04-16-202220

PLEASE PRINT

State of Wisconsin Substance Release Notification Form

~~04-16-202071~~

Emergency Hotline Number: 1-800-943-0003

Form 4400-91 Rev. 11-95

Date and Mil. Time of Incident 9.8.98 Approx. 1700	Date and Mil. Time Reported 9.9.98 1552
Person Reporting Richard Boyes	Telephone # (715) 398-3824
Representing Agency, Firm, or Citizen Dome Petroleum Corp	
Responsible Party Richard Boyes	
Contact Name Richard Boyes	Telephone # (715) 398-3824
Address 21st and Stinson	City, State, Zip Code Superior WI 54880

Substance Involved	Amount & Units Released	Amt. Recovered	Is this a 304 (11004 42 USC) spill?
Natural Gas Liquid NGL	27,000 lbs Vapor		☐ Yes ☐ No ☐ Unknown

☐ Solid ☐ Semisolid ☐ Liquid ☑ Gas Color _____ Odor _____

Exact Location (inc. address, facility name, mileage, bldg. #, etc.)
21st and Stinson Storage Vessel V6

City Superior	County Douglas	Lat/long
DNR Region No	¼ ¼sec T NR (E/W)	Weather Cond.

Cause of Incident Failure of Rupture Disc and the pressure safety Value

Spilled Substance Impact To: Check (✓) all that apply
- ☑ Air ☐ Potential
- ☐ Soil ☐ Potential
- ☐ Groundwater ☐ Potential
- ☐ Surface Water ☐ Potential
  Name: _____
- ☐ Storm Sewer ☐ Potential
- ☐ Sanitary Sewer ☐ Potential
- ☐ Concrete/Asphalt ☐ Potential
- ☐ Private Well ☐ Potential
- ☐ Contained/Recovered
- ☐ Other: _____

Spill Source:
- ☐ Transportation Accident, Fuel Supply Tank Spill
- ☐ Transportation Accident, Load Spill
- ☑ Industrial Facility ☐ Paper Mill ☐ Chemical Co.
- ☐ Ag Coop/Facility/Food Factory/Facility
- ☐ Gas/Service Station/Garage/Auto Dealer, Repair Shop
- ☐ Pipeline, Terminal, Tank Farm, Oil Jobber/Wholesaler
- ☐ Public Property (city, state, church, school, etc.)
- ☐ Utility Co., Power Generating/Transfer Facility
- ☐ Private Property (home/farm)
- ☐ Construction, Excavation, Wrecking, Quarry, Mine
- ☐ Airport Facility ☐ Railroad Facility
- ☐ Other _____

Action Taken By Spiller
- ☐ No Action Taken
- ☐ No Action Needed
- ☐ Monitor
- ☐ Cleanup Method: _____
- ☐ Waste Destination: _____
- ☐ Containment
- ☐ Contractor Hired
  Name: _____
- ☑ Other: Blocked in isolated leak task 7 minute

Injuries? ☐ Yes ☑ No If yes, how many? ____ Has an evacuation occurred? ☐ Yes ☑ No Potential? ☐ Yes ☐ No

Are there any resource damages? ☐ Yes ☑ No ☐ Potential What kinds? _____

Other Agencies Notified (✓ first column if notified); Check (✓) both columns if on scene

☐ ☐ Fire Department/Hazmat	☐ ☐ Local DNR	☐ ☐ EPA
☐ ☐ Local Law Enforcement	☐ ☐ Div. Emer. Gov.	☐ ☐ Nat'l Resp. Ctr. 800-442-8802
☐ ☐ LEPC or Local Emer. Gov.	☐ ☐ DATCP 608-224-4500	☐ ☐ Chemtrec 800-424-9300
☐ ☐ Regional Response Team	☐ ☐ DHSS 608-266-2830	☐ ☐ Other _____

Incident Commander, if known: _____ Phone: _____

Prepared By: (Print) Lisa Meyer (Sign)	Date: 9.9.98	Rpt'd to DATCP? ☐Yes ☐No
Person Notified: Tom Solin	Region Notified: No Time:	Date: 9.9.98
Invstgtd By: (Print) (Sign)	Date:	Site Closed? ☐Yes ☒No
Spill Coordinator Signoff:	Date:	Transferred to ERP? ☒No ☐Yes; Case # _____
		NFA Letter Sent? ☐Yes ☒No
		Spill Packet Sent? ☐Yes ☒No

☒ Additional Comments on Reverse

SEP 09 '98 15:14 NO.027 P.01

Amoco Canada Petroleum Company Ltd.

Engineering Chart

Sheet No. Of

File

Appn.

Date

By

Data:

from H.Sasic calculation sheets Batch 273, 275, 276

calculated from HYSIS v1.2.3 @ 83 psig and vapour fraction = 0.2238 (59° level) using Peng Robinson EOS.

Compositions / mole fraction

Component	Liquid Feed to Sphere	Vapour in Sphere
C_1	0.0006	0.0023
C_2	0.0120	0.0303
C_3	0.6089	0.7764
iC_4	0.1287	0.0843
nC_4	0.1998	0.0995
iC_5	0.0187	0.0043
nC_5	0.0142	0.0025
C_{6+}	0.0171	0.0004

Amoco Canada Petroleum Company Ltd.
Fort Saskatchewan Storage and Fractionation Facility
P.O. Box 3210
Fort Saskatchewan, Alberta
T8L 2T2

Date: 98/07/06 1:32 PM

To:

Name	Richard Boyer
Company	Amoco Canada
Location	Superior, WI
Fax Number	(715)398-5865
Voice Number	(715)398-3824

From:

Name	Al Eggum
Location	Fort Saskatchewan, AB
Fax Number	(403)998-1564
Voice Number	(403)992-2725

RE: V-6 Release Calculations

Message

As requested.

All the assumptions used throughout the calculations should result in a conservative estimate of the release, that is to say that the actual release amount is less than the assumed maximum amount estimated by calculation at 27,000 pounds.

In addition, the vendor data sheet states that the maximum relief rate for this relief valve is 190,000 lbs/hr. My calculation estimated the relief rate at 220,000 lbs/hr. (The design data on the data sheet differs somewhat from current conditions.)

Thanks,

Al

Engineering Chart

Appn.
Date
By

Superior V-6 RV

Data Calc'd by HYSIS	VAP	LIQ
molecular weight MW	46.400	51.557
molar heat capacity $\tilde{C}_p$ (BTU/lbmol °F)	20.183	31.665
compressibility Z	0.86986	0.026062

Critical Flow

$$W = \frac{A C_1 K P_1 K_b \sqrt{MW}}{\sqrt{Z T_1}}$$

$\tilde{C}_{p,vap,std} = 19.991$ ← from GPSA Data Book Eq 5-1

$P_1 = 97.7$ psia.
$P_2 = 14.7$ psia.
$T_1 = 68°F = 528$ R. ← process data

RV vendor data.

$A = 16$ in^2 (R) $K_b = 1.00$
$K = 0.9530$

$$P_{cr} = P_1 \left(\frac{2}{k+1}\right)^{k/k-1}$$

↑ from GPSA Data Book Eq. 5-5

$$k = \frac{\tilde{C}_p}{\tilde{C}_v} = \frac{\tilde{C}_p}{\tilde{C}_p - R} = \frac{20.183}{20.183 - 1.986} = 1.1091$$

GPSA Eq 13-3

$$k_{std} = \frac{19.991}{19.991 - 1.986} = 1.1103$$

Check for Critical Flow

$$P_{cr} = 97.7 \left(\frac{2}{1.1091+1}\right)^{\left(\frac{1.1091}{1.1091-1}\right)} = 56.94 \text{ psia} \Rightarrow \text{Critical Flow.}$$

$C_1 = 327.83$ from GPSA Fig 5-8.

Mass Flow

$$W = \frac{A C_1 K P_1 K_b \sqrt{MW}}{\sqrt{Z T_1}} = \frac{(16 \text{ in}^2)(327.83)(0.953)(97.7)(1.0)\sqrt{46.4}}{\sqrt{(0.86986)(528)}}$$

$$= 222065 \text{ lb/h}$$

TIME

$t = 17:26:26 - 17:19:02 = 7$ min 24 s $= 7.4$ min $= 0.123$ h.

