Maint

MAIN/TRB/bb
6240/11
28 SEP 1979

From: Commanding General
To: Commandant of the Marine Corps (Code LFF-2)

Subj: Oil Spill Prevention

Ref: (a) CMC ltr LFF-2-EGB:lmc of 14 Sep 1979

Encl: (1) BO 11090.1A
(2) Proposed BBul 11090
(3) CG MCB CLNC ltr MAIN/JIW/th 6240/11 of 17 Jul 1979
(4) CG MCB CLNC ltr MAIN/JIW/gbg 6240/11 of 31 Jul 1979

1. As requested by reference (a) the following information relative to oil spills at Marine Corps Base, Camp Lejeune is submitted. From experience oil spills originate from one of three sources. Accidental, equipment failure and unsatisfactory disposal practices of the line forces. Copies of all oil spill reports are routinely forwarded to Environmental Protection Agency, United States Coast Guard and Headquarters Marine Corps in consonance with current directives.

2. The following corrective action is being taken:

a. Marine Corps Base Order (enclosure (1)) contains a spill prevention containment and countermeasure plan for oil and other hazardous substances. This order established policy in environmental pollution/abatement and contains oil pollution control procedures. In support of the order a continuing education program consisting of slide/lecture presentations is given to tenant commands.

b. Marine Corps Base Bulletin (enclosure (2)) will be published to re-emphasize oil pollution control requirements.

c. Correspondence (enclosures (3) and (4)) to tenant commands pointing out the seriousness of the problem have met with renewed Command emphasis.

d. Military construction project P-996 includes facilities intended to eliminate oily waste discharges which are presently reaching receiving waters from maintenance shops, grease racks, parking lots and fuel farm.

e. Approximately 150 waste oil collection tanks have been installed at grease racks, maintenance shops, etc for temporary storage of waste peteoleum products, in an effort to reduce miscellaneous discharge of petroleum products. In 1978 approximately 125,000 gallons was sold to a reprocessing firm. At present approximately 250,000 is being advertised for sale by the Defense Property Disposal Office.

3. This Command is aware of the environmental significance of oil spills. Continued efforts to control poor housekeeping practices, considered to be the root of the problem, will continue to be regularly pursued.

DEPARTMENT OF THE NAVY
HEADQUARTERS UNITED STATES MARINE CORPS
WASHINGTON, D.C. 20380

IN REPLY REFER TO

LFF-2-EGB:lmc
14 SEP 1979

From: Commandant of the Marine Corps
To: Commanding General, Marine Corps Base, Camp Lejeune, North Carolina 28542

Subj: Oil Spills Prevention

1. Recent discussions between representatives of this Headquarters and the Office of the Secretary of Defense have emphasized the need to reduce spills of oil and other hazardous materials.

2. Coincidentally the Marine Corps Base, Camp Lejeune has experienced an increased number of oil spills during Calander Year 1979 as reported by oil spill reports, report symbol MC 6280-01.

3. In order for this Headquarters (Code LFF) to respond to the Office of the Secretary of Defense it is requested that information on actions taken or planned to reduce the number of oil spills be provided by 28 September 1979.

R. T. TRUNDY
By direction

Copy to:
DASD (EE&S)
DUSN

ENGINEERING REPORT
FOR
SPILL PREVENTION CONTROL AND COUNTERMEASURES PLAN (SPCC PLAN)
MARINE CORPS BASE, CAMP LEJEUNE, NORTH CAROLINA

# I. INTRODUCTION

## A. Purpose Report

The purpose of this engineering investigation was to make a field survey and inventory of petroleum storage facilities, identifying potential oil spill sites, and proposing fixes that will either eliminate the potential source or prevent any spill from entering navigable waters and causing a "film" or "sheen" upon same. A "sheen" means an irridescent appearance on the surface of water.

## B. Authority of Report

MC Bulletin 6240 dtd 3 April 1974 and Federal Register, Vol. 38, No. 237, Part II, dtd 11 December 1973, subj: Oil Spill Prevention.

## C. Scope of Report

1. Any facility having an aggregated aboveground storage capacity of 1,320 gallons or more, or any single tank over 660 gallons; or underground storage capacity of 42,000 gallons or more.

2. Any facility, non-transportation related which, due to its location, would cause an oil spill.

# II. GENERAL

## A. Summary of Existing Conditions

Investigations revealed that the majority of oil storage tanks or facilities need minor to major corrections to meet the Federal Environmental Protection Agency Standards.

