

(conoco)

VCM Plant

Conoco Chemicals
Continental Oil Company
P.O. Box 605
Westlake, Louisiana 70669
(318) 882-0550

RECEIVED

DEC 07 1976

December 4, 1976

Mr. Gary Bernath
Region VI, Environmental Protection Agency
First International Building
1201 Elm Street
Dallas, TX 75270

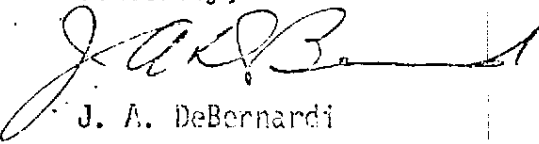
Dear Mr. Bernath:

The Leak Detection and Elimination Plan for Continental Oil Company's Westlake, Louisiana VCM Plant is attached. This plan is being submitted pursuant to the requirements of the National Emission Standard for Vinyl Chloride.

Please note the request in Item VII of the plan that the attached Figures I, II, and III be considered confidential.

If there are any questions about this plan, or if additional information is needed, please contact me.

Sincerely,


J. A. DeBernardi

is
Enc
CC + enc:
Mr. James F. Coerver
Technical Secretary
Louisiana Air Control Commission
P. O. Box 60630
New Orleans, LA 70160

BCC: RDG-CRH-JEC-DAK-JF-JHM-ROC-PLF-JRH

VVC 000011905

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LEAK DETECTION AND ELIMINATION PLAN

The CONOCO VCM Plant Leak Detection and Elimination Plan is designed to provide a formalized procedure for controlling leaks from equipment in vinyl chloride service. The plan is organized following the requirements of the leak detection and elimination section of the national emission standard for vinyl chloride.

I. Continuous Monitoring System

The leak detection plan will utilize three multipoint area monitors, Honeywell Model 1000 gas chromatographs (CAR), for detection of major leaks and identification of the general area of the plant where a leak is located. The monitors will sample the air at each sample point on a continuous sequential basis, with each point being sampled once every 10 minutes. These chromatographs are CAR-171 for the plant process area, CAR-401 for the offsites area, and CAR-678 for the dock area. The CAR's are presently being utilized for the OSHA VCM monitoring plan and have proven to be reliable area monitors. Honeywell has stated that their accuracy is $\pm 5\%$ at VCM concentrations over 1.0 ppm.

II. Portable Hydrocarbon Detector

A Century OVA-98b portable organic vapor analyzer will be used routinely to find small leaks and to pinpoint major leaks indicated by the vinyl chloride monitoring system. This instrument has been used for three years for leak detection and has proven to be reliable. It can measure hydrocarbons within a sensitivity of 10 ppm.

III. Calibration and Maintenance

The vinyl chloride monitoring system will be maintained, calibrated, and span checked on a monthly schedule. CAR-171 and 401 will have an elution check three times a week to insure that they are reading the correct chromatograph peaks. CAR-678 will have an elution check before each ship loading. In using the CAR's for OSHA monitoring, it has been the plant's experience that the span changes very little with time and that a monthly span check is sufficient to insure reliable and accurate readings.

The portable detector will be maintained and calibrated on a monthly schedule. Its concentration indicator gauge will be spanned before each use.

IV. Location and Number of Monitor Points

The vinyl chloride monitors will utilize the ten monitoring points located in the plant process, offsites, and dock areas as shown in Figures 1, 2, and 3, respectively. The equipment in vinyl chloride service is outlined in each figure. The monitor point locations were selected from existing monitoring points after considering the number of pieces of equipment in vinyl chloride service and the size and physical layout of the plant areas containing equipment in vinyl chloride service. Each point is monitored once every ten minutes. However, CAR-678

located at the dock is only operated during ship loading since the dock is staffed and all equipment in vinyl chloride service is in operation only during ship loading.