Maximum Mass of Discharge $= (222065)(0.123) = \boxed{27{,}400 \text{ lb}}$

Recycled Paper

8- 8-98;16:03 ;AMOCO CANADA ;888;584 # 3/ 8

Author: Alan D. Eggum at calgary2,lbufld
Date: 98/09/09 11:31 AM
Priority: Normal
TO: Richard L. Boyer at calgary2,lbufld
TO: Larry B. Jardine at calgary2,lbufld
Subject: Sphere V-6 NGL Release

---------- Message Contents ----------

Richard,
Larry asked me to estimate the amount of NGL released as a result of yesterday's incident on sphere V-6.

Information I obtained from Larry indicated that the release began at 17:19:02 and you had the RV blocked in by 17:26:26, giving a total release duration of 7.4 minutes.

To estimate a maximum possible release amount, I assumed full flow relief of vapour at measured sphere conditions (83 psig, 68 F, 59 ft level) against zero back-pressure for the entire 7.4 minutes. The resulting estimate for a maximum release is therefore (to two significant figures) 27,000 pounds of NGL.

Thanks.
Al.

To: Dan Rosenthal

Nat Release - Dame Petroleum

Nat Storage sphere V-6 ruptured disk failed at app. 4:50 pm on 9-8-98. The Pressure Safety Valve also failed, thus resulting in an app 7 minutes of produc (gas) releasing into the atmosphere.

The vessel had app. 81 psig. of pressure with a 59' level. The rupture disk was designed to release at 97 psi and the pressure safety valve was designed to relieve at 97 psi.

The rupture disk is on it's way to manufacturer, and crew here checking out pressure safety valve.

The maximum amount of product vented was app. 27,000 lbs. - Calculations on their way.

Richard L. Boyer
Area Foreman

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

WISCONSIN
DEPT. OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Northern Region Headquarters
810 W. Maple Street
Spooner, Wisconsin 54801
Telephone 715-635-2101
FAX 715-635-4105
TDD 715-635-4001

September 14, 1998

FID # 816061400
Case # 98-NOEE-062

Mr. Richard Boyer
Dome Petroleum
P.O. Box 2096
Superior,, WI 54880

CERTIFIED LETTER
RETURN RECEIPT REQUESTED

Subject: Notice of Violation

Dear Mr. Boyer:

The Department of Natural Resources believes that Dome Petroleum Natural Gas Liquids and propane producing facility located in Superior, Wisconsin has operated in violation of Wisconsin's air pollution control rules and spill reporting laws. The notice is issued pursuant to sections 285.83(1)(a)1. and 292.11(2)(a), Wisconsin Statutes.

On September 9, 1998 you reported to Dan Rosenthal, Air Pollution Compliance Engineer, a release of 27,000 pounds of natural gas liquids. This release took place on Sept 8, 1998 between 5:19 PM and 5:26 PM. This release was due to the failure of both the pressure relief control valve and the burst plate.

Section NR. 706.05(a), Wis. Adm. Code, and section 292.11(2)(a), Wisconsin Statutes, states in part that". . .persons who cause the discharge to the environment of a hazardous substance or who possess or control a hazardous substance which is discharged to the environment shall immediately notify the department of the discharge.

Section NR. 419.03, Wis. Adm. Code, states that "(1) No person may cause, allow or permit organic compound emissions into the ambient air that substantially contribute to the exceeding of an air standard or cause air pollution."

Based on this information, we believe that Dome Petroleum has operated in violation of the emission limits requirements of section NR. 419.03, Wis. Adm. Code, and hazardous substance discharge reporting requirements of section NR. 706.05(a), Wis. Adm. Code, and section 292.11(2)(a), Wisconsin Statutes.

Be advised that the Department is authorized to seek an injunction or other appropriate relief for violations of air pollution laws, including a forfeiture of not more than $25,000 per violation, pursuant to section 285.87(1), Wisconsin Statutes. Any person who intentionally commits an act that violates, or fails to perform an act required by, laws relating to air pollution may be fined not more than $25,000 per day of violation or imprisoned for not more than 6 months, or both, pursuant to section 285.87(2), Wisconsin Statutes. Each day of violation is considered a separate offense.

Be advised that the Department is authorized to seek an injunction or other appropriate relief for violations

of the spill reporting requirements, including a forfeiture of not more than $5,000 per violation. Each day of violation is considered a separate offense.

To resolve these violations, the Department of Natural Resources requests your attendance at an enforcement conference with representatives of Dome Petroleum. At this conference, you should be prepared to discuss the steps Dome Petroleum will make to limit accidental releases of volatile organic compounds and ensure immediate notice to the department. Please plan to bring your spill prevention containment and counter measures plan to the meeting if your company has one.

If you have any questions regarding this Notice of Violation letter please contact me directly. Once you receive this letter please let me know what time and dates this month look good for you and your staff for the meeting, feel free to contact me at (715) 635 -4069. For questions about any air pollution technical matters call Dan Rosenthal at (715) 392-7989. For any questions on hazardous substance spills response and control issues contact Jim Hosch at (715) 392-0802.

Sincerely,

Michael V. Michaelsen

Michael V. Michaelsen
Environmental Enforcement Specialist
Northern Region

cc: ENF - AM/7
Dan Rosenthal - Superior
Jim Hosch - Superior
Neal Baudhuin - Rhinelander
Steve Goetelaere - Superior Fire Dept., 3326 Tower Ave., Superior

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

WISCONSIN
DEPT. OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Northern Region Headquarters
810 W. Maple Street
Spooner, Wisconsin 54801
Telephone 715-635-2101
FAX 715-635-4105
TDD 715-635-4001

November 4, 1998

FID# 816061400
Case No. 98-NOEE-062

Mr. Richard Boyer
Dome Petroleum
P.O.Box 2096
Superior, WI 54880

Subject: October 20, 1998 Enforcement Conference Summary

Dear Mr. Boyer:

This letter is written to summarize the meeting and agreements reached regarding the September 8, 1998 release of natural gas liquids from your storage facility and our subsequent September 14, 1998 Notice of Violation letter in response to the incident. The participants at the conference included you and Don Walters, Larry Jardine representing your company, Steve Gotelaere, Brad Buhr, and Mark Dalbec, representing the Superior Fire Department, and Jim Hosch, Dan Rosenthal, and I representing DNR.

Briefly, Don Walters described the incident and related that the company's review discovered the rupture disk and pressure relief valve both failed within the normal operating pressure of 82 PSI. You have discovered that the pressure relief valves installed on the facility were not being tested although your company has a maintenance agreement with another firm. In your review, your investigation identified some need for improvement of the maintenance program for the relief valves, a need for onsite performance checks on relief valves, and increased frequency for the replacement of rupture disks. You also agreed to increase the number of staff at the plant, and to improve your spill notification protocol, as well as, update your spill prevention contingency plan. Steve Gotelaere expressed his concern that the company must communicate immediately with the Fire Department when releases occur. Steve discussed that one call to the Fire Department will initiate your notice of discharge responsibilities to the City and to the Department of Natural Resources and activate emergency response measures in the community, if necessary.

Below is a summary, including, what you have agreed to do to improve the operation to come into compliance with the notice of discharge and prevention of discharge requirements of Wisconsin's hazardous substance spills law :

1. Rupture disks will be replaced on an once per year rotation. You are also considering installing double rupture disks as an added safety measure. Annually,

Dome Petroleum will oversee the testing and maintenance of its pressure relief valves.

2. Dome Petroleum agreed to staff the plant around the clock (7 days per week, 24 hours per day) with operators. You advised us that it will take about 6 weeks to train staff to independently operate the plant. You agreed to provide the Department with a progress report on the hiring process within two weeks from the October 20th meeting.

3. Within 30 days from the October 20th meeting, Dome Petroleum agreed to present to the City of Superior and to the Department, a SPCC plan that outlines the new notice provisions and realistically models accidental releases.

We appreciate your willingness to work with us to improve the safety of your operation. We believe that the steps you are implementing and planning to take will satisfactorily address the matter. Progress toward eliminating the noncompliance has been initiated. Once we receive your progress report, and review your Spill response plan modifications, we will advise you of our final enforcement recommendation.

If this is not an accurate summary of our discussion please do not hesitate to call me at 715-635-4069. If you need to discuss the air management program please contact Dan Rosenthal at (715) 392-7989. Any upcoming spills related documents should be sent directly to Jim Hosch at our Superior Office. Jim's number is (715) 392-0802. We appreciated discussing this matter with you and look forward to working with you in the future.

Sincerely

Michael V. Michaelsen

Michael V. Michaelsen
Environmental Enforcement Specialist

cc: Dan Rosenthal- Superior
Jim Hosch - Superior
Neal Baudhuin - Rhinelander
Gary Kulibert - Rhinelander
Casetrack - Rhinelander
Steve Gotelaere - Superior Fire Department

Dome Petroleum MEETING
10/20/98

Name	Position
Mick Michalsen	WDNR - Spooner Enforcement
DAN ROSENTHAL	WDNR - ENV. ENG.
Mark Dalbec	SFD - Inspector
BRAD BUHR	SFD ASSISTANT CHIEF
Steve Gotelaew	Fire Chief
DON WALTERS	AMOCO - OPNS MGR.
LARRY B. JARDINE	Supt. FORTSASK/EEEP.
Richard L. Boyer	Amoco - Area Foreman
JAMES A. HOSCH	WDNR - Spills Coord. Superior

RECEIVED

To: Tim Hosch - Superior

DNR SUPERIOR

From: Mick Michaelsen

FYI

Superior FD would probably like to know Dome's progress (I'll leave it up to you to contact them, O.K.?

Mick

Sent separate copy to Dan -

WISCONSIN DEPARTMENT OF NATURAL RESOURCES

Northern Region Headquarters
810 W. Maple St.
Spooner, WI 54801

WISCONSIN DEPT. OF NATURAL RESOURCES

FAX #: 715/635-4105 PHONE #: 715/635-2101 DATE: 11-5-98

TO: Richard Boyer

AGENCY: Dome Petroleum

FAX #: 715-398-5865

SUBJECT: YOUR FAX ADVISING US OF YOUR PROGRESS

FROM: Mick Michaelsen

PHONE #: 715-635-4069

PAGES TO FOLLOW (EXCLUDING COVER SHEET): 0 pgs.

NORTHWEST WISCONSIN
Be A Part Of It!

FORM\FAX_HQ

Richard:

Just to let you know your fax and attached letter & 1999 Dome shift calendar were received. I will send copies to Jim Hosch, Dan Rosenthal in Superior. I will also recommend they forward your documents on to Superior F.D.

I sent out my summary letter to you dated yesterday

Please consider this note as acknowledgement that Dome has met the 1st progress update (14 days from notice

Thanks for keeping us advised —

Mick Michaelsen 11/5/98

DOME PETROLEUM CORPORATION
SUPERIOR STORAGE FACILITY
SUPERIOR, WI 54880
715-398-3324

TO: Mick Michaelson

FROM: Richard Boyer

FAX:

FAX: 715-398-5365

NUMBER OF PAGES INCLUDING THIS ONE 5

Mick,

Update our status. New employees will begin Nov. 16th. They will be trained on HAZWOPER and Amoco's safety policies. Have developed shift schedule, and plan on beginning Dec. 1st to man the facility 24 hours a day.

Call me with any questions.

Richard

p.s. attached offer letters and shift schedule

November 3, 1998

William J. Harkabus
1822 Lackawanna Ave.
Superior, Wisconsin 54880

Dear William:

It is with great pleasure that I make an offer of employment to you for the Technician A position, Grade 06, at a bi-weekly salary of [redacted]. You will be part of our Supply and Logistics Business Group, reporting to Richard Boyer, at our Superior location.

Your employment is contingent upon:

1) The information and qualifications you provided during our selection process (subject to verification).

The results of a pre-placement drug and alcohol screening that can be scheduled by calling Amoco's Health Services at 1-800-883-3018. Please note that this screening can take up to one week to schedule and results must be received prior to your first day of employment.

Establishing employment eligibility under the Immigration Reform & Control Act of 1986 (see attached Notice to All Applicants). This must be done on your first day of work. Also note that you will need to furnish originals or certified photocopies. Regular photocopies are unacceptable.

Your anticipated start date will be on Monday, November 16, 1998. Please discuss the time and location with your supervisor. You will need to participate in an employee activation session within your first 3 days. The meeting will last approximately one hour and you will be requested to complete several forms necessary for activating you on Amoco's payroll.

Enclosed are state and federal tax forms for you to review. You will be requested to complete and submit these forms for purposes of payroll deduction on your first day of employment.

Your employment provides for participation in Amoco's benefit programs as described in the enclosed brochure. Should you have any questions about Amoco's benefits, please call the Amoco Benefits Center (ABC) between 8:00 a.m. and 8:00 p.m., Central Time at 1-800-890-4100. When you contact ABC you will hear a series of voice prompts asking you to select an option. In order to speak to a customer service representative you will need to press *0#.

Please understand that it is imperative for you to make your benefits selections within 31 days of your start date, otherwise you will not be covered. If you have not received detailed benefits material within a few days after receiving this letter, please call the above 1-800 number and tell the customer service representative you may soon be an Amoco employee who will be participating in the "corporate domestic" suite of benefits.

Should you have any questions or concerns unrelated to benefits, please do not hesitate to call me at (312) 856-2708.

We look forward to having you join the Supply and Logistics Group.

Sincerely,

Alenda Young
Staffing Representative

Enclosures

R. Boyer, Dome, Superior WI
Kendra Wesely, MC 3408
Amoco Benefits Center

1999 DOME SHIFT CALANDAR

D = 5 AM - 5 PM F = 7 AM - 3 PM N = 5 PM - 5 AM

Operator																																Operator
A				D	D	D		N	N	N				D	D	D	D								N	N	N	N				A
B	N	N	N				D	D	D	D								N	N	N	N				D	D	D					B
C				N	N	N	N				D	D	D		N	N	N				D	D	D	D								C
D	D	D	D								N	N	N	N				D	D	D		N	N	N							D	D
E	F	F	F	F	F			F	F	F	F	F			F	F	F	F	F			F	F	F	F	F						E
	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S	M	T	W	T	F	S	S			
DEC-JAN			30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24			DEC-JAN
JAN-FEB	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			JAN-FEB
FEB-MAR	22	23	24	25	26	27	28	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21			FEB-MAR
MAR-APR	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18			MAR-APR
APR-MAY	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16			APR-MAY
MAY-JUN	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8	9	10	11	12	13			MAY-JUN
JUN-JUL	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3	4	5	6	7	8	9	10	11			JUN-JUL
JUL-AUG	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5	6	7	8			JUL-AUG
AUG-SEP	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	1	2	3	4	5			AUG-SEP
SEP-OCT	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	1	2	3			SEP-OCT
OCT	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31			OCT
NOV	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28			NOV
NOV-DEC	29	30	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26			NOV-DEC
DEC	27	28	29	30	31																										DEC

NOV 05 '98 10:03AM DOME P.5

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN

Amoco Canada Petroleum Company Ltd.
Operated By
Dome Petroleum Corporation

Superior Terminal
21st and Stinson
Superior, Wisconsin 54880

SINCE 1972
TWIN PORTS TESTING INC.
1301 NORTH THIRD STREET • SUPERIOR, WISCONSIN 54880
(715) 392-7114 • (800) 373-2562 • FAX (715) 392-7163
P.O. BOX 16246 • DULUTH, MINNESOTA 55816-0246
(218) 722-1911

October 19, 1998

Mr. Richard Boyer
Dome Petroleum Corporation
21st and Stinson
Superior, Wisconsin 54880

Re: SPCC Plan Certification
Dome Petroleum Facility
Superior, Wisconsin

Dear Mr. Boyer:

I have performed a review of the Spill Prevention Control and Countermeasures Plan (SPCC) for the above-referenced facility. Based upon that review, I find the SPCC Plan to be in compliance with the provisions of 40 CFR, Part 112.

My review included verification of the Plan's compliance with 40 CFR, Part 112, my on-site inspection, and interviews with Dome Petroleum personnel. To remain in compliance, a copy of the Plan must be maintained at the Facility and training must be provided and documented. In addition, the SPCC Plan must be reviewed every three years and if changes occur that impact spill prevention it must be amended and certified by a Professional Engineer.

As a registered professional engineer in the State of Wisconsin, this information is, to the best of my knowledge, true, complete, and accurate.

Sincerely,
Twin Ports Testing, Inc.

Brian E. McVean, P.E.
Environmental Manager

BEM:bem

[wordfiles/888-98/spcc]

SPILL PREVENTION CONTROL AND COUNTERMEASURE PLAN
Dome Petroleum Corporation

NAME OF FACILITY:	Superior Terminal
LOCATION OF FACILITY:	21st and Stinson - Superior, Wisconsin 54880
TYPE OF FACILITY:	NGL Storage Facility and Depropanizer Plant
OWNER OR OPERATOR:	Amoco Canada Petroleum Company Limited P.O. Box 200 Station M Calgary, Canada T2P 2H8
PERSON ACCOUNTABLE FOR OIL SPILL PREVENTION AT FACILITY:	Richard Boyer Area Foreman Phone: 715/398-3824
PLAN REVISION DATE:	
PLAN REVIEW AND/OR MINOR REVISIONS:	DATE/INITIALS: _____ _____ _____ _____ _____ _____

FOR EMERGENCY CONTACT LIST
PLEASE REFER TO APPENDIX A

1.0 CERTIFICATION AND MANAGEMENT APPROVAL

Dome Petroleum Corporation
Superior Terminal - Superior, Wisconsin
Spill Prevention Control & Countermeasure Plan (SPCC)

MANAGEMENT APPROVAL

This Spill Prevention Control and Countermeasure (SPCC) Plan will be implemented as herein described.

Richard L. Boyer
Signature

10-19-98
Date

Richard L. Boyer
Name (Please Print)

Area Foreman
Title

CERTIFICATION

I hereby certify that I have examined the facility, and being familiar with the provisions of 40 CFR, Part 112, attest that this SPCC Plan has been prepared in accordance with good engineering practices.

Brian E. McVean
Signature

10-19-98
Date

BRIAN E. McVEAN
Name (Please Print)

ENVIRONMENTAL MANAGER
Title

WI 28673
Registration Number

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2.0 GENERAL INFORMATION

2.1 Terminal Operation Summary

Dome Petroleum Corporation's Superior Terminal is located in Superior, Wisconsin (See Figure 1). The terminal serves as a petroleum product storage facility and depropanizing plant (Figure 2). The terminal itself is designed to periodically receive batches of natural gas liquids (NGLs) at a maximum incoming rate of 300,000 barrels per day via a 16" pipeline that originates in Canada. Individual batches of NGLs are separated by approximately 5000 barrel batches of "Syncrude" synthetic oil buffer material. The NGLs that are received at the Superior terminal are primarily of light fraction and range in specific gravity from 0.54 to 0.71. Petroleum material, primarily NGL is stored on site in six 50,500 barrel insulated spheres (V-1 through V-6). From the storage area, the material is either routed to the on-site depropanizing system or pumped to Amoco's Sarnia, Ontario facility for further processing via a 30" pipeline.

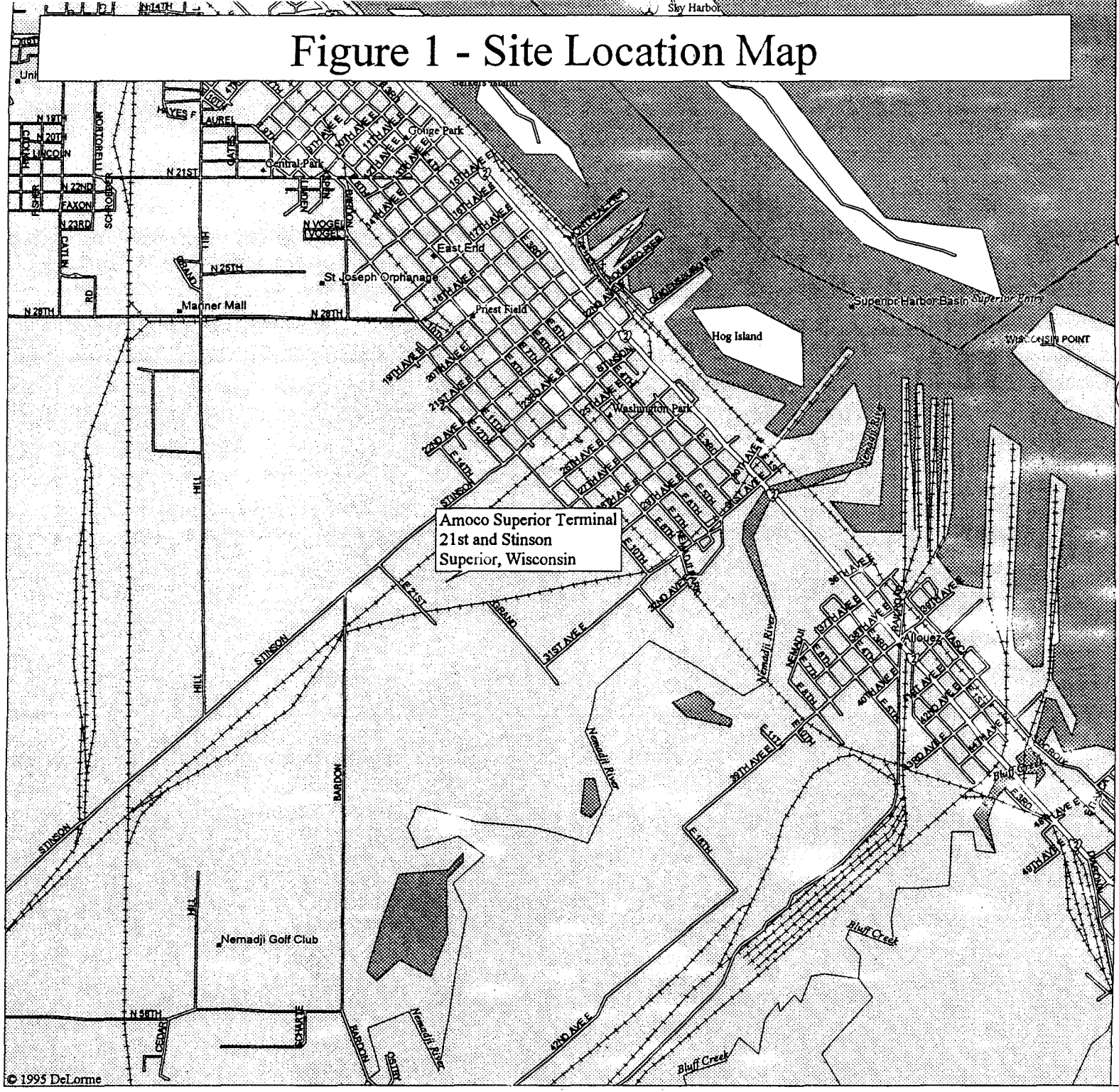
An on-site depropanizing plant is also present and in operation at the Superior Terminal. The on-site depropanizer unit is capable of distilling 10,000 barrels per day (BPD) of NGLs for a respective yield of 6,000 gallons of propane. To keep the propane production process at temperature a hot oil caloric exchange system is utilized. This system uses heated high viscosity petroleum based oil (Exxon Caloria HD) as a transfer medium. The oil is pumped throughout the system at a maximum design flow rate of 330 gallons per minute (GPM). Excess oil from the system is returned to the surge drum (storage capacity = 2500 gallons) component before it is heated and transferred back into circulation.

2.2 Surrounding Land Use

The terminal is located in a predominantly industrial section of the eastern end of the City of Superior, Wisconsin. The following is a description of specific land uses within close proximity of the facility.

- *North:* *Bayside Ready Mix Inc. and undeveloped land.*
- *South:* *Developed land under the control of Lakehead Pipe Line Company Inc.*
- *East:* *Residential properties and undeveloped land.*
- *West:* *Developed land under the control Lakehead Pipeline Inc. and Stack Brothers Inc..*

Figure 1 - Site Location Map

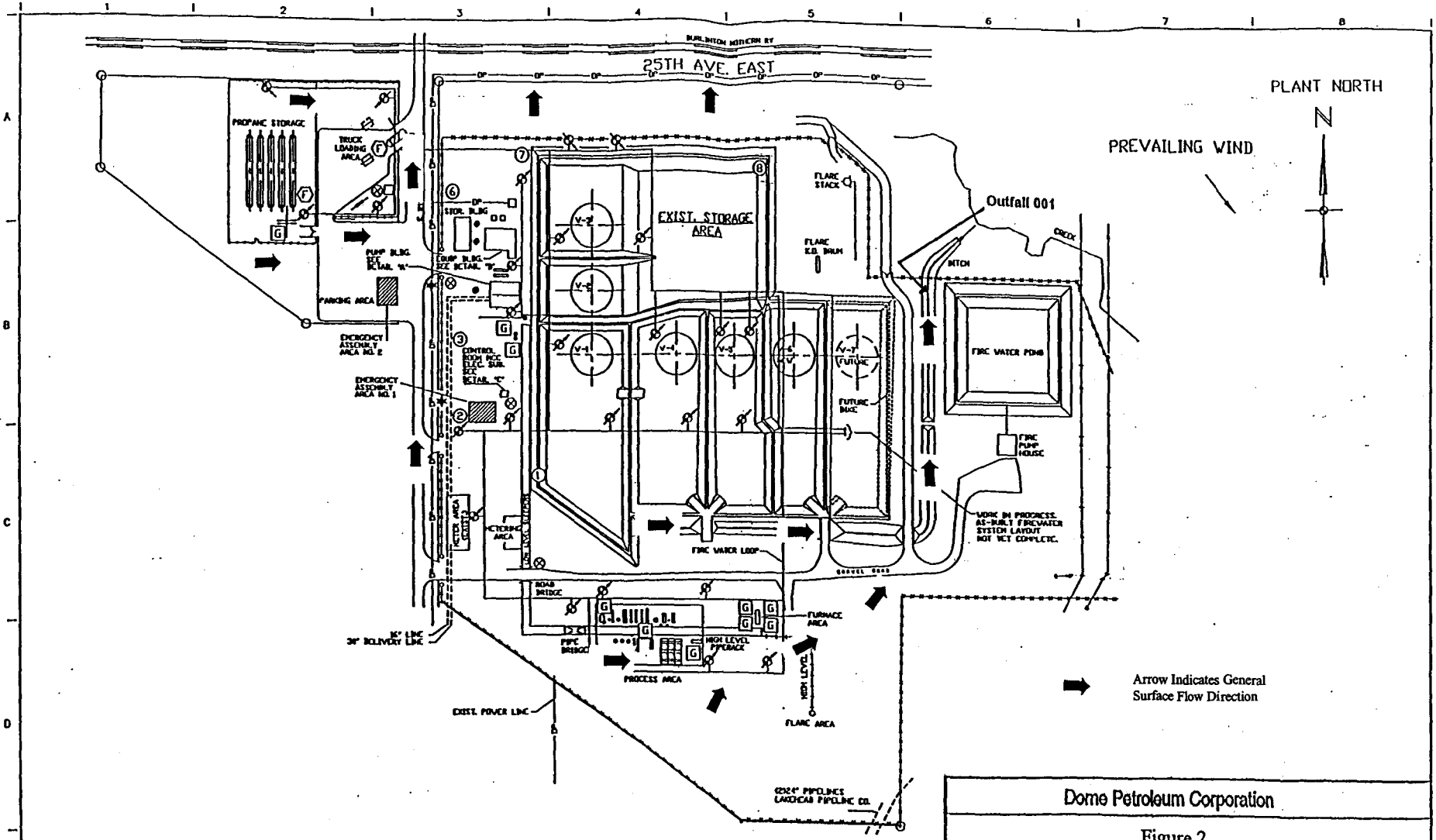


Mag 14.00
Wed Sep 30 10:44 1998
Scale 1:31,250 (at center)

2000 Feet

1000 Meters

- Secondary SR, Road, Hwy Rar
- US Highway
- Railroad
- Point of Interest
- Park or Reservation
- Locale
- Public Airport
- State Boundary
- Population Center
- Land
- Lake, Ocean, Large River
- River, Canal



Dome Petroleum Corporation	
Figure 2 Superior Terminal	
SCALE: NTS	*DATE:* 09/01/98
PREPARED FOR: ENVIRONMENTAL COMPLIANCE CONSULTANTS, INC.	
PREPARED BY: Jody Hulne	

3.0 FACILITY INFORMATION

3.1 Spill Potential

The Superior Terminal is located on relatively flat terrain with a very slight slope of a few feet per mile toward Lake Superior, which is located approximately 7,000 ft. to the northeast of the facility. Surficial soils within the region consist primarily of dense, low permeability, reddish-brown clay of glacolacustrine origin. The local surficial ground water table sits approximately 5 ft. to 15 ft. below grade.

Significant spill potential exists from three primary sources of petroleum products and product use at the Superior Terminal. These three sources are the NGL storage sphere system (V-1 through V-6 and associated piping) the truck loading area and the hot oil caloric exchange system (estimated system storage capacity = 4500 gallons).

3.1.1 NGL Storage Sphere System

The spill potential resultant for the NGL storage system at the Superior Terminal is moderate at the Superior Terminal. Spills associated with the NGL storage sphere system are prevented via engineering controls and numerous daily inspections conducted by terminal employees. In addition, the system is continuously monitored via a computer system that is operated by Amoco employees either from the control room in Superior or remotely from the Fort Saskatchewan facility. In the event that there was a product release from one of the bulk storage spheres, the contents of the release would immediately be contained within an earthen dike that has been designed to hold greater than 100% of the spheres contents. These dykes are normally closed and opened only to drain collected rain and snowmelt waters.

A spill from the NGL storage sphere system could potentially be caused by a piping leak, sphere puncture or valve failure. Individual spheres contain primarily NGLs and light fraction petroleum hydrocarbons of high vapor pressure. As a result of this, a spill of material from the NGL storage sphere system would likely volatilize shortly following exposure to atmospheric pressure.

3.1.2 Truck Loading Area

The spill potential in the truck loading area at the Superior Terminal is moderate and associated with the propane dispersal system that is located within the area. This system consists primarily of five 90,000 gallon maximum capacity steel propane pressure vessels. Spills within the area are prevented via engineering controls as well as numerous daily inspections conducted by terminal employees. In addition, the system is continuously monitored via a computer system that is operated by Amoco employees.

A spill in the truck loading area could potentially be caused by a piping leak, vessel puncture or valve failure. Individual vessels contain primarily propane and light fraction petroleum hydrocarbons of high vapor pressure. As a result, a spill of material from the propane storage and dispensing area would likely volatilize shortly following exposure to atmospheric pressure. However, should a spill occur during truck loading activities, it would be addressed via the deployment of containment/absorption booms and pads once the flow of product through the line has been stopped.

3.1.3 Hot Oil Caloric Exchange System

The spill potential associated with the hot oil caloric exchange system at the Superior Terminal is moderate and is primarily associated with the oil heating, storage and transfer equipment. When in operation, the system utilizes approximately 4100 gallons of Exxon Caloria HD petroleum based oil to transfer heat throughout the depropanizing process and maintain optimal operating temperature in the system. Fluid levels and pressure readings within the system are continuously monitored via a computer system that is operated by Amoco employees.

A spill associated with the hot oil caloric exchange system could be caused by a piping leak, vessel puncture or valve failure. Any oil released from the surge tank and filter portions of the hot oil caloric exchange system would be immediately contained within an earthen dike that has been designed to hold greater than 100% of the system contents. Spills from the piping and transfer-associated parts of the system would be addressed via the deployment of containment/absorption booms and pads once the flow of product through the line has been stopped either by manual or remote means.

Reference Table 1 for a comprehensive listing of the facility's petroleum storage vessels and their potential for spills in terms of approximate spill volume, secondary containment and prevention measures employed at the facility.

3.2 Facility Drainage

Local drainage across the Superior Terminal facility is generally to the north toward Newton Creek. Various on-site multidirectional storm water channels direct, collect and allow for the controlled discharge of storm water to that water body. After a significant precipitation event or spring snowmelt, storm water may collect within the dike enclosures surrounding the NGL storage spheres, depropanizing system and portions of the hot oil caloric exchange system. Within the diked area, the facility ground surface has been graded so that it gently slopes towards the southeast, where water from all of the singular dikes may be routed to a storm water drainage ditch . Terminal personnel must physically open valves located within each of the dike walls before any water is allowed to move out of any of the dike enclosures. Once it has exited the dike system storm water from the facility travels first to the northeast, then to the northwest where it exits the facility grounds at storm water Outfall 001. Outfall 001 discharges to Newton Creek which is a tributary to the Saint Louis River Estuary and consequently Lake Superior.

Drainage in the truck loading area, plant yard, and office areas is generally to the north and northeast toward the facility's ditches that discharge to Outfall 001. Three storm water catch basins that discharge to the City of Superior sewerage system are positioned between the equipment building and storage building that are located in the northwestern portion of the facility. Precipitation and storm water that falls within low gradient portions of the facility yard would likely either run off the pavement and onto the grassy lawn or naturally dissipate and infiltrate into the surrounding soils.

3.3 Historical Spill Events

To date, facility has not experienced a "spill event" per 40 CFR Part 110 that would significantly contribute to adverse impact on the navigable waterbodies of the State. Information pertinent to any future spills will be recorded in the spill event log that is included in Appendix B. Spills that occur at the facility that do not meet the definition of a "spill event" but are reportable per local, state or federal regulations, will also be documented. This documentation is to be kept on file at the terminal office. Reports may constitute verbal and/or written correspondence with appropriate agency personnel.

Should a spill event occur at the Superior Terminal as defined in 40 CFR Part 110, it will be logged and recorded within this Plan within Appendix B in addition to the notifications made per local, state and federal requirements.

3.4 Spill Response Procedures & Equipment

Should a spill or release of product occur on site, the terminal supervisor will be notified immediately. The terminal supervisor or authorized representative will then coordinate the appropriate response actions to be taken, including spill containment, clean up, and verbal and written notifications per local, state, federal and internal Amoco requirements. A detailed plan of the terminal's spill response procedures can be referenced in its "Spill Contingency Plan", which is available in the terminal front office.

In general, spills contained within diked areas will be recovered with vacuum trucks and the use of absorbents.

Spills that occur outside of a controlled area (i.e. dike enclosure, drain system) are to be contained by the use of booms, absorbents and/or the construction of emergency dikes. These spills may also be contained or controlled by the construction of diversion curbing or trenching. Free liquids are to be recovered with the use of a vacuum truck where possible.

Waste products generated during clean-up operations will be recycled or treated and disposed of in accordance with applicable local, state and federal regulations. Typical wastes which could potentially be generated during a spill response event may include: waste petroleum material, contaminated absorbents, personal protective gear or contaminated soils.

The terminal stores various absorbent materials and response equipment on-site in the event of a small spill. A listing of these on-site resources can be found in Appendix C. The Superior Terminal also participates in a local spill response Mutual Aid Group, which services the Duluth/Superior area. The Mutual Aid Group consists of various industries within the Superior area, such as Dome Petroleum Corporation Co., Murphy Oil Co., and Chevron. Through contributions from each group member, the local fire department maintains a fully equipped emergency spill response trailer that is also available for use.

However, should a large or catastrophic event occur, the Amoco Emergency Response Team will be contacted immediately. The Amoco Emergency Response Team will provide the appropriate personnel and response equipment required to address terminal needs in an emergency situation. This will be accomplished through the utilization of Amoco equipment and personnel or by contacting a professional Environmental Services Company. The Amoco Emergency Response Team is available on a 24-hour basis for response to emergency situations.

4.0 INSPECTION AND RECORDS

The aboveground storage spheres, the hot oil caloric exchange system and aboveground piping are visually inspected during normal work hours by terminal personnel on a daily basis. Records of these inspections are kept on file at the terminal office as part of the field reading documentation procedures. The truck loading area is visually inspected by each driver prior to and after loading and also by terminal personnel.

A formal inspection of the valves and fittings associated with the depropanizer system is conducted by outside contractors on an annual basis. Documentation of these events is also retained at the terminal office.

The petroleum liquid volume in all on-site vessels is gauged electronically, allowing volumes to be monitored and recorded continually. This process would identify large discrepancies of product volumes, and thus indicate a potential leak or spill in the event of an occurrence. Calibrations are performed as necessary to ensure program accuracy.

The propane loading equipment is inspected and calibrated quarterly by company personnel and per local or state authorities as requested or required. Pumps and pump seals are inspected regularly for signs of wear or failure, as are all valves, castings and fittings. In addition, all on-site pump systems are vibration tested to assure they are within tolerance every three calendar months. Aboveground piping and storage vessels associated with the system are inspected and observed during daily activities throughout the terminal.

5.0 PERSONNEL, TRAINING AND SPILL PREVENTION PROCEDURES

Amoco and its employees will promptly respond to, and cope with, any release of oil or petroleum that occurs at the Superior Terminal or its facilities. Response measures taken will safeguard life, property and the environment. Amoco will comply with all relevant regulatory requirements of local, state and federal agencies.

For reference in the event of a spill or disaster event at the Superior Terminal, Amoco has provided several manuals that are available and easily accessible to all employees. These reference materials include : " the SPCC Plan", " the Emergency Procedures Guide ", "the Fire Prevention Plan" and "the Spill Response Plan" . All such plans are located in the terminal office.

New employees at the terminal are trained and supervised during their initial phase of employment. They are accompanied by trained personnel on each new work assignment, and are only given responsibility for independently completing a specific work assignment after they have proven themselves qualified and competent to perform the work task. This determination is facility specific and is made by Amoco personnel.

All employees are required to attend periodic training sessions that review environmental and safety topics, such as SPCC Plans or fire suppression. Training is conducted in the form of briefings, reviews, training sessions and/or safety meetings. The regulatory requirements of SPCC and the site specific SPCC Plan for the Superior Terminal are reviewed with all staff on an annual basis. Employees sign registration forms at each of these training sessions to document attendance and the topics discussed. All records are kept on file at the terminal office.

6.0 FACILITY DESIGN AND OPERATIONAL INFORMATION

6.1 Bulk Storage Tanks

All product storage tanks are constructed of welded steel, and meet the American Petroleum Institute (API) and American Society of Mechanical Engineers (ASME) standards. In summary, the Superior Terminal facility has the following breakdown of tanks on site:

6 - Aboveground NGL storage spheres
6 - Horizontal, above-ground propane storage and dispensing bullets
1 - Hot oil surge tank
1 - Ethyl Mercaptan tank
1 - Wastewater storage tank

A complete listing of all tanks at the facility including specific products and volumes contained within, secondary containment structures and alarm systems can be referenced in Table 1. Dikes associated with these systems are constructed of compacted earthen clay, concrete or metal.

To minimize the potential for a spill, Amoco has equipped each tank with a monitoring system that reflects the volume of material within a given tank. However, should liquid levels within a specific tank become dangerously elevated, or pressure levels within a system fall out of operating range, automated level and pressure alarms will sound as an additional protective measure. These alarms will activate and alert personnel at the terminal site when a system parameter is out of range. Should the situation escalate to the point where a high-high alarm is subsequently triggered, NGL flow from the pipeline is automatically rerouted to bypass the storage sphere. In the event that the Superior Terminal personnel are unable to respond to a system alarm, access to site specific system parameters and alarms is also available from the Amoco Fort Saskatchewan facility. The Amoco Fort Saskatchewan operations are run 24 hours every day, so immediate response to a facility alarm is assured.

If it is determined that a specific vessel may be leaking, but evidence of a spill is not visible, the vessel will be immediately taken out of service.

6.2 Truck loading Area

Trucks are loaded via vapor and fill lines through braided hoses with automatic close couplings. To ensure against potential spills due to truck movement , Amoco has instituted a policy that all trucks loading at the facility must do so with their air breaks in the locked out position. Furthermore, all drivers who load propane at the Superior Terminal must complete an annual safety training course documenting the proper loading procedures at the terminal. The system fill equipment includes an automatic set-stop meter that presets gallons to be loaded, thus minimizing possible truck overfill. All drivers must be within 25 feet of their vehicle when it is loading material at the terminal. A handprint recognition system coupled with PIN number verification ensures that only trained, authorized drivers may access the terminal and loading area.

Emergency shut-off switches are located at the loading area, terminal office maintenance shop gate, and at the depropanizer entrance area. These switches will shut all operations down at the loading area when deployed. In the event of a fire, the one million-gallon water reserve fire suppression system may also be manually activated.

The largest truck compartment that is likely to be loaded at the Superior Terminal has the capacity of 10,000 gallons. If a release of this magnitude were to occur, the vast majority of it would likely vaporize and dissipate shortly after exposure to atmospheric pressure. Any liquid material associated with the leak would likely spread out as sheet flow within the loading area and either vaporize and dissipate or percolate into the gravel parking lot.

Spills are also prevented by requiring all loading and unloading activities to be closely monitored by each driver, along with the visual inspection of truck and equipment for evidence of leak or failure before loading, during loading and prior to final departure.

6.3 Pipelines

The majority (except for the spans that pass under roads) of the pipeline at the facility is aboveground and visible for inspection. The pipelines are painted and cathodically protected with an impressed current system to minimize the potential for spills due to pipeline corrosion. As the pipelines are elevated on transverse steel bars set in concrete, they are easily inspected. The lines are welded to a footing which in turn sets on a support bracket. This design minimizes possible leaks that could occur over time due to friction or rubbing between the pipeline and respective support.

All pipelines are visually inspected during daily operations to ensure proper maintenance. Pumps and pump seals are also inspected. However, should a spill result from pipeline wear or corrosion, it would be contained within the tank dike enclosures, as would a release due to the failure of a pipeline gasket. Or, it would be contained through the deployment of booms, absorbents and pads should the spill occur outside of a diked enclosure.

Spills due to worn valves, pumps, loading arm seals, gaskets, or cracked valve or pump castings are prevented by routine maintenance and inspection.

6.4 Hot Oil Caloric Exchange System

The hot oil caloric exchange system consists of a natural gas fired oil heater, a hot oil filter, a surge tank and associated connective piping. When in operation, the system utilizes approximately 4100 gallons of Exxon Caloria HD petroleum based oil to transfer heat to the depropanizing process and maintain optimal operating temperature within the system. The total storage capacity of the system is estimated at 4500 gallons.

The entire hot oil caloric exchange system at the facility is positioned aboveground and visible for inspection. The connective piping associated with the system is painted and cathodically protected with an impressed current system to minimize the potential for spills due to pipeline corrosion.

The system is visually inspected during daily operations to ensure proper maintenance. However, should a spill result from the surge tank portion of the system, it would be contained within the tank dike. Or, it would be contained through the deployment of booms, absorbents and pads should the spill occur outside of a diked enclosure.

Spills due to worn valves, pumps, and piping or cracked valve or pump castings are prevented by routine maintenance and inspection.

7.0 SECURITY

The Superior Terminal is completely enclosed by a six-foot high chain-link security fence, limiting access to the facility to authorized personnel only. The terminal is operational on a 24-hour basis, though Amoco personnel are only present Monday through Friday during the normal business hours of 7:00 AM and 5:30 PM. A contract security company patrols the remainder of the 24-hour period at the facility. The terminal entrance is controlled by an electronic gate system which can only be opened by an authorized gate card and/or PIN number entry. The loading area is controlled by a computer system that is activated via handprint recognition and pin number entry. All systems are in the closed or inoperable position until activated.

In the event of a spill or other emergency situation during loading activities, the driver can terminate operations by activating the emergency shutdown button.

The facility is well lit during night hours. All vehicle paths, the truck loading area, the NGL storage spheres, hot oil caloric exchange system components and terminal office surroundings are illuminated as a security and safety measure. The loading area is illuminated with explosion-proof photo-celled controlled lights, as is NGL storage area.

In the event of an emergency, a list of appropriate contact names and phones numbers can be referenced in Appendix A.

8.0 PLAN MODIFICATIONS

Any proposed modifications to the existing use and storage volumes of petroleum products at the Superior Terminal will be reviewed prior to initiation of the modification. Should such changes impact the potential for a spill , or the spill containment capacities at the facility, this Plan shall be modified accordingly per 40 CFR Part 112 requirements. Minor Plan changes such as contact names, phone numbers or non-petroleum product storage shall be made by terminal personnel as appropriate. All amendments and modifications shall be documented in the space provided in the front of the manual, including a brief description of the sections affected, initials of individual making the changes and date of changes.

APPENDIX A

AMOCO SUPERIOR TERMINAL EMERGENCY CONTACT LIST

The following Amoco personnel and federal, state, and local government agencies are to be contacted for spills of releases of oil, hazardous wastes, or hazardous substances.

TELEPHONE DIRECTORY

Dome Petroleum Corporation:

Superior Terminal		715-398-3824
Richard Boyer –	Home	715-374-2185
	Cellular	218-343-2277
Rapid River Terminal		906-474-9407
David Kniss –	Home	906-446-312[illegible]
	Cellular	906-420-5830
Amoco Control Center		
Fort Saskatchewan –		403-992-2750

AMOCO PUBLIC AND GOVERNMENT AFFAIRS:

Kent Barry – Oak Brook	Office	708-990-6076
	Home	708-717-5782
	Portable	708-380-3297
	Pager	800-756-8062

AMOCO CALGARY EMERGENCY RESPONSE OFFICE:

Telephone (24 hour)		403-233-1313
Facsimile (24 hour)		402-233-5610
Western Area Superintendent		
Don Walters –	Office	403-992-2700
	Home	403-464-2872
	Cellular	403-975-1635
	Hand Held	403-975-3856
Manager Western Operations		
R. J. Dreveny –	Office	403-233-1618
	Home	403-255-4574
	Cellular	403-650-8066
Vice-President, Marketing and NGL		
B. Anderson –	Office	630-588-1737
	Home	312-856-3425
Emergency – Safety/Environmental		
M. Robertson –	Office	403-233-5925
	Home	403-281-4995

AMOCO SUPERIOR TERMINAL EMERGENCY TELEPHONE LIST..... Page 2

Public Affairs and Corporate Communications .....
Vince Rodych – Manager Community Affairs – .....Office.....403-233-1414
.....Home.....403-254-9462

Legal .....
Brian Little – General Council – .....Office.....403-233-1313

Security .....
D. Parr – Manager Corporate Security – .....Office.....403-233-5660
.....Home.....403-280-1437

EMERGENCY CONTACTS:

Ambulance/Rescue .....911 or 715/394-0234
Superior Memorial Hospital 715-392-8281
Fire (Superior) .....911 or 715/394-0227
Police (Superior) .....911 or 715/394-0234
CHEMTREC 800/424-3900
Amoco Notification Center 312/856-2200
Rosco Inc – A Division of WRR Environmental 1-800-669-4162

Federal: National Response Center (Coast Guard) 800/424-8802
U.S. EPA - Chicago 312/353-2318

State: Wisconsin Department of Natural Resources 1-800-943-0003
Department of Transportation (Div. of Emergency Response) 800/422-0798
State Police 715/635-2141

Local: Coast Guard 218/720-5286
Emergency 24-hour telephone 218/720-5412
Port Authority 218/727-8525
LEPC (Local Emergency Planning Committee) 715/394-0335
Public Works Department 715/394-0333
Water Control Board 715/394-0335
Corps. of Engineers 715/394-4165

APPENDIX B

Historical "Spill Event" Log
Dome Petroleum Corporation - Superior Terminal

1. Date: _____ Volume of Spill: _____

Navigable Waters Impacted: _____

Summary of Spill Event: _____

_____

_____

_____

_____

Cause of Spill: _____

Corrective Actions Taken_____

_____

_____

_____

Future Preventive Measures Implemented: _____

2. Date: _____ Volume of Spill: _____

Navigable Waters Impacted: _____

Summary of Spill Event: _____

_____

_____

Cause of Spill: _____

_____

Corrective Actions Taken: _____

_____

Future Preventive Measures Implemented: _____

_____

3. Date: _____ Volume of Spill: _____

Navigable Waters Impacted: _____

Summary of Spill Event: _____

_____

_____

Cause of Spill: _____

_____

Corrective Actions Taken: _____

_____

Future Preventive Measures Implemented: _____

APPENDIX C

DOME PETROLEUM CORPORATION – SUPERIOR TERMINAL

Emergency Response and Spill Containment Equipment

Sorbent & Containment Materials
- Various Absorbent Materials (stored on site for small spills)
- Containment Booms/Dykes
- Oil-up Spill Kit
- Impermeable Tarps/Sheeting
- Containment Booms

Hand Tools / Equipment
- Shovels
- Wheelbarrows
- Rakes

Heavy Equipment
- 4 Wheel Drive Vehicle
- Front End Loader

Fire Extinguishers

- 5-350# Wheel Units
- 21-30# Purple K
- 3-30# ABC
- 3-20# Ansul ABC
- 2-20# CO2
- 4-15# CO2
- 1-5# CO2
- 1-5# ABC

Communication Equipment
- 2 x Motorola Intrinsically Safe 2-Way Radios

Personal Protective Equipment

- 10 x Nomex Coveralls
- First Aid Kits

Third Party Responders/Equipment Resources
- Environmental Compliance Consultants Inc.
- Bay West, Inc.
- Superior/Duluth Mutual Aid Spill Group Trailer*

* The spill trailer is located at the fire station on Tower Ave.

TABLE 1

Storage Tank Information
Dome Petroleum Corporation - Superior Terminal

Tank No.	Volume (Gals.)	Product Stored	Secondary Containment	Level Alarm
V1- Sphere	50,000	Natural Gas Liquid	Earthen Dike	Yes
V2- Sphere	50,000	Natural Gas Liquid	Earthen Dike	Yes
V3- Sphere	50,000	Natural Gas Liquid	Earthen Dike	Yes
V4- Sphere	50,000	Natural Gas Liquid	Earthen Dike	Yes
V5- Sphere	50,000	Natural Gas Liquid	Earthen Dike	Yes
V6- Sphere	50,000	Natural Gas Liquid	Earthen Dike	Yes
V-0801	2595	Exxon Caloria Oil	Concrete Dike	Yes
V-1901	5281	Natural Gas Liquid	Earthen Dike	Yes
V-1904	5595	Ethyl Mercaptan	Concrete Dike	Yes
V-1201A	90,000	Propane	NA	Yes
V-1201B	90,000	Propane	NA	Yes
V-1201C	90,000	Propane	NA	Yes
V-1201D	90,000	Propane	NA	Yes
V-1201E	90,000	Propane	NA	Yes
V-1201F	90,000	Propane	NA	Yes

To: Jim Hosch
Superior

FYI / FILE

Jim I sent a copy to Don too - so far on track with Engr.
Mick

ME PETROLEUM CORP.

P.O. BOX 200, STATION M
CALGARY, ALBERTA, CANADA
T2P 2H8

(403) 233-1313

RECEIVED
NOV 30 1998
DNR - SPOONER

State of Wisconsin
Department of Natural Resources
Attention: Michael V. Michaelsen
810 W. Maple Street
Spooner, Wisconsin 54801

October 20, 1998 Enforcement Conference Summary

Subsequent to the enforcement meeting on October 20, 1998 regarding our operation at Superior, Wisconsin, Dome Petroleum Corp. has implemented actions and plans to which it agreed at that meeting and this correspondence is written confirmation of same.

Referencing your letter to our Mr. Richard Boyer on November 4, 1998, please note our response to each numbered obligation:

1. Rupture Disks

   We have initiated an annual change-out of all rupture disks in service at the facility. This will be incorporated in our maintenance procedures. Every employee on site has taken a certified training program given by FIKE (designer and manufacturer of the disks) for the proper installation of this equipment. All change-outs, as well as relief valve testing, will be witnessed by a Dome Petroleum employee.

2. Staffing

   We have hired two new employees who are currently being trained in the operation of the storage facility. As of December 1, 1998, the site will have 24 hour/day, 7 day/week manned coverage.

3. SPCC Plan and Modeling of Relief Valve Releases

An SPCC Plan has been submitted to the appropriate personnel within your department. We will include the City of Superior Fire Department in our notifications.

We are modeling release scenarios for the relief valves on the sphere as well as the propane bullets. The results of these technical studies will be forwarded to you under separate cover within two (2) weeks. Their meaning will be shared with the City of Superior at the same time.

We will gladly make ourselves available at your earliest convenience to discuss the contents of the release studies .

Yours truly,

D.E. (Don) Walters
Manager, Western Operations

State of Wisconsin \ DEPARTMENT OF NATURAL RESOURCES

Tommy G. Thompson, Governor
George E. Meyer, Secretary
William H. Smith, Regional Director

Northern Region Headquarters
810 W. Maple Street
Spooner, Wisconsin 54801
Telephone 715-635-2101
FAX 715-635-4105
TDD 715-635-4001

February 19, 1999

FID# 816061400
Case No. 98-NOEE-062

Mr. Richard Boyer
Dome Petroleum
P.O.Box 2096
Superior, WI 54880

Subject: September 14, 1998 Notice of Violation - Close out

Dear Mr. Boyer:

On September 14, 1998 the Department of Natural Resources issued a Notice of Violation letter to Dome Petroleum for alleged violations of Wisconsin's air pollution control rules and spill reporting laws in response to the September 8, 1998 release of natural gas liquids from your storage facility.

In follow up to an enforcement conference held on October 20,1998, Dome Petroleum completed numerous improvements to the Superior Storage Facility including the hiring of additional staff for 24 hour manned coverage, commencing annual rupture disk change out by Dome Petroleum certified employees, updating maintenance procedures, and improving the SPCC plan with procedures for notification of DNR and Superior Fire Department personnel. Lastly , the Amoco Consequence Modeling Report issued December 16, 1998 was submitted as requested, we understand that there have been discussions with the City of Superior Fire Department about the report on the fate of releases and appropriate response scenarios.

Based on this information, the Department will take no further action on the alleged violations described in the September 14, 1998 Notice of Violation letter. The Department reserves the right to reconsider this decision if violations occur in the future.

We appreciate your willingness to take these positive actions to improve the safety of your operation and work with us. The steps you have implemented have gone far to alleviate our concerns about release prevention and detection, notification, response time, and your product's effect on human health, safety and the environment.

If you have any questions regarding this letter please do not hesitate to call me at 715-635-4069. If you need to discuss air management program issues please call Dan Rosenthal at (715) 392-7989 or for spills program information call Jim Hosch at (715) 392-0802.

Sincerely

Michael V. Michaelsen

Michael V. Michaelsen
Environmental Enforcement Specialist

cc: Alan Eggum, Plant Engineer, Amoco Canada, P.O. Box 3210, Fort Saskatchewan, Alberta T8L 2T2
Dan Rosenthal - Superior
Jim Hosch - Superior
Neal Baudhuin - Rhinelander
Gary Kulibert - Rhinelander
Casetrack - Rhinelander (C. Steger)
Steve Gotelaere - Superior Fire Department

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