## B. Summary of General Improvement Recommendations

The Environmental Protection Agency recommends that dikes or retaining walls be built around aboveground tanks. Diked areas and facility drainage should be piped through an oil separator. If drainage is not piped through an oil separator, drainage valve should be kept locked and opened after inspection to prevent an oil sheen from escaping the diked area. Aboveground and belowground tanks should be tested periodically. Mobile or portable oil storage tanks should be positioned or located so as to prevent a spill from reaching navigable waters. Security fencing and lighting should be provided. Personnel should be trained in spill prevention.

III. ORGANIZATION AND EXPLANATION OF REPORT

A. General

Public Works Dwgs. Nos. 13363-13376 and 13384 (enclosure (1)) show the required work and overall plant or facility layout for drain valve and oil separator location.

B. Reports

Certain inspections and tests are required and should be developed by the Base Maintenance Natural Resources and Environmental Affairs Division and records should be retained for three years. Proposed report formats are attached as enclosure (2).

C. Standing Operating Procedure (S.O.P.)

A S.O.P. guide, enclosure (3), should be issued as a Base Order.

IV. COST

The estimated cost to correct all deficiencies is $83,000. Enclosure (4) is a breakdown of direct costs by sites.

Clyde D. Smith
CLYDE D. SMITH, P.E.
Mechanical Branch Manager
Public Works Department

## TANKS

ANNUAL REPORT REQUIRED

1. Location _____

2. Date and time _____

3. Tank condition _____

_____

_____

4. Tank support or foundation condition _____

_____

_____

5. Dike condition _____

_____

_____

6. Tank tested:

A. Above ground: Visual inspection _____

_____

_____

B. Below ground: Hydrostatic (5 psi) _____

_____

_____

7. Tank piping, pumps, etc. inspected for signs of leaks or spills _____

_____

_____

8. If tank shows signs of deterioration, leaks, or oil spills, report to Base Maintenance Natural Resources and Environmental Affairs Division, Ext. 5003.

ENCLOSURE (2)

OIL SEPARATOR

REPORT REQUIRED MONTHLY

1. Location _____

2. Date and time _____

3. Clean off oil in separator as required _____

_____

4. Clean out bottom of separator as required _____

_____

5. If excess oil appears in separator, notify Base Maintenance Natural Resources and Environmental Affairs Division, Ext. 5003.

_____
NAME

SEE BASE ORDER 11090.1 FOR DISPOSAL OF WASTE OIL.

ENCLOSURE (2)

## DIKED AREA DRAINAGE

REPORT REQUIRED EACH TIME DIKED AREA IS DRAINED

1. Location _____

2. Date and time _____

3. Water inspected for oil sheen _____

_____

4. Excess oil sheen in diked area _____

_____

5. Oil sheen cleaned up before draining? _____

_____

6. Drain valve closed and locked _____

_____

7. Notify Base Maintenance Natural Resources and Environmental Affairs Division, Ext. 5003.

_____
NAME

SEE BASE ORDER 11090.1 FOR DISPOSAL OF WASTE OIL.

ENCLOSURE (2)

# S.O.P.

1. Check bulk tank capacity before filling any tank.

2. Pump or truck operator to stay with vehicle while loading or unloading.

3. Place physical barriers (chock-blocks) under tank truck's wheels before loading or unloading.

4. Place catch buckets under hose connections to tank trucks before connecting or disconnecting hose to prevent minor spills.

5. Put "end caps" on all unloading hoses and hang hose in rack with end caps at highest point.

6. Train personnel in "cleanup" of minor/major spills.

7. Inspect dikes, oil separators, and miscellaneous oil pumping equipment that might cause an "oil spill" monthly.

8. Do not locate mobile or portable storage tanks within 150 ft. horizontally of a stream or drainage ditch and have an earth dike around tank one foot higher than tank.

9. Clean oil separators monthly or more frequently, if required.

10. Do not drain a diked area until any oil "sheen" has been removed or piped into an oil separator.

11. A supply of absorbents and dispersants or emulsifiers shall be stockpiled at a central location.

12. All oil storage tanks, equipment and loading/unloading areas shall be continuously monitored for potential oil spills.

COST ESTIMATE
(SPCC PLAN)

| SITE | COST * |
|---|---|
| 1 | $ 5,367 |
| 2 | 3,240 |
| 3 | 17,247 |
| 4 | 1,060 |
| 5 | 2,180 |
| 6 | 1,405 |
| 7 | 1,505 |
| 8 | 1,122 |
| 9 | 294 |
| 10 | 1,339 |
| 11 | 925 |
| 12 | 17,430 |
| 13 | 1,922 |
| 14 | 500 |

* The above costs are to receive overhead, tax, insurance, profit, bond, and contingencies markup.

