the east and west API cells. The API cells are equipped with additional oil skimming equipment and a sludge removal system consisting of flight scrapers, screw conveyors, sludge pumps, and a sludge holding tank. The oil skimmed from the waste water in the API cells is also directed to Tanks 29T6A-B.

The water leaving the API cells goes to the lift station where acid or caustic is added to adjust the pH. Special polymers can also be added to the water at the lift station which help any remaining oil flocculate.

The water is then pumped from the lift station to the flocculator tank (29T1) which can be used to continuously blend the water and chemicals.

Water overflows the flocculator tank into the dissolved air flotation (DAF) clarifier. The DAF unit adds very fine air bubbles to the water which help float any residual oil so that it can be skimmed. The DAF is also equipped with a sludge removal system.

The treated water then overflows the DAF to the City of Detroit sewer system.

2. Waste Water Treatment Unit Location

The Waste Water Treatment Unit is located west of the main office building and south of the Crude/Vacuum Unit on the Crude/Alky side of the refinery. The equipment is numbered 29-X-X.

3. Stream Names

The feed stream to the Waste Water Treatment Unit is the waste water from the refinery sewer system. The waste water stream enters the unit at the forebay of the API separator.

All other intermediate streams and discharge streams to the City of Detroit sewer system are generally referred to as waste water and vary with respect to oil concentration, pH, and chemical additives.

4. Chemicals

Chemicals that may be used in the Waste Water Treatment Unit area are:

Petrotec 7450	-	An emulsion breaker added to the waste oil in Tanks 29T6A-B
Sulfuric acid, 93.2%	-	Added to waste water at the lift station to control water pH (H_2SO_4)
Betz 1181	-	Added to waste water downstream of lift station to promote coagulation of oil in the DAF. The chemical is used intermittently based on effluent water quality.

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V
Steam	-	150 psig @ 366°F
Instrument air	-	60 psig, dry (30 psig at inst.)
Plant air	-	100 psig, dry
Potable water	-	60 psig @ 70°F

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Benzene	-	Present in the refinery waste water
Hydrogen Sulfide (H_2S)	-	Can be present in the refinery waste water at high or low concentrations SEE NOTE 1 BELOW
Acid/Caustic	-	Refinery waste water is often highly acidic or highly alkaline; also acid and caustic are stored near the lift station; see "Special Precautions" below.
Asbestos	-	Could be present in insulation throughout the unit.
Flammable	-	The refinery sewer system and the treating system can contain significant quantities of flammable liquids and vapors.
Betz 1181	-	Chemical used intermittently to flocculate oil from the waste water stream.

7. Special Precautions

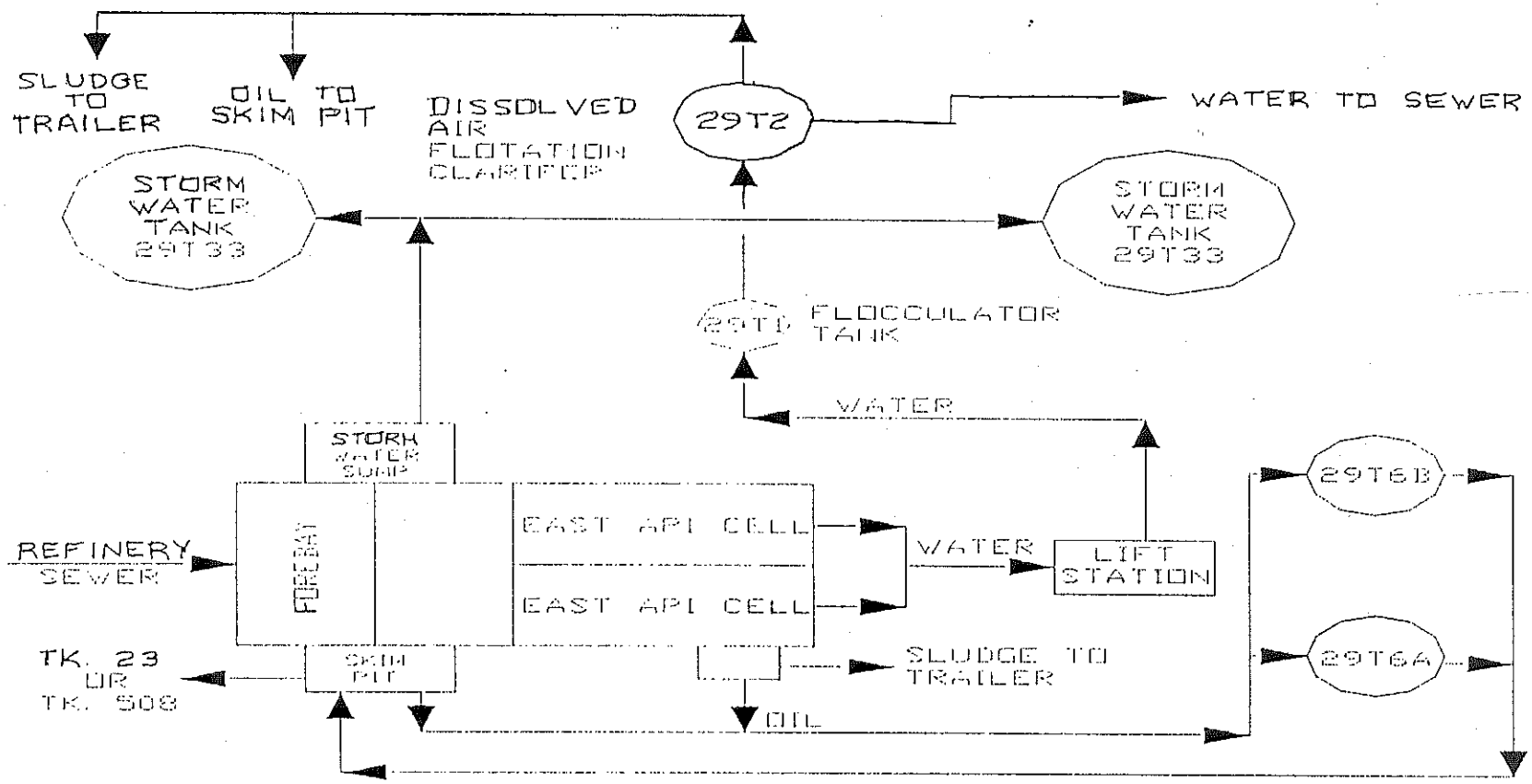
Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the Waste Water Treating Facility. Personnel must also wear goggles or face shields when appropriate. An Operations Department representative must sign a Safe Work Permit before you enter the battery limits and begin work.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notifying an Operations Department representative upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Keys should be left in the ignition. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

WASTEWATER TREATMENT PROCESS OVERVIEW



PROCESS OVERVIEW FOR ALKYLATION UNIT

4. Alkylation Unit Description

An olefin is a hydrocarbon that is hydrogen deficient or unsaturated. Olefin feed and isobutane are the two feeds to the Alkylation Unit.

Propylene, a low-grade olefin, is sometimes directed to the reaction section for alkylation.

Reaction products are sent for further processing and separation in the fractionating section. The fractionator directs an overhead project of isobutane back to storage (Tank 96) for recycling in the reaction section. A portion of the overhead product is directed to the depropanizer section where fractionation removes propane from the isobutane. The propane is removed as overhead product and directed to a storage tank for sales. The bottoms product from the depropanizer, isobutane, is recycled to the reaction section.

The side-cut product, normal butane, is directed to Tank 87 for gasoline blending.

The bottoms product, alkylate, is directed to a storage tank and is used for gasoline blending.

Sats overhead, propane from the Cracking Plant, is also a feedstock to the deethanizer system of the Alkylation Unit. This propane is directed to the caustic scrubber for removal of H_2S before entering the deethanizer fractionator. In the fractionator, ethane and methane are removed overhead and directed to the refinery fuel gas system. The propane from the deethanizer is then directed to storage.

The Sats bottoms stream from the Cracking Plant contains mostly normal butane and isobutane. This stream is fed directly to the Alky fractionation section to recover these materials.

2. Alkylation Unit Location

The Alkylation Unit is located at the northwest side of the Crude-Alky side of the plant. The Alkylation Unit equipment is numbered 9-X-X.

3. Stream Names

a. Feeds to the Alkylation Unit are:

C_4 Olefins	-	From FCCU
Isobutane	-	Reactant and coolant
Sats bottoms	-	Butane mix from Cracking Plant
Sats overhead	-	Propane mix from Cracking Plant
Propylene	-	Olefin reactant to the unit
Butane mix slop	-	Outside and/or reprocessing feed

b. Products from the Alkylation Unit are:

Off gas - Directed to refinery fuel system from the deethanizer system

Alkylate - Directed from the main fractionator to a storage tank for gasoline blending

Butane - Directed from the main fractionator to Tank 87 for gasoline blending or to Woodhaven for storage

Isobutane - Recycled through reaction section, directed from the main fractionator to depropanizer for propane removal or to Tank 96 for recycling through the reaction section

Propane - Directed to sales from the depropanizer system and the deethanizer system

4. Chemicals

Chemicals that may be used in the Alkylation area are:

Sodium Hypochlorite & Betz Slimicide C-31 - Unit cooling water micro-biocide

Betz 26K - Unit cooling water corrosion inhibitor/dispersant

Sulfuric Acid - H_2SO_4, used to control the pH in the cooling tower system and utilized as the catalyst for the Alkylation reaction

Caustic - NaOH, used for neutralization of entrained sulfuric acid and for the absorption of H2S in the scrubber

Petrotec 1100 - Used to control the pH in the deisobutanizer overhead system for corrosion protection

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature:

Electricity	-	110V, 240V, 480V, 4800V
Steam, low pressure	-	15 psig @ 250°F, 50 psig @ 300°F
Steam, high pressure	-	150 psig @ 400°F, 600 psig @ 500°F
Fuel gas	-	60 psig @ 100°F
Instrument air	-	60 psig, dry
Plant air	-	Instrument air utilized as plant air
Cooling water	-	60 psig @ 80°F
Potable water	-	60 psig @ 70°F
Nitrogen	-	80 psig @ 60°F

6. Hazards and Toxics

The following items are specific hazards in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	- Present in the Sats overhead (propane) stream and the caustic scrubber **SEE NOTE 1 BELOW**
Sulfuric acid	- Present throughout the reaction section and in the cooling tower system
Liquefied petroleum gas (LPG)	- Present throughout the unit
Iron sulfide	- Present in varying concentrations in any process area **SEE NOTE 1 BELOW**
Caustic	- Used in DIB caustic wash

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the Alkylation Unit. Personnel must also wear goggles, face shields, or acid splash suits when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

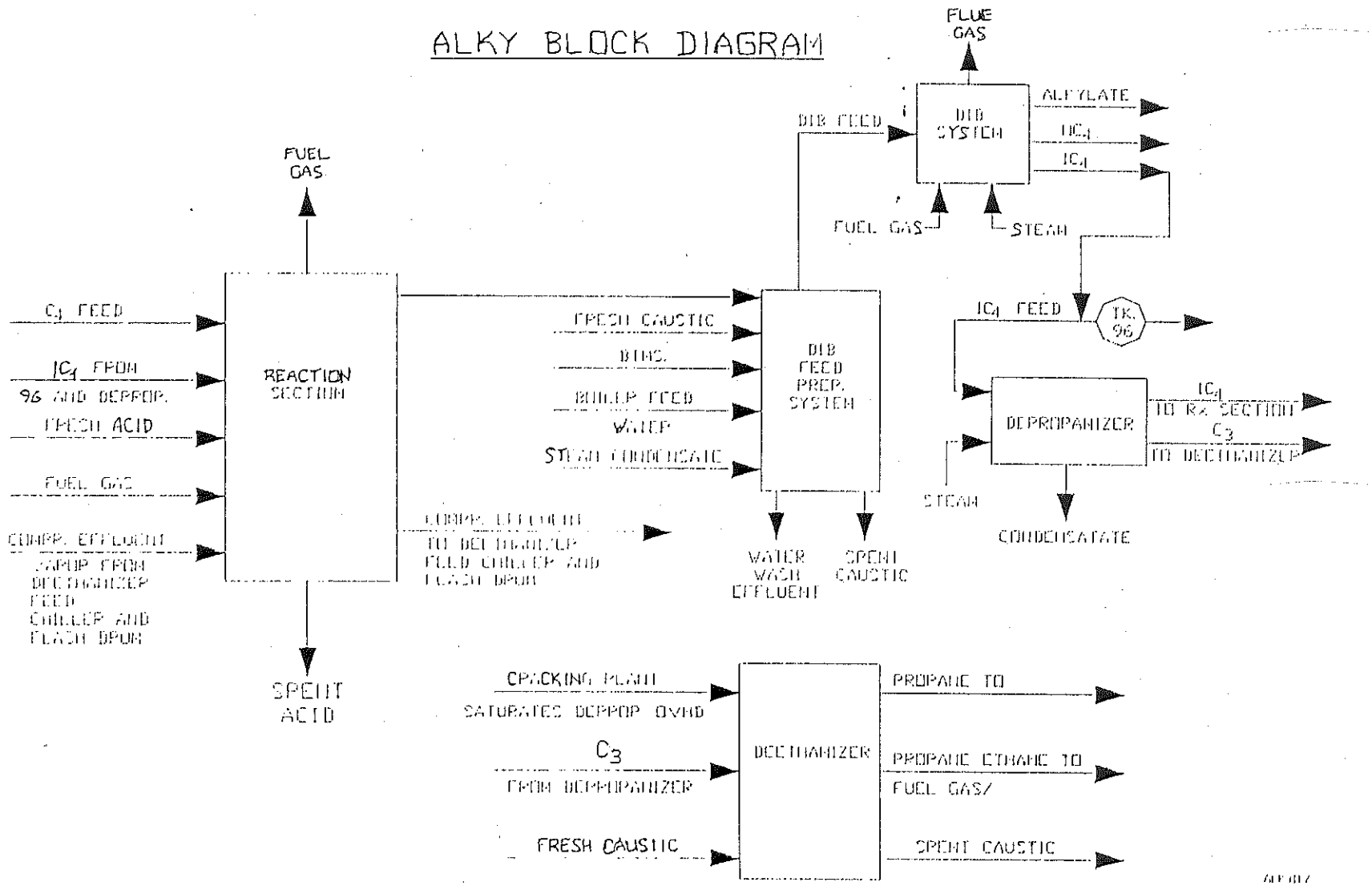
Acid areas are identified by orange lines painted around the equipment. Work in these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

NOTE 2 - Iron sulfide may be found in any lines or equipment that contain H_2S. When dry and exposed to air, iron sulfide can ignite, forming sulfur dioxide as a product.

ALKY BLOCK DIAGRAM



PROCESS OVERVIEW FOR MTBE UNIT

1. MTBE Unit Description

Methyl tertiary butyl ether (MTBE) is a high octane gasoline blending component. It is formed by the reaction of methanol and isobutylene over a strong acid resin. The mixed butane-butene (olefin feed) stream contains approximately 10-15% isobutylene. The balance of the olefin feed components go through the unit unreacted and to the Alkylation Unit.

The MTBE Unit consists of four sections: feed preparation, methanol recovery, reaction and fractionation.

The function of the feed preparation step is to remove entrained caustic, basic nitrogen, solids and free water.

The Methanol Recovery Unit consists of three molecular sieve adsorber vessels. The function of the adsorbers is to prevent the methanol from going to the Alky. The adsorbed methanol is desorbed into the olefin feed to the MTBE reactor.

In the reaction section, methanol and isobutylene are combined over a strong acid resin in two fixed-bed reactors to form MTBE.

The purpose of the debutanizer section is to separate the lighter olefin stream from the heavier MTBE product. The olefin stream is directed to the Alkylation Unit while the MTBE product is sent to storage.

2. MTBE Unit Location

The MTBE Unit is located in Complex 2. It is north of the Complex 2 control room building. The MTBE equipment is numbered 10-X-X.

3. Stream Names

a. Feeds to the MTBE Unit are:

Olefin feed	-	From FCCU
Methanol	-	From 10T35
Process water	-	City water to water wash

b. Products from the MTBE Unit are:

Olefin feed (with low isobutylene)	-	To Alky
MTBE	-	To storage
Wastewater	-	To Treaters

4. Chemicals

Chemicals that may be used in the MTBE Unit area are:

Sodium Hypochlorite & Betz Slimicide C-31	-	Unit cooling water micro-biocide
Betz 26K	-	Unit cooling water corrosion inhibitor/dispersant
Sulfuric Acid	-	Present in the cooling tower system
Spectrum 2300	-	Scale inhibitor in the cooling tower system

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	480V, 240V, 120V
Steam, low pressure	-	50 psig @ 300°F
Steam, medium pressure	-	150 psig @ 400°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Cooling water	-	60 psig @ 80°F
Nitrogen	-	80 psig @ 60°F
Natural gas	-	50 psig @ 60°F
Potable water	-	60 psig @ 70°F

6. Hazards and Toxics

The following items are specific hazards in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Iron sulfide	-	Present in varying concentrations in any process area SEE NOTE 1 BELOW
Sulfuric acid	-	Present in the cooling tower system
Methanol	-	Present throughout the unit
Flammable	-	All hydrocarbon streams are flammable
Liquefied petroleum gas (LPG)	-	Present throughout the unit
Molecular sieve adsorbent	-	Located in methanol recovery vessels

7. Special Precautions

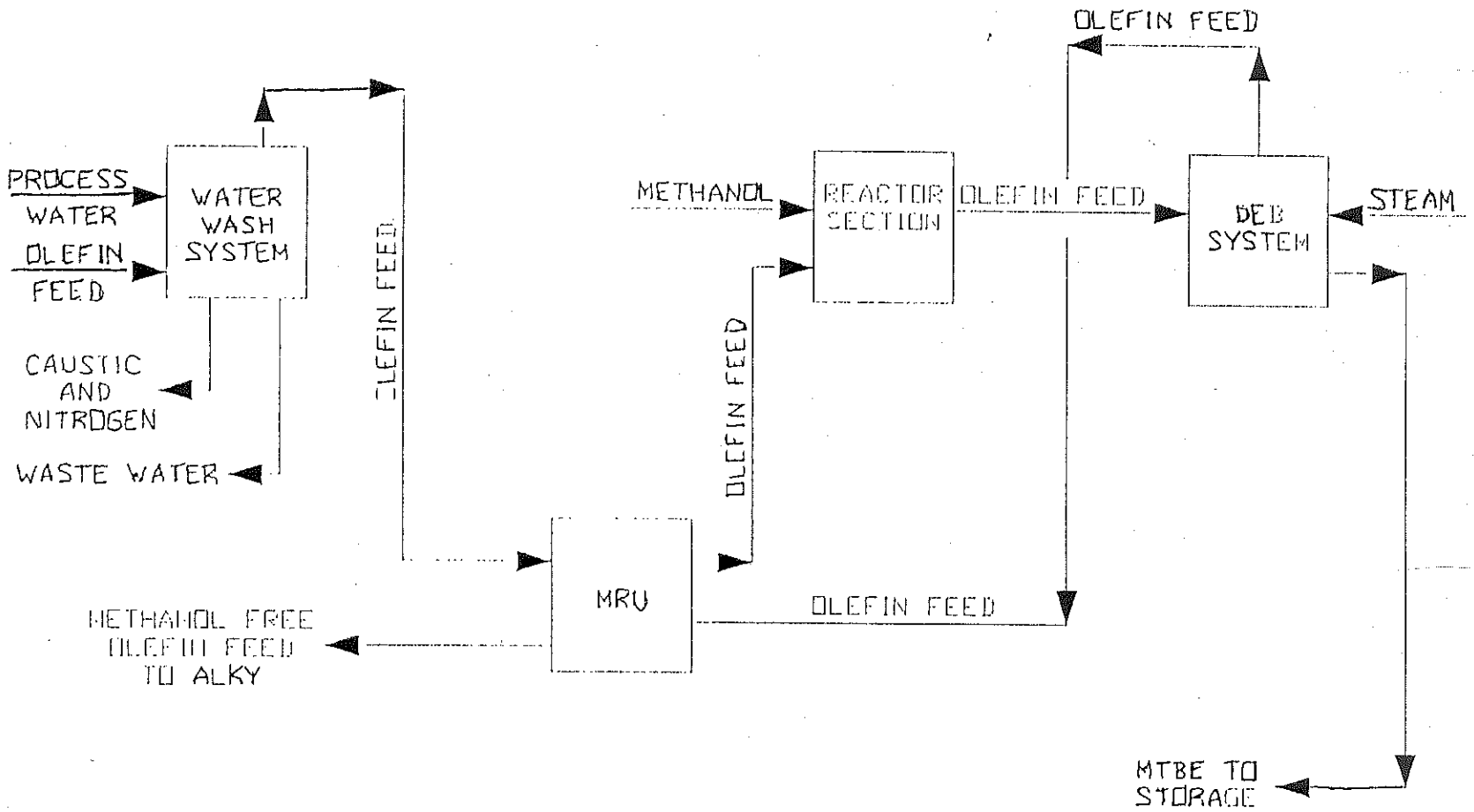
Avoid venting any hydrocarbons to the atmosphere wherever possible. When opening a valve in this service, do it slowly. When possible, hydrocarbons should be vented to the flare system. One should always determine the wind direction and stand upwind of the valve.

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the MTBE Unit. Personnel must also wear goggles, face shields, or acid splash suits when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Iron sulfide may be found in any lines or equipment that contain H_2S. When dry and exposed to air, iron sulfide can ignite, forming sulfur dioxide as a product.

MTBE BLOCK DIAGRAM



PROCESS OVERVIEW
FOR GAS OIL/DISTILLATE HYDROTREATER UNIT

1. Gas Oil/Distillate Hydrotreater Unit Description

Gas oil and distillate hydrocarbon streams in the refinery are considered sour due to their high sulfur concentrations. The function of the Gas Oil/Distillate Hydrotreater (GOHT) is to react the sour hydrocarbon streams with hydrogen over a catalyst bed at elevated temperatures and moderately high pressures to remove sulfur and other undesirable constituents (nitrogen and oxygen). The feeds are combined to the reactor and products are separated in a distillation tower.

Heat exchangers in the unit heat feed streams to the reactor and distillation tower. The stream temperatures are also increased in a heater by burning refinery fuel gas.

The unit can process either gas oil or distillate. The gas oil product stream is routed to the FCCU for further processing. The distillate product stream is directed to sales as low sulfur diesel fuel. The sulfur and other undesirable constituents are converted into acid gases. The acid gases are removed from the hydrogen and hydrocarbon streams by lean amine absorbing towers. the acid gases are separated from the amine in a stripper tower and directed to the Sulfur Recovery Unit (SRU) The regenerated amine is reused and circulated back to absorb more acid gases.

2. GOHT Unit Location

The GOHT is located at the southwest edge of the Crude-Alky side of the plant. The GOHT equipment is numbered 7-X-X.

3. Stream Names

a. Feeds to the GOHT Unit are:

Sour Gas Oil	- Feed stream to unit (block mode operation)
Sour Distillate	- Feed stream to unit (block mode operation)
Hydrogen	- Facilitates sulfur removal from the gas oil and distillate streams

b. Products from the GOHT Unit are:

Fuel Gas	- Directed to refinery fuel system
Acid Gas	- Directed to the SRU for conversion to elemental sulfur
Heavy Naphtha	- Directed to the naphtha Reforming Units
Distillate	- Goes to product tankage as saleable low sulfur diesel product
Gas Oil	- Directed to the FCCU as feed
Sour Water	- Directed to the Sour Water Stripper

c. Intermediate streams include:

Recycle Hydrogen	-	Hydrogen stream that circulates through reactor
Amine	-	Used to remove hydrogen sulfide and other contaminants from the recycle hydrogen stream - amine is continually regenerated and reused.

4. Chemicals

Chemicals that may be used in the GOHT area are:

Sodium Hypochlorite & Betz Slimicide C-31	-	Unit cooling water micro-biocide
Betz 26K	-	Unit cooling water corrosion inhibitor/dispersant
Sulfuric Acid, 93%	-	H_2SO_4, used to control the pH in the cooling tower system
Betz Corrshield K-9	-	Compressor cooling water corrosion inhibitor
Petrolite 1200	-	Corrosion inhibitor
Ucarsol HS-101	-	Pure amine solution
752 Oil	-	Lube oil for pumps
153D Oil	-	Lube oil for compressors
Methanol	-	Flare line freeze protection
Tolad 511	-	Conductivity additive for distillate product stream
Tolad 9012	-	Stability additive for distillate product stream
Tolad 3000	-	Pour point depressant for distillate product stream
Betz Prochem 3F18	-	Organic dispersant chemical added to gas oil and distillate charge to reduce preheat exchanger fouling
Betz Prochem 3F29	-	Polymerization inhibitor added to distillate charge to reduce preheat exchanger fouling.

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4800V
Steam, low pressure	-	50 psig @ 290°F
Steam, medium pressure	-	120 psig @ 350°F
Fuel gas	-	50 psig @ 80°F
Natural gas	-	50 psig @ 60°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Cooling water	-	55 psig @ 85°F
Potable water	-	60 psig @ 70°F
Nitrogen	-	80 psig @ 60°F

6. Hazards and Toxics

The following items are specific hazards in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	- Present throughout the unit and highly concentrated in acid gas stream and rich amine SEE NOTE 1 BELOW
Iron sulfide	- Present in varying concentrations in any process area SEE NOTE 2 BELOW
Ammonia	- Present in amine and acid gas streams
Hydrogen	- Highly concentrated in makeup and recycle streams
Benzene	- Present in hydrocarbon streams
Temperature	- Several streams are at temperatures from 200°F to 780°F
Pressure	- Stream pressures up to 850 psig
Flammable	- All hydrocarbon, hydrogen, and acid gas streams in the unit are flammable
Catalyst	- Contains molybdenum, cobalt and nickel

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the GOHT Unit. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

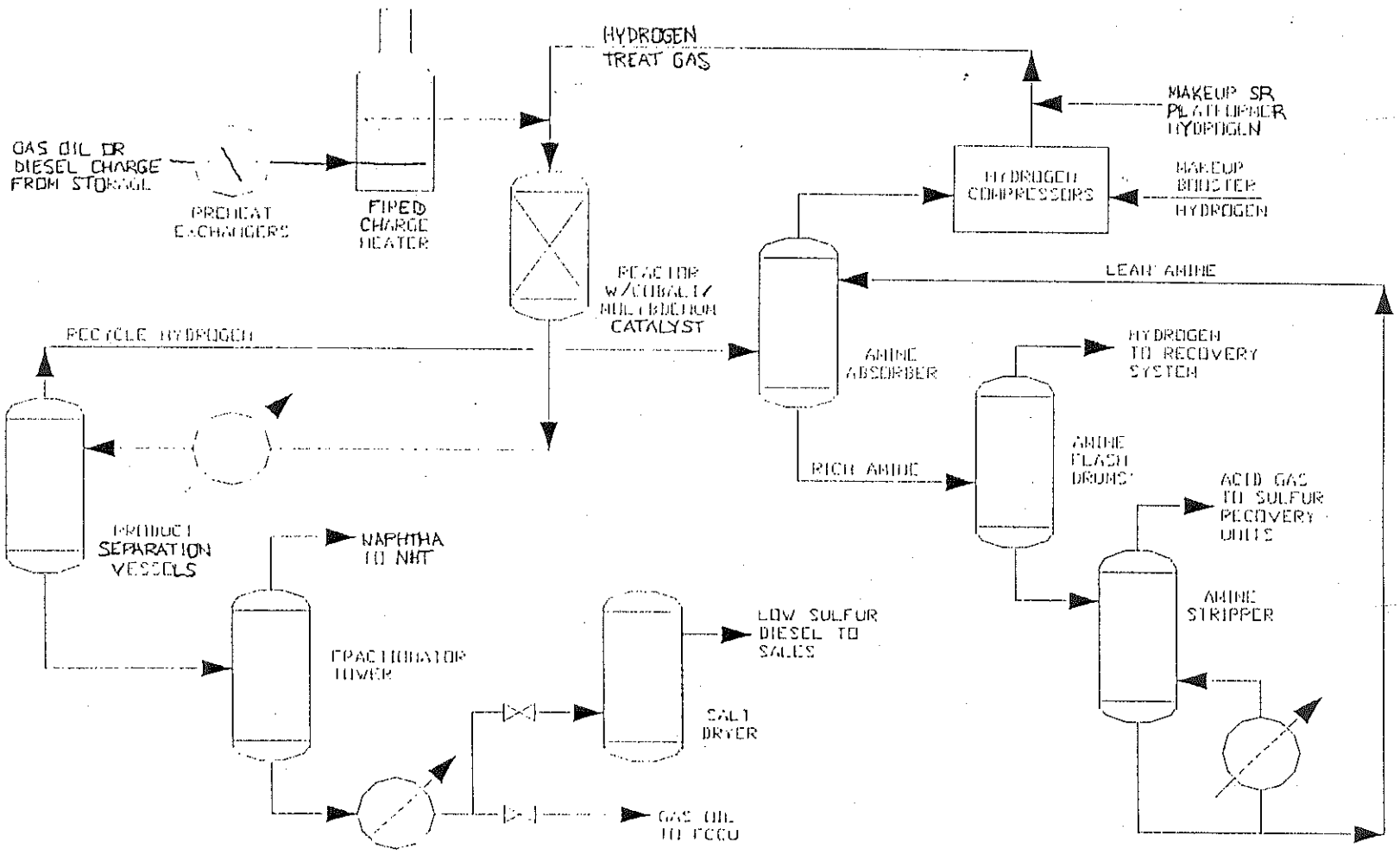
In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

NOTE 2 - Iron sulfide may be found in any lines or equipment that contain H_2S. When dry and exposed to air, iron sulfide can ignite, forming sulfur dioxide as a product.

PROCESS OVERVIEW

GAS OIL/DISTILLATE HYDROTREATER



PROCESS OVERVIEW
FOR SOUR WATER STRIPPER UNIT

1. Sour Water Stripper Unit Description

Sour water is a mixture of water, hydrogen sulfide (H_2S), ammonia, and/or hydrocarbons. Sour water is formed in the refinery whenever water comes in contact with streams containing H_2S or ammonia. The function of the Sour Water Stripper Unit (SWS) is to remove the H_2S and ammonia from the water stream. This occurs in a distillation tower.

Steam is used to provide heat to the tower. This heat drives the H_2S and ammonia up the tower. These components called acid gases are directed to one of the Sulfur Recovery Units (SRU) where the H_2S is converted to elemental sulfur and the ammonia is converted to nitrogen.

2. Sour Water Stripper Unit Location

The SWS is located at the southwest side of the Crude-Alky side of the plant. The SWS equipment is numbered 41-X-X.

3. Stream Names

a. Feeds to the SWS are:

Sour Water	-	Main feed to the unit, collection of entire refinery sour water
Boiler Feed Water	-	Used to flush ammonia salts from process lines

b. Products from the SWS are:

Acid Gas	-	Directed to the SRU
Treated Water	-	Directed to the wastewater treatment system

4. Chemicals

Chemicals that may be used in the SWS area are:

Sodium Hypochlorite & Betz Slimicide C-31	-	Unit cooling water micro-biocide
Betz 26K	-	Unit cooling water corrosion inhibitor/dispersant
Sulfuric Acid, 93%	-	H_2SO_4, used to control the pH in the cooling tower system
752 Oil	-	Lube oil for pumps

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	- 110V, 480V, 4800V
Steam, low pressure	- 50 psig @ 290°F
Natural gas	- 50 psig @ 60°F
Instrument air	- 60 psig, dry
Plant air	- 100 psig, wet
Cooling water	- 55 psig @ 85°F
Potable water	- 60 psig @ 70°F
Nitrogen	- 80 psig @ 60°F

6. Hazards and Toxics

The following items are specific hazards in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	- Present throughout the unit and highly concentrated in acid gas stream **SEE NOTE 1 BELOW**
Iron sulfide	- Present in varying concentrations in any process area **SEE NOTE 2 BELOW**
Ammonia	- Present in amine and acid gas streams
Benzene	- Present throughout the unit; benzene is a carcinogen
Temperature	- Several streams are at temperatures above 200°F
Flammable	- All hydrocarbon and acid gas streams in the unit are flammable

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the SWS Unit. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

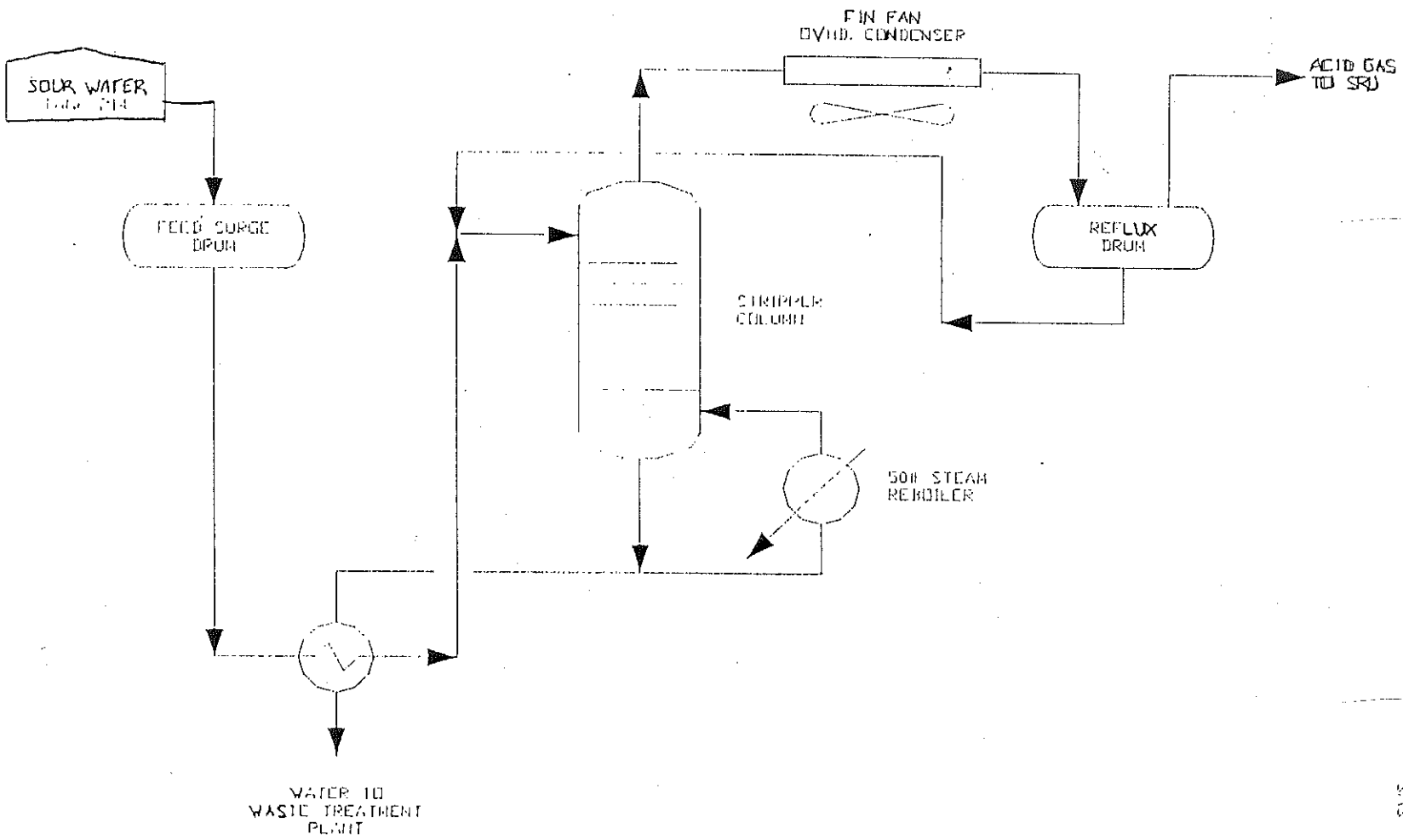
In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

NOTE 2 - Iron sulfide may be found in any lines or equipment that contain H_2S. When dry and exposed to air, iron sulfide can ignite, forming sulfur dioxide as a product.