V. Action Plan

The action plan upon detection of a leak will be as follows:

- 1) The person finding the leak will attempt to control the leak.
- 2) If that person is unable to control the leak, the Operations Shift Supervisor will be notified. The Shift Supervisor will take one of the following actions.
 - a) Repair the leak, or
 - b) Notify the Maintenance Department to take corrective action to control the leak.
- 3) The Leak Detection Form (Figure 4) will be initiated by the person finding the leak and given to the Operations Shift Supervisor. If the person finding the leak cannot correct the leak, the Shift Supervisor will either take action to correct the leak or notify the Maintenance Department to correct the leak. The Shift Supervisor will then record the action taken to control the leak.

VI. Definition of a Leak

The background concentrations of VCM in the process, offsites, and dock areas were determined by statistically analyzing the monitor log sheet data. The VCM concentration measured at each monitor point is reported on a log sheet once per hour. Log sheet data from September 15 to October 15 of this year was used for the process and offsites monitors. Log sheet data from 30 consecutive ship loadings was used for the dock monitor. There were no known major leaks during the time this log sheet data was taken.

The upper limit of the background concentration was defined as the concentration the monitor points were calculated to be at or below 99% of the time. The process area, monitor CAR-171, had a 95 percent probability of being at or below 5 ppm, and a 99 percent probability of being at or below a number greater than 10 ppm. The range on this monitor was 0 to 10 ppm, therefore, concentrations above 10 ppm could not be measured. The monitoring points for the offsite area, monitor CAR-401, have a 95 percent probability of being at or below 6 ppm, and a 99 percent probability of being at or below 18 ppm.

The monitoring points for the dock area, CAR-401, have a 95 percent probability of being below 0.5 ppm and a 99 percent probability of being 4 ppm or below.

Since the 95 percent probability concentration for the process area is slightly lower than the 95 percent probability concentration for the offsites area, we have assumed that the 99 percent probability concentration for the process area is also slightly lower than the 18 ppm 99 percent probability concentration of the offsites area.

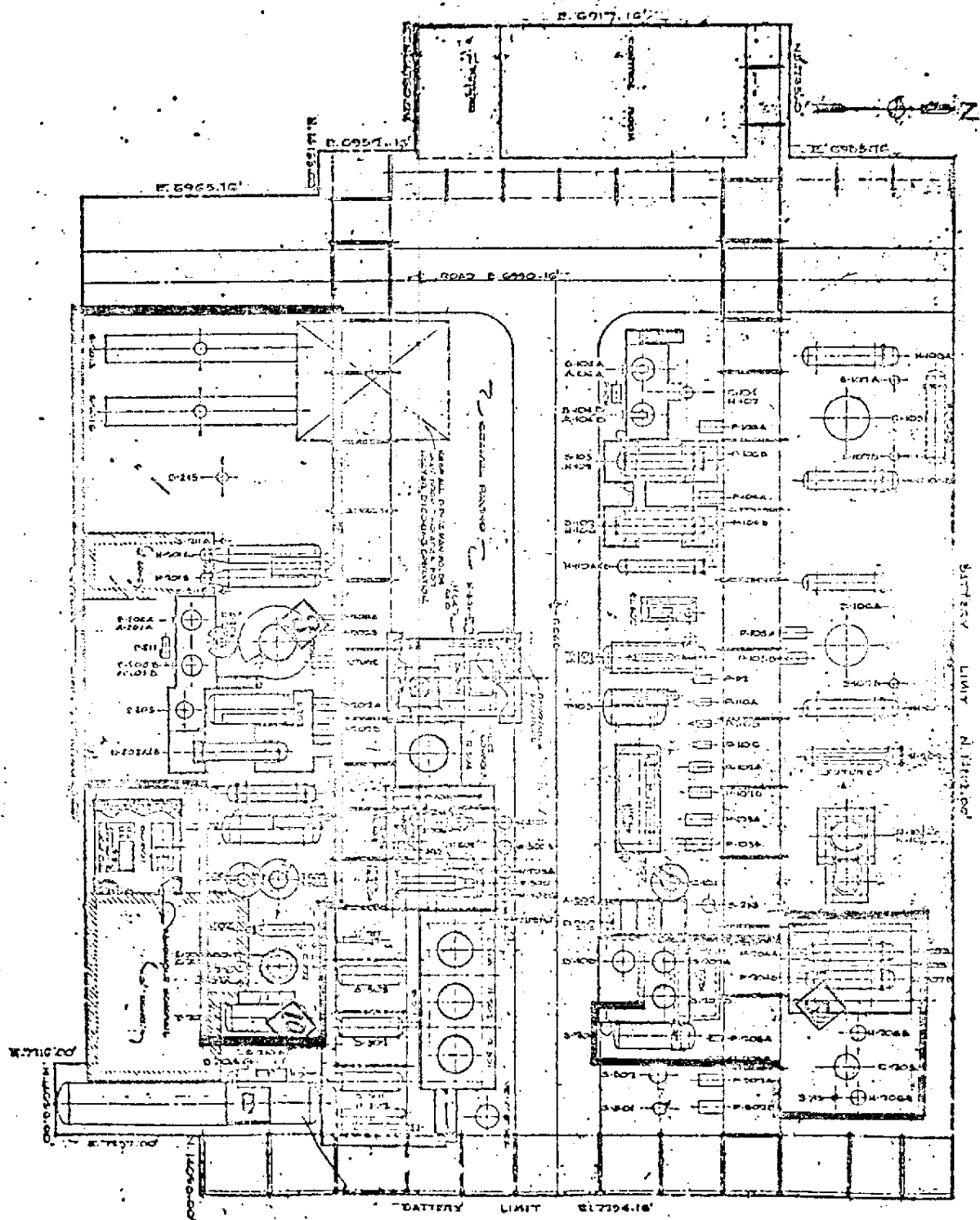
A leak was defined to be two consecutive log sheet readings at a concentration approximately 10 ppm over the 99 percent probability concentration. Therefore, a leak concentration will be defined as 25 ppm in the process area, 30 ppm in the offsites area, and 15 ppm in the dock area. The process area monitoring system's range will be increased to show VCM concentrations of 25 ppm.

VII. Confidentiality

Figures I, II, and III are considered to be confidential since they show the location and number of equipment in the process, offsites, and dock area. If these figures were made public, they would divulge proprietary process information. Therefore, the Administrator is requested to consider Figures I, II, and III of this Leak Detection and Elimination Plan to be confidential in accordance with Section 61.15(b) of the general provisions of the Hazardous Air Pollutants Standard - 40 CFR 61.

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FIGURE 1
CONOCO VCM PLANT
CAR-171 MONITORING POINTS

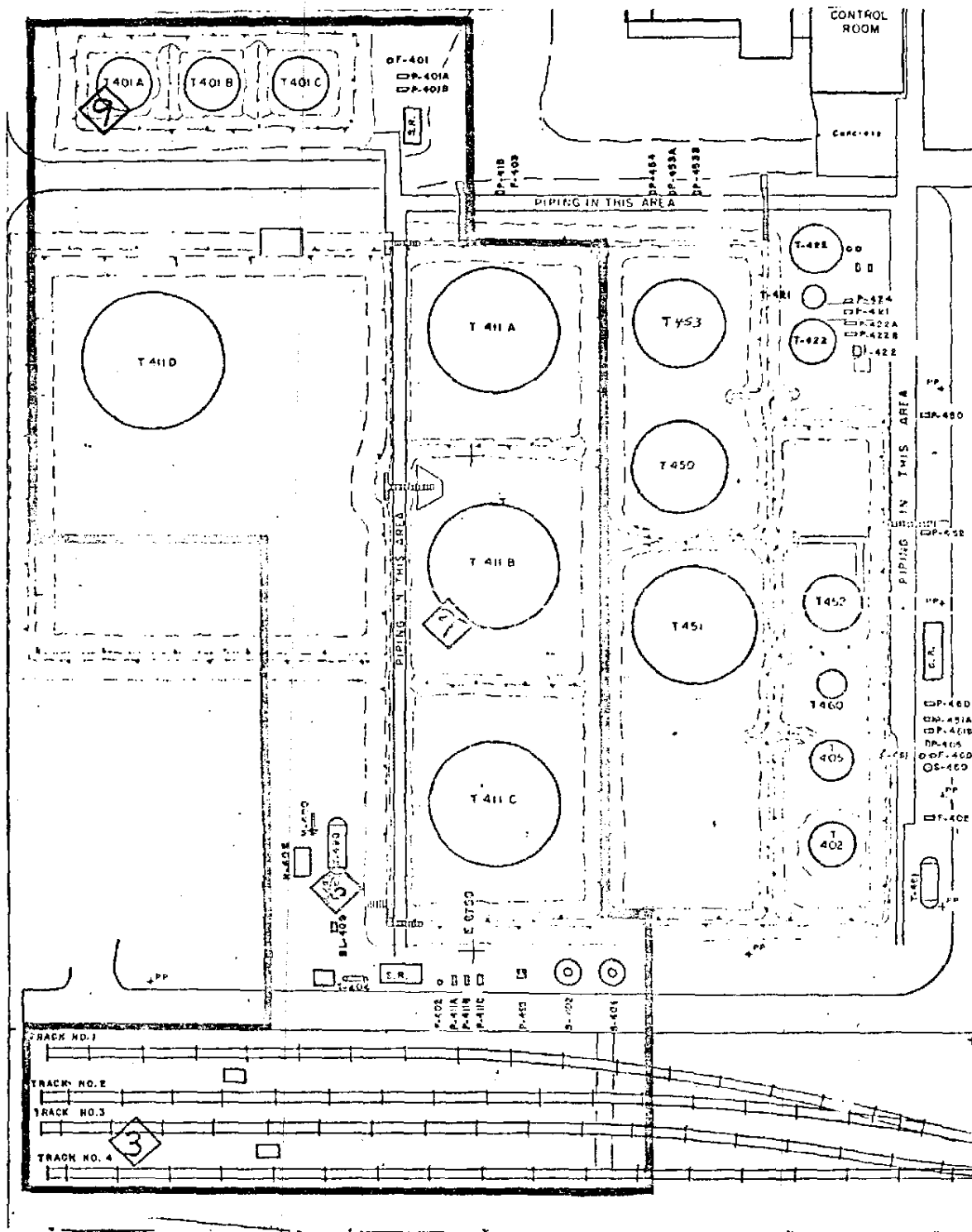


Note: Equipment in vinyl chloride service is within heavy outline.

Monitor Point Location

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FIGURE 2
CONOCO VCM PLANT
CAR-401 MONITORING POINT

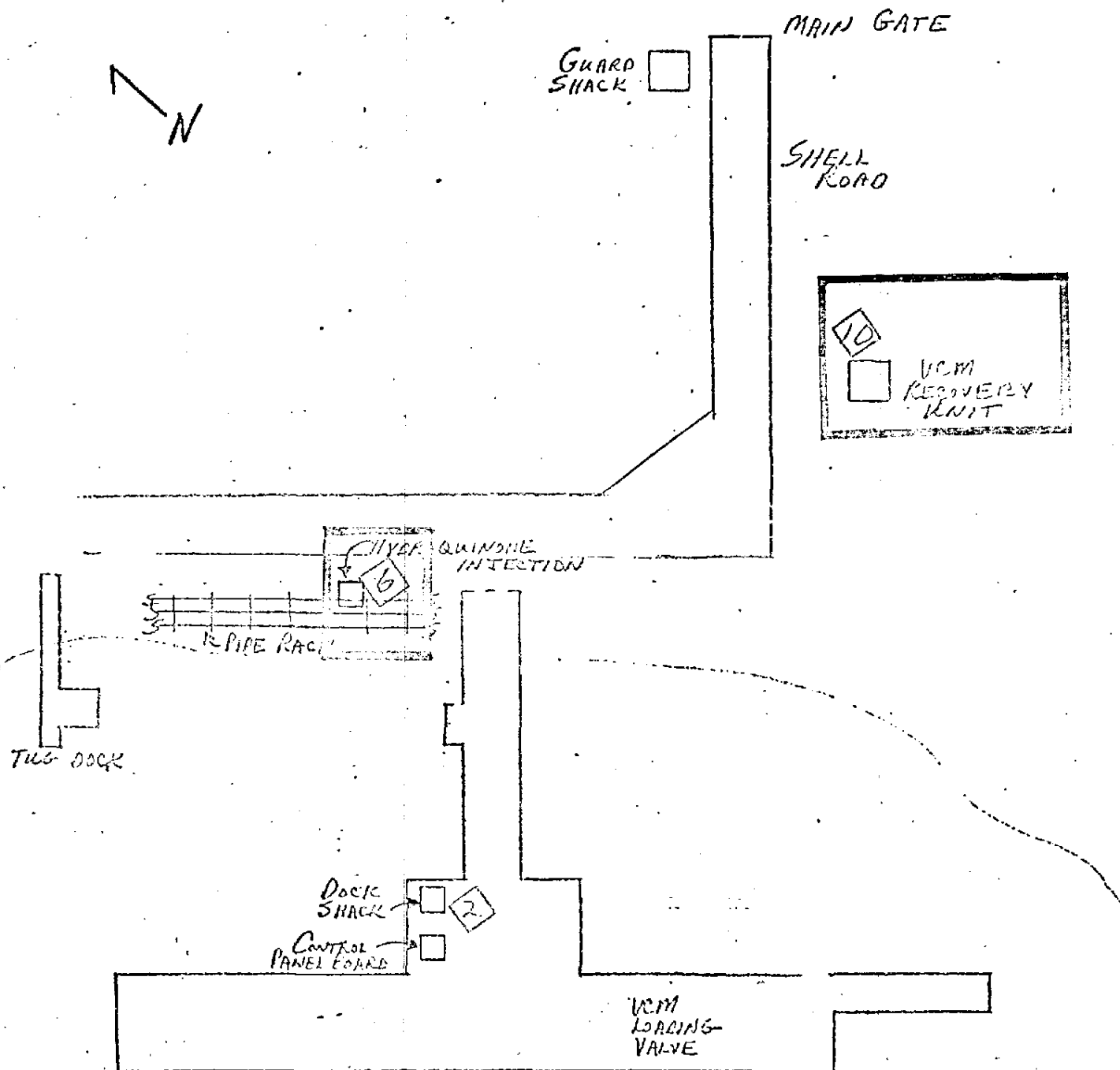


Note: Equipment in vinyl chloride service is within heavy outline.

Monitor Point Location

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FIGURE 3
CONOCO VCM PLANT
CAR-678 MONITORING POINTS



Dock No. 3

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Note: Equipment in vinyl chloride service is within heavy outline.



Monitor
Point Location

FIGURE 4
CONOCO VCM PLANT
LEAK DETECTION FORM

Name of person finding the leak:

Date:

Time:

I. To be completed by person finding the leak.

1) Location of Leak:

2) Cause of Leak:

3) Action Taken to Eliminate Leak:

- 1) Action Taken?
- 2) Leak Controlled?
- 3) Leak Not Controlled?
- 4) Other

II. To be completed by Shift Supervisor if leak has not been controlled.

1) Action taken to control leak.

a) Maintenance Department notified to correct leak?

b) Other?

Name of Shift Supervisor: