SEWERAGE AND WATER BOARD

OF

NEW ORLEANS

SEWAGE OVERFLOW ACTION PLAN

Previously SSORAP and
Unauthorized Discharge
Overflow Response
Action Plan

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12/02/97
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SEWAGE OVERFLOW RESPONSE ACTION PLAN
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PLAN OVERVIEW

PLAN OVERVIEW

The Sewage Overflow Action Plan (SOAP) is the Sewerage and Water Board of New Orleans' (sometimes hereinafter referred to as "Board") systematic approach to responding to overflows occurring in the Sanitary Sewage System. This document presents the Plans and Policies which define the role of the Board and its employees in responding to situations commonly experienced in managing sanitary sewer overflows (SSO's), as well as providing guidance and assuring adequate resources for those situations which cannot be completely anticipated.

The SOAP identifies in detail those standard operating procedures and the individual responsibilities necessary to respond to SSO's in an effective and expedient manner. This SOAP also serves as a training tool for Board employees. The document has been organized into the following sections:

SECTION 1 - INTRODUCTION provides a general description of the Sewer Collection System and identifies the Departments/Divisions which are involved in the Response Action Plan. This section also provides a general description of the activities related to responding to sanitary sewer overflows. It also includes a list of Response Time Goals.

SECTION 2 - DEPARTMENTAL PROCEDURES identifies each organization within the Board responsible for directly responding to sewer system overflows. Along with a description of the organization and its staffing are detailed procedures and policies identifying the specific actions of individuals responsible for remediating an overflow condition.

SECTION 3 - COMMUNICATION AND REPORTING specifically identifies the information flow associated with identifying, documenting, responding to and reporting SSO's. Information is tracked from the initial Service Request to the monthly E.P.A. and La. D.E.Q. reports.

SECTION 4 - SANITARY SEWER OVERFLOW CONTAINMENT PLANNING provides guidance for handling sewer overflow material. Considerations are discussed for making site specific decisions during an emergency. Final decisions will have to be determined on a case-by-case basis.

SECTION 5 - AVAILABLE EQUIPMENT provides a listing of vehicles and equipment by Department/Division available for responding to sanitary sewer overflows. Also listed is standard equipment assigned to each type of vehicle.

It is important to stress that the data and procedures contained in this document will change over time, as equipment is replaced, new systems are installed, or computer software is updated and modified as procedures are improved. Therefore this plan should be reviewed as a "living document", the contents of which will be modified as necessary to stay current.

INTRODUCTION

1.1 ORGANIZATION

The Sewerage and Water Board of New Orleans (Board) is responsible for the installation, operation and maintenance of the public drainage, water and sewerage systems. The sanitary sewerage system of the City is a gravity collection system consisting of 1450 miles of lateral and trunk sewers, ranging in size from 6 inches to 7 feet in diameter. Lifting and conveying the sewage by trunk sewers and three miles of sewer force mains requires 83 electrically operated pumping and lift stations.

The Operations, Facility Maintenance and Networks Divisions have the primary responsibility for responding to SSOs. See Figure 1.1. The Environmental Affairs group is responsible for all regulatory reporting and enforcement associated with SSOs from the sewer collection system.

The Board is committed to responding quickly and decisively to mitigate any overflows from the sanitary sewer system. Over the last several years the Board has developed a procedure for responding to reported overflows. Figure 1-2 is the "decision tree" which the Board follows in addressing overflow problems.

In order to more accurately identify and improve the response times for sanitary sewer overflows, the Board has prepared this document. This plan lists the activities required to carry out the Board's Plan for responding to SSOs as well as the resources provided to fulfill the Plan.

1.2 BACKGROUND

The first priority of the Sewerage Overflow Action Plan is to have the ability to handle emergency service requests quickly and efficiently so as to avoid adverse impact to the public's health and environmental factors. Emergency sewer service requests usually consist of calls to relieve collection line stoppages and to correct lift station, pumping station and force main failures. Quickly clearing stoppages before overflows and damage occur is a major concern. Sewer line stoppages can develop when obstructions slow down the flow of wastewater, gradually forming a blockage or choke in the gravity system.

Historical data is being used to direct follow-up maintenance work and develop preventive maintenance plans; stoppages are identified according to their cause or type of problem. Stoppages result from obstructions such as grease, debris, broken pipe, offset joints or a joint failure. These obstructions may require removal, repair or replacement.

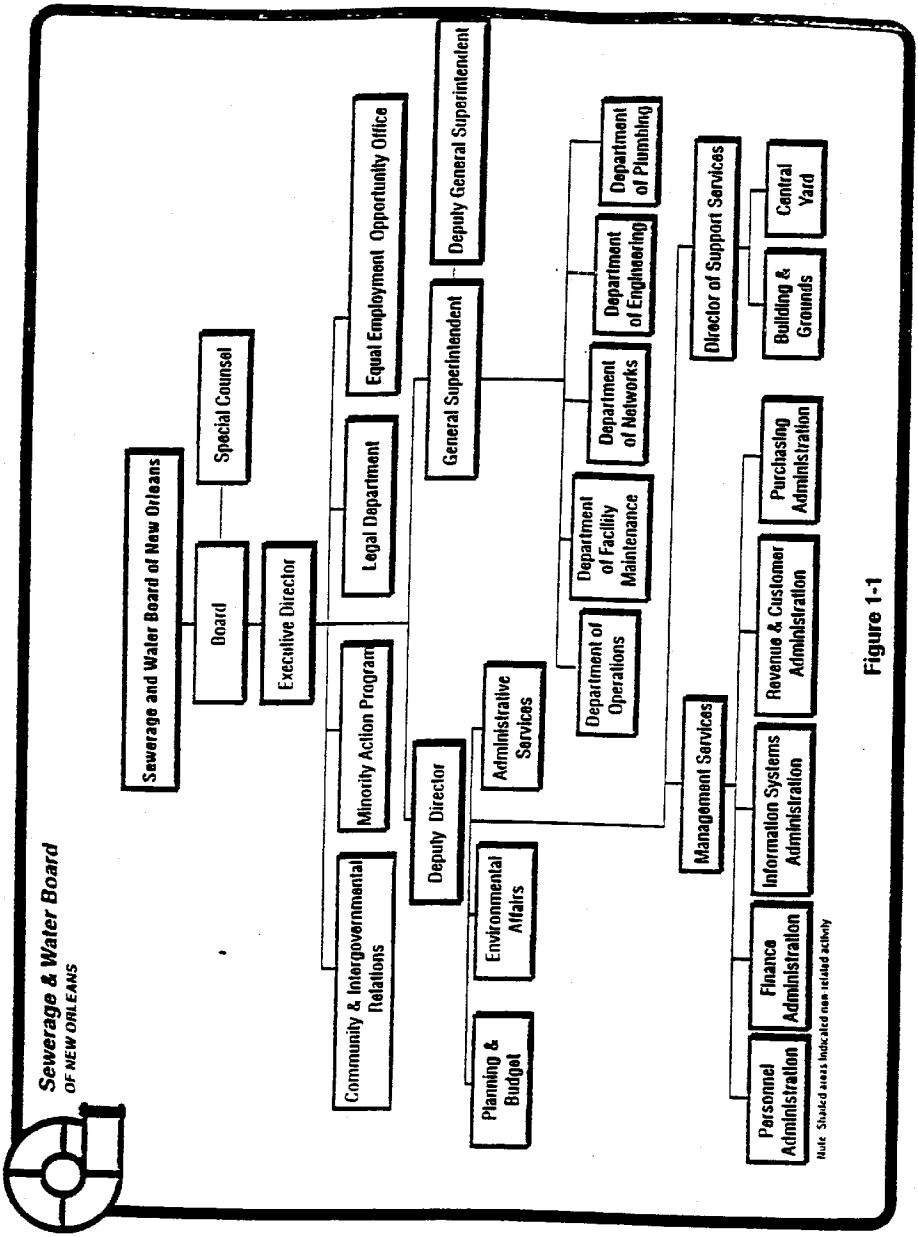
Sewerage & Water Board
OF NEW ORLEANS
Sewerage and Water Board of New Orleans
Board
Special Counsel
Executive Director
Equal Employment Opportunity Office
Legal Department
Minority Action Program
Community & Intergovernmental Relations
Deputy General Superintendent
General Superintendent
Deputy Director
Administrative Services
Environmental Affairs
Planning & Budget
Department of Plumbing
Department of Engineering
Department of Networks
Department of Facility Maintenance
Department of Operations
Director of Support Services
Central Yard
Building & Grounds
Purchasing Administration
Revenue & Customer Administration
Management Services
Information Systems Administration
Finance Administration
Personnel Administration
Note: Shaded areas indicated non-related activity

Figure 1-1

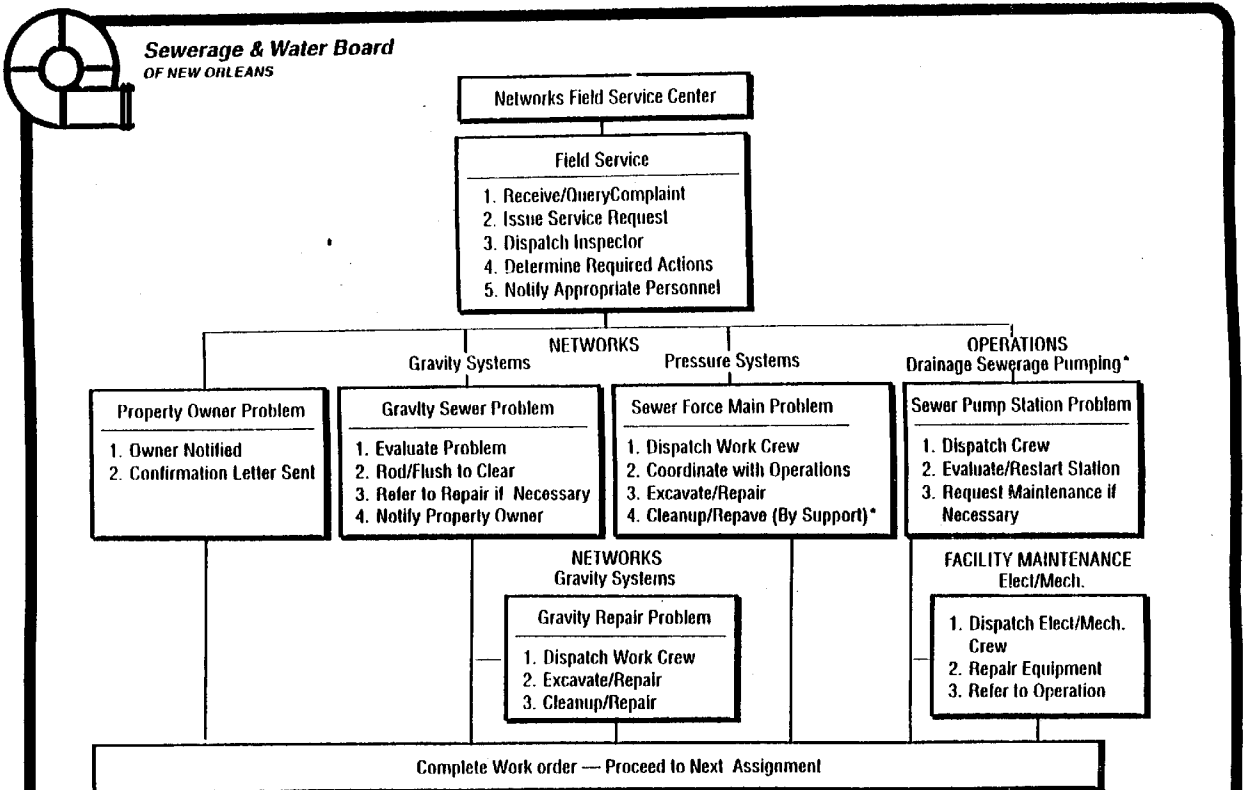

Figure 1-2
Overview - Response Action Plan (General)

*Also Includes Water Pumping and Power Division Station "C"

1.2.1 EMERGENCY SEWER SERVICE CALL PROCEDURES

Most emergency calls are related to stoppages and these will be classified in two categories: (1)Main line and (2) Sewer House Connections.

A gravity main line stoppage can be a major problem and can affect a number of customers on that portion of the collection system. The gravity main line stoppage is usually identified by a customer who notifies the Board, by telephone, that a sewer house connection or manhole is overflowing.

In contrast, a gravity line stoppage or a sewer house connection stoppage usually affects only the home or business establishment that is backed up. Typically, the resident telephones the Board when a sink or toilet facility does not drain into the sewer system.

In either of the above cases, the phone center operator receiving the call first queries and then records all available relevant information into the Board's Service Request database used to track the Board's work. The information is then electronically transmitted to the Emergency Dispatch Office.

The Emergency Dispatcher radios the Emergency Inspector and provides the address, location, nature of the problem, name of the complaintant, and the information obtained from the Board's database which may be relevant to the site, including any pending job reports.

If multiple emergency calls are received at the same time or there is a temporary backlog of service requests, they are prioritized. Sewer Overflows are given the highest priority ranking.

Once on the scene, the Emergency Inspector assesses the existing condition and makes a determination of the type of problem (e.g., obstructed gravity sewer main or sewer house connection, pumping station failure, sewer force main failure, or defect on private property.) This information is forwarded to the Emergency Dispatcher who contacts the appropriate Division Supervisor (Operations for pumping stations, Gravity for choked mains or house connections or the Pressure Department for force main failures.)

1.2.2 GRAVITY LINE OBSTRUCTION PROCEDURES

At present, approximately 80% of all Sewer Emergency Service requests result from a sewer house connection stoppage or "Choke".

1. When a sewer house connection stoppage is reported, upon arrival, the crew inspects the gravity main. Inspection of the upstream and downstream manholes on the gravity line will verify if the main line is down and flowing. If the gravity line is not flowing, the crew inspects the gravity line until the area of the stoppage is located and cleared. The Sewerage and Water Board is responsible for removing blockages between the main and the property line on service laterals. The property owner is responsible for all other repairs.

2. If the gravity line is open and flowing, the crew proceeds to the customer's address. The service line cleanout is inspected to determine if the portion of the service line from the property line to the gravity line is open and clear. The determination is achieved by removing the cleanout cover and visually inspecting the cleanout. If it is found blocked, the cleanout and lateral lines are cleared by using a rod with a corkscrew to eliminate the obstruction. If this cannot be accomplished, depending on conditions observed by the Supervisor on site, the problem may be referred to a flushing crew.

3. If the obstructive material cannot be removed, the closest available Gravity Repair crew is routed

to the emergency repair jobsite. Utilizing available information, the site is excavated at the point of the obstruction. The broken or blocked pipe section is repaired or replaced.

4. The site is restored and cleanup of any discharge will include an attempt to collect all discharge flow and return it to the sanitary system. A flushing truck may be utilized if the cleanup is extensive.

5. Finally, the affected customers are notified (if a house connection complaint) of the status of the work and the work order information is completed.

At present, approximately 20% of all Emergency Service Requests result from a gravity line stoppage, and can present an overflow condition. On a gravity main line stoppage the field supervisor examines the maps to determine direction of flow. The downstream manhole is inspected and observed for no or restricted flow. When a manhole that is down and flowing is located, the stoppage is located between this manhole and the upstream manhole. The problem could also be at a pumping or lift station or directly upstream prior to the first upstream manhole.

The method for clearing a main line stoppage is similar to the procedure described above (utilizing rodding or flushing) with the exception that a stoppage may result from a failure at a sewage pumping or lift station. Debris from the cleaning is collected, where possible, and removed from the Sewer System.

1.2.3 LIFT AND PUMP STATION FAILURE PROCEDURES

Lifting and conveying sewage by trunk sewers and sewer force mains requires 83 electrically operated pump and lift stations, of which 80 are automatically operated. Of these stations, 64 are on the East Bank and 16 are on the West Bank of the Mississippi River. Pump stations discharge into a force main and lift stations pump to gravity mains that flow to other lift or pumping station(s).

Sewer stations "A" and "D" on the East Bank and Station "C" on the West Bank are large attended pump stations (manned 24 hours per day.) These attended stations and the automated stations transfer the total collected sewage from the entire city to the two treatment plants, one on each side of the Mississippi River.

Power is provided to stations "A", "C" and "D" at 60 Hz and 25 Hz. Power is provided to all of the automatic lifting and pumping stations at 60 Hz. Entergy, the local electrical power provider, supplies power at 60 Hz. The Sewerage and Water Board's Power Plant provides power at 25 Hz. and backup 60 Hz power.

Failure of the lift and pump stations (because of equipment failure, power failure, severe flooding, etc.) may result in sewage surcharge and overflowing at manholes and cleanouts. In addition, there is a real threat that sewage may backup into business establishments or residences raising concerns of possible public health hazards. In these situations, auxiliary pumps will be utilized to assist in handling the flow. Overflowing sewage will be contained, if possible, and redirected and pumped into the sewer system.

1.2.4 SEWER FORCE MAIN FAILURE PROCEDURES

Sewer force main failures have the potential for significant damage. Force main failures can create a large spill in a short period of time and can usually affect a larger section of the sewerage system than a gravity main line blockage, complicating coordination of the repair. Response to a force main failure may call upon every organizational group within the Board having responsibility for operation and

maintenance of the sewerage system, including the wastewater treatment facility.

Force Main failures can result from a variety of conditions including age of components, subsidence, water hammer, corrosion or material failure.

Excavation and repair of force main components takes place after the affected section of the system is isolated, drained, and considerations have been made for the possible containment and subsequent clean-up of any sewage overflows.

1.2.5 SPILL CONTAINMENT

The Board's first priority in operating its sewer system is to protect the public health of the citizens and the environment in the most cost effective manner possible. The Board is continuing to improve its capabilities in these areas.

To this end the Board will by pass, direct, and temporarily store sewage as the situation dictates to avoid contamination of soil, street, etc. that would place the citizens in contact with waste products. If these sewer wastes reach a canal it will be the Board's first effort to remove the contamination. Drainage pumping from the contaminated canal will be stopped, where feasible, to prevent the spread of contamination. When feasible, mixed contaminated waters from the canal will be reintroduced to the sewer system.

In those circumstances when sewage cannot be removed from the canal system because of location or weather, where possible the procedures will be to dilute and flush the canals. Planning for spill containment is addressed in Section 4.

1.2.6 QUANTIFIABLE PERFORMANCE MEASURES AND INFLUENCING FACTORS

Response to SSOs must be immediate and quick. Response Time is the time between receiving the report of an overflow and the combined time for the Inspector and the Repair Crew to arrive at the scene. Remedial correction is the time spent assembling repair materials, correcting the SSO and making the final correction to defective facilities. Such corrections will vary with the nature of the problem. The Board makes a distinction between the remedial corrective actions to remediate an SSO, the precise location and time of which cannot be predicted, and corrective actions that are necessary to respond to natural disasters like floods or hurricanes. that are not related to preventive maintenance. The problems faced by the Board reflect the varied condition restraints, time frames, constraints, requirements, material availability and situations in the field encountered in New Orleans.

Discussion of Influencing Factors

> Number of PRIORITY 01 Occurrences: Obviously, responding to multiple Priority 01 occurrences affects response time goals by possibly placing the inspector out of the area for the next Priority 01 response. By definition all SSOs are Priority 01 occurrences. Responding to multiple Priority 01 occurrences takes more time than responding to one. However, it does not follow that responding to two Priority 01 jobs will take twice as long as responding to one Priority 01. As a general matter, the Board's experience confirms this point. Priority definitions can be found on Page 2-5.

Travel Time: Most travel times within the City will be less than or equal to 30 minutes. In heavy traffic conditions during rush hour or the like, travel times can approach or equal 60 minutes. In unusual circumstances such as special holidays (Mardi Gras), on in unique travel conditions such as failed river/canal crossings which require the detour of traffic, travel times of as long as 90 minutes or significantly longer travel times can be expected.

Day/Night, Holiday, Severe Weather Response Times: Response times vary depending on whether it is daytime or night time, or if there is a holiday. Severe weather also can affect response times. In the night time, darkened visual conditions can make the locations of SSOs more difficult and time consuming. Similarly, in severe weather conditions, the detection of SSOs is more difficult and will require more time to locate. On holidays, reduced staffing levels will also tend to increase response time. For purposes of this SOAP, Daytime is defined as the period from 7:00am to 11:00pm.

Actual response times will be dependent upon actual circumstances and conditions at the time an SSO is reported. When an SSO is reported as some other type deficiency, then discovered to be an SSO, the first report time will be logged as the time of first discovery in the field and not the initial mis-reporting of the incident.

Complicated Overflow Problems. After the Inspector has arrived at the reported overflow site the analysis of the problem starts. On routine problems the inspector is expected to call for a repair crew with the proper tools and material within 15 minutes after arrival. On more complicated problems, a Supervisor and Engineers may have to be called out to view and analyze the problem. This time will vary with the situation. To analyze these complex problems will take more time and will be in addition to the Inspector's Response Time Goals and the Repair Crews Response Time Goals. No goal has been set for remediation of the overflow, but crews will diligently pursue temporary remediations on effecting permanent repairs. No scheduled repair crews work between 11:00pm and 7:00am. but crews are capable of being recalled for overflow remediation.

The Board, through its negotiations with USEPA, has established composite inspector/repair crew response times that will apply in terms of compliance with this SOAP as follows:

RESPONSE TIME QUANTIFIABLE MEASURES/GOALS

CONDITION	RESPONSE TIME
Daytime Response Time	4 hours
Night, Holiday, Severe Weather Response Time	6 hours

SECTION 2
DEPARTMENTAL PROCEDURES

2.1 GENERAL

The specific procedures comprising the Sewer Overflow Action Plan (SOAP) are the result of extensive research, data collection and verification of the practices of the Sewerage and Water Board. These management objectives and planned approach represent the combined efforts of various Departments and Divisions of the Sewerage and Water Board. The Board will meet the Plan's objectives through close coordination, communication and cooperation.

Each section below will discuss the organizational structure within the respective group and identify staffing as well as resource commitments. In order to identify the specific areas of responsibility within the organizational structure, each sub-section includes a workflow chart listing the systematic responses taken within each organizational group and then identifies the detailed procedures employed to discharge these responsibilities.

2.2 FIELD SERVICE CENTER

2.2.1 Organization

The Field Service Center provides the first response to customer reports of possible Sanitary Sewer Overflows. Typically, customer reports are the result of slow flowing or backed-up sewage in buildings, overflows at sewer house connection cleanouts or sewer manholes, sewage discharges due to force main breaks or possibly odor complaints.

Figure 2-1 (Flow Diagram) details the activities which occur within this group located at 2900 Peoples Ave. This facility is centrally located within the City of New Orleans. The Field Service Center is a division of the Department of Networks. See Figure 2-2 and Figure 2-3.

This group consists of:

Field Service Center Manager
Equipment and Services Dispatchers
Field Service Supervisors
Customer Assistance Specialists
Information Process Operators

The Field Service Center is staffed and responds to emergency service 24hrs/day, 7days/week. The telephone center is located on the first floor of the Central Yard Administration Building along with the Dispatch and Data Center. The Field Service Center is equipped with a backup generator in the event of a power failure. The Field Service function utilizes the work order and database system CASSWORKS which records and tracks the progress of all service requests and work orders. CASSWORKS is a software product originally developed by RJN Group, Inc. consisting of database tools and utilities that drive individual CASSWORKS applications. This program resides on the Sewerage and Water Board main computer located at 625 St Joseph Street, New Orleans. The system consists of a dedicated server running under Oracle 7.2 Database on 120 MHZ Pentium CPU. The IBM 95 OQT has 64 megabytes of RAM and a 6 gigabyte hard drive. Currently CASSWORKS occupies 1 gigabyte of disk space. DOS PC's are utilized as terminal hardware.

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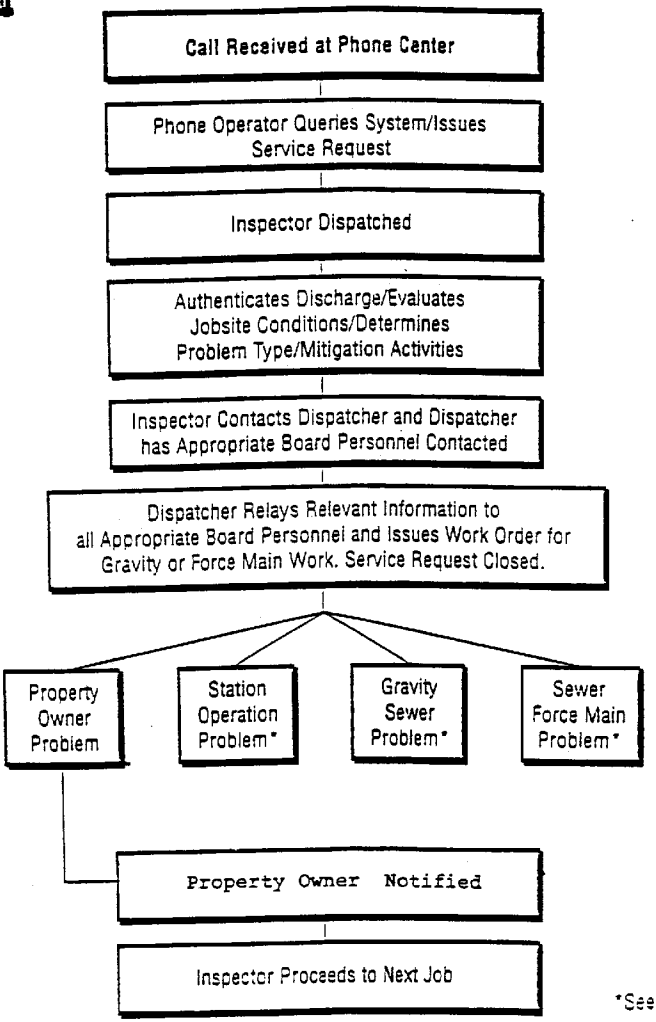

*See following sections

Figure 2-1
Field Service Center Emergency Response Flow Chart

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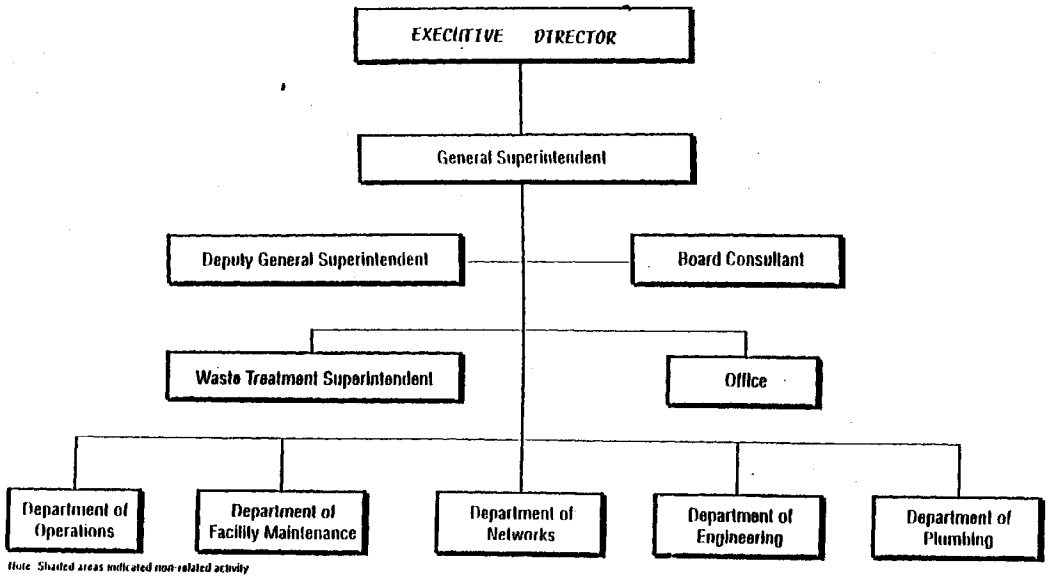
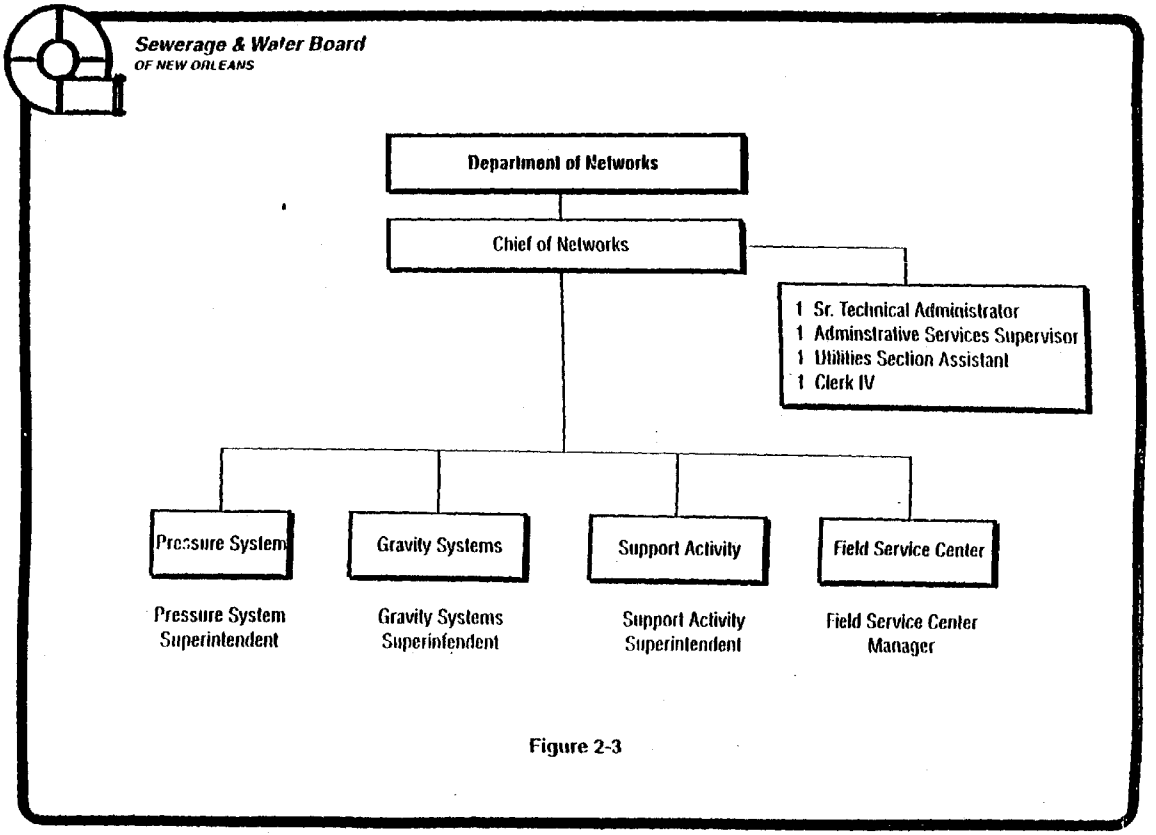


Note: Shaded areas indicated non-related activity

Figure 2-2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Department of Networks
Chief of Networks
1 Sr. Technical Administrator
1 Adminstrative Services Supervisor
1 Utilities Section Assistant
1 Clerk IV
Pressure System
Gravity Systems
Support Activity
Field Service Center
Pressure System Superintendent
Gravity Systems Superintendent
Support Activity Superintendent
Field Service Center Manager

Figure 2-3

The CASSWORKS work order system records service requests and prioritizes work orders as follows:

Priority	Definition
01	Any job that poses an immediate definite threat to life, health or property would be considered an emergency, or priority 01, job. These types of jobs will be handled immediately, with all coordination performed utilizing communication radios, beepers, telephones and computers. All Sanitary Wastewater Overflows are priority 01 jobs.
02	Any job that is considered an emergency, but does not pose an immediate definite threat to life, health or property.
03	Any job that should be addressed as a matter of public convenience. These jobs would not be considered a threat to life, health or property.
04	Any job that needs to be addressed first thing the next morning. These "first AM" jobs are normally referrals from late evening crews of jobs that they were unable to complete.
05	Any job that can be addressed whenever a crew becomes available These jobs are held until all priority 01 through 04 jobs have been addressed.

All vehicles that regularly respond to service requests are equipped with two way radios. Departmental supervisors are provided with two way radios as well as beepers. The office is equipped with a base station for the two way radio system and that office is staffed with at least one Field Service Supervisor during normal business hours. After normal business hours the crews are coordinated by the respective Gravity or Pressure Duty Supervisor and the Dispatcher stationed at the Emergency Desk. The Sewerage and Water Board has been and will remain committed to the precept that all crews may be made available to mitigate the effects and resolve overflow conditions whenever they may occur.

2.2.2. Procedures

1. Call received at Phone Center. The Customer Assistance Specialist receives the call notifying the Board of an emergency situation. This person then queries the system to determine if the problem is a duplicate. If a complaint was called in previously, the Customer Assistance Specialist records the Service Request information as a duplicate in the CASSWORKS systems which is printed to the Dispatch Office. The response Time starts.

2. Dispatcher generates a service request and if necessary, the Dispatcher will look up the sewer house connection records in CASSWORKS for cleanout information to provide this to the Emergency Inspector en route.

3. Inspector Dispatched. The Field Service Supervisor or Dispatcher assigns the Service Request to the nearest available Emergency Inspector. All Emergency Inspector pick-up trucks are equipped with multi-channel communication radios. In addition to the radios in the trucks, all-on duty Emergency Inspectors are equipped with pagers in the event they are needed while not in the Board vehicle. The Field Service Supervisor provides all of the information available including the sewer house connection records once those are made available if needed. The Inspector proceeds to the location of the emergency job as quickly and safely as possible.

4. Inspector arrives on site. The inspector contacts the complaintant and collects information regarding the reported emergency. The response time is calculated.

5. The Emergency Inspector authenticates discharge report, evaluates jobsite conditions, determines problem type and any mitigation activities. Once on the scene, the Inspector determines if a discharge is occurring, or has occurred. This can be reasonably obtained by checking the problem area for signs of bathroom debris. In the absence of a current discharge, the Inspector would be expected to determine if a discharge condition is imminent. If the discharge condition exists or is imminent, the inspector examines the job site conditions and attempts to determine the reason for the discharge. Once the discharge has been confirmed, the Inspector determines the type of problem (gravity sewer main or connection choke, sewer force main failure, or Property Owner Problem) and the proper routing to correct the problem. As part of the jobsite evaluation, the Inspector investigates for any mitigating activities available.

6. As a result of the investigation described above, four possible sewage discharge problems will be identified: Property owner problem, station operation problem, gravity sewer problem, and sewer force main problem. If the problem is a property owner problem, the owner is notified using a door hanger notification. See example of door notice on following pages.

7. For any other problem the Inspector contacts the Dispatcher or Field Service Supervisor who then contacts appropriate Board personnel. See respective section for specific personnel. Appropriate Board personnel are equipped with:

- Multi-channel, two way communication radios in their pick up trucks, assigned 24 hours per day to assure expeditious response,
- Personal pagers, at a minimum while on duty and in some cases 24 hours a day,
- Portable cellular phones (Division Managers),
- The Emergency Dispatcher is provided with a list of home phone numbers for all senior supervisors as well as beeper numbers.

8. The Emergency Dispatcher relays relevant information to all appropriate Board personnel. The appropriate Board personnel are contacted by multi-channel two-way communication radio if necessary.

9. Notify resident of job status directly or by door hanger. The inspector will contact the complainant and advise them of the job status. If the complainant is not home or does not answer the door, the inspector will leave a door hanger that describes the results of the inspection and any future actions required by the Board or the property owner. The door hanger also indicates phone numbers that the resident can call to have questions answered. See example of door notice on following pages.

10. Complete paperwork and proceed to next job. The Dispatcher completes the "Action Taken" portion of the Service Request and lists the activities performed as well as the results of the investigation. All Service Request information is entered into the computer database.

Note: In the event that a discharge is found by an experienced S&WB employee, the report from that knowledgeable source would replace the need for a report from an Emergency Inspector. The Service Request is completed using the information provided by the experienced S&WB employee. (ie. Department/Division Head or Supervisor)

It can be reasonably anticipated that upon arrival at the scene the Inspector will be required to perform activities which may require working in close proximity to oncoming vehicular traffic. Particular attention should be paid to those sections of the Board Safety Manual relative to this subject. Also, the Inspector must not enter any "confined spaces" (as defined in the Safety Manual) alone or without proper safety equipment and following proper procedures also as defined therein. See the copy of the Safety Manual (Appendix I) for these and all other pertinent practices and procedures.

**** Service Request ****

Request.....12046146 Date...03/25/1997 Time...02:34 pm

Recorded By...JRR
Caller Information:
Caller Name.....PICK-UP
Caller Address.....PRESSURE DEPT
City.....NEW ORLEANS
Phone Number.....() Ext..3864
Billing Number.....

Problem Location:
Address.....7058 N PRIEUR
Cross Street.....

Problem Description:
METER LEAK

INLET LEAK OS

MM 3/25/97 1325 JRR

Problem Code.....WLK WATER LEAK - INLET SERVICE

Comments:

SEWERAGE & WATER BOARD OF N. O.

EMERGENCY INSPECTION

DATE _____ TIME _____

SORRY THAT WE MISSED YOU!

WE RESPONDED TO YOUR CALL

_____

_____

_____

_____ PROPERTY OWNER'S PROBLEM*

_____ NO ONE AT HOME *(Unable to verify complaint)*

YOUR S&WB JOB WAS REFERRED TO:

_____ GRAVITY DEPARTMENT
(Please call 942-2980)

_____ PRESSURE DEPARTMENT
(Please call 942-2979)

_____ SUPPORT DEPARTMENT
(Please call 942-2981)

*IF FURTHER CLARIFICATION IS NEEDED
PLEASE CALL OUR 24 HOUR DAILY
EMERGENCY NUMBERS (942-3833) or (942-3834)

_____
S&WB INSPECTOR

SEWERAGE & WATER BOARD OF N. O.

SORRY THAT WE MISSED YOU!

DATE _____ TIME _____

- ☐ Owner must expose the Sewer House Connection Cleanout and call the S. & W.B. Complaint Desk after the Cleanout is exposed - Because it is:
  - ☐ Not to proper grade
  - ☐ In flower bed
  - ☐ Not exposed
  - ☐ Under debris
- ☐ Owner must remove the Cleanout Cap because the Cleanout Cap is the owner's property and it cannot be removed without risk of breaking.
- ☐ Chokage is inside property and is owner's responsibility.
- ☐ We unstopped the Sewer House Connection.
- ☐ We unstopped the Main Sewer.
- ☐ We found Sewer House Connection down and running.

Explanation:

_____
S. & W.B. Inspector

Workdays: 8:00 A.M. - 4:00 P.M. 942-3833
Any other day or time: 942-3834
942-3835

2.3 GRAVITY SYSTEMS

2.3.1. Organization

The Gravity Systems Division is responsible for relieving stoppages or "chokes" from gravity sewers or building service connections. See Appendix A-D for maps of sewer system. Stoppages are caused by obstructions such as roots, grease, debris, broken pipe or a joint failure. These obstructions may require removal, repair, or immediate replacement to correct the problem. Some of the most common types of debris found when removing a stoppage are a build up of solidified grease, detergents, sticks, rags, plastic bags, diapers, broken pipe, brick, rocks, sand, eggshells, and silt, to name a few.

Stoppages can be cleared and sewers cleaned by either hydraulic or mechanical methods. Hydraulic cleaning methods consist of cleaning a sewer with water under pressure that produces high water velocities. These velocities are usually high enough to wash most grit, grease and debris found in sewers down the sewer and leave the pipe clean.

Mechanical methods of clearing stoppages or sewers consist of using equipment that scrapes, cuts, pulls or pushes the material out of the pipe. Other stoppages are caused by physical obstructions found in the main sewer. These obstructions are sometimes found to be created by plumbers, equipment, or by some force of nature. An obstruction can be caused by the placement of a building sewer tap connection that protrudes into the main sewer, a poorly repaired pipe section, backfill damage to pipe and the misuse of trench compaction equipment, pipe damage due to the improper use of sewer cleaning equipment and other such physical contribution.

Larger items removed from lines and manhole openings which have caused a major problem for removal are broken manhole and flushing inlet casting, concrete and asphalt rubble, large metal and plastic buckets, broken and lost plu.nber rods, snakes and plugs, wooden posts and timber materials, tree limbs, stumps and many other items.

The Gravity Systems Division is located at 2900 Peoples Ave, which is centrally located within the City of New Orleans. This division is under the Department of Networks. See Figure 2-4.

Crews are established to perform three basic functions. The Board employs Gravity Complaint crews, Sewer Flushing crews, and Gravity Repair crews to remedy overflowing problems. Gravity Complaint crews generally consist of a three or four person crews and are utilized to mechanically clear stoppages.

Sewer Flushing crews generally consist of three-man crews and are utilized to hydraulically clear stoppages if not cleared by rodding. Two high pressure cleaning rigs are also available as needed.

Gravity Repair crews are utilized if stoppages cannot be removed by any other means or the sewer lines are obviously broken or collapsed. Gravity Repair crews are set up to excavate and repair sections of gravity sewers and generally consist of a six employee compliment. Additional equipment (back-hoe, dump trucks etc.) is assigned as needed to perform the specific task.

The main objective of Gravity Systems is to try to correct the problem as quickly and safely as possible. If the cause of the stoppage can be identified, the best method of correcting it comes next.

A mental check list to identify the problem would include:

- Does this lin · have a history of previous stoppages? (A root problem line or a grease problem line.)

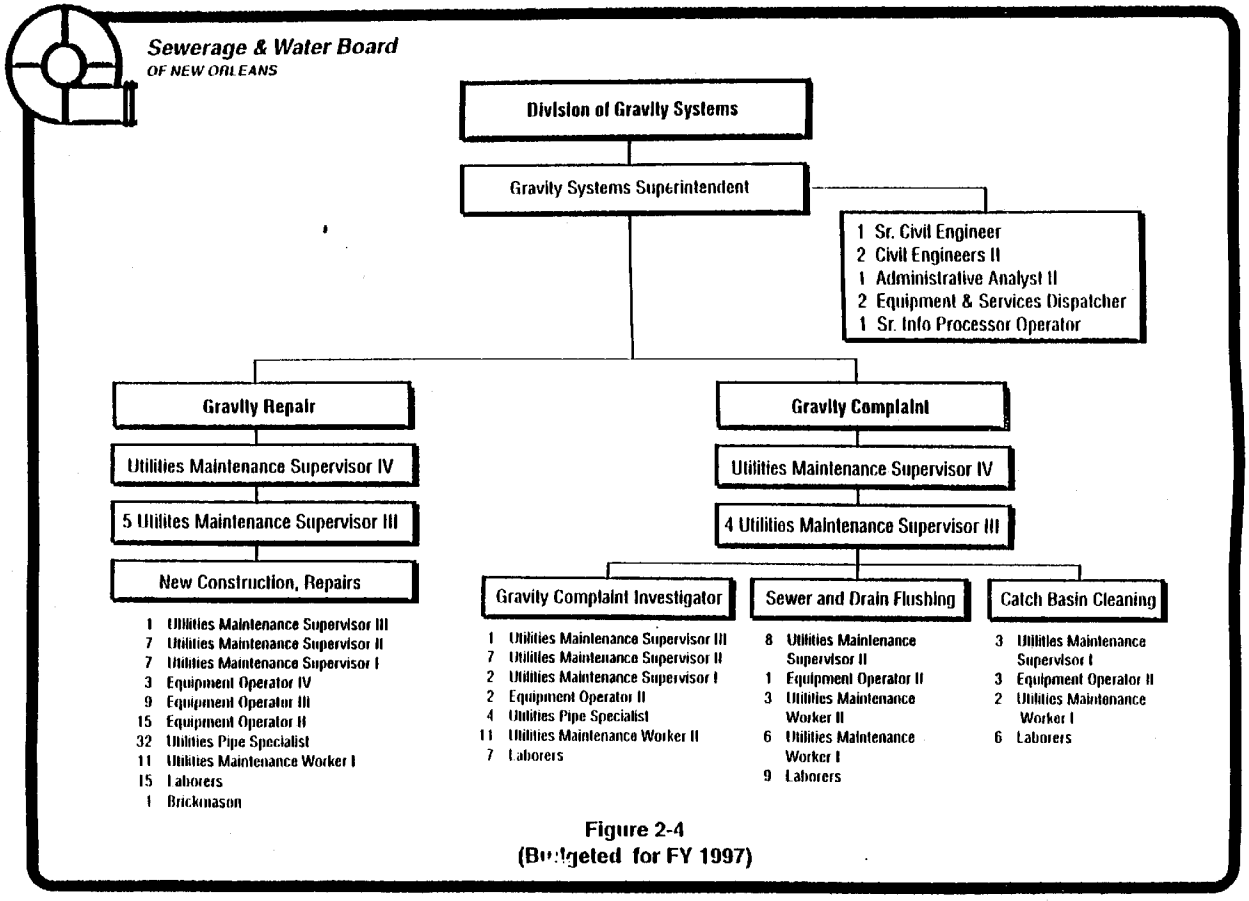

Figure 2-4
(Budgeted for FY 1997)

- Are trees growing near the line?
- Have new building sewers or new lateral or branch sewers been installed recently?
- Have repairs been made recently to the sewer, to other utilities or to the street?
- Are there any ground or surface indications, such as a settlement or a sink hole?

Once the cause of the problem has been identified, the methods for solving the problem can be analyzed.

2.3.2 Procedures

1. Gravity Complaint Supervisor notified by Dispatcher. As per step 8 of the Emergency procedures, the supervisor is contacted by the Emergency Dispatcher by multi channel two way communication radio and provided all relevant information concerning the Sanitary Sewer Overflow. For the purposes of this document, all references to the Gravity Complaint Supervisor shall be understood to mean the Departmental Supervisor of the Gravity Complaint Department or the On-call Duty Supervisor after normal business hours. In the event that a Sanitary Sewer Overflow was reported by a source considered to be knowledgeable, that report and the information provided would replace the need to dispatch an inspector to the site.

2. Complaint crew is dispatched to the site. The Supervisor would identify the closest available crew capable of handling the job as described by the inspector's report, and would dispatch that crew to the scene as quickly as possible. All available pertinent information would be made available to the crew supervisor.

3. Complaint crew arrives on scene. The crew unloads the required investigation equipment from the truck, including all Safety Equipment required as outlined in the Sewerage and Water Board Safety Manual.

4. Scope the type of problems the Board must address. The crew determines if there is an active Sanitary Sewer Overflow or if there is evidence of a past overflow. In the event of evidence of a past overflow, the crew also inspects to determine if an overflow could be considered imminent. The crew evaluates jobsite conditions to determine what course of action can be taken to solve the problem. Based upon the collected information, the crew identifies what, if any, mitigation activities are available, such as bypass pumping, while the discharge condition is addressed. As a result of the information obtained from these investigations, the crew supervisor will either confirm or correct the problem type. The Sewerage and Water Board is responsible for removing blockages between the main and the property line on service laterals. The property owner is responsible for all other repairs.

5. Property Owner problem, Gravity problem, Force Main problem, and Station problem are the four possible sewer overflow problem types. The crew supervisor would be expected to identify which of the above types exist as a result of the investigation and proceed accordingly:

- property owner problem (see step 18 and Figure 2-5)
- sewer house connection or main choke (see step 6 and Figures 2-6 and 2-7)
- sewer force main broken (see Figure 2-8), or
- sewer station outage (see Figure 2-16)

The Crew supervisor has the option at any time to contact a gravity corrective maintenance flushing truck to clean up or mitigate past or active overflow of the sanitary system.

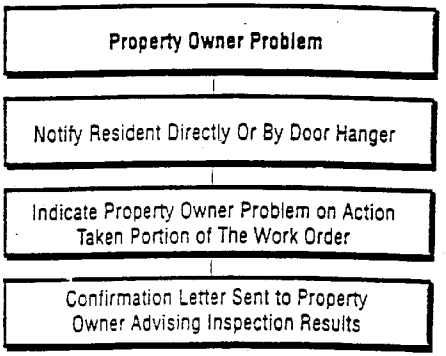

Figure 2-5
Gravity Department Emergency Response Flow Chart
Property Owner Problem

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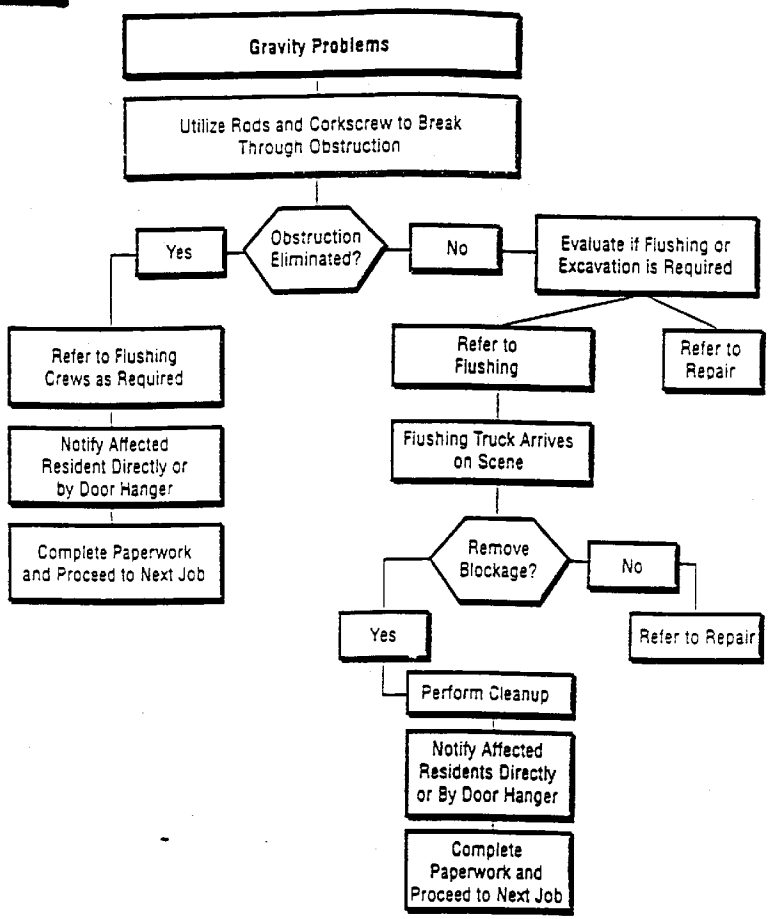


Figure 2-6
Gravity Department Emergency Response Flow Chart
Gravity Complaint

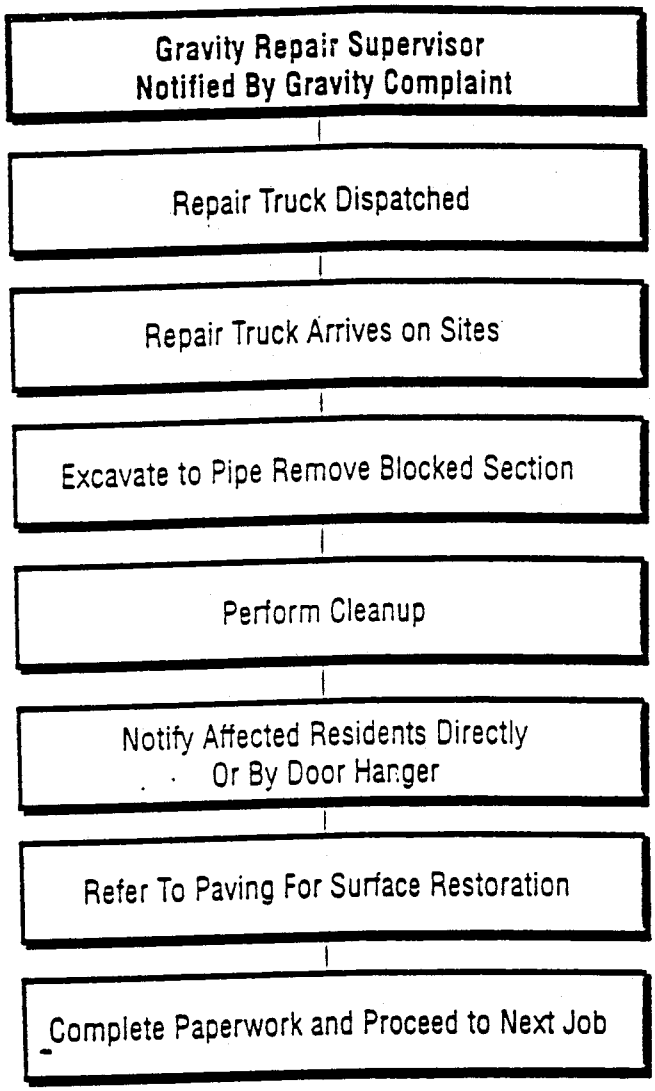
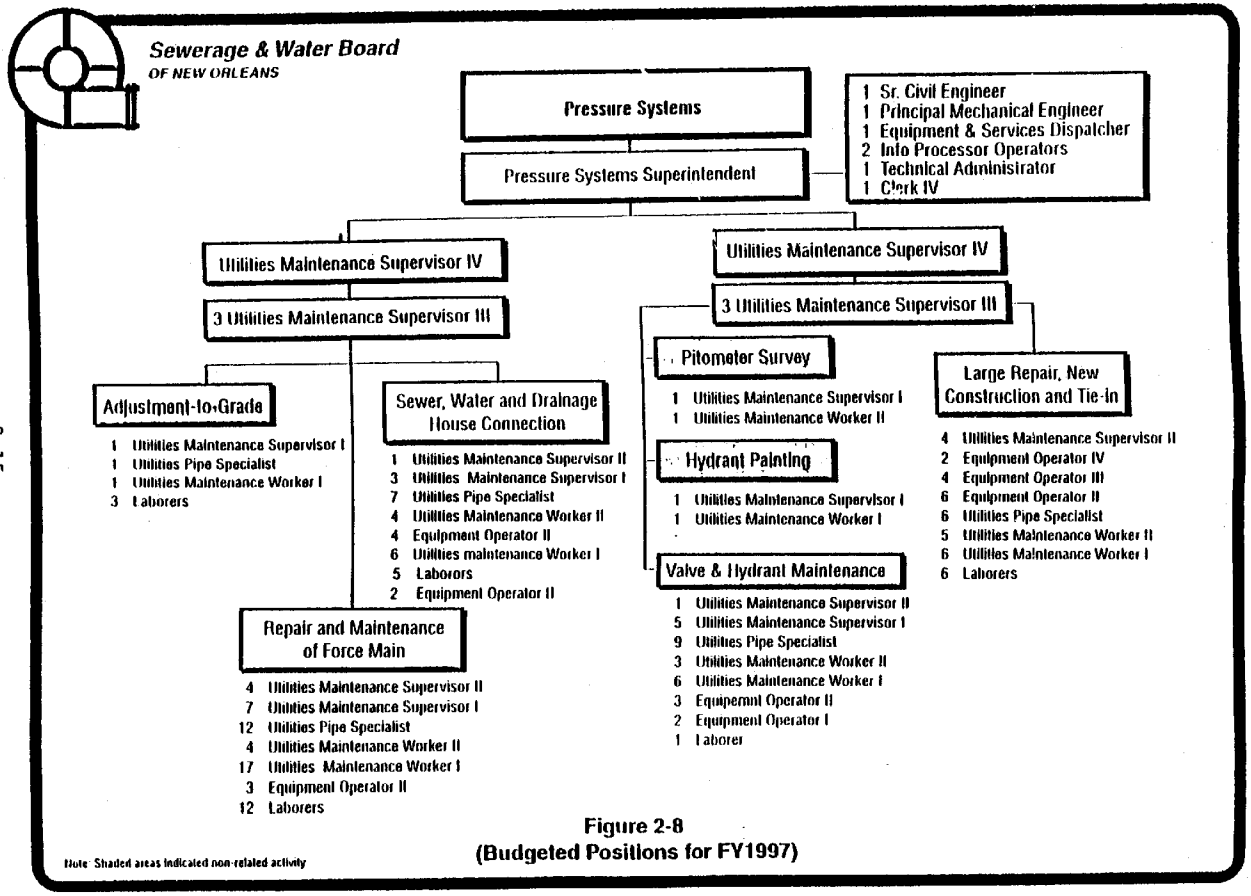


Figure 2-7
Gravity Department Emergency Response Flow Chart
Gravity Repair



Note: Shaded areas indicated non-related activity

Figure 2-8
(Budgeted Positions for FY1997)

6. Utilize rods and cork screws to break through obstruction. The complaint crew investigation on the scene concludes that the problem can be solved by rodding the choked main or connection. The rodder is positioned downstream of the stoppage and rodding continues upstream until the system is flowing normally. The crew will retain if possible, the nature of the blockage (grease, dirt, broken pipe, roots, etc.) and indicate nature when filling out the work order.

7. Obstruction eliminated? The crew determines if their efforts to break apart the obstruction have been successful, by additional rodding, inspecting downstream manholes for an increase in flow as well as inspection of the impacted cleanouts and mains. If the obstruction is not eliminated, go to step 9.

8. Refer to Flushing Department as required. If the choke is broken by the rod crew, at the option of the crew supervisor, the crew may still call a flushing crew to clean the sanitary main and the connection where they have access to it. Go to step 17.

9. Evaluate if flushing or excavation is required. If the choke is not broken by the rod crew, that crew supervisor will contact another Board crew for additional maintenance. Based upon the various factors such as the type of obstruction, the years of experience the crew supervisor has with rodding the sewer system, and crew availability, the supervisor will make a recommendation for either a repair truck or a flushing truck. Generally, jobs will be referred to a flushing crew for a grease or grit choke and a repair crew for chokes caused by broken pipe. If the determination is made to refer to a repair crew, go to step 13.

10. Refer to flushing. The crew supervisor utilizes the multi channel two way communication radio to have a flushing crew dispatched to the emergency repair site. The next available flushing crew is routed to the jobsite.

11. The flushing crew arrives on scene. The flushing crew arrives on the site and establishes a safe working environment in accordance with the Sewerage and Water Board Safety Manual. Utilizing the information supplied to the supervisor and an examination of the jobsite, the supervisor will direct the crew to dislodge and collect the obstructive material from the pipe utilizing either a flushing or vacuum truck. The time required for this procedure will vary significantly depending on size of pipe, length of pipe (main vs. connection), and the amount of debris.

12. Blockage Removed? If the flushing crew is successful and the obstructive material is dislodged and debris is removed go to step 17. If a flushing crew is unsuccessful, a repair crew will be contacted.

13. Refer to Gravity repair crew. A Gravity Repair Supervisor is contacted by the multi channel two way communication radio and collects all relevant information concerning the unauthorized discharge. The Gravity Dispatcher is also notified of the emergency excavation and is directed to contact other utilities so that their lines can be marked prior to emergency excavation in accordance with State Law.

14. Gravity repair truck is dispatched. The closest available Gravity Repair Truck is identified and routed to the emergency repair job.

15. Repair truck arrives on site. The repair truck arrives on the scene and establishes a safe working environment in accordance with the Sewerage and Water Board Safety Manual.

16. Excavate to pipe and repair or replace blocked section. Before the crew begins excavation for repair, all utilities must be located in accordance with State Law. Observe all traffic control and safety precautions. Personal safety equipment such as hard hats, safety glasses, steel toe boots, etc. must be worn by the crew. After the location of the obstruction has been laid out, a backhoe is used to excavate a trench. The backhoe operator must be careful to avoid damaging any underground utilities. The backhoe can be used only to point where crew with shovels must expose the pipe. Once the pipe is exposed and the defect located, the appropriate repairs are made. This could include splicing in a new piece of pipe or replacing an entire pipe segment..

Backfill the trench appropriately.

If any transfer is required, it would be performed sewer to sewer.

17. Clean up work site. Remove any and all construction debris and cleanse area affected by discharge. Clea up of the discharge will include an attempt to collect all discharged flow and material possible and return it t the sanitary system. In the event that a large amount of flow needs to be collected a vacuum truck could b dispatched to that location.

18. Notify complaintant directly or by door hanger. If the affected resident is not home or does not answe the door, the Inspector will leave a door hanger that describes the results of the inspection and any futur actions required by the Board or the property owner. The door hanger also indicates phone numbers that th resident can call to have questions answered.

19. Complete paperwork and proceed to next job. The crew supervisor completes the "Action Taken" portio of the Work Order and lists the activities performed as well as the results of the investigation. If any additiona Board work is required, the work order would indicate the work to be performed and the proper departmen to which the subsequent work order should be referred. Once the paperwork is complete, the Crew Supervisor contacts the gravity department dispatcher or the duty supervisor and proceeds to the next job. All work orde information is reviewed by the Crew Supervisor and then sent to the Gravity Department to be logged, then to the Data Entry Department to enter the information into the computer database upon return to the Central Yard Office.

Work orders that the Gravity Complaint investigation indicated as property owner problems are photocopied prior to submission for data entry. The photocopy is sent to the Gravity Office and a form letter is sent to the property owner describing the problem found. A phone number is listed on the letter in the event the property owner has additional questions concerning the job.

2.4 PRESSURE SYSTEMS

2.4.1 Organization

The Pressure Systems Division is responsible for repairing all force main pipe and valving. See Appendix E for a map of Major Sewer Mains.

Force mains can be damaged by breakage which may result in serious spills requiring isolation of the force main segment to enable repairs. In some cases, numerous pump stations are affected when a force main segment is taken out of service. The isolation of a damaged force main segment for repairs and the rerouting of normal sewage flow requires shutdown of affected pump stations and the closing and opening of key valves at pump stations and on the force main segment to be isolated.

This scenario dictates extremely careful planning of force main segment isolation procedures, affected pump station shutdown procedures, sewage overflow containment, and expeditious repair of the force main. Thorough communication and coordination among key personnel of the Sewerage and Water Board is essential.

The Pressure Systems Division is located at 2900 Peoples Ave., which is centrally located within the City of New Orleans. The Pressure Systems Division is under the Department of Networks. See Figure 2-9. Crews are available to respond to emergency situations 24hrs/day 7days/week.

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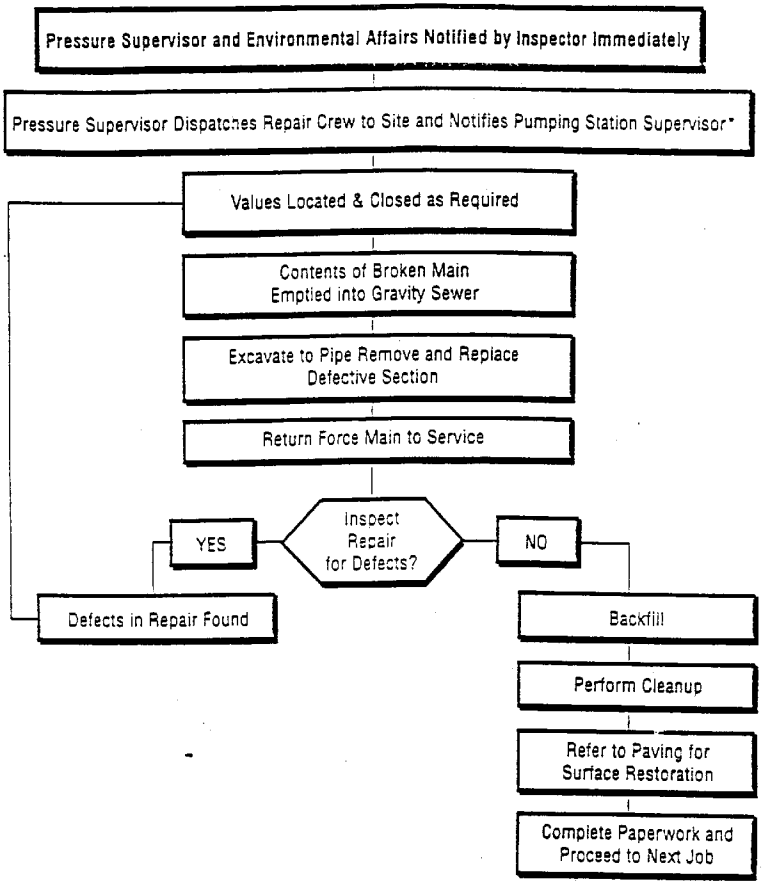

*Coordination with Utility Companies is necessary if excavation is required

Figure 2-9
Pressure Department Emergency Response Flow Chart

Crew sizes and equipment for pressure system repairs vary according to the size and complexity of the repair. Generally speaking, crews can be classified as "standard repair and maintenance crews" and "large repair crews." A standard repair crew typically consists of a five-person crew under a supervisor. Large crews are assigned based upon the complexity and size of the assignment.

Since a force main failure has a significant potential for adverse environmental impact, all necessary resources are immediately made available for remediation of this type of event. Usually the Department Heads of Pressure, Sewerage Pumping, and Environmental Affairs will assist on site in the planning of an immediate proactive response. In addition to the potential for an adverse environmental impact, this type of repair activity has the potential to affect and require the communication with and coordination and participation of every Department associated with the sewerage system, including the wastewater treatment facility. Figure 2-9 identifies the sequence of activities taken for force main repair.

2.4.2 Sewer Force Main Repair Procedures

1. Pressure supervisor notified by Dispatcher. Also notified are Environmental Affairs, the General Superintendent, the Chief of Networks, the Pressure System Superintendent, and Pumping Operations. Event Time Starts.

2. The Supervisor assigns a repair crew that is dispatched to the site. At that time a call is made for a utility mark-off prior to any excavation. All safety procedures and equipment identified in the Board's Safety Manual must be followed/utilized.

3. The Supervisor checks inventories including checking to assure that pumps larger than 3" are available to ensure that necessary materials and spare parts are available to make the repairs as well as necessary drawings that identify force main piping and valves (including locations and sizes). See Appendix E for Major Sewer Main layout map. The event Response Time stops when the crew arrives.

4. The crew shall carefully return wherever possible the contents of the force main back to the sewerage system. In many cases, the force main is returned to a gravity sewer. If this cannot be done an alternate plan for containment must be developed in cooperation with the Drainage and Sewerage Pumping Supervisor. See Section 4.0 - SANITARY SEWER OVERFLOW CONTAINMENT PLANNING

5. The Pressure system supervisor is to contact the Drainage and Sewerage Pumping Supervisor (or the Water Pumping and Power Supervisor in the case of Station C) to advise of the need to shutdown all stations that pump into the section of the force main that needs to be isolated. (See Section 2.5.2) Wet wells may be pumped down in advance of shutdown to provide additional system storage.

6. After the Pumping Supervisor has verified the station(s) have been shutdown, Pressure Supervisor coordinates the closing of all the valves necessary for isolating the force main affected by the defective section and draining the pipe.

7. After all the procedures have been carefully followed to isolate the force main segment, repairs can be made by the repair crew.

8. Make sure that all underground and overhead utilities that may be affected by the repair have been marked prior to beginning work.

9. Remove, replace or repair defective segment. Test repairs prior to backfilling!

10. Return force main to service. Once a force main break has been repaired and the main is ready for service, the procedures taken to isolate the force main segment must be followed in reverse to restore normal operation of the pump stations, force main, and any valves affected by the shutdown.

11. Clean up work site. Remove any and all construction debris and cleanse area affected by discharge. Clean up of the discharge will include an attempt to collect all discharge flow and material possible and return it to the sanitary system. In the event that a large amount of flow needs to be collected a flushing or vacuum truck could be dispatched to that location.

12. Complete paperwork and proceed to next job. The crew supervisor completes the "Action Taken" portion of the work order and lists the activities performed as well as the results of the investigation. If any additional Board work is required, the work order would indicate the work to be performed and the proper department to refer the subsequent work order. Once the paperwork is complete, the crew supervisor contacts the gravity department dispatcher or the duty supervisor and proceeds to the next job. All work order information is reviewed by the departmental supervisors and then sent to the Data Entry Department to enter the information into the computer database upon return to the Central Yard Office. The report to the Environmental Affairs Department is prepared at this time.

2.5 LIFT AND PUMP STATIONS

2.5.1 Organization,

The Department of Operations and Department of Facility Maintenance under the General Superintendent, respectively operate and maintain the sewage lift and pump stations. The Division of Facility Maintenance is responsible for major electrical and mechanical maintenance. Figures 2-10 and 2-11 depict the organizational structure within the Departments. A map of the lift and pump stations is located in Appendix F. These stations can be grouped by physical similarities. The following pages include such a grouping for the East Bank sewerage pumping stations. Each pump station has at least two automated pumps. One pump is set to respond to normal wet well levels and is called the "lead" pump. The other pump(s) is/are set to respond to higher wet well levels, in a "lag pump" role to maintain the station's pumping capacity in the event of lead pump failure or excessive effluent to the wet well. The "lead/lag" designations are switched regularly to equalize pump wear.

2.5.1.1 Sewerage Operations Department

The East Bank is divided into 6 routes, each with nine (9) to thirteen (13) lift and/or pumping stations. Division staffing is identified in Figure 2-12. Each route has one Pumping Plant Operator (P.P.O.) and one Utility Plant Worker II (U.P.W.II) assigned to operate and maintain the stations. Furthermore, one Assistant Supervisor is assigned to routes 1 and 2, one to routes 3 and 4, and one to routes 5 and 6. The fourth assistant is assigned to SPS "A" (manned 24 hours per day) and fills in as needed on the routes. The West bank has one route consisting of sixteen stations. One Assistant Supervisor, one P.P.O. and two U.P.W.II's are assigned to the West bank.

Stations "A" and "D" are provided 24 hour per day coverage by Sewerage Operations. Station "C" is staffed 24 hours per day by the Division of Water Pumping and Power, see Figure 2-13. The other sewerage lift and pump stations are operated automatically. For monitoring these automatic stations, personnel in Sewerage Operations work from 7:00 A.M. to 3:30 P.M., Monday through Friday. An attempt is always made to assure that at least two employees service unscheduled outages. Emergency On-Call coverage is provided by the Operations and Facility Maintenance Departments on all off hours. In addition, to further assure expeditious response to a

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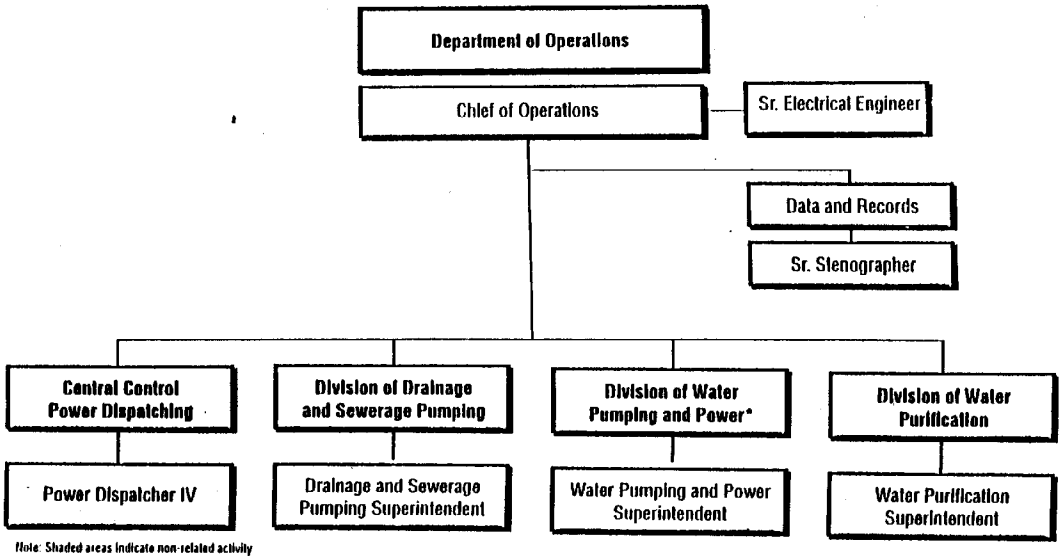

Note: Shaded areas indicate non-related activity

Figure 2-10

*Station "C" only

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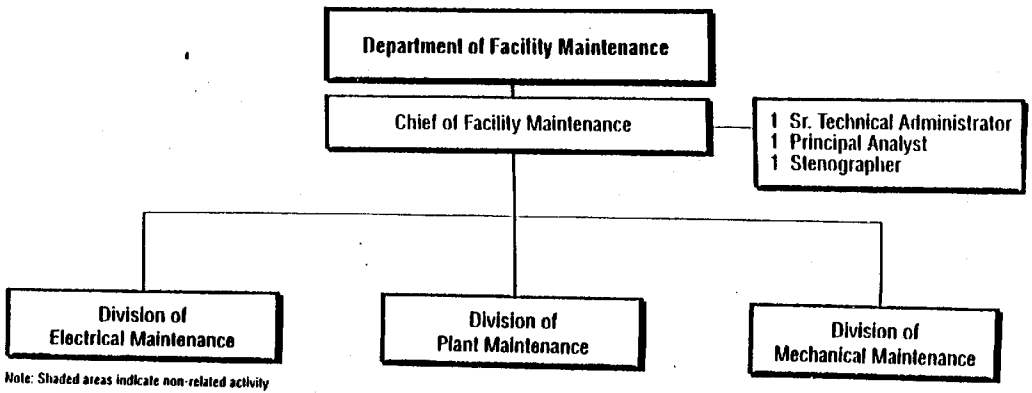

Note: Shaded areas indicate non-related activity

Figure 2-11

Sewerage & Water Board
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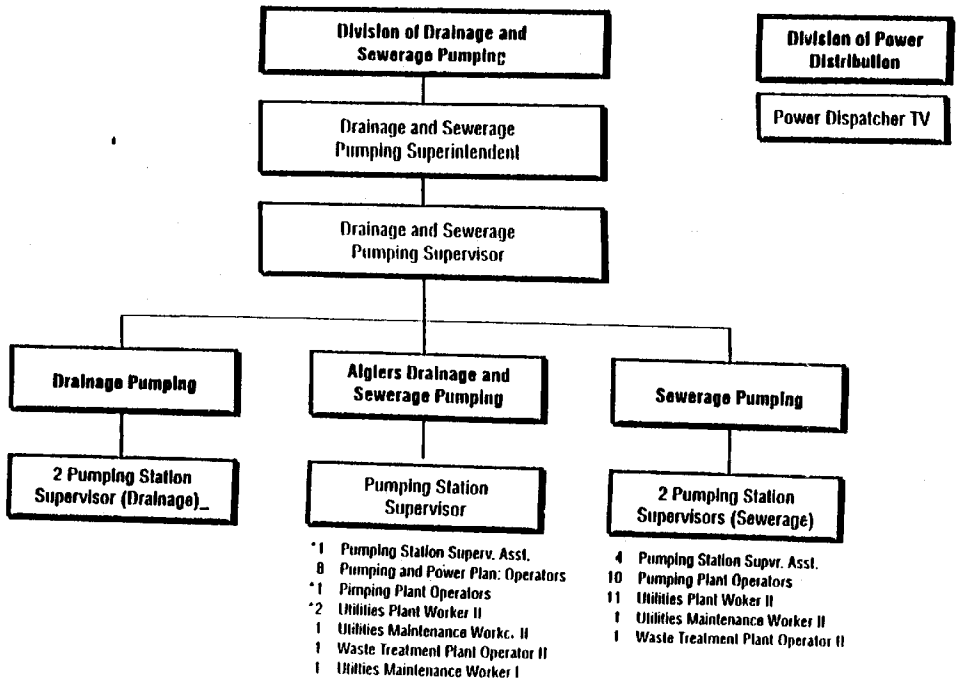

Note Shaded areas indicate non-related activity
* Number reflective of sewage pumping personnel only

Figure 2-12
(Budgeted Positions for FY 1997)

Sewerage & Water Board
OF NEW ORLEANS

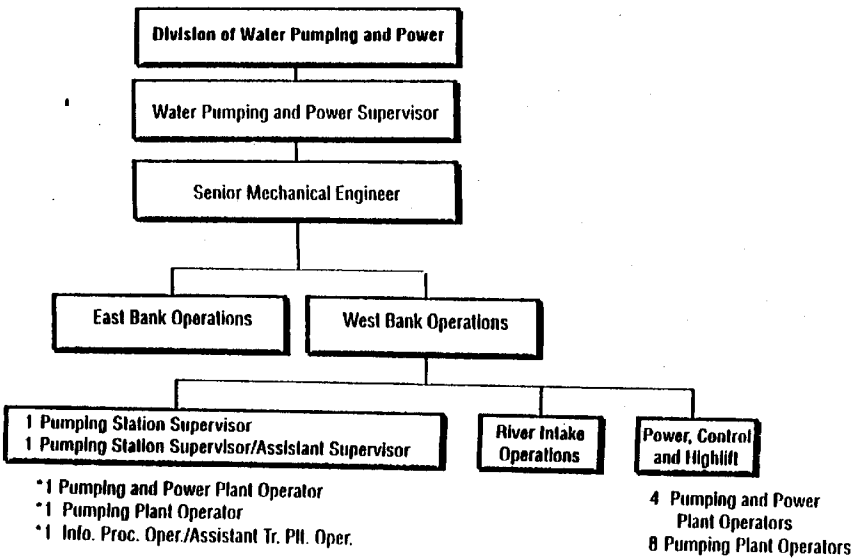

Figure 2-13

NOTE: Shaded areas indicate non-related activity
*Numbers reflective of sewage pumping personnel only

potential if not an actual emergency, all supervisors are assigned beepers and vehicles for their commute to and from work and for use while at work. These vehicles are equipped with two way radios, tools, and safety equipment.

The Drainage and Sewerage Superintendent, the Drainage and Sewerage Supervisor, and the Sewerage Pumping Station Supervisors (3), are always On-Call, except for vacations, leaves of absence, and illness, during which time they will provide coverage for each other. Each week an On-Call personnel list is prepared for the next week to provide coverage as follows:

Sewerage Operation - East Bank

- Two Assistant Supervisors for all routes and Station "A"
- Two back up Assistant Supervisors for all routes and Station "A"

Drainage and Sewerage Operation - West Bank

- Assistant Supervisor for all West Bank Stations
- Back up Assistant Supervisor for all West Bank Stations

EASTBANK S.P.S LISTING AND ADDRESSES
Grouped by physical similarities

FACILITY NAME	*LOCATION*
Manned pumping station	
S.P.S. "A" (sewerage only)	1321 Orleans Ave.
D.P.S. "D" (drainage & sewerage)	2801 Florida Ave.
Lift Stations below ground, cast in place	
S.P.S. 1 Pumps to gravity system for S.P.S. 14	7336 Cohn at Lowerline
S.P.S. 3 Pumps to gravity system for S.P.S. 5	8720 Olive near Eagle
S.P.S. 6 Pumps to gravity system for S.P.S. 15	242 S. Solomon at Palmyra
S.P.S. 8 Pumps to gravity system for S.P.S. "A"	Broad at Toulouse

SEWERAGE AND WATER BOARD OF NEW ORLEANS
Inter-Office Memorandum

DATE: April 4, 1997

FROM: Bob Mcelnian; Pumping Supt.

TO: J. E. Huerkamp; Chief of Operations #2

RE: ON-CALL personnel for Drainage & Sewerage Operations from 7:00AM, Monday 4/7/97 through 7:00AM, Monday 4/14/97

DRAINAGE AND SEWERAGE PUMPING SUPERVISOR

Ronald Springer	895-8157 (H)	830-9300 (PB)

I. DRAINAGE OPERATIONS - EAST BANK

Supv. for D.P.S. 1 thru 7, 12, D, and C.F.C.:		
Lawrence Soublet	482-1637	830-9355
Asst. Supv.		
Gerald Tilton	486-4973	830-9343
BACK-UP		
Renauldo Robertson	895-2272	830-9324
Supv. for D.P.S. 10, 14, 15, 16, 19, 20, UP, and N.O. East:		
Ronald Richard	283-8026	830-9320
Asst. Supv.		
Allen Mangerchine	838-6980	830-9275
BACK-UP		
John Barrow	288-4404	830-9280
Drainage Station Operators for all East Bank D.P.S.:		
Richard Rey	943-6777	830-9323
Allen Dedebant	288-1927	830-9329
Delores Quarles	949-4779	830-9364
BACK-UP		
Michael Neely	282-4090	830-9249
Dave Bowman	255-0540	830-9256
Frank Mangiapane	833-8986	830-9368

II. SEWERAGE OPERATIONS - EAST BANK

Supv. for Routes 1, 2, 3, & "A":		
Kenneth Stiles	340-6231	841-6746
Supv. for Routes 4, 5, and 6:		
Ray Fabre	244-0763	841-6747
Asst. Supv. for all Routes & Station "A":		
Ray Talbert	244-3970	841-6749
Herman Seals	241-7686 or 241-8208	841-6750
BACK-UP		
Ronald Wortmann	945-5128 or 947-2551	841-6748
Eldridge Randolph	246-3955	841-6751

III. DRAINAGE & SEWERAGE OPERATIONS - WEST BANK

Supv. for All West Bank Stations:		
Kenneth Smith	282-6878	830-9374
Asst. Supv. Personnel for all West Bank Stations:		
Gerald Boothe	340-3162	830-9383
BACK-UP		
Richard Alexander	340-6449	830-9379

When contacting an ON-CALL employee, the initial call should be to his/her home number. If unable to contact, call beeper twice, wait 5 minutes and call beeper again, twice. If no response, call back-up employee in a similar manner.

CC: Gorman, Sullivan, Operation's Office, Semel, Benetz, Lawrence, Becker, Mains, Wagar, Tonrey, Safety Dept., Emergency Desk, 5DC, 2SC, 3WB, 13DPS, (Total 44)

Rev.11/07/97

Pumping stations electrical equipment above ground, pumps below street level - use oil drips for bearing lubrication

S.P.S. "B"	4725 St. Claude at Jourdan
S.P.S. 14 3 units pump into gravity main to S.P.S. "A" 2 units pump into force main to S.P.S. "A"	4000 Clara at Marengo
S.P.S. 15 2 units for force main, 2 units for gravity main (cannot use all 4 pumps together)	2431 Palmyra near S. Rocheblave
S.P.S. 16 Pumps to gravity system to S.P.S. "B"	3751 N. Miro at Pauline
S.P.S. 17 Pumps into gravity system to D.P.S. "D"	4975 Spain at Selma
S.P.S. 18	Vicksburg at Florida
S.P.S. 19	3730 Jumonville at Milton
S.P.S. 21	6670 Memphis at Filmore
S.P.S. 22	5705 Perlita near Prentiss
S.P.S. 23	4500 Mithra

Different physical structure - bearings use grease

S.P.S. 5	1302 Erato at S. Dorgenois
S.P.S. 9	2540 Annette at Law

Different physical structure - bearings use grease

AMID S.P.S.	6800 Almonaster
Eastover S.P.S.	6051 Eastover Dr.
Industrial Pkwy. S.P.S.	4200 Industrial Parkway off Chef
Oak Island S.P.S.	14201 Michoud

Pumping station electrical equipment above ground, pumps just below street level - use vacuum system to draw water to pumps

S.P.S. 4	5899 Fleur De Lis
S.P.S. 20	328 37th Street
S.P.S. 24	5027 N. Tonti near Reynes
S.P.S. 25	2245 Charbonnet at N. Tonti
S.P.S. 26	2244 St. Maurice at N. Tonti
America S.P.S.	6789 Dwyer at Westlake
Castle Manor S.P.S.	4950 Gwain at Dwyer
Cerise S.P.S.	5001 Cerise at Dwyer
Chickasaw S.P.S.	Chickasaw at Metropolitan
Gentilly Oaks S.P.S.	5000 Papania at Vienna
Lakeland Terrace S.P.S.	5057 Warren Dwyer
Pines Village S.P.S.	155 Dwyer at Foch
Wilson S.P.S.	7709 Wilson at Dwyer

Pumping stations below ground - poured in place

Berg S.P.S.	11501 Morrison
Burke S.P.S.	9001 Morrison at Burke

Briarwood S.P.S.	13701 Morrison near Briarwood
Bullard S.P.S.	5501 Bullard (next to bowling alley)
Crowder S.P.S.	5500 block of Crowder (in front of bank)
Dodt S.P.S.	8118 Chef Hwy
K-Mart S.P.S.	Desire at Gentilly
Lake Forest S.P.S.	10451 Lake Forest near Read
Lakewood South S.P.S.	Country Club Dr. near Marcia
Lawrence S.P.S.	7901 Morrison west of Crowder
Liggett S.P.S.	12501 Morrison near Dune
Shorewood S.P.S	14441 Morrison at Shorewood
Victoria S.P.S.	Victoria at Gentilly
Weber S.P.S.	10141 Morrison near Read

Lift station below ground - poured in place

Plum Orchard S.P.S.	7300 Chef Hwy. (inside apt. complex)
Pumps to gravity system for Dodt S.P.S.	

Pre-fab metal can stations

American Marine S.P.S.	4045 Jourdan Rd.
Boland S.P.S.	1910 Surekote Rd. off Florida Ave.
Pumps to gravity system for S.P.S. 24	
Folger's S.P.S.	14601 Gentilly
France & Florida S.P.S.	2701 France Rd. at Florida
Lamb S.P.S.	6450 Morrison by Kenilworth
MeCo S.P.S.	3855 France by Mech. Equip. Co.
Pumps to gravity system for France & Florida S.P.S.	
Michoud S.P.S.	4400 Michoud south of R.R. tracks
Southern Scrap S.P.S.	Southern Scrap Rd.
Vent. Isles S.P.S. #2	0711 Old Spanish Trail
Pumps to gravity system for Industrial Park S.P.S.	
Village De Lest S.P.S.	11324 Dwyer off Michoud

Lift station - pumps and motors in wet well

McCoy S.P.S.	McCoy at Gentilly
Pumps to gravity system for Dodt S.P.S.	

Pre-fab above ground stations - fiberglass huts

Wright Rd.	Wright Rd. at Lake Forest
Pumps to gravity system for Lake Forest S.P.S.	
Willowbrook S.P.S.	Willowbrook off Michoud
Pumps to gravity system for Village de Lest S.P.S.	

Station above ground built over wet well, pumps submerged in water

Blvd. "X" S.P.S.	14433 Chef Hwy.

Poured concrete station - equipment just below street level (similar in design to Wright & Willowbrook)
Alcee Fortier S.P.S. Alcee Fortier Blvd. at Levee
Pumps to gravity system for Blvd. "X"

2.5.1.2 Facility Maintenance Department

The Division of Mechanical Maintenance and the Division of Electrical Maintenance are responsible for the maintenance of the pumping stations. Refer to Figures 2-14 and 2-15. (The Division of Plant Maintenance does however assist in an emergency). The Chief of Facility Maintenance, the Mechanical Maintenance Superintendent, and the Electrical Maintenance Superintendent are always On-Call except for vacations, leaves of absence, and illness, during which time they will provide coverage for each other. Each week, an On-Call list is prepared for the next week (see page 2-26), providing coverage as following:

Machine Shop On-Call
- Mechanical (3)
- Welding (1)
- Diesel (1)

Machine Shop Back-Up
- Mechanical (3)
- Welding (3)
- Diesel (1)

Electrical Shop On-Call
- Duty Supervisor (1)
- Electricians (2)
- Pole Line (1)
- Instrumentation Technician (2)

Electrical Shop Back-Up
- Duty Supervisor (1)
- Electricians (2)
- Pole Line (1)
- Instrumentation Technician (1)

When there is a pending rain storm, S&WB Power Dispatchers will call in personnel from the electric shop, as noted on their On-Call list, under "rain load". This person(s), depending upon need, works solely within the power generation complex to assure that the electrical problems within the 25 Hz Power Generation Plant are immediately addressed.

Note: Personal On-Call take home vehicles stocked with sufficient tools, supplies and materials to effect basic repairs.

2.5.2 PROCEDURES

2.5.2.1 Pump Station Unscheduled Maintenance Work Flow Chart (see Figure 2-16)

Notification of a problem may be received from a customer complaint to the phone center or directly either from Board forces or from monitoring of the SCADA system. (When notice is from a customer complaint, normal

Sewerage & Water Board
OF NEW ORLEANS

Division of Mechanical Maintenance

Mechanical Maintenance Superintendant

- 1 Mechanical Engineer
- 1 Sr. Storekeeper
- 1 Sr. Info Processor Operator

Carrollton

Utilities Plant Machinist Supervisor III

- 2 Utilities Plant Machinist Supervisor II
- 1 Utilities Plant Machinist Supervisor I
- 8 Utilities Plant Machinist
- 1 Machinist
- 2 Equipment Operator IV
- 1 Utilities Maintenance Worker II
- 2 Utilities Maintenance Worker I

Field Crew

Utilities Plant Machinist Supervisor III

- 2 Utilities Plant Machinist Supervisor II
- 3 Utilities Plant Machinist Supervisor I
- 1 Utilities Diesel Maintenance Supervisor
- 8 Utilities Plant Machinist
- 1 Plant Diesel Mechanic
- 1 Machinist
- 3 Utilities Mountains Worker II
- 1 Utilities Mountains Worker I

Welding and Fabrication

2 Utilities Plant Welding Supervisor II

- 1 Utilities Plant Welder Supervisor II
- 8 Utilities Plant Welders
- 1 Welder
- 1 Utilities Maintenance Worker II
- 1 Utilities Maintenance Worker I

Figure 2-14
(Budgeted Positions for FY 1997)

Sewerage & Water Board
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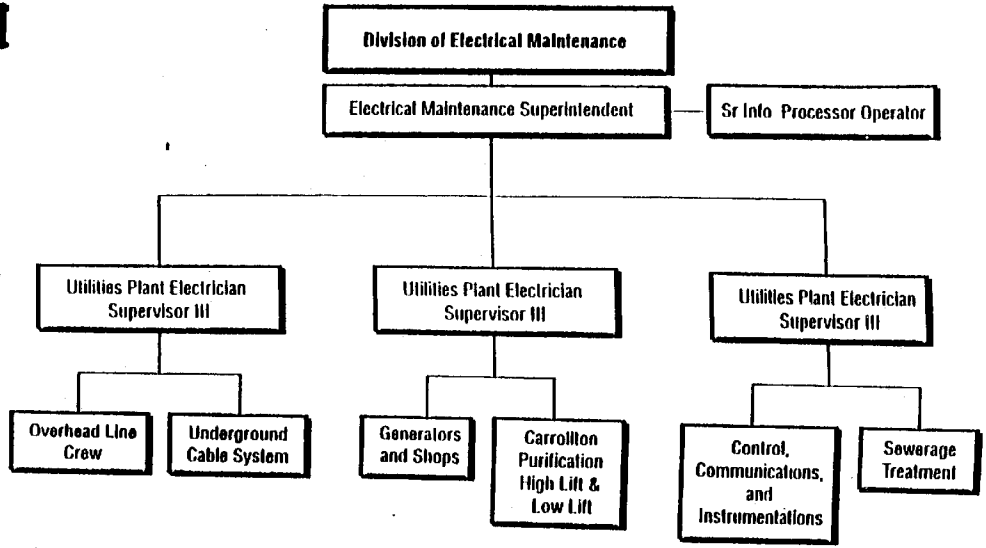


1 Utilities Plant Electrician Supervisor I
1 Utilities Powerline Supervisor
2 Utilities Plant Electricians
1 Electrician
1 Utilities Maintenance Worker II

1 Utilities Plant Electrician Supervisor II
1 Utilities Plant Electrician Supervisor I
4 Utilities Plant Electricians
1 Utilities Maintenance Worker II

1 Sr. Control Instrument Tech
2 Control Insturment Techs

1 Utilities Plant Electrician Supervisor II
1 Utilities Plant Elect Supvr I
3 Utilities Plant Electricians
1 Electrician

Figure 2-15
(Budgeted Positions for FY 1997)

Sewerage & Water Board
OF NEW ORLEANS

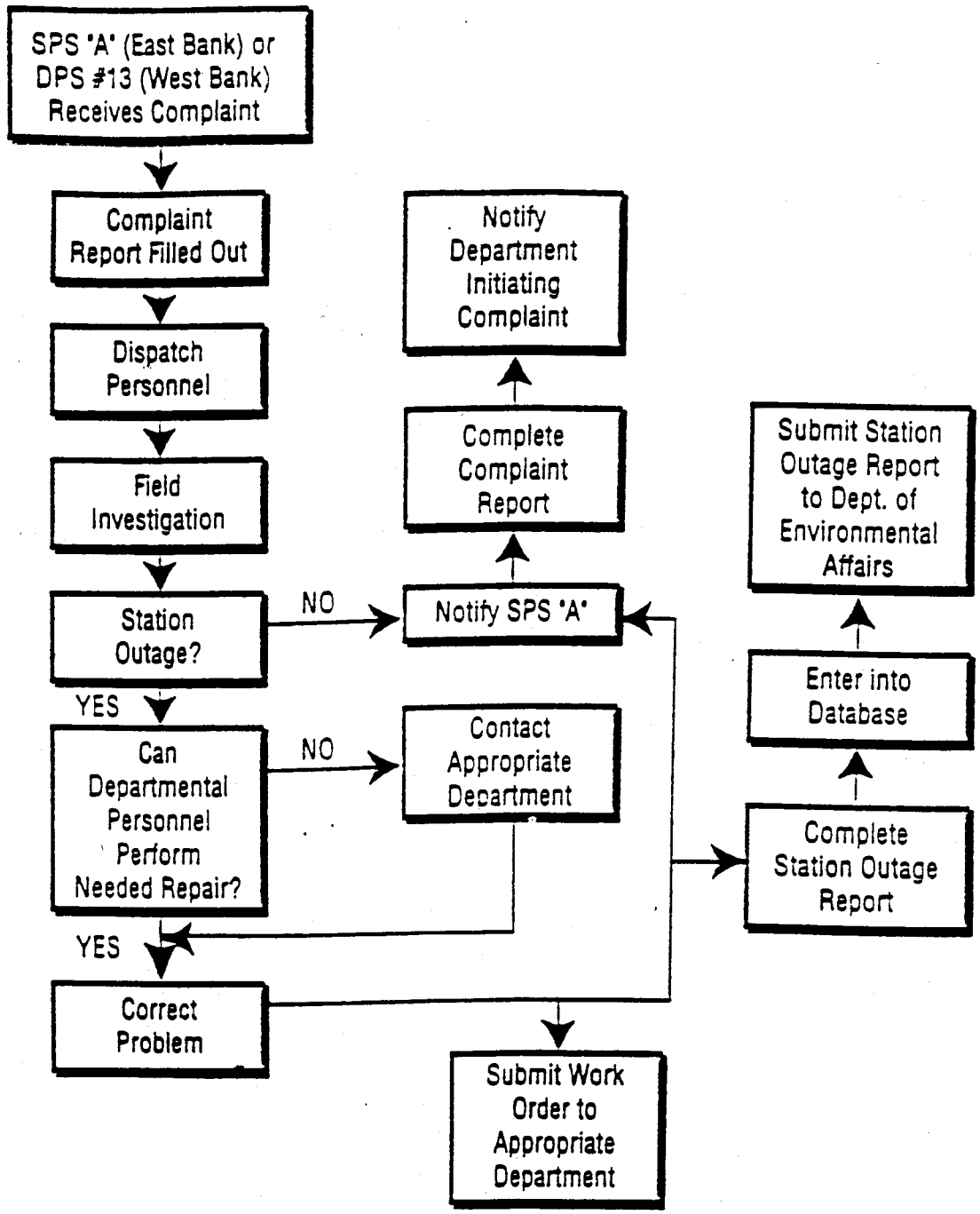


Figure 2-16
Operations Department Unscheduled Maintenance Work Flow Chart

procedures are followed. The Emergency Inspector who ivestigates or the duty supervisor then notifies either SPA "A", DPS #13, or the on-call person. See Page 2-26.) SPS "A", DPS #13 or the on-call person will dispatch the appropriate route crew or route supervisor to the station handling the area of the complaint.

The on-duty operator at S.P.S. "A" (or D.P.S. #13) records the information regarding the nature of the complaint on the "Sewerage Pumping Operations Complaint Report". A notation of the complaint call being received is also made in the station log book at S.P.S. "A" (or D.P.S. #13).

The route crew or supervisor makes a field investigation to determine if the problem is due to a station outage.

If the problem is not due to a station outage, S.P.S. "A" (or D.P.S. #13) is notified of same. S.P.S. "A" (or D.P.S. #13) will then contact the department that called in the complaint and inform them that the station is operating properly and complete the "Complaint Report", as well as making a notation in S.P.S. "A"'s log book.

If the route crew or route supervisor determines that there is a station outage which the Department of Operations personnel cannot correct, S.P.S. "A" (or D.P.S. #13) is notified and requested to contact the departmental supervisor to apprise him of the situation. The departmental supervisor will take the necessary action to contact the appropriate department that is needed to get the station back in service. (If the nature of the outage is due to loss of service from the electric utility company, the utility company will be contacted by S.P.S. "A" (or D.P.S. #13), and is noted in the station log book.)

Required service or maintenance is performed to get the station back in service. S.P.S. "A" (or D.P.S. #13) is notified of the nature of the problem and steps taken to correct same. The route crew or supervisor dispatched to the scene is responsible for filling out an "OUTAGE REPORT AUTOMATIC SEWAGE PUMPING STATION" form.

If a division of the Facilities Maintenance Department was needed to get the station back in service, the route supervisor or departmental supervisor will submit a work order for the completed work that was performed.

The information from the "OUTAGE REPORT AUTOMATIC SEWAGE PUMPING STATION" form is entered into the station outage database at the Sewerage Pumping Operations office and a "Drainage/Sewerage Operations Department Station Outage Report" is then generated and submitted to the Department of Environmental Affairs.

A flow chart for addressing station operation problems, as noted above, is found in Figure 2-16.

Historical records have shown that the response time (i.e., time that the Department of Operations receives a complaint from S.P.S. "A" to the time that such complaint is adequately addressed) is approximately thirty (30) minutes. Furthermore, approximately 95% of all complaints received by the Department of Operations are successfully addressed within the Department of Operations.

2.5.2.2 Employee Training Manual - Department of Operations

Proper training is essential to assure that personnel can successfully address routine and emergency problems at the lifting and pumping stations, which otherwise could result in unauthorized discharges. To this end, an in-depth Employee Training Manual (Appendix H) was written in 1970 by and for Drainage and Sewerage Pumping Operations. This manual, revised in 1995, is structured to take a newly hired Utility Plant Worker II one year to complete in order to be eligible for advancement to a Pumping Plant Operator (PPO) position. In addition, this training program is designed as a (refresher) course for the PPOs, supervisor assistants and supervisors, all of whom are required to attend a minimum of twenty hours of classroom training every two years. Also, all PPO's possess State Certification for wastewater collection.

2.5.2.3 On-The-Job and Classroom Training - Department of Facility Maintenance

In the Department of Facility Maintenance, typically semi-experienced or experienced trade groups (i.e., electricians, welders and mechanics) are hired. Semi-experienced personnel typically have trade certificates from schools and enough knowledge to pass a performance test. Such semi-experienced personnel are hired as entry level electricians, welders and mechanics and, after one year from their date of hire, are eligible to be promoted to Utility Plant Electricians, Welders, and Mechanics after successfully passing performance testing. Personnel with sufficient outside experience can be hired directly as Utility Plant Electricians, Welders, and Mechanics, again only after successfully passing performance testing.

In addition to on-the-job training, personnel in the Department of Facility Maintenance attend on-site and off-site training seminars and programs, to be better able to address scheduled as well as unscheduled repairs. Based upon performance, all maintenance employees are eligible for the Supervisor I, II, and III positions.

2.5.2.4 Safety Program

Consistent with the necessity to adequately address scheduled and unscheduled maintenance at the sewerage lift and pump stations, the Sewerage and Water Board is committed to providing a safe and healthy work environment for its employees. To this end, the Safety Department has developed general guidelines and policies geared to providing and maintaining safe and healthy working conditions and safe operating practices. See the attached Safety Manual (Appendix I).

2.5.2.5 Miscellaneous Relevant Procedures (Attached)

- Routine Work Schedule Automatic Sewer Stations
- Log Book Entries Automatic Sewer Stations
- Sewer Station Outage Procedure
- Bypass/Overflow/Spill report - sample
- Station Outage Report - sample
- Daily Check List of Unmanned Stations. Note: personnel from the Department of Operations inspect the equipment in the lift and pump stations a minimum of three times per work week. Information gathered is detailed in the Routine Work Schedule (attached). More involved maintenance is performed by the Department of Facility Maintenance at the request of the Department of Operations.
- Sewerage Pumping Operations Complaint Report
- Specification for the Supervisory Control And Data Acquisition (SCADA) panels for remote monitoring and control of various sewerage pumping stations (Appendix J). Note: this system is to be installed by December 31, 1997.
- Route Report

Routine Work Schedule
Automatic Sewer Stations

This work schedule is a guide to the work that must be performed on each of the routes. It is NOT all inclusive. There will be other duties that must be performed that are not included on this schedule. All employees are reminded that the route operator is the immediate supervisor, and is responsible for getting the work done on the route. If you are not the route operator, you are to comply with the directives and work assignments as given by the operator.

All personnel are expected to be at their assigned route truck and ready to leave Station "D" by 7:15 AM. The operator should not have to seek the whereabouts of the assigned helpers.

Both the operator and the assigned helper(s) are to enter any and all stations that are being checked, or where work is being done. Helpers found sitting in the truck while the operator is in the station will receive disciplinary action in a manner similar to the attendance policy.

During the course of the workday, unless you have an emergency that has been approved by a Supervisor or Supervisor Assistant, do not ask to:

- Stop home or anywhere else
- Go off the route
- Take care of personal business
- Use the telephone (except at lunch time)
- Study non-SWB approved class material (except at lunch)
- Sleep in the truck
- Smoke in the truck

All employees are expected to:

- Properly wear and buckle their seat belts when riding in SWB vehicles.
- Have all personal equipment that may be needed for performing work, including boots, rain gear, and safety gear. Everyone is reminded that they are personally responsible for any equipment charged to their inventory. Items lost are to be reported immediately and must be paid for.

Helpers are required to take an active part in their training by assisting in any and all work being performed and by asking questions concerning operation and maintenance procedures of the stations.

Operators are expected to take an active part in training their helpers by seeing that their helpers assist in performing any and all work being performed, and asking questions of the helper pertaining to operation and maintenance procedures. All stations on the route are to be inspected on Monday, Wednesday and Friday. In the event of holidays and/or bad weather, these days may be changed. During your inspection on route days, you are to tend to any maintenance that requires immediate attention and make your plans as to any routine maintenance to be performed on "maintenance" days (usually Tuesday and Thursday).

Daily Work

Operator : Before leaving Station "D" check oil and gas in truck and for lawn equipment (you are responsible for mixing gas). All are to be fueled up either before you go out on your route, or in the afternoon when you are returning from your route. Likewise for supplies and/or equipment from the yard or Station "D". You are not to return to the yard or Station "D" during the day unless it is an emergency and your route supervisor has authorized your return.

Helper: Follow directives of your operator, such as getting ice, supplies, loading tools and/or equipment onto truck, etc.

At Each Station:

Helper: Check all bearings; bearings should be checked for the proper oil level, heat, excess grease seepage, and any abnormal noise. Check water supply to packing glands, check packing glands for heat and excess leakage. Check all grease cups and refill if half empty. Be sure all bearings and packing glands are checked with pumps running during operators test. Check all lights, except switch board lights, and change if needed (**Note:** All incandescent light bulbs should have a glass cover over them. Report any that are missing to the operator). Pick up any trash and paper in yard and around station.

Operator: Check the operation of all equipment that is in service. Run each pump, sump pump, vacuum pump, and air compressor at each station. Make necessary repairs or replacement of equipment required for normal station operation. Check all switch board lights and change if needed. Check elevation gauges for proper operation, and insure that pumps are operating at automation at the proper levels. Bleed air compressor tanks and regulator bowls. Re-pack pumps as needed. Assist and supervise helper in daily routines.

Fill in all log books (sign first initial & last name, not just initials) and Route Reports legibly. Print if necessary. The time you arrive and leave the station must be recorded. Record amp and kilowatt readings (if possible) on all units in the station log book. (Stations having four speed pumps - record amp and kilowatt readings for all speeds at least once a week). Route Reports must be turned in to the supervisor(s) at the end of each day. Be sure to list all equipment which needs repair or work, and make verbal reports of all problems to your supervisor upon turning in your route report.

Any problems found during your station inspection that hamper normal operations are to be reported to your route supervisor **immediately**. Do not wait until later in the day. If you are unable to contact your assigned route supervisor via radio, have the operator at Station "A" beep him. If no response is received within five minutes, contact another route supervisor.

Weekly Work

Helper: Clean upper and lower level floors. Sweep and mop upper level floors, and hose down lower levels and steps. Dust and wipe down all equipment, using varsol or degreaser if necessary. Dust switch boards. Clean all bathroom facilities and be sure that all facilities are in working order. Clean sump holes and sump pumps. Cut grass and edge around fences, cut down trees growing in fences. Cut grass growing in cracks of station yard and surrounding sidewalks. If no weedeater is available you are to use a flat shovel to clear the cracks. Load all trash on truck for dumping in the dumpster by Station "D", at the end of the day.

Operator: Check all station equipment as per daily work schedule. Assist and supervise helper in all work. **Never leave helper unsupervised.** The operator should assign specific work for the helper to perform during this time. Thoroughly check all stations for which complaints have been received since the previous daily check. Operate all valves in station. Be sure the valves are left in the proper operating position, and grease all valve stems before operating.

Monthly

Operators: Purge bubbler tubes. Check all discharge pressure gauges and elevation gauges to make sure they read "0" when disconnected from system. Check all other gauges in station for proper operation. Grease all pumps and equipment in the stations assigned for each day during the first week of each month. Check the operation of the normal operation feeder and emergency feeder, and make sure that the change over switch operates properly.

Quarterly

Operators: Operate station isolation valve. Record number of turns and direction to open/close on your route sheet.

Semi-annually

Operators: Grease all pumps and motors that use grease.

Log Book Entries
Automatic Sewer Stations

Rev.: 11/08/95

The station log book serves as a record of the operational status of the station, as well as a record of the maintenance performed at the station. It is a "personal diary" of day-to-day events that are recorded for future use, and is often used in legal proceedings. Because of that fact, it is extremely important that all entries are legible for any and all to read - print if necessary.

It is also important that your log entries consist of information that is useful in documenting the station's operational status. You do not need to confine your documentation to 2 or 3 lines in the log book. Give some details to what is going on at the station. If you were to use a half-page each day for your log entries, the standard 150 page log book would last over a year. The name of the station should be recorded inside of both the front and back cover, as labels on the outside tend to fall off over time.

Log book entries should contain at least (but are not limited to) the following:

1. Date

2. Time entering and time exiting station - use military time. (A station inspection without specific times noted is useless in many instances).

3. Elevation of wet well upon arrival at station. (If it is determined during the inspection that there was a problem with the bubbler system, note same along with the corrected elevation reading).

4. Amp and/or kilowatt readings if available. (Having electrical readings to compare can aid in determining possible pump and/or motor problems). Readings on single speed units are to be recorded at each inspection. readings for multiple speed units may be recorded once a week. Identify unit, speed and electrical reading.

Example:

#1 unit	Amps	Kilowatts
1st.	60	110
2nd.	75	125
3rd.	90	140
4th.	100	150

5. Pump(s) on "auto" and which is lead or lag.

6. Any problems detected and/or corrected.

7. Any maintenance performed by departmental personnel, personnel from other departments or contractors.

8. If you re-pack a pump note the size packing used, the number of turns placed between the neck ring and lantern ring, and the number of turns placed between the lantern ring and the packing gland.

9. If you are responding to any type of complaint regarding the station, make a notation of same along with the resulting findings of your inspection.

10. Discharge pressure (if available) with pump running, and with pump off.

11. Equipment out of service and reason why. This should be documented until such time as equipment is back in service.

12. The last entry should be the first initial and full last name of the employees making the inspection.

SANITARY SEWAGE OVERFLOW RESPONSE ACTION PLAN

The purpose of this policy is to inform all employees of their responsibilities relative to the proper notification of sewer force main breaks and/or sewer pumping station outage. Operation personnel must keep in mind that their first priority is to ensure the proper operation of the pumping stations and the welfare of the citizens of the City of New Orleans.

I. The following procedure is to be followed upon notification of a **Sewer Force Main** break:

1) Supervisory personnel are to make an "on-site" inspection to verify that the problem is a sewer force main break. Once this has been verified, a course of action is to be developed to valve off the affected area so repairs can begin. After the proper course of action has been determined, Operations Department Personnel shall shut down all stations that pump into the section of the force main which needs to be isolated. Once the stations have been shut down, the Pressure Department's Personnel will close off the necessary force main valve(s) to isolate the break.

2) The following are to be apprised immediately of the situation:

A) Central Yard Pressure Department and Emergency Department:

Pressure Dept. 942-3865 Emergency Dept. 942-3833

B) Machine Shop/Welding Shop (only if it is a steel pipe):

Machine Shop: 865-0512 Welding Shop: 835-0509

C) Department of Environmental Affairs. No. 942-3855

D) Departmental Chain of Command (See attached)

E) Notify the proper treatment facility (Eastbank OR Westbank Sewerage Treatment Plant) depending on affected area and the

severity of the break.

EB No.: 277-5400 WB No.: 392-9729

3) Bypass valves for the collection areas in which stations are shut down are not to be opened until it has been determined by supervisory staff that it is absolutely necessary. Immediate Notifications to "2C" above is required in the event a forced bypass becomes necessary.

(Forced Bypass: Any bypass that occurs by physically opening a valve)

4) Supervisory personnel shall remain available until repairs have been completed. This is to facilitate getting the system back in service as quickly as possible after repairs have been made.

5) As soon as the force main is repaired, any valves closed to facilitate repair are to be re-opened and the stations put back to the normal operating condition. Any bypass valves that were opened are to be closed as soon as the station for the area is back in service.

6) Notification of completed repairs are to be made to "2C, 2D, and 2E" above as soon as possible.

7) *Supervisors must provide a written report of the event documenting the dates and times of the sequence of events to "2C" above as soon as possible. If a forced bypass OR overflow OR spill at the station was incurred a Bypass/Overflow/Spill Report (a sample is attached) is also to be submitted to the appropriate personnel.*

8) If stations were shut down and no forced bypass occurred at the station, a Station Outage Report must be submitted to "2C" above (a sample is attached).

9) If it is after normal working hours contact individuals in paragraph 2 above by beepers.

II. The following procedure is to be followed upon notification of a Sewer Station Outage:

1) Supervisory personnel are to make an "on-site" inspection to verify that the problem is a station outage. Once this has been verified, a course of action is to be developed so repairs can begin. After the proper course of action has been determined, Operations Department Personnel shall contact the proper department(s) so that the repair work can start immediately only if the required work is NOT within the operations personnel's responsibilities.

2) The following are to be apprised immediately of the situation:

   A) Central Yard Pressure Department and Emergency Department (ONLY IF NEEDED as judged by supervisor):

   Pressure Dept. 942-3865 Emergency Dept. 942-3833

   B) Machine Shop/Welding Shop/Electric Shop (AS REQUIRED):

Machine Shop: 865-0512 Welding Shop: 865-0509 Electric Shop: 865-0550

   C) Department of Environmental Affairs. No. 942-3855

   D) Departmental Chain of Command (See attached)

   E) Notify the proper treatment facility (Eastbank OR Westbank Sewerage Treatment Plant) depending on affected area and the severity of the break as judged by supervisor(s).

   EB No.: 277-5400 WB No.: 392-9729

3) Bypass valve(s) for the station are not to be opened until it has been determined by supervisory staff that it is absolutely necessary. Immediate Notifications to "2C" above is required in the event a forced bypass becomes necessary.

4) Supervisory personnel shall remain available until repairs have been completed. This is to facilitate getting the station back in service as quickly as possible after repairs have been made.

5) As soon as the station becomes operational again, all valves must be

Department of Drainage & Sewerage Operartions

Bypass/Overflow/Spill

Report

Facility: CODE:

Location:

From Date: Time: Note:
To Date: Time:

Elapsed Period is : Days, : Hours and : Minutes.

Total Elapsed Time in Minutes:

Quantity (gal):

Analytical Results:

Cause of Bypass/Overflow/Spill:

Steps Taken to Reduce OR Eliminate Bypass/Overflow/Spill:

Steps Taken to Prevent Recurrence:

Reported to Environmental Affairs On;

Date: Time: Individual Receiving the Report:

Date: Individual Submitting the Report:

CC; Environmental Affairs, Deputy Director, Gen. Supt., Chief of Operations

Rev.11/07/97

DRAINAGE/SEWERAGE OPERATIONS DEPARTMENT

STATION OUTAGE REPORT

DATE:

FROM: ;Sewerage Operations

TO ;Rudy August, Environmental Affairs Department

RE ; Report of Station Outage CODE:

STATION NAME/NUMBER:

ADDRESS:

Date Outage Occured:

Problem Was Detected Due To;
Scheduled Station Inspection: Time:
Response to Complaint Call: Time:

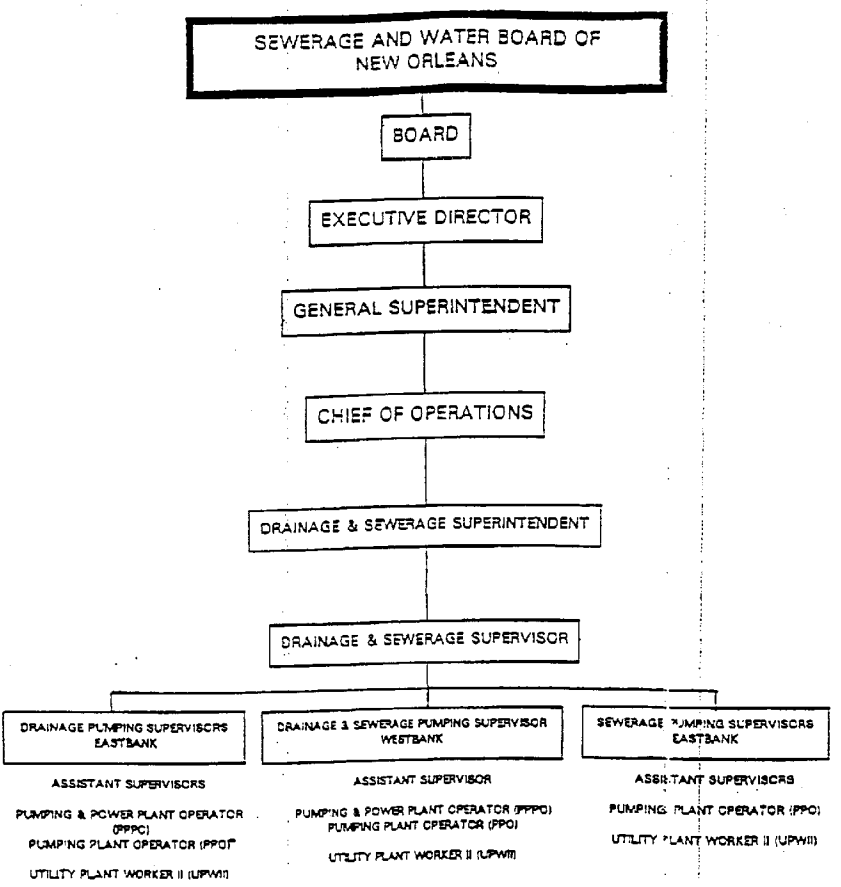
Problem Found:

Action(s) Taken:

Station Back in Service;
Date: Time:

:
Supervisor;
Sewerage Pumping Operations

Rev.11/07/97


SEWERAGE AND WATER BOARD OF NEW ORLEANS
BOARD
EXECUTIVE DIRECTOR
GENERAL SUPERINTENDENT
CHIEF OF OPERATIONS
DRAINAGE & SEWERAGE SUPERINTENDENT
DRAINAGE & SEWERAGE SUPERVISOR
DRAINAGE PUMPING SUPERVISORS EASTBANK
ASSISTANT SUPERVISORS
PUMPING & POWER PLANT OPERATOR (PPPO)
PUMPING PLANT OPERATOR (PPO)
UTILITY PLANT WORKER II (UPWII)
DRAINAGE & SEWERAGE PUMPING SUPERVISOR WESTBANK
ASSISTANT SUPERVISOR
PUMPING & POWER PLANT OPERATOR (PPPO)
PUMPING PLANT OPERATOR (PPO)
UTILITY PLANT WORKER II (UPWII)
SEWERAGE PUMPING SUPERVISORS EASTBANK
ASSISTANT SUPERVISORS
PUMPING PLANT OPERATOR (PPO)
UTILITY PLANT WORKER II (UPWII)

DRAINAGE & SEWERAGE OPERATIONS

DAILY CHECK LIST FOR UNMANNED STATIONS

☐ Inspection day ☐ Maintenance day Page: _____

DATE: _____ ROUTE: _____ FACILITY: _____ PUMPS ON "AUTO" (LEAD/LAG SEQUENCE) _____

TIME IN: _____ OUT: _____ CREW: _____ WETWELL ELEV. _____ft. DISC. PRESS. _____ psi WATER PRESS. _____psi

N/A OK PROB VERIFY:

- ☐ ☐ ☐ 1. Blowers
- ☐ ☐ ☐ 2. Exhaust fans (including control room)
- ☐ ☐ ☐ 3. Condition of lights (inside/outside)
- ☐ ☐ ☐ 4. Position of transfer switches

SUMP PUMPS: (Primary and Backup)

- ☐ ☐ ☐ 5. Operation on "hand" and "auto"
- ☐ ☐ ☐ 6. Condition of sump pit (keep clean)

MOTORS:

- ☐ ☐ ☐ 7. Verify operation in "hand/auto" mode
- ☐ ☐ ☐ 8. Audible check for foreign sound
- ☐ ☐ ☐ 9. Brush condition
- ☐ ☐ ☐ 10. Arcing of brushes
- ☐ ☐ ☐ 11. Collector ring condition
- ☐ ☐ ☐ 12. Check upper oil level
- ☐ ☐ ☐ 13. Check lower oil level
- ☐ ☐ ☐ 14. Grid banks/Control room (general inspection)

PUMPS:

- ☐ ☐ ☐ 15. Check packing (adjust/replace if needed)
- ☐ ☐ ☐ 16. Check oil levels in reservoir
- ☐ ☐ ☐ 17. Check oil drips, grease cups, grease fittings
- ☐ ☐ ☐ 18. Check belts and guards
- ☐ ☐ ☐ 19. Visual and audio check

VACUUM PUMPS:

- ☐ ☐ ☐ 20. Check packing (adjust if needed)
- ☐ ☐ ☐ 21. Verify operation in "hand/auto" mode
- ☐ ☐ ☐ 22. Check oil levels in reservoir
- ☐ ☐ ☐ 23. Visual and audio check

AIR COMPRESSORS / BUBBLERS:

- ☐ ☐ ☐ 24. Bleed tank
- ☐ ☐ ☐ 25. Check and bleed filter regulator
- ☐ ☐ ☐ 26. Verify system air flow

GAUGES/INSTRUMENTATION

- ☐ ☐ ☐ 27. Compressor, regulator, elevation
- ☐ ☐ ☐ 28. Amps, kilowatts
- ☐ ☐ ☐ 29. Vacuum

PIPING AND VALVES:

- ☐ ☐ ☐ 30. Visual inspection for leaks, cracks
- ☐ ☐ ☐ 31. Check proper valve position
- ☐ ☐ ☐ 32. Condition of backflow preventer

N/A OK PROB SITE AND STRUCTURE:

- ☐ ☐ ☐ 33. Remove debris from site (inside & outside)
- ☐ ☐ ☐ 34. General visual inspection including: building structure, gratings, ladders, hatch, doors, windows, roof, gutter cans, lawn, fence, etc.

Motor	Amps	KW	Speed
#			
#			
#			
#			
#			

EQUIPMENT OUT OF SERVICE AND REASON:

_____

_____

_____

OTHERS WORKING IN STATION:

_____

_____

_____

NOTE: ALL LINE ITEMS CHECKED AS PROBLEMS ARE TO BE LISTED BY NUMBER AND DESCRIBED.

Line #	Description/Nature of problem noted

Additional comments/notes

_____

_____

_____

_____

_____

_____

☐ VERIFY THAT ALL EQUIPMENT CONTROL SWITCHES ARE SET TO THE PROPER POSITION, AND STATION IS SECURE BEFORE LEAVING!

Supervisor reviewing: _____

File: Masters/sewchk lgl Issue date 12/31/98

SEWERAGE PUMPING OPERATIONS
COMPLAINT REPORT

DATE: 3-19-97 TIME RECEIVED (use military time): 1442

1) CALL RECEIVED FROM:

Person's name: Jerry Mine Phone #: 254-8401

Department, company, or address: Johnson Coffee Co. 14601 Old Gentilly

2) TYPE OF COMPLAINT (check one):

✓ Complaint of high sewer. ___ Complaint of sewer odor

___ Other (explain): _____

Address or location of complaint: 14601 Old Gentilly

3) PERSONNEL CONTACTED TO INVESTIGATE COMPLAINT:

Name: H. Leslie Tk# 51 Time contacted: 1443

Name: _____ Tk# _____ Time contacted: _____

4) RESULT OF INVESTIGATION (check one):

___ Station(s) checked out okay. ✓ Station(s) out of service.

Reason: Found the #142 unit off, put them back on auto station pumping down.

Station(s) checked: Johnson's

Elevation of sewer(s) (must be filled in): 140 Time of completed investigation: 1532

5) NOTE: If the complaint was received from a S&WB department, you are to call them back and inform them if there was a problem at the station (and if the problem was corrected), or if the station was functioning properly.

Time of callback: 1500 Department called: Johnson Coff. Co.

Full name of person you relay information to: Jerry Mine

6) SIGNATURE OF PERSON TAKING COMPLAINT INFORMATION:

(sign here): A. Shaw If your watch ends before the complaint is resolved, it is your responsibility to relay this information to your relief, as well as what action you have taken. To verify that this information has been passed on, see that your relief signs below.

(relief signs here): _____

7) SIGNATURE OF PERSON COMPLETING THIS REPORT:

(sign here): A. Shaw

Use back of page if needed for additional comments or information. Please make every effort to ensure that this form is filled out completely and accurately

Rev. 11/07/97

WORK ORDER TIME STUDY
Date Range: 10/01/96 tr 10/31/96
Problem Code(s): SHCOF OR SMROF

ED MED	W/O CREATED DATE	TIME	MED	FOREMAN	TRUCK NO	DATE COMPLETED	TIME ARRIVED	TIME LEFT	SR -> WO_R DAYS	SR -> WO_R HOURS	WO_R -> WO_C DAYS	WO_R -> WO_C HOURS	SR -> WO_C DAYS	SR -> WO_C HOURS
	8/14/96	08:49	A	KIRTS L	478	10/09/96	7:00A	9:30A			56	00:41		
P	9/28/96	02:58	P		38	10/29/96			0	01:25				
A	10/01/96	05:45	A	MELANCON M	230	10/01/96	8:15A	9:30A	0	01:23	0	03:45	0	05:08
A	10/01/96	10:56	A	MELANCON M	230	10/01/96	12:45P	1:15P	0	02:06	0	02:19	0	04:25
P	10/01/96	02:00	P	SLACK S	75	10/01/96	2:35P	2:50P	0	00:14	0	00:42	0	00:56
P	10/01/96	10:28	P	SLACK S	75	10/01/96	10:30P	11:10P	0	07:29	-1	23:42	0	07:11
P	10/01/96	11:52	P	SLACK S	75	10/01/96	8:50P	9:20P	0	05:26	-1	21:28	0	02:54
A	10/01/96	12:35	P	COLLINS C	396	10/01/96	1:00P	1:45P	0	02:06	0	01:10	0	03:16
A	10/02/96	08:36	A	STEWART BY	230	10/02/96	9:30A	10:45A	0	00:22	0	02:09	0	02:31
A	10/02/96	01:37	P	SLACK S	75	10/02/96	2:55P	3:25P	0	05:48	0	01:48	0	05:36
P	10/02/96	02:25	P	BENSON C	227	10/02/96	5:30P	7:15P	0	00:03	0	04:50	0	04:53
P	10/02/96	07:48	P	SLACK S	75	10/02/96	11:30P	12:00A	0	03:17	-1	16:42	-1	19:29
A	10/02/96	10:01	P	SLACK S	75	10/03/96	12:15A	12:45A	0	12:45	0	14:44	1	01:29
	10/03/96	10:01	A	MELANCON M	230	10/02/96	8:45A	9:15A			-2	23:14		
	10/03/96	10:26	A	SLACK S	75	10/02/96	9:20P	9:50P			-1	11:24		
P	10/03/96	02:54	P	SLACK S	75	10/03/96	4:35P	5:15P	0	01:16	0	02:21	0	03:37
A	10/03/96	05:32	P	JACKSON R	227	10/03/96	6:45P	7:15P	0	04:37	0	03:43	0	08:20
P	10/03/96	05:08	P	SLACK S	75	10/03/96	8:45P	9:15P	0	02:02	0	04:07	0	06:09
P	10/03/96	07:37	P	SLACK S	75	10/03/96	10:20P	11:10P	0	03:52	0	03:33	0	07:25
P	10/03/96	10:48	P	SLACK S	75	10/04/96	12:45A	1:15A	0	00:54	0	02:27	0	03:21
A	10/04/96	10:16	A	COLLINS C	396	10/04/96	11:15A	12:00P	0	00:45	0	01:44	0	02:29
A	10/04/96	11:49	A	SLACK S	75	10/04/96	1:45P	2:25P	0	00:25	0	02:36	0	03:01
P	10/06/96	02:23	P	SLACK S	75	10/06/96	3:50P	4:50P	0	01:43	0	02:27	0	04:10
P	10/07/96	05:15	P	COLLINS C	396	10/07/96	5:00P	6:30P	0	05:12	0	05:15	0	06:27
A	10/07/96	03:49	P	COLLINS C	396	10/07/96	6:45P	7:30P	0	06:06	0	03:41	0	09:45
	10/07/96	06:45	P	COLLINS C	396	10/07/96	8:49P	9:16P			0	04:31		
	10/08/96	01:03	P	JACKSON R	227	10/08/96	2:00P	4:00P			0	02:57		
A	10/08/96	02:20	P	COLLINS C	396	10/08/96	6:45P	8:00P	0	02:24	0	05:40	0	08:06
P	10/08/96	03:09	P	COLLINS C	396	10/08/96	5:00P	6:30P	0	03:05	0	03:21	0	06:26
P	10/08/96	06:16	P	JACKSON R	227	10/08/96	8:10P	9:00P	0	01:46	0	02:44	0	06:30
P	10/09/96	05:39	P	COLLINS C	396	10/09/96	7:00P	8:00P	0	02:47	0	02:21	0	05:08
P	10/09/96	07:30	P	COLLINS C	396	10/09/96	8:20P	9:20P	0	03:24	0	01:50	0	05:14
P	10/09/96	08:24	P	JACKSON R	227	10/09/96	9:15P	10:00P	0	02:19	0	01:36	0	03:55
A	10/09/96	12:06	P	MELANCON M	230	10/09/96	12:45P	1:30P	0	01:05	0	01:26	0	02:31
	10/10/96	10:57	A	JACKSON R	227	10/09/96	5:30P	6:00P			-1	07:03		
P	10/10/96	02:56	P	JACKSON R	227	10/10/96	12:30A	1:00A	0	00:38	-1	10:04	-1	10:42

WORK ORDER TIME STUDY
Date Range: 02/01/97 to 02/28/97
Problem Code(s): SHCOF OR SHROF

D MED	W/O CREATED DATE	TIME	MED	FOREMAN	TRICK NO	DATE COMPLETED	TIME ARRIVED	TIME LEFT	SR -> WO_R DAYS	SR -> WO_R HHMS	WO_R -> WO_C DAYS	WO_R -> WO_C HHMS	SR -> WO_C DAYS	SR -> WO_C HHMS
A	2/01/97	09:56	A	OALMANN R	230	2/01/97	2:00P	3:00P	0	23:28	0	05:04	1	04:52
A	2/01/97	12:27	P	OALMANN R	230	2/01/97	8:10P	8:15P	0	02:28	0	07:48	0	10:16
A	2/01/97	12:29	P	OALMANN R	230	2/01/97	8:20P	9:20P	0	03:21	0	08:51	0	12:12
P	2/02/97	02:44	P	OALMANN R	230	2/02/97	8:15P	8:45P	0	00:04	0	06:01	0	06:05
P	2/02/97	04:37	P	OALMANN R	230	2/01/97	1:55P	3:40P	1	01:34	-2	23:03	0	00:37
	2/03/97	06:23	A	OALMANN R	230	2/01/97	7:00P	8:10P			-2	13:47		
A	2/03/97	10:42	A	MELANCON M	346	2/03/97	11:45A	1:00P	0	00:31	0	02:18	0	02:49
P	2/03/97	04:09	P	CLARK J	396	2/03/97	9:30P	9:55P	0	00:26	0	03:46	0	04:12
P	2/03/97	09:48	P	CLARK J	396	2/03/97	2:55P	4:00P	0	04:31	-1	18:12	-1	22:43
P	2/03/97	11:01	P	CLARK J	396	2/03/97	11:30P	12:10P	0	04:20	-1	13:09	-1	17:29
A	2/03/97	12:07	P	CLARK J	396	2/03/97	7:50P	8:05P	0	01:13	0	07:58	0	09:11
	2/04/97	05:56	A	JACKSON R	227	2/03/97	12:50P	1:45P			-1	07:49		
A	2/04/97	09:57	A	CARTER H	278	2/04/97	11:35A	12:25P	0	00:55	0	02:28	0	03:23
	2/04/97	01:25	P	CLARK J	396	2/03/97	2:50P	3:30P			-1	02:05		
P	2/04/97	09:24	P	BLAKE W	75	2/05/97	8:09A	8:45A	0	00:58	0	11:21	0	12:19
	2/04/97	12:05	P	OALMANN R	230	2/03/97	12:15P	12:45P			-1	00:40		
A	2/05/97	09:49	A	BLAKE W	75	2/05/97	11:35A	12:00P	0	01:17	0	02:11	0	03:28
A	2/05/97	10:50	A	MELANCON M	346	2/05/97	12:00P	12:30P	0	02:56	0	01:40	0	04:36
	2/05/97	01:04	P	MELANCON M	346	2/04/97	12:30P	1:00P			-2	23:56		
P	2/05/97	01:57	P	COLLINS C	326	2/05/97	3:10P	4:00P	0	01:56	0	02:03	0	03:59
P	2/05/97	02:46	P	CLARK J	416	2/05/97	4:40P	5:35P	0	02:41	0	02:49	0	05:30
P	2/05/97	08:22	P	CARTER H	278	2/06/97	8:00A	9:15A	0	03:05	0	12:53	0	15:58
P	2/05/97	08:40	P	BLAKE W	75	2/06/97	8:05A	10:45A	0	01:53	0	14:05	0	15:58
A	2/06/97	09:25	A	CARTER H	278	2/06/97	12:10P	12:50P	0	00:53	0	03:25	0	04:18
A	2/06/97	09:56	A	CARTER H	278	2/06/97	11:25A	12:00P	0	01:12	0	02:04	0	03:16
A	2/06/97	01:39	P	COLLINS C	326	2/06/97	9:45P	10:30P	0	04:05	0	08:51	0	12:56
P	2/06/97	01:45	P	CLARK J	396	2/06/97	4:20P	5:10P	0	01:31	0	03:25	0	04:56
P	2/06/97	02:13	P	COLLINS C	326	2/06/97	9:05P	9:30P	0	02:03	0	07:17	0	09:20
P	2/06/97	03:22	P	CLARK J	346	2/06/97	10:10P	10:50P	0	01:57	0	07:28	0	09:25
A	2/06/97	03:24	P	CLARK J	396	2/06/97	9:25P	10:05P	0	04:23	0	06:41	0	11:04
P	2/06/97	07:41	P	CLARK J	396	2/06/97	11:10P	11:50P	0	06:05	0	04:09	0	10:14
P	2/06/97	09:16	P	CLARK J	396	2/06/97	12:55P	1:30P	0	01:57	-1	16:14	-1	18:11
A	2/06/97	12:03	P	COLLINS C	326	2/06/97	4:20P	5:05P	0	01:23	0	05:02	0	06:25
A	2/06/97	12:37	P	COLLINS C	326	2/06/97	2:00P	4:00P	0	03:18	0	03:23	0	06:41
A	2/07/97	10:00	A	OALMANN R	371	2/07/97	11:30A	12:05P	0	00:30	0	02:05	0	02:35
P	2/07/97	02:08	P	COLLINS C	326	2/07/97	6:15P	7:00P	0	00:52	0	04:52	0	05:44

WORK ORDER TIME STUDY

Date Range: 02/01/97 tr 02/28/97

Problem Code(s): SHCOF OR SHUOF

ED MED	W/O CREATED DATE	TIME	MED	FOREMAN	TRUCK NO	DATE COMPLETED	TIME ARRIVED	TIME LEFT	SR -> WO_R DAYS	SR -> WO_R HHMMS	WO_R -> WO_C DAYS	WO_R -> WO_C HHMMS	SR -> WO_C DAYS	SR -> WO_C HHMMS
A	2/07/97	02:24	P	CLARK J	396	2/07/97	2:50P	5:50P	0	04:47	0	03:26	0	08:13
P	2/07/97	02:39	P	COLLINS C	326	2/07/97	4:00P	5:00P	0	00:52	0	02:21	0	03:13
P	2/07/97	02:45	P	COLLINS C	326	2/07/97	5:20P	5:50P	0	01:15	0	03:05	0	04:20
P	2/07/97	05:30	P	CLARK J	396	2/07/97	9:25A	10:15A	0	02:56	-1	16:45	-1	19:41
A	2/08/97	01:11	P	CLARK J	396	2/08/97	2:50P	3:35P	0	01:44	0	02:24	0	04:08
P	2/08/97	05:08	P	CLARK J	396	2/09/97	9:55A	11:15A	0	01:03	0	18:07	0	19:10
P	2/08/97	05:12	P	CLARK J	396	2/08/97	7:20P	8:20A	0	02:17	-1	15:08	-1	17:25
P	2/08/97	05:53	P	CLARK J	396	2/08/97	6:25P	7:05P	0	01:43	0	01:12	0	02:55
P	2/08/97	07:21	P	CLARK J	396	2/08/97	10:00P	10:50P	0	04:16	0	03:29	0	07:45
A	2/09/97	01:43	P	CLARK J	396	2/09/97	2:45P	3:30P	0	04:25	0	01:47	0	06:12
A	2/10/97	10:58	A	BENSON C	346	2/10/97	11:45A	12:15P	0	01:23	0	01:17	0	02:40
P	2/10/97	01:54	P	COLLINS C	326	2/10/97	7:05P	7:45P	0	01:29	0	05:51	0	07:20
P	2/10/97	03:00	P	COLLINS C	326	2/10/97	6:20P	6:50P	0	00:45	0	03:50	0	04:35
P	2/10/97	03:58	P	COLLINS C	326	2/11/97	8:30A	9:15A	0	01:39	0	17:17	0	18:56
A	2/10/97	05:27	P	CARTER N	278	2/10/97	6:15P	7:00P	0	06:35	0	01:33	0	08:08
P	2/10/97	05:45	P	COLLINS C	326	2/10/97	8:30P	9:00P	0	01:01	0	03:15	0	04:16
P	2/10/97	07:08	P	CARTER N	278	2/10/97	8:40P	9:15P	0	02:47	0	02:07	0	04:54
P	2/10/97	07:10	P	CARTER N	278	2/10/97	9:30P	10:20P	0	02:37	0	03:10	0	05:47
A	2/11/97	01:26	P	COLLINS C	326	2/11/97	4:00P	4:45P	0	01:55	0	03:19	0	05:14
A	2/11/97	12:44	P	COLLINS C	326	2/11/97	3:00P	3:30P	0	03:48	0	02:46	0	06:34
	2/11/97	12:52	P	COLLINS C	326	2/11/97	5:05P	6:05P			0	05:13		
P	2/12/97	03:00	P	COLLINS C	326	2/12/97	4:10P	6:00P	0	00:38	0	05:00	0	03:38
P	2/12/97	03:14	P	CARTER N	278	2/12/97	4:30P	5:45P	0	02:09	0	02:31	0	04:40
P	2/12/97	07:11	P	COLLINS C	326	2/12/97	8:00P	9:30P	0	03:40	0	02:19	0	05:59
A	2/13/97	07:49	A	BENSON C	346	2/13/97	8:45A	9:15A	0	01:12	0	01:26	0	02:38
	2/13/97	08:14	A	CARTER N	278	2/12/97	6:30P	7:15P			-1	11:01		
A	2/13/97	09:39	A	OALMANN R	416	2/13/97	10:30A	11:00A	0	00:50	0	01:21	0	02:11
	2/13/97	01:52	P	BENSON C	346	2/12/97	11:45A	12:15P			-2	22:23		
P	2/13/97	02:13	P	COLLINS C	326	2/13/97	4:00P	5:00P	0	00:20	0	02:47	0	03:07
P	2/13/97	05:17	P	COLLINS C	326	2/13/97	6:30P	7:15P	0	01:07	0	01:58	0	03:05
P	2/13/97	07:12	P	COLLINS C	326	2/14/97	8:50P	10:30P	0	01:38	1	03:18	1	04:56
P	2/13/97	08:23	P	CARTER N	278	2/13/97	8:30P	9:15P	0	02:25	0	00:52	0	03:17
P	2/13/97	08:42	P	COLLINS C	326	2/14/97	3:20A	4:10A	0	01:26	0	07:28	0	08:54
P	2/13/97	09:13	P	JACKSON R	227	2/14/97	8:05A	8:45A	0	04:55	0	11:32	0	16:27
A	2/13/97	12:14	P	CARTER N	278	2/13/97	1:45P	2:54P	0	01:02	0	02:40	0	03:42
A	2/13/97	12:20	P	OALMANN R	416	2/13/97	12:55P	1:30P	0	01:02	0	01:10	0	02:12

WORK ORDER TIME STUDY
Date Range: 02/01/97 to 02/28/97
Problem Code(s): SIKOF OR SMHOF

D	W/O CREATED					TRUCK	DATE	TIME	TIME	SR -> WO_R		WO_R -> WO_C		SR -> WO_C	
HED	DATE	TIME	HED	FOREMAN		NO	COMPLETED	ARRIVED	LEFT	DAYS	HOURS	DAYS	HOURS	DAYS	HOURS
---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---
	2/14/97	10:56	A	CLARK J		371	2/14/97	11:40A	12:25A			0	01:29		
A	2/14/97	11:18	A	OALMANN R		416	2/14/97	11:40A	12:00P	0	01:54	0	00:42	0	02:36
	2/14/97	05:03	P	BLAKE W		75	2/13/97	10:30A	11:50A			-2	20:47		.
P	2/14/97	05:29	P	COLLINS C		326	2/14/97	4:30P	5:45P	0	01:47	0	02:16	0	04:03
P	2/14/97	09:57	P	COLLINS C		326	2/15/97	8:30A	9:30A	0	01:46	0	11:33	0	13:19
A	2/14/97	12:29	P	CARTER H		278	2/14/97	1:45P	2:30P	0	01:05	0	02:01	0	03:06
A	2/15/97	10:21	A	COLLINS C		326	2/15/97	10:30A	11:15A	0	01:03	0	00:54	0	01:57
P	2/15/97	02:04	P	CARTER H		278	2/15/97	8:30A	9:30P	0	00:53	0	07:26	0	08:19
P	2/15/97	02:39	P	COLLINS C		326	2/15/97	6:30P	7:30P	0	02:28	0	04:51	0	07:19
P	2/15/97	08:00	P	CARTER H		278	2/15/97	11:00P	11:40P	0	02:14	0	03:40	0	05:54
P	2/15/97	08:40	P	COLLINS C		326	2/16/97	12:00A	12:45A	0	00:39	0	16:05	0	16:44
P	2/15/97	09:44	P	COLLINS C		326	2/15/97	10:30P	11:00P	0	05:22	0	01:16	0	06:38
P	2/16/97	01:42	P	WILLIAMS W		416	2/17/97	8:00A	9:00A	0	00:49	0	19:18	0	20:07
P	2/16/97	02:10	P	BENSON C		346	2/17/97	7:45A	8:45A	0	01:43	0	18:35	0	20:18
P	2/16/97	02:12	P	BENSON C		346	2/17/97	9:00A	10:30A	0	01:14	0	20:18	0	21:32
P	2/16/97	04:19	P	JONES J		371	2/17/97	8:30A	9:15A	0	01:11	0	14:56	0	16:07
P	2/16/97	04:22	P	COLLINS C		326	2/16/97	9:30P	10:15P	0	05:26	0	03:53	0	07:19
P	2/16/97	07:00	P	COLLINS C		326	2/16/97	10:45P	11:00P	0	02:00	0	04:00	0	06:00
P	2/16/97	07:17	P	JONES J		371	2/17/97	9:20A	9:50A	0	01:25	0	14:33	0	15:58
P	2/16/97	07:42	P	CARTER H		278	2/16/97	11:30P	12:15P	0	02:56	-1	16:33	-1	19:29
P	2/16/97	12:57	P	COLLINS C		326	2/16/97	1:30P	2:30P	0	00:23	0	01:33	0	01:56
A	2/17/97	01:39	P	COLLINS C		326	2/17/97	2:25P	3:05P	0	01:40	0	01:26	0	03:06
A	2/17/97	03:42	P	BLAKE W		75	2/17/97	7:10P	7:20P	0	05:00	0	03:38	0	08:38
P	2/17/97	05:23	P	CARTER H		278	2/17/97	9:25P	10:00P	0	01:23	0	04:37	0	06:00
P	2/17/97	05:51	P	CARTER H		278	2/17/97	12:45P	1:15P	0	02:36	-1	19:24	-1	22:00
P	2/17/97	06:11	P	CARTER H		278	2/17/97	12:00A	12:30A	0	03:09	-1	18:19	-1	21:28
P	2/17/97	10:14	P	BLAKE W		75	2/17/97	10:40P	11:40P	0	01:27	0	01:26	0	02:53
P	2/17/97	10:16	P	BLAKE W		75	2/17/97	11:40P	12:00P	0	01:14	-1	13:44	-1	14:58
A	2/17/97	12:31	P	BLAKE W		75	2/17/97	1:50P	2:45P	0	01:03	0	02:14	0	03:17
	2/18/97	07:11	A	JACKSON R		227	2/17/97	12:50P	1:20P			-1	06:09		
	2/18/97	07:33	A	CARTER H		278	2/17/97	3:30P	4:15P			-1	00:42		
	2/18/97	10:30	A	BENSON C		346	2/18/97	12:00P	12:45P			0	01:15		
P	2/18/97	02:07	P	JACKSON R		227	2/18/97	2:20P	2:50P	0	-1:16	0	00:43	0	01:59
P	2/18/97	06:06	P	CARTER H		278	2/18/97	5:30P	6:30P	0	01:47	0	00:24	0	02:11
P	2/18/97	09:59	P	CARTER H		278	2/18/97	11:15P	12:00A	0	03:42	-1	14:01	-1	17:43
	2/18/97	12:33	P	JONES J		371	2/17/97	10:55A	11:35A			-2	23:00		

WORK ORDER TIME STUDY

Date Range: 02/01/97 tr 02/28/97

Problem Code(s): SNEOF OR SNHOF

I MED	W/O CREATED DATE	TIME	MED	FOREMAN	TRUCK NO	DATE COMPLETED	TIME ARRIVED	TIME LEFT	SR -> WO_R DAYS	HOURS	WO_R -> WO_C DAYS	HOURS	SR -> WO_C DAYS	HOURS
A	2/19/97	10:33	A	MELANCON H	346	2/19/97	11:00A	12:00P	0	02:08	0	01:27	0	03:35
A	2/19/97	11:04	A	OALMANN R	371	2/19/97	12:25P	12:55P	1	00:34	0	01:51	1	02:25
A	2/19/97	11:17	A	MELANCON H	346	2/19/97	12:30P	1:30P	0	00:49	0	02:13	0	03:02
	2/19/97	11:47	A	CARTER N	278	2/15/97	7:30P	8:15P			-4	08:28		
	2/19/97	01:05	P	COLLINS C	326	2/15/97	3:30P	4:00P			-4	02:55		
P	2/19/97	02:10	P	BENSON C	326	2/19/97	2:30P	3:00P	0	01:22	0	00:50	0	02:12
P	2/19/97	02:12	P	CARTER N	278	2/19/97	5:15P	6:00P	0	01:39	0	05:48	0	05:27
P	2/19/97	08:26	P	CARTER N	278	2/19/97	9:45P	10:45P	0	01:04	0	02:19	0	03:23
P	2/19/97	12:46	P	BLAKE W	75	2/19/97	12:00P	2:25P	0	00:25	0	01:39	0	02:04
	2/20/97	10:24	A	BENSON C	346	2/18/97	9:00A	9:15A			-3	22:51		
	2/20/97	10:31	A	JACKSON R	227	2/19/97	8:30A	9:00A			-2	22:29		
A	2/20/97	02:27	P	CARTER N	278	2/20/97	9:20A	10:10P	0	02:50	0	07:43	0	10:33
A	2/20/97	05:40	P	CARTER N	278	2/20/97	5:15P	6:30P	0	06:50	0	00:50	0	07:40
	2/20/97	07:24	P	CARTER N	278	2/20/97	10:5	11:45P			0	04:21		
	2/20/97	08:49	P	CARTER N	278	2/20/97	12:00A	1:30P			-1	16:41		
P	2/20/97	09:42	P	BLAKE W	75	2/20/97	12:30A	1:00A	0	01:14	-1	03:18	-1	04:32
P	2/20/97	09:55	P	BENSON C	416	2/21/97	11:30A	11:45A	0	02:45	0	13:50	0	16:35
P	2/20/97	11:39	P	BENSON C	416	2/21/97	8:30A	9:30A	0	01:19	0	09:51	0	11:10
	2/21/97	11:38	A	JACKSON R	227	2/20/97	10:20A	10:50A			-2	23:12		
A	2/21/97	11:55	A	OALMANN R	371	2/21/97	1:15P	1:45P	0	01:50	0	01:50	0	03:40
P	2/21/97	01:38	P	MELANCON H	346	2/21/97	2:00P	3:00P	0	01:22	0	01:22	0	02:44
A	2/21/97	02:18	P	CARTER N	278	2/21/97	3:15P	4:00P	1	02:43	0	01:42	1	04:25
P	2/21/97	03:13	P			2/21/97			0	02:00				
	2/21/97	03:21	P			2/21/97								
P	2/21/97	05:51	P	BLAKE W	75	2/02/97	10:55P	11:25P	0	01:18	-19	05:34	-19	06:52
A	2/21/97	05:55	P	CARTER N	278	2/21/97	10:00P	10:50P	0	09:05	0	04:55	0	14:00
P	2/21/97	06:32	P	BLAKE W	75	2/21/97	10:05P	10:45P	0	04:12	0	04:13	0	08:25
P	2/21/97	07:01	P	BLAKE W	407	2/21/97	8:00P	9:00P	0	01:25	0	01:59	0	03:24
P	2/21/97	07:04	P	BLAKE W	75	2/21/97	9:20P	9:52P	0	01:14	0	02:48	0	04:02
P	2/21/97	08:07	P	BLAKE W	75	2/21/97	12:30P	2/21/7	0	04:21				
P	2/21/97	08:49	P	JONES J	278	2/24/97	8:15A	9:30A	0	05:26	2	12:41	2	18:07
P	2/21/97	09:16	P	BLAKE W	75	2/22/97	4:25P	4:50P	0	02:21	0	21:34	0	23:55
P	2/21/97	10:16	P	CARTER N	278	2/21/97	11:00P	11:35P	0	04:44	0	01:19	0	06:03
P	2/21/97	10:50	P	CARTER N	278	2/21/97	12:45P	1:15P	0	01:13	-1	14:25	-1	15:38
A	2/21/97	12:28	P	BLAKE W	75	2/21/97	1:50P	2:18P	0	02:46	0	01:50	0	04:36
A	2/22/97	02:43	A	CARTER N	278	2/22/97	6:15(	7:00P	0	01:21	0	16:19	0	17:40

WORK ORDER TIME STUDY
Date Range: 02/01/97 to 02/28/97
Problem Code(s): SNCOF OR SNHOF

D MED	U/O CREATED DATE	TIME	MED	FOREMAN	TRUCK NO	DATE COMPLETED	TIME ARRIVED	TIME LEFT	SR -> WO_R DAYS	SR -> WO_R HOURS	WO_R -> WO_C DAYS	WO_R -> WO_C HOURS	SR -> WO_C DAYS	SR -> WO_C HOURS
A	2/22/97	11:32	A	BLAKE W	75	2/22/97	1:30P	2:50P	0	02:42	0	02:58	0	05:40
A	2/22/97	04:56	P	CARTER N	278	2/22/97	8:15P	9:00P	0	05:13	0	04:04	0	09:17
P	2/22/97	04:59	P	CARTER N	278	2/22/97	7:15P	8:00P	0	03:05	0	03:01	0	06:06
P	2/22/97	07:59	P	BLAKE W	75	2/22/97	1:15P	1:45P	0	03:16	-1	17:46	-1	21:02
P	2/23/97	01:59	A	JACKSON R	227	2/24/97	8:00A	8:50A	0	02:34	1	06:51	1	09:25
P	2/23/97	01:44	P	CARTER N	278	2/23/97	2:30P	3:15P	0	00:55	0	01:31	0	02:26
A	2/23/97	12:19	P	CARTER N	278	2/23/97	5:45P	6:15P	0	00:23	0	05:56	0	06:19
A	2/24/97	09:18	A	JACKSON R	227	2/24/97	10:15A	11:10A	0	00:01	0	01:52	0	01:53
A	2/24/97	02:01	P	BENSON C	416	2/24/97	3:45P	4:15P	0	04:41	0	02:14	0	06:55
	2/24/97	02:18	P	BENSON C	416	2/21/97	10:30A	11:20A			-4	21:02		
	2/24/97	02:19	P	BENSON C	416	2/21/97	11:55A	2:45P			-3	00:26		
P	2/24/97	05:03	P	BENSON C	416	2/24/97	6:00P	6:30P	0	03:04	0	01:27	0	04:31
A	2/24/97	12:49	P	OALMANN R	346	2/24/97	1:10P	1:40P	0	01:09	0	00:51	0	02:00
	2/25/97	01:00	P	JACKSON R	227	2/21/97	10:00A	11:35A			-5	22:35		
P	2/25/97	01:37	P	BLAKE W	75	2/25/97	2:15P	3:15P	0	01:36	0	01:38	0	03:14
P	2/25/97	02:20	P	BLAKE W	75	2/25/97	4:40P	6:00P	0	00:41	0	03:40	0	04:21
P	2/25/97	03:28	P	BLAKE W	75	2/25/97	6:15P	6:55P	0	01:55	0	03:27	0	05:22
	2/25/97	03:30	P			2/26/97								
	2/25/97	03:34	P			2/26/97								
	2/25/97	03:39	P	OALMANN R	346	2/24/97	10:30A	11:30A			-2	19:51		
	2/25/97	03:42	P	CARTER N	278	2/21/97	1:15A	1:45A			-5	10:03		
	2/25/97	03:43	P	BLAKE W	75	2/21/97	12:30P	12:55A			-5	21:12		
P	2/25/97	04:19	P	BENSON C	416	2/25/97	5:50P	7:15P	0	02:28	0	00:56	0	03:24
A	2/25/97	12:22	P	BENSON C	416	2/25/97	1:45P	2:30P	0	01:17	0	02:08	0	03:25
P	2/26/97	05:09	A	BLAKE W	75	2/25/97	2:30A	3:45A	0	05:58	-2	22:36	-1	04:34
	2/26/97	08:38	A	JONES J	278	2/26/97	11:00A	11:15A			0	02:37		
A	2/26/97	11:26	A	JACKSON R	227	2/26/97	12:00P	12:15P	0	02:24	0	00:49	0	03:13
A	2/26/97	02:15	P	BENSON C	416	2/26/97	2:45P	3:30P	0	03:42	0	01:15	0	04:57
P	2/26/97	02:27	P	BENSON C	416	2/26/97	4:15P	5:00P	0	02:11	0	02:33	0	04:44
	2/26/97	02:47	P	COLLINS C	326	2/25/97	12:05P	12:35P			-2	21:48		
P	2/26/97	02:48	P	BLAKE W	75	2/26/97	4:25P	6:00P	0	02:00	0	03:12	0	05:12
A	2/26/97	03:04	P	BLAKE W	75	2/26/97	6:30P	7:10P	0	03:16	0	04:06	0	07:22
	2/27/97	09:18	A	JACKSON R	227	2/26/97	12:15P	12:55P			-1	03:37		
P	2/27/97	08:00	P	BLAKE W	75	2/27/97	8:40P	9:25P	0	01:13	0	01:25	0	02:38
	2/28/97	08:50	A	CARTER N	278	2/27/97	8:15A	8:45P			-1	11:55		
A	2/28/97	10:56	A	COLLINS C	326	2/28/97	11:20A	12:15P	0	00:26	0	01:19	0	01:45

WORK ORDER TIME STUDY
Date Range: 02/01/97 tr 02/28/97
Problem Code(s): SHCOF OR SHHOF

D MED	W/O CREATED DATE	TIME	MED	FOREMAN	TRUCK NO	DATE COMPLETED	TIME ARRIVED	TIME LEFT	SR -> WO_R DAYS	SR -> WO_R HOURS	WO_R -> WO_C DAYS	WO_R -> WO_C HOURS	SR -> WO_C DAYS	SR -> WO_C HOURS
A	2/28/97	10:59	A	COLLINS C	326	2/28/97	12:20P	12:50P	0	01:26	0	01:51	0	03:17
A	2/28/97	04:08	P	BENSON C	416	2/28/97	4:35P	5:15P	0	04:26	0	01:07	0	05:33
A	2/28/97	12:09	P	BENSON C	416	2/28/97	1:45P	2:30P	0	05:37	0	02:21	0	07:58
A	2/28/97	12:24	P	COLLINS C	326	2/28/97	1:45P	2:45P	0	01:36	0	02:21	0	03:57
	3/03/97	10:36	A	CLARK J	278	2/28/97	2:00P	2:50P			-3	04:14		
	3/03/97	11:34	A	MELANCON M	346	2/28/97	1:15P	1:30P			-3	01:56		
	3/03/97	11:53	A	MELANCON M	346	2/28/97	8:15A	9:00A			-4	21:09		

SECTION 3
COMMUNICATION AND REPORTING

COMMUNICATION AND REPORTING

3.1 GENERAL

There are three types of wastewater situations which can occur in the collection system that can result in an overflow requiring reports to be submitted to the E.P.A. and the La. D.E.Q.

3.2 SEWER HOUSE CONNECTION AND MANHOLE DISCHARGES

The first type involves an overflow from a sewer house connection (S.H.C.) or a sewer manhole caused by an obstruction, defect in the piping or other cause. This type of problem is usually first detected by a private citizen and reported to the Sewerage and Water Board as either a blockage on private property or a possible overflow of the sewer cleanout or a sewer manhole in the street.

The complaint is called in to the Phone Center by the citizen or possibly a Sewerage and Water Board employee who observes the problem. After an initial data query, the Customer Assistance Specialist then issues a service request which is routed electronically via network computer to the emergency dispatcher who will radio dispatch an emergency inspector to investigate the problem as soon as possible. The operation is staffed on a twenty-four hour, seven day basis. The Emergency Inspectors are assigned specific routes in the city and the inspection is assigned accordingly.

Once the Emergency Inspector confirms that a blockage or overflow exists within the Sewerage and Water Board system, the inspector relays this information back to the emergency dispatcher by radio. The Dispatcher then initiates a phone call and a work order to the appropriate department so resolution of the problem can be accomplished as soon as possible. The work order will contain specific work codes to identify a sewer house connection overflow (SHCOF) or main sewer overflow (SMOF), both of which are given a priority one (1) for emergency response which is the highest level priority.

The work order is transmitted via the local area network (LAN) computer system to the appropriate department supervisor for assignment to a work crew for corrective action. The Gravity Supervisor typically assigns the work by radio to ensure rapid response. If the problem occurs at the start of either of the two (2) daily shifts the supervisor will distribute the work order.

The crew truck foreman, a Utility Maintenance Supervisor I, II or III, responds to the location indicated on the work order and corrects the problem. The inspector will note the work done by writing a description at the bottom of the work order. This may include the resolution of the problem or the referral to another department, such as pipe repair or replacement, if necessary. If the job is referred by radio, the truck foreman completes the Sewerage and Water Board Networks Work Order form in the field.

The work orders are collected and reviewed for accuracy by the Supervisor III or IV at the end of each shift and sent to the data entry department for placement in the CASSWORKS work order system as a record of the job. Copies of all work orders bearing the SMOF and SHCOF codes are also hand-carried daily to the Environmental Affairs Division (EAD) for their information in completing the Sanitary Sewer Overflow (SSO) reports which are sent to EPA and La. D.E.Q. These reports are hand-delivered to avoid "pick-up" jobs (which are those jobs assigned that may not have originated as a complaint) from being overlooked in the record keeping phase.

These Sewer House Connection Overflows and Sewer Manhole Overflows (SSOs) are typically short duration small volume overflows which, at the request of EPA Region 6, are reported monthly by the EAD. The EAD tracks these jobs on a weekly basis. As a quality assurance measure, the EAD, Environmental Enforcement Technician I (EET I), works with a department Information Processor Operator (IPO) to query the CASSWORKS system for a listing of SHCOF and SMOF coded work orders. The work order copies generated by the query are compared to the copies that were hand-delivered by the Gravity Department Supervisor as a safeguard against overlooking any report, especially "pick-up" jobs.

The EET I then uses the information in the work order tracking report to determine when the problem was first discovered and confirmed by Sewerage and Water Board personnel as a valid complaint to calculate the duration of the overflow. The elapsed time of the overflow event is reduced to minutes and a total potential volume for the overflow is calculated using estimated flow rates. This estimate of possible maximum volume from an overflow does not indicate or imply that any or all of the overflow reached the drainage system.

The EAD Supervisor then takes the data generated to prepare a notification letter for the Deputy Director's signature and forwards the letter to E.P.A. and La. D.E.Q., as required. These reports are submitted monthly based on agreement with E.P.A. that this reporting frequency is acceptable.

The types of situations requiring more immediate reporting to E.P.A. and La D.E.Q. are those which usually involve greater volumes of sewage that actually reached the drainage system and which are caused by unusual circumstances. These include sewage pumping station outages and force main breaks. Another type of unusual event would be an operational upset at the sewage treatment plant which would require routing of flows to the river. This latter situation is rare and the discharge report is developed from information received directly from the treatment plant.

3.3 SEWERAGE PUMPING STATION DISCHARGES

A pump station outage is usually reported by the operator as a result of periodic, scheduled inspection of the station route. An overflowing sewer manhole (SMOF) may also indicate an outage, in which case, the tracking method described under Sewer House Connection and Manholes Overflows is employed.

The pump station operator will return the station to service and note in the station log that an outage has occurred. The Pump Station Operator will also immediately advise supervisors of the outage. A determination is made at this time and by the Sewerage Pumping Operations (SPO) Supervisor of whether an overflow has occurred, due to the outage.

The location, time, date and other pertinent information is cross referenced to the work order tracking reports by the EAD to determine any correlation with the Gravity Department reports. If an overflow has occurred, the EAD staff works with the SPO Supervisor to determine duration, estimate flow and volume and determine that appropriate action is undertaken. This information is reduced to the overflow report form which EAD uses to prepare the notification letter. These notices are sent as soon as possible to the E.P.A. and D.E.Q. as required.

3.4 SEWERAGE FORCE MAIN DISCHARGES

In the case of a sewer force main break, the work order may originate from a citizen complaint, Sewerage and Water Board inspection or a notice of reduction in flow from the sewerage treatment plant. This type of problem results in the EAD and the Pressure Department Supervisor as well as the General Superintendent, Chief of Networks, Pressure System Superintendent and Pumping Operations being notified immediately via beeper, telephone or radio. Staff is available twenty-four (24) hours, seven (7) days a week for this purpose.

The Pressure Department Supervisor, EAD Supervisor or on-call person and usually the Department Heads of Pressure, Sewerage Pumping, and EAD will converge on scene to determine immediate remediation action. The appropriate work orders are generated, input is received by all departments involved to assist in estimating volume and duration for reporting purposes. In the case of environmental impact from these incidents, the E.P.A. and La. D.E.Q. are advised orally of the problems and the written notice is forwarded as soon as possible pending all necessary information being developed.

The records keeping and reporting process for this type of event is supervised by the Engineer in charge of the repair work because the Sewerage and Water Board recognizes the potential for this type of an event to have a higher potential for adverse environmental impact. The accelerated record keeping process also allows the Sewerage and Water Board to provide more timely information to E.P.A. and D.E.Q. of these events and their resolution.

SECTION 4
SANITARY SEWER OVERFLOW CONTAINMENT PLANNING

SANITARY SEWER OVERFLOW CONTAINMENT PLANNING

4.1 GENERAL

Sanitary Sewer Overflows can be caused by blockages or restrictions in service connections laterals or sewers, damaged or deteriorating gravity sewers or force mains, and equipment or power failures at pump stations or lift stations. Most discharges are minor and can be promptly cleaned up as part of the standard work order procedure. Occasionally a discharge or overflow is of such a magnitude or duration that a coordinated action plan must be developed to minimize the impact on nearby waterways or public areas.

When these situations do arise, most commonly associated with force main repairs or pump lift station failures, Board personnel will be required to make a number of decisions very quickly upon arriving on the site. Fortunately, in many cases the discharge can be returned to the gravity system with little or no environmental impact. If this cannot be done, however, every effort must be made to contain the discharge when the condition exists to be re-directed into the sewerage system. In order to communicate and coordinate with all associated Board personnel a plan must be developed to identify these agreed-upon actions.

The plan must consider all available options for immediately eliminating the discharge or diverting to a containment area, as well as options for containing the contents of, for example, a damaged main which will be evacuated during repair work. It is impossible to anticipate all the specific conditions and factors which may be relevant for any particular incident. Each incident will be unique.

4.2 CONSIDERATIONS

The following are some of the more significant considerations which will impact the ultimate approach to mitigation activities.

- Can any or all of the discharge be returned to the sewerage system immediately? If so, how much, where and by what means?
- What is the anticipated duration of the repair activity?
- Can normal sewage flow be rerouted? If so how much?
- How many and which pump stations will be affected by isolation of the force main?
- Do any of the stations have the capability to bypass flow to the gravity system?
- How long can the normal sewage flow in the affected gravity sections be interrupted before property damage or upstream overflows occur?
- Is there the capability to create in-system containment by artificial drawdown of the associated gravity system(s) and if so, how much?
- Is there the capability to create a containment area utilizing a drainage canal or catch basin, how would the flow be reintroduced into the sewerage system and could an effective clean-up of the containment area be accomplished? (One or more containment areas could be considered not only at the repair site but at an affected pump station or other location).

- Is there a capability to haul sewage (vac tanker, vac truck etc.) from either the repair site or anticipated up-stream overflow location?

- Is a rainfall event anticipated during the repair or clean-up activities?

Because of the varying conditions, locations and circumstances which have an impact on the planning process the development of specific procedures is not practical. It is far more important for a response action plan such as included herein, to provide for the availability of resources including senior management expertise, such that a response can be initiated in an expedient and thoughtful manner. As evidenced in other sections of this document, the Board has a policy of requiring Division and Department managers to be available on call 24 hours per day and to personally respond to all emergencies including Sanitary Sewer Overflows.

The ability to call on the experience of these managers as a matter of policy, insures all possible avenues of mitigation are considered and all required resources are dedicated to this response effort.

Containment Scenarios

In order to assist in the mitigation the discharge of sanitary sewage to the storm sewage collection system and to the waters of the United States, the following six (6) scenarios were developed:

- Gravity Collection System Blockage or Restriction
- Gravity Collection System Damaged or Deteriorated Main
- Pressure System Damaged or Deteriorated Force Main
- Pressure System Scheduled Force Main Maintenance
- Sewage Operations Single Station Failure
- Sewage Operations Multiple Station Failure

Gravity Collection System Blockage or Restriction

The greatest number of discharges of sanitary sewage are caused by either blockages or restrictions in the gravity collection system. However, these events usually result in a minimal discharge of sanitary sewage due to their predominant occurrence in small diameter sewer lines with low flow. The best approach in handling these problems is to mitigate the discharge of sanitary sewage which involves attacking the cause of the overflows by quickly removing the blockage or restriction and re-establishing normal flow in the system to reduce the total discharge volume. The S&WB was to remove any discharge of sanitary sewage that may be present. Combination units in conjunction with crews using hoses will attempt to vacuum up material deposited during the discharge and return same to the sanitary sewage collection system.

Gravity Collection System Damaged or Deteriorated Main

The volume of discharge of sanitary sewage resulting from damaged or deteriorated gravity mains can vary greatly depending on the location of the defect in the collection system, as well as the location of the system itself. The failure of an 8" main at the shallow, high end of the system generally will present less of a threat of discharge than the collapse of an 18" main downstream. However, the failure of an 8" main in a well-point sand environment can present more of a challenge than that of a much larger main installed in clay and result in a larger possible discharge if action is not taken to mitigate the discharge.

Thus, the method of attack used to handle spill containment and mitigation involving needed repairs to damaged or deteriorated gravity mains depends on the anticipated duration of the corrective maintenance activity.

If a Gravity Division repair crew can be dispatched to the scene as soon as the problem is detected, sewer to sewer diversion by pass pumping will not be set up. The crew will either complete the necessary repair work that day or break out the defective pipe freeing the obstruction to normal flow. This will eliminate the discharge. At that point, steps will be taken to return discharged sewage to the collection system. However, if the repair crew is unable to complete the repairs or provide relief, then sewer to sewer diversion pumping will be set up and operated until the obstruction is removed. Once repairs have been completed, the area will be cleaned up and discharged sewage returned to the collection system wherever possible.

Pressure System Damaged or Deteriorated Force Main

Many factors must be considered by the personnel who respond to the discharge of sanitary sewage created by the failure of a damaged or deteriorated force main:

- the size and material composition of the main.
- the location of the damaged or deteriorated main in the force main system.
  the ability to isolate the damaged or deteriorated force main and re-route the flow.
- the number of stations affected by the main and its isolation.
- the ability to store sanitary sewage in the sewage collection system before a discharge is needed to prevent impact on life, health, or significant property damage.
- the anticipated rainfall that may occur before repairs are completed to the force main.
- the ability to contain and store the discharge of sanitary sewage in canals or drainage collection system near the location of the force main failure, including the volume of such containment before the sanitary sewage reaches the waters of the United States.
- the ability to effectively re-introduce the contained sanitary sewage into the sanitary sewage collection system for proper treatment and disposal.

Time is of the essence. It is impractical to list exactly all locations in the Board's force main system where containment and re-entry of discharged sanitary sewage into the sanitary sewage collection system is a possibility. However, the employees responding to emergencies of this nature are thoroughly familiar with the Board's systems. Based upon their technical expertise, they decide the proper course of action to be taken once they have assessed the situation.

Pressure System Scheduled Force Main Maintenance

When scheduled maintenance is required to the force main system (i.e. exercising of valves that may result in the discharge of sanitary sewage into the storm water collection system, tying in new mains to the force main system, repairs to a force main valve, etc.), coordination between the Board's Networks and Operations Departments is required. They consider the following options prior to the initiation of any force main scheduled maintenance:

- the anticipated duration of the outage of the force main system.
- the number of stations affected by the outage.
- the ability to re-route flows during the outage.
- the ability to drag down the collection systems contributory to the force main that will be out of service to allow for system storage before the discharge of sanitary sewage to the storm water collection system is necessary.
- the weather forecast prior to and during the scheduled force main outage.
- the ability to contain sewage that may be discharged into the storm water collection system and re-introduce it into the sewage collection system after the force main is restored to service.

As is the case for outages of force mains due to deterioration or damage, it is impractical to list exactly all locations in the Board's force main system where containment and re-entry of discharged sanitary sewage into the sanitary sewage collection system is a possibility. However, the employees coordinating scheduled force main maintenance are thoroughly familiar with the Board's systems. Based upon their technical expertise, they decide the proper course of action to be taken once they have assessed the situation.

Sewage Operation Single Station Failure

When a single sewage pumping station is reported out of service, a Pumping Station Supervisor (PSS) or Pumping Station Supervisor Assistant (PSSA) is dispatched to the scene. The department's goal is to have that individual present at the station within 30 minutes of notification. When that individual arrives, the situation is analyzed using the following criteria:

- can the station be returned to operation quickly (i.e. by resetting a circuit breaker, or unclogging a bubbler line) or will the station be out for a protracted period of time due to a major failure (i.e. a lightning strike or fire that has destroyed major electrical components, or a mechanical failure that has resulted in a flooded station requiring the removal and drying of components?)
- is there sufficient storage in the system to avoid an overflow prior to the return of the station to operation?
- if storage is inadequate, can the station be bypassed using portable pumping units?
- can the level of sewage in the system be reduced or the level maintained sufficiently low enough to avoid an overflow by using a portable pump from the system serviced by the affected station to the collection system serviced by an adjacent pumping station?
- if the discharge of sewage into the storm drainage collection system occurs, is containment and re-introduction into the sanitary collection system possible?

The PSS or PSSA uses knowledge of the stations and their relationship to the other systems of the Board to select the proper combination of resources available to eliminate or mitigate the discharge of sanitary sewage into the storm water collection system.

Sewage Operation Multiple Station Failure

The Board rarely experiences outages of multiple sewage pumping stations at the same time. When this occurs it is generally the result of an Act of God (i.e. hurricanes) that has affected the source of commercial power over a large portion of the City of New Orleans. In those cases, there is little that can be done to mitigate the discharge of sanitary sewage to the storm drainage collection system. However, for those cases not involving the loss of commercial power, the Board has or is in the process of obtaining generators, submersible pumps and portable sewage pumping station control equipment to provide for temporary pumping of the sewage until the stations have been returned to service. Attached are listings (see page 5-71) of the equipment that is available to handle the restoration of pumping at failed sewage pumping stations. These lists cover equipment in the Facilities Maintenance and Operations Departments.

Temporary Storage of Overflowed Sewage

Unlike other areas of the country with positive slopes, New Orleans has an advantage in that large overflows can be temporarily contained in our large (storage) canals and later returned to the sewer system in dry weather. Close management will be taken to limit public access to any contaminated canal waters. When conditions allow, the Board will limit the amount of drainage pumping to allow maximum containment of overflowed sewage. The volume of water returned to the sewer system will normally exceed the volume overflowed to any drainage canal by the volume of water mixed with the sewage in the canal. Tests, as necessary, will be taken to determine the extent of mixing and contamination. Where possible waters will be physically separated from the overflowed sewage.

Disinfection of Public Areas Exposed to Overflowed Sewage

For public areas that have come in contact with overflowed sewage, the Board will take reasonable action to implement disinfection procedures. Generally, these procedures will involve an application of an oxidizing agent such as a dilute chlorine solution on constructed surfaces (streets, driveways, walls, etc.) and a lime application on organic surfaces (lawns, soil areas, etc). The level and extent of disinfection will be determined in the field. It is not the intent of this disinfection procedure to infer that total pathogen destruction has been achieved, nor that any other level of disinfection has been achieved.

SECTION 5
AVAILABLE EQUIPMENT

AVAILABLE EQUIPMENT

5.1 VEHICLES

The following pages list the available equipment within several departments of the Sewerage and Water Board. These departments are involved with emergency response on a daily basis. While each of these departments does not have a specific list of equipment identified exclusively for sewer, water, drainage or power, each department does remain committed to providing the resources required to prevent or minimize a Sanitary Sewer Overflow to the maximum extent possible. In fact, these events are given the highest priority and any and all resources necessary to remedy the problem are made available. The lists are separated by the domicile or "home" departments which are separated as follows:

Department	**Domicile Series**
Stations	2000
Facility Maintenance	4000
Networks	
Emergency	6000
Pressure	6400
Gravity	6500
Support	6600
Warehouse (spare)	9000

Equipment needs are evaluated by the Sewerage and Water Board on an annual basis and purchased based primarily upon this evaluation. This document is not intended to limit equipment to its current levels in quantity, description, operator or any other identified category. The Board remains committed to reviewing the equipment needs on a continuing basis and providing for additional equipment during the time periods when it is required.

Department of Operations

**** Domicile : 2100

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
11	90 CHEVY LUMINA	2100	0841		MOEINIAN,B.	LA 101290	C102 TH	0 Y	A 3/16/90
337	95 FORD F-150 4X4	2100	0841		SPRINGER, R.	LA 125987	C322 TH	0 Y	A 5/01/95

Total Pieces of Equipment : 2

**** Domicile : 2200

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
34	95 CHEV ASTRO VAN	2200	0841		VARIOUS	LA 128626	C311	0 Y	A 7/06/95
129	87 DODGE MINI VAN	2200	0841		VARIOUS	LA 93812	C311	0 Y	A 5/20/87

Total Pieces of Equipment : 2

**** Domicile : 2300

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
162	89 CHEVY C1500 PU	2300	0841		RICHARD,R.	LA 95852	C302 TH	0 Y	A 2/06/89
A-416	84 HESCO PWR.UNT.	2300	0841		VARIOUS	LA 77041	C748	0 N	A 3/14/84
A-577	95 KUBOTA T1600	2300	0841		VARIOUS	LA NONE	C843	1 Y	A 5/15/95

Total Pieces of Equipment : 3

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
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**** Domicile : 2310

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
131	95 CHEV C2500 P\U	2310	0841		BARROW, J.	LA 126008	C315 TH	1 Y	A 8/31/95
272	88 CHEVY C3500 UT	2310	0841		ROBERTSON, R.	LA 93203	C315 TH	1 Y	A 3/02/88
283	91 CHEVY K1500 EX	2310	0841		VARIOUS	LA 106804	C322	1 Y	A 2/25/91
296	90 CHEVY C2500 PU	2310	0841		LEBLANC, F.	LA 99713	C315	1 Y	A 3/16/90
338	90 CHEVY C2500 UT	2310	0841		BATTAGLIA,J.	LA 99724	C315	1 Y	A 3/15/90
379	94 FORD F150 PU	2310	0841		SHAW,R	LA 119112	C302 TH	0 Y	A 3/01/94

Total Pieces of Equipment : 6

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**** Domicile : 2316

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-563	86 CASE FRTEND LD	2316	0840		VARIOUS	LA NONE	C023	1 N	A 11/17/86

Total Pieces of Equipment : 1

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**** Domicile : 2330

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
383	94 FORD F150 PU	2330	0841		SOUBLET,L.	LA 119110	C302 TH	0 Y	A 3/01/94
453	94 CHEVY K1500	2330	0841		NEELY,M.	LA 119069	C322 TH	0 Y	A 2/03/94

Total Pieces of Equipment : 2

**** Domicile : 2400

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
44	95 CHEV C2500 UT	2400	0841		CELESTINE, J.	LA 125976	C315	1 Y	A 6/08/95
47	95 CHEV C2500 UT	2400	0841		SIVERS,C	LA 125977	C315	1 Y	A 6/08/95
48	92 CHEVY K2500 EX	2400	0841		FABRE,R.	LA 110488	C322 TH	1 Y	A 3/04/92
51	95 CHEV C2500 UT	2400	0841		HEALS, H.	LA 125978	C315	1 Y	A 6/08/95
84	94 FORD F250 P/U	2400	0841		STILES,K.	LA 119268	C315 TH	1 Y	A 5/10/94
86	91 CHEVY C2500 UT	2400	0841		GODFREY,F.	LA 106907	C315	1 Y	A 4/24/91
87	91 CHEVY C2500 UT	2400	0841		JOSEPH, W.	LA 106906	C315	1 Y	A 4/24/91
94	91 CHEVY C2500 UT	2400	0841		ROGERS,E.	LA 106905	C315	1 Y	A 4/24/91
121	90 FORD F450 UTIL	2400	0841		RANDOLPH,E.	LA 103930	C315 TH	1 Y	A 11/06/90
187	92 CHEVY C2500 UT	2400	0841		TALBERT, R.	LA 110548	C315 TH	1 Y	A 4/01/92
340	90 CHEVY C2500 UT	2400	0841		NEWKIRK,W.	LA 99723	C315	1 Y	A 3/15/90
362	90 CHEVY C2500 UT	2400	0841		WORTMAN, R.	LA 99720	C315	1 Y	A 3/15/90
A-505	95 KUBOTA T1600	2400	0841		VARIOUS	LA NONE	C843	1 N	A 2/06/95
A-550	82 HESCO PUMP	2400	0841		FABRE, R.	LA 72899	C748	0 N	A 6/11/82

Total Pieces of Equipment : 14

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
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**** Domicile : 2411

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-521	66 BOAT TRAILER	2411	0840		FARPE, R.	LA 6292	C610	9 N	A 3/17/83

Total Pieces of Equipment : 1

**** Domicile : 2412

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
96	91 CHEVY C2500 UT	2412	0841		ALEXANDER, R.	LA 106904	C315	1 Y	A 4/24/91
228	89 CHEVY C20 P/U	2412	0841		JAMES, S.	LA 95877	C315	1 Y	A 2/22/89

Total Pieces of Equipment : 2

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**** Domicile : 2413

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
385	94 FORD F150 PU	2413	0841		BOOTHE, G.	LA 119109	C302 TH	0 Y	A 3/01/94

Total Pieces of Equipment : 1

Department of Facility Maintenance

**** Domicile : 4000

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
24	90 CHEVY LUMINA	4000	0841		SEMEL,G.	LA 101286	C102 TH	0 Y	A 3/16/90

Total Pieces of Equipment : 1

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**** Domicile : 4100

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
28	91 CHEV ASTRO VAN	4100	0841		MAINS,R.	LA 106851	C311 TH	0 Y	A 4/01/91
A-501	84 CLARK LPG LIFT	4100	0841		VARIOUS	LA NONE	C874	2 N	A 12/04/84
A-579	92 HESCO PWR.UNT.	4100	0841		VARIOUS	LA 110637	C748	0 N	A 6/15/92
A-641	95 QFI GENERATOR	4100	0841		VARIOUS	LA	C749	1 Y	A 1/17/96

Total Pieces of Equipment : 4

**** Domicile : 4110

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
53	95 CHEV C2500 UT	4110	0841		POSEY, J.	LA 125979	C315	1 Y	A 6/08/95
85	94 FORD F250 UTIL	4110	0841		HARMAN, T.	LA 119252	C315 TH	1 Y	A 5/12/94
167	94 FORD F250 UTIL	4110	0841		MC DONALD, S.	LA 119253	C315 TH	1 Y	A 6/01/94
241	94 FORD F250 UTIL	4110	0841		BROULETTE, B.	LA 119256	C315 TH	1 Y	A 6/01/94
300	82 FORD F700 DERK	4110	0841		VARIOUS	LA 56074	C594	0 Y	A 1/25/82
321	84 FORD ALTEC BKT	4110	0841		VARIOUS	LA 75655	C590	0 Y	A 10/05/84
369	89 CHEVY C20 P/U	4110	0841		ALEXANDER, J.	LA 95883	C315 TH	1 Y	A 2/28/89
375	93 FORD F800 FLTB	4110	0840		VARIOUS	LA 109908	C541	1 Y	A 4/20/93
471	87 FORD ALTEC BKT	4110	0841		VARIOUS	LA 93887	C591	1 Y	A 7/28/87
491	96 FORD F450	4110	0841		VARIOUS	LA 137300	C540	1 Y	A 7/17/96
A-403	81 ALTEC UTL TRAL	4110	0841		VARIOUS	LA 56075	C612	9 N	A 1/25/82
A-412	83 FMC CHIPPER	4110	0841		VARIOUS	LA 70816	C612	0 N	A 10/03/83
A-419	50 CABLE REEL	4110	0841		VARIOUS	LA 6064	C612	9 N	A 3/17/83
A-468	64 PORT GENERATOR	4110	0841		VARIOUS	LA 6045	C748	0 N	A 3/17/83
A-622	95 SAUBER REEL TR	4110	0841		VARIOUS	LA 126021	C612	0 Y	A 9/18/95
C-491	96 LINDSEY	4110	0840		UNASSIGNED		C711	0 Y	A 7/17/96

Total Pieces of Equipment : 16

**** Domicile : 4120

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
139	91 CHEVY C2500 UT	4120	0841		WEAVER, E.	LA 106902	C315 TH	1 Y	A 4/24/91
197	94 FORD F250 UTIL	4120	0841		MANCUSO,E.	LA 119246	C315 TH	1 Y	A 6/01/94
372	89 CHEVY C20 P/U	4120	0841		LACHUTE,A.	LA 95881	C315	1 Y	A 3/02/89

Total Pieces of Equipment : 3

SWB EMIS SYSTEM
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**** Domicile : 4130

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
35	95 CHEV ASTRO VAN	4130	0841		PRIMEAUX, R.	LA 128625	C311	0 Y	A 7/06/95
79	90 FORD AERO. VAN	4130	0841		QUEBEDAUX,H.JR.	LA 101305	C311 TH	0 Y	A 5/29/90
95	94 FORD F250 UTIL	4130	0841		GOMILA, K.	LA 119251	C315	1 Y	A 6/01/94
97	95 CHEV C2500 UT	4130	0841		AGUILERA, R.	LA 125980	C315	1 Y	A 6/08/95
127	91 CHEVY C2500 UT	4130	0841		HONOREE,E.	LA 106903	C315 TH	1 Y	A 4/24/91
199	94 FORD F250 UTIL	4130	0841		ABLE,R.	LA 119255	C315 TH	1 Y	A 6/01/94
467	89 CHEVY C20 P/U	4130	0841		RANKO,R.	LA 95880	C315	1 Y	A 3/02/89
469	89 CHEVY C20 P/U	4130	0841		HIHAR,K.	LA 95879	C315	1 Y	A 3/03/89

Total Pieces of Equipment : 8

**** Domicile : 4260

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
68	88 CHEVY C1500 PU	4260	0841		VARIOUS	LA 93207	C302	0 Y	A 2/29/88
153	95 CHEV C2500 P\U	4260	0841		DESLATTE, H.	LA 126006	C315	1 Y	A 8/31/95
213	96 CHEVY 4X4 EXT	4260	0841		VARIOUS	LA 137202	C319	0 Y	A 6/05/96
250	88 FORD 350 FLTBD	4260	0841		MILLER, J.	LA 94400	C541	1 Y	A 7/15/88
288	89 CHEVY G30 VAN	4260	0841		VARIOUS	LA 95861	C314	1 Y	A 2/17/89
291	89 CHEVY G30 VAN	4260	0841		VARIOUS	LA 95862	C314	1 Y	A 2/17/89
301	90 CHEVY C2500 PU	4260	0841		VARIOUS	LA 99715	C315	1 Y	A 3/16/90
317	90 CHEVY C2500 PU	4260	0841		VARIOUS	LA 99717	C315	1 Y	A 3/16/90
322	94 FORD F150 PU	4260	0841		BARNES,G.	LA 119117	C302	0 Y	A 3/01/94
332	94 FORD F150 PU	4260	0841		HATHAWAY,T.	LA 119115	C302 TH	0 Y	A 3/01/94
345	96 CHEVY G30 VAN	4260	0841		WINCHESTER,F	LA 137139	C314	1 Y	A 5/30/96
418	95 FORD FT900 DUM	4260	0841		VARIOUS	LA 128658	C515	1 Y	A 6/30/95
486	89 CHEVY C20 P/U	4260	0841		SWALLEY, R.	LA 95871	C315	1 Y	A 3/02/89
493	89 FORD F800 DUMP	4260	0840		VARIOUS	LA 95894	C509	1 Y	A 3/22/89
C-3	85 LORAIN 20T CRN	4260	0841		VARIOUS	LA 75659	C833	1 N	A 2/20/85
A-415	83 CLARK LPG LIFT	4260	0841		VARIOUS	LA NONE	C874	2 N	A 11/04/83
A-500	92 BOBCAT MOD 943	4260	0841		VARIOUS	LA NONE	C821	1 N	A 3/12/92

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**** Domicile : 4260

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-581	95 TAKEUCHI T26	4260	0841		VARIOUS	LA NONE	C821	1 N	A 2/24/95
A-597	93 BBT 2122DT TR	4260	0841		VARIOUS	LA 109913	C612	9 Y	A 3/08/93
A-632	88 LEROI AIR COMP	4260	0840		VARIOUS	LA 94377	C704	1 N	A 4/05/88
A-637	89 FORD TRACTOR	4260	0841		VARIOUS	LA	C843	1 N	A 2/03/89
A-662	93 SUL-AIR 250CFM	4260	0841		VARIOUS	LA 116785	C712	1 Y	A 4/07/93
A-500B	96 HUSKIE 5F214	4260	0840		VARIOUS		C891	99 N	A 6/12/96

Total Pieces of Equipment : 23

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile ALL

**** Domicile : 4270

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
83	91 CHEVY C2500 UT	4270	0841		VARIOUS	LA 106908	C315 TH	1 Y	A 4/24/91
143	91 CHEVY C2500 UT	4270	0841		BAGLET, R.	LA 106901	C315	1 Y	A 4/24/91
144	91 CHEVY C2500 UT	4270	0841		PIERRE,T.	LA 106900	C315	1 Y	A 4/24/91
146	91 CHEVY C2500 UT	4270	0841		THOMAS,G.	LA 106899	C315	1 Y	A 4/24/91
175	91 CHEVY C2500 UT	4270	0841		CLEMENTS, G.	LA 106898	C315	1 Y	A 4/24/91
177	94 FORD F250 UTIL	4270	0841		BARROW, T.	LA 119250	C315	1 Y	A 6/01/94
212	91 CHEVY C2500 UT	4270	0841		THIBODEAUX, R.	LA 106897	C315	1 Y	A 4/24/91
232	94 FORD F250 UTIL	4270	0841		VERDIN,S.	LA 119257	C315	1 Y	A 6/01/94
258	94 FORD F250 UTIL	4270	0841		JACKSON, C.	LA 119258	C315 TH	1 Y	A 6/01/94
277	88 CHEVY C3500 UT	4270	0841		VARIOUS	LA 93205	C315	1 Y	A 3/02/88
484	89 CHEVY C20 P/U	4270	0841		VARIOUS	LA 95873	C315	1 Y	A 2/28/89

Total Pieces of Equipment : 11

**** Domicile : 4300

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
66	89 FORD BRONCO4X4	4300	0841		SIGNORILLI,G.	LA 95958	C320 TH	0 Y	A 6/28/89
99	91 DODGE D150 P/U	4300	0841		SARCO,W.	LA 106398	C302	0 Y	A 1/24/91
A-522	66 BOAT TRAILER	4300	0840		VARIOUS	LA 6293	C610	9 N	A 3/17/83
A-605	96 T&TE HD12X5FB	4300	0840		VARIOUS	LA 137142	C612	9 Y	A 5/20/96

Total Pieces of Equipment : 4

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile ALL

**** Domicile : 4310

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
81	94 FORD F250 P/U	4310	0841		REYES, D.	LA 119269	C315	I Y	A 5/10/94
313	90 CHEVY C2500 PU	4310	0841		HARMEYER,S.	LA 99714	C315 TR	I Y	A 3/16/90
447	93 FORD FT900CRTK	4310	0841		VEAL,W.	LA 119031	C571	1 Y	A 10/07/93
472	87 FORD F800 CRN	4310	0841		LAINE,J.	LA 94345	C571	1 Y	A 8/26/87
A-503	88 CLARK LPG LIFT	4310	0841		VARIOUS	LA NONE	C874	2 N	A 10/03/88
A-596	95 DAEWOOD G25	4310	0841		VARIOUS	LA NONE	C874	2 Y	A 4/11/95

Total Pieces of Equipment : 6

**** Domicile : 4320

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
52	94 FORD F250 P/U	4320	0841		HIGGINBOTHAM,R.	LA 119271	C315	1 Y	A 5/10/94
73	94 FORD F250 P/U	4320	0841		MC ARDLE,J.	LA 119270	C315	1 Y	A 5/10/94
106	96 CHEVY C2500 PU	4320	0841		GIROIR,F	LA 137137	C315	1 Y	A 5/30/96
112	87 CHEVY C20 P/U	4320	0841		VARIOUS	LA 94239	C315	1 Y	A 3/26/87
149	95 CHEV C2500 UT	4320	0841		DARENSOURG, C.	LA 125981	C315	1 Y	A 6/08/95
158	95 CHEV C2500 UT	4320	0841		MIPRO,P.	LA 125982	C315	1 Y	A 6/08/95
165	95 CHEV C2500 UT	4320	0841		GOMEZ, O.	LA 125983	C315	1 Y	A 6/08/95
185	95 CHEV C2500 UT	4320	0841		BURNS, M.	LA 125984	C315	1 Y	A 6/08/95
193	95 CHEV C2500 UT	4320	0841		HIHAR, G.	LA 125985	C315	1 Y	A 6/08/95
208	88 CHEVY C3500 PU	4320	0841		TIMMONS,	LA 93212	C315	1 Y	A 2/26/88
236	91 CHEVY C2500 PU	4320	0841		SOUIFE,G.	LA 106895	C315 TH	1 Y	A 4/24/91
249	91 CHEVY C2500 PU	4320	0841		REED,K.	LA 106894	C315	1 Y	A 4/24/91
265	93 CHEV.TILT CAB	4320	0841		VARIOUS	LA 110777	C313	1 Y	A 12/02/92
292	94 FORD F250 UTIL	4320	0841		SCHIRO,A.	LA 119259	C315	1 Y	A 6/01/94
312	94 FORD F250 UTIL	4320	0841		TREGRE,S	LA 119260	C315	1 Y	A 6/01/94
328	90 CHEVY C2500 PU	4320	0841		SEMEL,C.	LA 99718	C315	1 Y	A 3/16/90
A-561	92 LEROI AIR COMP	4320	0841		VARIOUS	LA	C708	1 N	A 4/14/92

**** Domicile : 4320

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date

Total Pieces of Equipment : 17

**** Domicile : 4330

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
192	90 CHEVY C1500 PU	4330	0841		NUESSLY, G.	LA 99646	C302 TH	0 Y	A 3/05/90
202	89 FORD FT900 CRN	4330	0841		VARIOUS	LA 95941	C571	1 Y	A 5/17/89
204	88 CHEVY C3500 PU	4330	0841		VARIOUS	LA 93213	C315	1 Y	A 2/26/88
234	95 CHEV C2500 P\U	4330	0841		CATCHOT, R.	LA 126007	C315 TH	1 Y	A 8/31/95
390	84 DODGE D350	4330	0841		VARIOUS	LA 77098	C540 SB	0 Y	A 6/19/84
443	93 CHEV CC C-3500	4330	0841		VARIOUS	LA 109944	C540	1 Y	A 4/14/93
446	96 FORD F350	4330	0841		VARIOUS	LA 137401	C540	1 Y	A 7/15/96
474	96 FORD F350	4330	0840		VARIOUS	LA 137403	C540	1 Y	A 7/15/96
A-483	83 MILLER WLD/GEN	4330	0841		VARIOUS	LA NONE	C724	0 N	I 12/19/83
A-549	82 LINC WELD MACH	4330	0841		VARIOUS	LA 70996	C718	0 N	A 9/23/82
A-556	74 LINC WELD MACH	4330	0841		VARIOUS	LA 22971	C719	1 N	A 10/02/74
A-558	74 LINC WELD MACH	4330	0841		VARIOUS	LA 22973	C719	1 N	A 10/02/74
A-570	82 LINC WELD MACH	4330	0841		VARIOUS	LA 70997	C718	0 N	A 9/23/82
A-587	82 LINC WELD MACH	4330	0841		VARIOUS	LA 70995	C718	0 N	A 9/23/82
A-653	89 MILLER WELDER	4330	0841			LA NONE	C717	0 N	I 8/18/89

Total Pieces of Equipment : 15

Department of Networks
Field Service

**** Domicile : 6000

Equipment Number	Year/ Make	Dom / Bill	Maint. Park Resp	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
6	91 DODGE DYNASTY	6000	0841	LAWRENCE,W	LA 106390	C102 TH	0 Y	A 1/17/91
179	94 FORD F250 UTIL	6000	0841	VARIOUS	LA 119247	C315	1 Y	A 6/01/94
186	94 FORD F250 UTIL	6000	0841	VARIOUS	LA 119249	C315	1 Y	A 6/01/94
189	94 FORD F250 UTIL	6000	0841	VARIOUS	LA 119248	C315	1 Y	A 6/01/94
190	94 FORD F250 UTIL	6000	0841	VARIOUS	LA 119254	C315	1 Y	A 6/01/94
377	94 FORD F250 UTIL	6000	0841	VARIOUS	LA 119261	C315	1 Y	A 6/01/94
380	94 FORD F250 UTIL	6000	0841	VARIUOS	LA 119262	C315	1 Y	A 6/01/94
382	94 FORD F250 UTIL	6000	0841	VARIOUS	LA 119263	C315	1 Y	A 6/01/94

Total Pieces of Equipment : 8

Department of Networks
Pressure Division

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile ALL

**** Domicile : 6400

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
37	96 DODGE 1500 PU	6400	0841		SIMONEAUX,W	LA 136697	C302 TH	0 Y	A 4/10/96
41	96 DODGE 1500 PU	6400	0841		JOSEPH,A	LA 137105	C302 TH	00 Y	A 4/10/96
54	96 DODGE 1500 PU	6400	0841		REED,R	LA 137103	C302 TH	0 Y	A 4/10/96
72	92 CHEVY C1500 PU	6400	0841		NGUYEN, H.	LA 110514	C302 TH	0 Y	A 3/18/92
124	92 CHEVY C1500 PU	6400	0841		GILLIS,F.	LA 110519	C302 TH	0 Y	A 3/18/92
126	91 DODGE D150 P/U	6400	0841		PARKER,J	LA 106399	C302 TH	0 Y	A 2/15/91
195	90 FORD BRONCO4X2	6400	0841		HADI, A.	LA 99622	C318 TH	0 Y	A 12/20/89
334	94 FORD F150 PU	6400	0841		FONTAN,C.	LA 119114	C302 TH	0 Y	A 3/01/94
335	94 FORD F150 PU	6400	0841		LYNCH,W.	LA 119113	C302 TH	0 Y	A 3/01/94
386	95 FORD F-150 P/U	6400	0841		WOODSON,F.	LA 125994	C302 TH	0 Y	A 5/02/95
393	94 FORD F150 PU	6400	0841		DUMAS, C.	LA 119107	C302 TH	0 Y	A 3/01/94
406	95 FORD F-150 P/U	6400	0841		COFFER,J	LA 126000	C302 TH	0 Y	A 5/02/95
440	94 FORD F150 PU	6400	0841		MC CULLER,O.	LA 119106	C302 TH	0 Y	A 3/01/94

Total Pieces of Equipment : 13

**** Domicile : 6410

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
245	90 CHEVY ALUM VAN	6410	0840		SANFORD,F.	LA 101366	C312	1 Y	A 8/17/90

Total Pieces of Equipment : 1

**** Domicile : 6420

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
222	93 FORD CF8000	6420	0840		WHITE,J	LA 116770	C505	1 Y	A 6/16/93
261	94 FORD CF8000	6420	0840		MCMILLAN,E.J.	LA 119184	C505	1 Y	A 6/01/94
302	91 FORD CF8000	6420	0840		LAGARDE,A.	LA 110385	C505	1 Y	A 9/12/91
304	91 FORD CF8000	6420	0840		MINOR,A.	LA 110384	C505	1 Y	A 9/12/91
424	95 FORD CF8000	6420	0840		FERNANDEZ,C.	LA 122242	C505	1 Y	A 8/01/95
429	90 FORD CF8000	6420	0840		RUDISON,R.	LA 101273	C505	1 Y	A 4/19/90
430	90 FORD CF8000	6420	0840		MINOR,W.	LA 101307	C505	1 Y	A 5/29/90
442	95 FORD CF8000	6420	0840		CARTER,LEVI	LA 122245	C505	1 Y	A 8/01/95
451	95 FORD F800 DUMP	6420	0840		BATES,L	LA 128678	C509	1 Y	A 8/31/95
452	95 FORD F800 DUMP	6420	0840		MOSS,D.	LA 128679	C509	1 Y	A 8/31/95
468	94 FORD F800 DUMP	6420	0840		FLEURY,R.	LA 119194	C509	1 Y	A 4/11/94
502	97 FORD F800 DUMP	6420	0840		WINGERTER,R	LA 137215	C509	1 Y	A 6/18/96
A-509	93 BOBCAT MOD 853	6420	0840		UNASSIGNED	LA NONE.	C821	1 Y	A 3/05/93
A-515	93 BOBCAT MOD 853	6420	0840		FLEURY,R.	LA NONE	C021	1 Y	A 3/05/93
A-553	88 LINDSAY A.C.	6420	0840		SPARE	LA 93786	C710	1 N	A 1/26/88
A-580	93 BBT 2122DT TR	6420	0840		UNASSIGNED	LA 109910	C612	9 Y	A 3/08/93
A-585	93 BBT 2122DT TR	6420	0840		FLEURY,R.	LA 109911	C612	9 Y	A 3/08/93

**** Domicile : 6420

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-602	96 MCELRATH TRAIL	6420	0840		WASHINGTON,F	LA	C607	9 Y	A 9/04/96
A-604	95 GLOBE TAG-A-LG	6420	0840		WASHINGTON,F	LA 128602	C612	0 Y	A 5/17/95
A-610	95 N.H. SKLOADER	6420	0840		WASHINGTON,F	LA	C821	1 Y	A 5/26/95
A-621	96 NH LX665 SK LD	6420	0840		WASHINGTON,F	LA 137249	C819	1 Y	A 9/18/96
C-222	93 LINDSAY175 MTD	6420	0840		WHITE,J	LA NONE	C711	1 N	A 6/17/93
C-261	94 LINDSAY175 MTD	6420	0840		MCMILLAN,E.	NONE	C711	1 N	A 6/22/94
C-302	91 LINDSAY175 MTD	6420	0840		LAGARDE,A.	LA NONE	C711	1 N	A 12/04/91
C-304	91 LINDSAY175 MTD	6420	0840		MINOR,A.	LA NONE	C711	1 N	A 12/04/91
C-424	95 LINDSAY185 MTD	6420	0840		FERNANDEZ,C.	LA NONE	C711	1 N	A 10/24/95
C-429	90 LINDSAY175 MTD	6420	0840		RUDISON,R.	LA NONE	C711	1 N	A 2/19/91
C-430	90 LINDSAY175 MTD	6420	0840		MINOR,W.	LA NONE	C711	1 N	A 2/19/91
C-442	95 LINDSAY185 MTD	6420	0840		CARTER,LEVI	LA NONE	C711	1 N	A 10/26/95
A-621B	96 JACK HAMMER	6420	0840		WASHINGTON,F		C891	9 Y	A 10/05/96
A-621C	96 BKHO ATTACH	6420	0840		WASHINGTON,F		C892	9 Y	A 10/05/96

Total Pieces of Equipment : 31

**** Domicile : 6430

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
356	87 CHEVY C30 P/U	6430	0841		GRAHAM,C.	LA 93813	C315	1 Y	A 6/04/87

Total Pieces of Equipment : 1

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile ALL

**** Domicile : 6440

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
357	87 CHEVY C30 P/U	6440	0841		GILLIAM,J.	LA 93814	C315	1 Y	A 6/04/87

Total Pieces of Equipment : 1

**** Domicile : 6450

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
201	89 FORD 800 FLTBD	6450	0840		LAURENT,K.	LA 95942	C541	1 Y	A 5/17/89
247	92 FORD CF8000	6450	0840		KINGSBERRY, A.	LA 110521	C505	1 Y	A 4/02/92
264	93 FORD F800 DUMP	6450	0840		UNASSIGNED	LA 116790	C509	1 Y	A 4/07/93
284	94 FORD CF8000	6450	0840		STABILE,S.	LA 119186	C505	1 Y	A 6/01/94
286	94 FORD CF8000	6450	0840		FONTENOTTE,M.	LA 119187	C505	1 Y	A 6/01/94
324	93 FORD FT900 DMP	6450	0840		BOLDEN, S.	LA 116787	C515	1 Y	A 4/07/93
425	95 FORD CF8000	6450	0840		PERKINS,J	LA 122243	C505	1 Y	A 8/01/95
457	95 FORD F800 DUMP	6450	0840		LEWIS,D	LA 128680	C509	1 Y	A 8/31/95
463	95 FORD F800 DUMP	6450	0840		SCOTT, B.	LA 128681	C509	1 Y	A 8/31/95
464	94 FORD F800 DUMP	6450	0840		SAMUELS,M	LA 119192	C509	1 Y	A 4/11/94
466	94 FORD F800 DUMP	6450	0840		MC ACY,M.	LA 119193	C509	1 Y	A 4/11/94
501	97 FORD F800 DUMP	6450	0840		TATE,R	LA 137214	C509	1 Y	A 6/18/96
A-514	94 CZ ENG.	6450	0840		TATE,R.	LA 119097	C612	9 Y	A 2/09/94
A-529	93 CASE 590T BKHO	6450	0840		SAMUEL,M.	LA NONE	C808	1 BK675416 Y	A 5/24/93
A-560	94 CASE 590T BKHO	6450	0840		TATE,R.	LA NONE	C808	1 BK675493 Y	A 4/01/94
A-567	92 CASE 590T BKHO	6450	0840		SCOTT,B.	LA NONE	C808	1 N	A 4/14/92
A-576	92 SYKES 6X4 PUMP	6450	0840		SPARE	LA NONE	C736	1 N	A 3/24/92

**** Domicile : 6450

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-590	92 SYKES 4X4 PUMP	6450	0840		SPARE	LA NONE	C735	1 N	A 3/24/92
A-594	95 TAKEUCHI EXCV.	6450	0840		UNASSIGNED	LA NONE	C817	1 Y	A 3/29/95
A-600	95 CZ ENG	6450	0840		MCACY,M.	LA 128603	C612	0 Y	A 5/17/95
A-607	85 INST 24DT TRL	6450	0840		SCOTT,B	LA 137235	C605	9 N	A 9/10/85
A-614	95 CASE 590 SUP L	6450	0840		MCACY, M.	LA NONE	C808 E4477	1 Y	A 9/11/95
A-657	93 BBT 2522DT TR	6450	0840		SAMUEL,M.	LA 109914	C612	9 Y	A 3/08/93
C-247	92 LINDSAY175 MTD	6450	0840		KINGSBERRY, A.	LA NONE	C711	1 N	A 4/02/92
C-284	94 LINDSAY175 MTD	6450	0840		STABILE,S.	LA NONE	C711	1 N	A 6/22/94
C-286	94 LINDSAY175 MTD	6450	0840		FONTENETTE,M.	LA NONE	C711	1 N	A 6/22/94
C-425	95 LINDSAY185 MTD	6450	0840		PERKINS,J.	LA NONE	C711	1 N	A 1/18/96

Total Pieces of Equipment : 27

**** Domicile : 6460

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
136	94 CHEVY ALUM VAN	6460	0841		ODDO,A.III	LA 119138	C312	1 Y	A 4/01/94
233	93 FORD CF8000	6460	0840		RUSSELL,T.	LA 116769	C505	1 Y	A 6/16/93
289	90 CHEVY ALUM VAN	6460	0841		DE WHIRST,A.	LA 101364	C312	1 Y	A 8/17/90
403	91 CHEVY ALUM VAN	6460	0840		ROBAIR,A.	LA 106867	C312	1 Y	A 4/08/91
408	94 FORD CF8000	6460	0840		RUTH,A.	LA 119190	C505	1 Y	A 6/01/94
421	96 FORD CF8000	6460	0840		JONES,B	LA 137204	C505	1 Y	A 5/30/96
462	94 FORD F800 DUMP	6460	0840		DUNBAR, J.	LA 119191	C509	1 Y	A 4/11/94
A-593	93 CASE 590T BKHO	6460	0840		LEWIS,D.	LA NONE	C808 BK675419	1 Y	A 5/24/93
A-601	95 CZ ENG	6460	0840		DUNBAR, J.	LA 128604	C612	0 Y	A 5/17/95
A-615	95 CASE 590 SUP L	6460	0840		DUNBAR, J.	LA NONE	C808 E4478	1 Y	A 9/11/95
A-658	93 BBT 2522DT TR	6460	0840		LEWIS,D.	LA 109915	C612	9 Y	A 3/08/93
C-233	93 LINDSAY175 MTD	6460	0840		RUSSELL,T.	LA NONE	C711	1 N	A 6/17/93
C-408	94 LINDSAY175 MTD	6460	0840		RUTH,A	LA NONE	C711	1 N	A 6/22/94
C-421	96 LINDSAY TMD27	6460	0840		JONES,B	LA NONE	C711	1 Y	A 8/02/96

Total Pieces of Equipment : 14

**** Domicile : 6470

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
242	93 FORD CF8000	6470	0840		AGUILLARD,A.	LA 116768	C505	1 Y	A 6/16/93
269	93 FORD F800 DUMP	6470	0840		WASHINGTON,F	LA 116789	C509	1 Y	A 4/07/93
274	92 FORD CF8000	6470	0840		ORTEGA,D	LA 110522	C505	1 Y	A 4/02/92
409	96 FORD CF8000	6470	0840		DEJEAN,L	LA 137203	C505	1 Y	A 5/30/96
481	96 FORD CF8000	6470	0840		UNASSIGNED	LA 137207	C505	1 Y	A 5/30/96
A-595	93 CASE 590T BKHO	6470	0840		BATES,L.	LA NONE	C808 BK675421	1 Y	A 5/24/93
A-642	89 LINDSAY A.C.	6470	0840		DE JEAN,L.	LA 95865	C710	1 N	A 2/22/89
A-660	93 BBT 2522DT TR	6470	0840		BATES,L.	LA 109917	C612	9 Y	A 3/08/93
C-242	93 LINDSAY175 MTD	6470	0840		AGUILLARD,A.	LA NONE	C711	1 N	A 6/17/93
C-274	92 LINDSAY175 MTD	6470	0840		ORTEGA,D	LA NONE	C711	1 N	A 4/02/92
C-409	96 LINDSAY TMD27	6470	0840		DEJEAN,L	LA NONE	C711	1 Y	A 8/02/96
C-481	96 LINDSAY TMD27	6470	0840		UNASSIGNED	LA NONE	C711	1 Y	A 8/02/96

Total Pieces of Equipment : 12

Department of Networks
Gravity Division

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile ALL

**** Domicile : 6500

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
21	89 FORD BRONCO4X2	6500	0841		BANKSTON,L.	LA 95901	C318 TH	0 Y	A 4/04/89
27	86 FORD BRONCO4X4	6500	0841		MITCHEL,S	LA 87898	C320	0 Y	A 3/05/86
38	86 FORD BRONCO4X4	6500	0841		WAGAR,J	LA 87899	C320 TH	0 Y	A 3/05/86
42	89 FORD BRONCO4X2	6500	0841		BECKER,J.	LA 95902	C318 TH	0 Y	A 4/04/89
70	91 DODGE D150 P/U	6500	0841		LANE, R.	LA 106396	C302 TH	0 Y	A 1/24/91
76	92 CHEVY C1500 PU	6500	0841		CAMBRIDGE, R.	LA 110516	C302 TH	0 Y	A 3/18/92
137	90 CHEVY C1500 PU	6500	0841		NERO,J.	LA 99635	C302 TH	0 Y	A 3/05/90
166	89 CHEVY C1500 PU	6500	0841		WAGAR,J	LA 95853	C302 TH	0 Y	A 2/06/89
194	96 DODGE 1500 PU	6500	0841		KELLY,E	LA 136700	C302 TH	0 Y	A 4/10/96
214	96 DODGE 1500 PU	6500	0841		LEMOINE,O.J.	LA 136699	C302 TH	0 Y	A 4/10/96
366	94 FORD F150 PU	6500	0841		EVERIDGE,A	LA 119111	C302 TH	0 Y	A 3/01/94
395	95 FORD F-150 P/U	6500	0841		WOODSON,B.	LA 125995	C302 TH	0 Y	A 5/02/95
399	95 FORD F-150 P/U	6500	0841		VALLAIRE,W.	LA 125996	C302 TH	0 Y	A 5/02/95
439	94 FORD F150 PU	6500	0841		SPOONER,M.	LA 119155	C302 TH	0 Y	A 4/06/94
444	94 FORD F150 PU	6500	0841		NAJOLIA,A.	LA 119105	C302 TH	0 Y	A 3/01/94

Total Pieces of Equipment : 15

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**** Domicile : 6510

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
108	90 FORD CF8000	6510	0840		BODY, R.	LA 101309	C505	1 Y	A 6/11/90
210	90 INT 4900 TANDM	6510	0840		BEVERLY,V.	LA 101265	C515	1 Y	A 4/24/90
251	88 FORD F800 DUMP	6510	0840		ANDERSON,J	LA 95779	C509	1 Y	A 9/15/88
252	93 FORD CF8000	6510	0840		WASHINGTON, C.	LA 116767	C505	1 Y	A 6/16/93
253	93 FORD CF8000	6510	0840		JOHNSON, K.	LA 116766	C505	1 Y	A 6/16/93
259	91 FORD F800 DUMP	6510	0840		UNASSIGNED	LA 106954	C509	1 Y	A 5/22/91
281	88 FORD F350 DUMP	6510	0840		HENRY,C.	LA 126012	C507	1 Y	A 5/18/88
282	88 FORD F350 DUMP	6510	0840		HANDY,P	LA 94396	C507	1 Y	A 5/18/88
305	91 FORD CF8000	6510	0840		LUNDIE, J.	LA 110383	C505	1 Y	A 9/12/91
306	91 FORD CF8000	6510	0840		KING,R.	LA 110382	C505	1 Y	A 9/12/91
307	91 FORD CF8000	6510	0840		KIRTS, L.	LA 110381	C505	1 Y	A 9/12/91
308	92 FORD CF8000	6510	0840		NELSON, S.	LA 110523	C505	1 Y	A 4/02/92
309	91 FORD CF8000	6510	0840		HANDY,P.	LA 110380	C505	1 Y	A 9/12/91
315	92 FORD CF8000	6510	0840		MC KEY,A	LA 110524	C505	1 Y	A 4/02/92
318	91 FORD FT900 DMP	6510	0840		RECASNER,S	LA 125669	C515	1 Y	A 5/23/91
329	93 FORD FT900 DMP	6510	0840		ROMAN, C.	LA 116792	C515	1 Y	A 4/07/93
333	94 FORD CF8000	6510	0840		FRAZIER, A.	LA 119188	C505	1 Y	A 6/01/94

**** Domicile : 6510

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
339	93 FORD 800 FLTBD	6510	0840		WASHINGTON, K.	LA 109907	C541	1 Y	A 4/20/93
358	94 FORD CF8000	6510	0840		HENRY, C.	LA 119189	C505	1 Y	A 6/01/94
415	90 FORD CF8000	6510	0840		BURKE,C	LA 101328	C505	1 Y	A 6/21/90
445	95 FORD CF8000	6510	0840		DAVIS, L.	LA 122246	C505	1 Y	A 8/01/95
458	96 FORD CF8000	6510	0840		UNASSIGNED	LA 137206	C505	1 Y	A 5/30/96
465	95 FORD F800 DUMP	6510	0840		WHITE, G.	LA 128682	C509	1 Y	A 8/31/95
470	95 FORD F800 DUMP	6510	0840		PHILLIPS, M.	LA 128683	C509	1 Y	A 8/31/95
476	95 FORD F800 DUMP	6510	0840		SOUTHALL,G.	LA 128684	C509	1 Y	A 8/31/95
477	94 FORD F800 DUMP	6510	0840		MURPHY, D.	LA 119195	C509	1 Y	A 4/11/94
494	89 FORD F800 DUMP	6510	0840		MONET,C.	LA 95893	C509	1 Y	A 3/22/89
495	89 FORD F800 DUMP	6510	0840		SPARE	LA 95895	C509	1 Y	A 3/22/89
498	90 INT 4900 TANDM	6510	0840		UNASSIGNED	LA 95915	C515	1 Y	A 5/01/89
499	94 FORD F800 DUMP	6510	0840		PETERS,W	LA 119196	C509	1 Y	A 4/11/94
503	97 FORD F800 DUMP	6510	0840		UNASSIGNED	LA 137216	C509	1 Y	A 6/18/96
504	97 FORD F800 DUMP	6510	0840		UNASSIGNED	LA 137217	C509	1 Y	A 6/18/96
505	97 FORD F800 DUMP	6510	0840		KAIGLER,L	LA 137218	C509	1 Y	A 6/18/96
A-444	84 BANTAM CRAWLER	6510	0840		WHITE,G	LA NONE	C817	1 N	A 1/14/84

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**** Domicile : 6510

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-516	94 CZ ENG.	6510	0840		MURPHY, D.	LA 119098	C612	9 Y	A 2/09/94
A-523	94 CZ ENG.	6510	0840		KIEGLER,L.	LA 119102	C612	9 Y	A 2/09/94
A-527	90 FORD 655C BKHO	6510	0840		UNASSIGNED	LA NONE	C807	1 N	A 6/29/90
A-536	92 CZ ENG.	6510	0840		SOUTHALL, G.	LA 125917	C612	9 N	A 2/05/92
A-537	91 INST 24DT TRL	6510	0840		PETERS,W	LA 125906	C605	9 N	A 2/20/91
A-541	92 CASE 590T BKHO	6510	0840		KAIGLER, L.	LA NONE	C808	1 N	A 4/14/92
A-555	82 BANTAM CRAWLER	6510	0840		KAIGLER, L.	LA NONE	C817	1 N	A 5/03/8[illegible]
A-566	96 GLOBE TRAILER	6510	0840			LA	C607	9 Y	A 9/04/9[illegible]
A-574	94 CASE 590T BKHO	6510	0840		PETERS,W	LA NONE	C808	1	A 4/01/94
A-575	92 SYKES 6X4 PUMP	6510	0840		SPARE	LA NONE	BK675495 C736	Y 1 N	A 3/24/9[illegible]
A-589	92 SYKES 4X4 PUMP	6510	0840		SPARE	LA NONE	C735	1 N	A 3/24/9[illegible]
A-606	94 CASE 590T BKHO	6510	0840		MURPHY, D.	LA NONE	C808	1	A 4/01/9[illegible]
A-617	95 CASE 590 SUP L	6510	0840		SOUTHALL, G.	LA NONE	BK675500 C808	Y 1	A 4/01/9[illegible]
A-618	86 KALYN 24 TRLR	6510	0840		UNASSIGNED	LA 136552	E4481 C607	Y 9 N	A 9/11/9[illegible] 4/30/8[illegible]
A-619	95 CASE 590 SUP L	6510	0840		MONET,C.	LA NONE	C808	1	A 9/11/9[illegible]
A-626	96 NH LX665 SK LD	6510	0840		UNASSIGNED	LA 137248	E4484 C819	Y 1 Y	A 9/10/9[illegible]
A-633	88 KALYN 24 TRLR	6510	0840		ANDERSON,J	LA 122222	C607	9 N	A 4/06/8[illegible]

**** Domicile : 6510

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-646	89 KALYN 24 TRLR	6510	0840		WHITE,G.	LA 95867	C607	9 N	A 3/02/89
A-647	89 KALYN 24 TRLR,	6510	0840			LA 95868	C607	9 N	A 3/02/89
A-648	96 MCELRATH TRAIL	6510	0840			LA	C607	0 Y	A 9/04/96
A-652	89 FORD 655C BKHO	6510	0840		ANDERSON,J	LA NONE	C807	1 N	A 8/21/89
A-659	93 BBT 2522DT TR	6510	0840		PHILLIPS,M.	LA 109916	C612	9 Y	A 3/08/93
A-661	93 CASE 590T BKHO	6510	0840		PHILLIPS,M.	LA NONE	C808	1 Y	A 5/24/93
A-666	96 CASE 590T BKHO	6510	0840		KAIGLER,L	LA NONE	BK675370 C808	Y 1	A 3/06/96
A-667	96 CASE 590T BKHO	6510	0840		WHITE,G	LA NONE	C808	1 Y	A 3/06/96
C-108	90 LINDSAY175 MTD	6510	0840		BODY, R.	LA NONE	C711	1 N	A 2/19/91
C-252	93 LINDSAY175 MTD	6510	0840		WASHINGTON, C.	LA NONE	C711	1 N	A 6/17/93
C-253	93 LINDSAY175 MTD	6510	0840		JOHNSON, K.	LA NONE	C711	1 N	A 6/17/93
C-305	91 LINDSAY175 MTD	6510	0840		LUNDIE, J.	LA NONE	C711	1 N	A 12/04/91
C-306	91 LINDSAY175 MTD	6510	0840		KING,R.	LA NONE	C711	1 N	A 12/04/91
C-307	91 LINDSAY175 MTD	6510	0840		KIRTS, L.	LA NONE	C711	1 N	A 12/04/91
C-308	92 LINDSAY175 MTD	6510	0840		NELSON, S.	LA NONE	C711	1 N	A 4/02/92
C-309	91 LINDSAY175 MTD	6510	0840		HANDY,P.	LA NONE	C711	1 N	A 12/04/91
C-315	92 LINDSAY175 MTD	6510	0840		MC KEY,A	LA NONE	C711	1 N	A 4/02/92

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**** Domicile : 6510

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ing	Status/ Date
C-333	94 LINDSAY175 MTD	6510	0840		FRAZIER, A.	LA NONE	C711	1 N	A 6/22/94
C-358	94 LINDSAY175 MTD	6510	0840		HENRY, C.	LA NONE	C711	1 N	A 6/22/94
C-415	90 LINDSAY175 MTD	6510	0840		RECASNER,S.	LA NONE	C711	1 N	A 2/19/91
C-445	95 LINDSAY185 MTD	6510	0840		DAVIS,L.	LA NONE	C711	1 N	A 10/24/95
C-458	96 LINDSAY TMD27	6510	0840		UNASSIGNED	LA NONE	C711	1 Y	A 8/02/96
A-626B	96 JACK HAMMER	6510	0840		UNASSIGNED		C891	9 Y	A 10/05/96
A-626C	96 BKHO ATTACH	6510	0840		UNASSIGNED		C892	9 Y	A 10/05/96

Total Pieces of Equipment : 75

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**** Domicile : 6521

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
75	95 FORD 450 S-ROD	6521	0840		SLACK,STEVE	LA 136528	C521	1 Y	A 11/07/95
227	87 FORD 350 S-ROD	6521	0840		JACKSON,R.	LA 93889	C521	1 Y	A 7/16/87
230	90 FORD 350 S-ROD	6521	0840		MELANCON,M.	LA 101352	C521	1 Y	A 8/17/90
278	89 FORD 450 S-ROD	6521	0840		CARTER,H.	LA 95991	C521	1 Y	A 10/10/89
326	91 FORD 450 S-ROD	6521	0840		CAZELOT,E.J.	LA 107163	C521	1 Y	A 7/03/91
346	96 FORD F450 SROD	6521	0840		UNASSIGNED	LA	C521	1 Y	A 9/18/96
396	91 CHEVY ALUM VAN	6521	0840		COLLINS, C.	LA 106866	C312	1 Y	A 4/08/91
407	92 CHEVY ALUM VAN	6521	0840		JONES, J.	LA 110563	C312	1 Y	A 5/11/92
416	92 CHEVY ALUM VAN	6521	0840		UNASSIGNED	LA 110565	C312	1 Y	A 5/11/92
483	95 FORD F800 DUMP	6521	0840		STEWART, B.	LA 128685	C509	1 Y	A 8/31/95
485	95 FORD F800 DUMP	6521	0840		DAVIS, R.	LA 128686	C509	1 Y	A 8/31/95
A-75	95 SEWER ROD	6521	0840		SLACK,S	LA	C520	0 N	I 2/23/96
A-227	87 SRECO S-RODDER	6521	0840		JACKSON,R.	LA NONE	C520	0 N	I 7/16/87
A-230	90 SRECO S-RODDER	6521	0840		MELANCON,M.	LA NONE	C520	0 N	I 3/13/91
A-278	89 SEWER ROD	6521	0840		CARTER,H.	LA NONE	C520	0 N	I 10/10/89
A-326	91 SRECO RODDER	6521	0840		CAZELOT,E.J.	LA NONE	C520	0 N	I 7/03/91
A-346	96 SRECO S RODDER	6521	0840		UNASSIGNED		C521	0 Y	A 9/20/96

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**** Domicile : 6521

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date

Total Pieces of Equipment : 17

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**** Domicile : 6522

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
211	90 FORD LN800 VAC	6522	0840		VARIOUS	LA 101351	C551	1 Y	A 8/17/90
298	91 FORD F700 TRSH	6522	0840		VARIOUS	LA 106830	C516	1 Y	A 3/06/91
303	92 FORDCF8000SJET	6522	0840		WILKERSON,H	LA 110776	C561	1 Y	A 10/26/92
316	92 INTL 4900 VAC	6522	0840		HOLMES,I	LA 110550	C551	1 Y	A 4/09/92
327	92 INTL 4900 VAC	6522	0840		OALMANN,R	LA 110549	C551	1 Y	A 4/10/92
359	87 FORD F8000 VAC	6522	0840		HOWARD,D	LA 93891	C551	1 Y	A 8/03/87
376	91 FORD F700 TRSH	6522	0840		SHAW,R.	LA 106832	C516	1 Y	A 3/06/91
394	95 FORD F-800	6522	0840		CASIMERE, L.	LA 125911	C551	1 Y	A 10/31/94
434	93 FORD LN8000 VA	6522	0840		PARKER,A	LA 116786	C551	1 Y	A 4/07/93
A-211	90 VAC-CON	6522	0840		VARIOUS	LA NONE	C551	1 N	I 8/17/90
A-316	92 VAC-CON V390	6522	0840		HOLMES,I	LA NONE	C551	1 N	I 4/09/92
A-327	92 VAC-CON V390	6522	0840		OALMANN,R	LA NONE	C551	1 N	I 4/09/92
A-359	87 VAC-CON V290	6522	0840		HOWARD,D	LA NONE	C551	1 N	I 8/03/87
A-394	95 VACTOR	6522	0840		CASEMIRE,L	LA NONE	C551	1 Y	I 10/31/94
A-434	93 VAC-CON 390	6522	0840		PARKER,A	LA NONE	C551	1 N	I 4/07/93
A-598	85 VAPOROOTER	6522	0840		WILKERSON,H	LA 75663	C745	0 N	A 3/04/85

Total Pieces of Equipment : 16

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**** Domicile : 6523

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
297	91 FORD F700 TRSH	6523	0840		UNASSIGNED	LA 106829	C516	1 Y	A 3/06/91
363	91 FORD F700 TRSH	6523	0840		POUNDS, R	LA 106831	C516	1 Y	A 3/06/91
387	91 CHEVY ALUM VAN	6523	0840		CALISTE, I	LA 106865	C312	1 Y	A 4/08/91
400	91 CHEVY ALUM VAN	6523	0840		ROBINSON, R.	LA 106864	C312	1 Y	A 4/08/91

Total Pieces of Equipment : 4

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**** Domicile : 6600

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
49	96 DODGE 1500 PU	6600	0841		UNASSIGNED	LA 136646	C302 TH	0 Y	A 3/19/96
217	96 DODGE 1500 PU	6600	0841		JOHNSON,J	LA 137101	C302 TH	0 Y	A 4/10/96
401	95 FORD F-150 P/U	6600	0841		TRAHANT,E.	LA 125997	C302 TH	0 Y	A 5/02/95
402	95 FORD F-150 P/U	6600	0841		SMITH, R.	LA 125998	C302 TH	0 Y	A 5/02/95
405	95 FORD F-150 P/U	6600	0841		MOSES,D.	LA 125999	C302 TH	0 Y	A 5/02/95

Total Pieces of Equipment : 5

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**** Domicile : 6611

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
182	95 FORD F800 DUMP	6611	0840		SMITH, H.	LA 128677	C509	1 Y	A 8/31/95
238	89 FORD 450 FLTBD	6611	0841		NEUSTADTER, S.	LA 95990	C541	1 Y	A 10/10/89
254	93 FORD CF8000	6611	0840		MCCORMICK, W.	LA 116771	C505	1 Y	A 6/16/93
268	94 FORD CF8000	6611	0840		RANDOLPH, J.	LA 119185	C505	1 Y	A 6/01/94
271	93 FORD F800 DUMP	6611	0840		DOLLIOLE,B.	LA 116788	C509	1 Y	A 4/07/93
275	90 CHEVY ALUM VAN	6611	0840		DEMPSEY, R.	LA 106855	C312	1 Y	A 8/17/90
310	91 FORD CF8000	6611	0840		MARTIN, A.	LA 110379	C505	1 Y	A 9/12/91
404	90 FORD CF8000	6611	0840		ROBINSON, G.	LA 125686	C505	1 Y	A 7/05/90
410	91 FORD 450 FLTBD	6611	0841		WATTS, M.	LA 106868	C541	1 Y	A 4/08/91
506	97 FORD F800 DUMP	6611	0840		JOSEPH,C	LA 137219	C509	1 Y	A 6/18/96
275S	95 CUSHION CUT	6611	0840		DEMPSEY,R		C896	9 Y	I 11/04/96
A-512	90 CONC/ASPH SAW	6611	0840		DEMPSEY, R.	LA NONE	C862	0 N	A 11/08/90
A-548	92 CZ ENG.	6611	0840		AGE, E.	LA 119095	C612	9 Y	A 2/09/94
A-616	86 KALYN 24 TRLR	6611	0840		DOLLIOLE,B	LA 87282	C607	9 N	A 4/30/86
A-620	94 CASE 590T BKHO	6611	0840		AGE, E.	LA NONE	C808 BK675502	1 Y	A 4/01/94
A-634	88 FORD 655A BKHO	6611	0840		DOLLIOLE,B	LA	C807	1 N	A 4/20/88
C-254	93 LINDSAY175 MTD	6611	0840		MCCORMICK, W.	LA NONE	C711	1 N	A 6/17/93

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**** Domicile : 6611

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
C-268	94 LINDSAY175 MTD	6611	0840		RANDOLPH, J.	LA NONE	C711	1 N	A 6/22/94
C-275	90 LINDSAY S80KD	6611	0840		DEMPSEY, R.	LA NONE	C712	1 N	A 1/23/91
C-310	91 LINDSAY175 MTD	6611	0840		MARTIN, A.	LA NONE	C711	1 N	A 12/04/91
C-404	90 LINDSAY175 MTD	6611	0840		ROBINSON, G.	LA NONE	C711	1 N	A 1/23/91

Total Pieces of Equipment : 21

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**** Domicile : 6612

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
168	95 FORD F800 DUMP	6612	0840		AGE, E.	LA 128674	C509	1 Y	A 8/31/95
174	95 FORD F800 DUMP	6612	0840		ALEXANDER, D.	LA 128676	C509	1 Y	A 8/31/95
354	87 CHEVY C70 PTCH	6612	0840		BREACID,M	LA 93815	C534	1 Y	A 6/09/87
355	88 FORD F800 PTCH	6612	0840		MITCHELL	LA 93799	C534	1 Y	A 3/09/88
433	93 FORD F800 PTCH	6612	0840		BLASIO, A.	LA 116793	C534	1 Y	A 4/06/93
435	93 FORD F800 DUMP	6612	0840		DUPRE,A	LA 109970	C509	1 Y	A 6/16/93
496	89 FORD F800 DUMP	6612	0840		LAWLESS,F	LA 95896	C509	1 Y	A 3/22/89
355V	96 WACKER	6612	0840		MITCHELL,R		C897	9 Y	I 11/04/96
433V	96 WACKER	6612	0840		BLASIO,A		C897	9 Y	I 11/04/96
A-504	93 BBT 2122DT TR	6612	0840		DOLLIOLE,B.	LA 109909	C612	9 Y	A 4/01/93
A-525	86 FERG.46A ROLR	6612	0840		JOSEPH,C	LA 87306	C863	1 N	A 4/07/86
A-542	91 BOBCAT MOD843B	6612	0840		ALEXEANDER,D	LA NONE	C821	1 N	A 3/04/91
A-551	91 LEEBOY 400 RLR	6612	0840		JOSEPH,C	LA NONE	C863	1 N	A 6/25/91
A-559	94 CZ ENG.	6612	0840		ALEXANDER, D.	LA 119096	C612	9 Y	A 2/09/94
A-572	93 BOBCAT MOD 853	6612	0840		DOLLIOLE, B.	LA NONE	C821	1 Y	A 3/05/93
A-623	94 BOBCAT MOD 853	6612	0840		ALEXANDER,D.	LA NONE	C821	1 Y	A 6/09/94
A-663	93 BBT PH1621DT	6612	0840		JOSEPH,C	LA 119002	C612	9 Y	A 8/09/93

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**** Domicile : 6612

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date

Total Pieces of Equipment : 17

REPORT# 001N
8:15 am
11/07/96

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile ALL

User S3
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**** Domicile : 6613

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
314	91 FORD CF8000	6613	0840		MADINA,C	LA 110378	C505	1 Y	A 9/12/91
422	96 FORD CF8000	6613	0840		CROSS,C	LA 137205	C505	1 Y	A 5/30/96
441	95 FORD CF8000	6613	0840		OSUM, K.	LA 122244	C505	1 Y	A 8/01/95
C-314	91 LINDSAY175 MTD	6613	0840		MADINA,C	LA NONE	C711	1 N	A 12/04/91
C-422	96 LINDSAY TMD27	6613	0840		CROSS,C		C711	0 Y	A 9/19/96
C-441	95 LINDSAY185 MTD	6613	0840		OSUM, K.	LA NONE	C711	1 N	A 10/24/95

Total Pieces of Equipment : 6

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8:15 am
11/07/96

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile ALL

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**** Domicile : 6620

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
423	95 FORD F-150 P/U	6620	0841		MOWLA, M.	LA 128601	C302 TH	0 Y	A 5/02/95

Total Pieces of Equipment : 1

**** Domicile : 6650

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
154	88 CHEVY SUBURBAN	6650	0841		FAIRLEIGH, A.J.	LA 93800	C304	1 Y	A 2/24/88
164	90 CHEVY C1500 PU	6650	0841		MYERS, G.	LA 99642	C302 TH	0 Y	A 3/05/90
367	95 CHEVY SUBURAN	6650	0841		ROMANO, W.	LA 125986	C304	0 Y	A 6/09/95

Total Pieces of Equipment : 3

Warehouse

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6:40 am
11/11/96

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile 9000
Employee Name ALL

User S3
Page 1

**** Domicile : 9000

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
104	90 FORD CF8000	9000	0840		SPARE	LA 101308	C505	1 Y	A 6/11/90
229	89 CHEVY C30 CRW	9000	0841		SPARE	LA 95943	C308	1 Y	A 5/19/89
231	86 FORD F800 DUMP	9000	0840		SPARE	LA 87268	C509	1 Y	A 4/21/86
240	91 FORD F800 DUMP	9000	0840		SPARE	LA 106958	C509	1 Y	A 5/22/91
243	91 FORD F800 DUMP	9000	0840		SPARE	LA 106957	C509	1 Y	A 5/22/91
246	91 FORD F800 DUMP	9000	0840		SPARE	LA 106956	C509	1 Y	A 5/22/91
255	93 FORD F800 DUMP	9000	0840		SPARE	LA 116791	C509	1 Y	A 4/07/93
266	88 FORD F800 DUMP	9000	0840		SPARE	LA 95780	C509	1 Y	A 9/16/88
267	88 FORD F800 DUMP	9000	0840		SPARE	LA 95781	C509	1 Y	A 9/15/88
273	86 FORD F800 DUMP	9000	0840		SPARE	LA 101333	C509	1 N	I 4/21/86
279	88 FORD F800 DUMP	9000	0840		SPARE	LA 95784	C509	1 Y	A 9/16/88
323	86 FORD F800 DUMP	9000	0840		SPARE	LA 87269	C509	1 Y	A 4/21/86
331	88 FORD CF7000	9000	0840		SPARE	LA 95783	C504	1 Y	A 9/20/88
343	87 FORD F800 DUMP	9000	0840		SPARE	LA 94275	C509	1 Y	A 5/05/87
350	87 FORD F800 DUMP	9000	0840		SPARE	LA 94270	C509	1 Y	A 5/05/87
351	87 FORD F800	9000	0840		SPARE	LA 94276	C533	1 Y	A 5/05/87
352	88 FORD CF7000	9000	0840		SPARE	LA 95785	C504	1 Y	A 9/20/88

REPORT# 001N
6:40 am
11/13/96

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile 9000
Employee Name ALL

User S3
Page 2

**** Domicile : 9000

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
371	88	9000	0840		SPARE	LA	C521	1	A
	FORD 350 S-ROD					93322		Y	7/15/88
414	90	9000	0840		SPARE	LA	C505	1	A
	FORD CF8000					101330		Y	6/21/90
473	87	9000	0840		SPARE	LA	C504	1	A
	FORD CF7000					94351		Y	10/12/87
475	87	9000	0840		SPARE	LA	C504	1	A
	FORD CF7000					94350		Y	10/12/87
478	88	9000	0840		SPARE	LA	C504	1	A
	FORD CF7000					95786		Y	9/20/88
479	89	9000	0840		SPARE	LA	C504	1	A
	FORD CF7000					95825		Y	2/15/89
480	89	9000	0840		SPARE	LA	C504	1	A
	FORD CF7000					95827		Y	2/15/89
482	89	9000	0840		SPARE	LA	C504	1	A
	FORD CF7000					95824		Y	2/15/89
492	89	9000	0840		SPARE	LA	C509	1	A
	FORD F800 DUMP					95892		Y	3/22/89
C-S1	92	9000	0840		SPARE	LA	C709	1	A
	LINDSAY 175 SP					NONE		N	4/02/92
C-S2	92	9000	0840		SPARE	LA	C709	1	A
	LINDSAY 175 SP					NONE		N	4/02/92
A-371	88	9000	0840		SPARE	LA	C520	0	I
	SRECO S RODDER					NONE		N	2/01/89
A-424	82	9000	0840		SPARE	LA	C735	1	A
	4"GR TRASH PMP					70843		N	4/06/82
A-454	82	9000	0840		SPARE	LA	C735	1	A
	4"GR TRASH PMP							N	4/06/82
A-511	91	9000	0840		SPARE	LA	C809	1	A
	DYNAHOE 490K					107117		N	6/14/91
A-526	90	9000	0840		SPARE	LA	C807	1	A
	FORD 655C BKHO					NONE		N	6/29/90
A-557	91	9000	0840		SPARE	LA	C807	1	I
	FORD 655C BKHO					NONE		N	7/01/91

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6:40 am
11/13/96

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile 9000
Employee Name ALL

User S3
Page 3

**** Domicile : 9000

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
A-562	88	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					93785		N	1/26/88
A-578	95	9000	0840		SPARE	LA	C735	1	A
	T&T PUMP TRL.					128627		Y	7/31/95
A-584	88	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					93783		N	1/26/88
A-609	85	9000	0840		SPARE	LA	C605	9	A
	INST 24DT TRL					75973		N	9/10/85
A-624	87	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					93807		N	5/21/87
A-625	87	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					93808		N	5/21/87
A-627	88	9000	0840		SPARE	LA	C819	1	A
	CASE SKD STEER					NONE		N	1/25/88
A-628	88	9000	0840		SPARE	LA	C609	9	A
	HUDSON TRAILER					93795		N	2/23/88
A-629	88	9000	0840		SPARE	LA	C819	1	A
	CASE SKD STEER					NONE		N	1/25/88
A-630	88	9000	0840		SPARE	LA	C609	9	A
	HUDSON TRAILER					93794		N	2/23/88
A-631	88	9000	0840		SPARE	LA	C736	1	A
	SYKES 6X4 PUMP					NONE		N	3/23/88
A-638	89	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					95860		N	2/22/89
A-640	89	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					95858		N	2/22/89
A-643	89	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					95856		N	2/22/89
A-644	89	9000	0840		SPARE	LA	C710	1	A
	LINDSAY A.C.					95866		N	2/22/89
A-650	89	9000	0840		SPARE	LA	C807	1	A
	FORD 655C BKHO					NONE		N	8/21/89
C-104	90	9000	0840		SPARE	LA	C711	1	A
	LINDSAY175 MTD					NONE		N	2/19/91

SWB EMIS SYSTEM
OPERATOR VEHICLE ASSIGNMENT
BY:Domicile 9000
Employee Name ALL

**** Domicile : 9000

Equipment Number	Year/ Make	Dom / Bill	Maint Resp	Park	Employee Name	State / License	Class / Rental	Fuel/ Ins	Status/ Date
C-414	90 LINDSAY175 MTD	9000	0040		SPARE	LA NONE	C711	1 N	A 2/19/91

Total Pieces of Equipment : 52

5.2 On - Truck Resources

In addition to the equipment list for each department, each department has standard equipment that is contained on the trucks. This equipment is available to the crew in the activities to prevent and minimize the affects of any Sanitary Sewer Overflows.

Standard Equipment on Emergency trucks:

- Standard Equipment on Inspector Vehicles:

  Multi channel two way communication radio
  Hydrant spanners
  Pressure Gauge
  Various hand tools
    Stillson wrenches
    Valve keys
    Hammers of various sizes
    Mirrors
    Safety equipment
    Leather work gloves
    Hard hat
    Safety boots
  Sewer and water maps

- Standard Equipment on Gravity Inspection Rod Trucks:

  Multi channel two way communication radio
  Hose with adapters for hydrants
  Various size cork screws for rods
  Grade rods
  Probing rods
  Hand tools
  Engineers hammer
  Screw drivers
  Allen wrench set
  Oil
  100 foot tape
  6 foot ruler
  Valve finder
  Sewer maps
  Hydrant key
  Flashlights
  Mirrors
  Safety equipment
  Safety cones, signs and flags

Hard hats
Steel boots for each member of the crew
Safety gloves for each member of the crew
Safety vests for each member of the crew
First aid kit
Fire extinguisher
Shovels
Pick and handle
Guide pipe with extension
Tongs
Chisels
Gas cans (unleaded and diesel)
Disinfectant
Various colors of dye
16 lb maul
Bucket
Water cooler

- Large Investigation Vans Have All of the Above Plus:

  Air blowers
  3" pumps
  Large safety signs and type I barricades

- Standard Equipment on Flushing Trucks:
  Hoses
  Several types of nozzles
  Grade rod
  Hand tools
    Screw driver
    Oil
    Crescent wrenches
    Allen wrench set
    100 foot tape
    Hydrant key
    Flashlight
    Mirrors
  Valve finder
  Sewer maps
  Suction pipe
  Safety equipment

Safety cones, signs and flags
Hard hats for each member of the crew
Safety vests for each member of the crew
Steel toe hip and waist boots for each crew member
Fire extinguisher
Safety gloves for each crew member
Boot for flushing hose
16 lb maul
Bucket
Stump bar
Water cooler
Pick and handle

- Standard Equipment on all Gravity Repair Trucks:
  2.5 ton truck with crew cab
  175 cfm air compressor mounted on truck
  Air hammers for breaking concrete and driving sheeting
  Air powered backfill tampers
  3" water pumps, both diagram and centrifugal
  3" suction and discharge hoses
  General hand tools
  Hand tools for preparing pipe ends
  Hand tools for mechanical joining of various type of pipe
  Cement finishing tools
  Shovels, various types
  Chain saws and multi purpose saws
  Electrically powered, truck mounted hoisting winch
  Bricks
  Portland cement mix
  Portable lighting
  Mechanical and air inflated test plugs, various sizes
  Safety equipment
    First aid kits
    Safety cones, signs and flags
    Hard hats for each member of the crew
    Safety vests for each member of the crew
    Steel toe hip and waist boots for each crew member
    Fire extinguisher
    Safety gloves for each crew member
  Gasoline powered fresh air blowers, w/ required attachments
  Gas cans and fuel
  Different sizes and types of pipe
  Pipe joint connecting materials

Pipe fittings

- Standard Equipment on All Pressure Repair Crews:
  Chain saws with various blades
  Paving breaker adaptor for back hoe
  Various hand tools
    Crowfoot
    Hacksaw
    Hammers, various sizes and types
    Flashlight
    Pliers
    Ruler
    Hand saws, various
    Screw drivers
  100' tape
  Caulking tools
  Blow torch
  Wrenches
  Safety equipment
    First aid kits
    Safety cones, signs and flags
    Hard hats for each member of the crew
    Safety vests for each member of the crew
    Steel toe hip and waist boots for each crew member
    Fire extinguisher
    Leather work gloves
    Safety goggles
    Ear protectors
    Rain suits
    Safety vests
  Broom, brush
  Various size chisels
  Water coolers
  Buckets, storage cans
  Grease gun
  Various size hoses
  Various sizes hydrant keys
  Locator valve
  Picks, shovels of various types
  Nozzles, various sizes
  3" pumps, diagram and trash
  Sounding rod
  Pipes and fittings, various sizes, types and adapters

5.3 Other Resources - Catastrophic Emergency

In addition to the equipment listed in the previous sections, the Sewerage and Water Board has enjoyed a successful, cooperative relationship with the contractors and other

utilities in the area. In the event of catastrophic emergency situations requiring resources not available to the Board response staff, neighboring parishes and local contractors and suppliers are available to either supply any available equipment, material, and staffing required to respond directly to the emergency situation. In addition, procedures for responding to reasonably anticipated catastrophic emergency situations are listed in the Sewerage and Water Board, Operations Department, Emergency Procedures Manual included in Appendix G.

Examples of organizations that would be available to assist in the response to catastrophic emergency situations include:

Jefferson Parish
St. Bernard Parish
City of New Orleans Agencies

Boh Brothers Construction
Drennan Construction
Video Industrial Services
Insituform

Louisiana Industries
Various equipment rental agencies

When a catastrophic emergency situation occurs, the response to the failure is identified and the required equipment, materials and manpower is tabulated. This listing is then compared with existing, available Board supplies. Areas where the required resources exceed those that are available in-house are identified and the appropriate organizations are contacted.

Subject: List of 4", 6" and 8" Pumps available for Sewer System

1.	A416	'84	Hesco Power Unit w/4" Gorman Rupp Pump
2.	A550	'82	Hesco Power Unit w/4" Gorman Rupp Pump
3.	A579	'92	Hesco Power Unit w/4" Gorman Rupp Pump
4.	A589	'92	4"x4" Sykes Pump on Skid
5.	A590	'92	4"x4" Sykes Pump on Skid
6.	A613	'95	T&TE 4" Gorman Rupp Pump Trailer
7.	A668	'97	ABC Pump Trailer 4"x4" G.R.
8.	A669	'97	ABC Pump Trailer 4"x4" G.R.
9.	A424	'82	4" Gorman Rupp Trash Pump/Skid
10.	A454	'82	4" Gorman Rupp Trash Pump/Skid
11.	A575	'92	6"x4" Sykes Pump/Trailer
12.	A576	'92	6"x4" Sykes Pump/Trailer
13.	A578	'95	T&T 6"x4" Pump w/Trailer
14.	A631	'88	6"x4" Sykes Pump on Skid
15.	A605	'96	T&TE 6" Electric Submersible Pump/Trailer
16.	A552	'97	8" Pump w/Trailer

In stock in Warehouse #1 is 6 - 3" trash pumps in stock for use with Sewer Model 120TP3, and 13 - 3" trash pumps being carried on repair trucks.

All Vendors Offer 24 Hour Service

1) Mayer - Hammant — Phone #268-4277
471 Manhattan Blvd. Harvey — Mike Hammant
sizes: 3" to 12" diesel pumps
type: trash pump (centrifugal)
Service: 24 hours

2) Advanced Industrial Products Inc. — Phone #307-1257
2125 Whitney Avenue, Gretna
sizes: 2" to 6" diesel pumps
type: trash or submersable (centrifugal)
Service: 24 hours

3) Prime Equipment — Phone #244-7700
11,580 Chef Hwy.
sizes: 2" to 6" diesel pumps
type: trash or submersable (centrifugal)
Service: 24 hours

4) Buckner — Phone #828-0070
sizes: 2" - 6" diesel pumps
type: trash pumps
Service: 24 hours

SEWERAGE & WATER BOARD OF NEW ORLEANS
SEWAGE OVERFLOW ACTION PLAN
LIST OF FIGURES

FIGURE		FOLLOWS PAGE
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1-2	Overview - Response Action Plan	1-1
2-1	Field Service Center Emergency Response Flow Chart	2-1
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SEWERAGE & WATER BOARD OF NEW ORLEANS
SEWAGE OVERFLOW ACTION PLAN
LIST OF APPENDICES

<u>Appendices</u>

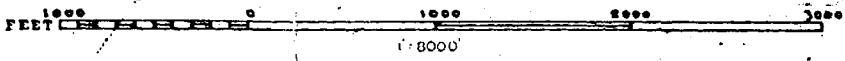
Appendix A	Plan of the City of New Orleans Sewer System
Appendix B	Plan of the City of New Orleans Sewer System Northeast Section
Appendix C	Plan of the City of New Orleans Sewer System WestBank and Lower Coast
Appendix D	Plan of the City of New Orleans Sewer System Lake Pontchartrain to City Park
Appendix E	City of New Orleans Major Sewer Main Layout
Appendix F	City of New Orleans Lift and Pump Stations
Appendix G	Sewerage & Water Board - Operations Department Emergency Procedures Manual
Appendix H	Sewerage & Water Board - Employee Training Manual
Appendix I	Sewerage & Water Board - Safety Manual
Appendix J	Sewerage & Water Board Specifications for the Supervisory Control and Data Acquisition (SCADA) Panels

SEWERAGE AND WATER BOARD OF NEW ORLEANS

ENGINEERING DEPT. SEWER AND WATER

PLAN
OF THE
SEWERAGE SYSTEM
OF THE CITY OF
NEW ORLEANS LOUISIANA

SCALE



CORRECTED MONTHLY UP TO THE PRESENT TIME

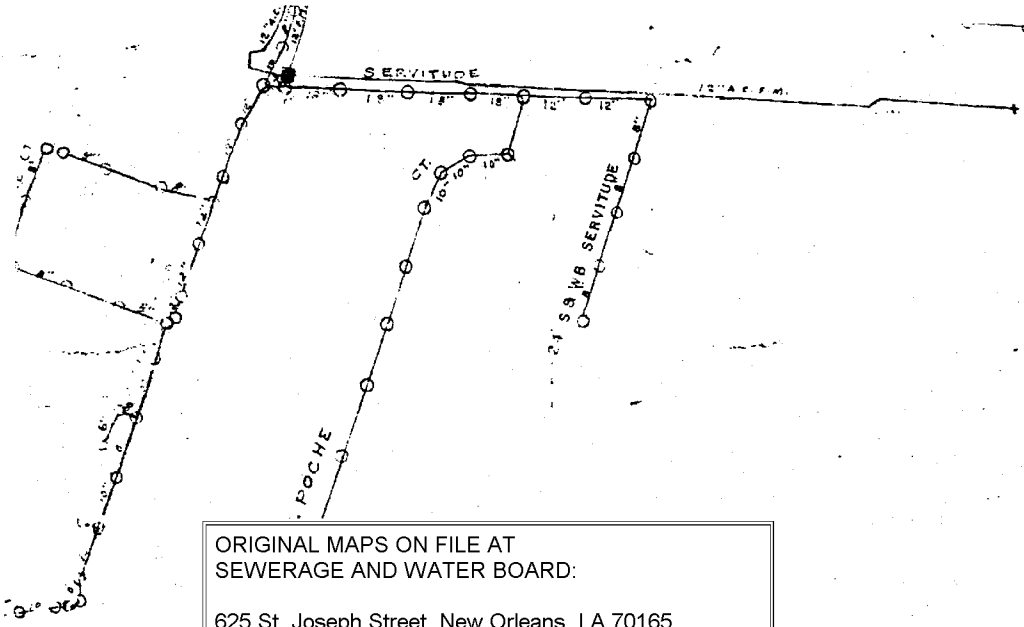
ORIGINAL MAPS ON FILE AT
SEWERAGE AND WATER BOARD:

625 St. Joseph Street, New Orleans, LA 70165

Director's Office:	Room 233
Gen. Superintendent's Office:	Room 311
Purchasing Department:	Room 133

8800 S. Claiborne Avenue, New Orleans, LA 70118

Network Engineering Department



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Purchasing Department:	Room 133

8800 S. Claiborne Avenue, New Orleans, LA 70118

Network Engineering Department

SEWERAGE AND WATER BOARD OF NEW ORLEAN

PLAN

OF THE

SEWER SYSTEM

IN THE NORTHEAST SECTION

SEWERAGE AND WATER BOARD OF NEW ORLEANS

PLAN

OF THE

SEWER SYSTEM

OF THE WEST BANK AND LOWER COAST
OF THE CITY OF

NEW ORLEANS, LOUISIANA

AS BUILT TO DATE

SCALE = 8,000

ORIGINAL MAPS ON FILE AT
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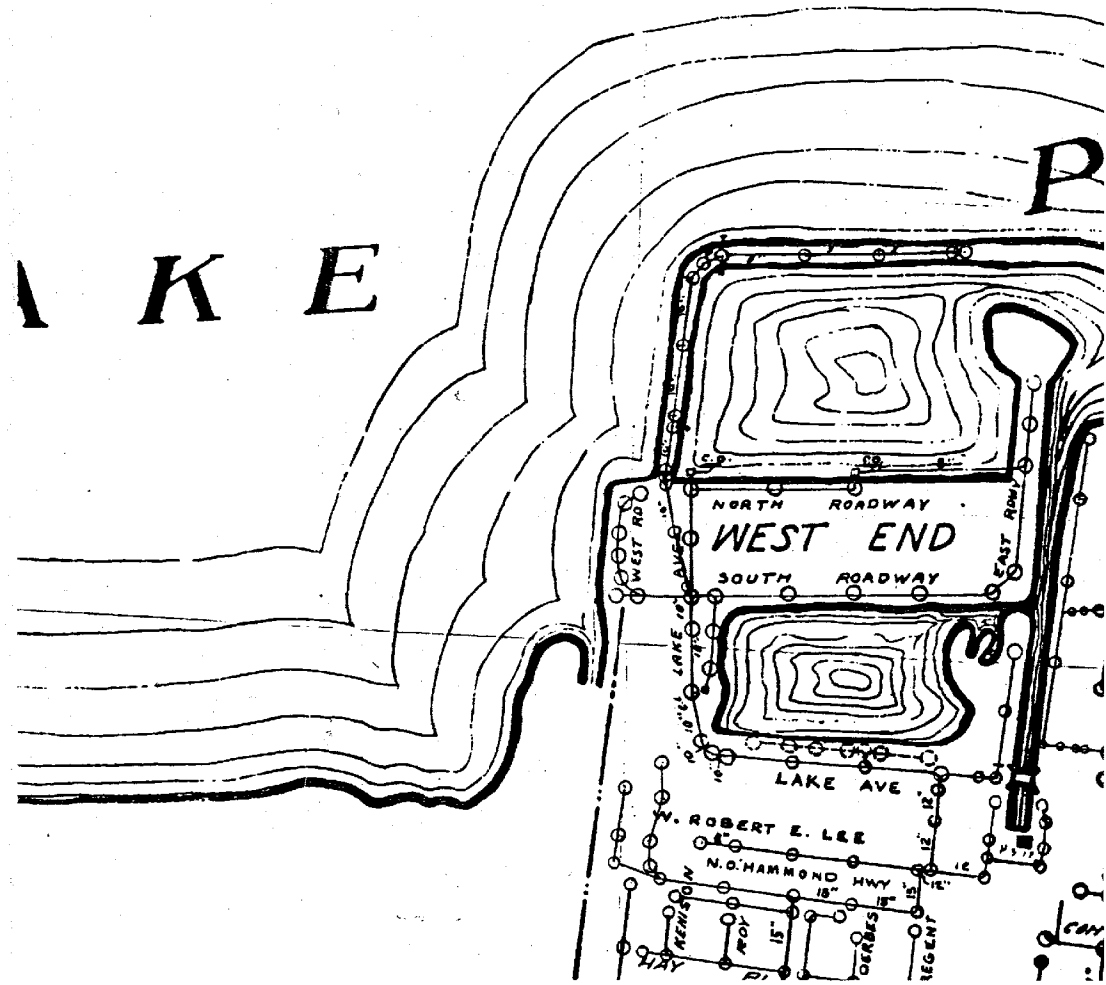

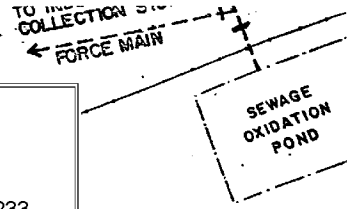

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SEWERAGE AND WATER BOARD:

625 St. Joseph Street, New Orleans, LA 70165

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Gen. Superintendent's Office:	Room 311
Purchasing Department:	Room 133

8800 S. Claiborne Avenue, New Orleans, LA 70118
Network Engineering Department

ALL VALVES ARE GATE VALVES UNLESS OTHERWISE NOTED.
ON PLUG VALVES, USE INDICATOR TO DETERMINE POSITION OF VALVE; VALVES MAY CLOSE CLOCK

SEWERAGE & WATER BOARD OF N. O.

MAJOR SEWER MAINS

WITH OVERFLOWS & BYPASSES

Appe

SCALE: 1" = 1000'

0 1 2 3 4 5
THOUSAND FEET

PV = PLUG VALVE
S = STEEL
KV = KNIFE VALVE

PUMPING STATION
C = PRESTRESSED CONC.
93 OVERFLOW

17 LIFT STATION
AC = ASBESTOS CEMENT
ABANDONED

SEWER FORCE MAIN
CI = CAST IRON
SEALED

GRAVITY SEWER
3000 = CONTRACT NO.
VALVED

REVISED TO DWG. 7300	9-2-96

FIELD BK 3442

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625 St. Joseph Street, New Orleans, LA 70165

Director's Office:	Room 233
Gen. Superintendent's Office:	Room 311
Purchasing Department:	Room 133

8800 S. Claiborne Avenue, New Orleans, LA 70118

Network Engineering Department

16 17 18 19

H I J K L

MISCELLANEOUS FACILITIES

BLDG.	✱	625 ST. JOSEPH ST.	F-5
BLDG.		8800 S. CLAIBORNE AVE.	E-3
ARD		2900 PEOPLES AVE.	E-8
NO. 1	(I)	PARISH LINE (GEN. OGDEN)	E-3
NO. 2	(I)	JEFF. PARISH (NEAR INDUST. CT.)	D-3
(WB)	(I)	200 DEARMAS ST.	G-6
& (WB)	(I)	1401 BROOKLYN ST.	G-6
F.C.	(FC)	8400 EARHART BLVD.	E-4
F.C.	(FC)	8801 SPRUCE ST.	E-3
F.C.	(FC)	1107 PACIFIC AVE.	G-7
	(FC)	2801 FLORIDA AVE.	E-8
	(G)	2300 PERDIDO ST.	F-5
	(RG)	VARIOUS LOCATIONS	

REV	DATE	DESCRIPTION	BY
9	11-22-86	UPDATED	

SEWERAGE AND WATER BOARD
OF NEW ORLEANS

S&WB FACILITIES

DR. SHP PCB
TRC.
CK.
AP
SCALE GRAPHIC
DATE 6-5-75

GENERAL SUPERINTENDENT

DWG. NO. 6881

DEPT. NETWORK ENGR. SHEET NO. 1 OF

Appendix F

SEWERAGE AND WATER BOARD OF NEW ORLEANS

EMERGENCY PROCEDURES

March 1992
March 1993
March 1994
March 1995
May 1996

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HURRICANE

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CONTACTS FOR
HURRICANE (IMMINENT) EMERGENCIES

OPERATIONS DEPARTMENT

AVAILABLE PEOPLE	POSITION
1	CHIEF OF OPERATIONS

AVAILABLE PEOPLE	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPT. (East & West Banks)

AVAILABLE PEOPLE	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPV. (East & West Banks)

DRAINAGE PUMPING EAST BANK

AVAILABLE PEOPLE	POSITION
2	SUPERVISORS
4	ASST. SUPERVISORS
11	PUMP & POWER PLANT OPERATORS
19	PUMPING PLANT OPERATORS
23	U.P.W. II'S

SEWERAGE PUMPING EAST BANK

AVAILABLE PEOPLE	POSITION
2	SUPERVISORS
4	ASST. SUPERVISORS
6	PUMPING PLANT OPERATORS (OUTSIDE)
2	PUMPING PLANT OPERATORS (INSIDE STATION "A")
6	U.P.W. II'S OR U.M.W. (OUTSIDE)
2	U.P.W. II'S OR U.M.W. (INSIDE STATION "A")

DRAINAGE & SEWERAGE PUMPING

WEST BANK

AVAILABLE PEOPLE	POSITION
1	DRAIN. & SEWER STA. SUPV.

DRAINAGE STATION

AVAILABLE PEOPLE	POSITION
1	DRAIN. & SEWER STA. ASST. SUPV.

STATION 13

AVAILABLE PEOPLE	POSITION
2	PUMPING & POWER PLANT OPERATORS
2	PUMPING PLANT OPERATORS
2	U.P.W. II'S

STATION 11

AVAILABLE PEOPLE	POSITION
2	PUMPING STATION OPERATORS
2	PUMPING & POWER PLANT OPERATORS

SEWER STATION

AVAILABLE PEOPLE	POSITION
1	ASST. SUPERVISOR
2	STATION OPERATOR
2	U.P.W. II'S

CENTRAL CONTROL

AVAILABLE PEOPLE	POSITION
1	POWER DISPATCHER IV
2	POWER DISPATCHER III
3	POWER DISPATCHER II
2	POWER DISPATCHER I
2	PUMPING PLANT OPERATOR

A breakdown of Central Control is as follows:

CENTRAL CONTROL

AVAILABLE PEOPLE	POSITION
1	POWER DISPATCHER IV
2	POWER DISPATCHER III
2	POWER DISPATCHER II
1	POWER DISPATCHER I
1	PUMPING PLANT OPERATOR

PLANT FREQUENCY CHANGER

AVAILABLE PEOPLE	POSITION
1	POWER DISPATCHER II
1	POWER DISPATCHER I
1	PUMPING PLANT OPERATOR

DEPARTMENT OF WATER PUMPING AND POWER

EAST BANK BOILER & TURBINE OPERATIONS

AVAILABLE PEOPLE	POSITION
1	SUPERINTENDENT
1	ASST. SUPERINTENDENT
2	STEAM PLANT ENG. III'S
8	STEAM PLANT ENG. II'S
4	STEAM PLANT ENG. I
2	BOILER PLANT OPERATORS
4	PUMPING PLANT OPERATOR
5	U.P.W. II'S

RIVER STATION (OAK ST.)

AVAILABLE PEOPLE	POSITION
2	PUMPING PLANT OPERATORS
1	U.P.W. II

NEW RIVER STATION

AVAILABLE PEOPLE	POSITION
1	STEAM PLANT ENGINEER I
1	PUMPING PLANT OPERATOR
1	U.P.W. II

DEPARTMENT OF WATER PUMPING AND POWER

WESTBANK OPERATIONS
(STATION "C" - ALGIERS)

AVAILABLE PEOPLE	POSITION
1	PUMPING STATION SUPV.
1	PUMPING STATION SUPV. ASST.
3	PUMP & POWER PLANT OPERATORS
6	PUMPING PLANT OPERATORS

WATER PURIFICATION

AVAILABLE PERSONNEL	POSITION
1	WATER PURIFICATION SUPT.

CARROLLTON PURIFICATION PLANT

AVAILABLE PERSONNEL	POSITION
2	WATER PURIFICATION SUPT. ASST'S
2	W.P.O. IV'S
3	W.P.O. III'S
2	W.P.O. II'S
3	W.P.O. I'S
1	LABOR SUPV. II
2	LAB TECH. III'S
1	WATER CHEMIST

ALGIERS PURIFICATION PLANT

AVAILABLE PERSONNEL	POSITION
1	WATER PURIFICATION SUPT. ASST.
1	W.P.O. IV
1	W.P.O. III
2	W.P.O. II'S
3	W.P.O. I'S

WASTE TREATMENT PLANTS

AVAILABLE [illegible]	POSITION	TELEPHONE
S&WB DON CROWDER BEEPER	WASTE TREATMENT SUPT.	585-2271 887-3477 830-0807
P.S.G. BOBBY BERRY BEEPER	REGIONAL MANAGER	277-5400 529-1722 794-5283
E.B.S.T.P. AUGUST JOHNSON, JR. BEEPER	PROJECT MANAGER	277-5400 244-0406 825-5439
W.B.S.T.P. JIM ROSS BEEPER	PLANT SUPERVISOR	392-9729 394-1382 825-5282

PLACEMENT OF NON-DEPARTMENTAL PERSONNEL

DRAINAGE AND SEWERAGE PUMPING STATION

LOCATIONS:

- The "Grass Gang" may occupy the following areas during a hurricane.

  D.P.S. # 5 - Labor Shack
  D.P.S. # 6 - West of the station by the diesel engine pad
  D.P.S. # 7 - Marconi side of the station (East Side)
  D.P.S. #19 - Parking area inside the station

NOTES:

- Located near the Florida Avenue Syphon, the S&WB and Levee Board each has one set of gates on either side of the Intercostal Canal. During the past hurricanes, the Levee Board closed all of their gates. Verify, in the event of an emergency, that the syphon gates are in the open position. (The syphon gates being kept in the open position is very important, in the event of a power failure at D.P.S. #19. If the 60 cycle power fails at D.P.S. #19, D.P.S. #5 will be able to handle some of the drainage with 25 cycle power.)

- The following is a list of boats on hand.

  S.P.S. "A" - 16' boat with trailer
  D.P.S. 11 - 12' boat
  S.P.S. "D" - 14' boat
  St. Charles D.P.S. - 14' boat

WATER PUMPING & POWER

LOCATIONS:

- ☐ During emergency situations, such as Hurricanes, personnel from Central Yard are usually assigned to various areas throughout the Board's facilities. It should be noted that no trucks have been assigned to the East Bank (Carrollton Power Plant) Facility in recent years, but several crews have been assigned to the Algiers Facilities. In the event that truck crews are assigned to our Pumping & Power Facilities, they will be headquartered in the following areas:

  East Bank: One (1) truck crew in the Low-Lift Area

  One (1) truck crew in the Power House in the area across from the #1 turbine.

  West Bank: One (1) truck crew in Station "C", at the rear of the station, near the emergency Diesel Generator.

  One (1) truck crew in the New High-Lift building in the area below the office.

- ☐ Any additional truck crews would be distributed in the foregoing four areas.

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

EAST BANK

PRE-STORM:

The following shall be performed by **May 1st** of each year and prior to any storm.

- ☐ Verify conditions of all underpass stations, catch basins, culverts and wet-wells, remove and clear all debris.
- ☐ Check station's logging equipment (floats, staff gauges, etc.) for proper operation.
- ☐ Purge all bubbler lines and check bubbler equipment for proper operation.
- ☐ Operate and service all drainage pumps, sump pumps, screen cleaners, vacuum pumps, diesel engines, etc.
- ☐ Verify that all spare fuses, flashlights, and maintenance equipment are at each station.
- ☐ Verify the proper operations of **ALL** Rain Gauge Devices.
- ☐ Check all radio and station batteries.
- ☐ Verify the condition of all emergency equipment such as life jackets, boats, first aid kits, portable stoves, etc.
- ☐ Locate window and/or door hurricane bracing equipment such as plywood, screws, etc.
- ☐ Top off the station's diesel fuel storage tanks as applicable.
- ☐ Obtain trash rakes from warehouse and distribute to all stations.
- ☐ Lubricate all mechanical equipment as needed such as screen cleaners, etc.

HURRICANE WATCH:

- ☐ Install plywood on all station openings, brace all doors, and close all shutters.
- ☐ Check generators, pumps, and mobile pumping equipment for gas, oil and proper operation.
- ☐ At all stations check and clean suction screens and verify that there is nothing obstructing the suction and discharge of the station.
- ☐ Store sand bags and fuel.

- ☐ Issue all emergency tools and supplies such as hammers, nails, hand saws, rope, etc.
- ☐ Pick up all loose materials outside of the facility site.

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HURRICANE WARNING:

- ☐ Institute call-out procedure as follows:
  - Drainage Pumping Stations 1 through 7, "D", 10, 14, 15, 16, 19 and 20: Two (2) operators and two (2) U.P.W. II's on watch throughout storm.
  - Drainage Pumping Stations 12 and Carrollton Frequency Changer: Two (2) operators on watch throughout storm.
- ☐ With the General Superintendent's approval, open separation gates between sewage and drainage basins at S.P.S. "D".
- ☐ With the General Superintendent's approval, open 36" Hydraulic and Metropolitan dump valves at S.P.S. "D".
- ☐ Obtain portable air compressors from Central Yard for use to pressurize the pumps and prevent back syphoning.

POST-STORM:

- ☐ Operate equipment as required.

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

SEWER PUMPING STATIONS

EAST BANK

PRE-STORM:

- ☐ Verify security of all electrical services on May 1st and prior to all emergencies.
- ☐ Observe condition of river discharge lines at Forstall Street on June 1st and prior to all emergencies. Monitor potential hazards to marine facilities.
- ☐ Check all radio equipment.
- ☐ Verify the condition of all emergency equipment such as life jackets, boats, first aid kits, etc.
- ☐ Purge all bubbler lines and check bubbler equipment for proper operation.
- ☐ Verify the condition of all emergency equipment such as life jackets, boots, first aid kits, etc.
- ☐ Verify that spare fuses and proper maintenance equipment are at each site.
- ☐ Check, operate and service all sump pumps.

HURRICANE WATCH:

- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by the departmental plan.
- ☐ Pick up all loose material outside of the facility site.

HURRICANE WARNING:

- ☐ Institute call-out and procedures as required by specific departmental plan or as outlined herein.
  - Open selected by-passes. (See attached list)
  - With the General Superintendent's approval, divert Forstall force main to river. (Requires a valve crew from Central Yard to operate three (3) 30" valves.)
  - With the General Superintendent's approval, open 24" valve off the 54" main on Florida Avenue at Metropolitan Street. (Requires a valve crew from Central Yard.)
  - With the General Superintendent's approval, divert discharge from Station "A" to river.

POST-STORM:

- ☐ Set all discharge pumping back to treatment plant.
- ☐ Close all by-passes if stations are back in service.

BYPASS VALVES TO OPEN

During the early stages of a hurricane warning, bypass valves on the gravity sewer systems are opened for the stations listed below. Automation controls are pre-set at levels that permit the Sewerage Department to open the valves without actually bypassing unless the station is out of service.

K-MART	SHOREWOOD
CHICKASAW	BRIARWOOD
20	LIGGETT
4	GENTILLY OAKS
LAKEWOOD SOUTH	BERG
CITY PARK	WEBER
24	BURKE
25	LAWRENCE
26	LAMB
VICTORIA	OAK ISLAND
PINES VILLAGE	MICHOUD
AMERICA	FOLGER'S
PLUM ORCHARD	BLVD. "X"
DODT	VILLAGE DE LEST
CROWDER	WILSON
BULLARD	LAKE FOREST
LAKELAND TERRACE	CERISE
CASTLE MANOR	WILLOWBROOK

NOTE: **THE ABOVE BYPASS VALVES WILL BE OPENED ONLY UNDER THE APPROVAL OF THE GENERAL SUPERINTENDENT.**

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

WEST BANK

PRE-STORM:

The following shall be performed by **May 1st** of each year and prior to any storm.

- ☐ Verify conditions of all catch basins, culverts, and wet wells, remove and clear all debris.
- ☐ Check station's logging equipment (floats, staff gauges, etc.) for proper operation.
- ☐ Purge all bubbler lines and check bubbler equipment for proper operation.
- ☐ Operate and service all drainage pumps, sump pumps, screen cleaners, vacuum pumps, diesel engines, etc.
- ☐ Verify that all spare fuses, flashlights, and maintenance equipment are at each station.
- ☐ Verify the proper operations of **ALL** Rain Gauge Devices.
- ☐ Check all radio and station batteries.
- ☐ Verify the condition of all emergency equipment such as life jackets, boats, first aid kits, portable stoves, etc.
- ☐ Locate window and/or door hurricane bracing equipment such as plywood, screws, etc.
- ☐ Top off the station's diesel fuel storage tanks as applicable.
- ☐ Obtain trash rakes from warehouse and distribute to all stations.
- ☐ Lubricate all mechanical equipment as needed, such as screen cleaners, etc.

HURRICANE WATCH:

- ☐ Install plywood on all station openings, brace all doors, and close all shutters.
- ☐ Check generators, pumps, and mobile pumping equipment for gas, oil, and proper operation.
- ☐ At all stations, check and clean suction screens to verify that there is nothing obstructing the suction and discharge of the station.
- ☐ Store sandbags and fuel.

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- ☐ Issue all emergency tools and supplies such as hammers, nails, hand saws, rope, etc.
- ☐ Pick up all loose materials outside of the facility site.

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HURRICANE WARNING:

☐ Institute call-out procedure as follows:

- Drainage Pumping Station 11 - Two (2) Pumping & Power Plant Operators and Two (2) Pumping Plant Operators on watch throughout the storm.
- Drainage Pumping Station 13 - Two (2) Pumping & Power Plant Operators, Two (2) Pumping Plant Operators, and Two (2) U.P.W. II's on watch throughout the storm.

☐ Obtain portable air compressor(s) from Central Yard for use to pressurize the pumps and prevent back syphoning.

POST-STORM:

☐ Operate equipment as required.

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

SEWERAGE PUMPING STATIONS

WEST BANK

PRE-STORM:

- ☐ Check the operation of all by-pass valves.
- ☐ Purge all bubbler lines and check bubbler equipment on May 1st and prior to each emergency.
- ☐ Operate and service all main sump pumps.
- ☐ Verify security of all electrical services on **May 1st** and prior to all emergencies.
- ☐ Observe condition of river discharge lines on June 1st and prior to all emergencies. Monitor potential hazards to marine facilities.
- ☐ Check all radio equipment.
- ☐ Verify the condition of all emergency equipment such as life jackets, boats, first aid kits, etc.
- ☐ Verify that spare fuses and proper maintenance equipment are at each site.

HURRICANE WATCH:

- ☐ Check generators, pumps and mobile pumping units for gas and oil: Then test operate.
- ☐ Pick up all loose material outside of the facility site.

HURRICANE WARNING:

- ☐ Institute call-out procedure as follows:
  - Route 7 - One (1) Pumping Plant Operator and Two (2) U.P.W. II

POST-STORM:

- ☐ Operate equipment as required.

POWER DISTRIBUTION DIVISION

SPECIFIC RESPONSIBILITIES

CENTRAL CONTROL

PRE-STORM:

- ☐ Power Dispatchers will monitor the National Weather Service's continuous weather broadcasts, Kavouras radar/satellite data, and Wilken's Weather Technologies dial-up hurricane information. All weather information will be distributed as needed to operational departments.
- ☐ Verify operation of all fixed, mobile, and portable radios.
- ☐ Distribute additional materials, (fuses, tarps, rope, etc...) to Sub Stations.
- ☐ Place hurricane protection covers on windows and doors where needed and acquire sand bags for Central Control.
- ☐ Check and restock, as needed, first aid supplies.

HURRICANE WATCH:

- ☐ Continue the monitoring and distribution of weather information pertaining to the impending Hurricane.
- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by the departmental plan.

HURRICANE WARNING:

- ☐ Continue the monitoring and distribution of weather information pertaining to the impending hurricane.
- ☐ Institute call-out and procedures as required by the specific departmental plan.
- ☐ Initiate in-house 60 hertz power production, via Plant Frequency Changer, and distribute throughout the Carrollton Water Plant.
- ☐ Initiate additional generative power, placing on stand-by status.

POST-STORM:

- ☐ Continue the monitoring and distribution of weather information.
- ☐ Continue operation of equipment as required.

PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

POWER PLANT, HIGH LIFT, LOW LIFT, RIVER INTAKES

PRE-STORM:

- ☐ Check fuel supply and all fuel-oil lines.

HURRICANE WATCH:

- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by departmental plan.

HURRICANE WARNING:

- ☐ Institute call-out and procedures as required by specific departmental plan or as outlined herein.
- ☐ Arrange for stand-by operating personnel.
- ☐ Operate #5 gas combustion turbine generator throughout emergency.
- ☐ Check all bracing in buildings and river intakes completed by maintenance forces. have extra tarps available if needed.
- ☐ Start up circulating oil pump on turbines not in operation to assure they are operable.
- ☐ Maintain continuous operation throughout emergency.

POST-STORM:

- ☐ Continue operation.
- ☐ Arrange transportation of operating personnel, if necessary.

PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

STEAM GENERATING

PRE-STORM:

- ☐ Check fuel supply.
- ☐ Check burner equipment all boilers.
- ☐ Check boiler plant auxiliary units.

HURRICANE WATCH:

- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by departmental plan.

HURRICANE WARNING:

- ☐ Institute call-out and procedures as required by specific departmental plan or as outlined herein.
- ☐ Arrange for stand-by operating personnel.
- ☐ Set up one oil burner in each boiler in service.
- ☐ Maintain continuous operation throughout the emergency.

POST-STORM:

- ☐ Continue operation.
- ☐ Arrange transportation of operating personnel, if necessary.

PUMPING AND POWER DIVISION

SPECIFIC RESPONSIBILITIES

ALGIERS PUMPING AND POWER PLANT

PRE-STORM:

- ☐ Verify that spare cable, slings, reel bars and spreaders are available.
- ☐ Observe condition of all river cable crossing signs and cable isolators on June 1st and prior to each emergency.
- ☐ Verify emergency watering equipment condition on June 1st and prior to each emergency.
- ☐ Monitor river stage and traffic, report all potential hazards to intakes and discharges.
- ☐ Check ground level storage tanks.
- ☐ Check elevated storage tank prior to high winds.

HURRICANE WATCH:

- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by departmental plan.

HURRICANE WARNING:

- ☐ Institute call-out and procedures as required by specific departmental plan or as outlined herein.
- ☐ Verify arrival of all emergency crews and equipment from other S&WB departments; report all deviations.

POST-STORM:

- ☐ Monitor condition of River Intakes, Navigational Lights at River Station #2 and elevated water tower.

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WATER PURIFICATION DIVISION

SPECIFIC RESPONSIBILITIES

PRE-STORM:

- ☐ The following precautions must be taken at the Water Plant when a hurricane is impending:
  - ☐ Fill and secure empty reservoirs, storage tanks, clear water reservoir and elevated tanks.
  - ☐ Wash filters as necessary in order to maintain longer filter runs.
  - ☐ Secure Monorake and Alemite Systems.
  - ☐ Secure chlorine tank cars, lines, etc...
  - ☐ Fasten all windows - strong back all doors except essential entrances.
  - ☐ Make available "Visqueen" for chemical storage tank protection for possible roof leakage.
  - ☐ Check drains for debris.
  - ☐ Police area for potential projectiles.
  - ☐ Have sufficient water purification chemicals available and transferred to daily bins for use.
  - ☐ Institute steps from the "Flood" and "Internal Chemical Spill" procedures as necessary.

HURRICANE WATCH:

- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by departmental plan. Meet with senior personnel to discuss and review operational plans and priorities.

HURRICANE WARNING:

- ☐ Institute call-out and procedures as required by specific departmental plan, or as outlined herein.

POST-STORM:

- ☐ Assess and/or repair damage to Water Purification Systems.
- ☐ Sterilize broken water lines as required.
- ☐ Sample water system to maintain water quality.

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WASTE TREATMENT & WASTE TREATMENT CONTRACTOR

SPECIFIC RESPONSIBILITIES

PRE-STORM:

- ☐ Remove all loose debris from site.
- ☐ Dismantle any scaffolding and lash down all tarpaulins.
- ☐ Secure Chlorine Tank Cars and cylinders.
- ☐ Secure Incinerators and other equipment requiring long lead time for shut-down.
- ☐ Check inventory of required spares.
- ☐ Install water stops and sand bags, as required.

HURRICANE WATCH:

- ☐ Institute call-out procedures for any additional personnel needed.
- ☐ Shut-off all chlorine supplies and aspirate chlorinators.

HURRICANE WARNING:

- ☐ Verify arrival of requested emergency crews and equipment, report any deviations.
- ☐ Distribute all emergency stores and equipment.

POST-STORM:

- ☐ Repair all damage.
- ☐ Resume normal operations a quickly as possible.

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SITE SPECIFIC PLANS FOR
EAST BANK SEWAGE TREATMENT PLANT

SPECIFIC RESPONSIBILITIES

PRE-STORM:

- ☐ Execute general pre-storm tasks.
- ☐ Assume the worst:
  - Lay in supply of flashlights, batteries, bottled water, canned meats, etc...
  - Fill all gas cans with fresh gasoline.
  - Acquire adequate supplies of 2-cycle and 4-cycle oils.
  - Acquire and fill sandbags.
  - Install water stops in railroad cut and sandbag on plant side of water stops.
  - Exercise influent M.O.V.'s.
  - Verify operation of 2-way radio.

HURRICANE WATCH:

- ☐ Review procedure for putting 300 KW generator set on line.
- ☐ Shut off Cl_2 supply at tank car, aspirate chlorinators.
- ☐ Secure all roll-up doors.
- ☐ Secure all regular doors.

HURRICANE WARNING:

- ☐ Distribute emergency supplies.
- ☐ Move rolling stock to high places on roadways.
- ☐ Move all records, computers, and sensitive equipment to high locations.
- ☐ Institute by-passes at Station "A" and Station "D", request opening of Metropolitan valve.
- ☐ In the event of Power failure, maintain site drainage with 300 KW generator set.

POST-STORM:

- ☐ Execute general post-storm tasks.

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SITE SPECIFIC PLANS FOR
WEST BANK SEWAGE TREATMENT PLANT

SPECIFIC RESPONSIBILITIES

PRE-STORM:

- ☐ Execute general pre-storm tasks.
- ☐ Assume the worst:
  - Lay in supply of flashlights, batteries, bottled water, canned meats, etc...
  - Fill all gas cans such as fresh gasoline.
  - Acquire adequate supplies of 2-cycle and 4-cycle oils.
  - Verify operation of all portable pumps.
  - Exercise diesel generator.
  - Verify operation of 2-way radio.
  - Fill tractor with gas, check oil, and verify operation.

HURRICANE WATCH:

- ☐ Review procedure for bringing generator set on-line.
- ☐ Secure all roll-up doors.
- ☐ Secure all regular doors.
- ☐ Shut off Cl_2 supplies at tone cylinders and aspirate chlorinators.
- ☐ Move all records and sensitive equipment to New Pump Room; High & Dry locations.

HURRICANE WARNING:

- ☐ Distribute emergency supplies.
- ☐ Open by-pass valve at plant.
- ☐ Turn off main pumps to trickling filter.
- ☐ Lash down trickling filter arms.
- ☐ Start Diesel Generator and Bring on-line.

POST-STORM:

- ☐ Execute general post-storm tasks.

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FREEZE

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CONTACTS FOR FREEZE EMERGENCIES

OPERATIONS DEPARTMENT

AVAILABLE PERSONNEL	POSITION
1	CHIEF OF OPERATIONS

AVAILABLE PERSONNEL	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPT. (East & West Banks)

AVAILABLE PERSONNEL	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPV. (East & West Banks)

DRAINAGE PUMPING EAST BANK

AVAILABLE PERSONNEL	POSITION
2	ASST. SUPERVISORS

SEWERAGE PUMPING EAST BANK

AVAILABLE PERSONNEL	POSITION
2	SUPERVISORS
4	ASST. SUPERVISORS

NOTIFY ALL ON CALL SUPERVISORY PERSONNEL

DRAINAGE & SEWERAGE PUMPING

WEST BANK

1	ASST. SUPERVISOR
2	STATION OPERATOR (DRAINAGE OR SEWERAGE)

CENTRAL CONTROL

NUMBER	POSITION
1	POWER DISPATCHER IV OR III
1	POWER DISPATCHER II

DEPARTMENT OF WATER PUMPING AND POWER

EAST BANK

[illegible]	POSITION
2	STEAM PLANT ENG. III'S
2	STEAM PLANT ENG. II'S
1	STEAM PLANT ENG. I'S
1	PUMPING PLANT OPERATOR

ALGIERS

[illegible]	POSITION
1	PUMPING STATION SUPV.
1	PUMPING STATION SUPV. ASST.
1	PUMP. & PWR. PLANT OPERATOR
1	PUMPING PLANT OPERATORS

WATER PURIFICATION

[illegible]	[illegible]
1	WATER PURIFICATION SUPT.

CARROLLTON PURIFICATION PLANT

[illegible]	[illegible]
1	WATER PURIFICATION SUPT. ASST.
2	W.P.O. IV'S
3	W.P.O. III'S
2	W.P.O. II'S
3	W.P.O. I'S
1	LABOR SUPV. III
2	LAB TECH. III'S
1	WATER CHEMIST

ALGIERS PURIFICATION PLANT

[illegible]	[illegible]
1	WATER PURIFICATION SUPT. ASST.
1	W.P.O. IV
1	W.P.O. III
2	W.P.O. II'S
3	W.P.O. I'S

WASTE TREATMENT PLANTS

[illegible]	[illegible]	[illegible]
S&WB DON CROWDER BEEPER	WASTE TREATMENT SUPT.	585-2271 887-3477 830-0807
P.S.G. BOBBY BERRY BEEPER	REGIONAL MANAGER	277-5400 529-1722 794-5283
E.B.S.T.P. AUGUST JOHNSON, JR. BEEPER	PROJECT MANAGER	277-5400 244-0406 825-5439
W.B.S.T.P. JIM ROSS BEEPER	PLANT SUPERVISOR	392-9729 394-1382 825-5282

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

EAST BANK

PRE-FREEZE:

- ☐ Leave pencil point stream of water running from outside faucets.
- ☐ Verify insulation of exposed water lines outside of all stations in the first week of October.
- ☐ Any time the temperature is anticipated to drop below 32°F, the Central Control Division notifies the Supervisor Assistant on duty at which time all stations prepare for a freeze.
- ☐ Verify the proper operation of the pressure gauge for each water main.

SEWERAGE PUMPING STATIONS

EAST BANK

PRE-FREEZE:

- ☐ Verify insulation of exposed water lines outside of all automatic stations in the first week of October.
- ☐ Upon the first expectation of a possible freeze, shut off the water supply to the river discharge valves at Marigny Street and Spain Street and drain back-flow preventers.

FREEZE WARNING:

- ☐ Shut off the water supply to secondary pump units and vacuum pumps at all of the automatic stations.

POST-FREEZE:

- ☐ Set all pumping stations back to normal operation.
- ☐ After May 1st, open water supply to the river discharge valves at Marigny Street and Spain Street and exercise valves.

NOTE:

In the event of a severe freeze, if water pressure is lost at certain stations, they would have to be shut down to prevent damage to equipment.

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DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE & SEWERAGE PUMPING STATIONS

WEST BANK

PRE-FREEZE:

- ☐ Leave pencil point stream of water running from outside faucets.
- ☐ Verify insulation of exposed water lines outside of all stations in the first week of October.
- ☐ Open water by-pass for vacuum pumps.
- ☐ Run all raw water pumps.
- ☐ Verify the proper operation of the pressure gauge for each water main at the Drainage Pumping Stations.

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POWER DISTRIBUTION DIVISION

SPECIFIC RESPONSIBILITIES

CENTRAL CONTROL

PRE-FREEZE:

- ☐ Power Dispatchers will monitor the National Weather Service's continuous weather watch broadcasts, Kavouras, and Wilken's Weather Technologies weather information. All information concerning the freeze will be distributed as needed to operational departments.
- ☐ Notify proper personnel of impending freeze along with its predicted lows and duration. See next page.
- ☐ Set buildings for freeze.

FREEZE:

- ☐ Continue the monitoring and distribution of weather information.
- ☐ React accordingly to NOPSI and LP&L 60 Hertz outages.

POST-FREEZE:

- ☐ Continue the monitoring and distribution of weather information.
- ☐ Continue operation of equipment as required.
- ☐ Set buildings off of freeze.

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********** FREEZE PRECAUTIONS **********
32 DEGREES OR LOWER
(REV. 2-6-96)
NOTIFY ONE PERSON FROM EACH DEPARTMENT, (NOTIFY ALL +)

	NAME	OFFICE / BEEPER		HOME PHONE
+	G. J. SULLIVAN	2365	836-1814	482-2326
+	J. HUERKAMP	0412	830-8655	830-8655
+	R. ST. GERMAIN	0409	529-0609	271-7723
+	W. LAWRENCE	3891	528-4883	366-5105
+	P. MUMME	3863	NONE	242-7160
+	B. MOEINIAN	2961	838-2741	486-4792
+	J. TONCREY	0575	830-9342	283-8474
	NOTE: AFTER HOURS BEEP J. HUERKAMP			
	WATER PURIFICATION			
	L. LANGLEY	0406	836-1335	738-3223
	PUMPING & POWER			
	J. BENETZ	0552	830-7070	895-7673
	STATION "C"			
	J. LADEK	0407	830-9804	894-6818
	R. ISSAC	2406	830-9866	366-3621
	DRAINAGE STATIONS			
+	R. SPRINGER *	2957	830-9300	895-8157
+	R. RICHARD	2954	830-9320	283-8026
+	K. SMITH *	2415	830-9374	282-6878
+	L. SOUBLET	2955	830-9355	482-1637
*	ALSO SEWER STATIONS WESTBANK			
	SEWER STATIONS EASTBANK			
+	R. FABRE	2952	838-2306	244-0763
+	K. STILES	2953	841-6746	340-6231
	SEWERAGE TREATMENT PLANT EASTBANK & WESTBANK			
	A. JOHNSON	453-4563	825-5439	244-0406
	J. ROSS		825-5282	394-1382

ENTER ON LOG SHEET ALL PERSONNEL THAT YOU HAVE NOTIFIED

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PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

OLD RIVER STATION

PRE-FREEZE:

- ☐ Run vacuum pumps (either one) every hour. Run for about 2 minutes or until pump primes.
- ☐ Open tap water faucet in the rear of the station to about a trickle flow of water. (About the thickness of a pencil lead)
- ☐ Make sure gravity flow well in basement is working.
- ☐ Open tap water faucet in front of the Oak Street Station ("D" Pump Side) to about a trickle flow of water.
- ☐ Make sure "D" pump packing glands are dripping even if pump is not being used.
- ☐ Make sure water booster pump is working and has water on the packing gland.
- ☐ Make sure all heat strip breakers for motors are on and all heaters are working.

OLD RIVER WHARF

PRE-FREEZE:

- ☐ Crack open 13 valves on wharf.
- ☐ Open 1 faucet behind the station and 1 faucet on the water cooler in the station.

NEW RIVER STATION

PRE-FREEZE:

- ☐ Crack open the 6 faucets on each of the 4 vacuum pumps on the levee.
- ☐ Crack open 1 main water line by the front entrance of the station. Crack open 1 water line by the river intake sample filter system area.
- ☐ Crack open 3 valves inside station on the 3rd deck behind the #3 pump.
- ☐ Crack open water faucet by filters on the 2nd deck inside of the station.
- ☐ Crack open the water faucet in the basement.
- ☐ Close the air vents on the roof of the station.

PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

HIGH LIFT

PRE-FREEZE:

- ☐ Make sure drains are open and water is coming out of the drains by 4 manifolds by porch by #4 turbine: 2 on porch and 2 right inside. (HL-1, HL-2, HL-3, & HL-4)
- ☐ Make sure drains are open and water is coming out of the drains by 4 manifolds by porch by #5 turbine: 2 on porch and 2 right inside. (HL-9, HL-10, HL-11, & HL-12)
- ☐ Shut main water in pump room for the 48" line by Central control and open up drain lines to empty the water out of the line.
- ☐ Make sure that the water is dripping from the packing gland for the #4 turbine circulating pump.

CLAIBORNE STATION

PRE-FREEZE:

- ☐ Open 2 faucets: 1 outside of the station in the front and 1 on the side of the station toward the 60 cycle building.

PANOLA STATION

PRE-FREEZE:

- ☐ Turn on heaters in the building.

BOILER ROOM

PRE-FREEZE:

- ☐ Be sure that the 15 watt light bulbs for #3 & #4 force draft fan controllers are on.
- ☐ Be sure all cooling water for the equipment has a good water flow.
- ☐ Close the main water supply and drain the lines for both hoses for #1 & #2 penthouses. (under steps)

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PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

STATION "C" - ALGIERS

PRE-FREEZE:

- ☐ All outside water hoses are to be brought indoors. Shut off all exterior faucets from the outside of the building and drain all lines leading to the outside.
- ☐ When the temperature reaches 30°F, crack open the seal water valves on the #1, #2, & #3 sewer pumps. At the same time, set the bleeder valves for the Venturi and Manometers for freezing conditions.
- ☐ Turn on heater strips and heat lamps at River Station #1 and at River Station #2.

WATER PURIFICATION DIVISION

SPECIFIC RESPONSIBILITIES

PRE-FREEZE:

- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by the departmental plan. Meet with senior personnel to discuss and review operational plans and priorities.
- ☐ Fill storage tanks and reservoirs.
- ☐ Wash filters as necessary in order to maintain longer filter runs throughout freeze periods.
- ☐ Partially open valves on all exposed water lines to prevent freezing (do not open excessively). Drain lines not in use when possible.
- ☐ Protect chemical lines and storage tanks subject to freezing.
- ☐ Protect all D.P. (differential pressure) cells subject to freezing by supplying heat or insulation or by draining.
- ☐ Prepare for manual operation when automatic systems freeze or are shut down to prevent damage.
- ☐ Run sample lines and/or recirculation pumps subject to freezing.
- ☐ Have on hand a supply of tarps and other insulating materials and electric space heaters. Take special precautions when using a space heater! Keep it away from combustible materials and away form moisture and spraying water which might lead to electrical shock! If heaters are used to prevent equipment from freezing, **CHECK FREQUENTLY**.
- ☐ Have sufficient water treatment chemicals on hand and transferred in order to meet excessive demand.
- ☐ Maintain frequent communication between all departments and facilities in order to keep reservoirs and storage tanks at optimum level without overflowing.
- ☐ Sample and analyze water system to maintain water quality.

AT CARROLLTON PLANT

- ☐ Ready passage through the Head House for use.
- ☐ Start syphons in C4 and C6 before sub-freezing temperatures set in.

FREEZE WARNING:

- ☐ Maintain constant vigilance to keep adequate reservoir and storage levels. **DON'T GET BEHIND!!!**
- ☐ Frequently check chemical and water lines for freeze up.

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- ☐ Look ahead to even greater water demand and chemical usage.
- ☐ Keep up with forecasts to prepare treatment units and filters for extended use at or near capacity.

POST FREEZE:

- ☐ Assess damage.
- ☐ Immediately repair necessary systems.
- ☐ Keep management informed as to each facility's capability to meet the customer's demand for water.

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WATER

AND/OR

SEWER FORCE

MAIN BREAK

CONTACTS FOR MAIN BREAK EMERGENCIES

OPERATIONS DEPARTMENT

[illegible]	[illegible]
1	CHIEF OF OPERATIONS

[illegible]	[illegible]
1	DRAINAGE & SEWERAGE PUMPING SUPT. (East & West Banks)

[illegible]	[illegible]
1	DRAINAGE & SEWERAGE PUMPING SUPV. (East & West Banks)

DRAINAGE PUMPING EAST BANK

[illegible]	[illegible]
1	SUPERVISOR
1	ASST. SUPERVISOR

SEWERAGE PUMPING EAST BANK

[illegible]	[illegible]
2	SUPERVISORS
4	ASST. SUPERVISORS

NOTIFY ALL ON CALL SUPERVISORY PERSONNEL

DRAINAGE & SEWERAGE PUMPING

WEST BANK

[illegible]	[illegible]
1	SUPERVISOR
1	ASST. SUPERVISOR (DRAINAGE OR SEWERAGE)
1	STATION OPERATOR
1	U.P.W. II

CENTRAL CONTROL

NONE	NONE

NOTE: Normal Shift Personnel will be available.

DEPARTMENT OF WATER PUMPING AND POWER

EAST BANK

[illegible]	[illegible]
1	STEAM PLANT ENG. III
2	STEAM PLANT ENG. II

WESTBANK

[illegible]	[illegible]
1	PUMPING PLANT SUPV.
1	PUMP & PWR. PLANT SUPV.
1	PUMP. & PWR. PLANT OPERATOR

WATER PURIFICATION

CARROLLTON PURIFICATION PLANT

[illegible]	[illegible]
1	W.P.O. IV
1	LAB TECH. III

ALGIERS PURIFICATION PLANT

[illegible]	[illegible]
1	W.P.O. IV

WASTE TREATMENT PLANTS

[illegible]	[illegible]	TELEPHONE
S&WB DON CROWDER BEEPER	WASTE TREATMENT SUPT.	585-2271 887-3477 830-0807
P.S.G. BOBBY BERRY BEEPER	REGIONAL MANAGER	277-5400 529-1722 794-5283
E.B.S.T.P. AUGUST JOHNSON, JR. BEEPER	PROJECT MANAGER	277-5400 244-0406 825-5439
W.B.S.T.P. JIM ROSS BEEPER	PLANT SUPERVISOR	392-9729 394-1382 825-5282

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

EAST BANK - SEWER MAIN

UPON NOTIFICATION OF A BREAK:

- ☐ Shut down station(s) and report the problem to the Supervisor.
- ☐ Upon further investigation, Supervisor(s) will notify the Networks Department and Environmental Affairs Department as necessary.

SEWERAGE PUMPING STATIONS

EAST BANK - SEWER MAIN

UPON NOTIFICATION OF A BREAK:

- ☐ Determine which station(s) are pumping through the affected area and shut those stations down.
- ☐ Notify Networks Department when station(s) are shut down and instruct them as to which valve(s) must be closed on the main.
- ☐ Notify the Chief of Operations and the Environmental Affairs Department.

DURING REPAIRS:

- ☐ Operations personnel are kept in the field to monitor the station(s) that are shut down, and open by-pass valves should it become necessary.

UPON COMPLETION OF REPAIRS:

- ☐ Close any by-pass valves that were opened.
- ☐ Set the station(s) back to automatic.
- ☐ Notify the Chief of Operations and the Environmental Affairs Department.
- ☐ Submit a By-Pass Report if any stations were by-passed.

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

EAST BANK - WATER MAIN

UPON NOTIFICATION OF A BREAK:

- ☐ Notify all stations to monitor water pressure. If the pressure drops too low, stop the equipment.

SEWERAGE PUMPING STATIONS

EAST BANK - WATER MAIN

UPON NOTIFICATION OF A BREAK:

- ☐ Notify all stations to monitor water pressure. If the pressure drops too low, stop the equipment.
- ☐ If an outage of pumping equipment occurs due to the lack of water pressure the appropriate "By-pass" Report must be generated as outlined on page 51.

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

WEST BANK - WATER MAIN

UPON NOTIFICATION OF A BREAK:

- ☐ Notify all stations to monitor pressure. If pressure drops too low, stop all equipment that receives water for cooling.

SEWERAGE PUMPING STATIONS

WEST BANK - SEWER FORCE MAIN

UPON NOTIFICATION OF A BREAK:

- ☐ Determine which station(s) are pumping through the affected area and shut those stations down.
- ☐ Notify Networks Department when station(s) are shut down and instruct them as to which valve(s) must be closed on the main.
- ☐ Notify the Chief of Operations and the Environmental Affairs Department.

DURING REPAIRS:

- ☐ Operations personnel are kept in the field to monitor the station(s) that are shut down, and open by-pass valves should it become necessary.

UPON COMPLETION OF REPAIRS:

- ☐ Close any by-pass valves that were opened.
- ☐ Set the station(s) back to automatic.
- ☐ Notify the Chief of Operations and the Environmental Affairs Department.
- ☐ Submit a By-Pass Report if any stations were by-passed.

POWER DISTRIBUTION DIVISION

SPECIFIC RESPONSIBILITIES

CENTRAL CONTROL - WATER MAIN

UPON NOTIFICATION OF A BREAK:

- ☐ Upon notification of a main break, the Power Dispatchers will notify the following:
  - General Superintendent
  - Chief of Operations
  - Emergency Desk
  - High Lift
- ☐ Continue the monitoring and distribution of information as requested.
- ☐ Notify all stations to monitor water pressure. If the pressure drops too low, stop the equipment.
- ☐ If an outage of pumping equipment occurs due to the lack of water pressure the appropriate "By-pass" Report must be generated as outlined on page 51.

PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

UPON NOTIFICATION OF A BREAK:

- ☐ Contact the Emergency Desk (942-3837/3833/3832) to report or verify the existence of a main break.
- ☐ Take steps to maintain normal city water pressure.
- ☐ Report the break to on-call personnel, management and the Fire Department.
- ☐ Stand by to assist the Networks Department work crews with adjustments to city water pressure and/or valve closures as required.

WATER PURIFICATION DIVISION

SPECIFIC RESPONSIBILITIES

UPON NOTIFICATION OF A BREAK:

- ☐ Coordinate possible reaction measures with the Pumping and Power Division. Measures may include increasing low lift, decreasing high lift, and determining action to be taken regarding use of storage water.
- ☐ Have Laboratory Personnel on standby for water sampling and analysis.
- ☐ Communicate with Central Yard as to estimates for time of repair.

CHEMICAL SPILL IN THE RIVER

CONTACTS FOR
CHEMICAL SPILL IN THE RIVER EMERGENCIES

OPERATIONS DEPARTMENT

1	CHIEF OF OPERATIONS

1	DRAINAGE & SEWERAGE PUMPING SUPT. (East & West Banks)

DRAINAGE PUMPING EAST BANK

NONE	NONE

SEWERAGE PUMPING EAST BANK

NONE	NONE

NOTIFY ALL ON CALL SUPERVISORY PERSONNEL

DRAINAGE & SEWERAGE PUMPING

WEST BANK

SEWER STATION

NONE	NONE

CENTRAL CONTROL

NONE	NONE

DEPARTMENT OF WATER PUMPING AND POWER

EAST BANK

[illegible]	[illegible]
1	STEAM PLANT ENG. III
1	STEAM PLANT ENG. II
1	STEAM PLANT ENG. I
1	PUMPING PLANT OPERATOR

WESTBANK

[illegible]	[illegible]
1	PUMPING STATION SUPERVISOR
1	PUMPING STATION SUPERVISOR ASST.
1	PUMPING & POWER PLANT OPERATOR

WATER PURIFICATION

[illegible]	[illegible]
1	WATER PURIFICATION SUPT.

CARROLLTON PURIFICATION PLANT

[illegible]	[illegible]
2	WATER PURIFICATION SUPT. ASST'S
2	W.P.O. IV'S
1	W.P.O. III
2	W.P.O. II
1	W.P.O. I
1	LABOR SUPV. III
2	LAB TECH. III'S
2	Water Chemists

ALGIERS PURIFICATION PLANT

[illegible]	[illegible]
1	WATER PURIFICATION SUPT. ASST.
1	W.P.O. IV
1	W.P.O. III
2	W.P.O. II
1	W.P.O. I

WASTE TREATMENT PLANTS

NAME	POSITION	TELEPHONE
S&WB DON CROWDER BEEPER	WASTE TREATMENT SUPT.	585-2271 887-3477 830-0807
P.S.G. BOBBY BERRY BEEPER	REGIONAL MANAGER	277-5400 529-1722 794-5283
E.B.S.T.P. AUGUST JOHNSON, JR. BEEPER	PROJECT MANAGER	277-5400 244-0406 825-5439
W.B.S.T.P. JIM ROSS BEEPER	PLANT MANGER	392-9729 394-1382 825-5282

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DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

EAST BANK

INITIAL REPORT:

☐ No action is required by this department.

SEWERAGE PUMPING STATIONS

EAST BANK

INITIAL REPORT:

☐ No action is required by this department.

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

WEST BANK

INITIAL REPORT:

☐ No action is required by this department.

POWER DISTRIBUTION DIVISION

SPECIFIC RESPONSIBILITIES

CENTRAL CONTROL

INITIAL REPORT:

- ☐ Upon notification of an external chemical spill, outside of the Department of Central Control, the Power Dispatchers will notify the following:
  - General Superintendent
  - Chief of Operations
  - Emergency Desk
  - Water Purification Superintendent
  - Environmental Affairs

POST-SPILL:

- ☐ Continue the monitoring and distribution of information as requested.

PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

INITIAL REPORT:

- ☐ The Water Purification Division has primary responsibility for notification to the Environmental Affairs Department, upper management, and for coordination of activities related to a chemical spill in the river.
- ☐ Upon discovery of a spill, report to the Water Purification Department via the Chemical House and contact the Coast Guard.
- ☐ Report the spill to on-call personnel and department management.
- ☐ On call personnel stand by to assist the Water Purification Department with any required changes in raw water pumping or city water delivery rates, including possible pressure changes.

WATER PURIFICATION DIVISION

SPECIFIC RESPONSIBILITIES

INITIAL REPORT:

- ☐ Fill out a S&WB form titled "Operator will obtain the following information in case of a spill". The employee is to ask the caller for the information requested under each item of the report form, except for the calculated time of arrival at the plant intake. The arrival time is to be calculated by the water plant operator using the current river velocity and entered on the report form.
- ☐ Report the spill to the Supervisor or "On call" person who will, in turn, initiate chain-of-command notification and take other necessary action.
- ☐ Report the spill to the other S&WB Water Plant Operator (Algiers or Carrollton Purification Plants).
- ☐ Report the spill to all S&WB manned river intake structures or pumping stations, alerting the operators to make frequent checks and report any signs of the spill to the Water Plant Operator.
- ☐ Report the spill to all other Operations' Departments who might be affected, such as Filter Operations and Pumping and Power.
- ☐ Notify the nearest downstream plant with a water intake in accordance with the Waterworks Warning Network Plan published by the Louisiana Department of Health.

SUPERVISORY PERSONNEL SHALL:

- ☐ Carry out chain-of command notification.
- ☐ Contact S&WB Laboratory personnel and determine when and if sampling and testing is necessary.
- ☐ Work with Federal, State, and Local emergency response teams and their contract chemical clean-up crews in circumventing the spill.
- ☐ Call out the necessary personnel to effect in-plant clean-up and/or neutralization of the spill.
- ☐ Ensure proper clean-up materials, chemicals, and protective equipment are on-hand and ready for use.

INTERNAL CHEMICAL SPILL

CONTACTS FOR
INTERNAL CHEMICAL SPILL EMERGENCIES

OPERATIONS DEPARTMENT

AVAILABLE TODAY	POSITION
1	CHIEF OF OPERATIONS

AVAILABLE TODAY	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPT. (East & West Banks)

AVAILABLE TODAY	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPV. (East & West Banks)

DRAINAGE PUMPING EAST BANK

AVAILABLE TODAY	POSITION
1	SUPERVISOR
1	ASST. SUPV.

SEWERAGE PUMPING EAST BANK

AVAILABLE TODAY	POSITION
NONE	NONE

NOTIFY ALL ON CALL SUPERVISORY PERSONNEL

DRAINAGE & SEWERAGE PUMPING

WEST BANK

DRAINAGE & SEWER STATION

[illegible]	[illegible]
1	SUPERVISOR
1	ASST. SUPV. (DRAINAGE & SEWERAGE)

CENTRAL CONTROL

[illegible]	[illegible]
1	POWER DISPATCHER IV OR III

DEPARTMENT OF WATER PUMPING AND POWER

AVAILABLE PERSONNEL	POSITION
1	PUMP. & POWER SUPT. OR ASST.

EAST BANK

AVAILABLE PERSONNEL	POSITION
1	STEAM PLANT ENG. III
2	STEAM PLANT ENG. II

OR

AVAILABLE PERSONNEL	POSITION
2	STEAM PLANT ENG. III
2	STEAM PLANT ENG. II

WESTBANK

AVAILABLE PERSONNEL	POSITION
1	PUMPING STATION SUPERVISOR
1	PUMPING STATION SUPERVISOR ASST.
1	PUMPING & POWER PLANT OPERATOR

WATER PURIFICATION

[illegible]	[illegible]
1	WATER PURIFICATION SUPT.

CARROLLTON PURIFICATION PLANT

[illegible]	[illegible]
1	WATER PURIFICATION SUPT. ASST.
1	W.P.O. IV
1	W.P.O. III
1	W.P.O. II
1	LABOR SUPV. II

ALGIERS PURIFICATION PLANT

[illegible]	[illegible]
1	WATER PURIFICATION SUPT. ASST.
1	W.P.O. IV
1	W.P.O. III
2	W.P.O. II

WASTE TREATMENT PLANTS

[illegible]	POSITION	TELEPHONE
S&WB DON CROWDER BEEPER	WASTE TREATMENT SUPT.	585-2271 887-3477 830-0807
P.S.G. BOBBY BERRY BEEPER	REGIONAL MANAGER	277-5400 529-1722 794-5283
E.B.S.T.P. AUGUST JOHNSON, JR. BEEPER	PROJECT MANAGER	277-5400 244-0406 825-5439
W.B.S.T.P. JIM ROSS BEEPER	PLANT SUPERVISOR	392-9729 394-1382 825-5282

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

EAST BANK / WEST BANK

INITIAL REPORT:

- ☐ Log all information available at the time the report is received.
- ☐ Notify the on duty Supervisor Assistant.
- ☐ The on duty Supervisor Assistant should notify his Supervisor who in turn should notify the Environmental Affairs Department, the Chief of Operations, and the Chief of Networks.
- ☐ The on duty Supervisor Assistant should make an inspection of the spill location to observe if the spill is entering the drainage system and if so, take appropriate action.
- ☐ During the site inspection, as much available information should be obtained.

SEWERAGE PUMPING STATIONS

EAST BANK / WEST BANK

INITIAL REPORT:

- ☐ Upon notification, from Networks Department or Environmental Affairs Department, of a chemical or fuel spill in the street that has gotten into the gravity sewer, the appropriate station(s) would be shut down.
- ☐ Downed station(s) would remain off until receipt of notification from the Environmental Affairs Department that the stations(s) can be placed back in service.

POWER DISTRIBUTION DIVISION

SPECIFIC RESPONSIBILITIES

CENTRAL CONTROL

INITIAL REPORT:

- ☐ After an Internal Chemical Spill has occurred, the Power Dispatchers will monitor the containment of the spill. The Power Dispatcher will then notify the following:
  - On-Call Personnel.
  - Environmental Affairs.

PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

INITIAL REPORT:

- ☐ Primary responsibility for notification to the Environmental Affairs Department, upper management, and for coordination of containment/cleanup activities rests with the affected department.
- ☐ Contact the Emergency Desk (942-3837/3833/3832) to report the spill and have the spill reported to the Environmental Affairs Department.
- ☐ Contact on-call personnel, the Facility Maintenance spill containment/clean-up team through Central Control, and notify management.
- ☐ Take immediate action to stop or contain the spill and/or evacuate personnel if the condition is hazardous.
- ☐ Complete necessary documentation of the spill and actions taken.

WATER PURIFICATION DIVISION

SPECIFIC RESPONSIBILITIES

ALL INTERNAL CHEMICAL SPILLS EXCEPT UNCONTROLLABLE CHLORINE OR AMMONIA RELEASE (ON PAGE 81)

INITIAL REPORT:

- ☐ Notify immediate supervisor who will in turn continue chain of command notification.
- ☐ Appropriate Water Purification Superintendent Assistant or his designated representative will give verbal report to the Environmental Affairs Department (942-3855, if after hours, 942-3833).
- ☐ Appropriate Water Purification Superintendent Assistant will give verbal report to the Safety Engineer (942-3980, if after hours, to the Safety Engineer on call, check weekly Safety Engineer on call sheet for phone numbers).
- ☐ Appropriate Water Purification Superintendent Assistant will immediately send a written bypass/overflow report to the Environmental Affairs Department and copies to the Deputy Director, General Superintendent, Chief of Operations and Water Purification Superintendent.
- ☐ If the spill has not ceased at the time that the initial report was filed, a final report shall be sent at the conclusion of the incident to the Environmental Affairs Department and copies to the Deputy Director, General Superintendent and Chief of Operations.

WATER PURIFICATION DIVISION

SPECIFIC RESPONSIBILITIES

UNCONTROLLABLE CHLORINE OR AMMONIA RELEASE

INITIAL REPORT:

☐ Call these numbers in this order:

NOTE: BE SURE TO DIAL "9" FIRST TO GET AN OUTSIDE LINE FOR ALL NUMBERS LISTED BELOW.

- 911
- (1)-925-6595 State Police Hazardous Chemical Hotline
- 565-7200 Orleans Parish Emergency Planning
- 738-3223 Louis Langley (home) or 836-1335 (beeper)

CARROLLTON PURIFICATION PLANT

484-7687	V. Fouchi	(home)
830-8657		(beeper)
651-7243	A. Lobell	(home)
836-7655		(beeper)
469-9771	H. Head	(home)
831-6533		(beeper)
468-1691	J. Amore	(home)
830-0611		(beeper)

ALGIERS PURIFICATION PLANT

866-9070	M. Russell	(home)
830-8571		(beeper)
833-8131	N. Demesia	(home)
830-8188		(beeper)
366-0012	G. Bergeron	(home)
830-8189		(beeper)

☐ Determine the wind direction. Notify all persons in the vicinity to evacuate upwind.

☐ Do not attempt to enter contaminated area unless absolutely necessary and if so, with protective clothing and a full Self Contained Breathing Apparatus. Standby personnel must be present and informed if you enter a contaminated area. If possible, **STAY AWAY** and let the fire department handle it.

☐ Proceed to procedure, on page 80, for reporting other spills (follow each of the three steps).

FLOOD

CONTACTS FOR FLOOD EMERGENCIES

OPERATIONS DEPARTMENT

AVAILABLE PERSONNEL	POSITION
1	CHIEF OF OPERATIONS

AVAILABLE PERSONNEL	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPT. (East & West Banks)

AVAILABLE PERSONNEL	POSITION
1	DRAINAGE & SEWERAGE PUMPING SUPV. (East & West Banks)

DRAINAGE PUMPING EAST BANK

AVAILABLE PERSONNEL	POSITION
2	SUPERVISORS
5	ASST. SUPERVISORS
11	PUMP & POWER PLANT OPERATORS
23	U.P.W. II'S
19	PUMPING PLANT OPERATORS

SEWERAGE PUMPING EAST BANK

AVAILABLE PERSONNEL	POSITION
2	SUPERVISORS
4	ASST. SUPERVISORS

NOTIFY ALL ON CALL SUPERVISORY PERSONNEL

EMER0089.TIF

DRAINAGE & SEWERAGE PUMPING

WEST BANK

[illegible]	[illegible]
1	DRAIN. & SEWER STA. SUPV.

DRAINAGE STATION

[illegible]	[illegible]
1	DRAIN. & SEWER STA. ASST. SUPV.

STATION 13

[illegible]	[illegible]
2	PUMPING & POWER PLANT OPERATORS
2	PUMPING PLANT OPERATORS
2	U.P.W. II'S

STATION 11

[illegible]	[illegible]
2	PUMPING & POWER PLANT OPERATORS
2	PUMPING PLANT OPERATORS

SEWER STATION

[illegible]	[illegible]
1	ASST. SUPERVISOR
1	PUMPING PLANT OPERATOR
1	U.P.W. II

CENTRAL CONTROL

[illegible]	[illegible]
1	POWER DISPATCHER IV OR III
1	POWER DISPATCHER III OR II

DEPARTMENT OF WATER PUMPING AND POWER

EAST BANK

2	STEAM PLANT ENG. III
8	STEAM PLANT ENG. II
4	STEAM PLANT ENG. I
2	BOILER PLANT OPERATORS
4	PUMPING PLANT OPERATORS
5	UTILITY PLANT WORKER II

WESTBANK

1	PUMPING & POWER SUPV.
1	PUMPING & POWER SUPV. ASST.
3	PUMP & PWR. PLANT OPERATORS
6	PUMPING PLANT OPERATORS

WATER PURIFICATION

[illegible]	[illegible]
1	WATER PURIFICATION SUPT.

CARROLLTON PURIFICATION PLANT

[illegible]	[illegible]
2	W.P.O. IV
1	W.P.O. III
1	W.P.O. II
1	LABOR SUPV. III

ALGIERS PURIFICATION PLANT

[illegible]	[illegible]
1	W.P.O. IV
1	W.P.O. III
1	W.P.O. II

WASTE TREATMENT PLANTS

AVAILABLE PERSONNEL	POSITION	TELEPHONE
S&WB DON CROWDER BEEPER	WASTE TREATMENT SUPT.	585-2271 887-3477 830-0807
P.S.G. BOBBY BERRY BEEPER	REGIONAL MANAGER	277-5400 529-1722 794-5283
E.B.S.T.P. AUGUST JOHNSON, JR. BEEPER	PROJECT MANAGER	277-5400 244-0406 825-5439
W.B.S.T.P. JIM ROSS BEEPER	PLANT SUPERVISOR	392-9729 394-1382 825-5282

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE PUMPING STATIONS

EAST BANK

INITIAL REPORT:

- ☐ Call out personnel as needed to handle the rain load.

SEWERAGE PUMPING STATIONS

EAST BANK

INITIAL REPORT:

- ☐ Shut down stations affected by the flooding and close internal suction and discharge valves.

POST-FLOOD:

- ☐ Once flooding condition has subsided, set affected stations back to normal.

DRAINAGE AND SEWERAGE PUMPING DIVISION

SPECIFIC RESPONSIBILITIES

DRAINAGE & SEWERAGE PUMPING STATIONS

WEST BANK

INITIAL REPORT:

- ☐ Call out personnel as needed to handle the rain load.

POWER DISTRIBUTION DIVISION

SPECIFIC RESPONSIBILITIES

CENTRAL CONTROL

INITIAL REPORT:

- ☐ Power Dispatchers will monitor the National Weather Services continuous weather watch broadcasts, Kavouras radar/satellite data, and Wilken's Weather Technologies dial-up information. All weather information will be distributed as needed to operational departments.
- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by departmental rain event plan.
- ☐ Initiate additional generative and emergency power as needed.

POST-FLOOD:

- ☐ Continue the monitoring and distribution of weather information.
- ☐ Continue the operation of equipment as required.

PUMPING & POWER DIVISION

SPECIFIC RESPONSIBILITIES

INITIAL REPORT:

- ☐ Respond to requirements for additional drainage power with emergency "on call" and reserve personnel in Boiler Room and Turbine Operations.
- ☐ Assist in sandbagging of affected facilities.

WATER PURIFICATION DIVISION

SPECIFIC RESPONSIBILITIES

INITIAL REPORT:

- ☐ Institute preparation for call-out of additional personnel and preparation for procedures as required by departmental plan. Meet with the senior personnel to discuss and review operational plans and priorities.
- ☐ Have supplies on hand such as sandbags, generators, trash pumps, flashlights, and a boat.
- ☐ Fill all vehicle gas tanks and fill spare gasoline cans.
- ☐ Clean all drains of debris and ensure that sump pumps are functioning properly.
- ☐ When possible, elevate or sandbag equipment and machinery subject to flooding, and secure loose articles.
- ☐ Protect chemical feed and transfer equipment by opening discharge chute on conveyors.
- ☐ Keep other departments informed as to problems encountered by your department which might affect them.
- ☐ Close valves in overflow lines from recycle basins to drainage canals.

DURING FLOOD:

- ☐ Monitor the level of flood waters and determine if vents and access ports are subject to inundation by flood water allowing contamination of finished water supplies.
- ☐ Stay alert to changing conditions and forecasts. Take appropriate actions to protect personal safety and operational integrity.

POST FLOOD:

- ☐ Assess damage and institute cleanup.
- ☐ Inspect recycle basins for trash and debris.
- ☐ Check the Algiers underground gasoline tank for flood water contamination.
- ☐ Clean up any chemical spills or overflows.
- ☐ Communicate with other departments and state officials as appropriate.

EMERGENCY THREAT PLAN

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Intentionally

SEWERAGE AND WATER BOARD

EMERGENCY THREAT PLAN

FOR EMPLOYEES

CARROLLTON WATER PLANT

The recipient of a threat, usually the switchboard operator, is the key to a planned response, and must be thoroughly briefed on what steps to take. When a threat is received, the receiver of the call must:

- ☐ Get the exact message and time the call was received - it is important that the police know exactly what the caller said and he/she called.
- ☐ Hold the caller on the line as long as possible - attempt to trace the call while the person is still on the line.
- ☐ Ask questions - this will help to keep the caller on the line and possibly assist the police in identifying the caller and/or locating the bomb. A list of questions should be prepared to assist the operator in keeping the caller engaged in conversation. The list should include such questions as listed on the attached checklist. Do not hang up the phone. Call the police from another telephone. This may allow the police to tract the call.
- ☐ The receiver of the call should also pay close attention to background noises, speech impediments, accent, enunciations, and note if the caller is calm or excited.

Notification

- ☐ The person receiving the call must immediately call 911 (Police Emergency) and then Central control (865-0575).
- ☐ Central Control shall immediately notify the following:

☐ General Superintendent (Gen. Supt. will notify Exec. Director)	585-2356
☐ Chief of Operations	865-0412
☐ Chief of Facility Maintenance	865-0514

- ☐ The General Superintendent and/or the area Chief or Superintendent will assess the threat, go to the area and determine what action is necessary.
- ☐ Upon receiving instructions from any of the above-named authorities to evacuate the building or area, the employee will take only what was brought to work that day. The employee will immediately exit the building using the nearest stairwell. As they leave the building, doors and windows are to be left open. Personal lockers are to be opened.
- ☐ The above named authorities will also instruct the employees to gather at a safe assembly area located at least 300 feet from the building. The safe assembly area will be identified during the notification process.

- ☐ Employees are required to remain at the safe assembly area. Employees are <u>not</u> allowed to re-enter the building/area until the above named authorities give the All-clear" to return.

SEWERAGE & WATER BOARD EMERGENCY THREAT PLAN

SPECIFIC RESPONSIBILITIES

EMERGENCY NUMBER (Police - Fire - Medical EMS) 911

Plant or Building Security _____

Immediate Supervisor _____

Central Control _____

INITIAL REPORT:

Upon notification of a threat complete the following check list immediately.

- ☐ Exact time and date of call _____
- ☐ Exact words of caller _____

_____

_____

_____

- ☐ Exact time call ended? _____

QUESTIONS TO ASK CALLER FOR A BOMB THREAT

- ☐ When is bomb going to explode? _____
- ☐ Where is the bomb? _____
- ☐ What does the bomb look like? _____
- ☐ What will cause it to explode? _____
- ☐ Did you place the bomb? _____
- ☐ Why? _____

_____

_____

- ☐ Where are you calling from? _____
- ☐ What is your address? _____
- ☐ What is your name? _____

POST REPORT:

RECALL AS MUCH AS YOU CAN ABOUT THE CALLER

☐ Male	☐ Female	☐ Child	☐ Calm
☐ Disguised	☐ Nasal	☐ Angry	☐ Whispered
☐ Broken	☐ Stutter	☐ Slow	☐ Clearing Throat
☐ Sincere	☐ Lisp	☐ Rapid	☐ Heavy Breathing
☐ Giggling	☐ Deep	☐ Crying	☐ Ragged
☐ Squeaky	☐ Excited	☐ Stressed	☐ Scratchy
☐ Accent	☐ Loud	☐ Soft	☐ Slurred
☐ Familiar	☐ Poor Speech	☐ Normal	☐ Distinct
☐ Foul Language	☐ Well Spoken (Educated)	☐ Foreign	☐ Tape Recorded
☐ Message Read		☐ Intoxicated	☐ Cracked Voice

If familiar, who or what did it sound like? _____

_____

_____

RECALL BACKGROUND NOISES

☐ Dish Breaking	☐ Voices	☐ Static	☐ Street Noises
☐ Clear	☐ PA System	☐ Music	☐ Local
☐ House Noises	☐ Motor	☐ Long Distance	☐ Office Machinery
☐ Booth	☐ Animal Noises	☐ Trains	☐ Airplanes
☐ Television	☐ Children	☐ Traffic	☐ _____
☐ _____	☐ _____	☐ _____	☐ _____

REMARKS: _____

_____

_____

PERSON RECEIVING CALL: _____

TELEPHONE NUMBER CALL RECEIVED AT: _____

CALL IMMEDIATELY REPORTED TO: _____

SEWERAGE AND WATER BOARD

EMERGENCY THREAT PLAN

FOR MANAGEMENT

CARROLLTON WATER PLANT

The recipient of a threat call is the key to a planned response. Therefore, all personnel in position to receive calls must be thoroughly trained on the steps that must be taken, upon the receipt of a threatening call, and the order in which said steps must be followed.

When a bomb threat is received, the receiver of the call must:

- ☐ Attempt to write the exact message and time the call is received. It is important that the police know exactly what the caller said and the time he/she called.
- ☐ A list of suggested questions should be located within reaching distance of a telephone. These questions should be used in order to engage the caller in a conversation in efforts to keep the caller on the line as long as possible. If these questions seem inappropriate for that particular call, the receiver should use his/her best judgement when picking the conversation topic. Keep accurate notes of this conversation. There is a possibility that the caller will give hints as to where the bomb may be and the type it is. The caller may even identify himself/herself.

AT ALL COST - REMAIN CALM

DO NOT HANG UP THE TELEPHONE !!!

- ☐ If another person is available at the time a threatening call is received, quietly get their attention. Notify them by note of the call and have them call 911 in efforts to get the call traced.
- ☐ If no other person is available at the time a threatening call is received, in a calm reserved voice gather all information possible and dial 911 from another telephone upon the conversations end. Again do not hang up the telephone. This may aid the police in tracing the call even if the caller has hung up.
- ☐ In addition to noting what the caller is saying, attempt to note any distinct background noises, speech impediments, accents, and enunciations. Pay special attention to the callers vocal expression, such as calm, excited, or crying.

NOTIFICATION

- ☐ As stated earlier, if another person is available, have them call 911 (Police Emergency) immediately and then Central Control (865-0575) or use another phone to alert authorities.

- ☐ It is Central Control's responsibility to immediately notify the following S&WB Authorities:

  - ☐ General Superintendent (Gen. Supt. will notify Exec. Director) — 585-2356
  - ☐ Chief of Operations — 865-0412
  - ☐ Chief of Facility Maintenance — 865-0514

- * ☐ In case of an immediate threat where time is essential, Central Control will call the operator in charge of the affected area and instruct them to follow the Emergency Threat Plan as trained.

- ☐ After the notification of a threatening call, the General Superintendent and/or the area Chief will assess the threat, determine the action necessary, and proceed to the predetermined command post.

- ☐ If a decision is made to evacuate and search, the above named S&WB authorities will call in the pre-determined search team for the threatened area.

- ☐ After the search team completes its search, the team will notify all authorities of their findings at a pre-determined command post.

- ☐ If a device is discovered, the search team members will follow the enclosed bomb threat checklist of "***WHAT NOT TO DO***", and immediately report the location and a complete description of the device to all authorities.

- ☐ If a suspicious object is found, the authorities will immediately notify the New Orleans Police Department (NOPD) of the location and accurate description of the object.

- ☐ If the area has not yet been evacuated, the S&WB authorities will order the immediate evacuation and secure the area. The search team, acting under the direction of the authorities will secure the area.

- ☐ From this point on, all directions will come from the NOPD Bomb Squad.

NO ONE IS TO RE-ENTER THE THREATENED AREA UNTIL THE NOPD GIVES THE "ALL-CLEAR."

WHAT NOT TO DO

DON'T ignore bomb threats.
DON'T touch suspected explosives.
DON'T touch suspected bombs.
DON'T move suspected bombs.
DON'T move things that you don't know what they are.
DON'T open things that you don't know what they are.
DON'T place in water.
DON'T shake.
DON'T turn.
DON'T cut wires.
DON'T pull wires.
DON'T cut string.
DON'T pull fuses.
DON'T stamp out fuses.
DON'T undo glued packages.
DON'T pass metallic tools near suspected bomb.
DON'T move switches.
DON'T release hooks.
DON'T smoke near suspected bombs.
DON'T carry bomb outside.
DON'T carry bombs <u>period</u>.
DON'T place near heat.
DON'T place near vital equipment.
DON'T investigate too closely.
DON'T use insulating materials (bomb blankets or sandbags) unless you know how the bomb works.
DON'T move the bomb away from the people -- <u>move the people away from the bomb</u>.
DON'T get near bombs.
DON'T transmit on radios. Turn beepers and all other transmitters <u>off</u>.

<u>DO</u> STAY AWAY FROM SUSPICIOUS OBJECTS.

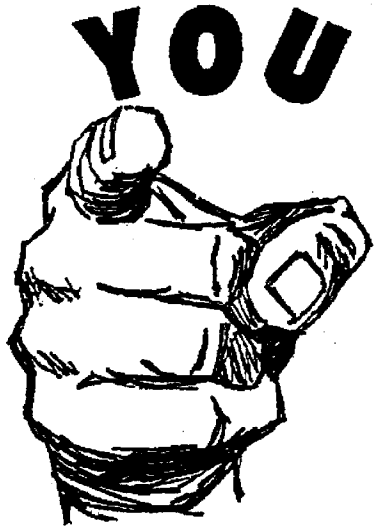
OPEN WINDOWS AND DOORS IF POSSIBLE.

IN SHORT, DON'T BE A HERO. THE GRAVEYARDS ARE FULL OF HEROS.

<u>REMEMBER</u>: IT'S A BOMB UNTIL IT'S NOT A BOMB.

Appendix H
Moved To
Exhibit #11

APPENDIX I



CAN PREVENT ACCIDENTS

Sewerage & Water Board

SAFETY MANUAL

Revised: September 30, 1993

CAN PREVENT
ACCIDENTS

SAFE0002.TIF

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DEFINITIONS

SEWERAGE AND WATER BOARD
SAFETY PROGRAM
STATEMENT OF POLICY

It is the Sewerage and Water Board's policy and commitment to provide safe and healthful working conditions for its employees. The Safety Unit of Risk Management is therefore charged with the Board's objectives and goals concerning the safety and well being of its employees. To this end the Safety Department has developed general guidelines geared to providing and maintaining safe and healthful working conditions and safe operating practices.

By implementing and following these safety practices, the Board can benefit from the increased efficiency of operations, a reduced accident/injury rate, reduced down-time and damaged equipment, improved employee morale and an improved work environment.

It is imperative that all supervisory personnel recognize the need for maximum safety. It is the supervisor's responsibility to enforce the safety rules, set a good example, and take corrective action on safety matters at the lowest level consistent with good operating policy.

The Safety/Risk Management Department provides assistance to management, supervisory and operating personnel in their efforts to prevent and control accidents and to establish safe operating procedures within each department.

The Sewerage and Water Board accepts its responsibilities in accident prevention and gives its full support to the safety guidelines outlined in this manual.

SAFE0006.TIF

SEWERAGE AND WATER BOARD
OF
NEW ORLEANS, LA

SAFETY MANUAL

This Safety Manual has been prepared with your personal safety and well being in mind. You are to read it in its entirety and to follow safe work practices as you perform your daily work assignments.

Upon receipt of this manual, please sign below, detach this page, and return it to your supervisor. This document will be retained in your personnel file.

I have received this Safety Manual and will read and abide by the safe practices contained herein.

Signature and Date	Print Name
Social Security Number	Supervisor's Signature

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PART I

GENERAL RULES FOR ALL EMPLOYEES

SECTION 1

APPLICATION AND RESPONSIBILITY

1-1 APPLICATION OF SAFETY RULES

A. Sewerage & Water Board safety rules are designed to provide a safe work place for all employees.

B. Each employee shall be given a copy of the Safety Handbook and shall carefully review the information and rules to perform their work safely.

C. If an employee is called upon to perform work that he/she considers hazardous and he/she is not properly protected, he/she shall bring the matter to the attention of his/her supervisor before commencing work.

1-2 SAFETY DEPARTMENT'S DUTIES AND RESPONSIBILITIES

A. To make supervisors aware of serious violations and assist in corrective action.

B. To advise supervisors of unsafe conditions in all work related areas.

C. To evaluate all job injuries to determine what action can be taken to prevent future occurrences.

D. To investigate all accidents by collecting information from those involved and submit a final written report.

E. To issue written Citations to any Sewerage & Water Board employee (including supervisors/foremen) who violates safety requirements. (See Attachment 1).

F. To oversee the Accident Review Board and Safety Review Board Committees.

G. To train supervisors in safety policy and procedures.

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1-3 SUPERVISORS' RESPONSIBILITY FOR SAFETY

Supervisors will bear the responsibility for thoroughly instructing their employees in the safe practices in their work area. They will on a regular basis enforce safety rules and procedures to the utmost of their ability and authority. The supervisors will set the example of good safety practices in all areas. They will act positively to reduce and eliminate any potential hazards that exist.

Safety records will be measured along with other phases of supervisor performance. Therefore, such safety records must be complete and accurate and all information regarding accidents must be reported immediately. The supervisors' primary responsibilities for safety are:

A. To enforce all safety regulations that are provided in the Sewerage and Water Board's safety handbook. It is the responsibility of all supervisors/foremen to issue written citations to employees found violating Sewerage & Water Board safety laws.

B. The supervisor/foreman shall enforce these safety rules by using the written citation shown on Attachment 2. Copies of the Supervisor/Foreman's citation to the employee will be sent to the Department Head, to the Safety Department and to Personnel. However, if the supervisor/foreman fails to enforce Sewerage & Water Board safety rules he could be subject to a written citation issued by the Safety Department (Attachment 1).

C. To wear the prescribed uniform and all personal protective equipment required.

D. To conduct regular safety checks of the area including a careful examination of all used and new equipment before it is placed in operation.

E. To maintain equipment properly and issue instructions for the elimination of fire and safety hazards.

F. To inspect continuously for unsafe practices and conditions and promptly undertake corrective action.

G. To administer an effective program of good housekeeping and maintain high standards of personal and operational cleanliness throughout all operations.

H. To provide safety equipment and protective devices for each job based on knowledge of applicable standards or on the recommendation of the Safety/Risk Management Department.

I. To conduct general safety meetings and encourage the employee's use of safety suggestions.

SAFE0009.TIF

SAFETY CITATION
(FROM SAFETY TO SUPERVISOR/FOREMAN/EMPLOYEE)

TO: Supervisor/Foreman/Employee Date: _____

Dept.: _____

From: _____ (Safety Dept.) Area: _____

_____
Name

Supervisor/Foreman/Employee has not taken corrective action for the following safety violations observed within his department.

1.
2.
3.
4.
5.

_____
Safety Engineer Signature

Attachment 1

SAFETY CITATION
(FROM SUPERVISOR/FOREMAN TO EMPLOYEE)

TO: Employee

Date: _____

Dept: _____

From: _____

Area: _____

_____
Name

has failed to comply with Sewerage and Water Board safety requirements. The following safety violations were observed within the area of supervision.

1.
2.
3.
4.
5.

_____
Foreman/Supervisor
Signature

Attachment 2

1-3A EMPLOYEES' RESPONSIBILITY FOR SAFETY

The employee's responsibilities for safety are:

A. To follow Sewerage and Water Board safety rules and regulations and to understand thoroughly the work to be done before safely performing their job.

B. To use the safety equipment which has been provided in performing the daily work assignments.

C. To wear the prescribed uniform and all personal protective equipment required.

D. To refrain from operating equipment or using tools for which training or orientation has not been received.

E. To warn co-workers of unsafe conditions or practices they are engaged in which could lead to or cause an accident.

F. To report defective equipment immediately to a supervisor.

G. To report dangerous or unsafe conditions that exist in the workplace as well as throughout the city. This would include defective sidewalks, broken curbs, hanging limbs, loose handrails, open manholes, sunken basins and sewers, missing signs, cracked meter boxes, etc.

H. To report all injuries and accidents regardless of severity.

I. To protect unsafe conditions that result from S&WB work that could present a hazard to the public.

J. To refrain from abusing tools and equipment so that these items will be in safe, usable condition for as long as possible as well as to ensure that they are in the best possible condition while being used.

1-4 RECOMMENDED SAFETY MEETINGS

A. A Safety meeting can be held either in the morning or afternoon. All work activities planned for that particular workday or for the following workday should be discussed. Record the date, topic discussed, name of persons attending the safety meeting onto the Safety Meeting Form. (See attachment 3). Safety meetings with the employees shall be held once per week by the Supervisor/Foreman.

All Supervisors (Supervisors 2,3, and 4) shall hold a monthly safety meeting with all of their Supervisors/Foremen.
Department heads should monitor these safety meetings to ensure that meetings are being held regularly. All safety meeting attendance forms should be forwarded to the safety unit for their training files. The Safety Unit shall review these safety meeting attendance forms to ensure compliance.

1-5 REPORTING EMPLOYEE INJURIES

A. All injuries must be reported to the employee's supervisor.

B. Supervisors must report to the Workers' Compensation Office in a timely manner all job-related injuries (using the Employer's Report of Occupational Injury or Disease Form). Please refer to Policy Memorandum Number 11 concerning the reporting of on-the-job injuries. (See Attachment 4)

C. It is important that all work-related injuries and illnesses be reported when they occur, or as soon thereafter as possible. However, any person or persons found to be making a false claim of injury for personal gain, and any person or persons in collusion with such scheme may be subject to immediate disciplinary action or possible legal action by the Sewerage & Water Board.

1-6 VEHICULAR ACCIDENT PROCEDURE

All vehicular accidents must be reported to the employee's supervisor according to policy number 34. The supervisor is responsible for filling out the Accident Investigation Form according to policy 34. (See Attachment 5)

1-7 NON-VEHICULAR ACCIDENT PROCEDURE

A. All non-vehicular accidents should be reported to a supervisor and the proper non-vehicular accident report (See Attachment 6) form should be filed and submitted to the Risk Management Department.

B. Non-vehicular accidents will be reviewed by the Safety Review Board. The Safety Review Board will examine all evidence and investigative information concerning serious non-vehicular safety accidents. The Safety Review Board will recommend disciplinary action to the supervisors involved and will notify the Personnel Department when appropriate.

SAFE0013.TIF

MONTHLY/WEEKLY SAFETY MEETING ATTENDANCE

Dept. or Truck No.:_____ Date:_____

Supervisor/Foreman Name:_____ Time:_____

Facility Name:_____ Topic:_____

	NAME	SS#	SIGNATURE
1.			
2.			
3.			
4.			
5.			
6.			
7.			
8.			
9.			
10.			
11.			
12.			
13.			
14.			
15.			
16.			
17.			
18.			
19.			
20.			

Supervisor/Foreman Signature _____ Date _____ Instructor Signature _____

Attachment 3

STATE OF LOUISIANA
Office of Workers' Compensation Administration
P.O. Box 94040
Baton Rouge, LA 70804-9040
(504) 822-0154
Toll Free 1-800-824-4592

EMPLOYER'S REPORT OF OCCUPATIONAL INJURY OR DISEASE

-PLEASE PRESS HARD-

Insured's Social Security Number

Employer's UI Reporting Number: 211192

Employer's Federal ID Number: 01794

Insurance Policy Number

PLEASE PRINT -- (FILL OUT COMPLETELY)

DATES

1. Date of Report MM/DD/YY
2. Date of Injury and Time MM/DD/YY Time: ☐ AM ☐ PM
3. Normal Starting Time Day of Accident Time: ☐ AM ☐ PM
4. If Employee Back to Work, Give Date: MM/DD/YY
5. At Same Wage? ☐ Yes ☐ No

DO NOT WRITE IN THIS COLUMN

6. If Fatal Injury, Give Date of Death: MM/DD/YY
7. Date Employer Knew of Injury MM/DD/YY
8. Date Disability Began MM/DD/YY
9. Last Full Day Paid—Date MM/DD/YY

Date Received

EMPLOYEE

10. Employee: First Middle Last
11. ☐ Male ☐ Female
12. Employee Telephone Number (Include Area Code)

S.I.C.

13. Address—Include Parish and Zip Code
14. Race: ☐ White ☐ Black ☐ Amer. Indian ☐ Asian ☐ Other

State-Parish

15. ☐ Married ☐ Single ☐ Divorced ☐ Separated ☐ Widowed
16. Number of Children Under 18
17. Date of Hire MM/DD/YY

Occupation

18. Present age
19. Occupation
20. Department or Division Regularly Employed
21. Employee Date of Birth: MM/DD/YY

Nature of Injury

OCCURRENCE

22. Place of Injury—Employer's Premises? ☐ Yes ☐ No
23. If No, Exact Location—Street, City, Parish and State

Part of Body

24. What Was The Employee Doing When Injured? (Be specific. If using tools or equipment or handling material—name them and tell what he was doing with them.)

Source of Injury

Type of Accident

Insurance Code

A.O.S.

25. How Did Injury Occur? (Describe fully the events which resulted in injury or disease. Tell what happened and how it happened. Name any objects or substances involved and tell how they were involved. Give full details on any factors which led or contributed to injury or disease.)

Unsafe Act

Agency of Acc.

Agency of Acc. Part

Did Injury or Disease Cause Business ?

26. Mechanical Defect ☐ Yes ☐ No (Describe Above)
27. Unsafe Act ☐ Yes ☐ No (Describe Above)
28. CHECK IF AMPUTATION ☐

Hazardous Conditions

29. Nature and Location of Injury or Disease (Describe fully, include parts of body affected)
30. OCC Disease—Date of Initial Disab.

31. Attending Physician and Address (If Hospital Involved, indicate)

EMPLOYER

32. Employer: SEWERAGE AND WATER BOARD OF NEW ORLEANS
33. Person Completing This Report

34. Employer's Address—Include Parish and Zip Code: 625 ST. JOSEPH STREET, N. O. LA. 70165
35. Employer's Telephone Number (Include Area Code): (504) 585-2251

36. Employer's Mailing Address—If Different Than Above: SAME ROOM 249
37. Nature of Business—Type of Mfg., Trade, Construction, Service, etc.: UTILITIES COMPANY

38. Pay Group #
39. Salary
40. ☐ Weekly ☐ Bi-Weekly
41. Injured Employee's Signature

Employer Instructions and Wage Information on Reverse Side

1. Purpose of This Report
   - ☐ More than 7 days of disability
   - ☐ Injury resulted in death
   - ☐ Amputation or Disfigurement
   - ☐ Medical Only
   - ☐ Possible Dispute
2. Check whether this is change of status from original notice sent to insurance carrier:
   Yes ☐ No ☐
   If yes, date disability began _____
   Date employee returned to work _____
   At same wage? Yes ☐ No ☐

WORKERS' COMPENSATION INSURANCE COMPANY AND ADDRESS
(Preprint or Stamp—Include NCCI Self-Ins Number)

SEWERAGE AND WATER BOARD
625 ST. JOSEPH STREET
NEW ORLEANS, LA. 70165

-RISK MANAGEMENT-

ATTACHMENT 4

SAFE0015.TIF

SEWERAGE & WATER BOARD ACCIDENT INVESTIGATION
(TO BE COMPLETED BY EMPLOYEE'S SUPERVISOR)

PAY GROUP _____ How long employed? _____

NAME OF OPERATOR _____ Age _____ Job Title _____

LOCATION OF ACCIDENT _____ Date _____ Hr. _____ a.m. _____ p.m.

POLICE REPORT ITEM NO. _____ LICENSE NO. _____

TYPE OF EQUIPMENT: (Cars-Trucks-Air Compressors-Cranes-Rollers-Pumps)

_____

Accident Details - What happened, who was involved? What injuries or damage resulted? Were Police Officers present?

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

_____

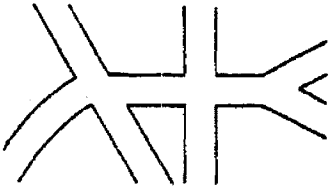
_____

_____

_____

-SEE SKETCH ON OTHER SIDE-

ATTACHMENT 5



Designate cars' speed
and direction as below.
Also show Point of Compass.

Your Car → 10

Other Car → 20

Identify streets or highways.

OTHER VEHICLE(S) INVOLVED:

NAME _____ PHONE NO. _____

ADDRESS _____

DRIVERS LIC. NO. _____

MAKE _____

TYPE _____

LIC. NO. _____

OWNER'S NAME _____

ADDRESS _____

INSURANCE CO. _____

WITNESSES:

NAME _____ PHONE NO. _____

ADDRESS _____

STATEMENT _____

_____

_____

SUPERVISOR SIGNATURE _____ DATE _____

SEWERAGE AND WATER BOARD
Non-Vehicular Accident
Report Form
(TO BE COMPLETED BY EMPLOYEE'S SUPERVISOR)

Type of Accident:
(Please check one)

ACCIDENT WITH INJURY

ACCIDENT, NO INJURY

NEAR MISS (caused by omission of safety rules/procedures or careless or negligent conduct or by failure to use prescribed Personal Protective Equipment)

DATE:_____

Name of Employee involved in accident:_____
Last First MI

Employee's SS#:_____ Job Title:_____

Payroll Group#:_____

Location of Accident: _____

Time of Accident:_____ AM PM Date of Accident:_____

Accident Details - (What happened? Who was involved? What injuries resulted? What damages resulted? Were safety procedures followed?)

_____

_____

_____

_____

To be signed by employee involved in this accident:

UNDER CIVIL SERVICE RULE V, SECTION 9.13, I UNDERSTAND THAT I AM TO SUBMIT TO DRUG/ALCOHOL SCREENING WHEN INVOLVED IN ANY ACCIDENT, INJURY OR NEARMISS.

REFUSE/CONSENT
(Circle One)

_____
Signature of Employee

WITNESSED BY:

_____
Signature of Supervisor

ATTACHMENT 6

(ORIGINAL TO SAFETY DEPT. - COPIES TO SUPERVISOR AND CLAIMS DEPT.)

1-8 PRACTICAL JOKES

Employees shall not engage in practical jokes, horseplay or careless/reckless behavior. Such activities pose a risk to fellow employees and may result in bodily injury.

1-9 NEW EMPLOYEE ORIENTATION

A. The orientation should be given by the employee's immediate supervisor.

B. The job orientation should relate to the general job requirements of the work and working areas with which the new employee will be involved.

C. The safety aspects of the job should be included. These should cover items such as:

1. No horseplay on the job, in the parking lot, or on any other SIWB property.
2. The personal protective equipment requirements for the job.
3. Access routes through the work site.
4. Maintaining orderliness within the work site (trash cleanups, material storage, clear walkways, etc.).
5. Maintaining guards on tools and machinery.
6. Danger tag and lockout procedure.
7. Procedures for reporting unsafe conditions and practices.
8. The immediate reporting and treatment of all job-related injuries.
9. Time and location for safety meetings.
10. Other items of current impor[illegible] relating to work site safety, vehicle safety and public safety.

SAFE0019.TIF

1-10 SEWERAGE & WATER BOARD VENDER/CONTRACTOR SAFETY ORIENTATION

A. All vendor/contractors who will be entering S&WB facilities or plant operating areas to perform work must comply with the following regulations in the Safety Orientation Notice. (See Attachment #8) The Safety Orientation Notice will be included in all vendor/contractor contracts or formal agreements, or will be mailed or hand delivered to vendors/contractors. The senior representatives of all vendors/contractors shall be responsible for providing and explaining the regulations of this Notice to their employees, and the senior representatives shall sign this Notice and return a copy of the signed Notice to the Board's Risk Manager, 625 St. Joseph St., Rm. 249, New Orleans, LA 70165, before they allow any of their employees to enter Board facilities to do work.

SAFE0020.TIF

SEWERAGE & WATER BOARD OF NEW ORLEANS
SAFETY ORIENTATION NOTICE

W E L C O M E

We welcome you to the S&WB and request your assistance in maintaining our Safety Standards. For the safety of yourself and everyone working at the S&WB, you are asked to observe the following safety precautions. When this notice has been read thoroughly, a senior representative of your company is required to distribute this information to all employees who will be affected. In addition, this senior representative is required to sign the last page of this notice and forward the original to Steve Klepeis, Risk Manager, Sewerage and Water Board of New Orleans, 625 St. Joseph Street, Room 245, New Orleans, Louisiana 70165. You are expected to keep a copy for your records, and to call Mr. Klepeis at 504-585-2252 or Mr Keith Pete at 504-942-3847 if you have any questions.

B A S I C

1. Smoking will be allowed in designated safe areas only.
2. Horseplay, practical joking and fighting are positively prohibited.
3. The use or possession of drugs or intoxicating beverages is strictly prohibited on all S&WB property. All prescription drugs must be logged in the visitors book.
4. Housekeeping is a must. We will keep our area safe and free from litter and expect you to do the same.
5. Handrails should always be used when going up or down ladders or stairs.
6. Atmospheric conditions such as adequate ventilation, presence of oxygen and absence of explosive gases will be assured before working in voids, tanks, or other enclosed spaces.

E M E R G E N C Y

7. The S&WB's Emergency Response Plan is a document which provides specific instructions as to emergency procedures to be followed in case of fire, hazardous materials spills or other emergencies. Contact the nearest S&WB employee for immediate assistance. In an emergency call 942-3855 (7:30 - 4:00 p.m.) during the work week. Call 942-3833 on evenings, weekends and holidays.

T R A N S P O R T A T I O N

Warning signals and lights shall be used as follows:

8. Rotating beacons shall be used if your vehicle is so equipped.
9. Tail lights/emergency flashers shall be used.

ATTACHMENT 8

10. Orange reflector type safety cones shall be placed to give other motorist warning.
11. If vehicle is moving, backing or parking, proper traffic control shall be exercised.

PROTECTIVE CLOTHING AND EQUIPMENT

12. Safety glasses will be worn by all personnel who are exposed to eye hazards. Hard hats will be worn at all times while an employee is not in an office or protected by a Rollover Protection Device.

13. Protective clothing and equipment such as rubber aprons and gloves, eye and face protection, approved respirators or dust masks will be worn when handling all harmful chemicals.

REPORTING

14. Defective equipment, machinery, hazardous conditions, or unsafe work practices or conditions shall be reported immediately to your Supervisor/Foreman who will then contact proper S&WB personnel for correction.

15. All injuries will be reported to the Risk Manager, 585-2252 or to the Safety Unit, 942-3980, regardless of how minor an injury may seem.

16. S & WB employees may hold safety meetings to discuss and promote safe work conditions and accident prevention. You may be asked to attend.

WORK SMART

17. Stay alert at all times, know what is going on around you. Know the safe operating procedures concerned with your assigned duties. When in doubt talk it over with a S&WB Supervisor.

18. Vendors shall at all times demonstrate strict compliance with all Federal, State, and Local regulations regarding safety, including but not limited to all relevant D.E.Q., D.O.T., E.P.A., and O.S.H.A. regulations.

19. The Vendor/Contractor will, at the request of the Risk Manager and Senior Safety Engineer, remove any of his employees found to be acting in or contributing to unsafe conditions.

ATTACHMENT 8

SEWERAGE AND WATER BOARD
SAFETY ORIENTATION NOTICE

20. The following items <u>are not</u> allowed in the plant:

Firearms and ammunition

Alcohol and illegal drugs

Cameras

21. Radios should be turned off.

I have received, read, and understand this Safety Orientation Notice. I will comply with these regulations, and I will require my employees to comply with these regulations.

Name Date

Company

ATTACHMENT 8

PART I

SECTION 2

GENERAL PRECAUTIONS

2-1 PROTECTING THE PUBLIC

A. The foreman shall be responsible for keeping the public away from construction sites where work activity presents hazards.

B. Hazards such as manholes, trenches or excavations shall be protected, and where exposed to traffic, protected with warning devices that are lighted at night with flashing lights placed at a point to indicate a hazard. Use steady burn lights when devices are placed in a series for channeling.

C. When it is necessary to warn traffic, flagmen or warning devices shall be stationed far enough on each side of the hazard to give vehicles enough time to stop. When flagmen are used, they shall wear orange safety vests of reflectable material.

D. When it is necessary to leave equipment or other obstructions unattended, the following safety precautions shall be taken:

   1. They shall not be left in front of entrances to private or public property.

   2. They shall be locked, blocked, or otherwise secured.

   3. They shall be adequately protected by approved warning devices.

E. Trucks, air compressors, trailers and other equipment shall be so placed as to present the least impediment or hazard to traffic, consistent with a safe working area for the employees. If possible, trucks or equipment shall be placed in front of the work area next to the oncoming traffic.

SAFE0024.TIF

2-2 SAFEGUARDS

A. Before starting any job that may be hazardous, care shall be taken to establish a safe procedure and under no circumstances shall safety be sacrificed for speed.

B. The foreman shall see that proper safeguards are provided before the work is started.

2-3 REPORTING HAZARDOUS CONDITIONS

* A. When an employee observes a hazardous condition that may cause injury or property damage or interfere with services, regardless of the department in which the condition exists, he shall report it promptly to his supervisor and when necessary guard it.

2-4 GUARDS

A. No guard shall be removed from any machine or piece of equipment except to perform required maintenance.

B. Guards removed to perform maintenance operations shall be replaced immediately and the machine shall not be operated while the guards are removed.

2-5 LOCKOUT TAGS

A. Before starting work on any circuit, machine, belting, shafting or other apparatus which is out of service, employees shall insure that a standard lockout tag is properly attached to the apparatus control.

B. No switch, governor, valve, throttle or other device used to put a circuit or equipment into service shall be operated while a lockout tag or similar device is attached to it.

C. A lockout tag, or similar device, that has been placed for the protection of workers, shall be removed only by authorization of the person in whose name it was placed and then only after the work has been completed and all workmen and tools are in the clear. (Follow the written S&WB Safety Clearance Procedures for electrical systems. See revised copy dated October 13, 1992).

D. Each employee in charge of work on any equipment shall have his lockout tag or similar device secured to the apparatus control.

SAFE0025.TIF

2-6 ENTERING HAZARDOUS AREAS

A. Before entering manholes or trenches, Foremen shall use approved testing devices to determine whether the enclosures are safe to enter.

B. Manhole covers shall be moved to an area where they will not create a tripping hazard.

C. Employees shall not enter an electrical or telephone manhole unless a representative of that utility company is present.

D. An employee shall not enter a manhole to do work where hazardous gases are present.

E. Smoking, and other possible sources of ignition, shall not be permitted in or near a manhole or trenches.

F. A ladder shall be used when entering or leaving a manhole. Climbing into or out of a manhole or trench by stepping on equipment, underground pipes and cables, or other underground fixtures is prohibited.

2-7 OFFICE SAFETY

A. Chairs, wastebaskets, cords and other articles shall not be left in aisles where they constitute a tripping hazard.

B. Desk drawers, cabinet doors, slides and files shall not be left open while unattended.

C. Broken glass or other sharp-edged objects shall not be placed in wastebaskets unless properly protected.

D. Approved-type ladders or other safe supports shall be used to reach material on high shelves or at other similar out-of-reach locations. Employees shall not stand on boxes, crates, chairs, etc.

E. Ashtray contents shall not be deposited with other waste, but separately handled, as a fire prevention measure.

F. Care must be employed in storage and placement of heavy equipment to prevent such objects from falling.

G. Only one drawer in a file cabinet section shall be open at a time.

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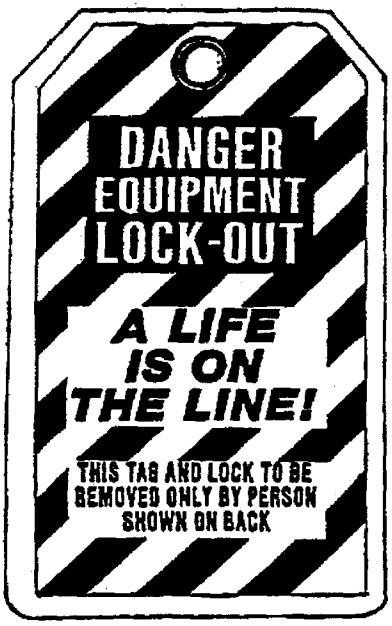
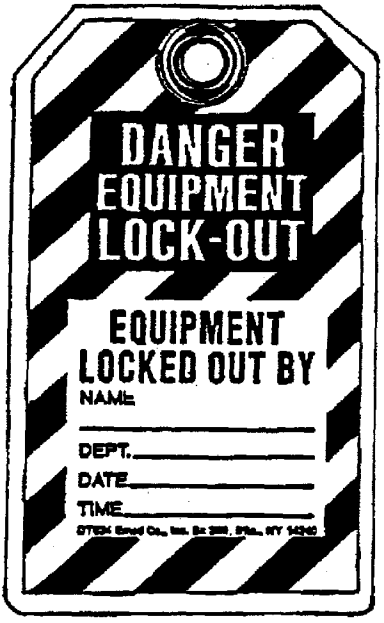


SIDE A



SIDE B

ATTACHMENT 9

H. Use caution in office buildings when opening doors and turning corners in halls.

I. Use caution when pushing carts in office buildings, particularly when approaching corners and other blind spots.

PART I

SECTION 3

HAND AND POWER TOOLS

3-1 GENERAL

A. All tools shall be of an approved type and maintained in good condition. The employee has responsibility to inspect all hand tools prior to use.

B. Defective tools shall not be used and shall be removed from the job site.

C. Employees shall always use the proper tool for the job to be performed. Makeshift and substitute tools shall not be used.

D. Tools shall not be thrown from place to place or from person to person; tools that must be raised or lowered from one elevation to another shall be placed in tool buckets or firmly attached to hand lines.

E. Tools shall never be placed unsecured on elevated places.

F. Impact tools such as chisels or punches, that become mushroomed or cracked, shall be dressed, repaired or replaced before being used any further.

G. Wrenches with sprung or damaged jaws shall not be used.

H. Pipe shall not be used to extend a wrench handle (cheater pipe) for added leverage unless the wrench was designed for such use.

I. Tools shall be used only for the purpose for which it was designed.

J. Tools with sharp edges shall be stored and handled so that they will not cause injury or damage. They shall not be carried in pockets.

K. Wooden handles that are loose, cracked or splintered shall be replaced. The handle shall not be taped or lashed with wire.

L. Tools shall not be left lying around where they may cause a person to trip or stumble.

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H. When working on or above open grating, a canvas or other suitable covering shall be used to cover the grating to prevent tools or parts from dropping to a lower level where personnel may be present, or the danger area shall be barricaded or guarded.

3-2 PORTABLE ELECTRIC TOOLS

A. The non-current carrying metal parts or portable electric tools such as drills, saws and grinders shall be effectively grounded when connected to a power source unless the tool is an approved double insulated type.

B. All powered tools shall be examined prior to use.

C. Powered tools shall be used only within their design capability and shall be operated in accordance with the instruction of the manufacturer.

D. All tools shall be kept in good repair and shall be disconnected from the power source while repairs are being made.

E. Electrical tools shall not be used where there is a hazard of flammable vapors and gases.

3-3 PNEUMATIC AND HYDRAULIC TOOLS

A. Compressed air and compressed air tools shall be used with care.

B. Pneumatic tools shall never be pointed at another person.

C. Pneumatic power tools shall be secured to the hose or whip by some positive means to prevent the tool from becoming accidentally disconnected.

D. Compressed air shall not be used for cleaning purposes.

E. Compressed air shall not be used to blow dust or dirt from clothing.

F. The manufacturer's stated safe operating pressure for hoses, pipes, valves, filters and other fittings shall not be exceeded.

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G. Before making adjustments or changing air tools unless equipped with quick change connectors, the air shall be shut off at the air supply valve ahead of the hose. The hose shall be bled at the tool before breaking the connection.

H. Eye protection, foot protection, an other safety equipment shall be worn where there is a reasonable probability that injury can be prevented by such equipment.

I. Powered tools shall be operated only by competent persons who have been trained in their use.

3-4 POWER LAWN MOWERS, EDGERS, ETC.

A. Employees shall insure that all applicable guards are in place prior to using power lawn mowers.

B. Prior to making adjustments, inspections or repairs the employee shall turn off the mower and permit it to come to a complete stop.

C. When operating a power mower, the operator shall:

1. Remove any loose material from the area to be mowed.
2. Avoid standing in front of the discharge opening.
3. When mowing a slope or incline, mow across the face of the slope.

3-5 ROPES AND SLINGS - WORKING STRENGTHS

A. Manila rope shall not be used for straight pull working loads greater than shown on Attachment 10.

B. Wire rope shall not be used for straight pull working loads greater than shown on Attachment 11.

C. Synthetic fiber rope shall not be used for straight pull working loads greater than shown on Attachment 12.

D. Wire rope slings shall not be used for loads greater than shown on Attachments 13, 14.

E. Alloy steel chains shall not be used for loads greater than shown on Attachment 15.

SAFE0031.TIF

3-6 CARE OF SYNTHETIC AND MANILA ROPE

A. Rope shall be stored in a cool, dry, and wall ventilated area whenever possible.

B. Rope that has come in contact with acid, acid fumes or strong alkali substances shall be removed from service and destroyed.

C. Rope that shows evidence of heat damage shall be removed from service and destroyed.

SAFE0032.TIF

MANILA ROPE - SAFE LOADS

Safe Loads in Pounds on New 3-Strand and Manila Rope

Diameter in Inches	SINGLE ROPE Safe Load
1/4	54
3/8	122
1/2	264
5/8	496
3/4	695
7/8	995
1	1160
1 1/8	1540
1 1/4	1740
1 1/2	2380
1 5/8	2880
1 3/4	3400
2	4000

ATTACHMENT 10

WIRE ROPES - SAFE LOADS

SIZE	STRANDING	IMPROVED STEEL PLOW
		Working Loads In Pounds
7/16"	6 × 19	3308
	8 × 19	2836
	6 × 37	3128
1/2"	6 × 19	4280
	8 × 19	3692
	6 × 37	4080
9/16"	6 × 19	5400
	8 × 19	4640
	6 × 37	5160
5/8"	6 × 19	6680
	8 × 19	5720
	6 × 37	6320

ATTACHMENT 11

New Synthetic Fiber Rope Safe Loads

	POLYESTER	POLYPROPYLENE
DIAMETER INCHES	SAFE LOAD POUNDS	SAFE LOAD POUNDS
1/4	149	113
3/8	334	244
1/2	640	420
5/8	1,130	700
3/4	1,610	1,090
7/8	2,320	1,490
1	2,820	1,800
1 1/8	3,800	2,360
1 1/4	4,260	2,700
1 1/2	6.050	3,820
1 5/8	7,350	4,620
1 3/4	10,300	6,700

ATTACHMENT 12

Synthetic Web Slings
(Rated Capacity in Pounds)
1,000 lbs. Per Inch of Width-Single Ply

Sling Body Width Inches	Triangle-Choker Slings, Type I Triangle-Triangle Slings, Type II Eye and Eye with Flat Eye Slings, Type III Eye and Eye with Twisted Eye Slings, Type IV						Endless Slings, Type V						Return Eye Slings, Type VI					
	Vert.	Choker	Vert. Basket	30° Basket	45° Basket	60° Basket	Vert.	Choker	Vert. Basket	30° Basket	45° Basket	60° Basket	Vert.	Choker	Vert. Basket	30° Basket	45° Basket	60° Basket
1.	1,000	750	2,000	1,700	1,400	1,000	1,600	1,200	3,200	2,800	2,300	1,600	800	650	1,600	1,400	1,150	800
2.	2,000	1,500	4,000	3,500	2,800	2,000	3,200	2,400	6,400	5,500	4,600	3,200	1,600	1,300	3,200	2,800	2,300	1,600
3.	3,000	2,200	6,000	5,200	4,200	3,000	4,800	3,600	9,600	8,200	6,900	4,800	2,400	1,950	4,800	4,150	3,450	2,400
4.	4,000	3,000	8,000	6,900	5,700	4,000	6,400	5,100	12,800	11,100	9,000	6,400	3,200	2,600	6,400	5,600	4,500	3,200
5.	5,000	3,750	10,000	8,700	7,100	5,000	8,000	6,400	16,000	13,900	11,300	8,000	4,000	3,250	8,000	6,900	5,650	4,000
6.	6,000	4,500	12,000	10,400	8,500	6,000	9,600	7,700	19,200	16,600	13,600	9,600	4,800	3,800	9,600	8,300	6,800	4,800

Notes: 1. All angles shown are measured from the vertical
2. Capacities for intermediate widths not shown may be obtained by interpolation.

ATTACHMENT 13

SAFE0035.TIF

RATED CAPACITIES FOR SINGLE LEG SLINGS

6 x 9 and 6 x 37 Classification Improved Steel Grade Rope With Fiber Core (FC)

(Horizontal angles shown in parentheses)

Rope		Rated Capabilities, Tons (2,000 lb.)								
		Vertical			Choker			Vertical Basket		
Dia. (Ins.)	Constr.	HT	MS	S	HT	MS	S	HT	MS	S
1/4	6x19	0.49	0.51	0.55	0.37	0.38	0.41	0.99	1.0	1.1
5/16	6x19	0.76	0.79	0.85	0.57	0.59	0.64	1.5	1.6	1.7
3/8	6x19	1.1	1.1	1.2	0.80	0.85	0.91	2.1	2.2	2.4
7/16	6x19	1.4	1.5	1.6	1.1	1.1	1.2	2.9	3.0	3.3
1/2	6x19	1.8	2.0	2.1	1.4	1.5	12.6	3.7	3.9	4.3
9/16	6x19	2.3	2.5	2.7	1.7	1.9	2.0	4.6	5.0	5.4
5/8	6x19	2.9	3.1	3.3	2.1	2.3	2.5	5.6	6.2	6.7
3/4	6x19	3.9	4.4	4.8	2.9	3.3	3.6	7.8	8.6	9.5
7/8	6x19	5.1	5.9	6.4	3.9	4.5	4.8	10.0	12.0	13.0
1	6x19	6.7	7.7	8.4	5.0	5.8	6.3	13.0	15.0	17.0
1 1/8	6x19	8.4	9.5	10.0	6.3	7.1	7.9	17.0	19.0	21.0
1 1/4	6x37	9.8	11.0	12.0	7.4	8.3	9.2	20.0	22.0	25.0
1 3/8	6x37	12.0	13.0	15.0	8.9	10.0	11.0	24.0	27.0	30.0
1 1/2	6x37	14.0	16.0	15.0	10.0	12.0	13.0	28.0	32.0	35.0
1 5/8	6x36	16.0	18.0	21.0	12.0	14.0	15.0	33.0	27.0	41.0
1 3/4	6x37	19.0	21.0	24.0	14.0	16.0	18.0	38.0	43.0	48.0
2	6x37	25.0	28.0	31.0	18.0	21.0	23.0	49.0	55.0	62.0

HT = Hand Tucked Splice and Hidden Tuck Splice. For hidden tuck splice (IWRC) use values in HT columns.

MS = Mechanical Splice

S = Swaged or Zince Poured Socket. These values only apply when the D/d ratio for HT slings is 10 or greater, and for MS and S slings is 20 or greater where: D = Diameter or curvature around which the body of the sling is bent; d = Diameter of rope.

ATTACHMENT 14

RATED CAPACITIES FOR 2-LEG AND 3-LEG BRIDLE SLINGS

6 x 9 and 6 x 37 Classification Improved Plow Steel Grade Rope With Fiber Core (FC)

(Horizontal angles shown in parentheses)

Rope		Rated Capacities, Tons (2,000 lb.)											
		2-Leg Bridle Slings						3-Leg Bridle Slings					
		90° (90°)		45° angle		60° (30°)		90° (90°)		45° angle		60° (30°)	
Dia. (ins.)	Const.	HT	MS	HT	MS	HT	MS	HT	MS	HT	MS	HT	MS
1/4	6x19	0.55	0.63	0.70	0.72	0.48	0.51	1.3	1.3	1.0	1.1	0.74	0.79
5/16	6x19	1.3	1.4	1.1	1.1	0.76	0.79	2.0	2.0	1.6	1.7	1.1	1.2
3/8	6x19	1.8	1.9	1.5	1.6	1.1	1.1	2.8	2.9	2.3	2.4	1.6	1.7
7/16	6x19	2.5	2.6	2.0	2.2	1.4	1.5	3.7	4.0	3.0	3.3	2.1	2.3
1/2	6x19	3.2	3.4	2.6	2.8	1.8	2.0	4.8	5.1	3.9	4.3	2.8	3.0
9/16	6x19	4.0	4.3	3.2	3.5	2.3	2.5	6.0	6.5	4.8	5.5	3.4	3.7
5/8	6x19	4.8	5.3	4.0	4.4	2.9	3.1	7.3	8.0	5.9	6.5	4.3	4.8
3/4	6x19	6.8	7.6	5.5	6.2	3.9	4.4	10.0	11.0	8.3	9.3	5.8	6.5
7/8	6x19	8.9	10.0	7.3	8.4	5.1	5.8	13.0	15.0	11.0	13.0	7.7	8.9
1	6x19	11.0	13.0	9.4	11.0	6.7	7.7	17.0	20.0	14.0	16.0	10.0	11.0
1 1/8	6x19	14.0	16.0	12.0	13.0	8.4	8.9	22.0	24.0	18.0	20.0	13.0	14.0
1 1/4	6x37	17.0	19.0	14.0	16.0	9.8	11.0	25.0	29.0	21.0	23.0	15.0	17.0
1 3/8	6x37	20.0	23.0	17.0	19.0	12.0	13.0	31.0	35.0	26.0	28.0	18.0	20.0
1 1/2	6x37	24.0	27.0	20.0	22.0	14.0	16.0	36.0	41.0	30.0	33.0	21.0	24.0
1 5/8	6x37	28.0	32.0	23.0	26.0	16.0	18.0	43.0	48.0	36.0	38.0	25.0	28.0
1 3/4	6x37	33.0	37.0	27.0	30.0	19.0	21.0	49.0	54.0	40.0	43.0	28.0	32.0
2	6x37	43.0	48.0	35.0	39.0	25.0	28.0	64.0	72.0	52.0	59.0	37.0	41.0

HT = Hand Tucked Splice MS = Mechanical Splice

ATTACHMENT 15

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MANUAL HANDLING OF BARRELS AND DRUMS

If two workers are to upend a full drum:

Stand facing each other on opposite sides of the drum. Grasp the chime near the high point at both ends of the drum.

Lift one end of the drum and press down on the other.

As the drum balances on the bottom chime, remove hands from the bottom chime and straighten the drum.

If two workers are to overturn a freestanding full drum:

Stand near partner, facing the drum. Grasp the chime with both hands and push to balance the drum on the bottom chime.

Shift facing and move one hand to the bottom chime. Slowly lower the drum to rest on the floor.

If two workers are to overturn a full drum that is near a wall:

Stand near partner placing one hand against the wall and one hand on the chime, slightly off center of the farthest point. Push against the wall and pull the chime forward until the drum is balanced on the bottom chime.

Step to one side, move one hand to grip the bottom chime and ease the drum to rest on the floor.

If one worker is to overturn a drum:

Stand in front of the drum, placing hands on the far side of the chime. Pull the drum forward until it balances on the bottom chime.

Shift hands to bottom of the near side of the chime, taking care not to place them where they will be crushed when the drum rests on the floor. Slowly lower the drum to the floor, keeping the back straight and bending at the knees.

If one worker is to upend a drum:

Crouch in front of the drum, knees open and grasping the lower edge of the chime. Lift, allowing the leg muscles to do the work.

Balance the drum on the lower chime and set hands to the far edge of the chime. Ease the drum to the upended position.

If one worker is to upend a drum, it is better to use specially designed barrel-lifter bars which are conveniently available.

To roll a drum:

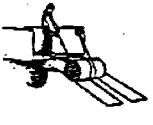
Push against the sides of the drum with both hands. Do not grasp the ends or use the foot.

To roll a barrel down a skid:

The barrel should be turned and slid endwise, not rolled down sideways.

If barrels or drums are to be handled on an incline or skid:

The safest way to handle a barrel or drum on an incline is to use ropes. The rope should be securely fastened to the platform from which the drum is to be lowered. The rope is then snubbed around the drum and the operator can slowly lower the load by keeping a firm grip on the free end.



To roll a drum up a skid:

This takes two workers, standing outside the skids and not below the barrel.

ATTACHMENT 16

SAFE0039.TIF

PART I

SECTION 4

HANDLING MATERIALS

4-1 BY HAND

A. Employees shall estimate the weight of an object before lifting it. (See Attachment 16)

B. Provide assistance (or use power equipment) when lifting objects that are too heavy.

C. Hold the load as close to the body as possible.

D. Lift the load straight up with your legs, not with your back.

E. Select the safest path to carry heavy or awkward loads.

1. Carry loads the shortest possible distance and place loads down using the reverse of the lifting procedure.

2. When two or more employees carry a heavy load, prearranged signals shall be used for releasing the load.

3. When two or more employees carry one object, each person, if possible shall face the direction in which the object is carried.

4. Avoid strains from lifting objects by being sure of footing, bending the knees and keeping the back almost perpendicular to the ground. When ready to lift, straighten the legs slowly, thus taking the strain on the stronger muscles of the body.

4-2 INDUSTRIAL FORKLIFTS

A. Operate forklifts within appropriate speed limits.

B. When moving the equipment, make sure that no employees or objects are in the path of the vehicle. Look in all directions and watch out for overhead structures (sprinkler systems, electrical conduits, etc.).

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C. Industrial trucks shall not be fueled while the engine is running.

D. When picking up a load, forks shall be set squarely and placed under the load as far as possible. Loads should not be raised or lowered while traveling. When unloaded, the truck's forks should be to the floor and all the way in. When loaded, the truck's forks should be high enough to clear the floor and not be overextended.

E. Loads shall not be suspended or swung over other persons. No one should be allowed to stand or walk under elevated forks.

F. Operators should face their destination. If unable to see over the load, the truck should be driven backwards.

G. On inclines, all types of loaded lift trucks shall be driven with the load on the upgrade side of the driver whether ascending or descending.

H. All loads shall be securely fastened or safely positioned to prevent tripping or falling.

I. No one other than the operator shall be allowed to ride the truck, forklift or other equipment, except when seats are provided for this purpose.

J. When an industrial truck is left unattended (operator is 25 feet away or the vehicle is not in his view), the load engaging means shall be fully lowered, controls shall be neutralized, power shall be shut off and brakes shall be set. Wheels shall be chocked when the truck is parked on an incline.

K. Equipment with internal combustion engines shall not be operated in enclosed areas for prolonged periods of time so as not to exceed the allowable levels of carbon monoxide.

L. DO NOT speed, and do not stop suddenly.

M. Lift bars on fork lift trucks that are movable or replaceable shall be held firmly in place by a proper securing pin. Jerry-rigged devices, such as using a threaded bolt, shall not be permitted.

N. Only attachments provided by or approved by the manufacturer may be used; all attachments shall be properly secured. Improvised methods shall not be used.

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O. When loading or unloading trucks or railroad cars, approved pallets, properly secured, shall be used. The wheels of the truck or railroad car shall be chocked.

4-3 CRANES, HOISTING EQUIPMENT

A. Only trained employees shall be authorized to operate hoisting equipment.

B. Employees shall not be permitted to ride the hook, sling or load of any hoisting equipment.

C. Load limits of hoisting equipment as specified by the manufacturer shall not be exceeded, except for test purposes.

D. Operating, maintenance and inspection procedures, as specified by the manufacturer, shall be followed.

E. The following are the minimum checks to be made daily prior to use:

1. Check all fluid levels of the prime mover.
2. Check control mechanisms including brakes and clutches for proper operation.
3. Check for leakage or damage in air and hydraulic systems.
4. Check the following devices where applicable:
   a. Boom hoist panel
   b. Prime mover start and stop
   c. Warning light
   d. Crane hook latch

F. Visually examine crane boom to ensure that it has not suffered damage.

G. Check that the correct load rating chart for the configuration in use is visible to the crane operator at the primary control station.

H. Visually check all wire rope for deterioration and damage.

I. Check for loose or missing bolts and pins.

J. Check weight indicator and load cells, where applicable for proper operation.

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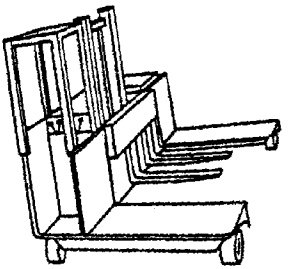
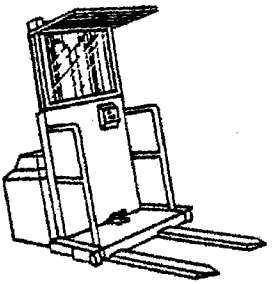
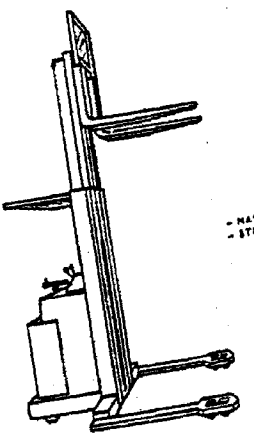


- SIDE-LOADER TRUCK



- ORDER PICKER TRUCK, HIGH LIFT



- NARROW-AISLE TRUCK
- STRADDLE TRUCK

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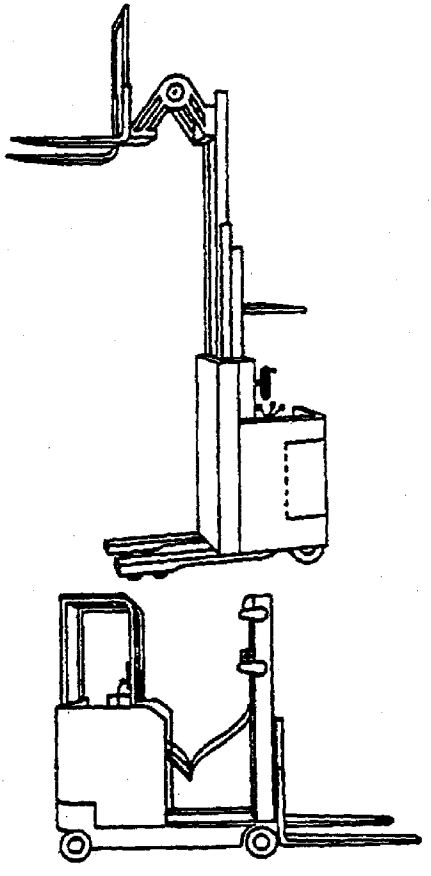
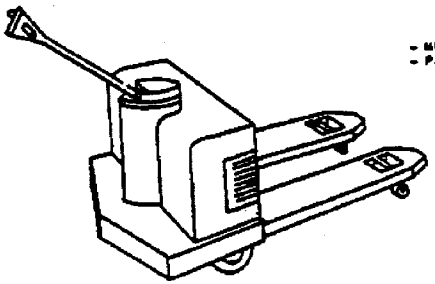
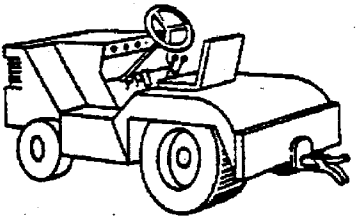


REACH TRUCK

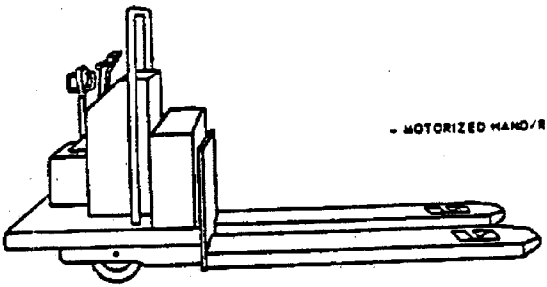
ATTACHMENT 18



- MOTORIZED HAND TRUCK
- PALLET TRUCK



- INDUSTRIAL TRACTOR



- MOTORIZED HAND/RIDER TRUCK

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K. Visually check loose gear such as slings, sling hooks and shackles.

L. Periodic Inspection - (every 3 months)

1. Deformed, cracked, or corroded members, in the crane structure and boom.
2. Loose bolts or rivets.
3. Cracked or worn sheaves and drums.
4. Worn, cracked or distorted parts such as pins, bearings, shafts, gears, rollers and locking devices.
5. Excessive wear on brake and clutch system parts, linings, panels, and ratchets.
6. Load, boom angle, and other indicators over their full range, for any significant inaccuracies.
7. Gasoline, diesel, electric, or other power plants for improper performance or noncompliance with safety requirements.
8. Excessive wear of chain drive sprockets and excessive chain stretch.
9. Crane hooks, magnetic particle or other suitable crack detecting inspection should be performed at least once each year.

M. The load shall be test lifted, and the brakes checked before beginning each day's work.

N. Operators of cranes and other hoisting equipment shall exercise extreme caution when in close proximity to energized lines or equipment.

O. Tag lines shall be attached to heavy objects being moved by hoists or cranes to prevent swinging or twisting of loads.

P. Signals to the equipment operator shall be given by only one person. The operator shall, however, obey a "stop" signal given by anyone. Hand signals given to the operator shall conform to the crane signal chart.

4-4 CRANES NOT IN REGULAR USE

A. A crane which has been idle for a period of one month or more, but less than six months shall be given an inspection.

B. A crane which has been idle for a period of over six months shall be given a complete inspection.

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4-5 INSPECTION RECORDS

A. Written, dated and signed crane inspection reports and records shall be made monthly on critical items in use such as brakes, crane hooks and ropes.

B. Records shall be kept where readily available.

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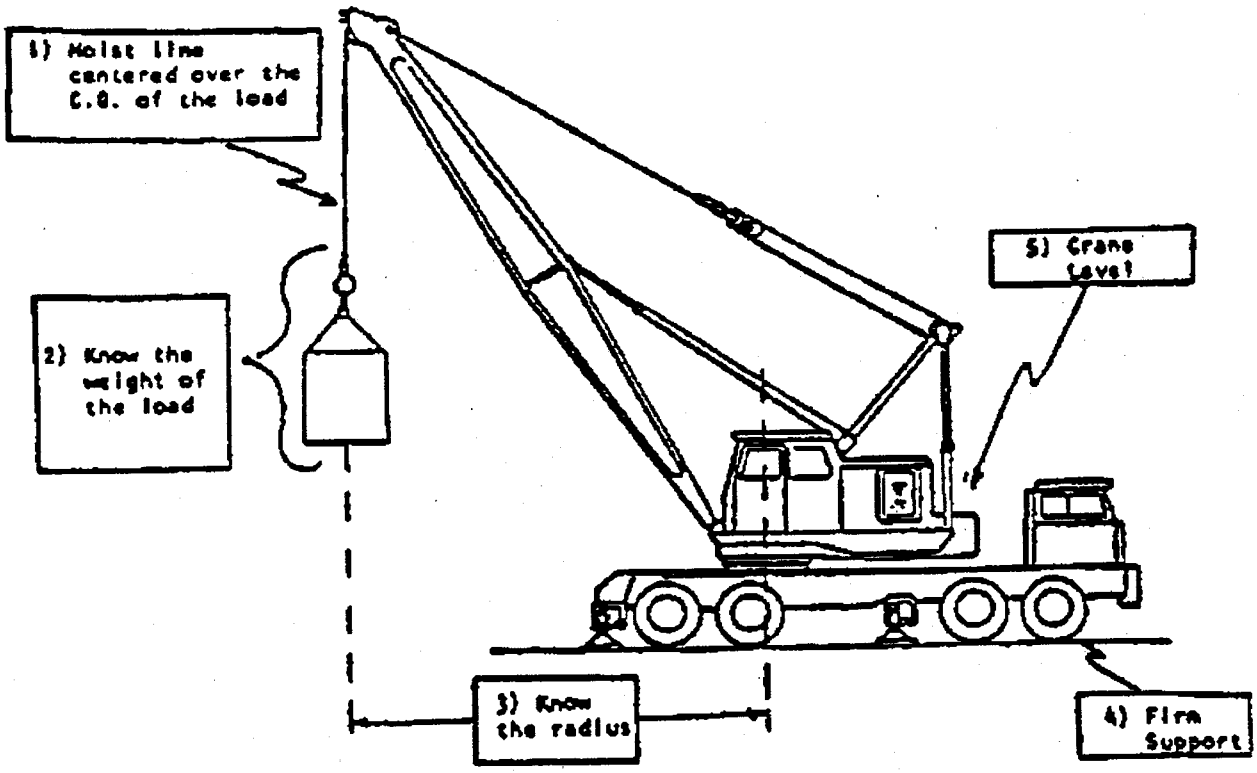
OPERATION and MAINTENANCE

of

CRANES

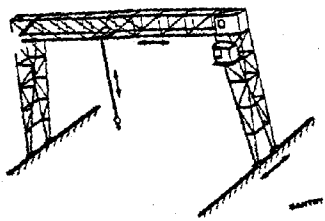
SAFE0048.TIF

Surely there are other important considerations when performing a hoisting operation, such as skill of the operator and proper rigging requirements. However, if these basic conditions have not been taken into consideration by the personnel responsible for the hoisting operation, then fundamental safe craning principals, have not been met.



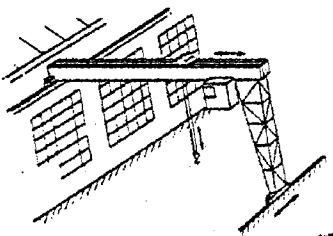
ATTACHMENT 19

TYPES OF CRANES

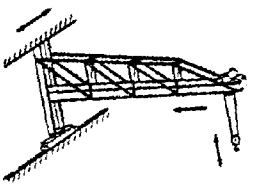


GANTRY

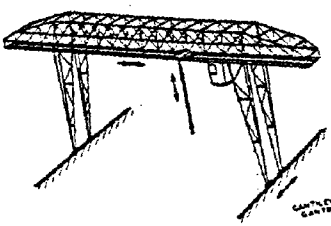
OVERHEAD TRAVELING



SEMI-GANTRY



WALL



CANTILEVER GANTRY

ATTACHMENT 20

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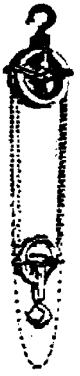
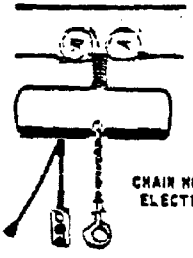
HOOK CHAIN HOIST
HAND OPERATED
GEARED TYPE

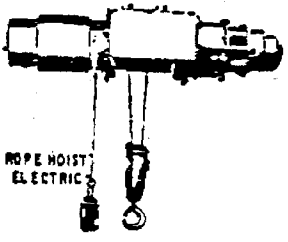


HOOK CHAIN HOIST
HAND OPERATED
DIFFERENTIAL TYPE

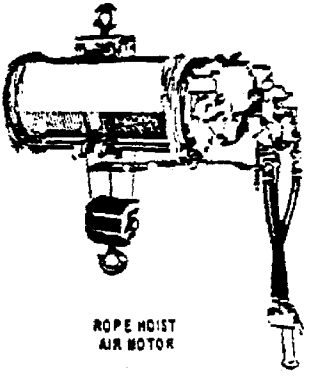
CHAIN HOIST
AIR MOTOR



CHAIN HOIST
ELECTRIC



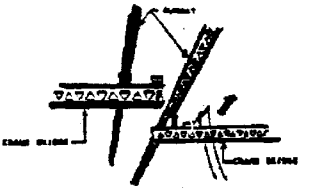
ROPE HOIST
ELECTRIC



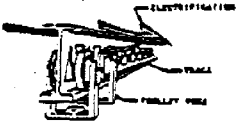
ROPE HOIST
AIR MOTOR

ATTACHMENT 21

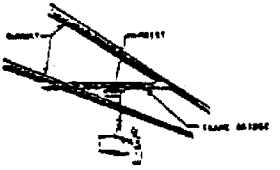
CAB CONTROLLED POWER HOIST



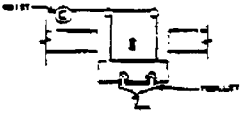
INTERLOCKING SYSTEM FOR UNDERHUNG CRANE



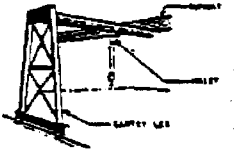
ELECTRIFICATION OF MONORAIL TRACK



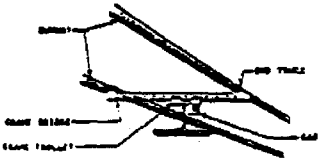
HAND PUSHED UNDERHUNG CRANE SYSTEM



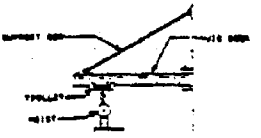
TRACK DROP OR LIFT SECTION



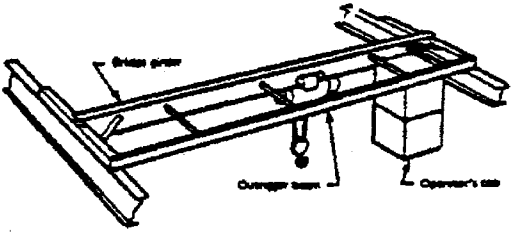
SINGLE-LEG GANTRY CRANE



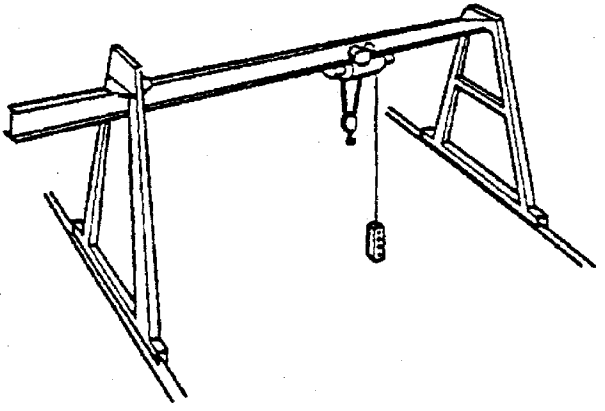
CAB CONTROLLED UNDERHUNG CRANE



WALL SUPPORTED JIB CRANE

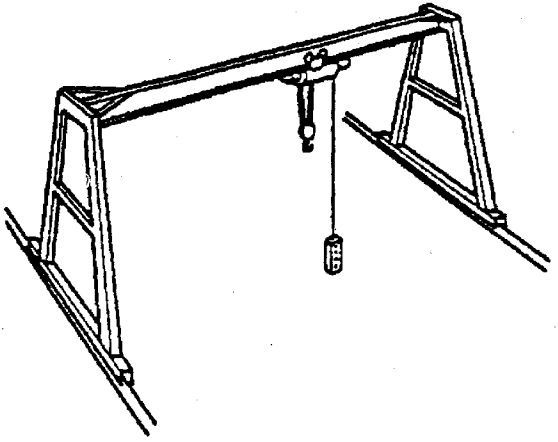


OVERHEAD-TYPE CRANE—CAB OPERATED

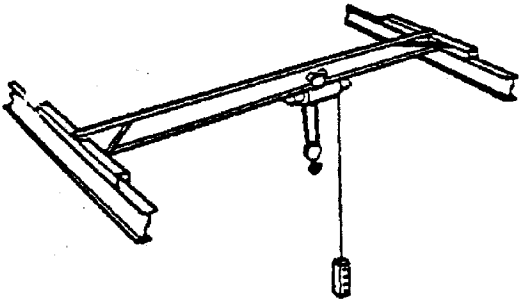


CANTILEVER GANTRY-TYPE CRANE

ATTACHMENT 22



GANTRY-TYPE CRANE



OVERHEAD-TYPE CRANE—FLOOR OPERATED

CRANES

CHAPTER 2-0

SCOPE, DEFINITIONS, REFERENCES

Section 2-0.1 Scope of B30.2

Within the general scope defined in Section 1, B30.2.0 applies to top running overhead, and gantry cranes including polar, semi-gantry, cantilever gantry, wall cranes and others having the same fundamental characteristics. These cranes are grouped because they all have top running trolleys and similar travel characteristics.

Section 2-0.2 Definitions

2-0.2.1 Types of Equipment

2-0.2.1.1 Crane. A machine for lifting and lowering a load and moving it horizontally, with the hoisting mechanism an integral part of the machine. Cranes, whether fixed or mobile, are driven manually, by power, or by a combination of both.

2-0.2.1.2 Automatic Crane. A crane which, when activated, operates through a preset cycle or cycles.

2-0.2.1.3 Cab-Operated Crane. A crane controlled by an operator in a cab attached to the bridge or trolley.

2-0.2.1.4 Cantilever Gantry Crane. A gantry or semi-gantry crane in which the bridge girders or trusses extend transversely beyond the crane runway on one or both sides.

2-0.2.1.5 Floor-Operated Crane. A crane which is controlled by a means suspended from the crane by an operator on the floor or an independent platform.

2-0.2.1.6 Gantry Crane. A crane similar to an overhead crane except that the bridge for carrying the trolley or trolleys is rigidly supported on two or more legs running on fixed rails or other runway.

2-0.2.1.7 Hot Molten Material Handling Crane. An overhead crane used for transporting or pouring molten material.

2-0.2.1.8 Manually-Operated Crane. A crane whose hoist mechanism is driven by pulling an endless chain or whose travel mechanism is driven in the same manner or by manually moving the load or hook.

2-0.2.1.9 Outdoor Storage Gantry Crane. A gantry type crane of long span usually used for storage of bulk material such as ore, coal, etc.; the bridge girders or trusses are rigidly or nonrigidly supported on one or more legs. It may have one or more fixed or hinged cantilever ends.

2-0.2.1.10 Overhead Crane. A crane with a multiple girder movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead fixed runway structure.

2-0.2.1.11 Polar Crane. A bridge or gantry type crane which travels on a circular runway.

2-0.2.1.12 Power-Operated Crane. A crane whose mechanism is driven by electric, air, hydraulic or internal combustion means.

2-0.2.1.13 Pulpit-Operated Crane. A crane operated from a fixed operator station not attached to the crane.

2-0.2.1.14 Remote-Operated Crane. A crane controlled by an operator not in a pulpit or in the cab attached to the crane, by any method other than a means suspended from a crane.

2-0.2.1.15 Semi-Gantry Crane. A gantry crane with one end of the bridge rigidly supported on one or more legs that run on a fixed rail or runway, the other end of the bridge being supported by a truck running on an elevated rail or runway.

2-0.2.1.16 Wall Crane. A crane having a cantilever frame with or without trolley, and supported from a side wall or line of columns of a building. It is a traveling type and operates on a runway attached to the side wall or columns.

ATTACHMENT 23

crane, manually operated. A crane whose hoist mechanism is driven by pulling an endless chain, or whose travel mechanism is driven in the same manner or by manually moving the load.

crane, overhead. A crane with a movable bridge carrying a movable or fixed hoisting mechanism and traveling on an overhead, fixed runway structure.

crane, power-operated. A crane whose mechanism is driven by electric, pneumatic, hydraulic, or internal-combustion means.

crane, pulpit-operated. A crane operated from a fixed operator station not attached to the crane.

crane, remote-operated. A crane controlled by an operator who is not in a pulpit or in the cab attached to the crane, by any method other than a means suspended from the crane.

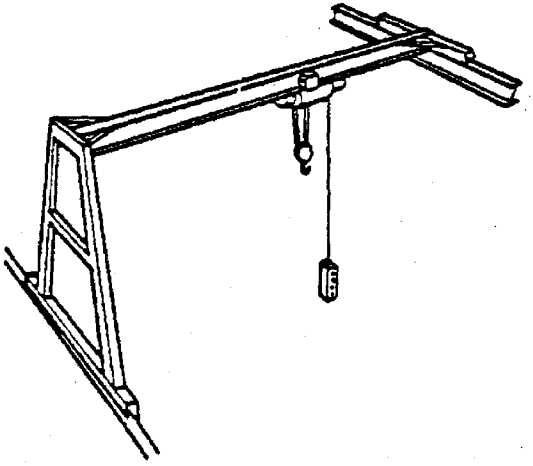
crane, semigantry. A gantry crane with one end of the bridge rigidly supported on one or more legs that run on a fixed rail or runway, the other end of the bridge being supported by a truck running on an elevated rail or runway.

crane, standby. A crane which is not in regular service but which is used occasionally or intermittently as required.

crane service, normal. That service which involves operation with randomly distributed loads within the rated load limit, or uniform loads of less than 65 percent of the rated load, for not more than 15 percent of the time for manually operated cranes and 25 percent of the time for electrically or pneumatically powered cranes, of a single work shift.

crane service, heavy. That service which involves operation within the rated load limit which exceeds normal service.

crane service, severe. That service which involves normal or heavy service with abnormal operating conditions.



SEMI-GANTRY-TYPE CRANE

ATTACHMENT 24

Daily Crane Inspection

Machine _____ Date _____

Item	Okay	Needs Repair	Not Equipped	Remarks
1. Engine oil, water & fuel				
2. Engine hoses & belts				
3. Hydraulic reservoir				
4. Tires				
5. Glasses, mirrors & horn				
6. Hoist drum & cable				
7. Boom hoist & telescope				
8. Boom wear pads				
9. Boom Sheaves				
10. Hoist block & ball				
11. Outriggers				
12. Electrical system				
13. Cab guages & controls				
14. Swing brake				
15. Positive swing lock				
16. Boom Angle indicator				
17. Machine brakes				
18. Back-up alarm				
19. Parking brake				
20. Jib				
21. Fire Extinguisher				
22. Transmission				

Air or oil leaks noted _____

Remarks _____

_____

Is machine safe to operate? _____

Operator _____

ATTACHMENT 25

Monthly Crane Inspection

Machine _____ Date _____

Item	Okay	Needs Repair	Not Equipped	Remarks
1. Glasses				
2. Sheet Metal				
3. Tires				
4. Outriggers				
5. Hoist Block				
6. Headache Ball				
7. Boom Sheaves				
8. Boom Sections				
9. Boom Wear Pads				
10. Hoist Drum Winch & Hoses				
11. Hoist cable				
12. Boom Hoist Cylinders				
13. Boom Telescope Cylinders				
14. Turn Table & Gear				
15. Front Differential				
16. Rear Differential				
17. Transmission				
18. Torque Convertor				
19. Drive Shafts				
20. Air System				
21. Hydraulic System				
22. Engine Oil				
23. Engine Coolant				
24. Engine Fuel Filter				
25. Engine Electrical System				
26. Engine Hoses and Belts				
27. Batteries				
28. Power Steering				
29. Cab guages				
30. Cab Controls				
31. Back-up Alarm				
32. Swing Brake				
33. Positive Cab Lock				
34. Boom Angle Indicator				
35. Fire Extinguisher				

ATTACHMENT 26

Item	Okay	Needs Repair	Not Equipped	Remarks
36. Machine Brakes				
37. Parking Brake				
38. Jib				

Any Oil or air leaks?_____

Was the machine serviced this month?_____

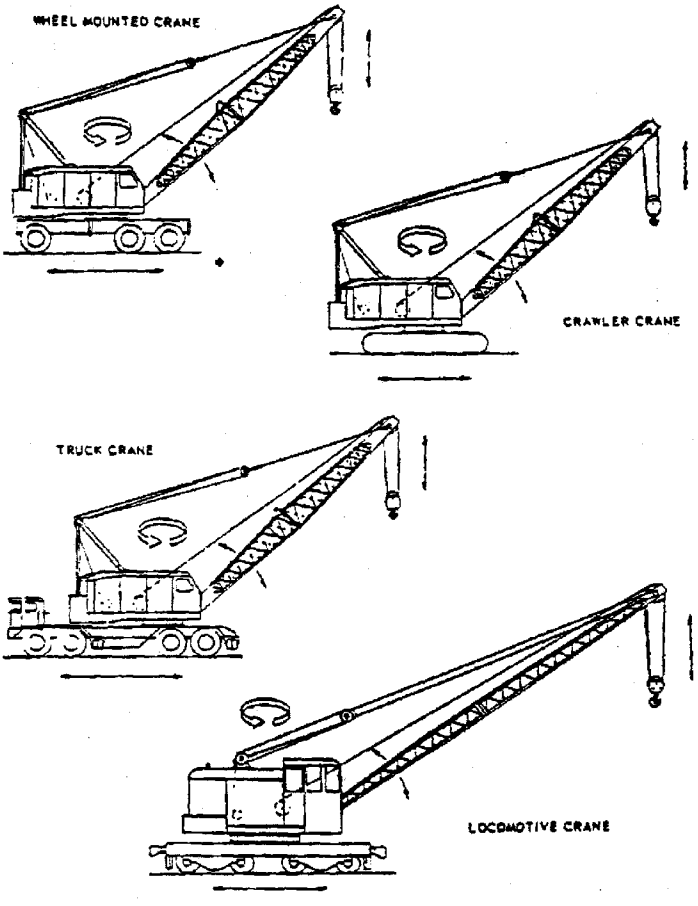
Any other problems not noted?_____

Is machine safe to operate?_____

Inspected by_____

ATTACHMENT 27

USA STANDARD



ATTACHMENT 28

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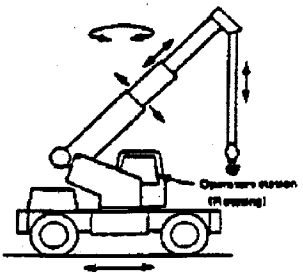

FIG. 5 WHEEL-MOUNTED CRANE – TELESCOPING BOOM (SINGLE CONTROL STATION)

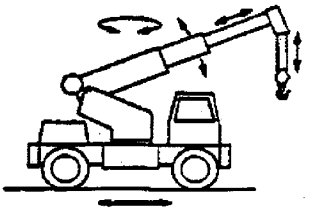

FIG. 6. WHEEL-MOUNTED CRANE – TELESCOPING BOOM (SINGLE CONTROL STATION)

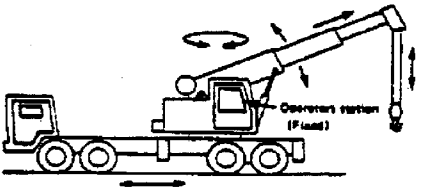

FIG. 7. WHEEL-MOUNTED CRANE – TELESCOPING BOOM (MULTIPLE CONTROL STATION)

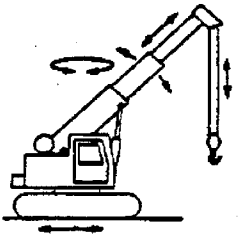

FIG. 8 CRAWLER CRANE – TELESCOPING BOOM

GENERAL NOTE TO FIGS. 5 THROUGH 10:
The boom may have a base boom structure of sections (upper and lower) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional length. These illustrations show some types.

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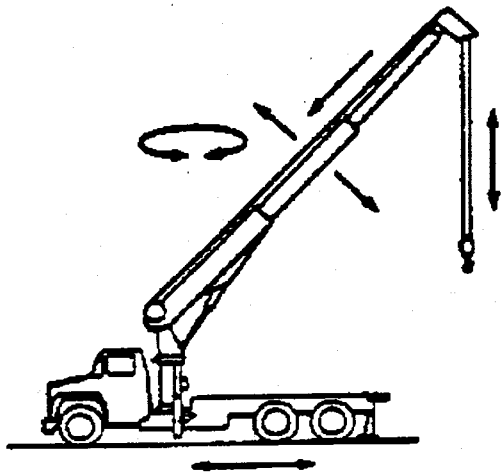


FIG. 9 COMMERCIAL TRUCK-MOUNTED CRANE – TELESCOPING BOOM

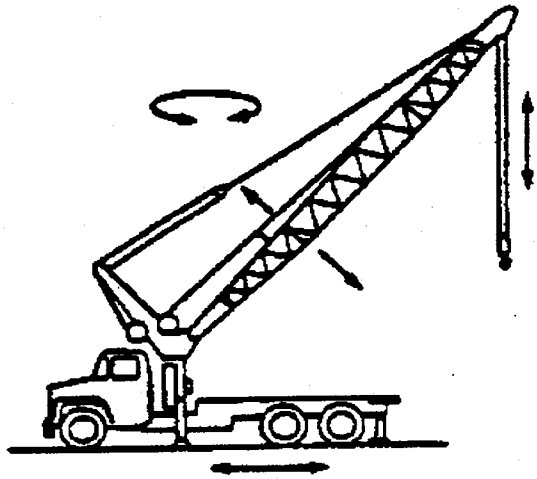
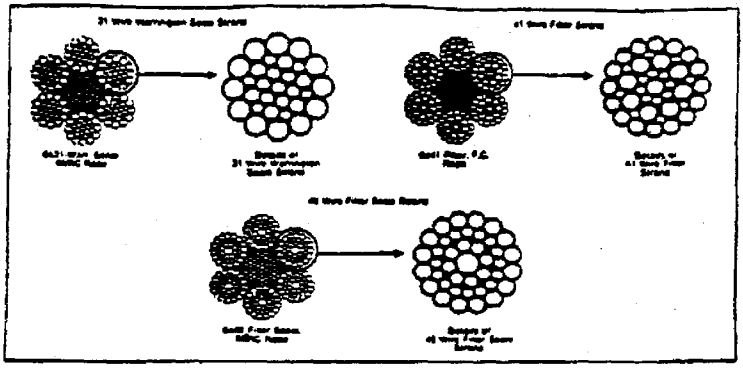
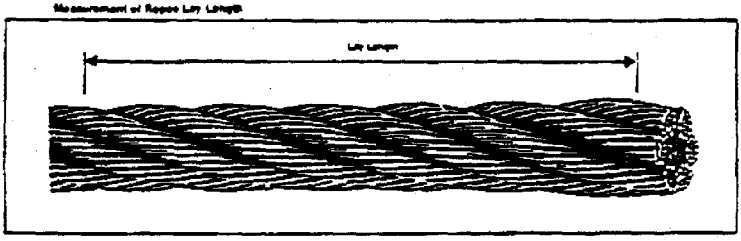


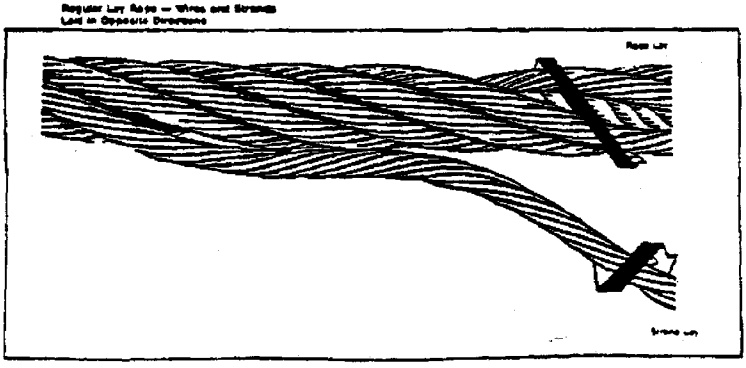
FIG. 10 COMMERCIAL TRUCK-MOUNTED CRANE – NONTELESCOPING BOOM

GENERAL NOTE TO FIGS. 9 THROUGH 10:
The boom may have a base boom structure of sections (upper and lower) between or beyond which additional sections may be added to increase its length, or it may consist of a base boom from which one or more boom extensions are telescoped for additional length. These illustrations show some types.

ATTACHMENT 29







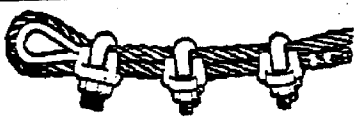
ATTACHMENT 30

INSTALLATION OF CABLE CLIPS

Right and Wrong Ways of Using Cable Clips

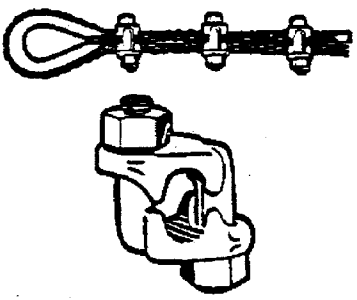
Correct
U-Bolt of all clips on dead end of rope

Incorrect
Do not stagger clips



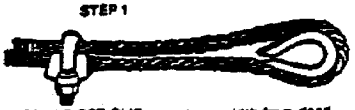
Incorrect
U-Bolt of all clips on live end of rope

Double Saddle Clips (Flat Grip Clips)



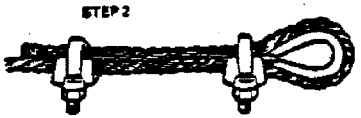
Proper Method of Installing Cable Clips

STEP 1



APPLY FIRST CLIP—one base width from dead end of wire rope—U-Bolt over dead end—live end rests in clip saddle. Tighten nuts evenly to recommended torque.

STEP 2

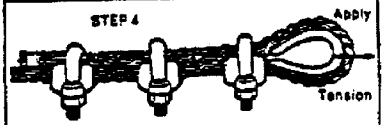


APPLY SECOND CLIP—nearest loop as possible—U-Bolt over dead end—turn on nuts firm but DO NOT TIGHTEN.

STEP 3

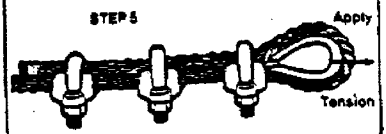
ALL OTHER CLIPS—Space equally between first two.

STEP 4



Apply tension and tighten all nuts to recommended torque.

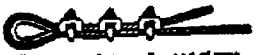
STEP 5



Recheck nut torque after rope has been in operation.

APPLICATION OF WIRE ROPE CLIPS

CORRECT METHOD — U-Bolts of clips on short end of rope. (No distortion on live end of rope.)



WRONG METHOD — U-Bolts on live end of rope. (This will cause mashed spots on live end of rope.)

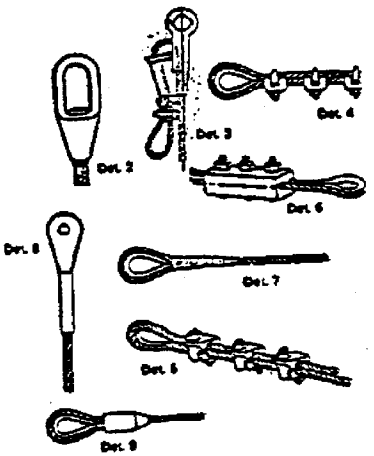
WRONG METHOD - Staggered clips, two correct and one wrong. (This will cause a mashed spot in live end of rope due to wrong position of center clip.)

After rope is in service, and is under tension, tighten clips to take up decrease in rope diameter.

Efficiency of wire rope clip connections is dependent upon turning the rope over a proper size thimble, applying the correct number of clips for the wire rope size and construction, and tightening the nuts to the recommended torque. The user should consult the clip manufacturer's application instructions to obtain this information.

EFFICIENCY OF WIRE ROPE CONNECTIONS
As Compared to
Catalog Breaking Strength of Wire Rope

Detail	Type of Connection	Efficiency
	Wire Rope	100%
1	Socket — Zinc Type — properly attached	100%
2	Wedge Socket	80%
3	Clips — Crosby Type	80%
4	Clips — Flat Grip Type	80%
5	Clips — Three Bolt Type	80%
6	Pure Clamp — Three Bolt Type	80%
7	Spliced Eye and Thimble	
	¾ and smaller	100%
	⅞ to ¾	95%
	⅞ to 1	85%
	1⅛ to 1⅜	75%
	1½ to 2	70%
	2¼ and larger	100%
8	Swedge Socket	100%
9	Swedge Sleeve	



Wire Rope Fitting

ATTACHMENT 31

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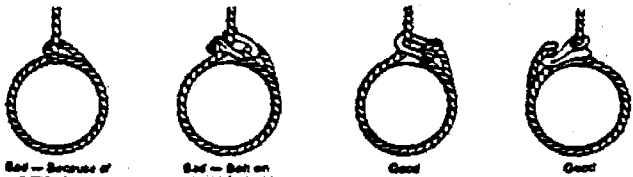
GOOD AND BAD RIGGING PRACTICES
Use of Chokers



Bad — Because of cutting action of eye splice on running line.

Bad — Bolt on running line can work loose.

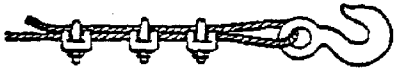
Good

Good

No cutting action on running lines.

Eye Fittings

Bad Practice
Wire rope lines with clip. Efficiency 50% or less.

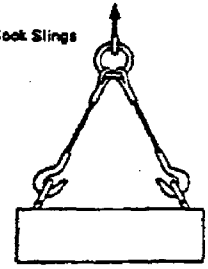


Bad Practice — Thimble should be used to increase strength of eye, reduce wear on rope and obtain maximum efficiency of attachment.

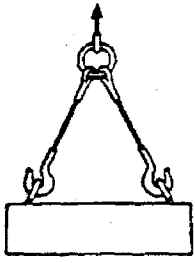
Good Practice — Note use of thimble in eye splice.

Good Practice — Use of thimble eye

Hook Slings



Bad Practice — Hook openings should be turned out.



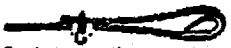
Good Practice — Hooks are turned out

Wire Rope Fittings

ATTACHMENT 32

TYPICAL MANUFACTURERS' RECOMMENDED METHOD OF APPLYING CLIPS TO GET MAXIMUM HOLDING POWER OF THE CLIP

1



Turn back the specified amount of rope from the thimble. Apply the first clip one base width from the dead end of the wire rope (U-bolt over dead end — live end rests in clip saddle). Tighten nuts evenly to recommended torque.

2

Apply the next clip as near the loop as possible. Turn on nuts firm but do not tighten.

3

Space additional clips if required equally between the first two. Turn on nuts — take up rope slack — tighten all nuts evenly on all clips to recommended torque.

4

NOTICE!

Apply the initial load and retighten nuts to the recommended torque. Rope will stretch and shrink in diameter when loads are applied. Inspect periodically and retighten.

Rope diameter	Minimum no. of clips	Amount of rope to turn back to thimble	Torque in ft. lbs.
1/8	2	3¼	
3/16	2	3¾	
¼	2	4½	15
5/16	2	5½	30
⅜	2	6½	45
7/16	3	7	65
½	3	11½	65
9/16	3	12	95
⅝	3	12	95
11/16	4	18	130
¾	4	19	225
7/8	5	26	225
1⅛	6	34	225
1¼	6	37	360
1⅜	7	44	360
1½	7	48	360
1⅝	7	51	430
1¾	7	53	590
2	8	71	750
2¼	8	73	750
2½	9	84	750
2¾	10	100	750
3	10	106	1200

If a greater number of clips are used than shown in the table, the amount of rope turnback should be increased proportionately.

A termination made in accordance with the instructions, and using the number of clips shown has an approximate 80% efficiency rating. This rating is based upon the catalog breaking strength of wire rope. If a pulley is used in place of a thimble for turning back the rope, add one additional clip.

The number of clips shown is based upon using right regular or Lang lay wire rope, 6x19 class or 6x37 class, fibre core or IWRC, IPS or XIPS. If Seale construction or similar large outer wire type construction in the 6x19 class is to be used for sizes 1 in. and larger, add one additional clip.

The number of clips shown also applies to right regular lay wire rope, 8x19 class, fibre core, IPS, sizes 1⅛ in. and smaller, and right regular lay wire rope, 18 x 7 class, fibre core, IPS or XIPS, sizes 1⅛ in. and smaller.

For other classes of wire rope not mentioned above, it may be necessary to add additional clips to the number shown.

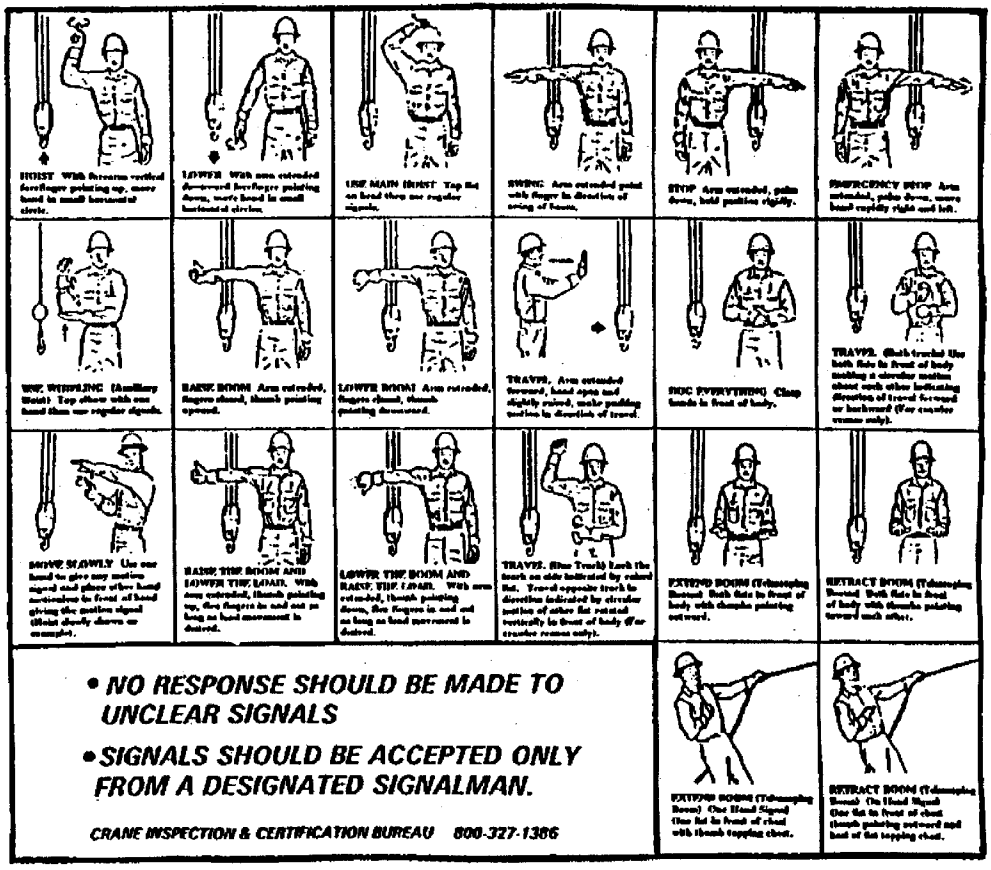
IMPORTANT: Failure to make a termination in accordance with aforementioned instruction, or failure to periodically check and retighten to the recommended torque, will cause a reduction in aforementioned efficiency rating.

*Varies with individual manufacturers

Wire Rope Fittings

[illegible]

ATTACHMENT 33



ATTACHMENT 34

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OPERATOR'S DAILY INSPECTION GUIDE
AND TROUBLE REPORT VEHICLES

No. 263972

Time Out _____

Vehicle No. _____
End Mileage _____
Start Mileage _____
Date: _____
Time In: _____

Start of Shift	"X" to certify that the following items have been inspected. An "O" will denote a discrepancy in that area. Check and correct these items before starting vehicle:	End of Shift
	1. Oil Check to see if at full mark.	
	2. Coolant-if applicable-check to see if full	
	3. Battery water level	
	4. Check tires	
	5. Drive belts check for 1/2" deflection	
	6. Windshield, mirrors, reflectors-if applicable	
	7. Damage to equipment, chassis or body (list on back)	
	8. Steering, power steering oil level	
	9. Clean interior and exterior as required	
	10. Auxiliary equipment-oil, water, belts	
	11. Instruments, gauges-gas, oil, air, amp., if applicable	
	Check these items after starting vehicle:	
	*12 Engine operation miss Knock	
	*13. Brakes service - parking - drain air tanks *	
	14. Hydraulic oil level -if applicable	
	15 Transmission oil level & linkage, -if applicable	
	*16. Horn-Signal lights, headlights, tail lights, backup alarm	
	*17. Check equipment for unusual noise, stoppage, breakage or malfunction and record separately from other noted discrepancy.	
	18. Cycle equipment one time - check chains, cylinders, belts and hoses if applicable.	
	19. Other specify (Air intake system)	
	20. Vehicle parked in spot number	

SIGNATURE OF DRIVER

* If any of these items cannot be corrected, you must have your supervisor's signature prior to using vehicle.

SIGNATURE OF SUPERVISOR

☐ Dist. Yard ☐ At garage for repair

ATTACHMENT 35

PART I

SECTION 5

COMPRESSED GASES AND WELDING

5-1 HANDLING AND STORAGE CYLINDERS

A. Care shall be exercised in handling all gas cylinders. They shall not be dropped or jarred.

B. Gas cylinders shall not be hoisted using a sling or electric magnet nor shall they be lifted by the valve protection cap. Hydraulic tailgates or other approved methods shall be used in lowering cylinders from trucks.

C. Gas cylinders, whether full or empty, shall be secured in a neutral position at all times. Valve protection caps shall be kept in place except while regulators and hoses are attached.

D. Gas cylinders shall be kept away from the heat and separated from highly combustibles or flammable materials.

E. Oxygen cylinders shall not be stored near highly combustible materials, especially oil and grease. They shall be separated in storage from fuel gas cylinders or combustible materials a minimum distance of 20 feet.

F. Welding or cutting of any pipeline, tank, empty container or piece of equipment shall not be performed until it is assured the object is free from highly flammable materials or an explosive mixture of gases. Before welding or cutting is begun, the hazardous materials shall be removed or it shall be vented to the atmosphere to prevent an explosion from expansion of trapped gases.

G. Cylinders containing chlorine, propane or hydrogen shall not be stored in a general storeroom. They shall be stored in a separate, well ventilated, fireproof area.

H. Cylinders shall not be allowed to come in contact with energized conductors, ground wires from electrical equipment or welding machines.

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I. Only those fuel gas cylinders that are in actual use or are secured in place and connected to a manifold or welding set shall be permitted in the main building of a generating station. All empty and spare cylinders shall be stored elsewhere.

J. The valves of compressed gas cylinders shall be opened slowly and only with the spiral wrench provided.

K. Employees shall never tamper with the safety relief devices of cylinders.

L. Employees shall never force connections that do not fit.

M. Oil or grease shall not be used for lubricating valves, gauge connections or to other parts of an oxygen system.

N. Before the regulator is removed from a cylinder, the valve shall be closed and all pressure released from the regulator.

O. A leaking cylinder shall not be used. Such cylinders shall be taken outdoors away from sources of ignition. The supervisor shall be notified.

P. Leaks in cylinders, regulators or gauges shall not be field repaired. Repairs shall be made only by qualified persons or manufacturer's representative.

Q. Gases shall not be mixed in a cylinder or to transfer gas from one cylinder to another.

R. A sign reading "Danger - No Smoking", Matches or Open Lights or equivalent wording shall be conspicuously posted in rooms or at entrances to areas where fuel gas or oxygen is stored.

S. All compressed gas cylinders shall be marked by labeling, stenciling or stamping to identify contents.

T. Compressed gases shall not be used to remove dust, dirt or debris.

5-2 WELDING AND CUTTING

A. Welding and cutting shall be performed only by experienced and properly trained persons.

B. When welding or cutting in elevated positions, precautions shall be taken to prevent sparks or hot metal from falling onto people or flammable material below.

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C. Suitable fire extinguishing equipment shall be immediately available at all locations where welding and cutting equipment is used.

D. Matches shall not be carried by welders or their helpers when engaged in welding or cutting operations.

E. A fire watch shall be maintained wherever welding or cutting is performed in locations where combustible materials present a fire hazard.

F. The supervisor shall contact the Safety Department prior to commencing hot work on machinery, tanks, equipment, shafts, or pipes that could contain explosive or highly flammable materials and shall be thoroughly cleaned and decontaminated prior to the application of heat. No hot work shall be done on 55 gallon drums that contain flammable residue.

G. In gaseous spaces where there is a possibility of an explosion, welding or cutting equipment shall not be used until the space is adequately ventilated.

H. Adequate ventilation or approved respiratory equipment shall be used while welding in confined spaces or while brazing, cutting or welding zinc, brass, bronze, stainless steel, or galvanized or lead coated material.

I. Prescribed eye and face protection, protective gloves and clothing shall be worn during welding or cutting operations or while cleaning scale from welds. Helpers shall also wore eye protection.

5-3 ELECTRIC WELDING

A. An AC or DC electrical welding machine shall not be operated until the frame or case of the machine is electrically grounded. Grounding connections shall be checked prior to welding.

B. To protect face and body during electrical welding and cutting, the operator shall wear a welding helmet and protective gloves and clothing. Helper or attendants shall wear approved eye protection. Other employees shall not observe electric welding operations unless they use approved eye protection.

C. Safety glasses shall be worn to guard against flying particles when the helmet is raised.

D. Welding screens shall be used whenever other personnel could be exposed to the arc of the welding operations.

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5-4 COMPRESSED AIR

A. Compressed air shall not be used to blow dust, dirt or any other materials from clothing or skin.

B. The manufacturer's stated safe operating pressure for hoses, pipes, valves, filters and other fittings shall not be exceeded.

C. Conductive hoses shall not be used near electrically energized equipment.

D. Compressed air shall not be used for bodily cleaning purposes. Compressed air may be used for cleaning parts of machinery only if employees wear nonvented goggles.

E. Air hoses shall not be placed on ladders, steps, scaffolds or walkways so as to create a tripping hazard.

F. Air hoses shall be connected by a self-locking or other positive locking means to prevent them from becoming accidentally disconnected.

5-5 EXTENSION CORDS

A. The use of extension cords shall be kept to a minimum and is not intended to serve as a substitute for permanent wiring.

B. Temporary electric cords passing through work areas shall be covered or elevated to protect them from damage and to eliminate tripping hazards.

C. Worn or damaged extension cords shall not be used.

D. Extension cords shall be protected against accidental damage that may be caused by traffic, sharp corners, projections or pinching.

E. Extension cords shall not be fastened by staples or hung from nails nor suspended by wire. Non-metallic materials should be used.

F. The exterior of all extension cord fittings shall be constructed of non-conductive material.

5-6 GAS WELDING

A. Suitable eye protection and protective gloves and clothing shall be worn during welding or cutting operations or while cleaning scale from welds. Helpers or attendants shall wear proper eye protection.

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B. Matches shall not be used to light a torch also a torch shall not be lighted on hotwork. A friction lighter or stationary pilot light shall be used.

C. No welding hoses shall be repaired by tape.

D. Whenever welding equipment is not in use, all cylinder valves shall be closed and the pressure in the hose released.

E. Acetylene cylinder valves shall be opened not more than one and one-half turns. The wrench shall be left in position on the stem while the cylinder is in use. Do not use acetylene at more than 15 lbs. psi.

F. Soap suds or other approved methods rather than flame shall be used to locate fitting leaks. Hoses may be checked for leaks by immersion in water and pressurizing it at normal working pressure.

G. Permit no oil or grease on any oxygen and acetylene equipment.

5-7 TORCHES

A. Clogged torch tip openings shall be cleaned with suitable cleaning wires or other devices designed for such purposes.

B. Torches in use shall be inspected at the beginning of each working shift for leaking shut-off valves, hose couplings and tip connections. Defective torches shall not be used.

C. Torches shall be lighted by friction lighters or other approved devices and not by matches or from hot work.

D. Oxygen and fuel gas regulators, including their related gauges, shall be in proper working order while in use.

E. Oxygen cylinders and fittings shall be kept away from oil or grease. Cylinders, cylinder caps and valves, couplings, regulators, hoses and apparatus shall be kept free from oil or greasy substances and shall not be handled with oily hands or gloves. Oxygen shall not be directed at oily surfaces, greasy clothes, or within a fuel oil or other storage tank.

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PART II

SPECIAL OPERATIONS

SECTION 6

VEHICLE OPERATIONS

6-1 GENERAL

A. Only those employees specifically authorized and who possess a (CDL) Commercial Driver's License or a valid driver's license for the equipment being used shall operate Sewerage and Water Board vehicles on company business.

B. Drivers shall know and obey all state and local motor vehicle laws applicable to the operation of their vehicle.

C. The driver shall drive at safe speeds no greater than that permitted by law. Traffic, road and weather conditions shall be given consideration in determining the safe speed within the legal limit at which the vehicle shall be operated.

D. A driver shall not permit unauthorized persons to drive, operate or ride in or on a company vehicle.

E. Seat belts shall be used everytime you drive or ride in a S&WB vehicle. Insist that passengers use the safety belts.

F. Employees shall not permit anyone to ride on the running boards, fenders or any part of the vehicle except on the seats. Passengers shall not stand in moving vehicles.

G. Employees shall not ride on trailers.

H. Employees shall not jump on or off vehicles in motion.

6-2 INSPECTION OF EQUIPMENT

A. The driver shall determine that the brakes are in a safe operating condition before operating equipment. If brakes are not working properly, they must be corrected before the vehicle is used.

B. Windshield wipers shall be frequently inspected and must be in good operating condition so that the windows and windshield give sufficient visibility for safe operation of the vehicle.

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C. All lights and reflectors on the vehicle shall be inspected by the driver during any night driving and if found defective, they shall be repaired immediately.

D. The driver shall report any defects that may have developed during the day. If the brakes are not working properly, they shall be adjusted or repaired before the vehicle is put in operation. Other items that affect safety shall be repaired prior to continued vehicle operation.

E. All crew trucks should be equipped with a first aid kit and fire extinguisher.

6-3 VEHICLE OPERATION

A. The operator of a Sewerage and Water Board vehicle shall clearly signal his intention of turning, passing or stopping.

B. Upon a signal from a vehicle approaching from the rear, the driver of a S&WB vehicle shall yield the right of way.

C. Drivers shall be prepared to stop and the right of way shall be yielded in all instances where necessary to avoid an accident.

D. The driver of a S&WB vehicle shall always be courteous toward other operators and pedestrians. He shall operate his vehicle in a safe manner and shall yield the right of way to pedestrians and other vehicles.

E. Drivers of all S&WB vehicles shall stay a safe distance behind when following another vehicle to allow adequate distance for stopping.

F. Drivers shall exercise added caution when driving through residential and school zones.

G. When entering or leaving any building, enclosure, alley or street where vision is obstructed, a complete stop shall be made and the driver shall proceed with caution.

H. Ignition systems shall be turned off and no smoking permitted while refueling.

I. The driver shall not operate a S&WB motor vehicle inside any garage except when driving in or out. The motor shall not be "warmed up" inside a garage nor shall the driver test motor operation in a garage unless the exhaust gas is carried directly to the outside atmosphere or doors and windows are open so that adequate ventilation exists.

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6-4 PARKING

All operators of board vehicles are subject to the rules governing parking on the streets of New Orleans as set forth in Chapter 38, Section 286 of the City Code. It is the strict intention of the Board to comply with all aspects of the City ordinance on parking. Please refer to Board Policy Memorandum number 71 for details concerning parking citations.

A. When vehicles must be parked on the roadway, they shall be parked on the right hand side facing in the direction of traffic flow, whenever possible.

B. Trucks, trailers and heavy equipment shall be protected by proper lighting devices, signs, channeling devices and barriers in accordance with state or local requirements.

C. When parking any vehicle, the driver will make sure it is left in a safe position. The driver shall turn the engine off, the transmission shall be placed in the lowest gear and the parking brake set.

D. When a vehicle is parked, the parking brake shall be set.

6-5 BACKING

A. Whenever possible, all work trucks shall be positioned to avoid the necessity of backing up later (use safety cones to prevent the public from parking too close to the rear of the work truck).

B. During all backing operations, the vehicle operator shall:

1. Keep a constant lookout
2. Carefully check any blind areas
3. Back slowly
4. Watch both sides
5. Use an observer when available

C. When backing a vehicle which has an obstructed view to the rear:

1. A reverse signal (Back-Up Alarm) audible above the surrounding noise level shall be used.
2. An observer shall signal that it is safe to back the vehicle.

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6-6 TRANSPORTING MATERIALS

A. Employees shall load pipe, poles, ladders or similar materials parallel with the truck length. Such material shall not extend beyond the normal width of the vehicle.

B. Materials shall be secured to prevent shifting.

C. Material which extends more than 4 feet beyond the front or back of the truck or trailer shall have warning devices attached. During the day red flags shall be used. At night and during periods of poor visibility, red lights shall be used.

D. All trucks that handle mud, rocks, shells and various materials shall use a tarpaulin covering to prevent damage from flying particles that may damage a vehicle traveling behind Sewerage and Water Board trucks.

6-7 WORK AREA PROTECTION

A. Work area protection is the adequate safeguarding or protecting of pedestrians, motorists, workmen and equipment by the use of adequate barriers, warning signs, lights, flags, traffic cones, high level warning signs and barricaded rope or Flagperson on approaches to work areas, excavations, open manholes or parked equipment.

B. Work area protection is accomplished by the use of good informative and protective devices. Keep in mind that a safe installation requires the use of these devices in relation to the location of the workmen and the equipment involved. The use of these devices must be coupled with proper planning, design, installation, inspection, maintenance and the use of good common sense. It is of the utmost importance that the work area be properly identified and that warning devices say what they mean to convey the message to the traveling public well in advance of arrival at the work area.

C. When the work area encroaches upon a sidewalk, crosswalk or other area near pedestrian traffic, temporary barricades shall be used to provide pedestrians with a safe and well defined walkway through or around the work area. Pedestrians shall not be diverted around a work area into a portion of the street used by vehicular traffic. At work locations where alternate walkways cannot be provided appropriate walkway or sidewalk closing signs shall be posted in advance of the work area.

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D. Proper work area protection shall be planned to insure the safety and protection of the public, the workmen and the equipment. To assist supervisors and foremen in setting up work area traffic control protection, a pocket size document has been prepared by the American Traffic Safety Services Association based upon the current manual on Uniform Traffic Control Devices for Streets and Highways.

6-8 WORK TRAFFIC CONTROL EQUIPMENT

A. Only those signs, light devices, barricades, flags and cones that conform to state or local codes shall be used.

B. All state and local traffic codes shall be followed when providing work area protection.

C. During night operation or in periods of reduced visibility special precautions shall be taken. Adequate warning devices, which may include flashing lights, and steady burning lights, reflectorized drums, flags, cones and barricades shall be used.

D. Warning devices and equipment shall be removed as soon as the hazard is eliminated.

E. Warning devices and traffic control equipment not in use shall be stored in a proper manner or shall be removed from the work area.

6-9 FLAGPERSON

A. A Flagperson or other appropriate traffic controls shall be used whenever there is any doubt that effective protection can be provided by signs, signals and barricades.

B. A Flagperson shall be used when closing off a lane on a two-lane road.

C. A Flagperson shall be used when closing off a lane around a single curve or elevated structure for a two-lane road.

D. Flagpersons shall place themselves in protected positions to reduce the possibility of injury from traffic.

E. A Flagperson shall insure they can fully observe the operation and shall guide vehicular traffic in such a manner as to minimize the possibility of accidents or injury.

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F. When Flagperson are used at both ends of a job site, reliable communications or pre-arranged signals shall be used to insure proper traffic flow.

G. A Flagperson shall face traffic when giving signals.

H. A Flagperson shall give positive, direct signals that leave no doubt as to their meaning.

I. The sign paddle bearing the clear messages STOP or SLOW provide motorists with more positive guidance than flags and should be the primary hand signaling device. Flag use should be limited to emergency situations and at spot locations which can best be controlled by a single flagger.

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PART II

SECTION 7

PERSONAL AND ENVIRONMENTAL PROTECTION

INTRODUCTION

Methods An Employee Must Use For His Protection

The general principles outlined in this section are applicable to all work activities. Specific control measures applicable to special types of work are covered in other sections.

In order for the employee to be fully protected he or she must know as much as possible about potential health hazards.

Each employee must be aware of the potential hazards associated with the use of chemicals. If you do not know or are unsure, contact your supervisor and review the appropriate Material Safety Data Sheet prior to beginning your assigned work.

7-1 CONFINED OR ENCLOSED SPACES

A. Prior to entering a confined space that has been closed for periods of time sufficient for the accumulation of explosive, toxic, or oxygen deficient atmospheres, such spaces shall not be entered until this atmosphere has been determined safe through the use of a portable gas detector. (See attachment 36 and 37)

B. When testing is performed, the atmosphere shall be measured for oxygen content and the presence of explosive and toxic atmospheres.

C. Entry into a confined space shall be prohibited if the oxygen is greater than 21.4% or less than 19.5% or when tests indicate that the concentration of flammable gases in the atmosphere is greater than 10% of the lower explosive limit.

D. When conditions referenced in the above exist, the work area shall be ventilated until required air quality has been ensured by additional tests. Continuous forced air ventilation shall be maintained while employees are working in any confined space.

E. Half mask air purifying respirators shall not be used in any confined space unless the oxygen content is above 19.5%.

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SEWERAGE & WATER BOARD CONFINED SPACE ENTRY PERMIT

NOTE: (This form, both front and back, is not to be used until our official Permit-Required Confined Space Enty Program is adopted.)

General Information

1) Department: _____ 2) Date: _____
3) Job Location: _____
4) Description of Work: _____
(Specify Purpose of Entry)
5) Permit Duration: _____

Condition of Entry Area

1) Configuration: ___ Top Entry, ___ Bottom Entry, ___Side Entry
2) Is there any noticeable odors emminating from entry area:
____ Yes ____ No
If yes, describe: _____
3) Depth/Size of Entry Area: _____
4) Is the entry area free of water/sewerage/or other materials/debris: ____ Yes ____ No
If no, explain: _____

* 5 through 7 for D.P.S., S.P.S., Water Treatment Facilities and Meter Vaults.

5) Is fixed mechanical ventilation provided for this entry space: ____ Yes ____ No
A). If yes, does ventilation work: ____ Yes ____ No
B). If no, explain: _____
6) Is electrical equipment Locked Out/Tagged Out:
____ Yes ____ No
If no, explain: _____
7) Temperature (if applicable): _____Degrees F

Confined Space Pre-Entry Checklist

1) Are you (Entry Foreman/Operator) certified in the operation of the gas monitor to be used? ____ Yes ____ No

2) Have you (Entry Foreman/Operator) performed calibration checks on the gas monitor to be used? ____ Yes ____No

3) Did you (Entry Foreman/Operator) test the atmosphere of the confined space prior to entry? ____Yes ____No

4) Does your (Entry Foreman/Operator) knowledge of industrial or other discharges indicate this area is likely to remain free of dangerous air contaminants while space is occupied?
____Yes ____ No

5) (Entry Foreman/Operator) Did the atmospheric checks test within the acceptable limits for all gases tested?
____Yes ____No

6) (Entry Foreman/Operator) Will the atmosphere be continuously monitored while the space is occupied? ____Yes ____No

ATTACHMENT 36

-PERMIT MUST BE POSTED ON JOB SITE, GOOD ONLY ON INDICATED DATE-
SEND COPY TO SAFETY UNIT

SEWERAGE & WATER BOARD CONFINED SPACE ENTRY PERMIT

NOTE: (This form, both front and back, is not to be used until our official Permit-Required Confined Space Entry Program is adopted.)

NOTICE: If any of the questions in the Pre-Entry Checklist are answered "No", do not enter the space. Contact your immediate supervisor.

Atmospheric Monitoring

1) Time and Date of Test: _____

2)

Tests to be Taken	Acceptable Limits	Instrument's Results
A) Oxygen	19.5% to 23.5%	_____%
B) Explosive	10%	_____%
C) Carbon Monoxide	25 ppm	_____ppm
D) Hydrogen Sulfide	10 ppm	_____ppm
E) Ammonia (if applicable)	25 ppm	_____ppm
F) Chlorine (if Applicable)	0.5 ppm	_____ppm
G) Other		_____

3) Individual conducting test: _____
(Name)

4) Instrument(s) used: _____
(Brand Name/Type)

Safety Equipment for Confined Space Entry and Rescue

1) Ventilation: ____ Yes ____ No
2) Body Harness, Lifeline, and Retrieval Equip ____ Yes ____ No
3) Confined Space Airline Rescue System: ____ Yes ____ No
4) Protective clothing: ____ Yes ____ No
5) Air Purifying Respirator: ____ Yes ____ No
6) Head/Eye/Hearing Protection [circle type(s)]
7) Explosion Proof Lighting: ____ Yes ____ No
8) Communication Equipment: ____ Yes ____ No

Authorized Attendants (list by name)
1)_____ 2) _____

Authorized Entrants (List by Name)
1)_____ 2)_____
3)_____ 4)_____

AUTHORIZATION

I certify that all required precautions have been taken and all necessary equipment is provided for safe entry and work in this confined space.

1) Permit Approved by Entry Foreman/Operator
_____ Date/Time_____
Printed Name/Signature

2) Reviewed by Entry Foreman's/Operator's Supervisor
_____ Date/Time_____
Printed Name/Signature

PERMIT MUST BE POSTED ON JOB SITE. GOOD ONLY ON INDICATED DATE

SEND COPY TO SAFETY UNIT

F. Emergency entry into confined spaces or areas where an unsafe atmospheric condition exists shall require the use of a positive pressure breathing apparatus.

G. Following inspection of a confined space the area must be determined safe for entry and hotwork by the person-in-charge. When the official Permit-Required Confined Space Entry Program is adopted by the Board, this certification and all supporting findings will be properly logged on a confined space entry log. These forms will then be filed with the department-in-charge and a copy will be sent to the Safety Department.

7-2 NOISE

A. In an area where the ambient noise level is expected to exceed 85 DBA, a noise survey shall be performed.

B. Specific areas where the measured noise level is constant above 90 DBA shall be identified and posted.

C. Employees working in posted area shall wear hearing protection.

7-3 INSULATION

A. Only designated employees will be permitted to do insulation work. No employee shall tamper with any insulation system unless authorized by the Risk Management Department. Employees authorized to work on insulation shall at all times comply with all federal, state, and local regulations.

7-4 EXHAUST VENTILATION

A. Exhaust systems, when provided at the work location, shall be used.

B. When an exhaust system does not provide adequate protection, other protective means, such as an approved respirator, shall be used.

7-5 RESPIRATORS

A. Users of respirators shall follow the manufacturer's instruction.

Self-contained breathing apparatuses shall be thoroughly inspected at least once a month and after each use.

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C. Respirators shall be selected on the basis of the hazard to which the employee is exposed.

D. Non-disposable respirators shall be inspected, cleaned and disinfected on a quarterly basis and if used on a daily basis, inspected, cleaned and disinfected daily. All defective parts shall be replaced prior to use.

7-6 IONIZING RADIATION

A. Applicable state and federal regulations shall be adhered to in the procurement, use and disposal of radioactive materials.

B. Employees engaged in the use of radioactive materials shall be trained and authorized by license.

C. Non-assigned personnel shall not enter a location which has been designated and posted by sign and/or barricades as a radiation area.

7-7 VENTILATION

A. The ventilation and exhaust systems provided at the work locations shall be utilized.

B. Ventilation and exhaust systems shall be maintained in accordance with the manufacturer's recommendations.

C. When an exhaust system does not provide required ventilation, employees shall use a NIOSH-approved respirator (NIOSH - National Institute for Occupational Safety and Health).

7-8 LABORATORIES

A. Laboratory work benches shall be kept neat and orderly and not become littered or contaminated with spilled chemicals.

B. Eating or drinking from laboratory glassware shall not be permitted.

C. Laboratory fume hoods shall be used for safe handling of volatile compounds.

D. Minimum face velocities shall be maintained on fume hoods.

E. All containers shall bear a label stating the chemical contained and its concentration.

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F. Chemical storage areas shall be kept neat, orderly and clean.

G. Access to chemical storage areas shall be limited to authorized personnel only.

H. Incompatible chemicals shall not be stored adjacent to each other.

I. Each laboratory shall have available for use a stack of personal protective equipment, such as rubber gloves, aprons, safety glasses, goggles and face shields.

7-9 CHEMICAL HAZARDS

A. Material Safety Data Sheets (MSDS's) shall be readily available to employees upon request for all chemicals used or stored at each facility. Product Material Safety Data Sheets contain the following information: manufacturer's name and emergency telephone number, physical/chemical data, fire and explosive hazard data, health hazard data, reactivity data, spill or leak procedures, special protection information, special precautions.

B. If necessary protective clothing and equipment shall be provided by the S&WB and properly worn by personnel working with any potentially hazardous chemicals (for example, diesel fuel spills, chlorine spills, lime spills, etc.)

C. Personnel shall receive training through their individual departments to ensure that they know how to acquire and use the hazard information available to them and to handle an emergency exposure due to a spill or leak. Personnel shall be informed of any precautionary measures that should be taken when working with chemical hazards.

D. All locations where chemicals are used on a routine basis shall have an eye-wash station available in the immediate vicinity. Eye-wash stations may be portable or a fixed system.

E. Refer to the OSHA Hazard Communication Standard (29CFR 1910.1200) which includes the Hazard Communication Program (Right to Know); Container Labeling Requirements; Material Safety Data Sheets (MSDS's); User Guide; Chemical Inventory Guidelines; Personnel Training Requirements.

F. In all areas of training, whether it be for general site employees, supervisors at the site, or for the use of specific safety and/or personal protective equipment, the level of training provided must be consistent with the worker's job function and responsibilities.

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Employees shall be retrained on an annual basis on material such as health hazards and the use of personal protective equipment. This refresher training must be provided to reemphasize the initial training and to update S&WB employees on any new policies or procedures.

The Safety Unit, The Environmental Affairs Department, and The Training Department will be responsible for coordinating training with the departmental supervisors in the handling of hazardous materials.

G. For emergency reporting procedures, see the attached official Hazmat Emergency Response Plan.

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CONFINED SPACE ENTRY

SUMMARY: Plan

Coordinate

Pretest

Constantly Ventilate Manhole

Retest before Re-entry

Enter only with proper lighting, safety equipment, and a lifeline

Always post a standby watch at entrance

Use the buddy system

Never leave an open manhole without posting its condition for others

Be sure to log your activities/findings

ATTACHMENT 37

SUGGESTED GUIDELINES FOR CONFINED SPACE ENTRY

We recommend that you follow these guidelines for confined space entry before work is started.

	Equipment Ready	Equipment Needed
Has operation's supervisor been informed at S&WB Office.	_____	_____
Has the compartment been identified.	_____	_____
Has proper lighting been installed in the confined space.	_____	_____
Have the gas detectors been checked.	_____	_____
Have all self-contained breathing units been checked.	_____	_____
Have all life lines and harnesses been checked.	_____	_____
Was rescue hoist installed.	_____	_____
Have standby personnel stationed at manhole been informed of emergency procedures.	_____	_____
Has compartment been certified safe for entry by Person In Charge.	_____	_____

* **NOTE** If there is a serious problem with a manhole call for your supervisor's assistance.

HAZARDOUS MATERIAL INCIDENT
EMERGENCY RESPONSE PLAN

NEW ORLEANS SEWERAGE AND WATER BOARD
EMERGENCY NUMBERS:
942-3855 From 7:30 A.M. to 4:00 P.M.
942-3833 Evenings, Weekends and Holidays

The Sewerage and Water Board's primary concern is to safeguard the public water supply. They respond to incidents which might affect the raw water intake, as well as any backflow into the water system, or illegal connections to the potable water system.

In addition, the Board has certain obligations to the State Department of Environmental Quality and the U.S. Environmental Protection Agency for discharges to navigable waterways which originate from their drainage or sewerage systems. Normally, the board will respond to an incident if it involves one of these three systems. Louisiana Revised Statute 33:4081 gave Sewerage and Water Board authority over the responsibility for the public systems for drainage, sewerage and water supply. The National Pollutant Discharge Elimination System Permits (NPDES) places responsibility on the Board for Sewerage Treatment plant discharges to navigable waterways of the United States.

Two distinct types of hazardous materials incidents require response from the Sewerage and Water Board. The first type is a land spill which affects the drainage or sewerage system. Initial response in this situation starts with a call to the Emergency Department (24 hours per day) from the public or any agency who first becomes aware of a spill. The Emergency Department will complete a Spill Alert Report prior to notifying any other Board personnel. If the spill occurs between 7:30 A.M. and 4:00 P.M. the Board's Environmental Enforcement Division (EED) is notified. Between 4:00 P.M. and 7:30 A.M. and weekends or holidays the "on call" Environmental Enforcement Division staff person is notified. He will report to the on-scene coordinator to provide information and drawings which show the direction of flows of the sewerage and drainage systems.

The "on call" person from the Board's Environmental Enforcement Division may request assistance from the Board's Duty Supervisor and that of other E. E. D. personnel according to the gravity and the extent of the hazardous threat to the sewerage and/or drainage systems. The "on call" person from the Board's Environmental Enforcement Division will notify the on-call Supervisor Assistant for Drainage and Sewerage operations, if a shut down of any of the Board's facilities is deemed necessary. The Supervisor Assistant will immediately notify the department head, and will respond to the request for assistance from E.E.D.

ATTACHMENT 3B

The E.E.D. will evaluate the situation and determine appropriate action in total cooperation with the lead agency. In the event that more specialized equipment or services are required to identify, contain or cleanup the spilled material, the on scene coordinator will hire an outside contractor for this purpose. It is the understanding of the Sewerage and Water Board that the on-scene coordinator will remain in responsible charge until the incident has been resolved to the satisfaction of all involved agencies. Containment, cleanup and disposal of any hazardous waste will be performed in accordance with applicable Federal, State, or Local regulations.

The second type of incident is a river spill which affects the Water Purification Plants' raw water intakes. The SEWERAGE AND WATER BOARD is a part of the Lower Mississippi River Waterworks Warning Networks Plan which is a warning system involving the participation of the waterworks facilities, the State Department of Health and Human Resources (DHHR), the State Department of Environmental Quality (DEQ) and Industry.

If any of the participants in the Lower Mississippi River Waterworks Network become aware of a deterioration in raw water quality or of a discharge which may affect water supplies, they immediately notify the nearest downstream plant with a water intake as well as one of the DHHR officials listed.

The DHHR official upon receiving the report will proceed to advise all of the downstream plants which might be affected by the discharge. The SEWERAGE AND WATER BOARD order of notification is as follows:

> The DHHR notifies the Shift Purification Operator who in turn notifies the appropriate Water Purification Supervior. Notification proceeds from the Water Purification Superintendent, to the Chief of Operations, to the GENERAL SUPERINTENDENT who will inform the Executive Director when necessary.

The Board's Legal Department is responsible for recovering damages to Board Property and Board expenses. Photographs, samples, affidavits and other information obtained by Board personnel assist the Legal Department in cost recovery for damage and services.

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MBEC1026

ATTACHMENT 38

PART II

SECTION 8

PERSONAL PROTECTIVE EQUIPMENT

8-1 EYE PROTECTION

A. The use of Sewerage and Water Board safety eye wear is required when engaged in or directly exposed to the industrial work process. It is intended that Sewerage and Water Board safety eye wear be utilized by employees in any area where the potential for eye injury exists.

B. Employees handling or working near toxic fumes or vapors must wear non-vented goggles over contact lenses or remove their contact lenses and wear prescription glasses or safety goggles.

C. Employees wearing prescription glasses or contact lenses on the job shall wear approved prescription safety glasses or safety goggles over their regular prescription eyewear.

D. Approved full-cover goggles and/or face shields shall be worn when engaged in or close to work involving:

1. Powergrinding, buffing or wire wheel brushing.
2. Flame welding, cutting or burning.
3. Electrical welding or cutting.
4. Handling of acid and caustics.
5. Pouring hot lead or other heated compounds.
6. Use of brush chippers.
7. Grass or weed cutting.
8. Any area where the potential for eye injury exists.

E. Approved safety glasses shall be worn when engaged in or close to work involving the following examples:

1. Drilling or chipping concrete.
2. Use of shop tools such as drills, saws and sanders.
3. Cleaning or scaling pipe.
4. Any area where the potential for eye injury exists.

8-2 OTHER CIRCUMSTANCES GOVERNING USE OF SAFETY EYE WEAR

A. Employees may be required to utilize safety eye wear at any time, when, in the judgment of the supervisor, a potential for eye injury exists.

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C. Safety eye wear is not required while working in administrative offices or in office type environments such as plant control rooms, storeroom and warehouse offices, etc., or while driving or riding in vehicles with an enclosed driver/passenger compartment but they should be readily available for use when entering areas where safety eye wear is required.

D. Safety eye wear, as a minimum requirement, must meet ANSI Standard Z-87.1-1979.

E. Safety eye wear shall not be altered or modified in any manner that would decrease the degree of protection that the eye wear was initially designed to provide.

8-3 PROTECTIVE WEARING APPAREL

A. Clothing that is suitable for the work being performed shall be worn. Minimal requirements for field work attire shall include shirts with sleeves and long work pants. Tank tops, shorts and cut offs are prohibited.

B. Approved footwear provided by Sewerage and Water Board for industrial and/or hazardous environments directly exposed to the work process shall be worn. Tennis shoes, jogging shoes or other canvas type sport or recreation shoes are prohibited.

C. Rings, loose jewelry and/or loose clothing shall not be worn when working on or near stationary machinery with moving parts.

D. Gloves suitable for the work shall be worn by all employees handling rough materials that can cause skin damage either through direct contact or through skin absorption.

E. Protective clothing shall be worn when handling materials that may contaminate the body or cause damage to the skin through absorption or direct contact.

F. Approved safety hard hats shall be worn by all personnel in field operations at all times, or as noted below.

G. Safety hard hats, or head band assembly shall not be defaced or altered in any manner without a supervisor's approval.

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H. Safety hard hats, depending upon work conditions, may not be required for personnel working in enclosed or confined areas where head protection is afforded by the enclosure or the construction of the enclosure is such that the use of hard hats would not be feasible. Safety hard hats shall not be required in the following job classifications: meter reader, auto mechanic, Sewerage and Drainage Pumping Station Operators.

I. Metal hard hats will not be worn by electricians, mechanics, or any others who might work in close proximity to overhead cable, high voltage lines or other potentially hazardous electrical systems.

J. Back support belts are provided by the Board and must be worn by all employees who engage in repetitive bending and lifting. Such support belts must also be worn by any employees when they engage in heavy lifting or bending activities. Classifications affected include but are not limited to Meter Readers, Networks Laborers, Pipe Specialists, Mechanics, and Utility Plant Workers.

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PART II

FIRE PREVENTION AND PROTECTION

SECTION 9

9-1 HOUSEKEEPING

A. Work locations, vehicles and the inside and outside of buildings shall be kept clean and orderly at all times.

B. Combustible materials, such as oil-soaked rags, waste and shavings shall be kept in approved metal containers with metal lids. Containers shall be emptied as soon as practicable.

C. Both clean rags and used rags shall be separated and kept in approved metal or metal lined bins having metal covers.

D. Any flammable liquids (vapor point at or below 100 degrees F) shall not be used for general cleaning purposes.

E. All solvents shall be kept in approved, properly labeled containers. Gasoline, benzene, naptha, lacquer thinner and other flammable solvents of this class shall be handled and dispensed only in UL approved, properly labeled red safety cans.

F. Permanent floors and platforms shall be kept free of dangerous obstructions and shall be maintained reasonably free from oil, grease or water.

G. Stairways, aisles, permanent roadways, walkways and material storage areas in yards shall be kept reasonably clear and free from obstructions, depressions and debris.

H. Materials and supplies shall be stored in an orderly manner so as to prevent their falling or spreading and to eliminate tripping and stumbling hazards.

I. No clothing shall be allowed to hang on walls, behind doors or in the space behind switchboards. No matches shall be left in clothes placed in lockers. Rubbish and unused clothing shall not be allowed to accumulate in lockers.

J. Paper and other combustible materials shall not be allowed to accumulate. Weeds or other rank vegetation shall not be permitted to grow in or around the garages, supply yards, buildings, oil tanks or other structures.

K. When pouring or pumping gasoline or other flammable liquids from one container to another, metallic contact shall be maintained between the pouring and receiving containers.

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9-2 SMOKING

Smoking or open flames shall not be permitted in areas where dangerous gases might be present, for example, oil rooms, acetylene storage, or similar areas. Smoking shall be prohibited inside storerooms, battery charging areas, flammable liquid storage locations and in other areas where quantities of combustible materials are kept. The absence of "No Smoking" signs shall not excuse smoking in dangerous places.

In accordance with the Clean Indoor Air Act (City Ordinance #14817) and to protect the health and safety of our employees, smoking is prohibited in enclosed areas within the buildings, facilities and installations of the Sewerage and Water Board. the Board is required to provide to the extent reasonably practicable, smoke-free areas for non-smoking employees.

We are not required to provide designated smoking areas; however, it is not the intent of this policy to deny a worker the right to smoke. The Board will strive to provide, where possible, ventilated smoking areas for each building, facility or installation.

The individual in charge of each Board facility is responsible for designating by public posting, where possible, ventilated smoking areas.

The enforcement of this policy is the responsibility of each supervisor, to ensure that non-smoking employees are not unwillingly subjected to the effects of smoke in the work area

9-3 FIRE PROTECTION

A. Fire protection equipment shall be properly located at all times. Except for actual use, an employee shall not move or remove such equipment with out proper authority.

B. Except for wheeled-type equipment, all fire extinguishers shall be properly mounted.

C. Employees shall be familiar with both the location and the operation of all fire protective equipment in the vicinity of their work area.

D. All employees shall know the classes of fire, their burning characteristics and the proper extinguishing agent to be used, as listed below:

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Class "A" fires involve ordinary combustibles such as wood and paper. Extinguishing agents include water and multipurpose dry chemical.

Class "B" fires involve oils and flammable liquids. Extinguishing agents include CO_2 and dry chemical.

Class "C" fires involve electrical equipment. Extinguishing agents include CO_2 and dry chemical.

Halon 1301 (Freon) and Halon 1211 are gaseous extinguishing agents suitable for combating both Class B and Class C fires especially at indoor locations. Both agents are slightly toxic in low concentrations (less than 5 percent) but will cause unconsciousness in a short period of time when the concentration is above 15 percent. When the extinguishing agent is released, precautionary measures similar to those for toxic, confined spaces should be employed.

E. Employees shall not enter confined spaces after using CO_2 extinguishers until the area has been thoroughly ventilated.

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PART II

MISCELLANEOUS TOOLS AND MECHANICAL EQUIPMENT

SECTION 10

10-1 GENERAL QUALIFICATIONS OF OPERATORS

A. Trenching machines, back-hoe boring machines, paving breakers, concrete saws, gas detectors and other mechanical equipment shall be operated only by qualified employees authorized to operate such equipment.

B. Before starting the machine the operator shall make sure that everyone is in the clear and during operations he must remain alert to all persons in the area.

10-2 COMPRESSED AIR TOOLS

A. Compressed air tools, while under pressure shall not be left unattended.

B. All connections to air tools shall be made secure before turning on air pressure.

C. Air at the tool shall not be turned on until the tool is properly controlled.

D. All pressurized air hoses must have safety clamps.

10-3 CLEARANCES FROM MACHINERY

A. Other employees working near excavation equipment must be no closer than 15 feet to the excavation equipment while it is in operation.

B. Employees shall not try to climb on, jump off, fuel, lubricate or adjust equipment while in operation. Back hoe operators must be particularly careful of overhead wires permitting no approach closer than 10 ft. to such wires.

C. Mechanical equipment must be attended at all times while the equipment is running.

D. An employee shall not clean the trench bucket of rock, wood, sticks, etc. while the machine is in operation.

E. When a front end loader is being loaded by hand the machine operator shall keep his hands and feet free from all controls.

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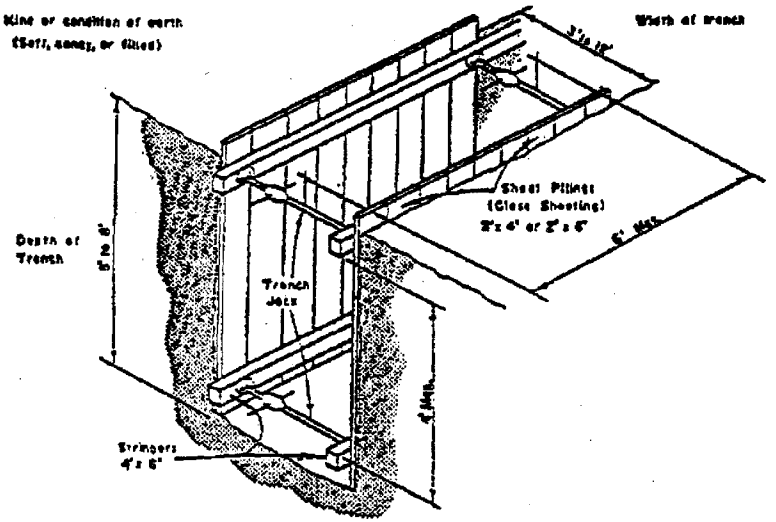
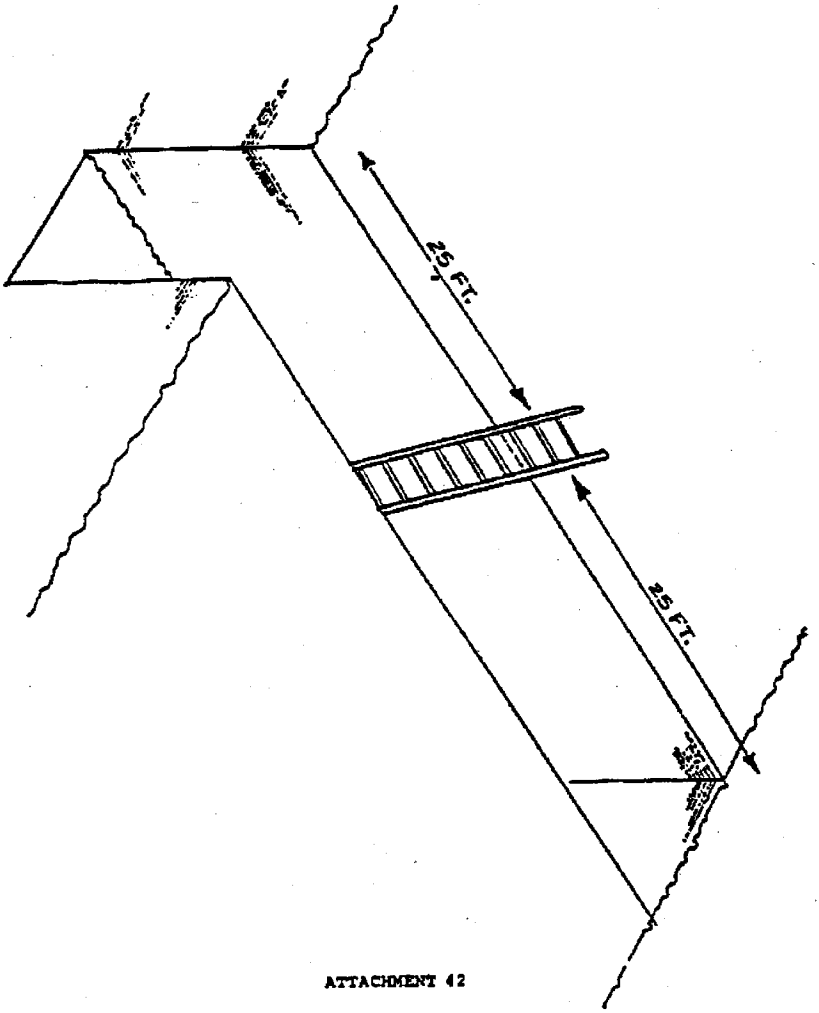
TRENCH SHORING-MINIMUM REQUIREMENTS



ATTACHMENT 41



ATTACHMENT 42

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10-4 STREET PROTECTION

All equipment left on the streets at night shall be adequately barricaded and protected with flashing warning lights.

10-5 LOCATING UNDERGROUND FACILITIES

All underground cables, pipelines, etc., shall be located, staked or marked before undertaking machine excavation. When digging near such facilities care shall be used to avoid damaging them.

10-6 HANDLING MATERIALS AND EQUIPMENT

A. Employees shall not ride on top of a load of pipe.

B. Load binders shall be used at both front and rear to secure pipe loads.

C. When loading various sizes of pipe the larger pipe sizes shall be loaded first.

D. When lifting or lowering heavy pipe, employees shall always stand on the opposite side of the pipe from the direction that the pipe is moving.

E. Pipe shall be placed in a safe location and blocked to prevent rolling.

F. If the pipe creates a hazard it shall be protected at night by flashing lights with barricades.

10-7 EXCAVATIONS AND TRENCHING

A. Before Trenching or Excavations, inspect the area job site including the soil condition. Evaluate how close the source of vibrations are to the trenching area. