

PETROLEUM PRODUCTS AND HAZARDOUS MATERIALS
IN UNDERGROUND CONDUIT SYSTEMS
REMOVAL PROCEDURES

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1. GENERAL

1.01 This section outlines procedures for removing petroleum products (gasoline, diesel fuel, etc.) or hazardous materials (acids, alkalies, pesticides, etc.) from underground conduit systems and precautions that should be followed to avoid accidents.

1.02 This section is written in conformance to present standards.

2. REFERENCE MATERIAL

2.01 In order to perform the procedures outlined in this section, THE CRAFT PERSONNEL MUST BE FAMILIAR WITH THE INFORMATION CONTAINED IN THE FOLLOWING SECTIONS AND SUBDIVISIONS:

Section	Title
620-102-010	Outside Plant Precautions - Underground and Buried Work
620-135-010PT	Guarding Work Areas
620-135-100PT	Guarding Work Areas - Standard Warning Devices
620-140-501PT	Testing and Ventilating Manholes
620-150-010	Manhole Covers - Removing and Replacing
Subdivision	
081-700-	Gas Detecting Devices
649-510-	Blowers and Heaters
649-530-	Portable Pumps

NOTICE

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Section 620-145-010PT

3. PROCEDURE FOR REMOVAL OF PETROLEUM PRODUCTS FROM UNDERGROUND CONDUIT SYSTEMS

3.01 When petroleum products are found in a manhole, an inspection of the area should be undertaken to determine the slope of the terrain and the probable number of manholes involved. After an overall view is obtained, the following guidelines and examples may be used as an aid to correct the problem.

WARNING: FUMES FROM PETROLEUM PRODUCTS MAY BE TOXIC AND HIGHLY FLAMMABLE. CARE SHOULD BE EXERCISED TO AVOID BREATHING THESE FUMES OR CAUSING A SPARK, WHICH MAY IGNITE THE PRODUCT WHILE WORKING AROUND THE MANHOLE.

3.02 When it is determined that the manhole contains a petroleum product, proceed as follows:

- (a) Notify the local Fire and/or Police Departments, and nearby oil companies (if appropriate) of the condition and location of the manhole.
- (b) Advise supervision of the condition and location of the manhole.
- (c) Warn passersby of the danger until the Fire and/or Police Departments takes charge.
- (d) Ensure that the work area warning devices are adequate and properly placed.
- (e) Seal the openings in the manhole cover and the space between the cover and frame with plastic duct seal, if practicable.

3.03 The Fire Department or other department having jurisdiction usually will direct further work required to remove the petroleum product, inspect and analyze the product to determine its source, and any other procedure deemed necessary. It is the responsibility of local Company supervision to obtain copies of this information and forward via company mail to;

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3. PROCEDURE FOR REMOVAL OF PETROLEUM PRODUCTS FROM UNDERGROUND CONDUIT SYSTEMS, Continued

DISTRICT MANAGER
ENVIRONMENTAL MANAGEMENT
2600 Camino Ramon Room 2E050
San Ramon

3.04 If the authorities are unfamiliar with the accepted procedures for determining the source of the petroleum product seepage, it is suggested that they review reference material indicated in 7.02.

3.05 It is important to make preliminary determinations of the source of the petroleum product and the level of the product in the manhole.

3.06 If the product entered the manhole through the cover, walls, or floor of the manhole and the level is below the lowest unplugged duct, **IT WILL NOT BE NECESSARY TO FLUSH THE DUCTS.**

3.07 If the product seeped in one duct, and the level of the product has not yet reached the other ducts, it also would not be necessary to flush all ducts. It may be that only the duct involved, the adjacent ducts, and the lower ducts need to be flushed.

3.08 All work performed by Company personnel must be directly supervised by a Company Supervisor at the job site.

3.09 In the event that cable trouble has occurred in the manhole and the Fire Department is not equipped to remove the petroleum product, the following is suggested:

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3. PROCEDURE FOR REMOVAL OF PETROLEUM PRODUCTS FROM UNDERGROUND CONDUIT SYSTEMS, Continued

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- (1) Obtain the services of a Company approved Hazardous Waste/Material handler for the transportation and disposal of the petroleum product or hazardous material.

NOTE: SEPTIC TANK SERVICES ARE NOT APPROVED FOR THE HANDLING, TRANSPORTATION AND DISPOSAL OF PETROLEUM PRODUCTS OR HAZARDOUS MATERIAL.

- (2) Allow the Company approved Hazardous Waste/Material handler to pump out and evacuate all of the petroleum product present in the manhole.

NOTE: DO NOT ALLOW THE PETROLEUM PRODUCT TO FLOW INTO SURFACE WATER DRAINS ON THE STREET.

- (3) After the petroleum product has been removed, the walls and floor of the manhole must be flushed with a high velocity water stream and the residue removed in the same manner described in Step 2, above. A high velocity stream of water is adequate to remove the petroleum product from the manhole walls and floor. Detergents and other agents should not be used due to the adverse effect agents may have on cable sheathing (cracking).

NOTE: THERE ARE THREE OPTIONS FOR THE SOURCE OF WATER AND EQUIPMENT USED TO FLUSH THE MANHOLE AND DUCT RUNS. THE OPTIONS ARE AS FOLLOWS:

If practicable, arrange to have the Fire Department flush the manhole and duct runs, using their equipment and water source.

Contact the local Water Department and obtain permission to use water from a nearby water hydrant. This option will require use of the Fire Department hose and high-pressure nozzle (with their permission), or equivalent equipment.

Employ a water truck having a large capacity, a standard pump, a 1-1/2 inch diameter hose of suitable length, and a high-pressure nozzle (Allen, straight-stream tip with 1/2 inch opening, and an open and shut handle, or equivalent nozzle).

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3. PROCEDURE FOR REMOVAL OF PETROLEUM PRODUCTS FROM UNDERGROUND CONDUIT SYSTEMS, Continued

3.10 If it can be determined that the petroleum product did not enter through the ducts, and the level has not reached the lowest duct, do not allow the water flushing operations to drain into the ducts. This will preclude having to flush the ducts.

3.11 After the manhole has been flushed, pumped, and made safe for entry (testing and ventilating), the ducts can be plugged, if the petroleum product seeped into through the ducts, and service trouble restoration begun.

3.12 At this point, it is necessary that the adjacent manholes be inspected to determine whether or not the duct runs should be flushed, and depending on the terrain, determine in which direction the flushing should be done.

Example 1: If the adjacent manhole is clear of petroleum products but has a LOWER elevation than the contaminated manhole, it is recommended that the duct run be flushed toward the non-contaminated manhole.

Example 2: If the adjacent manhole is clear of petroleum products but has a HIGHER elevation than the contaminated manhole, it is recommended that the duct run be flushed toward the contaminated manhole.

Example 3: If the adjacent manhole is contaminated, remove petroleum product and flush the manhole, then proceed to its adjacent manhole to determine (depending on elevation) the direction in which the duct run should be flushed.

3.13 After the direction of duct run flushing is determined, select the most convenient water source option listed in 3.09, Step (3) to remove residual petroleum products from duct runs.

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3. PROCEDURE FOR REMOVAL OF PETROLEUM PRODUCTS FROM UNDERGROUND CONDUIT SYSTEMS, Continued

WARNING: BEFORE ENTERING THE MANHOLE TO FLUSH THE DUCT RUNS, TEST THE ATMOSPHERE OF THE MANHOLE WITH A COMPANY APPROVED GAS INDICATOR DESIGNED FOR THIS PURPOSE. DO NOT ENTER THE MANHOLE UNTIL TEST SHOW A SAFE CONDITION (see 5.01 and 5.02).

3.14 When the direction of flushing has been determined and if it is practicable, it is recommended that the ducts on the "downhill" side of the adjacent manhole be plugged to prevent the need for additional flushing and further spreading of the residual petroleum product.

3.15 The duct runs are flushed by inserting the tip of the high-pressure nozzle inside the ducts and flushing toward the lower elevation. All ducts to be flushed should be flushed for several minutes.

NOTE: IF THE RUN IS OCCUPIED AND THE WATER STREAM CANNOT BE INJECTED, FLOOD THE MANHOLE WITH WATER AND PUMP UNTIL THE WATER AND PETROLEUM MIXTURE IS REMOVED.

3.16 After the duct runs have been flushed, remove the water and petroleum mixture, reflush the manhole(s) and remove the water as described in 3.09 Steps (1) and (2).