112.7

GUIDELINES FOR PREPARING AND IMPLEMENTING A SPILL PREVENTION CONTROL AND COUNTER MEASURE PLAN

(a) A written description of each spill, corrective action taken and plans for prevention of recurrence of all spills one year prior to 15 July 1974.

(b) Where experience indicates a reasonable potential for failure such as tank overflow rupture or leakage, plan should indicate the direction, rate of flow, and total quantity of oil which could be discharged from that facility.

(c) Appropriate containment structures or equipment

1. Dikes, berms or retaining walls
2. Wiers, booms or other barriers
3. Sorbent materials

(d) NA

(e) 1. Appropriate facility drainage:

i. By valves, manually operated, valves sealed and opened only by authorized personnel when storm water must be drained, sealed again after drainage.

2. Bulk storage tanks:

i. Material and construction of tank must be compatible with materials stored and conditions such as pressure, temperature, etc.

ii. (Check instruction literally - appears to be a duplication of (c) (1).)

iii. (Appears to be a duplication of (e) (1))

iv. Newly buried metallic tanks should be protected from corrosion by coatings, cathodic protection necessary. All buried tanks should be subjected to regular pressure testing.

v. Avoid portially buried metallic tanks, unless adequately coated.

vi. Above ground tanks should be subject to periodic integrity testing - using such techniques as hydrostatic testing, visual inspection or a system of non-destructive shell thickness testing. Inspect also tank supports and foundations.

vii. If there is a possibility of interval leakage from heating coils, condensate should be monitored for contamination or passed through a settling tank or other retention system.

viii. New and old tank installations should be fail-safe engineered or updated into a fail-safe engineered installation to avoid spills from overfilling by one or more of the following devices:

(A) High liquid level alarms

(B) Automatic pump cutoff devices

(C) Direct audible or code signal communication

(D) Fast response system for determining liquid level such as digital computers, telepulse or direct vision gauges.

(E) These devices should be regularly tested for proper operation.

ix. Effluents from all installations should be monitored frequently enough to detect situation that might cause an oil spill.

x. All visible oil leaks which could cause an accumulation of oil within diked areas should be promptly corrected.

xi. Position mobile or portable oil tanks so as to prevent spilled oil from reaching navigable waters, dike if necessary.

3. Facility transfer operations, pumping and in-plant process

i. Buried piping should have a protective wrapping and coating and should be cathodically protected if soil conditions warrent. Any line exposed should be carefully examined for deterioration.

ii. When a pipe line is not in service, or in standby service for an extended time the terminal connection at the transfer point should be capped or blank-flanged, and marked as to origin.

iii. Pipe supports should be properly designed to minimize abrasion and corrosion and allow for expansion and contraction.

iv. All above ground valves and pipelines should be examined regularly by operating personnel to note general condition. Periodic pressure testing may be warranted for piping in areas where facility drainage is such that a failure might lead to a spill event.

v. Vehicular traffic into the facility should be warned verbally or by appropriate sign to be sure that because of size the vehicle will not endanger above ground piping.

4. Facility tank truck loading and unloading rack

i. Tank truck loading and unloading procedures should meet the minimum requirements and regulations established by Department of Transportation.

ii. Where rack area drainage does not flow into a catchment basin or treatment facility designed to handle spills, a quick drainage system should be used for tank truck loading and unloading areas. The containment system should be designed to hold at least maximum capacity of any single compartment of a tank truck loaded or unloaded in the plant.

iii. An interlocking warning light or physical barrier system or warning sign should be provided in loading-unloading areas to prevent vehicular departure before complete disconnect of transfer lines.

iv. Prior to filling and departure of any tank truck, the lower-most drain and all outlets of such vehicle should be closely examined for leakage and corrected if necessary to prevent leakage while in transit.

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RTTUZYUW RUEBDOA8880 2712119-UUUU--RUEACMC.
ZNR UUUUU
R 282119Z SEP 79
FM CG MCB CAMP LEJEUNE NC
TO CMC WASHINGTON DC
BT
UNCLAS //N06240//
FOR CMC CODE LFF-2
OIL SPILL PREVENTION
A. CMC LTR LFF-2-EGB:LMC OF 14 SEP 1979
1. RESPONSE TO REF A MAILED BY THIS COMMAND 28 SEP 1979.
BT
#8880
TOD:290052Z SEP 79/13
REL:J.R. FRIDELL,COL,C/S
DIST:MAIN,FAC

NNNN

282119Z Sep 79