PROCESS OVERVIEW

SOUR WATER STRIPPER



PROCESS OVERVIEW FOR SULFUR RECOVERY UNIT

1. Sulfur Recovery Unit Description

Acid gas is a mixture of hydrogen sulfide (H_2S), ammonia, carbon dioxide, water, and/or light hydrocarbons. H_2S is formed in the refinery from hydrogen reacting with sulfur. The sulfur is present in the raw crude oil and is removed from various streams in the refinery. The function of the Sulfur Recovery Unit (SRU) is to convert the H_2S to elemental sulfur. This occurs in the reactors of the SRU.

The ammonia and a portion of the H_2S is burned in a thermal reactor, with initial products of nitrogen, water, carbon dioxide and sulfur dioxide (SO_2). Sufficient air is added to maintain a H_2S to SO_2 ratio of 2:1. All gases leaving the reactors are cooled and the heat is used to produce steam. As the gases cool, the sulfur vapors condense and the liquid is directed to a storage pit. Approximately 96% of the sulfur entering the unit is converted into liquid sulfur. The unreacted H_2S and SO_2, nitrogen, carbon dioxide, and water exiting the SRU is called tail gas and is sent to a Tail Gas Treating Unit (TGTU) for further processing.

2. Sulfur Recovery Unit Location

The SRU is located at the southwest side of the Crude-Alky side of the plant. The SRU equipment is numbered 42-X-X.

3. Stream Names

a. Feeds to the SRU are:

Amine Acid Gas	-	Main feed to the unit, composed of acid gases from the GOHT, FCCU, AND TGTU
Boiler Feed Water	-	Make-up water for steam generators
Sour Water Stripper Acid Gas	-	Secondary feed to the unit
Air	-	Required for combustion of feeds
Natural Gas	-	Maintains pilots on SRU burners

b. Products from the SRU are:

Sulfur	-	Directed to product
Sour Water	-	Directed to Sour Water Stripper
Tail Gas	-	Directed to TGTU
600 psig steam	-	Directed to high pressure steam system
50 psig steam	-	Directed to low pressure steam system

4. Chemicals

Chemicals that may be used in the SRU are:

Betz Sulfite 3	-	Boiler feed water (BFW) oxygen scavenger
Optimeen	-	BFW corrosion inhibitor
Betz Balanced Polymer, 6440A	-	BFW scale inhibitor

Caustic Soda	-	50° baume for BFW pH control
Betz Corrshield K-9	-	Cooling water corrosion inhibitor/dispersant
Sodium Hypochlorite & Betz Slimicide C-31	-	Unit cooling water micro-biocide
Sulfuric Acid, 93%	-	H_2SO_4, used to control the pH in the cooling tower system
752 Oil	-	Lube oil for pumps

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4800V
Steam, low pressure	-	50 psig @ 290°F
Steam, medium pressure	-	120 psig @ 350°F
Steam, high pressure	-	600 psig @ 500°F
Natural gas	-	50 psig @ 60°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Cooling water	-	55 psig @ 85°F
Potable water	-	60 psig @ 70°F
Nitrogen	-	80 psig @ 60°F

6. Hazards and Toxics

The following items are specific hazards in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	-	Present throughout the unit and highly concentrated in acid gas stream **SEE NOTE 1 BELOW**
Iron sulfide	-	Present in varying concentrations in any process area **SEE NOTE 2 BELOW**
SO_2 (sulfur dioxide)	-	Present throughout the unit **SEE NOTE 3 BELOW**
Ammonia	-	Present in amine and acid gas streams
Pressure	-	Steam pressure as high as 600 psig
Temperature	-	Several streams are at temperatures from 200°F to 2500°F
Flammable	-	All hydrocarbon and acid gas streams in the unit are flammable

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the SRU Unit. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

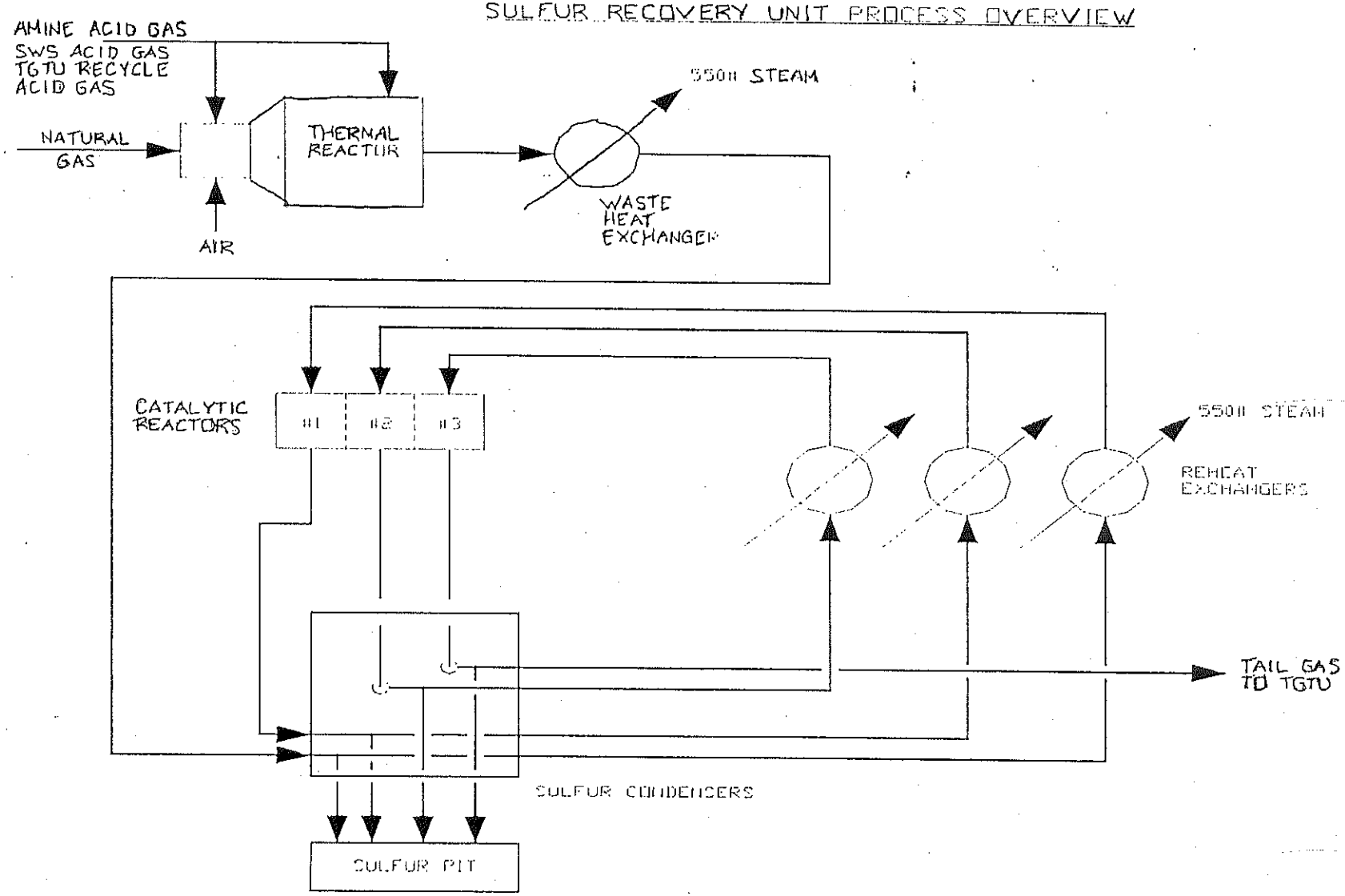
In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

NOTE 2 - Iron sulfide may be found in any lines or equipment that contain H_2S. When dry and exposed to air, iron sulfide can ignite, forming sulfur dioxide as a product.

NOTE 3 - Sulfur dioxide has a strong suffocating odor and is very irritating to the eyes and respiratory system. SO_2 is extremely poisonous and must be treated with respect to avoid injury or death.

SULFUR RECOVERY UNIT PROCESS OVERVIEW



PROCESS OVERVIEW FOR TAIL GAS TREATING UNIT

1. Tail Gas Treating Unit Description

Tail gas is a mixture of hydrogen sulfide (H_2S), sulfur, nitrogen, carbon dioxide, water, and sulfur dioxide. The tail gas is sent from the Sulfur Recovery Unit (SRU) to the Tail Gas Treating Units (TGTU) to remove sulfur and sulfur components from the gas and incinerate the gas. This is a two-step process. First, the feed is reacted with a hydrogen stream over a catalyst bed at elevated temperatures to produce H_2S and water. Then the H_2S is selectively removed from the gas.

Natural gas is burned in a heater to heat the tail gas sufficiently for the reaction. All the gases leaving the reactor are cooled, and the heat is used to produce steam. The gases are further cooled with a recirculating water stream. Acid gas (H_2S and carbon dioxide) is then removed by a lean amine absorbing tower. The acid gas is then separated from the amine in a stripper tower and directed back to the SRU. The amine, now regenerated, circulates back to absorb more acid gas.

2. Tail Gas Treating Unit Location

The TGTU is located at the southwest side of the Crude-Alky side of the plant. The TGTU equipment is numbered 43-X-X.

3. Stream Names

a. Feeds to the TGTU are:

Tail Gas	-	Main feed to the unit
Boiler Feed Water	-	Make-up water for steam generators
Hydrogen	-	Reacts with sulfur and SO_2
Air	-	Required for combustion of feeds
Natural Gas	-	Maintains pilots on SRU burners
Condensate	-	Make-up water for amine and quench system

b. Products from the TGTU are:

Acid Gas	-	Directed to SRU
Sour Water	-	Directed to Sour Water Stripper
Off Gas	-	Directed to incinerator
50 psig steam	-	Directed to low pressure steam system

c. Intermediate Streams:

Quench Water	-	Recirculating water stream
Amine	-	Used to remove H2S from tail gases; amine is continually regenerated and reused

4. Chemicals

Chemicals that may be used in the TGTU are:

Betz Sulfite 3	-	Boiler feed water (BFW) oxygen scavenger
Optimeen	-	BFW corrosion inhibitor
Max Amine-258	-	Pure amine solution
Betz Balanced Polymer, 6440A	-	BFW scale inhibitor
Caustic Soda	-	50° baume for BFW pH control
Betz Corrshield K-9	-	Cooling water corrosion inhibitor/dispersant
Sodium Hypochlorite & Betz Slimicide C-31	-	Unit cooling water micro-biocide
Sulfuric Acid, 93%	-	H_2SO_4, used to control the pH in the cooling tower system
752 Oil	-	Lube oil for pumps

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4800V
Steam, low pressure	-	50 psig @ 290°F
Natural gas	-	50 psig @ 60°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Cooling water	-	55 psig @ 85°F
Potable water	-	60 psig @ 70°F
Nitrogen	-	80 psig @ 60°F

6. Hazards and Toxics

The following items are specific hazards in this unit. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	-	Present throughout the unit and highly concentrated in acid gas stream **SEE NOTE 1 BELOW**
Iron sulfide	-	Present in varying concentrations in any process area **SEE NOTE 2 BELOW**
SO_2 (sulfur dioxide)	-	Present throughout the unit **SEE NOTE 3 BELOW**
Hydrogen	-	Highly concentrated in feed stream
Catalyst	-	Contains cobalt and molybdenum
Temperature	-	Several streams are at temperatures from 200°F to 600°F
Flammable	-	All hydrocarbon, hydrogen, and acid gas streams in the unit are flammable

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the TGTU. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

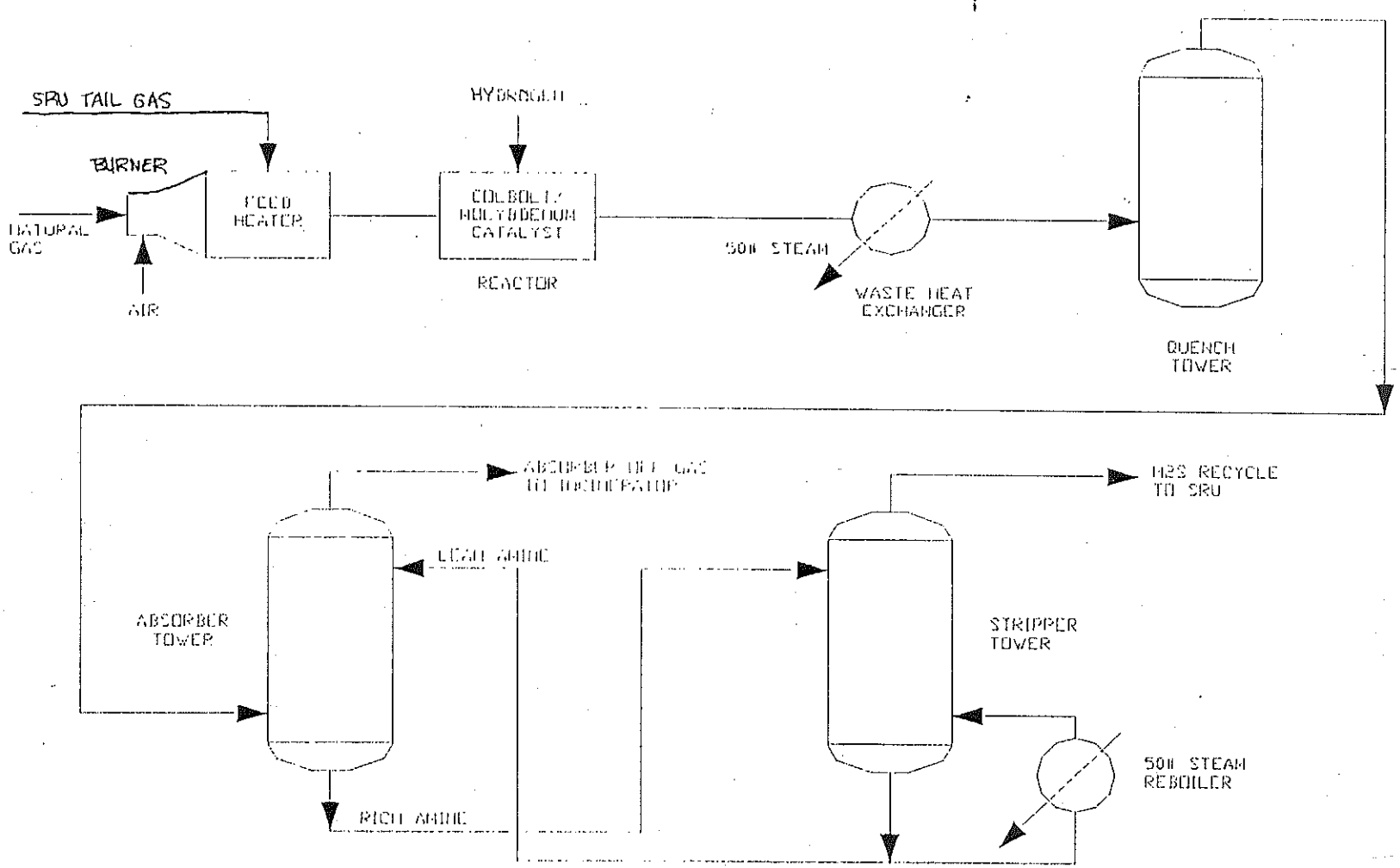
NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

NOTE 2 - Iron sulfide may be found in any lines or equipment that contain H_2S. When dry and exposed to air, iron sulfide can ignite, forming sulfur dioxide as a product.

NOTE 3 - Sulfur dioxide has a strong suffocating odor and is very irritating to the eyes and respiratory system. SO_2 is extremely poisonous and must be treated with respect to avoid injury or death.

PROCESS OVERVIEW

TAIL GAS TREATING UNIT



PROCESS OVERVIEW
FOR FLUID CATALYTIC CRACKING UNIT

1. Fluid Catalytic Cracking Unit (FCCU) Description

Gas oil is a heavy waxy material that is distilled from crude oil. The typical boiling range for gas oil is 600°F to 1000°F. The function of the FCCU is to crack the gas oil into lighter components such as gasoline, heating oil and liquefied petroleum gas (LPG). Products from the FCCU are slurry oil, heating oil (LCO), fractionator overhead liquid and fractionator overhead off gas. The slurry oil and heating oil go to storage as products. The fractionator overhead liquid goes to the Gas Con to be separated into gasoline and LPG products.

The unit process begins with gas oil being heated in a series of heat exchangers that draw heat from the unit products and fractionator pump around streams. The final heat is added to the gas oil using a fired heater. The gas oil is contacted witha high temperature catalyst in a reactor. Spent catalyst is reactivated in the regenerator by burning the carbon by-product. Hydrocarbons from the reactor go to the main column fractionator.

2. FCCU Location

The FCCU is located at the northwestern portion of the Cracking Plant side of the refinery. The FCCU plant number is 11 with all equipment numbered 11-X-X.

3. Stream Names

a. Feeds to the FCCU are:

Gas Oil	- Main feed to the unit (sweet and sour)
Resid	- Sweet flux that is charged with feed on an intermittent basis
Slurry Recycle	- Slurry oil from the main fractionator which is recycled to unit feed

b. Internal streams in the FCCU are:

Slurry pumparound	- Heavy oil stream that is cooled to improve fractionation
HCO pumparound	- Heavy oil stream that is cooled to improve fractionation
LCO pumparound	- Oil stream that is cooled to improve fractionation

c. Product streams from the FCCU area:

Slurry	- Goes to tankage
Heating Oil (LCO)	- Goes to tankage
Low pressure receiver liquid	- Goes to the Gas Con
Low pressure receiver off gas	- Goes to the Gas Con

4. Chemicals

Chemicals that may be used in the FCCU are:

Sterling Halite salt	-	Drying agent
Chemolube H	-	Hydraulic fluid
Methyl alcohol	-	Freeze protection additive for gas streams
Betz 26K	-	Cooling water dispersant/inhibitor
Betz Corrshield K-9	-	Cooling water corrosion inhibitor for closed loop systems
Fyrquel 300	-	Hydraulic fluid
DuPont FOA-3	-	Fuel oil additive
Betz Prochem-3 F28	-	Fuel oil antifoulant
Engelhard Dimension 50	-	FCCU catalyst
Sulfuric acid	-	Cooling water pH control
COP	-	Combustion promoter
Petrolite 1300	-	Corrosion inhibitor
Petrolite 1200	-	Corrosion inhibitor
Petrolite 4000	-	Slurry antifoulant
Betz Dimetallic 00H65	-	Metals passivator
Cyclona 71	-	Lubricant
Bleach (Sodium Hypochlorite)	-	Cooling water microbiocide
Petrolite 7330	-	Caustic solution emulsifier
Betz Slimicide C-31	-	Cooling water amine control agent
SAG GT-715	-	Amine antifoam
Calumet 153D	-	Reciprocating compressor lubricant
Fyrquel LT20	-	Hydraulic oil
Betz Dimetallic 70000	-	Metals passivator

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4800V, 12800V
Steam, low pressure	-	15 psig @ 250°F
Steam, high pressure	-	150 psig @ 400°F & 600 psig @ 600°F
Fuel oil	-	150 psig @ 250°F
Fuel gas	-	60 psig @ 100°F
Natural (city) gas	-	60 psig @ 80°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Starting air	-	120 psig, wet
Nitrogen	-	100 psig, dry
Cooling water	-	60 psig @ 100°F
Potable water	-	60 psig @ 70°F
Jacket water	-	60 psig @ 120°F

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in the FCCU. Refer to the specific procedure for that item in the Safety Rules and Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	-	Present in off gas and overhead streams **SEE NOTE 1 BELOW**
Benzene	-	Present in the overhead liquid, heating oil, and slurry oil
Temperature	-	Hydrocarbon streams are heated to as much as 970°F. The catalyst can be heated to 1350°F, and the high pressure steam can be heated to as much as 600°F.
Flammable	-	All hydrocarbon streams in the unit are flammable

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the TGTU. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

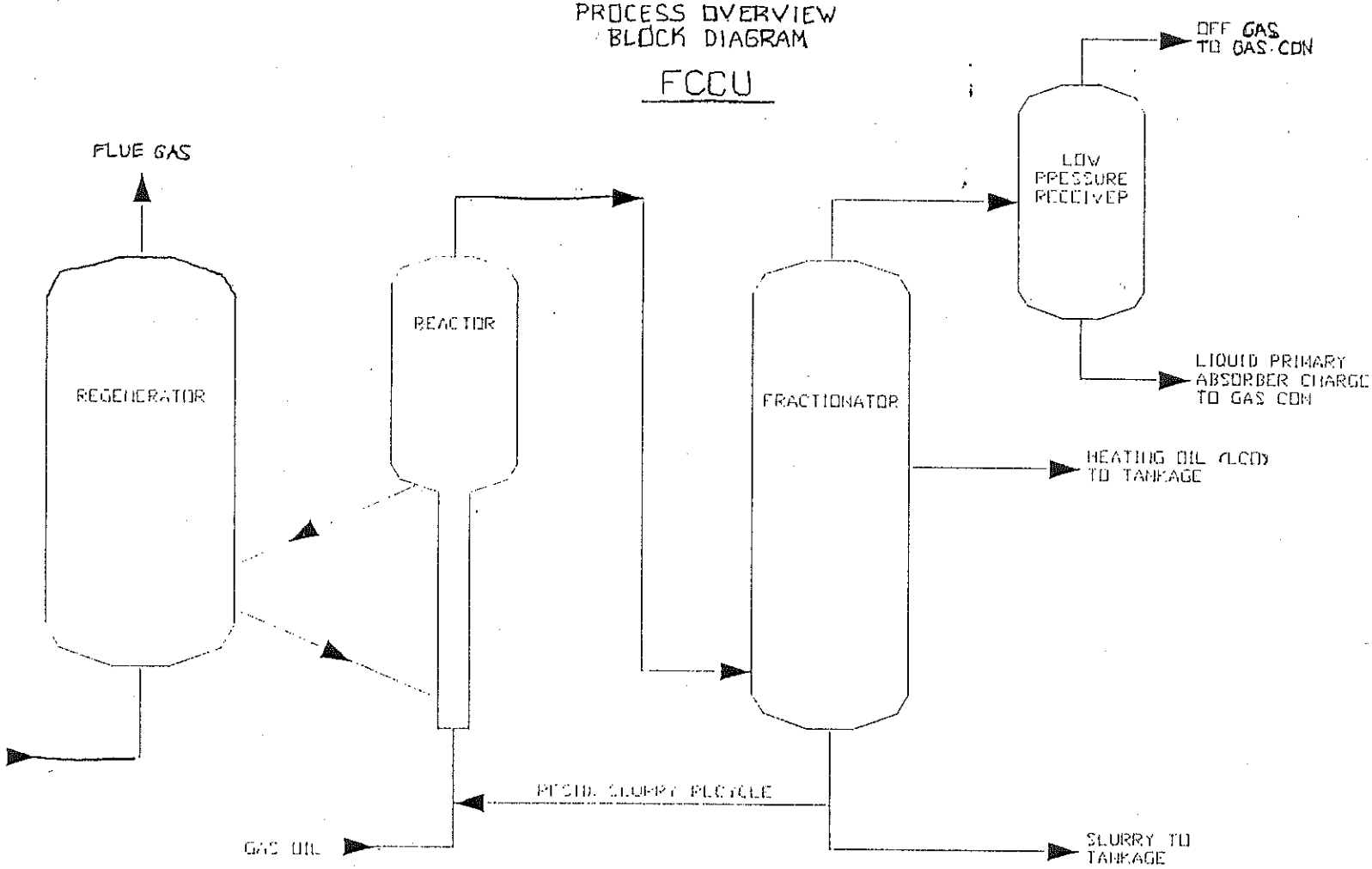
Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

PROCESS OVERVIEW
BLOCK DIAGRAM

FCCU



PROCESS OVERVIEW
FOR GAS CONCENTRATION, PROPYLENE, AND CP TREATER UNITS

1. Unit Descriptions

Gas Concentration Unit

The purpose of the Gas Concentration Unit is to collect liquids and off gases from the FCCU main column overhead and various other hydrocarbon liquids and gases and produce gasoline and liquefied petroleum gas (LPG). The particular products from this unit are Cat gasoline (Cat naphtha), Alky feed (an olefinic butane stream), saturates depropanizer bottoms (a saturated butane stream), saturates depropanizer overhead (propane), propane/propylene mix, and secondary absorber off gas. The Cat naphtha is sent to the #1 and #2 Merox for sweetening, the Alky feed and sats bottoms are sent to #3 Merox for mercaptan extraction, and the propane/propylene mix, sats overhead propane and secondary absorbers are sent to separate amine absorbers.

The Gas Con unit is divided into the compressor, absorber, and distillation sections. The compressor section increases the pressure of the feed gas streams. The absorber section collects the heavier gases as liquid hydrocarbons. The distillation section separates the liquid hydrocarbons into the various product streams.

CP Treaters

The purpose of the CP Treater Unit is to remove hydrogen sulfide and mercaptans from the Gas Con product streams. Hydrogen sulfide is removed from the product streams by amine adsorption. Hydrogen sulfide recovered from the amine is sent to the Sulfur Unit for processing. Mercaptans are removed from the product streams by absorption into caustic in a process called Merox treating. Mercaptans are removed from the caustic stream in a reaction with oxygen in the presence of a catalyst.

The Cat naphtha stream is sent to storage after Merox treating. The Alky feed stream is sent to the MTBE Unit after Merox treating. The sats bottom stream is sent to the Alky Unit after Merox treating. The propane/propylene mix is sent to the Propylene Unit after amine treating. The sats overhead is sent to the Alky Unit after amine treating and the secondary absorber off gas is sent to refinery fuel gas after amine treating.

Propylene Unit

The Propylene Unit is a distillation unit that separates the propane/propylene mix stream into propane and propylene products. Both propylene unit product streams are sent to storage as liquefied streams.

2. Unit Location

The Gas Con, CP Treaters, and Propylene Units are located in the northern portion of the Cracking Plant side of the refinery. The Gas Con, CP Treater, and Propylene Unit plant numbers are 12, 21, and 13, respectively, with all equipment numbered 12-X-X, 21-X-X, and 13-X-X, respectively.

3. Stream Names

   a. Feeds to the units are:

Primary Absorber Charge	-	Liquid from the FCCU
Low-stage gas	-	Gas from the FCCU
Crude debutanizer off gas	-	Gas from the Crude Unit
Saturates charge	-	Liquid from the Crude Unit
Drag streams	-	Miscellaneous streams from the refinery collected in the Gas Con

   b. Products from the units are:

Cat naphtha	-	Gasoline blend stream goes to storage
Alky feed	-	Butane/butene mix goes to MTBE
Propane	-	Propylene tower bottoms to storage

4. Chemicals

Chemicals that may be used in the units are:

Petrolite 1300	-	Corrosion inhibitor
Petrolite 1200	-	Corrosion inhibitor
Caustic soda	-	Treating
Methyl alcohol	-	Freeze protection additive for gas streams
MaxAmine 11B	-	Amine for treating
ARI-100L	-	Merox catalyst
Betz 26K	-	Cooling water dispersant/inhibitor
Bleach (sodium hypochlorite)	-	Cooling water microbiocide
Glycol	-	Freeze-point depressant
Calumet 153D	-	Compressor oil
Sulfuric acid	-	Cooling water pH control
Betz Slimicide C-31	-	Cooling water slime control agent

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4800V, 12800V
Steam, low pressure	-	15 psig @ 250°F
Steam, high pressure	-	150 psig @ 400°F & 600 psig @ 600°F
Fuel gas	-	60 psig @ 100°F
Natural (city) gas	-	60 psig @ 80°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Starting air	-	120 psig, wet
Nitrogen	-	100 psig, dry
Cooling water	-	60 psig @ 100°F
Potable water	-	60 psig @ 70°F
Jacket water	-	60 psig @ 120°F

Slurry oil	-	120 psig @ 700°F, process heat
Heavy cycle oil	-	130 psig @ 550°F, process heat
Light cycle oil	-	200 psig @ 120°F, sponge oil

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in the Gas Con, CP Treater, and Propylene Units. Refer to the specific procedure for that item in the Safety Rules and Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	-	Present in off gas and liquid streams. It is particularly concentrated in the amine treating sections. SEE NOTE 1 BELOW
Benzene	-	Present in gasoline streams
Temperature	-	Steam temperatures vary from 40°F to 700°F
Flammable	-	All hydrocarbon streams in the unit are flammable

7. Special Precautions

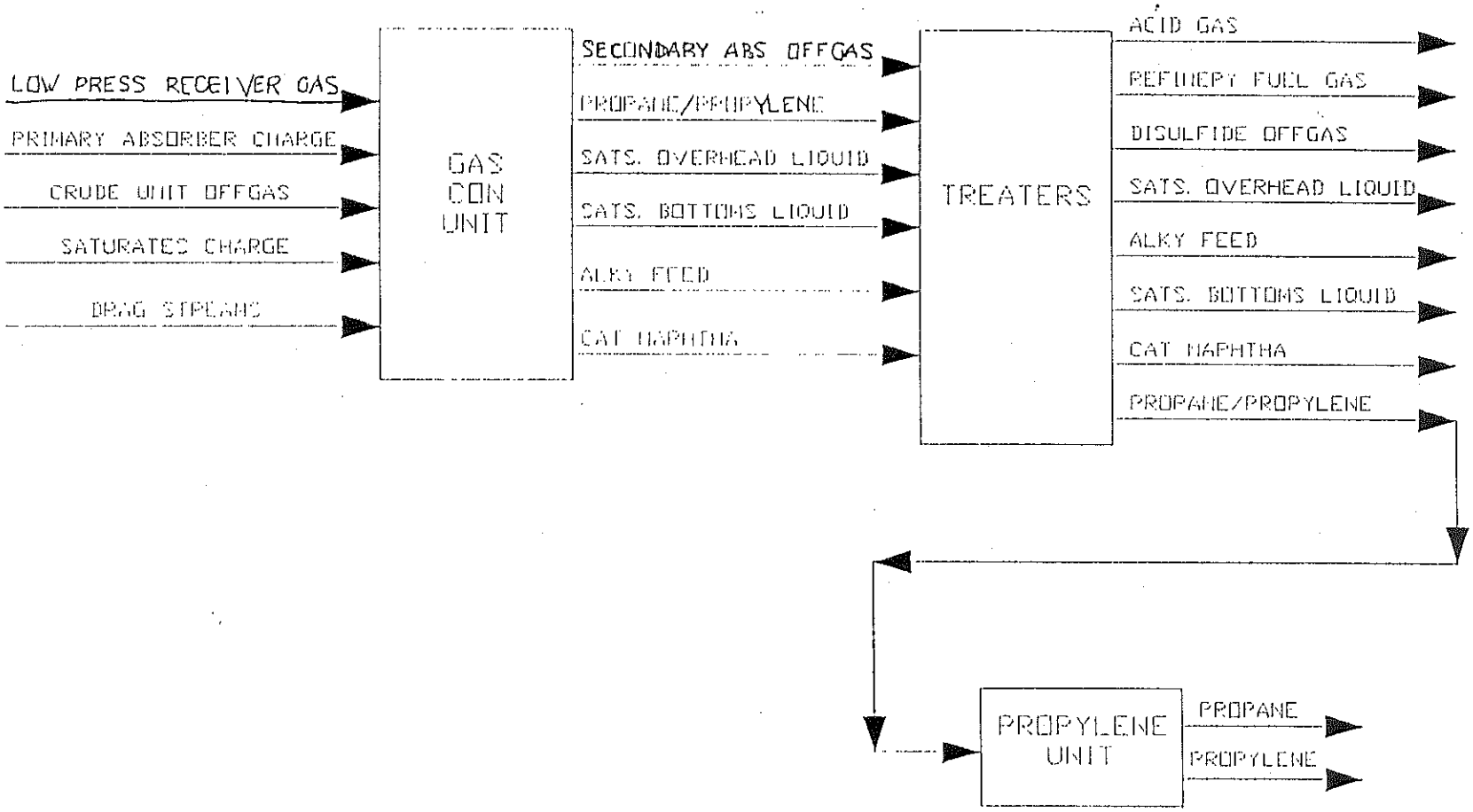
Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the Gas Con, CP Treater, and Propylene Units. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

GAS CON/CP TREATERS AND PROPYLENE UNIT PROCESS OVERVIEW BLOCK DIAGRAM



PROCESS OVERVIEW FOR BT PLATFORMER

1. BT Platformer Description

Catalytic reforming is a process by which gasoline boiling range, low-octane hydrocarbons are converted or "reformed" to high-octane gasoline components. Hydrogen, the "by-product" of the reforming process, is used to pretreat feed streams to the BT Platformer. Hydrogen is also used at the Gas Oil/Distillate Hydrotreater as well as in the refinery fuel gas system.

Catalyst is the key to the reforming process. The BT Platformer uses approximately 28,000 pounds of UOP R-72 bimetallic catalyst in the first two reactors and 33,000 pounds of UOP R-56 bimetallic catalyst in the third reactor.. Platinum and rhenium on the catalyst surface promotes the reformer reactions. Temperature and pressure play an important role in the reformer operation. Reactor temperatures and pressures reach 965°F and 300 psig, respectively.

2. BT Platformer Location

The BT Platformer is located in the south side of the Cracking Plant, near the gate. The BT plant number is 17 with equipment numbered 17-X-X.

3. Stream Names

a. Feeds to the BT are:

NHT stripper bottoms	-	Sweet naphtha
Boiler feedwater	-	Used for the steam generators
Tanks 18, 19 and 11	-	Sweet naphtha in storage

b. Products from the BT are:

Platformate	-	Gasoline blending material
Hydrogen		
Butane and lighter hydrocarbons		
Steam	-	150 psig

4. Chemicals

Chemicals that are used in the BT include:

Perchloroethylene	-	To chloride the catalyst
Methanol	-	To control moisture
TNPS (di-tertiary nonylpolysulfide)	-	To sulfide new and regenerated catalyst at start-of-run
Caustic	-	Used during regenerations

Cooling water chemicals used in the "H" cooling tower include:

Betz 26K	-	Unit cooling water corrosion inhibitor/dispersant
Betz Slimicide C-31 & sodium hypochlorite	-	Unit cooling water micro-biocide
Sulfuric acid	-	Controls cooling water pH

5. **Utilities**

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4,800V
Fuel gas	-	60 psig @ 80°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Cooling water	-	55 psig @ 80°F
Steam	-	120 psig @ 350°F

6. **Hazards and Toxics**

The following items are specific hazards that you should be aware of in the BT Platformer. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Flammable hydrocarbons and hydrogen	Benzene	-	Present in all naphtha streams.
Temperature	-	Streams temperatures up to 965°F.	
High pressure lines up to 300 psig			
Chlorides	-	Present in the reactor feed	
Noise	-	Hearing protection required	
Nitrogen and caustic	-	Used during regenerations	

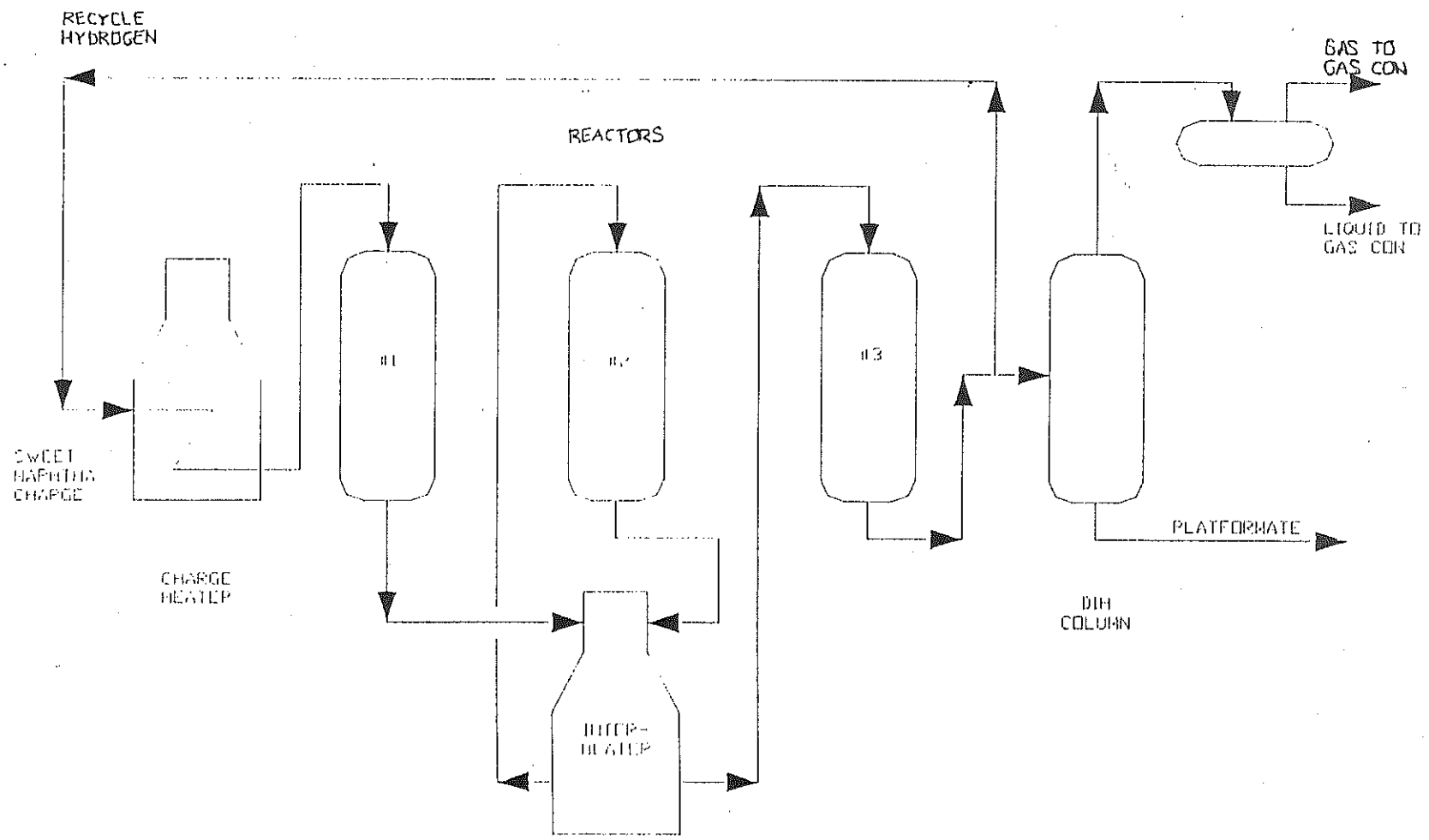
7. **Special Precautions**

Hard hats, work boots with a heel, eye protection, hearing protection, fire retardant clothing (Nomex), and personal H_2S monitors are required within the battery limits of the BT Platformer. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

B.T. PLATFORMER PROCESS OVERVIEW FLOW DIAGRAM



PROCESS OVERVIEW
FOR NAPHTHA HYDROTREATER

1. NHT Description

The Naphtha Hydrotreater (NHT) uses hydrogen to remove sulfur and nitrogen from straight-run naphtha. This process is called hydrotreating. The "desulfurized" or sweet naphtha is used for Platformer feed.

The NHT uses a cobalt and molybdenum catalyst to promote the "desulfurization" reaction. The NHT has one reactor that is filled with 45,000 pounds of Criterion HDS-22 catalyst. Reactor temperatures and pressures reach 625°F and 350 psig, respectively.

Proper operation of the NHT is imperative to the operation of the Platformers. Sulfur and moisture breakthroughs upset the Platformer operation, which in turn lowers reformate yield and hydrogen purity.

2. NHT Location

The NHT is located in the south side of the Cracking Plant. The NHT plant number is 16 with equipment numbered 16-X-X.

3. Stream Names

a. Feeds to the NHT are:

Straight run naphtha	-	From the Crude Unit
Hydrogen	-	From the Platformers
Condensate	-	Used to wash feed/effluent exchangers

c. Products from the NHT are:

Sweet Naphtha	-	Platformer feed
Hydrogen sulfide		
Butane and light hydrocarbons		
Sour water		

4. Chemicals

Chemicals that may be used in the NHT are:

Petrolite P-1200	-	Corrosion inhibitor in product coolers and stripper overhead vapor line
Sodium Hypochlorite and Betz Slimicide C-31	-	Unit cooling water micro-biocide
Betz 26K	-	Unit cooling water corrosion inhibitor/dispersant
Sulfuric acid, 93%	-	H_2SO_4, used to control the pH in the cooling tower system

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V, 4800V
Fuel gas	-	60 psig @ 80°F
Instrument air	-	60 psig, dry
Plant air	-	100 psig, wet
Cooling water	-	55 psig @ 80°F
Steam	-	120 psig @ 350°F

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in the Naphtha Hydrotreater. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Flammable hydrocarbons and hydrogen

Benzene in all naphtha streams

Temperatures up to 635°F

High pressure lines up to 600 psig

Hydrogen sulfide	–	Present in off gas and overhead streams SEE NOTE 1 BELOW
Noise	–	Hearing protection required

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection and fire retardant clothing (Nomex) are required within the battery limits of the NHT Unit. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

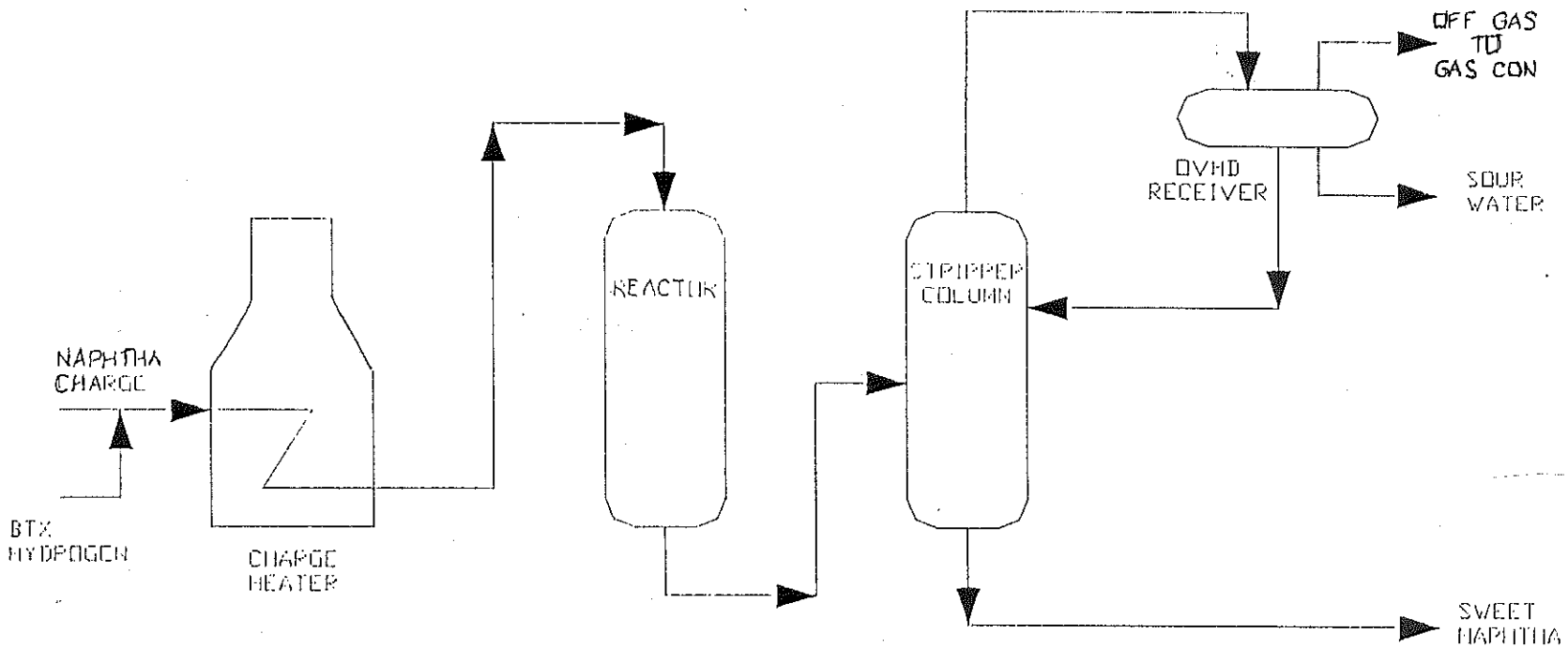
Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 – Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

Revised: 10/94

NHT PROCESS OVERVIEW FLOW DIAGRAM



PROCESS OVERVIEW
FOR SR PLATFORMER

1. SR Platformer Description

Catalytic reforming is a process by which gasoline boiling range, low-octane hydrocarbons are converted or "reformed" to high-octane gasoline components. Hydrogen, the "by-product" of the reforming process, is used to pretreat feed streams to the SR Platformer. Hydrogen is also used at the Gas Oil Unifiner and the Kerosene Hydrotreater.

Catalyst is very important to the reforming process. The SR Platformer uses 89,000 pounds of UOP R-62 bimetallic catalyst in four stacked reactors. The reactors are stacked to accommodate the low pressure drop required as well as the installation of a Continuous Catalyst Regeneration section at a later date. Platinum and rhenium on the catalyst surface promotes the reformer reactions. Temperature and pressure play an important role in the reformer operation. Reactor temperatures can be as high as 1010°F. The hydrogen pressure can be over 900 psig, on the second stage on the net gas compressor (14-C-002).

2. SR Platformer Location

The SR Platformer is located in the east side of the Cracking Plant, next to the Naphtha Hydrotreater and the Old Boiler House. The SR Platformer plant number is 14 with equipment numbered 14-X-XXX.

3. Stream Names

a. Feeds to the SR Platformer are:

NHT stripper bottoms	-	Sweet naphtha
Naphtha from Tanks 18, 19 and 11	-	Sweet naphtha
Boiler feedwater	-	Used for the steam generator

b. Products from the SR Platformer are:

Platformate	-	Gasoline blending material
Hydrogen		
Overhead gas	-	Butane and lighter hydrocarbons
Overhead liquid	-	Light hydrocarbons with some heavier
Steam	-	150 psig

4. Chemicals

Chemicals that are used in the SR Platformer include:

Perchloroethylene	-	Used to chloride the catalyst
TNPS (di-tertiary nonylpolysulfide)	-	Used during catalyst regeneration to sulfide the catalyst
Caustic	-	Used during catalyst regeneration to neutralize
Sodium Hypochlorite and Betz Slimicide C-31	-	Unit cooling water micro-biocide
Betz 25K	-	Unit cooling water corrosion inhibitor/dispersant
Sulfuric acid, 93%	-	H_2SO_4, used to control the pH in the cooling tower system

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	–	110V, 220V, 440V, 4500V
Fuel gas	–	50 psig @ 80°F
Natural gas	–	50 psig @ 50°F
Instrument air	–	50 psig, dry
Plant air	–	100 psig, wet
Cooling water	–	55 psig @ 80°F
Potable water	–	50 psig @ 70°F
Steam, high pressure	–	600 psig @ 600°F, 150 psig @ 350°F

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in the SR Platformer. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Flammable hydrocarbons and hydrogen

Benzene	–	Present in all naphtha streams

Temperatures up to 1010°F

High pressure lines up to 900 psig

Chlorides	–	Present in the reactor feed
Noise	–	Hearing protection required

7. Special Precautions

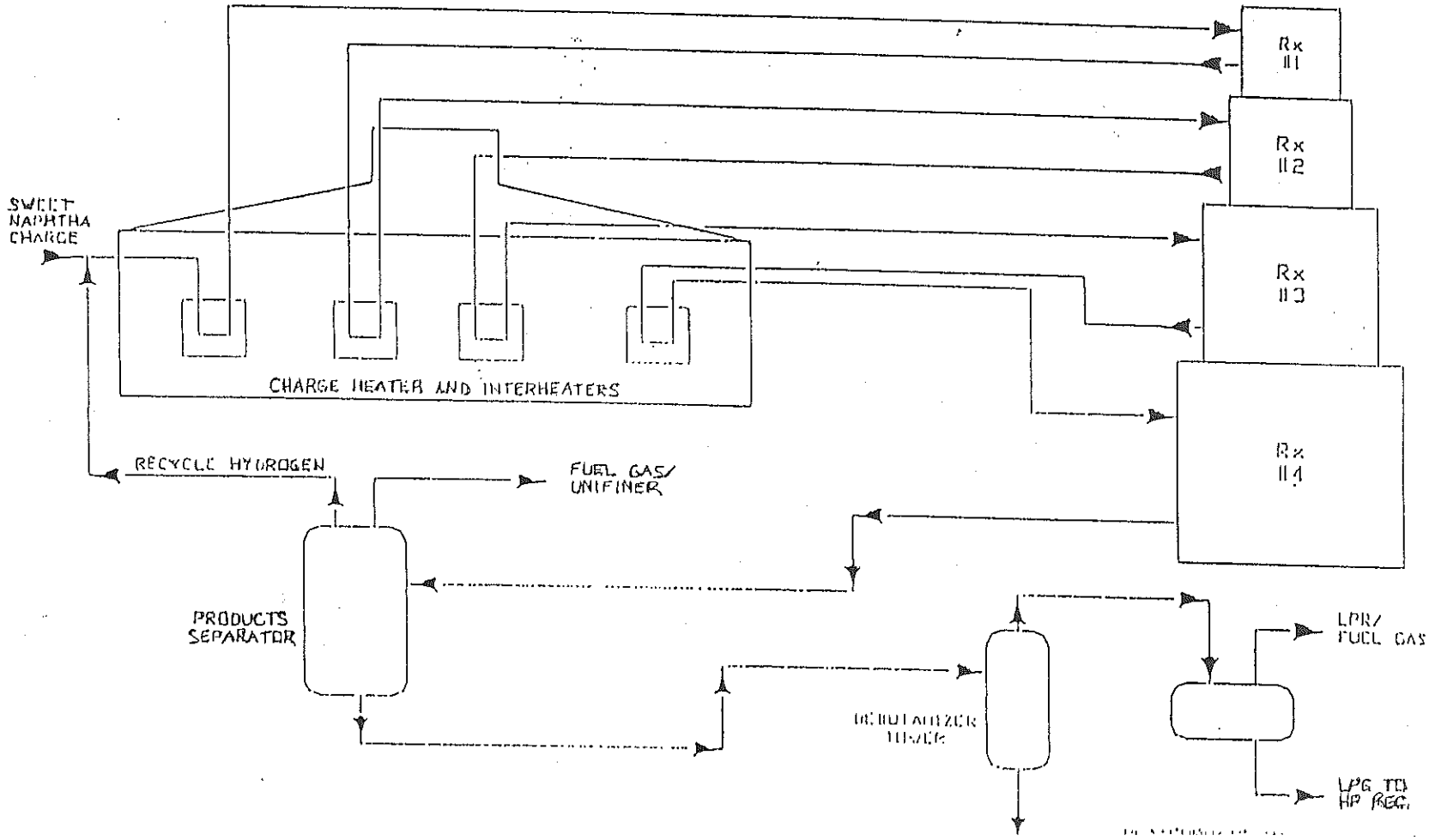
Hard hats, work boots with a heel, eye protection, hearing protection and fire retardant clothing (Nomex) are required within the battery limits of the SR Platformer. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

Revised: 10/94

SR PLATFORMER PROCESS OVERVIEW FLOW DIAGRAM



PROCESS OVERVIEW FOR KEROSENE HYDROTREATER

1. KHT Description

The Kerosene Hydrotreater (KHT) uses hydrogen to remove sulfur and nitrogen from kerosene. This process is called hydro treating. The desulfurized kerosene will have a sulfur content less than 0.04 wt%. The kerosene product can be sold as "Jet A" jet fuel.

The KHT uses a catalyst comprised of cobalt and molybdenum on an alumina based structure. This catalyst along with hydrogen and temperature promotes the desulfurization reaction. The KHT has one process heater and one reactor. The reactor is filled with 19,900 pounds of Co-Moly Critenion C-448 catalyst. The reactor temperatures will reach 680°F at a pressure of 770 psig.

The KHT Unit also has a clay filter which is used to remove any color bodies remaining in the kerosene product. The clay filter is filled with 1,275 ft^3 of 16/30 mesh Attapulgiti clay.

2. KHT Location

The KHT is located on the Cracking Plant side of the Detroit Refinery between the BT Platformer and Naphtha Hydrotreater. The KHT plant number is 19 with all equipment numbered 19-X-X.

3. Stream Names

a. Feeds to the KHT are:

Kerosene, including kerosene swing	-	From the Crude Unit
H_2 (hydrogen)	-	From the NHT

b. Products from the KHT are:

Desulfurized kerosene	-	Less than 0.04 wt%
Hydrogen sulfide and light gases		
Overhead liquid (naphtha)		
Sour Water		

4. Chemicals

Chemicals that are used in the KHT include:

Kerosene product additive for anti-static chemical, as directed by sales.

Betz 26K	-	Unit cooling water corrosion inhibitor/dispersant
Betz Slimicide C-31 & sodium hypochlorite	-	Unit cooling water micro-biocide
Sulfuric acid, 93%	-	H_2SO_4 used to control cooling water pH
Stadus 450	-	Adjusts conductivity of kerosene product

5. **Utilities**

Utilities within the unit are listed below along with their normal pressure and temperature:

Electricity	- 110V, 480V, 4,800V
Fuel gas	- 60 psig @ 80°F
Natural gas	- 50 psig @ 60°F
Instrument air	- 60 psig, dry
Plant air	- 100 psig, wet
Plant nitrogen	- 80 psig @ 60°F
City water	- 60 psig @ 70°F
Cooling water	- 55 psig @ 80°F
Steam	- 150# and 600#

6. **Hazards and Toxics**

The following items are specific hazards that you should be aware of in the KHT. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Flammable hydrocarbons and hydrogen	- Nomex clothing required
Temperature	- Streams temperatures up to 680°F.
High pressure lines up to 850 psig, 924 psig @ charge pumps	
Hydrogen sulfide	- Present in off gas and overhead streams/sour water SEE NOTE 1 BELOW
Noise	- Hearing protection required
Liquid samples	- Goggles required

7. **Special Precautions**

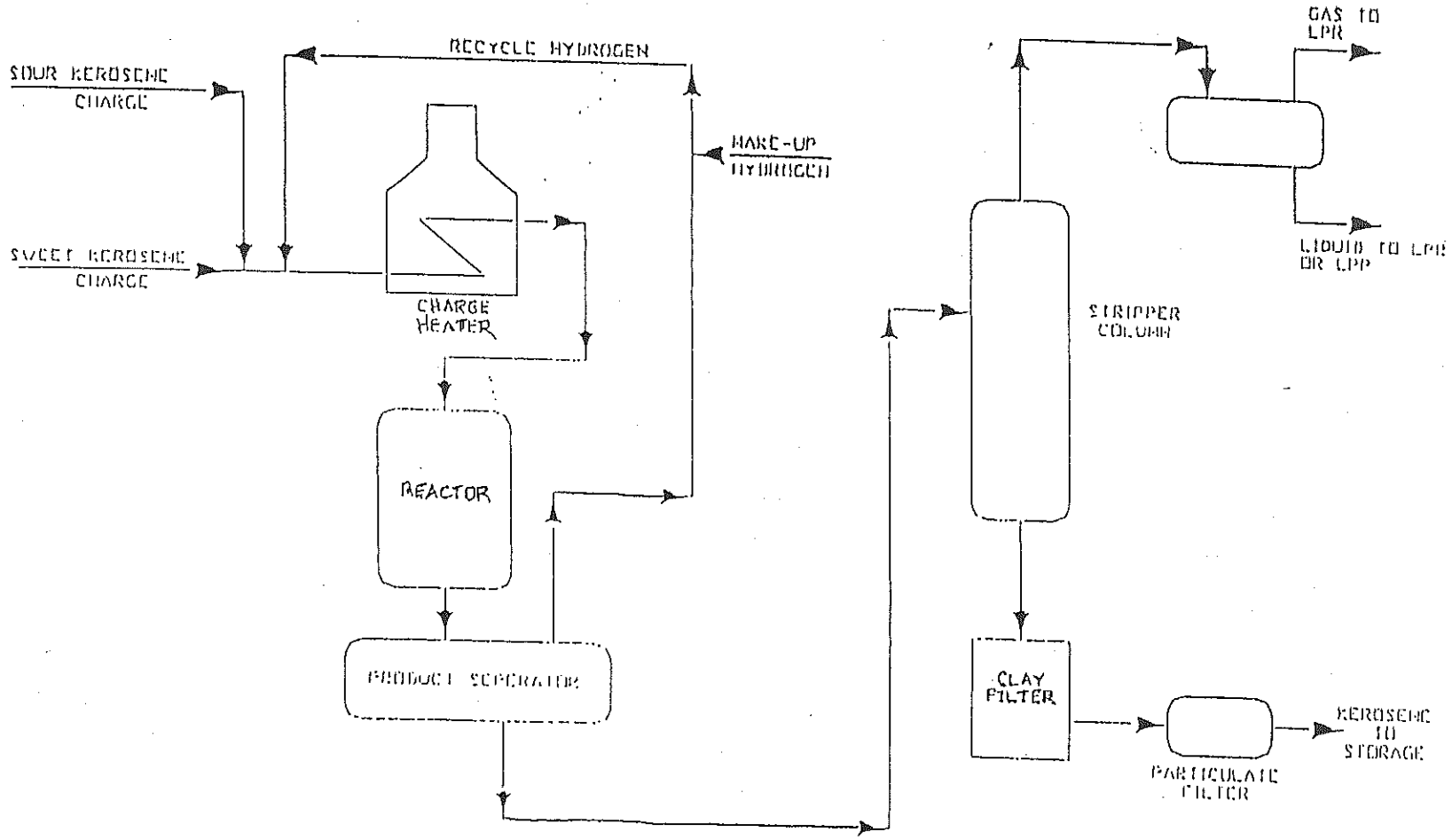
Hard hats, work boots with a heel, eye protection, hearing protection, fire retardant clothing (Nomex), and personal H_2S monitors are required within the battery limits of the KHT Unit. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposure as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area. Always wear a personal H_2S detector when working in this area.

KEROSENE HYDROTREATER PROCESS OVERVIEW FLOW DIAGRAM



PROCESS OVERVIEW
FOR THE CP BOILERS AND BOILER FEEDWATER

1. Boiler and Boiler Feedwater Description

The Detroit Refinery produces approximately 180,000 pounds/hour of 600-pound steam. We use two boilers to accomplish this: the CO Boiler and the Zurn Package Boiler. The CO Boiler, constructed in 1963, is the largest steam producer in the plant. Waste heat from the FCC flue gas is recovered by the boiler. This heat is supplemented with fuel gas and oil burners to produce steam. The Zurn Boiler was started up in late 1991 and fires natural gas.

The key to successful boiler operation is the boiler feedwater (BFW) treatment system. BFW is purified in a split stream softening process. Sodium zeolite and hydrogen zeolite softeners are on a 25% to 75% ratio, respectively. Sodium and hydrogen ions are exchanged for impurities found in the city water to produce high quality boiler feedwater. Salts and sulfuric acid are used to regenerate the strong cation softening resin.

Boiler feedwater chemicals are added to the softened water to help minimize corrosion and protect the internals of all steam producers and condensate systems. The steam and BFW production facilities on Complex 4 are key to the operation of the Detroit Refinery.

2. Boiler Location

The CO and Zurn Boilers are located near the FCC in the Cracking Plant. The CO Boiler plant number is 27 and the Zurn Boiler plant number is 27. The boiler feedwater treatment unit is 28.

3. Stream Names

a. Feeds to the Boilers are:

Boiler feedwater	-	From the softening system
Flue gas, natural gas, fuel oil	-	Fuels to the boilers
Flue gas from the FCC	-	Used in the CO Boiler

b. Products from the Boilers are:

600-pound steam	-	Superheated
Boiler blowdown water		
Stack gases		

4. Chemicals

Chemicals that are used in the Boilers and Boiler Feedwater include:

Sulfuric acid	-	Regenerates hydrogen zeolite softeners
Brine	-	Regenerates sodium zeolite softeners
Caustic	-	Controls pH downstream of the degassifier & neutralizes acid after a softener regeneration
Sulfite	-	Oxygen scavenger fed into the deaerator

Optimeen	-	Amine for condensate system
Balanced polymer	-	Metal and hardness protection
Betz Neutrafilm	-	Filming amine for pipes

5. Utilities

Utilities within the unit are listed below along with their normal pressure and temperature.

Electricity	- 110V, 480V, 4,800V
Fuel gas	- 60 psig @ 80°F
Natural gas	- 60 psig @ 60°F
Instrument air	- 60 psig, dry
Plant air	- 100 psig, wet

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in the Boilers and Boiler Feedwater. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Fuel gas
Extremely high temperatures
High pressure lines up to 600 psig
Noise - Hearing protection required

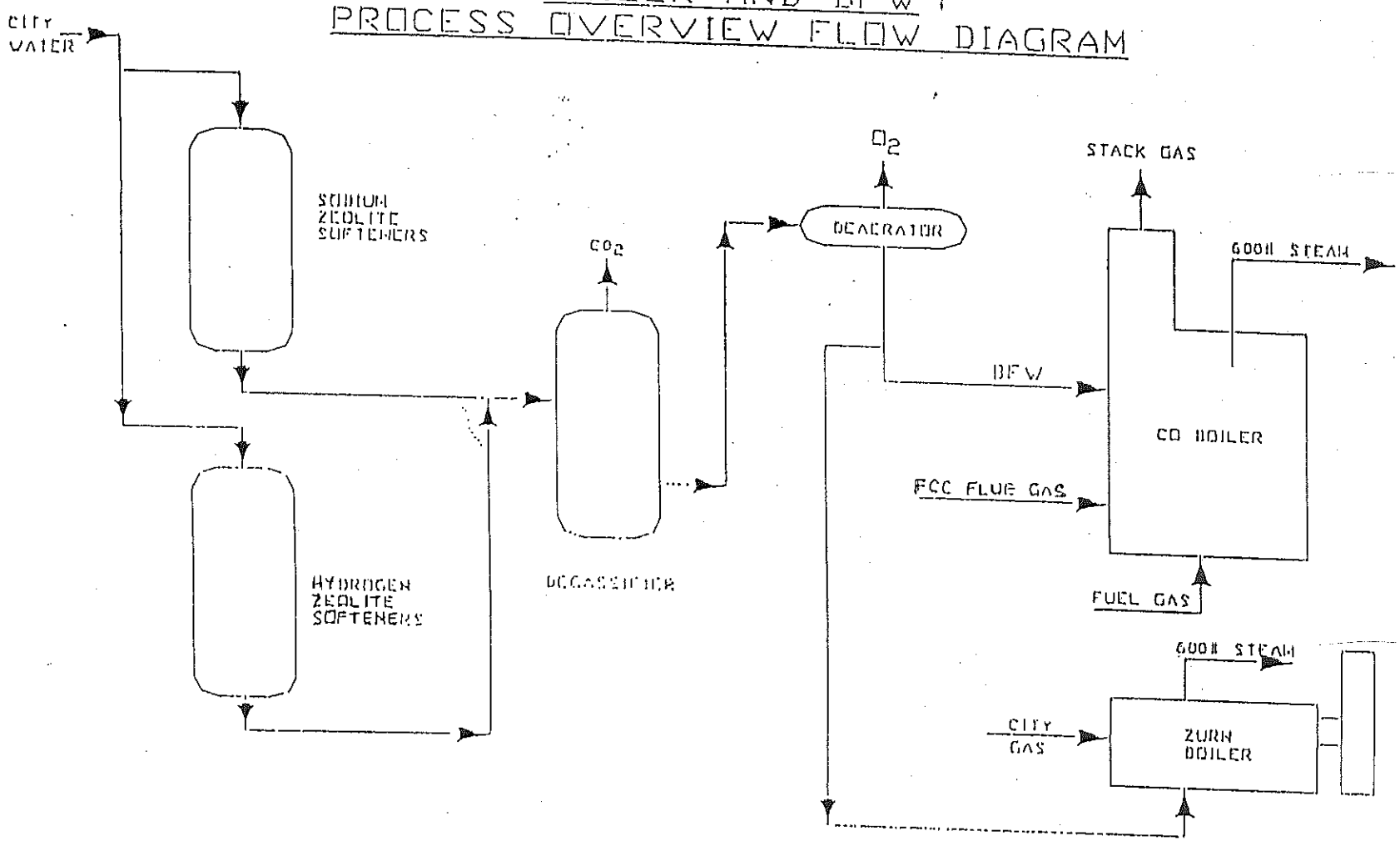
7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, fire retardant clothing (Nomex), and personal H_2S monitors are required within the battery limits of the Boilers and Boiler Feedwater. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

BOILER AND BFW PROCESS OVERVIEW FLOW DIAGRAM



PROCESS OVERVIEW FOR GASOLINE BLENDING AREA

1. Gasoline Blending Area Description

Gasoline blending incorporates the run-down streams from all of the units and combines them into a finished product called gasoline. Gasoline is that fraction of crude oil that has a typical boiling range between 90°F and 220°F. The chemical makeup of gasoline is best described as a light complex hydrocarbon.

The gasoline blender consists of a series of product run-down line manifolds into a header system called the gasoline blend header. These streams are then combined by pumping controlled amounts of each unit product into a finished product tank for sales certification.

2. Gasoline Blender Location

The gasoline blend header is located south of the Crude Treater area near Tank 6. All of the gasoline blender equipment is numbered 32-X-X or 22-1-X-X.

3. Stream Names

a. Feeds to the gasoline blender are:

Alkylate	-	From Alky Unit
Butane	-	From Alky Unit
BT/SR Platformate	-	From Platformer
BT Platformate with Crude DIH overhead	-	From Platformer & Crude Unit DIH overhead liquid
Cat Naphtha	-	From FCCU
Robinson Platformate	-	From outside source
MTBE	-	From MTBE Unit

b. Products from the gasoline blender are:

Premium Gasoline (not normal)
Regular lead-free gasoline with MTBE (not normal)
Regular gasoline
Premium lead-free gasoline with MTBE

4. Chemicals

Chemicals that may be used in the gasoline blending area are:

PDA 733	-	Anti-oxidant additive used in all gasolines
Metal deactivator	-	Used in all gasoline grades

5. Utilities

Utilities within the gasoline blending area are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V
Steam, low pressure	-	15 psig @ 250°F, 50 psig @ 300°F
Steam, high pressure	-	150 psig @ 400°F
Instrument air	-	60 psig, dry

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in this area. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

Benzene	-	Present in all streams in this area
Flammable	-	All hydrocarbons in this area are flammable

7. Special Precautions

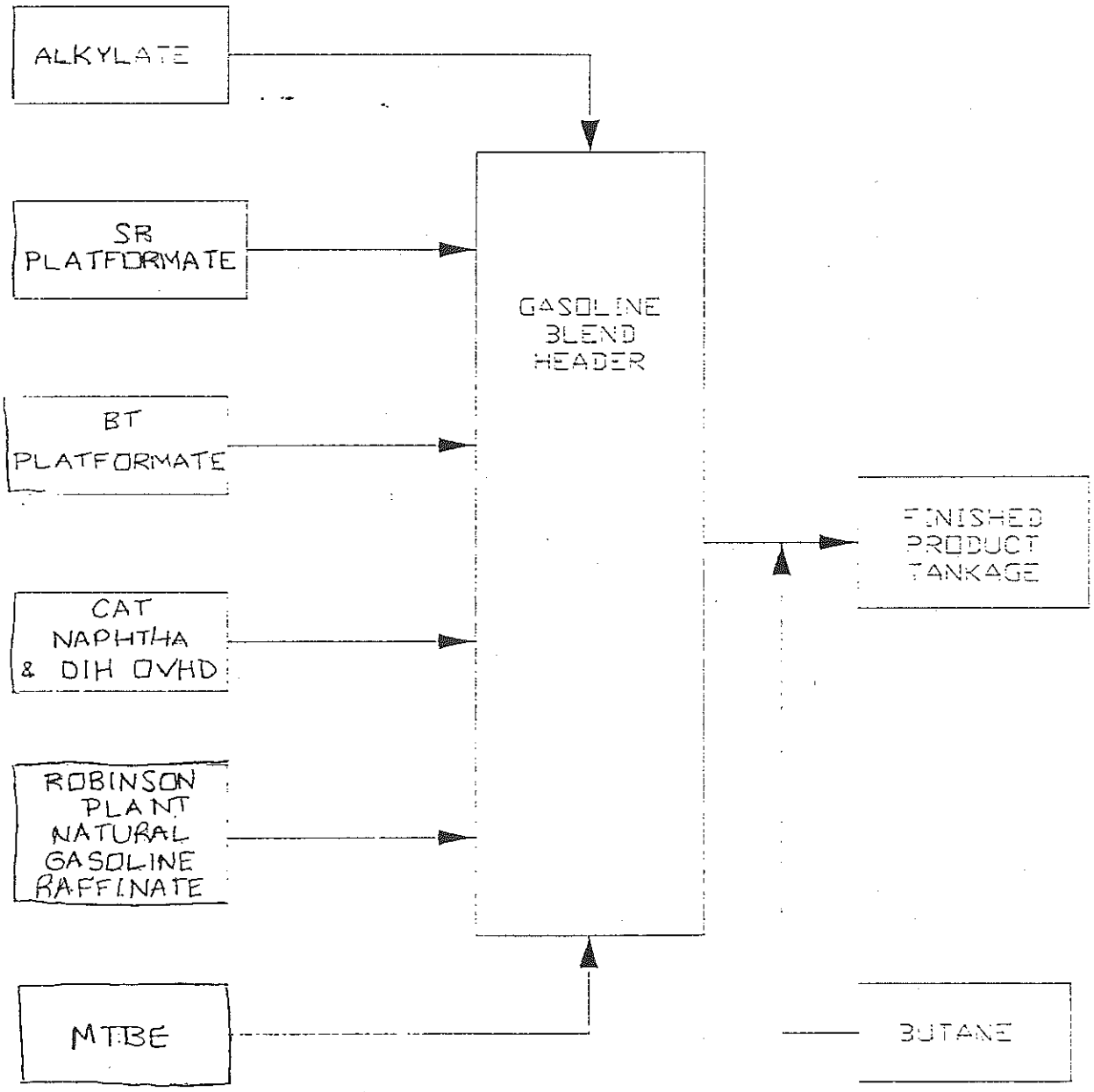
Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the Gasoline Blending Area. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

PROCESS OVERVIEW
BLOCK FLOW DIAGRAM

GASOLINE BLENDING



BLEND

PROCESS OVERVIEW FOR LPG AREA

1. LPG Area Description

LPG is liquid petroleum gas stored in high pressure vessels commonly referred to as bullets and spheres. LPG found in this refinery is either off-specification material and purchased unit feed to be processed through the units, or finished product to be sold by pipeline and tank cars.

2. LPG Location

The gasoline blend header is located south of the Crude Treater area near Tank 5. All of the gasoline blender equipment is numbered 32-X-X or 22-1-X-X.

3. Stream Names

a. Feeds to process units are:

Condensate	-	To Crude Unit
Refinery high pressure slop	-	To Sats Plant
Refinery low pressure slop/isobutane	-	To Sats/Alky Unit

b. Products from the LPG area are:

Butane	-	To gasoline blending
Propane	-	To tank cars or pipeline
Propylene	-	To tank cars

4. Chemicals

No purchased chemicals are used in the LPG area.

5. Utilities

Utilities within the LPG area are listed below along with their normal pressure and temperature.

Electricity	-	110V, 480V
Steam, low pressure	-	15 psig @ 250°F, 50 psig @ 300°F
Steam, high pressure	-	150 psig @ 400°F
Instrument air	-	50 psig, dry
Potable water	-	50 psig @ 70°F

6. Hazards and Toxics

The following items are specific hazards that you should be aware of in this area. Refer to the specific procedure for that item in the Safety Rules & Procedures Manual or the MSDS book for detailed instructions.

H_2S (hydrogen sulfide)	- Present in all streams in this area SEE NOTE 1 BELOW
Extremely flammable	- All streams in this area are flammable
High vapor density	- LPG's are heavier than air and tend to accumulate in low areas

7. Special Precautions

Hard hats, work boots with a heel, eye protection, hearing protection, and fire retardant clothing (Nomex) are required within the battery limits of the LPG Area. Personnel must also wear goggles or face shields when appropriate. Battery limits are designated by a yellow line painted on the ground around the perimeter of the unit. An Operations Department representative must sign a Safe Work Permit before work is begun in the battery limits.

Acid areas are identified by orange lines painted around the equipment. Entry into these areas requires full protective clothing consisting of rain gear, face shield, goggles, boots, and gloves as well as notification to Operations Department representatives upon entering and exiting the area.

In the event that a fire/emergency alarm sounds or a red flashing warning light is activated, vehicles should be pulled off the road and the engine turned off. Exit the area immediately. Contractors should proceed on foot to the nearest security gate. Maintenance personnel should report to their shop and await further instructions.

NOTE 1 - Hydrogen sulfide, H_2S, is often referred to as a "sour gas" because of its very offensive rotten egg odor. The rotten egg odor is deceiving because at exposures as low as 50 ppm, the sense of smell can become deadened. In higher concentrations, the loss of smell can lead one to assume the area is safe. H_2S is extremely poisonous and must be treated with respect to avoid injury, fire, or even death. Know the location of escape and rescue fresh air packs in the area.

PROCESS OVERVIEW

BLOCK FLOW DIAGRAM

LPG AREA

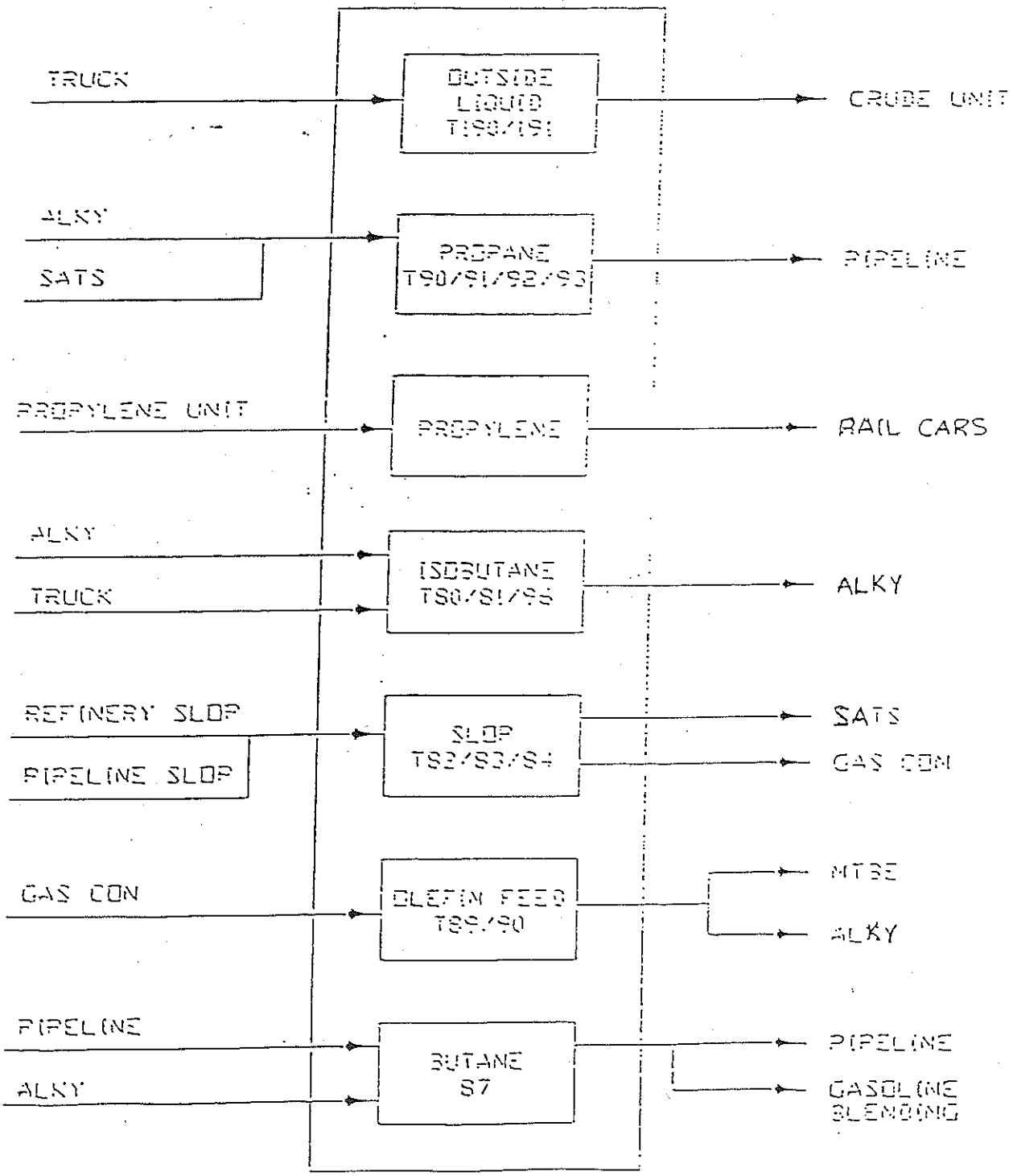


Table 1

Summary of Solid Waste Generated in Each Process Unit [1]

Detroit Refinery

Process Unit	Waste	EPA Waste Code
Crude/Vacuum Units (5 and 4)	Flux Mixed with Clay Desalter Solids [2] Dessicant	Non hazardous Potentially D001, D018 Non hazardous
Naphtha/Distillate Treaters (6)	Spent Caustic	D002, D003
Gas Oil/Distillate Hydrotreater (7)	Spent Carbon Filters Amine Filters Spent Hydrotreater Catalyst (C-448 & KF-752) Salt Filters (7V103)	Non hazardous D001, D018 D001 Non hazardous
Alkylation Unit (9)	Coalesser Filters (9V9) Spent Sulfuric Acid Spent Caustic	Non hazardous Exempt - Returned to Mfg. to produce virgin sulfuric acid D002, D003
MTBE Unit (10)	Spent MTBE Catalyst Olefin Feed Filters (10V103) Spent Ion Exchange Resin (MRU Skid)	Non hazardous Non hazardous Non hazardous
Fluid Catalytic Cracker Unit (11)	Spent FCCU Catalyst	Non hazardous
Gas Con (12)/Cracking Plant Treaters(21)/Propylene Unit (13)	Spent Caustic Amine Filters Cat Naphtha Sand Filters [2] Alky Feed Sand Filters [2]	D002, D003 D001, D018 Potentially D001, D002, D003 Potentially D001, D002, D003
Semi-Regen (SR) Platformer Unit (14)	Reformer Catalyst (UOP R-62)	D001
Naphtha Hydrotreater Unit (16)	Spent Hydrotreating Catalyst (C-448) NHT Particulate Feed Filters	D001 D001
BT Platformer Unit (17)	Reformer Catalyst (UOP R-72 and R-56)	D001
Kerosene Hydrotreater (19)	Spent Hydrotreating Catalyst (C-448) KHT Clay filters Particulate Filter	D001 D001 Non hazardous

Table 1

Summary of Solid Waste Generated in Each Process Unit [1]

Detroit Refinery

Process Unit	Waste	EPA Waste Code
Tank Farms (22)	Tank Bottoms [2] Leaded Tank Bottoms Leaded Material	Potentially D001, D018 K052 D008
Crude Boiler Feedwater Treating Unit (26)	Spent Ion Exchange Resin	Non hazardous
CO Boiler (27)/ CP Boiler Feedwater (28)	Spent Ion Exchange Resin	Non hazardous
Wastewater Treatment Unit (29)	Wastewater Sludge API Sludge DAF Float Sludge Slop Oil Emulsion Solids	F037, F038 K051 K048 K049
Laboratory (31)	Unused samples Old/obsolete chemicals	To wastewater treatment unit Various codes - Use Lab Pack to dispose once/year
Gasoline Blending/LPG Unit (32)	None	
Sour Water Strippers (41)	None	
Sulfur Recovery (42)	Spent SRU Catalyst (Alcoa S-400) Waste Sulfur	D001 Non hazardous
Scot Tail Gas Treating Unit (43)	Spent TGTU Catalyst (UCI C-29) Quench Filters Amine Filters Spent Carbon Filter	D001 Non hazardous D001, D018 Non hazardous
Central Control Room (50)	Air Filter	Non hazardous
Non Process Waste/Office	Medical Waste General Refuse/Trash	Non hazardous Non hazardous
Process Waste From All Units	Pump Screen Cleanings [2] Bundle Cleaning Sludge General Refuse/Trash Tank Bottoms [2] Old/obsolete chemicals	Potentially D001, D018 K050 Non hazardous Potentially D001, D018 Various codes - Use Lab Pack to dispose once/year

Table 1
Summary of Solid Waste Generated in Each Process Unit [1]
Detroit Refinery

Process Unit	Waste	EPA Waste Code
Maintenance	Aerosol Cans (empty and depressurized)	Non hazardous
(wastes potentially generated from all process units	Aerosol Cans (non-empty) [2]	Potentially D001
during Maintenance activities)	Asbestos - insulation	Non hazardous
	Asphalt/Concrete	Non hazardous
	Batteries (non-lead acid)	Universal Waste
	Batteries (lead acid)	Universal Waste
	Coke	Non hazardous
	Construction Debris	Non hazardous
	Empty Drums	Non hazardous
	Filters With Oil [2]	Potentially D001, D018
	Fluorsecent Tubes	Universal Waste
	Gaskets	Non hazardous
	High Intensity Sodium or Mercury Vapor Bulbs	Universal Wastes
	Insulation (non asbestos)	Non hazardous
	Insulation (oil soaked) [2]	Potentially D001, D018
	Insulation Jacketing	Non Hazardous
	Scrap Metal (including motors, pump parts,etc.)	Non hazardous
	Used Oil	Crude Unit Slop Tanks
	Paint Waste [2]	Potentially D001
	Paint Cleanup Waste [2]	Potentially D001
	Parts Washing Fluid	D001, D004, D010
	Refractory	Non Hazardous
	Sandblast Material [2]	Potentially D008
	Soil Contaminated with Oil (spill cleanup) [2]	Potentially D001, D018
	Sorbents/rags (spill cleanup) [2]	Potentially D001, D018

(1) This table does not include process or maintenance waste water streams.

(2) Some waste streams generated at the refinery can be a hazardous or nonhazardous waste depending on the process generating the waste (i.e., soil may be characteristically hazardous depending on the quantity of oil or other contaminants present). These waste streams are characterized each time they are generated to determine the applicable EPA waste codes. The EPA waste codes provided are those typically associated with the waste stream when it is found to be characteristically hazardous.

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
1	Resid	187,404	1948	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
2	Idle	367,458	1940	Cone	604	No, TVP < or = 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof tank
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
4	Caustic (NaOH)	19,446	< 1964	Cone	604	No, not an organic compound
					605	No, not an organic compound
					623	No, not a petroleum liquid
					K	No, not a petroleum liquid
					Ka	No, not a petroleum liquid
					Kb	No, not a volitile organic liquid
					CC	No, not in organic HAP service.
5	Caustic (NaOH)	19,446	1978	Cone	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, not a volitile organic liquid
					CC	No, not in organic HAP service.
6	RLF Gasoline	49,560	Jun-75	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	Yes, until 8/18/1998
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
6A	Wastewater/Slop Oil	30,786	1970	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
					QQQ	No, Installed prior to 5/4/1987

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
6B	Wastewater/Slop Oil	30,786	1970	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
					QQQ	No, Installed prior to 5/4/1987
6C	Out of Service	42,000	1954	Cone		Permanently out of service.
7	Sweet Gasoil	927,612	1941	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
8	Slop Oil	88,326	1980	IFR	604	No, constructed after 7/1/79
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed after 5/19/78
					Ka	Yes, until 8/18/98
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
9	Idle	21,000	1954	Cone	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, cone roof tank, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
10	High Sulfur #6 Fuel Oil	187,404	1935	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
11	Sweet Naphtha	594,174	1975	Cone	604	No, TVP < or = 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, TVP < 1.0 psia
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
14	Idle	164,136	1945	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
15	Alcohol	2,940	<1973	Horizontal	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, < 10,000 gal.
					CC	No, < 10,000 gal.
16	Slurry	190,554	1961	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
17	Slurry	190,554	1961	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
18	Raw Naphtha	387,324	1961	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
19	Sweet Naphtha	387,324	1961	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
20	Idle	1,050,000	1940	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
21	Platformate	878,640	1940	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
22	Idle	879,438	1939	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
23	Crude Slop Oil	336,000	1974	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	Yes, until 8/18/98
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
24	Raw Kerosene	949,956	1948	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
25	Idle	420,000	1955	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
27	Raw Kerosene	949,746	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
28	Slurry	953,022	1948	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
29	Fuel Oil Additive	19,488	< 1982	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, cone roof
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
30	Paving Asphalt	951,384	1948	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
31	Paving Asphalt	951,552	1948	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
32	Wastewater	1,400,000	1970	Open	604	No, not organic liquid
					605	No, not organic liquid
					623	No, not organic liquid
					k	No, not organic liquid
					Ka	No, not organic liquid
					Kb	No, not organic liquid
					CC	No, not organic liquid

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
33	Wastewater	1,400,000	1976	Open	604	No, not organic liquid
					605	No, not organic liquid
					623	No, not organic liquid
					k	No, not organic liquid
					Ka	No, not organic liquid
					Kb	No, not organic liquid
					CC	No, not organic liquid
35	Methanol	157,374	1989	IFR	604	No, constructed after 7/1/79
					605	No, constructed after 7/1/79
					623	No, constructed after 7/1/79
					K	No, constructed after 5/19/78
					Ka	No, constructed after 7/23/84
					Kb	Yes [see 63.640(n)(1)]
					CC	Yes, however, must compy with Kb ONLY
36	SLF Gasoline	446,712	1948	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
39	Idle	880,278	1948	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
40	RLF Gasoline	879,228	1948	IFR	604	No, modified after 7/1/79
					605	No, modified after 7/1/79
					623	No, modified after 7/1/79
					K	No, modified after 5/19/78
					Ka	No, modified after 7/23/84
					Kb	Yes [see 63.640(n)(1)]
					CC	Yes, however, must compy with Kb ONLY
41	Platformate	905,730	1948	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
42	Idle	181,524	1960	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
43	Idle	181,524	1960	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
45	SLF Gasoline	172,452	1954	IFR	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, TVP < 1.0 psia; IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
46	SLF Gasoline	172,410	1954	IFR	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, TVP < 1.0 psia; IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
47	MTBE	172,410	1954	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
48	Alkylate	359,268	1954	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
49	Alkylate	371,112	1954	IFR	604	No, modified after 7/1/79
					605	No, modified after 7/1/79
					623	No, modified after 7/1/79
					K	No, modified after 5/19/78
					Ka	No, modified after 7/23/84
					Kb	Yes [see 63.640(n)(1)]
					CC	Yes, however, must compy with Kb ONLY
50	Flush Oil	1,688,190	1954	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
51	Sour Water	1,688,694	1955	IFR	604	No, modified after 7/1/79
					605	No, TVP < 11 psia
					623	No, modified after 7/1/79
					K	No, modified after 5/19/78
					Ka	No, modified after 7/23/84
					Kb	Yes [see 63.640(n)(1)]
					CC	Yes, however, must compy with Kb ONLY
52	Sour Gasoil	919,506	1954	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
54	Slurry	3,075,702	1947	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
55	FCCU Naphtha	1,997,730	1940	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
56	Sweet Gasoil	2,110,584	1941	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
57	Raw Naphtha	2,154,558	1945	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof tank
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
58	FCCU Naphtha	2,055,144	1947	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
59	Resid	2,177,910	1948	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
60	Resid	1,882,608	1948	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
61	Alkylate	538,524	1958	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
62	Idle	586,530	1958	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
63	Low Sulfur #6 Fuel Oil	587,202	1954	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
64	Idle	580,734	1964	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
66	Fuel Oil Additive	37,800	1947	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, const. prior to 6/11/73; < 40,000 gal.
					Ka	No, const. prior to 5/18/78; < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
70	Low Sulfur #2 Fuel Oil	972,426	1958	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
71	Low Sulfur #1 Fuel Oil	972,762	1958	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
72	RFL Gasoline	2,097,060	1977	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	Yes
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
80	Isobutane	21,336	1945	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
81	Isobutane	21,336	1945	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
82	High Pressure Slop	25,536	1945	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
83	High Pressure Slop	25,536	1945	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
84	High Pressure Slop	14,112	1934	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
87	Normal Butane	451,038	1976	Sphere	604	No, TVP > 11 psia
					605	Yes
					623	No, TVP > 11 psia; spherical tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
89	Olefins	30,072	1959	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
90	Idle	30,072	1959	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
91	Propane	21,798	1959	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
92	Propane	21,798	1959	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
93	Propane	21,798	1959	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
94	Propylene	20,664	1961	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
95	Propylene	20,664	1961	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
96	Isobutane	164,136	1959	Sphere	604	No, TVP > 11 psia
					605	Yes
					623	No, TVP > 11 psia; spherical tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
98	Propylene	20,664	1961	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
99	Propylene	20,664	1962	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
100	Sweet Gasoil	3,800,790	1950	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
101	Raw Naphtha	3,885,630	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof tank
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
102	Low Sulfur #1 Fuel Oil	3,885,210	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
103	Raw Distillate	3,885,504	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
104	Idle	4,743,774	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
105	Sweet Gasoil	4,624,536	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, TVP < 1.0 psia; cone roof
					K	No, cone roof
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
106	Sweet Gasoil	4,623,906	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
107	Idle	4,626,342	1952	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
108	RLF Gasoline	6,239,940	1960	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
109	RLF Gasoline	6,241,620	1960	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
110	SLF Gasoline	6,312,054	1960	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements
112	Sour Crude	7,994,952	1966	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
113	Sour Crude	7,915,446	1960	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
114	Sour Crude	2,422,854	1960	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
115	Sweet Crude	2,501,226	1960	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
116	Raw Naphtha	4,475,394	1985	IFR	604	No, constructed after 7/1/79
					605	No, constructed after 7/1/79
					623	No, constructed after 7/1/79
					K	No, constructed after 5/19/78
					Ka	No, constructed after 7/23/84
					Kb	Yes [see 63.640(n)(1)]
					CC	Yes, however, must compy with Kb ONLY
120	Sour Gasoil	4,637,892	1964	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
125	Idle	6,210,666	1970	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
126	Raw Distillate	6,210,666	1970	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
127	Low Sulfur #2 Fuel Oil	5,728,800	1974	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	Yes, if storing liquids with TVP and RVP > 1.0 psia
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
128	Low Sulfur #2 Fuel Oil	6,171,354	1974	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	Yes, if storing liquids with TVP and RVP > 1.0 psia
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
129	Sweet Crude	4,877,040	1989	EFR	604	No, EFR
					605	No constructed after 7/1/79
					623	No constructed after 7/1/79
					K	No, constructed after 5/19/78
					Ka	No, constructed after 7/23/84
					Kb	Yes [see 63.640(n)(1)]
					CC	Yes, however, must compy with Kb ONLY
130	Sour Crude	5,558,070	1974	EFR	604	No, EFR
					605	No, TVP < 11 psia
					623	Yes
					K	Yes, until 8/18/98
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
133	Idle	5,593,308	1975	Fixed Roof	604	No, TVP <1.5
					605	No, TVP < 11 psia
					623	No, fixed roof
					K	No, modified after 5/19/78
					Ka	No, modified after 7/23/84
					Kb	Yes, recordkeeping only, TVP <0.5
					CC	Yes, Group 2 requirements
					UU	Yes, 60.472(c)
134	Idle	5,893,524	1977	Fixed Roof	604	No, TVP <1.5
					605	No, TVP < 11 psia
					623	No, fixed roof
					K	No, modified after 5/19/78
					Ka	No, modified after 7/23/84
					Kb	Yes, recordkeeping only, TVP <0.5
					CC	Yes, Group 2 requirements
					UU	Yes, 60.472(c)

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
170	Dye	9,030	1965	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, cone roof tank, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, < 251 bbls.
171	Dye	9,030	1965	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, cone roof tank, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, < 251 bbls.
172	Dye	9,030	1965	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, cone roof tank, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, < 251 bbls.
173	Dye	9,030	1965	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, cone roof tank, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, < 251 bbls.
176	Pipeline Transmix	452,214	1965	Sphere	604	Yes
					605	No, TVP < 11 psia
					623	No, no EFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, pressure vessel
181	Diesel Fuel	504	1994	Horizontal	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, < 10,000 gal.
					CC	No, < 10,000 gal.

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
190	High Pressure Condensate	20,664	1962	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
191	High Pressure Condensate	20,664	1964	Horizontal (Pressure)	604	No, TVP > 11 psia; < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, TVP > 11 psia; < 40,000 gal.; horizontal tank
					K	No, exempt, pressure vessel
					Ka	No, exempt, pressure vessel
					Kb	No, exempt, pressure vessel
					CC	No, exempt, pressure vessel
214	Sour Water	420,000	1967	IFR	604	Yes
					605	No, TVP < 11 psia
					623	No, IFR
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 1 tank requirements after 8/18/98
314	Paving Asphalt	2,185,554	1968	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
315	Paving Asphalt	2,185,428	1968	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
316	Paving Asphalt	4,533,522	1972	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
317	Idle	8,687,994	1972	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
318	Paving Asphalt	6,870,234	1972	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
319	Paving Asphalt	3,867,360	1972	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
320	Paving Asphalt	6,870,234	1972	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
321	Therminol	588	1968	Cone	604	No, TVP < or = 1.5 psia; < 40,000 gal.
					605	No, TVP < or = 11 psia; < 40,000 gal.
					623	No, TVP < or = 1.0 psia; cone roof tank; < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, < 251 bbls.
322	Therminol	500	1969	Cone	604	No, TVP < or = 1.5 psia; < 40,000 gal.
					605	No, TVP < or = 11 psia; < 40,000 gal.
					623	No, TVP < or = 1.0 psia; cone roof tank; < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, < 251 bbls.

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
323	Therminol	798	1969	Cone	604	No, TVP < or = 1.5 psia; < 40,000 gal.
					605	No, TVP < or = 11 psia; < 40,000 gal.
					623	No, TVP < or = 1.0 psia; cone roof tank; < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	No, exempt, < 251 bbls.
324	High Sulfur #6 Fuel Oil	77,112	1986	Cone	604	No, TVP < 1.5 psia, const. after to 7/1/79
					605	No, TVP < 11 psia, const. after 7/1/79
					623	No, TVP < 1.0 psia, const. after 7/1/79
					K	No, constructed after 5/19/78
					Ka	No, constructed after 7/23/84
					Kb	Yes, 60.116b(b) only
					CC	Yes, however, must compy with Kb ONLY
					UU	No, flush oil tank, equivalent to #6 F.O.
502	Crude Slop Oil	19,110	1952	Cone	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.; cone roof
					K	No, const. prior to 6/11/73; < 40,000 gal.
					Ka	No, const. prior to 5/18/78; < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
503	Crude Slop Oil	16,926	1952	Cone	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.; cone roof
					K	No, const. prior to 6/11/73; < 40,000 gal.
					Ka	No, const. prior to 5/18/78; < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
504	Idle	16,926	1952	Cone	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.; cone roof
					K	No, const. prior to 6/11/73; < 40,000 gal.
					Ka	No, const. prior to 5/18/78; < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
505	Crude Slop Oil	16,926	1952	Cone	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.; cone roof
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
507	Idle	193,914	1968	Cone	604	No, TVP < 1.5 psia
					605	No, TVP < 11 psia
					623	No, cone roof
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
508	Crude Slop Oil	345,996	1972	IFR	604	No, modified after 7/1/79
					605	No, modified after 7/1/79
					623	No, modified after 7/1/79
					K	No, modified after 5/19/78
					Ka	No, modified after 7/23/84
					Kb	Yes [see 63.640(n)(1)]
					CC	Yes, however, must compy with Kb ONLY
511	Idle	21,000	< 1975	Cone	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, not a volitile organic liquid
					CC	No, not in organic HAP service.
526	Idle	14,700	< 1975	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, not a volitile organic liquid
					CC	No, not in organic HAP service.
528	Idle	14,700	< 1975	Cone	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, not a volitile organic liquid
					CC	No, not in organic HAP service.
529	Amine	2,940	<1984	Horizontal	604	No, < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, < 10,000 gal.
					CC	No, < 10,000 gal.

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
530	Alcohol	2,940	<1984	Horizontal	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, < 10,000 gal.
					CC	No, < 10,000 gal.
532	Lube Oil	2,940	1992	Horizontal	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, < 10,000 gal.
					CC	No, < 10,000 gal.
603	High Sulfur #6 Fuel Oil	36,162	1977	Cone	604	No, TVP < 1.5 psia; < 40,000 gal.
					605	No, TVP < 11 psia; < 40,000 gal.
					623	No, cone roof
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
608	Low Sulfur #6 Fuel Oil	18,564	1953	Horizontal (atmospheric)	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
609	Low Sulfur #6 Fuel Oil	18,564	1953	Horizontal (atmospheric)	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements
610	Low Sulfur #6 Fuel Oil	18,564	1953	Horizontal (atmospheric)	604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, constructed prior to 6/11/73
					Ka	No, constructed prior to 5/18/78
					Kb	No, constructed prior to 7/23/84
					CC	Yes, Group 2 tank requirements

Table 2
Summary of Storage Tanks
Detroit Refinery

Tank Number	Tank Contents	Capacity (gals)	Year Built	Roof Type	Potentially App. Regs	Applicability Determination
940	Anti-Oxidant	2,856			604	No, < 40,000 gal.
					605	No, < 40,000 gal.
					623	No, < 40,000 gal.
					K	No, < 40,000 gal.
					Ka	No, < 40,000 gal.
					Kb	No, < 10,000 gal.
					CC	No, < 10,000 gal.

Table 3
Summary of Waste Handling Procedures
Detroit Refinery

Waste	Special Management Instructions	Container [1]	Accumulation Location [2]
Aerosol Cans (empty and depressurized)	Place in scrap metal rolloff box.	Scrap Metal Rolloff	Scrap Metal Rolloff - any paved surface.
Aerosol Cans (non-empty)	Collect in a drum and notify Environmental. The waste transfer form should include a description of the material in the cans.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Air Filter	Air filters used in heating/cooling systems of office buildings are a nonhazardous waste	Plant Trash	Any paved surface in refinery
Amine Filters	These filters are hazardous wastes (D001, D018). Satellite accumulation drums do not need to be dated (must still be labeled "Amine Filters"). Once the drum is full, the drum should be dated and transferred to the Martin Warehouse Haz. Accum. Area.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
API Sludge [3] (includes API, DAF, Slop Oil Emulsion Solids and waste water sludge)	API sludge is a listed hazardous waste (K048, K049, K051, F037, F038). 2 -weeks before shipment date; notify Laidlaw - Lori Irwin or Ed VanHoff @ 519-864-1021. (Wastewater (API) Sludge - Code B)	Laidlaw Rolloff Box	Complex 1 29T12 Pad
Asbestos (friable and non-friable; not contaminated with oil)	Asbestos must be managed separately from other materials - place in a separate rolloff box or drum (depending on quantity). Contractor should manage asbestos in accordance with regulations.	Rolloff box from landfill or drum (Material must be covered securely)	Any paved surface in refinery
Asphalt/Concrete	Separate asphalt and concrete; pieces can be no larger than 3 foot x 3 foot x 3 foot. Recycle at Angelo's Crushed Concrete or AJAX Asphalt	Rolloff box	Any paved surface in refinery
Batteries (Dry-cell; including batteries from flashlights, pagers, cellular phones, refinery radios, gas detectors)	Batteries are collected at each unit (blue tubs) and then transferred to a 55-gallon drum located at the Martin Warehouse Hazardous Waste Accumulation area.	Blue tubs in each unit then transfered to a 55-gallon drum	Blue tubs - unit office Drums - Martin Warehouse Hazardous Waste Accumulation
Batteries (Lead-Acid)	These batteries are recycled. They should be placed on a pallet in the Martin Warehouse Haz. Waste Accumulation Area.	(no container) Place on pallet	Martin Warehouse Hazardous Waste Accumulation Area
Bundle Cleaning Sludge (Bundle Exchanger sludge)	Bundle cleaning sludge is a listed hazardous waste (K050). Solids must be collected and placed in a drum.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Catalyst	See instructions for specific type of catalyst or contact Environmental to obtain handling instructions	See Specific Type of Catalyst	See Specific Type of Catalyst
Coke	This is a non-hazardous waste.	Refinery Contaminated Material rolloff box or drum	Rolloff box: any paved surface in the refinery Drum - Martin Warehouse Hazardous Waste Accumulation Area
Construction Debris (could include: scrap metal, concrete, asphalt, rock, brick, wood, insulation and soil)	Construction debris should be visually inspected and segregated by material. Follow instructions for each type of material (i.e. scrap metal, concrete/asphalt, etc.). For rock, brick or wood which is not contaminated follow this guideline.	Plant trash	Any paved surface in the refinery.
Dessicant	Dessicant used to remove water from instrument air streams is a nonhazardous waste	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area

Table 3
Summary of Waste Handling Procedures
Detroit Refinery

Waste	Special Management Instructions	Container [1]	Accumulation Location [2]
Desalter Solids [3]	Solids removed from the desalters should be placed in a drum or rolloff box. Contact Environmental to conduct sampling and obtain waste disposal approval	55-gallon drum or rolloff box	Martin Warehouse Hazardous Waste Accumulation Area or Complex 1 29T12 Pad
Empty Drum (for disposal) (container does not contain more than one inch of product)	Drums for disposal must be rinsed prior to placing in Accumulation area. Drums should be crushed. Notify Environmental when drums are crushed.	Rolloff box	Empty Drum Area
Empty Drum (for recycle or reconditioning) (container does not contain more than one inch of product)	Drums with deposits should be returned to the supplier. Drums for reconditioning must have the original product label on drum, and must have lid or bungs.	NA	Empty Drum Area
FCCU Catalyst	This is a non-hazardous waste which is used as a raw material at several facilities. The Marathon Job Coordinator should determine where the material will be shipped and then contact Environmental for shipping papers.	Super sacks (check with receiving facility)	Any paved surface in refinery
Filters	See instructions for specific type of filter or contact Environmental to obtain handling instructions	See instructions for specific type of filter	See instructions for specific type of filter
Filters with Oil (includes air and oil filters contaminated with oil)	Filters must be drained. Recovered oil should be placed in "used oil" drums (See "used oil" for further instructions). Drained filters should be containerized separately. Contact Environmental to conduct sampling and obtain disposal approval.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Fluorescent Tubes	Tubes should not be broken - put back into original packaging if possible.	Cardboard containers or 55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Flux (includes flux with clay)	Place material into 55-gallon drums and label appropriately. For large quantities of flux - a rolloff box may be used for Accumulation.	55-gallon drum or rolloff box	Drum -Martin Warehouse Hazardous Waste Accumulation Area Rolloff box - any paved surface in refinery.
Gaskets	Some gaskets may contain asbestos. However, if gaskets are not crumbling (friable), they may be disposed in plant trash. If gaskets are crumbling (friable) and are thought to contain asbestos, they must be handled as asbestos.	Plant Trash or see Asbestos	Any paved surface in refinery
General Refuse/Trash	Items such as paper, food containers, wooden pallets, office supplies, etc. may be disposed in plant trash.	Plant trash rolloff box	Any paved surface in refinery
High Intensity Sodium or Mercury Vapor Bulbs	Bulbs should not be broken. Notify Environmental when placing bulbs in Martin Warehouse Haz. Waste Accumulation Area	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Hydrotreater Catalyst [3]	Spent hydrotreater(C-448 & KF-752) catalyst is a hazardous waste (D001). This material is either sent for regeneration or metals recovery. The Marathon Job Coordinator must determine the appropriate vendor and notify Environmental	Flow bins (inerted with dry ice)	Complex 2 Bundle Cleaning Pad or CP Bundle Cleaning Area

Table 3
Summary of Waste Handling Procedures
Detroit Refinery

Waste	Special Management Instructions	Container [1]	Accumulation Location [2]
Insulation (Non-Asbestos)	Non-asbestos insulation in small quantities may be placed into plant trash. However, if excessive amounts of insulation are to be removed, a separate container should be arranged and disposal coordinated by Environmental.	Plant trash or Rolloff box (if large quantity)	Any paved surface in the refinery
Insulation (oil soaked)	Oil soaked insulation should be separated from non-oil soaked material. Asbestos insulation should be contained appropriately (see Asbestos). Contact Environmental to conduct sampling and obtain waste disposal approval.	55-gallon drum (if small quantity) Rolloff box (large quantity)	Drum - Martin Warehouse Hazardous Waste Accumulation Area Rolloff box - 29T12 Pad, Complex 2 bundle cleaning pad or CP bundle
Insulation Jacketing	Metal insulation jacketing should be placed in the scrap metal dumpster.	Scrap metal dumpster	Any paved surface in refinery
Ion Exchange Resin	Spent ion exchange resin from the boiler feedwater treaters and MTBE unit is a nonhazardous waste.	55-gallon drums or Rolloff box	Martin Warehouse Hazardous Waste Accumulation Area
KHT Clay Filters	These filters are hazardous wastes (D001). Satellite accumulation drums do not need to be dated (must still be labeled "KHT Filters"). Once the drum is full, the drum should be dated and transferred to the Martin Warehouse Haz. Accumulation Area.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Medical Waste	Sharps (i.e., needles and syringes) Cultures (i.e. vaccines) Pathological Items (i.e. blood soak guaze)	Rigid, puncture resit. cont. Air tight/puncture resit. cont. Leakproof/air tight cont.	Toronto Auxillary Building - Plant Nurse office
Motors (scrap)	Motors which are to be scraped may be placed into the scrap metal dumpsters.	Scrap metal dumpster	Any paved surface in refimery
MTBE Catalyst	Catalyst without liquid is a nonhazardous material. For small quantities place in a drum, larger quantities should be placed in a rolloff box. If the catalyst contains liquid contact Environmental for instructions.	55-gallon drum or Rolloff box	Drums - Martin Warehouse Hazardous Waste Accumulation Area Rolloff boxes - any paved surface in refinery
NHT Particulate Feed Filters	These filters are hazardous wastes (D001). Satellite accumulation drums do not need to be dated (must still be labeled "NHT Filters"). Once the drum is full, the drum should be dated and transferred to the Martin Warehouse Haz. Accumulation Area.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Old/Obsolete Chemicals	Generated in the laboratory and process units. These materials may be hazardous. A lab pack company manages these wastes once/year. Contact Environmental to coordinate disposal.	Original container until repackaged or consolidated (lab pack) for disposal	Original container until repackaged or consolidated (lab pack) for disposal
Paint Cleanup Waste	Contact Environmental to conduct sampling and/or obtain waste disposal approval.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Paint Waste	Contact Environmental to conduct sampling and/or obtain waste disposal approval.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Parts Washing Fluid	Contact Environmental to conduct sampling and/or obtain waste disposal approval.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area

Table 3
Summary of Waste Handling Procedures
Detroit Refinery

Waste	Special Management Instructions	Container [1]	Accumulation Location [2]
Process Filters (Quench, 9V9, 10V103, Salt filters, Particulate filters,)	These nonhazardous process filters should be placed in drums or a rolloff box (depending on the quantity of filters).	Drums or Rolloff box	Drums - Martin Warehouse Haz. Waste Accumulation Area Rolloff box - any paved surface in refinery
Pump Parts	Pump parts must be placed into the scrap metal dumpsters once oil has been removed from parts.	Scrap Metal Dumpster	NA
Pump Screen Cleanings	Pump screen cleanings may be containerized with sorball, sorbent socks, and oily rags. Contact Environmental to conduct sampling and obtain disposal approval.	55-gallon drums	Martin Warehouse Hazardous Waste Accumulation Area
Reformer Catalyst [3]	Spent reformer catalyst (UOP R-62, R-72 & R-56) is a hazardous waste (D001). This material is either sent for regeneration or metals recovery. The Marathon Job Coordinator must determine the appropriate vendor and notify Environmental	Flow bins (inerted with dry ice)	CP Bundle Cleaning Area
Refractory	This is a non-hazardous waste	Refinery Contaminated Material rolloff box	Any paved surface in refinery
Sand Filters (includes Cat Naphtha and Alky Feed filters)	Sand filters contain may contain caustic and may be a hazardous waste. Sand filter media should be placed in a drum. Contact Environmental to conduct sampling and arrange waste disposal approval.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Sandblast Material	Contact Environmental to conduct sampling and obtain waste disposal approval.	55-gallon drum (if small quantity) Rolloff box (lg. quantity)	Drum - Martin Warehouse Hazardous Waste Accumulation Area Rolloff box - 29T12 Pad, Complex 2 bundle cleaning pad or CP bundle cleaning pad
Scrap Metal (includes bolts, pipe, etc.)	Metal should be placed into scrap metal dumpsters. However, metal should be drained of any oil and be free of any insulation.	Scrap metal dumpster	Any paved surface in refimery
Sewer Sludge/Cleanings [3]	Sewer sludge is a listed hazardous waste (K048, K049, K051, F037, F038). 2 -weeks before shipment date; notify Laidlaw - Lori Irwin or Ed VanHoff @ 519-864-1021. (Wastewater (API) Sludge - Code B)	Laidlaw Rolloff Box or 55-gallon drum	Complex 1 29T12 Pad
Soil Contaminated With Oil [3]	Soil generated from excavations must be containerized separately. Contact Environmental to conduct sampling and obtain waste disposal approval.	55-gallon drum (small quantity) Rolloff box (large quantity)	Drum - Martin Warehouse Hazardous Waste Accumulation Area Rolloff box - 29T12 Pad, Complex 2 bundle cleaning pad or CP bundle cleaning pad
Sorbents/Rags (includes sorbent pads/socks, sorball and rags with oil)	Sorbent pads/socks may be containerized with pump screen cleanings, oily rags, and sorball but should be labeled appropriately. Contact Environmental to conduct sampling and obtain waste disposal approval.	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area
Spent Carbon (includes spent carbon filters)	The carbon should be placed into drums and returned to supplier for recycle.	55-gallon drums	Martin Warehouse Hazardous Waste Accumulation Area

Table 3
Summary of Waste Handling Procedures
Detroit Refinery

Waste	Special Management Instructions	Container [1]	Accumulation Location [2]
Spent Caustic	This is a hazardous waste (D002, D003). Notify Environmental prior to shipment to obtain shipping papers.	Tank 21T47	Hazardous Waste Tank 21T47
Spent Sulfuric Acid	Recycled back to supplier. Contact purchasing or the Marathon Job Coordinator for supplier name.	NA	NA
SRU Catalyst [3]	Spent SRU catalyst (Alco S-400) is a hazardous waste (D001). This material is either sent for regeneration or metals recovery. The Marathon Job Coordinator must determine the appropriate vendor and notify Environmental	Flow bins (inerted with dry ice)	Complex 2 Bundle Cleaning Pad
Tank Bottoms	All tank bottoms must be handled and stored separately. Contact Environmental to conduct sampling and obtain waste disposal approval.	55-gallon drum (small quantity) Roll off box (large quantity)	Drum - Martin Warehouse Hazardous Waste Accumulation Area Rolloff box - 29T12 Pad, Complex 2 bundle cleaning pad or CP bundle cleaning pad
TGTU Catalyst [3]	Spent TGTU catalyst (UCI C-29) is a hazardous waste (D001). This material is either sent for regeneration or metals recovery. The Marathon Job Coordinator must determine the appropriate vendor and notify Environmental	Flow bins (inerted with dry ice)	Complex 2 Bundle Cleaning Pad
Unused Samples	Unused liquid samples are placed into the refinery sewer system. Unused solid samples are placed in plant trash	Plant trash rolloff	Any paved surface in refinery
Used Oil	Used oil must be managed in the refinery slop oil system to be excluded from hazardous waste management requirements; therefore, it cannot be drained to the refinery sewer system. Complete the *Used Oil Generation Form* and send copy to Environmental.	Small quantities - drum Large quantities - have vacuum truck remove oil directly from equipment	Slop Oil Tanks
Waste Sulfur	Sulfur from cleanups should either be placed into drums	55-gallon drum	Martin Warehouse Hazardous Waste Accumulation Area

Notes:

NA - requirement not applicable to this waste stream

(1) Containers are obtained from the warehouse. Use the "Rolloff Box Request Form" to obtain a rolloff box.

(2) The following areas are designated as waste accumulation areas:

Complex 1: 29T12 Pad (Any liquid waste (haz or nonhaz) and solid hazardous waste)

Complex 2: Bundle Cleaning Area (Any liquid waste (haz or nonhaz) and solid hazardous waste)

Martin Warehouse Hazardous Waste Accumulation Area (all drummed material - haz and nonhaz)

Complex 3/4: CP Bundle Cleaning Area (Any liquid waste (haz or nonhaz) and solid hazardous waste)

** nonhazardous solid waste can be placed on any paved surface within the refinery.

A "Waste Transfer Form" should be completed and sent to Environmental when placing a waste (both hazardous and non-hazardous) into an accumulation area.

(3) Hazardous waste container emissions monitoring (Subpart CC) should be conducted on containers (greater than 120 gallons) used to store this waste stream. See guideline for monitoring instructions.

3

Table 4
Summary of Hazardous Wastes And Applicability of Subpart CC Regulations
Detroit Refinery

Waste	EPA Waste Code	Process Unit	Storage Container	Average Volatile Organic Concentration	Basis For Average VOC Concentration	Subpart CC Applicable?	Management Procedure
Desalter Solids (1)	Potentially D001, D018	5	55-gallon drums or rolloff box	>500 ppmv	Generator knowledge	Yes	Drums: Level 1 controls: DOT container/inspected Rolloff box: Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Spent Caustic	D002, D003	6,9,21	Tank 21T47	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Pressurized Tank
Amine Filters	D001, D018	7, 21, 43	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Spent Hydrotreater Catalyst (C-448 & KF 752)	D001	7	Flow bins (80 ft^3)	>500 ppmv	Generator knowledge	Yes	Not in light material service (org. const. <20% by weight) - Level 1 controls: Container has a cover and closure device - continuous barrier.
Sand Filters (Cat Naphtha and Alky Feed) (1)	Potentially D001, D002, D003	12	55-gallon drums	>500 ppmv	Generator knowledgs	Yes	Level 1 controls: DOT container/ inspected
Spent Reformer Catalyst	D001	14, 17	Flow bins (80 ft^3)	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Spent Hydrotreating Catalyst (C-448)	D001	16,19	Flow bins (80 ft^3)	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
NHT Particulate Feed Filters	D001	16	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
KHT Clay filters	D001	19	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
API Sludge	K051	29	Rolloff box	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Wastewater Sludge	F037, F038	29	55-gallon drums or rolloff box	>500 ppmv	Generator knowledge	Yes	Drums: Level 1 controls: DOT container/inspected Rolloff box: Level 2 controls: Container monitored to ensure no detectable emissions/ inspected

Table 4
Summary of Hazardous Wastes And Applicability of Subpart CC Regulations
Detroit Refinery

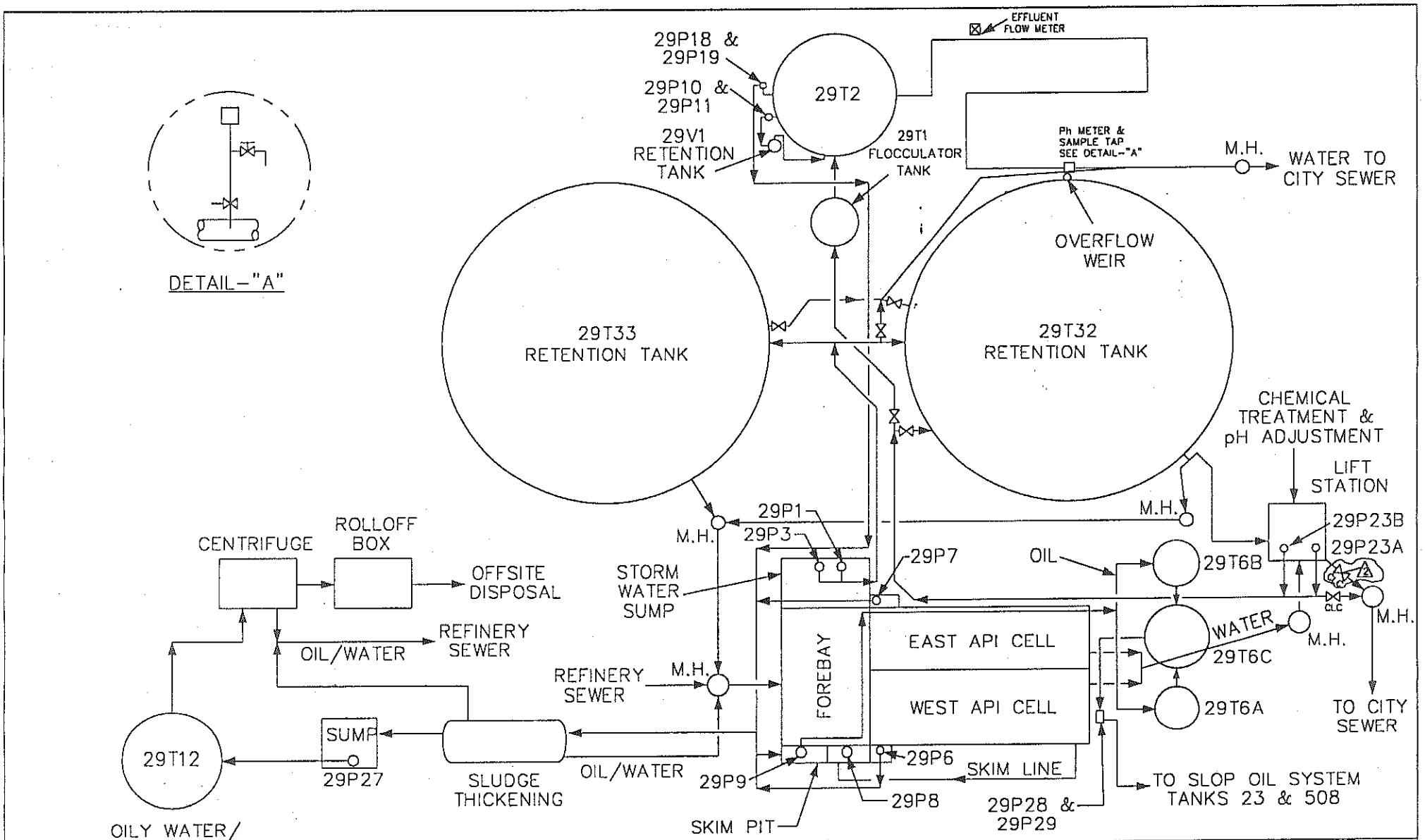
Waste	EPA Waste Code	Process Unit	Storage Container	Average Volatile Organic Concentration	Basis For Average VOC Concentration	Subpart CC Applicable?	Management Procedure
DAF FLoat Sludge	K048	29	Rolloff box	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Slop Oil Emulsion Solids	K049	29	Rolloff box	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Old/obsolete chemicals	Various Codes	31	Typically <5 gallons	NA	NA	NO 265.1080 (b)(2)	NA
Spent Catalyst (SRU)	D001	42	Flow bins (80 ft^3)	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Spent Catalyst (TGTU)	D001	43	Flow bins (80 ft^3)	>500 ppmv	Generator knowledge	Yes	Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Bundle Cleaning Sludge	K050	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Filters with Oil [1]	Potentially D001, D018	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Old/Obsolete Chemicals	Various Codes	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Tank Bottoms [1]	Potentially D001, D018	All	55-gallon drums/rolloff box/vacuum truck	>500 ppmv	Generator knowledge	Yes	Drum: Level 1 controls: DOT container/ inspected weekly Rolloff box: Level 2 controls: Container monitored to ensure not detectectable emissions/inspected. Vacuum truck: Immediately transported off-site. Truck not used for on-site storage.
Leaded Tank Bottoms	K052	All	55-gallon drums/rolloff box/vacuum truck	>500 ppmv	Generator knowledge	Yes	Drum: Level 1 controls: DOT container/ inspected weekly Rolloff box: Level 2 controls: Container monitored to ensure not detectectable emissions/inspected. Vacuum truck: Immediately transported off-site. Truck not used for on-site storage.

Table 4
Summary of Hazardous Wastes And Applicability of Subpart CC Regulations
Detroit Refinery

Waste	EPA Waste Code	Process Unit	Storage Container	Average Volatile Organic Concentration	Basis For Average VOC Concentration	Subpart CC Applicable?	Management Procedure
Leaded Material	D008	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Aerosol Cans (non-empty) (1)	Potentially D001	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Paint Waste (1)	Potentially D001	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Paint Cleanup Waste (1)	Potentially D001, D008	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Parts Washer Fluid	D001, D004, D010	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Sandblast Material (1)	Potentially D008	All	55-gallon drums or rolloff box	>500 ppmv	Generator knowledge	Yes	Drums: Level 1 controls: DOT container/inspected Rolloff box: Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Insulation (oil soaked) (1)	Potentially D001, D018	All	55-gallon drums or rolloff box	>500 ppmv	Generator knowledge	Yes	Drums: Level 1 controls: DOT container/inspected Rolloff box: Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Pump Screen Cleanings (1)	Potentially D001, D018	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected
Soil Contaminated With Oil (spill cleanup) (1)	Potentially D001, D018	All	55-gallon drums or rolloff box	>500 ppmv	Generator knowledge	Yes	Drums: Level 1 controls: DOT container/inspected Rolloff box: Level 2 controls: Container monitored to ensure no detectable emissions/ inspected
Sorbents/rags (spill cleanup) (1)	Potentially D001, D018	All	55-gallon drums	>500 ppmv	Generator knowledge	Yes	Level 1 controls: DOT container/ inspected

(1) Some waste streams generated at the refinery can be a hazardous or nonhazardous waste depending on the process generating the waste (i.e., soil may be characteristically hazardous depending on the quantity of oil or other contaminants present). These waste streams are characterized each time they are generated to determine the applicable EPA waste codes. The EPA waste codes provided are those typically associated with the waste stream when it is found to be characteristically hazardous.

4



NO.	DATE	BY	REVISIONS
1	4/97	RW	ADDED LIFT STATION OVERFLOW TO CITY SEWER
2	5/97	RW	ADDED VALVE
3	2/98	RW	GENERAL REVISION
4	9/98	RW	GENERAL REVISION

Marathon Ashland Petroleum LLC
DETROIT, MICHIGAN

PROCESS OVERVIEW
WASTE WATER TREATING

DRAWN	RW	DATE	12/95
CHK.BY	BV	APP.BY	
SCALE		UNIT	
APE NO.		CHG.NO.	
DWG.NO.	A29-172	REV	4

29017200

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

ATTORNEY WORK PRODUCT
ATTORNEY-CLIENT PRIVILEGE

September 25, 1998

MEMORANDUM

SUBJECT: Marathon Oil Company, Detroit, Michigan

FROM: Mary McAuliffe
Associate Regional Counsel

TO: Addressees

Attached please find a copy of the Marathon Oil, Detroit, Michigan annual inventory report for Marathon's Detroit refinery. This information was provided by James Entzminger of OCEPP, and may be useful in identifying areas of concern for your media.

Attachment

ADDRESSEES:

Daren Vanlerberghe, NEIC
Andre Daugavietis, C-14J
Lou Sass, DRU-7J
Yves Reme, DRU-7J
Kendall Moore, DRT-8J
Kathy Triatafillou, AE-17J
Kathy Keith, AE-17J
Catherine Collins, WC-15J
Mirtha Capiro, DRE-9J
Jeff Clay, S-6J
Barbara Carr, SE-5J
Pat Kuefler, DRE-9J
James Entzminger, w/o attachment

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 50% Recycled Paper (20% Postconsumer)

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

Certified Mail
Return Receipt #P 608 152 332

February 20, 1998

Michigan Department of Environmental Quality
Environmental Assistance Division
SARA Title III Office
P.O. Box 30457
Lansing, MI 48909

Re: 1997 Emergency and Hazardous Chemical Inventory Tier Two Report Form
Marathon Ashland Petroleum LLC, 1300 S. Fort St., Detroit, MI 48217

Dear Sir or Madam:

Enclosed is the Emergency and Hazardous Chemical Inventory Tier Two Report Form for the Marathon Ashland Petroleum LLC refinery located in Detroit and Melvindale (Facility ID # 2015). Copies of the Tier Two reports are also being forwarded to the Local Emergency Planning Committee and Fire Department.

Please contact me at (313) 843-9100 if you have any questions or require additional information.

Sincerely,

Jeffery L. Bruestle
Environmental Coordinator

Attachments

cc: Steven Jelneck, Wayne County Emergency Management
Niles Sexton, Detroit Fire Department
Chief Robert Harris, Melvindale Fire Department
Compliance Officer, Detroit Emergency Management

ENVIRONMENTAL ASSISTANCE DIVISION
FEB 25 1998
POLLUTION PREVENTION SECTION

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

MPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 872-05-9 Trade Secret Chem. Name 1-DECENE Check all that apply: X Pure, Mix, Solid, X Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	01	01	365	M14	LABORATORY	
CAS Trade Secret Chem. Name Check all that apply: Pure, Mix, Solid, Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)						
CAS Trade Secret Chem. Name Check all that apply: Pure, Mix, Solid, Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)						

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

.25 Rev. 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 29383-29-7; Trade Secret; Chem. Name: WHEELABRATOR 100L; Check all that apply: Pure / Mix X / Solid / Liquid X / Gas / EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	03	365	N14 N14	CRACKING PLANT TREATERS - OUTSIDE CHEM WAREHOUSE MARTIN FOUNDRY	
CAS MIXTURE; Trade Secret; Chem. Name: ZEP ANTIBACTERIAL CLEAN 'EMS; Check all that apply: Pure / Mix X / Solid / Liquid X / Gas / EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	02	01	365	N15	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS MIXTURE; Trade Secret; Chem. Name: ZEP BIG ORANGE; Check all that apply: Pure / Mix X / Solid / Liquid X / Gas / EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	02	01	365	D15	REFINERY-WIDE - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

5 Rev 1-91

Form Approved No. 2050-0072

ER TWO
MERGENCY AND
AZARDOUS CHEMICAL
NVENTORY

pecific
formation
y Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 25068-38-6 Trade Secret Chem. Name VALSPAR PEN-O-PREP Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS IUPAC Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	N14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name VW&R PERCHLOROETHYLENE SVG Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS IUPAC Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	02	365	D14	SR PLATFORMER - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name WACKER SILICONE FLUID SWS-101 Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS IUPAC Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	N14	SR PLATFORMER - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures.

25 Rev. 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem Name: UOP R-62 CATALYST (Trade Secret) Check all that apply: Pure ___ Mix X Solid X Liquid ___ Gas ___ EHS X EHS Name: HYDROGEN SULFIDE	Fire ___ Sudden Release of Pressure ___ Reactivity ___ X Immediate (acute) Delayed (chronic) ___	04	04	365	R14	SR PLATFORMER - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem Name: UOP R-72 CATALYST (Trade Secret) Check all that apply: Pure ___ Mix X Solid X Liquid ___ Gas ___ EHS ___ EHS Name:	Fire ___ Sudden Release of Pressure ___ Reactivity ___ X Immediate (acute) Delayed (chronic) ___	04	04	365	A25	BT PLATFORMER - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: UOP TYPE S-12 HYDROB ON CATALYST (Trade Secret) Check all that apply: Pure ___ Mix X Solid X Liquid ___ Gas ___ EHS ___ EHS Name:	Fire ___ Sudden Release of Pressure ___ Reactivity ___ X Immediate (acute) Delayed (chronic) ___	04	04	365	R25	LOW PRESSURE PRETREATER - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

Form Approved ... 2050-0072

ER TWO
MERGENCY AND AZARDOUS CHEMICAL NVENTORY

pecific formation y Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.:
Date Received:

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS Name: MIXTURE Trade Secret Chem. Name: UOP POLYFLO 130 PROCESS ADDITIVE Check all that apply: Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: X TRIS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	02	365	A14	CRUDE UNIT - OUTSIDE CHEMICALS	
CAS Name: MIXTURE Trade Secret Chem. Name: UOP POLYFLO 140 Check all that apply: Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: ; TRIS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	D14	WAREHOUSE MARTIN FOUNDRY	
CAS Name: MIXTURE Trade Secret Chem. Name: UOP R-56 CATALYST Check all that apply: Pure: X; Mix: ; Solid: X; Liquid: ; Gas: ; EHS: X TRIS Name: HYDROGEN SULFIDE	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	04	04	365	D14	BT PLATFORMER - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret: UNION CARBIDE UCARSOL HS SOLVENT 101; Chem Name (Check all that apply): X Pure, X Liquid; HS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); X Delayed (chronic)	05	05	365	R25 R25	GAS OIL UNIFINER - OUTSIDE CHEMICALS SULFUR RECOVERY - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret: UNITED CATALYSTS C29-2-04; Chem Name (Check all that apply): X Mix, X Solid; HS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	04	04	365	A25	SCOT TAIL GAS - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret: UNITED COLOR UNISOL LIQUID RED B; Chem Name (Check all that apply): X Mix, X Liquid; HS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	03	365	014	CRUDE & LAB TANK FARM - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approv. No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: TEAM DB-23 CATALYST; Check all that apply: Pure ___ Mix X Solid X Liquid ___ Gas ___ EHS ___; EHS Name:	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	02	01	365	R14	ALKYLATION UNIT - OUTSIDE CHEMICALS	
CAS: NOT AVAILABLE; Trade Secret; Chem. Name: UCARSOL HS SOLVENT 1 03; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	04	04	365	A14	SCOT TAIL GAS - OUTSIDE CHEMICALS	
CAS: 9003-13-8; Trade Secret; Chem. Name: UNION CARBIDE GT-871 5; Check all that apply: Pure X Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	03	02	365	D14 D14 D14 D14	CRACKING PLANT TREATERS - OUTSIDE CHEM CRUDE TREATERS - OUTSIDE CHEMICALS GAS OIL UNIFINER - OUTSIDE CHEMICALS SCOT TAIL GAS - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections)*.

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS MIXTURE; Trade Secret: SYBRON IONAC ASB-2; Chem Name; Check all that apply: Pure X, Mix X, Solid, Liquid, Gas, EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	03	365	D14	BOILER FEEDWATER TREATING - OUTSIDE CHEM	
CAS 67-56-1; Trade Secret: TAG METHYL ALCOHOL; Chem Name; Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS; EHS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); X Delayed (chronic)	(SEE BELOW)			A14 A14 A14 A14 A14 A14	ALKYLATION UNIT - OUTSIDE CHEMICALS BT PLATFORMER - OUTSIDE CHEMICALS CRACKING PLANT TREATERS - OUTSIDE CHEM CRUDE UNIT - OUTSIDE CHEMICALS FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS CONCENTRATION UNIT - OUTSIDE CHEM	
CAS 67-56-1; Trade Secret: TAG METHYL ALCOHOL; Chem Name; Check all that apply: Pure X, Mix X, Solid, Liquid X, Gas, EHS; EHS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); X Delayed (chronic)	05	05	365	A14 A14 A14 D14 D14	GAS OIL UNIFINER - OUTSIDE CHEMICALS LOW PRESSURE PRETREATER - OUTSIDE CHEM VACUUM UNIT - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS MIXTURE Trade Secret hem. Name SAFETY-KLEEN 105 SOL VENT RECYCLED Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	R14 R14	CRUDE/ALKY PUMP SHOP MOTOR POOL - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret hem. Name SUN METHYL TERTIARY-BUTYL ETHER OCTANE E NHANCER Check all that apply: X Pure X Mix Solid X Liquid X Gas EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	R25 R25	CRUDE & LAB TANK FARM - PROCESS STREAMS MTBE UNIT - PROCESS STREAMS	
CAS MIXTURE Trade Secret hem. Name SUNSHINE MAKERS SIMP LE GREEN Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	E14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM	

ertification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS/Chem. Name: MIXTURE — Trade Secret: PUROLITE CT-175 ION EXCHANGE RESIN. Check all that apply: Pure ___ Mix X Solid X Liquid ___ Gas ___ EHS ___ HS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	04	04	365	A25	MTBE UNIT - OUTSIDE CHEMICALS	
CAS/Chem. Name: MIXTURE — Trade Secret: S-W ALKYD FINISHES. Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ HS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	02	03	365	F14 R14	MICH REFINING DIVISION - ALL REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS/Chem. Name: MIXTURE — Trade Secret: S-W REDUCERS. Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ HS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	F14	MICH REFINING DIVISION - ALL	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approved ... No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: PHILLIPS SYNTHETIC DISTILLATE STANDARD; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	X Fire; Sudden Release of Pressure ___; Reactivity ___; X Immediate (acute); Delayed (chronic) ___	01	01	365	M14	LABORATORY	
CAS: 7778-77-0; Trade Secret; Chem. Name: POTASSIUM PHOSPHATE; Check all that apply: Pure X Mix ___ Solid X Liquid ___ Gas ___ EHS ___; EHS Name:	Fire ___; Sudden Release of Pressure ___; Reactivity ___; Immediate (acute); Delayed (chronic) ___	01	01	365	M14	LABORATORY	
CAS: 68037-26-3; Trade Secret; Chem. Name: PUROLITE C-100-R ION EXCHANGE RESIN; Check all that apply: Pure X Mix ___ Solid X Liquid ___ Gas ___ EHS ___; EHS Name:	Fire ___; Sudden Release of Pressure ___; Reactivity ___; X Immediate (acute); Delayed (chronic) ___	03	03	365	R14	BOILER FEEDWATER TREATING - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: PETROLITE 4000; Check all that apply: Pure / X Mix / Solid / X Liquid / Gas / EHS; HS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	04	04	365	D14 D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM WAREHOUSE - CAT SIDE	
CAS: MIXTURE; Trade Secret; Chem. Name: PETROLITE 7141; Check all that apply: Pure / X Mix / Solid / X Liquid / Gas / EHS; HS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	R14	WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE; Trade Secret; Chem. Name: PETROLITE 7450; Check all that apply: Pure / X Mix / Solid / X Liquid / Gas / EHS; HS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	04	04	365	D14 D14 A14	CRUDE TREATERS - OUTSIDE CHEMICALS WAREHOUSE MARTIN FOUNDRY WASTE WATER TREATING - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approved. OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS/Chem. Name: MIXTURE; Trade Secret: PETROLITE TOLAD 9012; Check all that apply: Pure ___ Mix X; Solid ___ Liquid X; Gas ___ EHS ___; HS Name:	X Fire; Sudden Release of Pressure ___; Reactivity: X Immediate (acute); Delayed (chronic) ___	03	02	365	014	GAS OIL UNIFINER - OUTSIDE CHEMICALS	
CAS/Chem. Name: MIXTURE; Trade Secret: PETROLITE 1100; Check all that apply: Pure ___ Mix X; Solid ___ Liquid X; Gas ___ EHS X; HS Name: 1,2-ETHANEDIAMINE	Fire ___; Sudden Release of Pressure ___; Reactivity: X Immediate (acute); X Delayed (chronic)	04	04	365	D14 A14	ALKYLATION UNIT - OUTSIDE CHEMICALS CRUDE UNIT - OUTSIDE CHEMICALS	
CAS/Chem. Name: MIXTURE; Trade Secret: PETROLITE 1200; Check all that apply: Pure ___ Mix X; Solid ___ Liquid X; Gas ___ EHS ___; HS Name:	X Fire; Sudden Release of Pressure ___; Reactivity: X Immediate (acute); Delayed (chronic) ___	05	04	365	A14 A14 A14 A14 D14	CRACKING PLANT TREATERS - OUTSIDE CHEM CRUDE UNIT - OUTSIDE CHEMICALS HIGH PRESSURE PRETREATER - OUTSIDE CHEM LOW PRESSURE PRETREATER - OUTSIDE CHEM WAREHOUSE MARTIN FOUNDRY	

Certification (*Read and sign after completing all sections*).

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments (*Check One*)

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

ER TWO
MERGENCY AND AZARDOUS CHEMICAL INVENTORY

ecific formation Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

ORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS Name: MIXTURE; Trade Secret: PETROLITE TOLAD SX 9 260; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; CAS Name	X Fire; Sudden Release of Pressure; Reactivity: X Immediate (acute), X Delayed (chronic)	04	04	365	014 014 014	CP TANK FARM - OUTSIDE CHEMICALS CRUDE & LAB TANK FARM - OUTSIDE CHEM MELVINDALE TANK FARM - OUTSIDE CHEMICALS	
CAS Name: MIXTURE; Trade Secret: PETROLITE TOLAD 0361; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; CAS Name	X Fire; Sudden Release of Pressure; Reactivity: X Immediate (acute), Delayed (chronic)	02	02	365	014	CRUDE & LAB TANK FARM - OUTSIDE CHEM	
CAS Name: MIXTURE; Trade Secret: PETROLITE TOLAD 3000; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS X; CAS Name: VINYL ACETATE	X Fire; Sudden Release of Pressure; Reactivity: X Immediate (acute), X Delayed (chronic)	04	04	365	015 015	CRUDE & LAB TANK FARM - OUTSIDE CHEM GAS OIL UNIFINER - OUTSIDE CHEMICALS	

ification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other [illegible]ard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem Name: PETROLITE PETROTEC 7 210; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	01	365	E14	CRUDE UNIT - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret; Chem Name: PETROLITE PETROTEC 7 330; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	02	02	365	D14	CRACKING PLANT TREATERS - OUTSIDE CHEM	
CAS: MIXTURE; Trade Secret; Chem. Name: PETROLITE T 0035; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	04	04	365	A14	MICH REFINING DIVISION - ALL	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem Name: PETROLITE D 0083 (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	D14	SCOT TAIL GAS - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem Name: PETROLITE PETROTEC 1 300 (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	05	05	365	A14 A14	CRACKING PLANT TREATERS - OUTSIDE CHEM CRUDE UNIT - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem Name: PETROLITE PETROTEC 4 990 (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 1310-58-3 Trade Secret Chem. Name: OXYCHEM CAUSTIC POTASH LIQUID ALL GRADES Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure X Reactivity X Immediate (acute) Delayed (chronic)	03	01	365	014	SCOT TAIL GAS - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: PARATHERM HE HEAT TRANSFER FLUID Check all that apply: Pure, Mix X, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	05	05	365	C14	ROUGE TERMINAL - OUTSIDE CHEMICALS	
CAS 127-18-4 Trade Secret Chem. Name: PERCHLOROETHYLENE Check all that apply: X Pure, Mix, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	02	365	D14	SR PLATFORMER - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

L-25 Rev. 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: OCTEL OIL ORANGE LIQUID; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	03	365	A14	CRUDE & LAB TANK FARM - OUTSIDE CHEM	
CAS: MIXTURE; Trade Secret; Chem. Name: OCTEL OIL RED B LIQUID; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS X; EHS Name: ANILINE	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); X Delayed (chronic)	03	03	365	A14	CRUDE & LAB TANK FARM - OUTSIDE CHEM	
CAS: MIXTURE; Trade Secret; Chem. Name: OCTEL STADIS 450 CONDUCTIVITY IMPROVER; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	014	HIGH PRESSURE PRETREATER - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

Form Approved No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: NORTON METAL TOWER PACKINGS (Trade Secret) Check all that apply: Pure: X; Mix: X; Solid: ; Liquid: ; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic):	04	04	365	R14	SCOT TAIL GAS - SPCI	
CAS: MIXTURE Chem. Name: OCTEL FUEL OIL ADDITIVE NO. 3 (Trade Secret) Check all that apply: Pure: ; Mix: X; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: X; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic):	04	04	365	D14 A14 D14 D14	CRUDE & LAB TANK FARM - OUTSIDE CHEM FLUID CATALYTIC CRACKER - OUTSIDE CHEM WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE Chem. Name: OCTEL OIL BLUE B LIQUID DYE (Trade Secret) Check all that apply: Pure: ; Mix: X; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: X; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic): X	03	03	365	A14	CRUDE & LAB TANK FARM - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

MPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Code	Storage Codes and Locations (Non-Confidential) Storage Locations	Optional
CAS MIXTURE Trade Secret Chem. Name NALCO/EXXON EC6065A OXYGEN SCAVENGER Check all that apply. Pure X Mix Solid X Liquid Gas EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	A14	BOILER FEEDWATER TREATING - OUTSIDE CHEM	
CAS MIXTURE Trade Secret Chem. Name NATIONAL REFRACTORIE S PUROLITE 30 Check all that apply. Pure X Mix X Solid Liquid Gas EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	04	04	365	C14	BOILER FEEDWATER TREATING - OUTSIDE CHEM	
CAS MIXTURE Trade Secret Chem. Name NORTON DENSTONE 2000 Check all that apply. Pure X Mix X Solid Liquid Gas EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	04	04	365	A25 A25	SCOT TAIL GAS - OUTSIDE CHEMICALS SULFUR RECOVERY - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: NALCO 7371 CORROSION INHIBITOR (Trade Secret) Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS HS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	05	05	365	A14 A14 R14 D14	ALKYLATION UNIT - OUTSIDE CHEMICALS BT PLATFORMER - OUTSIDE CHEMICALS GAS OIL UNIFINER - OUTSIDE CHEMICALS WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE Chem. Name: NALCO 8328 CORROSION INHIBITOR (Trade Secret) Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS HS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	04	04	365	E14 D14	WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE Chem. Name: NALCO 918 BALL STABI LIZER (Trade Secret) Check all that apply: Pure; Mix: X; Solid: X; Liquid; Gas; EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	02	02	365	E14	WAREHOUSE MARTIN FOUNDRY	

ertification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

25 Rev. 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: NALCO 5456 LIQUID (Trade Secret) Check all that apply: Pure / Mix / Solid / Liquid / Gas / EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	01	365	D14	MELVINDALE TANK FARM - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: NALCO 7320 MICROBIOCIDE (Trade Secret) Check all that apply: Pure / X Mix / Solid / X Liquid / Gas / EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	04	04	365	E14 E14	BT PLATFORMER - OUTSIDE CHEMICALS WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE Chem. Name: NALCO 7330 MICROBIOCIDE (Trade Secret) Check all that apply: Pure / X Mix / Solid / X Liquid / Gas / EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	D14	WAREHOUSE - CAT SIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: MONSANTO ROUNDUP HERBICIDE; Check all that apply: Pure — Mix X — Solid — Liquid X — Gas — EHS; EHS Name:	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret; Chem. Name: MULTI-PURPOSE GEAR COMPOUND; Check all that apply: Pure — Mix X — Solid — Liquid X — Gas — EHS; EHS Name:	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	03	02	365	D14 D14	CRUDE/ALKY PUMP SHOP MOTOR POOL - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret; Chem. Name: NALCO ACTI-BROM 7342 CHLORINE AID; Check all that apply: Pure — Mix — Solid — Liquid — Gas — EHS; EHS Name:	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	02	365	O14	GAS OIL UNIFINER - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

Rev 1-91

Form Approved OMB No. 2050-0072

ER TWO
MERGENCY AND
AZARDOUS
HEMICAL
VENTORY

pecific
formation
Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

ORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS Name: MIXTURE; Trade Secret: MOC SOUR WATER, REFINERY Check all that apply: X Pure, X Mix, Solid, X Liquid, Gas, X EHS S Name: HYDROGEN SULFIDE,AMMONIA	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	06	06	365	A14 R25 R25 R25	CRUDE & LAB TANK FARM - PROCESS STREAMS CRUDE TREATERS - PROCESS STREAMS CRUDE UNIT - PROCESS STREAMS VACUUM UNIT - PROCESS STREAMS Z PLANTWIDE	
CAS Name: 64742-40-1; Trade Secret: MOC SPENT CAUSTIC, DOCTOR SOLUTION Check all that apply: X Mix, X Liquid S Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	04	04	365	A14	CRUDE TREATERS - OUTSIDE CHEMICALS	
CAS Name: MIXTURE; Trade Secret: MONSANTO PYDRAUL 10E HYDRAULIC FLUID Check all that apply: X Mix, X Liquid S Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	04	04	365	A14 D14 D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	

ification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved. No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 74-98-6 Chem. Name: MOC PROPANE Trade Secret: No Check all that apply: X Pure, X Mix, Solid, X Liquid, X Gas, EHS EHS Name:	X Fire Sudden Release of Pressure: X Reactivity X Immediate (acute) Delayed (chronic)	05	05	365	R25 R25 R25 R25 R25	GAS CONCENTRATION UNIT - PROCESS STREAMS GAS OIL UNIFINER - PROCESS STREAMS HIGH PRESSURE PRETREATER - PROCESS STRMS PROPYLENE UNIT - PROCESS STREAMS Z PLANTWIDE	
CAS 115-07-1 Chem. Name: MOC PROPYLENE Trade Secret: No Check all that apply: X Mix, X Liquid (Pure, Solid, Gas, EHS) EHS Name:	X Fire Sudden Release of Pressure: X Reactivity X Immediate (acute) Delayed (chronic)	06	05	365	R25	Z PLANTWIDE	
CAS 64741-62-4 Chem. Name: MOC SLURRY OIL, CATALYTIC CRACKED Trade Secret: No Check all that apply: X Pure, X Mix, Solid, X Liquid, Gas, X EHS EHS Name: HYDROGEN SULFIDE	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	07	07	365	A14 R25	CRUDE & LAB TANK FARM - PROCESS STREAMS FLUID CATALYTIC CRACKER - PROCESS STRMS Z PLANTWIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

-25 Rev 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 8052-42-4 Chem. Name: MOC PETROLEUM ASPHALT Trade Secret Check all that apply: X Pure, X Mix, Solid, X Liquid, X Gas, X EHS EHS Name: HYDROGEN SULFIDE	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	09	09	365	R25 R25	CRUDE & LAB TANK FARM - PROCESS STREAMS ROUGE TERMINAL - PROCESS STREAMS Z PLANTWIDE	
CAS 8002-05-9 Chem. Name: MOC PETROLEUM CRUDE OIL Trade Secret Check all that apply: X Pure, X Mix, Solid, X Liquid, X Gas, X EHS EHS Name: HYDROGEN SULFIDE	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	09	09	365	R25 A14 R25	CRUDE UNIT - PROCESS STREAMS MELVINDALE TANK FARM - PROCESS STREAMS VACUUM UNIT - PROCESS STREAMS Z PLANTWIDE	
CAS 74-98-6 Chem. Name: MOC PROPANE Trade Secret Check all that apply: X Pure, Mix, Solid, X Liquid, Gas, EHS EHS Name:	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	(SEE BELOW)			R25 R25 R25 A25 R25 R25	ALKYLATION UNIT - PROCESS STREAMS BT PLATFORMER - PROCESS STREAMS CRACKING PLANT TREATERS - PROCESS STRMS CRUDE & LAB TANK FARM - PROCESS STREAMS CRUDE UNIT - PROCESS STREAMS FLUID CATALYTIC CRACKER - PROCESS STRMS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

Form Approved No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes (Non-Confidential)	Storage Locations	Optional
CAS 64741-44-2 Trade Secret Chem. Name: MOC NO. 2 FUEL OIL Check all that apply: X Pure, X Liquid EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	A14 R25 A14 R25 A14	CP TANK FARM - PROCESS STREAMS CRACKING PLANT TREATERS - PROCESS STRMS CRUDE & LAB TANK FARM - PROCESS STREAMS FLUID CATALYTIC CRACKER - PROCESS STRMS MELVINDALE TANK FARM - PROCESS STREAMS	
CAS MIXTURE Trade Secret Chem. Name: MOC NO. 6 FUEL OIL Check all that apply: X Pure, X Liquid, X EHS EHS Name: HYDROGEN SULFIDE	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	07	07	365	A14 A14 R25 Z	CP TANK FARM - PROCESS STREAMS CRUDE & LAB TANK FARM - PROCESS STREAMS ROUGE TERMINAL - PROCESS STREAMS PLANTWIDE	
CAS MIXTURE Trade Secret Chem. Name: MOC OILY SLUDGE Check all that apply: X Pure, X Mix, X Liquid EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	06	06	365	R25 Z	WASTE WATER TREATING - PROCESS STREAMS PLANTWIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

25 Rev 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 64742-48-9 Trade Secret Chem. Name: MOC NAPHTHA, HYDROTREATED HEAVY Check all that apply: X Pure, X Liquid THS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	05	05	365	R25	LOW PRESSURE PRETREATER - PROCESS STRMS	
CAS 64741-41-9 Trade Secret Chem. Name: MOC NAPHTHA, STRAIGHT RUN HEAVY Check all that apply: X Pure, X Mix, X Liquid, X Gas THS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	07	07	365	A14 A14 R25 A14 Z	CP TANK FARM - PROCESS STREAMS CRUDE & LAB TANK FARM - PROCESS STREAMS FLUID CATALYTIC CRACKER - PROCESS STRMS MELVINDALE TANK FARM - PROCESS STREAMS PLANTWIDE	
CAS 8008-20-6 Trade Secret Chem. Name: MOC NO. 1 FUEL OIL Check all that apply: X Pure, X Liquid THS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	07	07	365	R14 R25 A14 R25 Z	CRUDE & LAB TANK FARM - PROCESS STREAMS CRUDE TREATERS - PROCESS STREAMS MELVINDALE TANK FARM - PROCESS STREAMS VACUUM UNIT - PROCESS STREAMS PLANTWIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 64741-54-4 Trade Secret Chem. Name: MOC NAPHTHA, CATALYTIC CRACKED HEAVY Check all that apply: Pure: X; Mix: X; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	06	06	365		Z PLANTWIDE	
CAS 68476-46-0 Trade Secret Chem. Name: MOC NAPHTHA, CATALYTIC CRACKED LIGHT Check all that apply: Pure: X; Mix: X; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	07	07	365		Z PLANTWIDE	
CAS 68955-35-1 Trade Secret Chem. Name: MOC NAPHTHA, CATALYTIC REFORMED FULL RANGE Check all that apply: Pure: X; Mix: X; Solid: ; Liquid: X; Gas: X; EHS: ; EHS Name:	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	08	07	365	A14 A14	CRUDE & LAB TANK FARM - PROCESS STREAMS MELVINDALE TANK FARM - PROCESS STREAMS Z PLANTWIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes (Storage Code)	Storage Locations (Non-Confidential)	Optional
CAS 68476-85-7 Trade Secret Chem. Name: MOC LPG, C3-C7 Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure X Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	R25	LOW PRESSURE PRETREATER - PROCESS STRMS	
CAS 64741-64-6 Trade Secret Chem. Name: MOC NAPHTHA, ALKYLATION FULL RANGE Check all that apply: Pure X Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	06	06	365	A14 R25	CRUDE & LAB TANK FARM - PROCESS STREAMS Z PLANTWIDE	
CAS 64741-54-4 Trade Secret Chem. Name: MOC NAPHTHA, CATALYTIC CRACKED HEAVY Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	(SEE BELOW)			R25 R25 R25 R25 R25 A14	BT PLATFORMER - PROCESS STREAMS CRACKING PLANT TREATERS - PROCESS STRMS FLUID CATALYTIC CRACKER - PROCESS STRMS GAS CONCENTRATION UNIT - PROCESS STREAMS HIGH PRESSURE PRETREATER - PROCESS STRMS MELVINDALE TANK FARM - PROCESS STREAMS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS/Chem. Name: MIXTURE MOC GASOLINE, PREMIUM UNLEADED Trade Secret Check all that apply: Pure: X; Mix: X; Solid; Liquid: X; Gas; EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	07	06	365	A14 A14 Z	CRUDE & LAB TANK FARM - PROCESS STREAMS MELVINDALE TANK FARM - PROCESS STREAMS PLANTWIDE	
CAS/Chem. Name: MIXTURE MOC GASOLINE, REGULAR UNLEADED Trade Secret Check all that apply: Pure: X; Mix: X; Solid; Liquid: X; Gas; EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	09	08	365	A14 A14 Z	CRUDE & LAB TANK FARM - PROCESS STREAMS MELVINDALE TANK FARM - PROCESS STREAMS PLANTWIDE	
CAS/Chem. Name: 75-28-5 MOC ISO-BUTANE Trade Secret Check all that apply: Pure: X; Mix: X; Solid; Liquid: X; Gas: X; EHS HS Name	X Fire X Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	06	05	365	R25 A14 Z	ALKYLATION UNIT - PROCESS STREAMS CRUDE & LAB TANK FARM - PROCESS STREAMS PLANTWIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

. 25 Rev 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 64741-59-9 Trade Secret Chem Name: MOC DISTILLATE, CATALYTIC CRACKED LIGHT Check all that apply: X Pure, X Mix, Solid, X Liquid, Gas, EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	07	06	365	R25 R25	FLUID CATALYTIC CRACKER - PROCESS STRMS GAS CONCENTRATION UNIT - PROCESS STREAMS Z PLANTWIDE	
CAS 68783-08-4 Trade Secret Chem. Name: MOC GAS OIL, FULL RANGE Check all that apply: X Mix, X Liquid Pure, Solid, Gas, EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	09	09	365	A14 A14 R25 A14 R25	CP TANK FARM - PROCESS STREAMS CRUDE & LAB TANK FARM - PROCESS STREAMS CRUDE UNIT - PROCESS STREAMS MELVINDALE TANK FARM - PROCESS STREAMS VACUUM UNIT - PROCESS STREAMS Z PLANTWIDE	
CAS 68477-83-8 Trade Secret Chem. Name: MOC GAS, ALKYLATION OLEFIN FEED Check all that apply: X Pure, X Mix, Solid, X Liquid, X Gas, EHS EHS Name	X Fire Sudden Release X of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	05	05	365	R25 R25 R25	ALKYLATION UNIT - PROCESS STREAMS CRUDE & LAB TANK FARM - PROCESS STREAMS MTBE UNIT - PROCESS STREAMS Z PLANTWIDE	

Certification *(Read and sign after completing all sections)*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

MPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS MIXTURE Trade Secret hem. Name MITCO CW-886L Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	A14 A14	BT PLATFORMER - SPCI FLUID CATALYTIC CRACKER - SPCI	
CAS MIXTURE Trade Secret hem. Name MITCO MITFLOC 5619L Check all that apply: Pure Mix Solid Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	04	03	365	015	WASTE WATER TREATING - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret hem. Name MOBIL DTE 11 Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	03	03	365	D14 D14 D14	VACUUM UNIT - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	

ertification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

25 Rev. 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS/Chem Name: MIXTURE Trade Secret: MITCO CC-42T MICROBIOCIDE Check all that apply: X Pure, X Solid EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	N14	WAREHOUSE - CAT SIDE	
CAS/Chem Name: MIXTURE Trade Secret: MITCO CW-1644L Check all that apply: X Mix, X Liquid EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	04	04	365	A14	BT PLATFORMER - SPCI	
CAS/Chem Name: MIXTURE Trade Secret: MITCO CW-878L DEPOSIT PENETRANT Check all that apply: X Mix, X Liquid EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	02	02	365	D14	WAREHOUSE - CAT SIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures.

Form Approved, OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: MARATHON WINDSHIELD WASHER FLUID; Check all that apply: Pure [ ] Mix [X] Solid [ ] Liquid [X] Gas [ ] EHS [ ]; EHS Name:	X Fire; Sudden Release of Pressure; Reactivity X Immediate (acute); Delayed (chronic)	02	02	365	N14	MOTOR POOL - OUTSIDE CHEMICALS	
CAS: 1634-04-4; Trade Secret; Chem. Name: METHYL TERTIARY BUTY L ETHER; Check all that apply: Pure [ ] Mix [X] Solid [ ] Liquid [X] Gas [ ] EHS [ ]; EHS Name:	X Fire; Sudden Release of Pressure; Reactivity X Immediate (acute); Delayed (chronic)	03	03	365	A14	MTBE UNIT - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret; Chem. Name: MITCO CC-13L MICROBI OCIDE; Check all that apply: Pure [ ] Mix [X] Solid [ ] Liquid [X] Gas [ ] EHS [ ]; EHS Name:	Fire; Sudden Release of Pressure; Reactivity X Immediate (acute); Delayed (chronic)	02	02	365	D14	WAREHOUSE - CAT SIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 106-97-8 Trade Secret Chem. Name: MARATHON NORMAL BUTANE Check all that apply: X Pure, X Mix, Solid, X Liquid, X Gas, EHS EHS Name	X Fire Sudden Release of Pressure: X Reactivity X Immediate (acute) Delayed (chronic)	06	06	365	R25 Z	HIGH PRESSURE PRETREATER - PROCESS STRMS PLANTWIDE	
CAS MIXTURE Trade Secret Chem. Name: MARATHON PERFORMANCE GRADED ASPHALT BINDER Check all that apply: X Mix, X Liquid, X EHS (Pure, Solid, Gas) EHS Name: HYDROGEN SULFIDE	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	10	10	365	A15 A15 A15	CRUDE & LAB TANK FARM - OUTSIDE CHEM CRUDE UNIT - OUTSIDE CHEMICALS ROUGE TERMINAL - OUTSIDE CHEMICALS	
CAS 7704-34-9 Trade Secret Chem. Name: MARATHON SULFUR Check all that apply: X Pure, X Mix, Solid, X Liquid, Gas, X EHS EHS Name: HYDROGEN SULFIDE	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	06	05	365	A14 R25 R25 Z	CRUDE & LAB TANK FARM - PROCESS STREAMS CRUDE TREATERS - PROCESS STREAMS SULFUR RECOVERY - PROCESS STREAMS PLANTWIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: MARATHON MULTIPURPOSE HYDRAULIC OIL Trade Secret Check all that apply: Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	04	04	365	D14 R14 D14 D14 D14 D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS CONCENTRATION UNIT - OUTSIDE CHEM MAINTENANCE SHOP AREA 2 MOTOR POOL - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS: 64741-44-2 Chem. Name: MARATHON NO. 2 FUEL OIL DYED Trade Secret Check all that apply: Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: X Sudden Release of Pressure Reactivity Immediate (acute): X Delayed (chronic)	08	07	365		Z PLANTWIDE	
CAS: 106-97-8 Chem. Name: MARATHON NORMAL BUTANE Trade Secret Check all that apply: Pure: X; Mix: X; Solid: ; Liquid: X; Gas: X; EHS: ; EHS Name:	Fire: X Sudden Release of Pressure: X Reactivity Immediate (acute): X Delayed (chronic)	(SEE BELOW)			R25 R25 A14 R25 R25 R25	ALKYLATION UNIT - PROCESS STREAMS CRACKING PLANT TREATERS - PROCESS STRMS CRUDE & LAB TANK FARM - PROCESS STREAMS CRUDE UNIT - PROCESS STREAMS FLUID CATALYTIC CRACKER - PROCESS STRMS GAS OIL UNIFINER - PROCESS STREAMS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 7783-06-4 Trade Secret Chem. Name: MARATHON HYDROGEN SULFIDE Check all that apply: X Pure, X Mix, Solid, X Liquid, X Gas, X EHS HS Name: MARATHON HYDROGEN SULFIDE,HYDROGEN SULFIDE	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	04	03	365	R25 R25 Z	SULFUR RECOVERY - PROCESS STREAMS VACUUM UNIT - PROCESS STREAMS PLANTWIDE	
CAS 1634-04-4 Trade Secret Chem. Name: MARATHON METHYL TERTIARY BUTYL ETHER Check all that apply: X Pure, Mix, Solid, X Liquid, Gas, EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	06	06	365	A14	MTBE UNIT - PROCESS STREAMS	
CAS MIXTURE Trade Secret Chem. Name: MARATHON MULTI-PURPOSE GEAR COMPOUND Check all that apply: Pure, X Mix, Solid, X Liquid, Gas, EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	03	03	365	D14 R14 D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS CONCENTRATION UNIT - OUTSIDE CHEM PROPYLENE UNIT - OUTSIDE CHEMICALS	

ertification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes (Non-Confidential)	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: MARATHON ENDURANCE R & O OIL; Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): ; Delayed (chronic):	03	03	365	D14	Z PLANTWIDE	
CAS: 7783-06-4; Trade Secret; Chem. Name: MARATHON HYDROGEN SULFIDE; Pure: X; Mix: ; Solid: ; Liquid: ; Gas: X; EHS: X; EHS Name: MARATHON HYDROGEN SULFIDE,HYDROGEN SULFIDE	Fire: X; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic):	(SEE BELOW)			R25 R25 R25 R25 R25 R25	ALKYLATION UNIT - PROCESS STREAMS BT PLATFORMER - PROCESS STREAMS CRUDE & LAB TANK FARM - PROCESS STREAMS CRUDE UNIT - PROCESS STREAMS FLUID CATALYTIC CRACKER - PROCESS STRMS GAS CONCENTRATION UNIT - PROCESS STREAMS	
CAS: 7783-06-4; Trade Secret; Chem. Name: MARATHON HYDROGEN SULFIDE; Pure: X; Mix: X; Solid: ; Liquid: X; Gas: X; EHS: X; EHS Name: MARATHON HYDROGEN SULFIDE,HYDROGEN SULFIDE	Fire: X; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic):	(SEE BELOW)			R25 R25 R25 R25 R25 R25	GAS OIL UNIFINER - PROCESS STREAMS HIGH PRESSURE PRETREATER - PROCESS STRMS LOW PRESSURE PRETREATER - PROCESS STRMS PROPYLENE UNIT - PROCESS STREAMS SCOT TAIL GAS - PROCESS STREAMS SOUR WATER STRIPPERS - PROCESS STREAMS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

-25 Rev 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS Name: MIXTURE Trade Secret: MARATHON ALL-SEASON 10W-30 MOTOR OIL Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	03	03	365	D14 D14	MOTOR POOL - OUTSIDE CHEMICALS WAREHOUSE MARTIN FOUNDRY	
CAS Name: MIXTURE Trade Secret: MARATHON CYLONA 71 S TEAM CYLINDER OIL Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) X Delayed (chronic)	05	05	365	A14 D14 A14 D14 D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS CONCENTRATION UNIT - OUTSIDE CHEM VACUUM UNIT - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS Name: MIXTURE Trade Secret: MARATHON DEXRON-III MERCON AUTOMATIC TRANSMISSION FLUID Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	02	02	365	D14	MOTOR POOL - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS MIXTURE Trade Secret hem. Name MARAFLUID HYDRAULIC TRANSMISSION FLUID Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	(SEE BELOW)			D14 A14 D14 D14 D14 D14	ALKYLATION UNIT - OUTSIDE CHEMICALS BT PLATFORMER - OUTSIDE CHEMICALS FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS CONCENTRATION UNIT - OUTSIDE CHEM GAS OIL UNIFINER - OUTSIDE CHEMICALS MAINTENANCE SHOP AREA 3	
CAS MIXTURE Trade Secret hem. Name MARAFLUID HYDRAULIC TRANSMISSION FLUID Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	04	04	365	D14 D14 D14 D14	PROPYLENE UNIT - OUTSIDE CHEMICALS SULFUR RECOVERY - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS MIXTURE Trade Secret hem. Name MARATHON ALL-SEASON ANTIFREEZE Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	D14	MOTOR POOL - OUTSIDE CHEMICALS	

ertification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 74-98-6 Trade Secret Chem. Name LIQUID CARBONIC PROPANE (Check all that apply) X Pure, Mix, Solid, Liquid, X Gas, EHS EHS Name	X Fire Sudden Release of Pressure X Reactivity Immediate (acute) Delayed (chronic)	02	02	365	L24	MAIN WELDING SHOP	
CAS MIXTURE Trade Secret Chem. Name LPS INSTANT SUPER CLEANER/DEGREASER (Check all that apply) Pure, X Mix, Solid, X Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	F24	CRUDE/ALKY PUMP SHOP	
CAS MIXTURE Trade Secret Chem. Name MAINTECH CESCO CLS 15 (Check all that apply) Pure, X Mix, Solid, X Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	D14	WAREHOUSE MARTIN FOUNDRY	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved, No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 124-38-9 Trade Secret Chem. Name: LIQUID CARBONIC CARB ON DIOXIDE LIQUID Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, EHS EHS Name	Fire Sudden Release of Pressure: X Reactivity Immediate (acute): X Delayed (chronic)	02	02	365	L24	MAIN WELDING SHOP	
CAS 7440-59-7 Trade Secret Chem. Name: LIQUID CARBONIC HELI UM Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, EHS EHS Name	Fire Sudden Release of Pressure: X Reactivity Immediate (acute) Delayed (chronic)	02	02	365	L14 L24 L24	ALKYLATION UNIT - OUTSIDE CHEMICALS MAIN WELDING SHOP WAREHOUSE - CAT SIDE	
CAS 7782-44-7 Trade Secret Chem. Name: LIQUID CARBONIC OXYG EN Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, EHS EHS Name	Fire Sudden Release of Pressure: X Reactivity: X Immediate (acute) Delayed (chronic)	03	03	365	L24 L24 L24 L24	MAIN WELDING SHOP MAINTENANCE SHOP AREA 1 MAINTENANCE SHOP AREA 3 WAREHOUSE - CAT SIDE	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes (Non-Confidential)	Storage Locations (Non-Confidential)	Optional
CAS 7783-06-4 Trade Secret Chem. Name: LIQUID AIR HYDROGEN SULFIDE Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, X EHS HS Name: LIQUID AIR HYDROGEN SULFIDE,HYDROGEN SULFIDE	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	R25	LABORATORY	
CAS 74-86-2 Trade Secret Chem. Name: LIQUID CARBONIC ACETYLENE Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	L24 L24 L24	MAIN WELDING SHOP MAINTENANCE SHOP AREA 3 WAREHOUSE - CAT SIDE	
CAS 7440-37-1 Trade Secret Chem. Name: LIQUID CARBONIC ARGON Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, EHS HS Name	Fire Sudden Release of Pressure X Reactivity Immediate (acute) Delayed (chronic)	02	02	365	L24	MAIN WELDING SHOP	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

Form Approv... No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: KAISER T-1061 TABULAR ALUMINAS Trade Secret Check all that apply: Pure: X; Mix: X; Solid; Liquid; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	E14	WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE Chem. Name: KODAK 1-ETHYLPIPERIDINE Trade Secret Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	M14	LABORATORY	
CAS: MIXTURE Chem. Name: LENDOW SNAP Trade Secret Check all that apply: Pure; Mix: X; Solid; Liquid: X; Gas; EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	F14	LABORATORY	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 1333-74-0; Trade Secret; Chem. Name: HYDROGEN; Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, EHS; EHS Name	X Fire; Sudden Release; X of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	05	05	365	P24	GAS OIL UNIFINER - OUTSIDE CHEMICALS	
CAS MIXTURE; Trade Secret; Chem. Name: INTERNATIONAL SALT STERLING HALITE; Check all that apply: X Pure, Mix, X Solid, Liquid, Gas, EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	05	05	365	R14 A14	BOILER FEEDWATER TREATING - OUTSIDE CHEM GAS OIL UNIFINER - OUTSIDE CHEMICALS	
CAS MIXTURE; Trade Secret; Chem. Name: JOHNSON RAID FLYING INSECT KILLER FORMUL A 12; Check all that apply: Pure, X Mix, Solid, X Liquid, Gas, EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	F14	MICH REFINING DIVISION - ALL	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures.

Form Approved No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 14808-60-7; Trade Secret; Chem. Name: HILTI RM700EP USDA EPOXY MORTAR, PART C; Check all that apply: X Pure, X Solid; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS MIXTURE; Trade Secret; Chem. Name: HILTI RM800PC CEMENT-BASED MORTAR; Check all that apply: X Mix, X Solid; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS MIXTURE; Trade Secret; Chem. Name: HULS AMERICA ANDEROL 750 SYNTHETIC COMPRESSOR OIL; Check all that apply: X Mix, X Liquid; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	02	02	365	D14	HIGH PRESSURE PRETREATER - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: HILTI CS300EP FLOOR JOINT SEALANT, PART B (Trade Secret) Check all that apply: Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: X Immediate (acute); Delayed (chronic):	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: HILTI RM700EP USDA EPOXY MORTAR, PART A (Trade Secret) Check all that apply: Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: X Immediate (acute); Delayed (chronic):	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: HILTI RM700EP USDA EPOXY MORTAR, PART B (Trade Secret) Check all that apply: Pure: X; Mix: ; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: X Immediate (acute); Delayed (chronic):	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and oth[illegible] [illegible]eguard measures

Form Approved. OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Chem. Name: HILTI CC 251 EP PART B (Trade Secret); Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; HS Name	Fire ___; Sudden Release of Pressure ___; Reactivity ___; X Immediate (acute); Delayed (chronic) ___	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: MIXTURE; Chem. Name: HILTI CI060EP EPOXY INJECTION RESIN (Trade Secret); Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; HS Name	Fire ___; Sudden Release of Pressure ___; Reactivity ___; X Immediate (acute); Delayed (chronic) ___	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: MIXTURE; Chem. Name: HILTI CS300EP FLOOR JOINT SEALANT, PART A (Trade Secret); Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; HS Name	Fire ___; Sudden Release of Pressure ___; Reactivity ___; X Immediate (acute); Delayed (chronic) ___	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 7664-41-7 Trade Secret Chem. Name: HAMLER AMMONIA Check all that apply: X Pure, Mix, Solid, Liquid, X Gas, X EHS EHS Name: HAMLER AMMONIA,AMMONIA	Fire Sudden Release of Pressure X Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	L24 L24 L24	BT PLATFORMER - OUTSIDE CHEMICALS SCOT TAIL GAS - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE	
CAS 7681-52-9 Trade Secret Chem. Name: HIGH-PO-CHLOR SODIUM HYPOCHLORITE - 15% Check all that apply: X Mix, X Liquid EHS Name:	Fire Sudden Release of Pressure X Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	A14	GAS OIL UNIFINER - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: HILTI CC 251 EP PART A Check all that apply: X Mix, X Liquid EHS Name:	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/90
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved. OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: GRACE NEUTROX 53 BOILER WATER TREATMENT (Trade Secret) Check all that apply: Pure: X; Mix: X; Solid: X; Liquid: X; Gas: X; EHS: X EHS Name: HYDROQUINONE	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	D14	WAREHOUSE - CAT SIDE	
CAS: MIXTURE Chem. Name: GRACE SUPER CP COMBUSTION PROMOTER (Trade Secret) Check all that apply: Mix: X; Solid: X EHS Name:	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM	
CAS: MIXTURE Chem. Name: GRACE ZEOQUEST 102 RESIN CLEANER (Trade Secret) Check all that apply: Mix: X; Liquid: X EHS Name:	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	D14	WAREHOUSE - CAT SIDE	

Certification (*Read and sign after completing all sections*).

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/98
Date Signed

Optional Attachments (*Check One*)

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 64-17-5 Trade Secret Chem. Name: ETHYL ALCOHOL Check all that apply: X Pure, Mix, Solid, X Liquid, Gas, EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	06	05	365	A14	CRUDE & LAB TANK FARM - PROCESS STREAMS	
CAS MIXTURE Trade Secret Chem. Name: GENERAL CHEMICAL CAL -DRY CALCIUM CHLORID E Check all that apply: Pure, X Mix, X Solid, Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	05	05	365	J14	GAS OIL UNIFINER - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: GLADE CLEAN BIODEGRA DABLE CLEANER/DEGREA SER Check all that apply: Pure, X Mix, Solid, X Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	02	365	E14	CRUDE/ALKY PUMP SHOP	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures.

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

MPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS/Chem. Name: CHEM. MIXTURE ENGELHARD ALL FLUID CRACKING CATALYSTS (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	Fire ___ Sudden Release of Pressure ___ Reactivity X Immediate (acute) X Delayed (chronic)	05	05	365	R25	FLUID CATALYTIC CRACKER - PROCESS STRMS	
CAS/Chem. Name: 24623-77-6 ENGELHARD E803 CATALYST (Trade Secret) Check all that apply: Pure ___ Mix X Solid X Liquid ___ Gas ___ EHS ___ EHS Name	Fire ___ Sudden Release of Pressure ___ Reactivity X Immediate (acute) ___ Delayed (chronic)	04	04	120	R25	BT PLATFORMER - OUTSIDE CHEMICALS	
CAS/Chem. Name: MIXTURE EPPERT SPEEDI-WET ASBESTOS REMOVAL AGENT (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	Fire ___ Sudden Release of Pressure ___ Reactivity X Immediate (acute) ___ Delayed (chronic)	03	03	365	E14	MICH REFINING DIVISION - ALL	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 111-42-2 Trade Secret Chem. Name: DOW DIETHANOLAMINE Check all that apply: X Pure, X Liquid EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	120	D14	MAINTENANCE SHOP AREA 2	
CAS MIXTURE Trade Secret Chem. Name: DOW DOWEX M-31 CATIO N EXCHANGE RESIN Check all that apply: X Pure, X Solid EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	07	07	365	A14	MTBE UNIT - CATALYST	
CAS MIXTURE Trade Secret Chem. Name: DREWSPERSE 738 ANTIF OULANT Check all that apply: X Mix, X Liquid EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	04	04	365	D14 D14	WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

25 Rev 1-91

Form Approved. OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Trade Secret Chem. Name: DOW CAUSTIC SODA SOLUTION 50% PURIFIED GRADE Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	06	06	365	A14 A14	VACUUM UNIT - OUTSIDE CHEMICALS WASTE WATER TREATING - OUTSIDE CHEMICALS	
CAS: 71-55-6 Trade Secret Chem. Name: DOW CHLOROTHENE VG - USA Check all that apply: Pure X, Mix X, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	D14 D14 D14	BT PLATFORMER - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS: 63348-62-9 Trade Secret Chem. Name: DOW CORNING 200 FLUID, 10 CST. Check all that apply: Pure, Mix X, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	02	01	365	N14	LABORATORY	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

25 Rev. 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: DEVOE DEVRAN 184 CLEAR CONVERTER Trade Secret Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: DEVOE DEVRAN 184 100% SOLID EPOXY TANK COATING Trade Secret Check all that apply: Pure; Mix: X; Solid: X; Liquid; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	02	01	365	F14	MICH REFINING DIVISION - ALL	
CAS: MIXTURE Chem. Name: DOW CAUSTIC SODA SOLUTION 50% PURIFIED GRADE Trade Secret Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	(SEE BELOW)			R25 A14 R25 A14 A14 A14	ALKYLATION UNIT - OUTSIDE CHEMICALS BOILER FEEDWATER TREATING - OUTSIDE CHEM CRACKING PLANT TREATERS - OUTSIDE CHEM CRUDE TREATERS - OUTSIDE CHEMICALS CRUDE UNIT - OUTSIDE CHEMICALS GAS CONCENTRATION UNIT - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

Form Approved. No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: CRITERION 448 M-3 SULFURIZED CATALYST (Trade Secret) Check all that apply: Pure: X; Mix: X; Solid; Liquid; Gas; EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	04	04	365	A25	GAS OIL UNIFINER - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: CWC 604 MACHINE BOND EPOXY RESIN GROUT - COMPONENT A (Trade Secret) Check all that apply: Pure: X; Mix: X; Solid; Liquid; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	J14	MAINTENANCE - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: CWC 604 MACHINE BOND EPOXY RESIN GROUT - COMPONENT B (Trade Secret) Check all that apply: Pure: X; Mix: X; Solid; Liquid; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	J14	MAINTENANCE - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

-25 Rev 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 7664-93-9 Trade Secret Chem. Name: COULTON SULFURIC ACID CONCENTRATED Check all that apply: X Pure, X Liquid, X EHS EHS Name: SULFURIC ACID	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	06	06	365	R25 A14 A14 A14 R14 A14	ALKYLATION UNIT - OUTSIDE CHEMICALS BOILER FEEDWATER TREATING - OUTSIDE CHEM BT PLATFORMER - OUTSIDE CHEMICALS FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS CONCENTRATION UNIT - OUTSIDE CHEM VACUUM UNIT - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: CRC BRAKLEEN AEROSOL Check all that apply: X Mix, X Liquid EHS Name:	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	01	01	365	F24	MOTOR POOL - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: CRITERION 447 CATALYST Check all that apply: X Mix, X Solid EHS Name:	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	04	04	365	R14	GAS OIL UNIFINER - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050 0072

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Trade Secret Chem Name: CALUMET 153D-COMP OIL Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) X Delayed (chronic)	04	04	365	D14 A14 D14 D14	GAS OIL UNIFINER - OUTSIDE CHEMICALS PROPYLENE UNIT - OUTSIDE CHEMICALS WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS: 25068-38-6 Trade Secret Chem Name: CARBOLINE RUSTBOND PENETRATING SEALER A Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS HS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	02	02	365	F14 R14	MICH REFINING DIVISION - ALL REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: 67-56-1 Trade Secret Chem Name: CHEMTECH METHANOL Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	R25	MTBE UNIT - PROCESS STREAMS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

25 Rev' 1-91

Form Approved OMB No. 2050-0072

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS MIXTURE Trade Secret Chem. Name BETZ 26K-26224 Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	05	04	365	A14 A14 A14 A14 A14 A14	ALKYLATION UNIT - OUTSIDE CHEMICALS BT PLATFORMER - OUTSIDE CHEMICALS FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS OIL UNIFINER - OUTSIDE CHEMICALS SR PLATFORMER - OUTSIDE CHEMICALS VACUUM UNIT - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name BETZ 445 Check all that apply: Pure X, Mix, Solid, Liquid X, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	03	03	365	D14 D14	FLUID CATALYTIC CRACKER - OUTSIDE CHEM GAS CONCENTRATION UNIT - OUTSIDE CHEM	
CAS 7440-44-0 Trade Secret Chem. Name CALGON ACTIVATED CARBON Check all that apply: Pure X, Mix, Solid X, Liquid, Gas, EHS EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	01	01	365	J14	WAREHOUSE MARTIN FOUNDRY	

ertification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS MIXTURE Trade Secret hem Name BETZ SLIMICIDE C-41A Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	014	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret hem Name BETZ SOLSET SA20 Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	014	FLUID CATALYTIC CRACKER - OUTSIDE CHEM	
CAS MIXTURE Trade Secret hem Name BETZ ULTRASPERSE AP2 00 Check all that apply: Pure X Mix Solid X Liquid Gas EHS HS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	04	04	365	A14 A14	BOILER FEEDWATER TREATING - OUTSIDE CHEM CRUDE UNIT - OUTSIDE CHEMICALS	

ertification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

-25 Rev. 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: BETZ PROCHEM 3F28 (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	014	FLUID CATALYTIC CRACKER - OUTSIDE CHEM	
CAS: MIXTURE Chem. Name: BETZ PROCHEM 3F29 (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	014	GAS OIL UNIFINER - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: BETZ SLIMICIDE C-31 (Trade Secret) Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___ EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	04	04	365	014 014 014 014 014	ALKYLATION UNIT - OUTSIDE CHEMICALS FLUID CATALYTIC CRACKER - OUTSIDE CHEM REFINERY-WIDE - OUTSIDE CHEMICALS SR PLATFORMER - OUTSIDE CHEMICALS VACUUM UNIT - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

Form Approv. No. 2050-0072

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: BETZ MAX-AMINE 25B (Trade Secret) Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	04	04	365	A14	SCOT TAIL GAS - OUTSIDE CHEMICALS	
CAS: MIXTURE Chem. Name: BETZ PHILMPLUS 5K2 (Trade Secret) Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	D14 R	WAREHOUSE - CAT SIDE WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE Chem. Name: BETZ PROCHEM 3F18 (Trade Secret) Check all that apply: Pure: X; Mix; Solid; Liquid: X; Gas; EHS EHS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	O14	GAS OIL UNIFINER - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures.

25 Rev 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE Chem. Name: BETZ MAX-AMINE 10 (Trade Secret) Check all that apply: Pure: X; Mix: X; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic): X	05	05	365	A14 A14	CRACKING PLANT TREATERS - OUTSIDE CHEM FLUID CATALYTIC CRACKER - OUTSIDE CHEM	
CAS: MIXTURE Chem. Name: BETZ MAX-AMINE 11B (Trade Secret) Check all that apply: Pure: ; Mix: X; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic): X	04	04	365	A14	CRACKING PLANT TREATERS - OUTSIDE CHEM	
CAS: MIXTURE Chem. Name: BETZ MAX-AMINE 20B (Trade Secret) Check all that apply: Pure: ; Mix: X; Solid: ; Liquid: X; Gas: ; EHS: ; EHS Name:	Fire: ; Sudden Release of Pressure: ; Reactivity: ; Immediate (acute): X; Delayed (chronic):	03	03	365	A14	CRACKING PLANT TREATERS - OUTSIDE CHEM	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approv No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Chem. Name: BETZ INHIBITOR 10K-1 0204 (Trade Secret); Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	Fire ___; Sudden Release of Pressure ___; Reactivity ___; Immediate (acute) X; Delayed (chronic) X	03	03	365	A14	VACUUM UNIT - OUTSIDE CHEMICALS	
CAS: MIXTURE; Chem. Name: BETZ INHIBITOR 26K-2 6138 (Trade Secret); Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name:	Fire ___; Sudden Release of Pressure ___; Reactivity ___; Immediate (acute) ___; Delayed (chronic) X	03	03	365	R14	REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS: MIXTURE; Chem. Name: BETZ KLARAID PC2700 (Trade Secret); Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS X; EHS Name: FORMALDEHYDE	Fire ___; Sudden Release of Pressure ___; Reactivity ___; Immediate (acute) ___; Delayed (chronic) X	02	01	365	014	WASTE WATER TREATING - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Name: BETZ EMBREAK 2W801; Check all that apply: X Pure, Mix, Solid, X Liquid, Gas, EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	03	03	365	014	CRUDE UNIT - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret; Name: BETZ FERROQUEST FQ71 01; Check all that apply: Pure, X Mix, Solid, X Liquid, Gas, EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	03	03	365	014	CRUDE TREATERS - OUTSIDE CHEMICALS	
CAS: MIXTURE; Trade Secret; Name: BETZ FERROQUEST FQ71 02; Check all that apply: Pure, X Mix, Solid, X Liquid, Gas, EHS; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); X Delayed (chronic)	03	03	365	014	CRUDE TREATERS - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/88
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

IER TWO
MERGENCY AND IAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY ID No / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS MIXTURE Trade Secret em. Name BETZ CORR-SHIELD K-9 Check all at apply: Pure X Mix Solid X Liquid Gas EHS IS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	04	04	365	014 014 014 014 014	ALKYLATION UNIT - OUTSIDE CHEMICALS FLUID CATALYTIC CRACKER - OUTSIDE CHEM REFINERY-WIDE - OUTSIDE CHEMICALS SR PLATFORMER - OUTSIDE CHEMICALS VACUUM UNIT - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret em. Name BETZ DIMETALLIC 00H6 5 Check all at apply: Pure X Mix Solid X Liquid Gas EHS IS Name	X Fire Sudden Release of Pressure Reactivity X Immediate (acute) X Delayed (chronic)	03	03	365	014	FLUID CATALYTIC CRACKER - OUTSIDE CHEM	
CAS MIXTURE Trade Secret em. Name BETZ DIMETALLIC 70U0 0 Check all at apply: Pure X Mix Solid X Liquid Gas EHS S Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	014	FLUID CATALYTIC CRACKER - OUTSIDE CHEM	

rtification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations
___ I have attached a description of dikes and other safeguard measures

5 Rev 1-91
Form Approved OMB No. 2050-0072

IER TWO
MERGENCY AND HAZARDOUS CHEMICAL INVENTORY
Specific information by Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: BETCO CITRUSOLV CONC ENTRATE 209; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	01	01	365	N14	LABORATORY	
CAS: MIXTURE; Trade Secret; Chem. Name: BETZ BALANCED POLYME R 8025; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	04	04	365	A15	BOILER FEEDWATER TREATING - OUTSIDE CHEM	
CAS: MIXTURE; Trade Secret; Chem. Name: BETZ CORR SHIELD K7; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); X Delayed (chronic)	02	01	365	N14	CRUDE TREATERS - OUTSIDE CHEMICALS	

rtification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/88
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 17194-00-2 Trade Secret Chem. Name BARIUM HYDROXIDE (Check all that apply): Pure: X Mix: X Solid: Liquid: Gas: EHS: EHS Name	Fire: Sudden Release of Pressure: Reactivity: X Immediate (acute): Delayed (chronic):	02	02	365	E14	WAREHOUSE MARTIN FOUNDRY	
CAS 75-28-5 Trade Secret Chem. Name BELCHER ISOBUTANE (Check all that apply): Pure: X Mix: Solid: Liquid: X Gas: EHS: EHS Name	Fire: X Sudden Release of Pressure: X Reactivity: X Immediate (acute): Delayed (chronic):	01	01	365	M14	LABORATORY	
CAS MIXTURE Trade Secret Chem. Name BETCO CITRUS CHISEL 167 (Check all that apply): Pure: Mix: X Solid: Liquid: X Gas: EHS: EHS Name	Fire: Sudden Release of Pressure: Reactivity: X Immediate (acute): Delayed (chronic):	03	02	365	E14	SOUR WATER STRIPPERS - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/98
Date Signed

Optional Attachments *(Check One)*

___ I have attached a site plan
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

25 Rev 1-91

Form Approved OMB No. 2050-0072

IER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific information by Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY — ID No. / Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No of days On-site (days)	Storage Codes (Non-Confidential)	Storage Locations	Optional
CAS 68425-16-1 Trade Secret Chem. Name: ATOCHEM DI-TERTIARY NONLYPOLYSULFIDE (Check all that apply) X Pure, X Liquid EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	02	365	D14	SR PLATFORMER - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: AWC 763 RUST TRANSFORMER BULK (Check all that apply) X Mix, X Liquid EHS Name	Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	02	02	365	N14	MAINTENANCE SHOP AREA 1	
CAS 110-71-4 Trade Secret Chem. Name: BAKER CHEMICAL 1,2-DIMETHOXYETHANE (Check all that apply) X Mix, X Liquid EHS Name	X Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	01	01	365	M14	LABORATORY	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations
____ I have attached a description of dikes and other safeguard measures

-25 Rev 1-91

Form Approved OMB No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS: MIXTURE; Trade Secret; Chem. Name: ALBEMARLE AUTOMATE LIQUID DYE BLUE; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); Delayed (chronic)	03	03	365	A14	CRUDE & LAB TANK FARM - OUTSIDE CHEM	
CAS: MIXTURE; Trade Secret; Chem. Name: ALBEMARLE HITEC 4199 FUEL ADDITIVE; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name	X Fire; Sudden Release of Pressure; Reactivity; X Immediate (acute); X Delayed (chronic)	04	04	365	A14 D14 D14	CRUDE & LAB TANK FARM - OUTSIDE CHEM MELVINDALE TANK FARM - OUTSIDE CHEMICALS WAREHOUSE MARTIN FOUNDRY	
CAS: MIXTURE; Trade Secret; Chem. Name: ANDEROL 750 OIL; Check all that apply: Pure ___ Mix X Solid ___ Liquid X Gas ___ EHS ___; EHS Name	Fire; Sudden Release of Pressure; Reactivity; Immediate (acute); Delayed (chronic)	03	02	365	D14	SR PLATFORMER - OUTSIDE CHEMICALS	

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan.
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

Rev 1-91

Form Approved OMB No. 2050-0072

ER TWO
MERGENCY AND AZARDOUS CHEMICAL NVENTORY

Specific Information by Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No
Date Received

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

PORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

___ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max. Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 7727-37-9 Chem Name: AGA GAS INC. NITROGEN Trade Secret Check all that apply: X Pure; Mix; Solid; Liquid; X Gas; EHS MIS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	L14 L24 L24	FLUID CATALYTIC CRACKER - OUTSIDE CHEM MAIN WELDING SHOP SULFUR RECOVERY - OUTSIDE CHEMICALS	
CAS 7782-44-7 Chem Name: AGA GAS INC. OXYGEN Trade Secret Check all that apply: Pure; Mix; Solid; Liquid; X Gas; EHS MIS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	03	365	L24	LABORATORY	
CAS MIXTURE Chem Name: AKZO CHEMICALS KF-75 2 ALUMINA CATALYSTS Trade Secret Check all that apply: Pure; X Mix; X Solid; Liquid; Gas; EHS MIS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	05	05	365	A25	GAS OIL UNIFINER - OUTSIDE CHEMICALS	

Certification (*Read and sign after completing all sections*)

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

3/20/88
Date Signed

Optional Attachments (*Check One*)

___ I have attached a site plan.
___ I have attached a list of site coordinate abbreviations.
___ I have attached a description of dikes and other safeguard measures

25 Rev 1-91

Form Approved. No. 2050-0072

TIER TWO
EMERGENCY AND HAZARDOUS CHEMICAL INVENTORY

Specific Information By Chemical

Facility Identification

Name: MARATHON ASHLAND PETROLEUM LLC
Street Address: 1300 SOUTH FORT STREET
City: DETROIT State: MI Zip: 48217
County: WAYNE
SIC Code: 2911 Dun & Bradstreet No.: 15 291 3448

FOR OFFICIAL USE ONLY
ID No.
Date Received: 02 25 1998 2015

Owner/Operator Name

Name: MARATHON ASHLAND PETROLEUM LLC Phone: (419)422-2121
Mail Address: 539 SOUTH MAIN STREET, FINDLAY, OH 45840

Emergency Contact

Name: JEFFERY L. BRUESTLE Title: ENV. COORDINATOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

Name: JAMES N. KENYON Title: SAFETY SUPERVISOR
Phone: (313)843-9100 24 Hr. Phone: (313)843-9100

IMPORTANT: Read all instructions before completing form

Reporting Period From January 1 to December 31, 19 97

____ Check if information below is identical to the information submitted last year.

Chemical Description	Physical and Health Hazards (Check all that apply)	Inventory: Max Daily Amount (code)	Inventory: Avg. Daily Amount (code)	Inventory: No. of days On-site (days)	Storage Codes and Locations (Non-Confidential): Storage Code	Storage Locations	Optional
CAS 7440-44-0 Trade Secret Chem. Name: ACTIVATED CARBON (Check all that apply) X Pure, X Solid EHS Name	Fire Sudden Release of Pressure Reactivity Immediate (acute) Delayed (chronic)	04	04	365	A14 A14	GAS OIL UNIFINER - OUTSIDE CHEMICALS SCOT TAIL GAS - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: ADVANCED POLYMER C20 33 SERIES CATALYST (Check all that apply) X Mix, X Liquid, X EHS EHS Name: PHENOL	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	02	365	N14 R14	MICH REFINING DIVISION - ALL REFINERY-WIDE - OUTSIDE CHEMICALS	
CAS MIXTURE Trade Secret Chem. Name: ADVANCED POLYMER C21 31 SERIES CATALYST (Check all that apply) X Mix, X Liquid EHS Name	Fire Sudden Release of Pressure Reactivity X Immediate (acute) Delayed (chronic)	03	02	365	N14 R14	MICH REFINING DIVISION - ALL REFINERY-WIDE - OUTSIDE CHEMICALS	

FEB 25 1998
POLLUTION PREVENTION SECTION

Certification *(Read and sign after completing all sections).*

I certify under penalty of law that I have personally examined and am familiar with information submitted in this and all attached documents, and that based on my inquiry of those individuals responsible for obtaining the information, I believe that the submitted information is true, accurate and complete.

L. J. NORDHAUSEN, DIVISION MANAGER
Name and official title of owner/operator's authorized representative

Signature

2/20/98
Date Signed

Optional Attachments *(Check One)*

____ I have attached a site plan
____ I have attached a list of site coordinate abbreviations.
____ I have attached a description of dikes and other safeguard measures

copy

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

April 20, 1998

CDR R. C. Helland
U.S. Coast Guard
MSO Detroit
110 Mt. Elliott
Detroit, MI 48207-4380

Subject: February 18, 1998 Rouge River Spill
Shoreline Cleanup Activities - April 16, 1998 Site Review

Dear CDR Helland:

On April 16, 1998, Mr. V. J. Meeks, Marathon Ashland Petroleum LLC (MAPLLC), Mr. J. Snyder, Marine Pollution Control (MPC) and the author met at the Shell Oil dock to review the status of the shoreline cleanup. The warmer weather, rains and higher water levels appeared to have accomplished the additional shoreline cleanup anticipated. The author spoke with Mr. A. Pitney, USCG, later the same day. All parties agreed that the remaining absorbent boom and pom-poms could be removed. MPC was advised on April 16, 1998, to remove the remaining absorbent boom and pom-poms, take pictures of the shoreline and complete their report to MAPLLC.

Unless advised otherwise, MAPLLC considers, upon removal of the remaining absorbent boom and pom-poms, the response to the February 18, 1998 Rouge River Spill and subsequent cleanup closed and having met the requirements of the plan approved by the response unified command.

Any questions or comments should be directed to the author at the above address.

Respectfully submitted,

Donald G. Schnake
RP/IC

encl

cc: Mr. E. W. Friese, Jr.
Michigan Department of Environmental Quality
Southeast Michigan District Headquarters
38980 West 7 Mile Road
Livonia, MI 48152

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

March 16, 1998

CDR R. C. Helland
U.S. Coast Guard
MSO Detroit
110 Mt. Elliott
Detroit, MI 48207-4380

Subject: February 18, 1998 Rouge River Spill
Shoreline Cleanup Activities - March 11, 1998 Site Review

Dear CDR Helland:

On March 11, 1998, Mr. A. Pitney, USCG, Mr. M. Rancilio, Marine Polution Control, Mr. J. Bruestle, Marathon Ashland Petroleum LLC and the author met at the Shell Oil dock to review the status of the shoreline cleanup. All agreed that cold weather had hampered cleanup and that continued shoreline maintenance was warranted.

Enclosed is the written plan confirming the discussions. Please advise if the attached plan does not accurately reflect the March 11, 1998 discussions.

We anticipate reviewing the site again mid to end of April.

Respectfully submitted,

Donald G. Schnake
RP/IC

encl

cc: Mr. E. W. Friese, Jr.
Michigan Department of Environmental Quality
Southeast Michigan District Headquarters
38980 West 7 Mile Road
Livonia, MI 48152

MPC MARINE POLLUTION CONTROL
8631 WEST JEFFERSON • DETROIT, MICHIGAN 48209-2651 • 313/849-2333 • FAX 313/849-1623

Via Facsimile 313.843.7636

March 11, 1998

Mr. Donald Schnake
Marathon Oil Company

Ref: Rouge River Boom Maintenance

Dear Mr. Schnake,

Pursuant to our inspection of the Rouge River cleanup site on March 11, 1998, MPC personnel will engage in the following activities relative to the maintenance of the absorbent boom system in position upstream and downstream of O'Brien's drain:

> MPC shall remove saturated absorbent materials and replace as necessary in areas still exhibiting free floating contamination. In areas that are free of contamination, the absorbent materials will be removed with no replacement. All recovered absorbent materials will be placed in the roll-off box that is present on site, and will be transported to an appropriate disposal site at the conclusion of all operations. MPC will continue monitoring the site on a weekly basis, checking that the booms remain in correct position and changing out absorbents as necessary. MPC will keep you advised of these activities. MPC anticipates that in the next several weeks as the weather changes for the better, the recovery action of the absorbents will increase requiring additional adjustment and change-out.

Please give me a call if you have any questions.

Sincerely,

Michael Rancillo

Michael Rancillo

MEMBER
Spill Control Association of America

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

February 26, 1998

CDR R. C. Helland
U.S. Coast Guard
MSO Detroit
110 Mt. Elliott
Detroit, MI 48207-4380

Subject: February 18, 1998 Rouge River Spill
Shoreline Cleanup Activities

Dear CDR Helland:

Marine Pollution Control (MPC) was earlier designated as having planning responsibility for the above referenced spill response. MPC's proposed plan for the shoreline cleanup immediately upstream and downstream of the O'Brian Drain was discussed on site on February 25, 1996. In attendance were Mr. A. Pitney, USCG, Mr. E. W. Friese, MDEQ, Mr. M. Popa. MPC, and the author. Enclosed is the written plan confirming the discussions.

It was also agreed that the site would be periodically monitored by MPC and that a site review to determine adequacy of the plan would be held in approximately two weeks.

It is proposed that the site review be held at 10:00 a.m., Wednesday, March 11, 1998.

Please advise if the attached plan (1) does not accurately reflect the February 25, 1998 discussion or (2) if the March 11 site review date needs to be changed.

Respectfully submitted,

Donald G. Schnake
RP/IC

encl

cc: Mr. E. W. Friese, Jr.
Michigan Department of Environmental Quality
Southeast Michigan District Headquarters
38980 West 7 Mile Road
Livonia, MI 48152

MPC MARINE POLLUTION CONTROL
8631 WEST JEFFERSON • DETROIT, MICHIGAN 48209-2651 • 313/849-2333 • FAX 313/849-1623

Via Facsimile (313)843-6220

February 25, 1998

Mr. Von J. Meeks, CSP
Marathon Ashland Petroleum LLC
1300 South Fort Street
Detroit, MI 48217-1294

Ref: Rouge River Spill Response

Dear Mr. Meeks,

Pursuant to our discussions of this morning with Mr. Earl Friese of the Michigan Department of Environmental Quality (MDEQ), I have prepared the following work plan for shoreline remediation activities relative to the cleanup and response on the Rouge River.

Work Plan: Shoreline Cleanup Activities

MPC shall utilize absorbent materials to recover residual oil from the shorelines located immediately upstream and downstream of the O'Brien Drain. Specifically, MPC shall use Oil Snare "Pom-Poms" to remove oil from the shorelines and rip-rap present at the site. MPC shall place absorbent booms along the shorelines to prevent any recontamination of the shorelines until the presence of oil from the area has been mitigated. Also, MPC shall install a section of hard containment boom across the mouth of the O'Brien Drain, and line the inner side of this boom with an absorbent boom to recover any oil emanating from the drain area. All absorbent materials which have been used for recovery shall be monitored by MPC personnel, and changed out as necessary. MPC shall dispose of the contaminated absorbent materials by placing them into appropriate storage devices (D.O.T.-approved Roll-Off boxes) for removal from the site.

Please give me a call if you have any questions.

Sincerely,

Michael Popa
Operations Manager

MEMBER Spill Control Association of America

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

Certified Mail
Return Receipt # P 608 152 334

February 26, 1998

Mr. Earl W. Friese, Jr.
Michigan Department of Environmental Quality
38980 West Seven Mile Road
Livonia, MI 48152

Re: Report of Oil, Salt or Polluting Material Loss

Dear Mr. Friese:

The attached report is being submitted for an oil spill which was discovered on February 18, 1998. Additional information will be provided when the clean-up activities have been completed.

Please contact me if you have any questions.

Sincerely,

Jeffery L. Bruestle
Environmental Coordinator

cc: MDEQ Lansing - P 608 152 335
USCG Detroit - P 608 152 336

STATE OF MICHIGAN
DEPARTMENT OF NATURAL RESOURCES

REPORT OF OIL, SALT, OR POLLUTING MATERIAL LOSSES

Pursuant to the provisions of Act 245 of the Public Acts of Michigan 1929 as amended, regulations have been issued which require that all owners, managers, or operators of vessels, oil storage, or on-land facilities shall notify the Water Resources Commission or his authorized representative of oil, salt, and polluting material losses. This notification shall be made promptly by telephone or telegraph, giving briefly the particulars, and by mail, giving a detailed account of events and conditions.

Date: February 26, 1998	Company Name: Marathon Ashland Petroleum LLC
Location of Loss (Be Specific): Rouge River in Southwest Detroit, near I-75 overpass at mouth of O'Brian Drain	
Material Lost: Crude Oil Mixture	Amount: 1,200 gallons / Name of Surface Water Involved: Rouge River
Date Loss was Discovered: February 18, 1998	Time of Discovery: 11:30 a.m.
Name of Department of Natural Resources Representative Contacted: PEAS Operator #19	
Telephoned or Telegraphed by Whom: Jeffery L. Bruestle	Time: 1:00 p.m.
Cause of Loss (Include Type of Equipment and Other Details): Heavy rains overloaded the refinery pretreatment system. Retention tanks overflowed to the Detroit Water and Sewerage Department (DWSD) system. The DWSD system overflowed at the Oakwood lift station to the O'Brian Drain.	
Nature of Loss (Include Complete Description of Damage): The spilled oil was contained within the O'Brian Drain and in the Rouge River between the I-75 overpass and the Jefferson Avenue bridge.	
Additional Comments (Include Method of Control, Plans for Prevention of Recurrence, etc.): Oil was recovered with vacuum trucks and sorbent materials. Contaminated debris has been removed. Shoreline has been washed with low pressure cold water.	
Company Name: Marathon Ashland Petroleum LLC	By (Signature): Jeffery L. Bruestle

Return this form to: **Michigan Department of Natural Resources**
Groundwater Quality Division
Attention: Compliance Section
Box 30028
Lansing, Mich. 48909
24-Hour Emergency Notification Number
517/373-7660
800/292-4706 (In state)

November 7, 1995	MARATHON OIL COMPANY MICHIGAN REFINING DIVISION EMERGENCY RESPONSE PLAN CHECKLISTS	COMMLIST.14 Page 14 - 21

LIAISON OFFICER

GENERAL INFORMATION

This checklist is designed to be used by the Liaison Officer during an emergency. The Liaison Officer is responsible for coordinating with assisting fire and police departments and ensuring that appropriate notifications are made with local, county, state, and federal governmental agencies. The Liaison Officer will be located in the Incident Command Center.

The radio designation for the Liaison Officer will be "LIAISON."

INCIDENT INFORMATION

DATE: 2/18/98 TIME: 12:30

LOCATION Rouge River near I-75 bridge, outlet of O'Brien Drain

3,000 - 4,000 gallons

NATURE OF THE INCIDENT Oil in combined sewer overflow from DWSD lift station

MATERIALS/PROCESS INVOLVED

W.O. # 2901202

November 7, 1995	MARATHON OIL COMPANY MICHIGAN REFINING DIVISION EMERGENCY RESPONSE PLAN CHECKLISTS	COMMLIST.14 Page 14 - 23

AGENCY CONTACT LIST

NAME	GOVERNMENT AGENCY	COMMENTS
12 45 Chris Savage	Nat'l Response Center	800-424-8802
Report #	424-951	
Cheryl - Op #19	MDEQ - PEAS	800-292-4706
Chief Mergenthaler	US CG - Detroit	313-568-9524
(Dave)		
- MDC at Ford Rouge		
- Aaron Pitney USCG at Shell		
Sylvia	WC DOE	281-8396 → Downtown
- will leave message for Jerry K / Victor		
Larry Miller	Blue Circle / St. Mary's Peerless	849-4537
Charles Gray	CONRAIL	323-5834 Dist. Sup.
	Bridge	297-5425
Dispatch - Paulding	Detroit Fire Dept	596-1602
Charles Williams	River Rouge Fire Dept	842-1719
Harry Hayes	Con Rail	323-5053
- offered assistance if needed		

Michigan Refining Division

MARATHON ASHLAND Petroleum LLC

1300 South Fort Street
Detroit, MI 48217-1294
Telephone 313/843-9100

CERTIFIED MAIL

July 17, 2001

Waste, Pesticides and Toxics Division
U.S. Environmental Protection Agency
Region 5
77 West Jackson Boulevard
Chicago, IL 60604

Michigan Department of Environmental Quality
Waste Management Division
38980 Seven Mile Road
Livonia, MI 48152-1006
Attn: Mr. Larry AuBuchon

RE: Waste Management Procedure
Marathon Ashland Petroleum LLC
Detroit, Michigan
MID 005 506 357

Pursuant to Paragraph 23.A.ii of the New Source Review Consent Decree, United States of America et. al. v. Marathon Ashland Petroleum LLC (MAP) (Civil No. 01-40119), lodged May 11, 2001, MAP is submitting the enclosed Waste Management Procedure. If you have any questions regarding the Waste Management Procedure, please contact Paula Bremer at (313) 297-6364.

Sincerely,

David G. Linington
Environmental &Safety Manager

enclosure

n:\Environmental\Waste\2001\Correspondence\EPAwastemanagementprocedure.doc

Table of Contents

Purpose 2

Definitions 2

General Waste Handling Procedure 3
- Responsibilities 3
- Waste Storage Areas 4
- Empty Containers 5

Hazardous Waste Container Emissions Monitoring 6

Management of Hazardous Waste in Satellite Accumulation Areas 7

Hazardous Waste Storage Area Inspections 8

Management of Used Oil 9

Inspection Form 10

Attachments:
1. Summary of Waste Handling Procedures

PURPOSE

The purpose of this procedure is:

- To provide guidance for the handling and disposal of both wastes and containers that are generated during the course of normal plant operations, construction projects and maintenance activities.
- To comply with environmental regulations
- To define the responsibilities of those people involved with waste and container handling and disposal.

DEFINITIONS

Containers:	Rolloff boxes, flow bins, drums, cans, bottles, etc.
DOT:	U.S. Department of Transportation
EPA:	U.S. Environmental Protection Agency
Hazardous Waste:	Waste that is hazardous based upon its characteristics (i.e., ignitable, reactive, corrosive or toxic) or is from a listed source (i.e., wastewater treatment sludge, hydrotreating catalyst). The characteristics of the waste can be determined by analytical testing or using generator knowledge. Hazardous waste cannot be stored on-site for more than 90-days.
Hazardous Waste Storage Area:	A storage area which has been designated as acceptable for the storage of Hazardous Waste.
Marathon Job Coordinator:	The Marathon Job Coordinator is the operations, maintenance, or engineering person responsible for coordinating the project.
Non-Hazardous Waste:	Any waste that does not meet the definition of a hazardous waste.
RCRA	Resource Conservation and Recovery Act. This is the Federal regulation which governs the identification and management of hazardous waste.
Satellite Accumulation:	Storage area for up to 55-gallons of hazardous waste at or near the site of generation.
UN Approved Drum:	Drum designed, tested, and labeled to meet requirements established by the United Nations. Requirements are based upon the type of container, specific gravity of the material contained, and DOT packing group assigned to the waste. UN approved drums are stocked by the warehouse. The UN marking appears on the bottom of each drum.
Used Oil:	Oil generated from the draining of equipment or vehicles. Used oil does not include oil from tank bottoms or oil from cleanups.
VOC:	Volatile organic compounds.

GENERAL WASTE HANDLING PROCEDURE

Refinery waste generated from process units and maintenance activities should be handled separately and should not be placed into the plant trash. For ***ALL WASTES*** generated in the refinery the following four steps must be taken to ensure proper management of the waste. The attached table (Summary of Waste Handling Procedures) provides more specific information on the management procedures (including identifying the proper container, label content and accumulation location) for most waste streams generated in the refinery. If a waste stream is not on the attached table, the following four steps should be followed and the Environmental Department should be contacted for further instructions.

1. **CONTAINERIZE WASTE.** All waste must be containerized in UN approved drums, rolloff boxes (20 or 30 cu. yds.), lugger boxes (10 cu. yds), flow bins, or other containers that are appropriately sized for the material to be stored.

2. **LABEL CONTAINER.** Once waste is placed into containers, the container must be labeled with the name of the waste (including hazardous waste codes, if applicable) and the date (the date must be when waste was ***first*** placed into the drum - not the date the drum is full).

3. **CLOSE OR SECURELY COVER CONTAINER.** Immediately after placing waste into the container (i.e., within 15 minutes), the container cover must be securely fastened. Lids must have seals and be bolted, bungs should have gaskets and be tightened, and tarps must be securely fastened.

4. **MOVE TO PROPER ACCUMULATION AREA.** Once the container is full or the job is complete, the container must be moved to the proper accumulation area within 24 hours.

HAZARDOUS WASTE MAY NOT BE ACCUMULATED ON-SITE FOR MORE THAN 90 DAYS
(Unless in a satellite accumulation area)

Responsibilities:

ALL Operation and Maintenance personnel are responsible for ensuring that the four steps listed above are completed ***every time a waste is generated***. The attached table provides additional information regarding specific waste streams. Any questions regarding waste management procedures should be directed to the Environmental Department ***immediately***.

Operations (VOC/Shift Breakers) are responsible for performing VOC monitoring of containers as requested by the Marathon Job Coordinator/Maintenance Planner. The procedure for performing the VOC monitoring is described on page 6 of this procedure.

The ***Marathon Job Coordinator*** or ***Maintenance Planner*** is responsible for all of the following activities:

- Coordinating with Environmental to obtain samples and waste disposal approval when planning a job which will require disposal of refinery waste (e.g., soil, catalyst, tank bottoms, etc.).

- Making arrangements to obtain the proper container prior to beginning work (all wastes must be containerized at the time of generation).

- Ensuring that all wastes are properly containerized, labeled, and stored once generated.
- Arranging for containers to be moved to the appropriate accumulation area when job is completed or container is full and notifying Environmental.
- Ensuring that VOC monitoring of the container is conducted when necessary and submitting the completed Hazardous Waste Container Emissions Monitoring form to Environmental.
- Arranging for transportation of the waste to the disposal site identified by Environmental.
- Completing all shipping documents provided by Environmental. Submitting appropriate shipping document copies to Environmental after the waste is shipped off-site.

Environmental is responsible for all of the following activities:

- Determining if a waste is a hazardous or non-hazardous waste.
- Collecting waste samples as requested by the Marathon Job Coordinator/Maintenance Planner and arranging for the appropriate analysis.
- Providing labeling and storage information to the Marathon Job Coordinator/Maintenance Planner once analytical results have been received.
- Obtaining all necessary approvals to dispose of the waste. If the waste is hazardous, guidance will be provided to the Marathon Job Coordinator/Maintenance Planner for arranging for a licensed hazardous waste transporter.
- Providing all appropriate shipping documents to the Marathon Job Coordinator/Maintenance Planner.
- Inspecting the hazardous waste accumulation areas weekly and documenting the inspections.
- Maintaining records of analytical results, VOC monitoring results, transportation and disposal paperwork.
- Auditing to ensure compliance with applicable environmental regulations.
- Reviewing and updating this Waste Handling and Disposal procedure as necessary.

Waste Storage Areas:

Hazardous wastes must be stored in the following areas:

Complex 1:	Complex 1 29T12 Pad (bulk containers)
Complex 2:	Complex 2 Bundle Cleaning Pad (bulk containers) Martin Warehouse Hazardous Waste Storage Area (drums)
Complex 3/4:	CP Bundle Cleaning Pad (bulk containers and drums)

Non-Hazardous waste storage:

- Non-hazardous waste in drums (liquid and solid) must be stored at Martin or on the CP bundle pad
- Solid non-hazardous waste in bulk containers can be stored on any paved surface in the refinery
- Liquid non-hazardous waste in bulk containers must be stored on one of the Bundle Cleaning Pads

Empty Containers

Operations personnel are responsible for handling empty containers generated within their process areas. Maintenance personnel are responsible for handling empty drums generated by maintenance activities. The procedure for handling empty containers for return or disposal is as follows:

1. Determine if there is a deposit on the container which can be collected upon return of the container to the supplier. Notify the warehouse of empty containers with deposits so that the empties can be picked up when new containers are delivered.

2. Containers which cannot be returned to the supplier should be completely emptied. There must be less than 1-inch of product in the drum.

3. Empty drums should be stored in the empty container location in each complex. Empty drums must be stored on pallets with lids closed and bungs tightened.
   - Complex 1: North of the API
   - Complex 2: South of Martin Warehouse
   - Complex 3/4: South of CP Warehouse

4. When at least 50 empty drums have been accumulated, the Environmental Department will make arrangements for a contractor to have drums crushed and readied for disposal.

5. Other types of empty containers (i.e., bottles, can and buckets) should be thoroughly rinsed and the label removed from the container. The container may then be disposed of in the plant trash dumpsters.

NOTE: EMPTY 55-GALLON DRUMS ARE PROHIBITED FROM BEING USED FOR TRASH WITHIN THE REFINERY

HAZARDOUS WASTE CONTAINER EMISSIONS MONITORING

This monitoring guideline applies to hazardous waste storage containers (e.g., roll-off boxes, flow bins, etc.) **larger than 120 gallons**.

1. VOC monitoring shall be performed in accordance with the fugitive monitoring guidelines, at the container-cover interface.

2. Monitoring shall be performed each time a waste is placed into storage and when the container cover is disturbed. Monitoring shall be performed after final filling and covering of container OR after a batch of waste has been added to the container and the container is covered for the day.

3. The following hazardous wastes are exempt from this procedure: *GO/DHT catalyst in flow bins*

4. Operate the monitor according to the same procedures used for fugitive VOC monitoring from valves, pumps, etc.

5. Take a background VOC reading between three to six feet away from container.

6. Walk slowly and take VOC readings at the cover and box interface around the entire perimeter of the container. Record the maximum VOC reading.

7. Complete the form below.

8. If the net VOC concentration is greater than 500 ppmv, resecure cover and perform test again.

9. If the net VOC concentration is greater than 500 ppmv, notify Environmental and either obtain a new cover or transfer the waste to a new container and retest the container.

SUBMIT THIS FORM TO ENVIRONMENTAL

YOUR NAME:_____ DATE:_____

TIME MONITORING PERFORMED:_____

CONTAINER NUMBER:_____ VOC ANALYZER NUMBER:_____

CONTAINER TYPE: ☐ roll-off box ☐ flow bin ☐ other:_____

CONTAINER COVER: ☐ tarp ☐ solid, gasketed cover ☐ other:_____

TYPE OF WASTE:_____

	PPMV
MAXIMUM VOC READING AT ANY INTERFACE =	
BACKGROUND READING =	
NET VOC CONCENTRATION (MAX READING - BACKGROUND READING) =	

MANAGEMENT OF HAZARDOUS WASTE IN SATELLITE ACCUMULATION AREAS

Hazardous waste may be accumulated in a "satellite accumulation" area for greater than 90 days if **ALL** of the following conditions are met:

(1) Only 55-gallon drums can be used for satellite accumulation (only one drum can be located at any single accumulation point);

(2) The drum must have a yellow hazardous waste label with the name of the waste filled in (the date should **not** be put on the drum label until the drum is full);

(3) The accumulation container must be located ***at*** or ***near*** the point of waste generation (e.g., next to the vessel which contains the amine filters to be removed);

(4) The drum must be under the control of the operator of the process generating the waste (e.g., the drum should be located within the unit where outside access is restricted) ;

(5) The drum must be closed (i.e., bungs in place and tightened, lid sealed and bolted) unless waste is being added to the container; and

(6) When the drum is full, the date should be added to the yellow hazardous waste label and the container transferred to the Martin Warehouse Accumulation Area within 24 hours.

Satellite accumulation areas should only be used for hazardous wastes which are generated on a regular basis (i.e., daily or weekly). For hazardous wastes which are only generated once a month or less frequently, the waste should be placed into a drum and transferred to Martin Warehouse Hazardous Accumulation Area or the CP Bundle cleaning pad as soon as the process/activity generating the waste is complete (i.e., bundle cleaning is completed). The following areas are satellite accumulation storage locations:

Complex 1:
- 29T12 area (API debris)
- API (API sludge)

Complex 2:
- Scot Tail Gas Unit (amine filters – 43V107 area)

Complex 3/4:
- FCCU Fractionator (slurry sediment)

Miscellaneous:
- Laboratory (paper towel waste)
- Laboratory (mercury accumulation)

If additional locations are need, contact Environmental for assistance in determining what meets the definition of a satellite accumulation area for specific hazardous wastes.

HAZARDOUS WASTE STORAGE AREA INSPECTIONS

Hazardous wastes must be stored in the following areas:

Complex 1: Complex 1 29T12 Pad (bulk containers)

Complex 2: Complex 2 Bundle Cleaning Pad (bulk containers)
Martin Warehouse Hazardous Waste Storage Area (drums)

Complex 3/4: CP Bundle Cleaning Pad (bulk containers and drums)

Federal and state regulations require that hazardous waste storage areas be inspected on a weekly basis. The purpose of the weekly/daily inspections is to ensure that hazardous wastes are:

- properly containerized (i.e., containers are in good condition, containers sealed/tightly closed);
- properly labeled (e.g., hazardous waste, description of material, date); and
- properly stored:
  - ➔ drums on pallets,
  - ➔ material on-site for less than 90 days,
  - ➔ fire extinguisher is available (properly tagged);
  - ➔ containment area is free of liquids (free liquids must be removed within 24 hours),
  - ➔ no signs of releases (i.e., pooled liquid on containment area, hole in container), and
  - ➔ containment area integrity is intact (i.e., no cracks/gaps).

Weekly inspections of the hazardous waste storage areas are performed by the Environmental Department and documented on the attached inspection form (page 10 of this procedure). Upon completion of the inspection, the inspection forms are filed in the Environmental Department files and maintained for three years.

Any deviations noted during the storage area inspections are reported to the appropriate complex supervisor and corrective actions are implemented as soon as practical.

MANAGEMENT OF USED OIL

Used oil is generated throughout the refinery during routine and preventative maintenance activities. Used oil must be managed in the Refinery Slop Oil System to be exempt from hazardous waste regulations. Therefore, the following procedure should be followed when used oil is generated:

Small quantities of used oil:

- Place oil in the "Used Oil" drums located near each maintenance shop at the refinery.
- These drums are vacuumed out on a routine basis; however, if drum is full contact the vacuum truck operator or the Complex I maintenance foreman to have the drum emptied.

Large quantities of used oil:

- Contact the vacuum truck operator (or Complex I maintenance foreman) to have the used oil removed directly from the equipment.

The used oil collected from the maintenance shop accumulation drums and/or directly from equipment is placed into the refinery slop oil system via one of the gravity feed drums.

Instructions: **Federal and state regulations require that hazardous storage areas be inspected weekly.** Place a check mark in the appropriate column next to each inspection item. **For any item checked in a shaded box, provide specific comments on the deviation and report to the appropriate Supervisor immediately.** The Supervisor must initiate corrective actions. The corrective action completed column should be initialed and dated when corrective action is complete, or describe actions being taken. When the weekly inspection is completed this form must be filed in the Environmental file.

	Martin Warehouse Hazardous Waste Accumulation Area			Complex 1 29T12 Pad			Complex 2 Bundle Cleaning Area			CP Bundle Cleaning Area		
Inspection Item:	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed	Yes	No	Corrective Action Completed
All containers are marked with a "Hazardous Waste" label or label clearly identifying the waste material.												
All containers have date when storage for disposal began clearly marked.												
All containers have been stored in the unit for less than 90 days.												
All containers are free of leaks or stains possibly caused by leaks.												
All containers are tightly closed with all bungs in place.												
All containers are free of dents and/or corrosion.												
Minimum of 2 feet of aisle space is maintained between rows.												
Fire extinguisher is present and seal has not been broken												
Spill control equipment is available in Warehouse (1)												
Containment area is free of water or other liquids.												
Floor/base of storage area is free of cracks or gaps.												

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container [1]	Label [2]	Storage [3]	Transportation/Disposal [4]
Aerosol Cans (empty and depressurized)	NA	Scrap Metal Rolloff	NA	NA	NA
Aerosol Cans (non-empty)	Collect in a drum and notify Environmental.	Drum	- Aerosol Cans - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Air Filters (contaminated with oil)	If air filters have only small amounts of oil they can be placed in a drum and labeled "refinery contaminated material". If significant quantities of oil are present notify Environmental.	Drum	- Refinery Contaminated Material - Date (green - non-haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Air Filters (not contaminated with oil)	NA	Plant Trash Dumpster	NA	NA	NA
Amine Filters	These filters are hazardous wastes.	Drum	- Hazardous Waste - Waste Codes D001, D018 - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
API Sludge [5] (both liquids and solids)	API separator sludge is a hazardous waste. (Wastewater (API) Sludge - Code A is liquid; Code B is solid)	Safety-Kleen rolloff box	- Hazardous Waste - Waste Codes K048, K049, K051, F037, F038 - Date (yellow - haz)	Complex 1 29T12 Pad	Contact Environmental to obtain shipping papers
Asbestos (friable and non-friable; not contaminated with oil)	Asbestos must be managed separately from other materials - place in a separate rolloff box or drum (depending on quantity). Contractor should manage asbestos in accordance with regulations.	Rolloff box from landfill or drum (Material must be covered securely)	- Asbestos warning labels (contractor should supply)	Any paved surface in plant	Asbestos Waste Shipment Record Notification Form (obtain from Environmental)
Asphalt/Concrete	Separate asphalt/concrete; pieces can be no larger than 3 foot x 3 foot x 3 foot. Recycle at Angelo's Crushed Concrete or AJAX Asphalt.	Rolloff box	NA	Any paved surface in plant	Contact Environmental to obtain shipping papers
Batteries (Lead-Acid)	These batteries are recycled. They should be placed on a pallet in the Martin Warehouse Haz. Waste Storage Area.	Place on pallet	NA	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Batteries (Dry-cell; including batteries from flashlights, pagers, cellular phones, refinery radios, gas detectors)	Batteries are collected at each unit (blue tubs) and then transferred to a 55-gallon drum located at the Martin Warehouse Hazardous Waste Storage area.	Collect at each unit then transfer to drum in Martin Warehouse Storage area	- Batteries	Martin Warehouse Hazardous Waste Storage	*Environmental

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container [1]	Label [2]	Storage [3]	Transportation/Disposal [4]
Carbon	Carbon should be analyzed to determine if it is a hazardous or non-hazardous waste. Contact Environmental for assistance. Manage as hazardous until results are received	Drums	- Spent Carbon - Complex # - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage	Purchasing will arrange pickup of spent carbon with the manufacturer
Carbon Support Media	This is a non-hazardous waste.	Drum	- Carbon Support Media - Vessel # (green - non haz)	Martin Warehouse Hazardous Waste Storage	*Environmental
Catalyst (FCCU)	This is a non-hazardous waste which is used as a raw material at several facilities. The Marathon Job Coordinator should determine where the material will be shipped and then contact Environmental for shipping papers.	Super sacks (check with receiving facility)	NA	NA	Contact Environmental to obtain shipping papers
Catalyst [5] (Hydrotreater)	Spent hydrotreater catalyst is a hazardous waste. This material is either sent for regeneration or metals recovery. The Marathon Job Coordinator must determine the appropriate vendor and notify Environmental	Flow bins (inerted with dry ice)	- Hazardous Waste - Waste Code K171 - Date (yellow - haz)	Complex 2 Bundle Cleaning Pad or CP Bundle Cleaning Area	Contact Environmental to obtain shipping papers
Catalyst (other than Hydrotreater or FCCU)	Catalyst should be analyzed to determine if it is a hazardous or non-hazardous waste. Contact Environmental for assistance	Drum	Contact Environmental	Any paved area within the plant	Environmental
Coalescer Filters (10V104, 17V14)	Non-hazardous filters which can be placed in a drum	Drums	- Process Filter - Vessel # (green - non haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Coke	This is a non-hazardous waste.	Rolloff box	NA	NA	Contact Environmental to obtain shipping papers
Construction Debris (could include: scrap metal, concrete, asphalt, rock, brick, wood, insulation and soil)	Construction debris should be visually inspected and segregated by material. Follow instructions for each type of material, if they exist (i.e. scrap metal, concrete/asphalt, etc.). For non-contaminated construction debris follow this guideline	Plant trash	NA	NA	NA
Cooling Tower Wood	This is non-hazardous waste	Rolloff box	- Cooling Tower Wood - Complex # (green - non haz)	Any paved area within the plant	Contact Environmental to obtain shipping papers

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a. Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container [1]	Label [2]	Storage [3]	Transportation/Disposal [4]
Crude Oil Tank Bottoms	Crude oil storage tank sediments are a hazardous waste	Drums	- Crude Oil Tank Bottoms - Tank # - K169 (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain shipping papers
Desalter Sludge	Desalter sludge must be analyzed to determine if it is a hazardous waste. Contact Environmental for assistance.	Drum or Rolloff box	- Desalter Sludge - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain shipping papers
Desicant	Desicant from instrument air filters is a non hazardous waste	Drum	- Desicant - Complex # (green - non haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Empty Drum (for recycle or reconditioning) (container does not contain more than one inch of product)	Drums with deposits should be returned to the supplier Drums for reconditioning must have the original product label on drum, and must have lid or bungs.	NA	- Empty/Recycle	Empty Drum Storage Area	Warehouse Foreman will arrange for pickup of empty drums.
Empty Drum (for disposal) (container does not contain more than one inch of product)	Drums for disposal must be rinsed prior to placing in storage area. Environmental will arrange for crushing.	Rolloff box	- Empty/Dispose	Empty Drum Storage Area	* Environmental
Exchanger Sludge (Bundle Exchanger sludge)	Exchanger Sludge is a listed hazardous waste (waste code K050). Liquid goes to the refinery sewer system. Solids must be collected and placed in a drum.	Drum	- Hazardous Waste - Waste Code K050 - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain shipping papers
Fluorescent Tubes	Tubes should be put back into original packaging if possible. Tubes should not be broken	Cardboard containers	Electric lamps	Martin Warehouse Hazardous Waste Storage Area (east side) 97-8 warehouse (west side)	*Environmental
Flux (includes flux with clay)	Place material into 55-gallon drums and label appropriately. For large quantities of flux - a rolloff box may be used for storage.	Drum	- Flux - Date	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Gaskets	Some gaskets may contain asbestos. However, if gaskets are not crumbling (friable), they may be disposed in plant trash. If gaskets are crumbling (friable) and are thought to contain asbestos, they must be handled as asbestos.	Plant Trash or see Asbestos	NA or see Asbestos	NA or see Asbestos	NA or see Asbestos

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container [1]	Label [2]	Storage [3]	Transportation/Disposal [4]
General Refuse/Trash	Items such as paper, food containers, wooden pallets, office supplies, etc. may be disposed in plant trash.	Plant Trash	NA	NA	NA
High Intensity Sodium or Mercury Vapor Bulbs	Bulbs should not be broken. Notify Environmental when placing bulbs in Martin Warehouse Haz. Waste Storage Area	Drum	Electric Lamps	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Insulation (Non-Asbestos)	Non-Asbestos insulation in small quantities may be placed into plant trash. However, if excessive amounts of insulation are to be removed, a separate container should be arranged and disposal coordinated by Environmental.	Plant trash or Rolloff box (if large quantity)	NA	NA	* notify Environmental if large quantity is generated and separate container is used.
Insulation (oil soaked)	Oil soaked insulation should be handled separately. The insulation should be contained appropriately whether asbestos or non-asbestos. Contact Environmental to conduct sampling and obtain waste disposal approval.	Drum (if small quantity) Rolloff box (large quantity)	- Oil soaked insulation - Date	Martin Warehouse Hazardous Waste Storage Area (drums) Any paved surface (rolloff box)	Contact Environmental to obtain waste disposal instructions and shipping papers
Insulation Jacketing	Metal insulation jacketing should be placed in the scrap metal dumpster	Scrap metal dumpster	NA	NA	NA
Ion Exchange Resin	Contact Environmental to obtain instructions on disposal.	Drums or Rolloff box	- Ion Exchange Resin - Date	Martin Warehouse Hazardous Waste Storage Area (drums) Any paved surface (rolloff box)	* Environmental
KHT Clay Filters [5]	The clay filter is a hazardous wastes. Place material into rolloff boxes	Roll off	- Hazardous Waste - Waste Code D001 - Date (yellow - haz)	CP Bundle Cleaning Pad	* Environmental
Laboratory Wipes/Rags	Wipes and rags which come in contact with solvents/lab chemicals/samples are a hazardous waste.	Drum	- Laboratory Rags - U239, U002 - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	
Lube Oil Filters	Filters must be hot drained. Recovered oil should be placed in "used oil" drums (See "used oil" for further instructions). Drained filters are non-hazardous waste.	Drum	- Refinery Contaminated Material - Date (green - non-haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain shipping papers
Medical Waste	Sharps, cultures and other medical wastes are managed by a contractor.	Supplied by contractor	Supplied by contractor	Service Building - Plant Nurse Office	Supplied by contractor

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container (1)	Label (2)	Storage (3)	Transportation/Disposal (4)
Metal (bolts, pipe, etc.)	Metal should be placed into scrap metal dumpsters. However, metal should be drained of any oil and be free of any insulation.	Scrap metal dumpster	NA	NA	NA
Motors (scrap)	Motors which are to be scraped may be placed into the scrap metal dumpsters.	Scrap metal dumpster	NA	NA	NA
MTBE Catalyst	Catalyst without liquid is a nonhazardous material. For small quantities place in a drum, larger quantities should be placed in a rolloff box. If the catalyst contains liquid contact Environmental for instructions.	Drum or Rolloff box	- MTBE Catalyst - Date	drums - Martin Warehouse Hazardous Waste Storage Area rolloff boxes - any paved surface	Contact Environmental to obtain shipping papers
NHT Particulate Feed Filters	These filters are hazardous wastes.	Drum	- Hazardous Waste - Waste Code D001 - Date (yellow - haz)	CP Bundle Cleaning Pad	* Environmental
Old/Obsolete Chemicals	Generated in laboratory and process units. These materials may be hazardous. A lab pack is periodically scheduled to remove these items	Original container	Original label should be left on the container.	Laboratory	* Environmental
Olefin Feed Filter (10V103)	Non-hazardous filters which can be placed in a drum	Drums	- Process Filter - Vessel # (green - non haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Paint Cleanup Waste	Notify Environmental to obtain waste disposal approval	Drum	- Paint Waste - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Particulate Feed Filters (19V105)	Non-hazardous filters which can be placed in a drum	Drums	- Process Filter - Vessel # (green - non haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Parts Washer Solvent	Notify Environmental to obtain waste disposal approval	Drum	- Parts Washer Solvent - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Process Filters	Process filters must be handled and containerized separately. See instructions for each type of filter.				
Pump Parts	Pump parts must be placed into the scrap metal dumpsters once oil has been removed from parts.	Scrap Metal Dumpster	NA	NA	NA

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container [1]	Label [2]	Storage [3]	Transportation/Disposal [4]
Pump Screen Cleanings (except main column bottoms screen - see slurry oil tank bottoms for management instructions)	Pump screen cleanings must be handled separately in large quantities. If small quantity, cleanings may be containerized with sorball, sorbent socks, and oily rags. Contact Environmental to conduct sampling and obtain disposal approval.	Drums	- Refinery Contaminated Material - Date (green - non-haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain waste disposal instructions and shipping papers
Quench Filters (43V106A&B)	Manage as hazardous waste with the amine filters from the unit.	Drums	- Amine Filters - D001, D018 - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Rags (Oily)	Oily rags may be handled and containerized with sorball, sorbent socks, and pump screen cleanings but the container must be labeled appropriately. Contact Environmental to conduct sampling and obtain waste disposal approval.	Drums	- Refinery Contaminated Material - Date (green - non-haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain waste disposal instructions and shipping papers
Reformer (platformer) Catalyst	Contact Environmental to determine haz or non haz and coordinate with reclamation/disposal facility	Flow bins	- Reformer Catalyst - Vessel # - Date (yellow - haz)	CP Bundle Cleaning Pad	Contact Environmental to obtain waste disposal instructions and shipping papers
Refractory	This is a non-hazardous waste	Rolloff box	- Refractory - Vessel # (green - non haz)	Any paved area within the plant	Notify Environmental to obtain shipping papers
Salt Filters (7V103)	Non-hazardous filters which can be placed in a drum	Drums	- Process Filter - Vessel # (green - non haz)	Martin Warehouse Hazardous Waste Storage Area	* Environmental
Sandblast/ Abrasive	Contact Environmental to conduct sampling and obtain waste disposal approval. Manage as hazardous until analytical results show non-haz.	Rolloff box Drum (if small quantity)	- Sandblast/ Abrasive - Date (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area (drums) Any paved surface (rolloff box)	Contact Environmental to obtain waste disposal approval and shipping papers.
Sewer Sludge/Cleanings [5]	Sewer sludge is a hazardous waste. (Wastewater Sludge - Code A is liquid; Code B is solid)	Sludge trailer or Laidlaw rolloff box	- Hazardous Waste - Waste Codes K048, K049, K051, F037, F038 - Date (yellow - haz)	Complex 1 29T12 Pad	Contact Environmental to obtain shipping papers

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a. Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container [1]	Label [2]	Storage [3]	Transportation/Disposal [4]
Slurry Oil Tank Bottoms	Tank bottoms/filters/separated solids from slurry oil are a hazardous waste.	Drums	- Slurry Oil Tank Bottoms - Tank # - K170 (yellow - haz)	Martin Warehouse Hazardous Waste Storage Area or CP Bundle Cleaning Pad	Contact Environmental to obtain shipping papers
Soil (clean)	Contact Environmental to make determination of clean soil.	None - stockpile	NA	Contact Environmental	NA
Soil (with oil)	Soil generated from excavations must be containerized separately. Contact Environmental to conduct sampling and obtain waste disposal approval.	drum (very small quantity) rolloff box	- Soil contaminated with oil - Date	Martin Warehouse Hazardous Waste Storage Area (drums) Any paved surface (rolloff box)	Contact Environmental to obtain waste disposal approval and shipping papers.
Sorball with Hydrocarbon	Sorball contaminated with hydrocarbons may be containerized with oily rags, pump cleanings, and sorbent socks.	Drum	- Refinery Contaminated Material - Date (green - non-haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain waste disposal approval and proper paperwork.
Sorbent Pads/Socks	Sorbent Pads/Socks contaminated with hydrocarbons may be containerized with oily rags, pump cleanings, and sorball.	Drum	- Refinery Contaminated Material - Date (green - non-haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain waste disposal approval and proper paperwork.
Spent Caustic	This material is a not a hazardous waste when shipped to Merichem. Notify Environmental prior to shipment to obtain shipping papers.	21V49	NA	21V49	Contact Environmental to obtain shipping papers
Sulfur	Sulfur from cleanups should be placed into drums	Drums	- Waste Sulfur - Date (green - non haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain shipping papers
Sulfuric Acid (spent)	Recycled back to supplier. Contact purchasing or the Marathon Job Coordinator for supplier name.	NA	NA	NA	NA
Tank Bottoms (except slurry and crude oil tank bottoms)	All tank bottoms must be handled and stored separately. Contact Environmental to conduct sampling and obtain waste disposal approval. Manage as hazardous until analytical results show non-haz.	Drum (if small quantity) Roll off box (if large quantity)	- Tank Bottoms - Tank # - Date (yellow - non haz)	Martin Warehouse Hazardous Waste Storage Area	Contact Environmental to obtain waste disposal approval and proper paperwork.

Michigan Refining Division - Safety Rules and Procedures
Waste Handling a. Disposal (#24)
Attachment 1: Summary of Waste Handling Procedures

Waste	Special Management Instructions	Container (1)	Label (2)	Storage (3)	Transportation/Disposal (4)
Used Oil	Used oil must be managed in the refinery slop oil system to be excluded from hazardous waste management requirements; therefore, it cannot be drained to the refinery sewer system. Place into "used oil" drums located at maintenance shops.	Small quantities - drum Large quantities - have vacuum truck remove oil directly from equipment	- Used oil - Date	Complex storage area	Must be transported to the T59 slop oil gravity drum. Complete the *Used Oil Generation Form* - submit to Environmental

Notes:

NA - requirement not applicable to this waste stream

(1) Containers are obtained from the warehouse. Contact Environmental to obtain a roll off box.

(2) Preprinted non-hazardous labels (green) and hazardous labels (yellow) can be obtained from the Environmental Department

(3) The following areas are designated as waste storage areas:

Complex 1: 29T12 Pad (Any liquid waste (haz or nonhaz) and solid hazardous waste)

Complex 2: Bundle Cleaning Area (Any liquid waste (haz or nonhaz) and solid hazardous waste)

Martin Warehouse Hazardous Waste Storage Area (all drummed material)

Complex 3/4: CP Bundle Cleaning Area (Any liquid waste (haz or nonhaz) and solid hazardous waste)

** nonhazardous solid waste can be stored on any paved surface within the refinery.

(4) If "Environmental" is in this box; the Environmental Department is responsible for shipment of the waste offsite (including arranging for transportation and disposal). Otherwise the unit/complex generating the waste stream is responsible for arranging for transportation to the disposal facility chosen by the Environmental Department. All paperwork (Bills of Lading and Manifests) for offsite waste shipments is provided by the Environmental Department unless otherwise noted.

(5) Hazardous waste container emissions monitoring (Subpart CC) should be conducted on containers (greater than 120 gallons) used to store this waste stream. See guideline for monitoring instructions.

INFORMATION REQUEST
RCRA ENFORCEMENT BRANCH APPROVAL
(Delegation 8-8)

AUTHORITY: ☑ RCRA §3007 only ☐ RCRA §3007 and CERCLA §104

INSTALLATION NAME: MARATHON ASHLAND PETROLEUM, LLC

LOCATION ADDRESS: 1300 S. FORT ST. MID 005506357

CITY: DETROIT

STATE: MI ZIP: 48217

REGISTERED AGENT: N/A

IS THE MATTER IN RCRA LITIGATION OR UNDER A COURT ORDER?

☑ NO

☐ YES (Concurrence by Regional Counsel is required).

A. DRAFT	INITIALS	DATE
1. ~~REB~~ ECAB Staff Name MIRTHA CAPIRO	MC	9/4/98
SECTION: ☐ IL/IN ☑ MI/WI ☐ OH/MN ☐ ~~IL/MI/WI~~ ☐ ~~IN/OH/MN~~		
2. ~~REB~~ ECAB Section Chief		
3. ORC Attorney Name MARY MC AULIFFE (Only if the matter is in RCRA Litigation or under court order)	MM	9/4/98

B. FINAL		
1. ~~REB~~ ECAB Staff	MC	9/4/98
2. ~~REB~~ ECAB Section Chief	PR	9-4-98
3. ORC Attorney (For Litigation Consultation only)		
4. ~~REB~~ ECAB Chief	PR for JB	9-4-98
5. Assoc. Director, Office of RCRA (only if CERCLA §104 authority is referenced)		
6. WMD Director (only if CERCLA §104 authority is referenced)		

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5
77 WEST JACKSON BOULEVARD
CHICAGO, IL 60604-3590

REPLY TO THE ATTENTION OF:

SEP 04 1998

DE-9J

VIA FACSIMILE AND
CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Jeffery L. Bruestle
Environmental Coordinator
Marathon Ashland Petroleum, LLC
Michigan Refining Division
1300 South Fort Street
Detroit, Michigan 48217

Re: Section 3007 Information Request, Marathon Ashland Petroleum, LLC
1300 South Fort Street, Detroit, Michigan 48217
US EPA ID No. MID 005 506 357

Dear Mr. Bruestle:

This is a request for information by the United States Environmental Protection Agency (U.S. EPA) pursuant to its authority under Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. § 6927. The information requested relates to your company's management of solid and/or hazardous waste, including, but not limited to, hazardous waste management units at the subject facility.

The information requested herein must be provided to this office within twenty one (21) calendar days of receipt of this letter notwithstanding its possible characterization as confidential business information. You may, pursuant to 40 CFR 2.203(a), assert a business confidentiality claim covering all or part of the information in the manner described in 40 CFR 2.203(b). Information covered by such a claim will be disclosed by U.S. EPA only to the extent and by means of the procedures set forth in 40 CFR Part 2, Subpart B. Any requests for confidentiality must be made when the information is submitted, since any information not so identified may be made available to the public without further notice.

Recycled/Recyclable • Printed with Vegetable Oil Based Inks on 50% Recycled Paper (20% Postconsumer)

The written statements submitted pursuant to this request must be notarized and submitted under an authorized signature certifying that all statements contained therein are true and accurate to the best of the signatory's knowledge and belief. Any documents submitted to U.S. EPA Region 5 pursuant to this information request should be certified as true and authentic to the best of the signatory's knowledge or belief.

Should the signatory find, at any time after the submittal of the requested information, that any portion of the submitted information is false, misleading, or incomplete, the signatory should so notify Region 5. If any answer certified as true should be found to be untrue or misleading, the signatory can and may be prosecuted pursuant to 18 U.S.C. § 1001. U.S. EPA has the authority to use the information requested herein in an administrative, civil, or criminal action.

If you have any questions regarding this matter, please contact Mirtha Capiro, Enforcement and Compliance Assurance Branch, at (312) 886-7567, or Andre Daugavietis, Office of Regional Counsel, at (312) 886-6663. Your response should be sent to U.S. EPA, Region 5, at the address on the letterhead above, to the attention of Ms. Capiro.

Sincerely yours,

Paul L Ille

for Joseph M. Boyle, Chief
Enforcement and Compliance Assurance Branch

Enclosure

cc: Larry Aubuchon, Livonia District, MDEQ

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 5

IN THE MATTER OF:

Marathon Ashland Petroleum, LLC Michigan Refining Division 1300 South Fort Street Detroit, Michigan 48217 US EPA ID No. MID 005 506 357	)Information Request Pursuant)to Section 3007 of the Resource)Conservation and Recovery Act,)as amended, 42 U.S.C. § 6927.))

This is a request by the United States Environmental Protection Agency (U.S. EPA) issued pursuant to Section 3007 of the Resource Conservation and Recovery Act (RCRA), as amended, 42 U.S.C. § 6927. The issuance of this request serves to require Marathon Ashland Petroleum, LLC (the Company) to submit information relating to its management of solid and/or hazardous wastes at its refinery facility (the Facility) located in Detroit, Michigan.

The State of Michigan is authorized to administer and enforce a hazardous waste management program in lieu of the Federal program under Subtitle C of RCRA, 42 U.S.C. 6921 *et. seq.* subject to the Hazardous and Solid Waste Amendments of 1984 (HSWA), November 8, 1984, 42 U.S.C. § 6926(c) and (g). The State's program, as administered by the Michigan Department of Environmental Quality, was approved by the U.S. EPA pursuant to 42 U.S.C. § 6926(b) and 40 CFR Part 271. The U.S. EPA's approval of Michigan's base program was effective on October 30, 1986 (51 Federal Register 36804). Michigan has primary responsibility for enforcing its hazardous waste program. However, the U.S. EPA retains the

authority to exercise its enforcement authorities under Sections 3007, 3008, 30013, and 7003 of RCRA, 42 U.S.C. §§ 6927, 6928, 6934, and 6973, as well as under other Federal laws and regulations. See 40 CFR § 272.1151(a)(1)(ii) for Michigan Administrative Code (MAC) Rules.

I. INSTRUCTIONS

This request for information pertains to specific information the Company may have regarding the management of solid and/or hazardous waste at the Facility located at or near 1300 South Fort Street, Detroit, Michigan 48217.

The information must be provided notwithstanding its possible characterization as confidential business information or trade secrets. You are entitled to assert a claim of confidentiality pursuant to 40 CFR § 2.203(b) for any information produced that, if disclosed to persons other than officers, employees, or duly authorized representatives of the United States, would divulge information entitled to protection as trade secrets. Any information which the Administrator of this Agency determines to constitute methods, processes or other business information entitled to protection as trade secrets will be maintained as confidential pursuant to the procedures set forth in 40 CFR Part 2. A request for confidential treatment must be made when information is provided since any information not so identified will not be accorded this protection by the Agency.

The information submitted pursuant to this request must be accompanied by an affidavit from a responsible company official or representative certifying that all statements contained therein are true and accurate to the best of the signatory's knowledge and belief. Should the signatory find at any time after submittal of the requested information that any portion of this submittal certified as true is false or misleading, the signatory should so notify U.S. EPA. If any information submitted under this information request is found to be untrue or misleading, the signatory can be prosecuted under Section 101 of Title 18 of the United States Code. U.S. EPA has the authority to use the information requested herein in an administrative, civil, or criminal action.

The information requested herein must be provided, within twenty one (21) calendar days following receipt of this request, to the United States Environmental Protection Agency, Region 5, Attention: Mirtha Capiro, Enforcement and Compliance Assurance Branch (DE-9J), 77 West Jackson Boulevard, Chicago, Illinois 60604.

This Information Request is not subject to the Paperwork Reduction Act, See 44 U.S.C. § 3501 *et. seq.*

II. DEFINITIONS

All terms not defined herein shall have the meaning given to them in the Act and 40 CFR Parts 260 through 266.

1. "Average volatile organic concentration" or "average VO concentration" means the mass-weighted average volatile organic concentration of a hazardous waste as determined in accordance with the requirements of 40 CFR § 265.1084.

2. "Container" means any portable device in which a material is stored, transported, treated, disposed of, or otherwise handled, as defined in MAC 299.9102 and 40 CFR § 260.10.

3. "Facility" means all contiguous land, and structures, other appurtenances, and improvements on the land, used for treating, storing, or disposing of hazardous waste. A facility may consist of several treatment, storage, or disposal operational units (e.g., one or more landfills, surface impoundments, or combinations of them), as defined in MAC 299.9103 and 40 CFR § 260.10.

4. "Generator" means any person, by site, whose act or process produces hazardous waste identified or listed in MAC 299.9104 and 40 CFR §§ 261.10 through 261.33 or whose act first causes a hazardous waste to become subject to regulation, as defined in MAC 299.9202 and 40 CFR § 260.10.

5. "Hazardous waste" means a hazardous waste as defined in MAC 299.9104 and 40 CFR §§ 261.3 and 260.10.

6. "Person" means an individual, trust, firm, joint stock company, Federal Agency, corporation (including a government corporation), partnership, association, State, municipality, commission, political subdivision of a State, or any interstate body, as defined in MAC 299.9106 and 40 CFR § 260.10.

7. "Sludge" means any solid, semi-solid, or liquid waste generated from a municipal, commercial, or industrial wastewater treatment plant, water supply treatment plant, or air pollution control facility exclusive of the treated effluent from a wastewater treatment plant, as defined in MAC 299.9106 and 40 CFR § 260.10.

8. "Solid waste" means any garbage, refuse, sludge from a waste treatment plant, water supply treatment plant, or air pollution control facility and other discarded material, including solid, liquid, semisolid, or contained gaseous material resulting from the industrial, commercial, mining, and agricultural operations, and from community activities, but does not include solid or dissolved material in domestic sewage, or solid or dissolved materials in irrigation return flows or industrial discharges which are point sources subject to permits under Section 402 of the Federal Water Pollution Control Act, as amended (86 Stat. 880), or source, special nuclear, or by-product

material as defined by the Atomic Energy Act of 1954, as amended (68 Stat. 923), as defined in Section 1004 of the Solid Waste Disposal Act, as amended.

9. "Storage" means the holding of hazardous waste for a temporary period, at the end of which the hazardous waste is treated, disposed of, or stored elsewhere, as defined in MAC 299.9107 and 40 CFR § 260.10.

10. "Surface impoundment" or "impoundment" means a facility or part of a facility which is a natural topographic depression, man-made excavation, or diked area formed primarily of earthen materials (although it may be lined with man-made materials), which is designed to hold an accumulation of liquid waste or wastes containing free liquids, and which is not an injection well. Examples of surface impoundments are holding, storage, settling and aeration pits, ponds, and lagoons, as defined in MAC 299.9107 and 40 CFR § 260.10.

11. "Tank" means a stationary device, designed to contain an accumulation of hazardous waste which is constructed primarily of non-earthen materials (e.g., wood, concrete, steel, plastic) which provide structural support, as defined in MAC 299.9108 and 40 CFR § 260.10.

12. "Treatment" means any method, technique, or process, including neutralization, designed to change the physical, chemical, or biological character, or composition of any

hazardous waste so as to neutralize such waste, or so as to recover energy or material resources from the waste, or so as to render such waste nonhazardous or less hazardous; safer to transport, store, or dispose of; or amenable for recovery, amenable for storage, or reduced in volume, as defined in MAC 299.9108 and 40 CFR § 260.10.

13. "Wastewater Treatment Unit" means a device which:

(1) Is part of a wastewater treatment facility that is subject to regulation under either section 402 or 307(b) of the Clean Water Act; and

(2) Receives and treats or stores an influent wastewater that is hazardous waste as defined in Section 260.10 of this chapter, or that generates and accumulates a wastewater treatment sludge that is a hazardous waste as defined in Section 261.3 of this chapter, or treats or stores a wastewater treatment sludge which is a hazardous waste as defined in Section 261.3 of this chapter; and

(3) Meets the definition of tank or tank system in Section 260.10 of this chapter.

14. "You" or "Respondent" shall mean the addressee of this Request, the addressee's officers, managers, employees,

contractors, trustees, partners, successors, assignees, and agents.

III. REQUEST FOR INFORMATION

In addition to providing responsive documents, Marathon Ashland Petroleum, LLC shall answer the following information requests:

1. Identify all products, co-products, by-products, and solid wastes produced from the process units at the refinery, including hazardous wastes and their corresponding EPA Hazardous Waste Numbers if applicable.

2. Provide a narrative description of the manner in which all products, co-products, by-products, and solid wastes identified in response to question 1., above, are managed (e.g., on-site storage, off-site shipping). Include plant diagrams showing on-site storage locations.

3. Identify all waste streams at the Facility subject to the 40 CFR Parts 264 or 265 Subpart CC ("Subpart CC") air emissions standards, and explain how they are managed to meet the requirements of the applicable regulations. Include all waste streams managed in containers (drums, totes, rolloff boxes, etc.), tanks (fixed roof, open tanks within an enclosure, sumps, etc.), surface impoundments, or miscellaneous units (drum shredders, can crushers, etc.). For each waste stream, identify the average volatile organic concentration of the waste, and identify the basis for the determination, as either direct measurement, or knowledge of the waste. If any waste streams

have been determined to be exempt from regulation under Subpart CC, please identify those waste streams, and provide the basis for the determination.

4. Provide a diagram of the facility's wastewater treatment units, including impoundments.

5. Provide the following notarized certification by a responsible company officer:

> I certify under penalty of law that I have personally examined and am familiar with the information submitted in responding to this information request. Based on my review of all relevant documents and inquiry of those individuals immediately responsible for providing all relevant information and documents, I believe that the information submitted is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

Issued this 4th day of September, 1998.

Paul Little

By Joseph M. Boyle, Chief
Enforcement and Compliance Assurance Branch
Waste, Pesticides, and Toxics Division
United States Environmental Protection Agency
Region 5