4. PROCEDURE FOR THE REMOVAL OF HAZARDOUS MATERIALS FROM UNDERGROUND CONDUIT SYSTEMS

4.01 When hazardous materials are found in a manhole, the following guidelines should be used to correct the condition of the manhole(s) in question.

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4. PROCEDURE FOR THE REMOVAL OF HAZARDOUS MATERIALS FROM UNDERGROUND CONDUIT SYSTEMS, Continued

NOTE: RAW SEWAGE IS NOT A HAZARDOUS SUBSTANCE. THE CLEAN UP AND DISPOSAL OF THIS MATERIAL CAN BE ACCOMPLISHED WITH A COMPANY CONTRACTED SEPTIC OR SEWAGE TANK HANDLER AND NOT A HAZARDOUS WASTE HANDLER.

4.02 When it is determined that a manhole contains a hazardous material/waste, proceed as follows:

- (a) Notify supervision of the condition and location of the manhole.
- (b) Supervision will arrange for the contracting of a Company approved Hazardous Material/Waste handler to pump the manhole and dispose of the substance.
- (c) If additional information is needed, Supervision can call the Environmental Management HOTLINE: 415-823-9824.
- (d) It is the responsibility of Supervision to forward any manhole water sampling information and/or test data via company mail to:

DISTRICT MANAGER
ENVIRONMENTAL MANAGEMENT
2600 CAMINO RAMON ROOM 2E050
SAN RAMON

4.03 Field supervision should refer to the "HAZARDOUS MATERIALS/WASTES MANAGEMENT HANDBOOK" for specific and current procedures when preparing hazardous materials/wastes for transportation and disposal.

4.04 The flushing of the manhole and ducts may not be required for hazardous materials that are not of a combustible petroleum based substance. Company supervision should call the Environmental Management Hotline for information or assistance at the telephone number given in 4.02 (c).

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5. PRECAUTIONS BEFORE ENTERING AND WORKING IN A MANHOLE

5.01 After the petroleum product is removed, ventilate the manhole with a company approved power blower for a period of time no less than 45 minutes. This initial ventilation purge time may not apply to hazardous materials removed from the manhole if the material IS NOT a petroleum based substance. This ventilation time may be greater if the manhole is larger than standard size. Refer to Section 620-140-501PT for manhole ventilation purge times.

5.02 After completion of the initial ventilation purge, test the manhole atmosphere with a company approved gas indicator designed for this purpose. Do not enter the manhole until tests made with the gas indicator show that the manhole atmosphere is safe for working.

5.03 Ventilate the manhole continuously with a power blower to keep the manhole atmosphere safe. The atmosphere must be tested at frequent intervals with a company approved gas indicator to insure safe working conditions.

6. DEFERMENT OF CABLE WORK

6.01 If work in the manhole can be deferred until the source of the petroleum product or other combustible hazardous material can be determined, the danger of fire or explosion can be minimized by the use of "dry ice" (carbon dioxide). The manhole should be flushed as described in 3.09, then approximately 30 pounds of dry ice should be lowered into the manhole. After placing the dry ice, replace the manhole cover and seal the cover with plastic duct seal. Manholes so treated should be ventilated thoroughly and tested for the presence of combustible gases before entering as described in 5.01 through 5.03.

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7. DETERMINING SOURCE OF PETROLEUM PRODUCT OR SOURCE OF HAZARDOUS MATERIAL

7.01 Identification of a petroleum or hazardous material spill is the responsibility of the petroleum or hazardous substance industry or manufacturer. Therefore, it is critical that once the contaminations are discovered, a letter be transmitted to the District Sales Manager of the suspected company with copies to local officials, requesting their assistance in locating the source of the contamination and assistance in any cleanup required.

7.02 If the above request results in no action by the appropriate company contacted, assistance in determining the source of the petroleum or hazardous material seepage can be obtained from the following publications:

N F P A #329 (National Fire Protection Association) - Underground Leakage of Flammable and Combustible Liquids.

API (American Petroleum Institute) Publication #4149 - The Migration of Petroleum Products in Soil and Ground Water.

7.03 In no case shall Pacific*Bell/Nevada*Bell assume responsibility for the spill or cleanup unless the responsible and appropriate public authorities abrogate these responsibilities through due process. In this case, it will be necessary for Pacific*Bell/ Nevada*Bell to take corrective action for service restoration and/or normal work operations.

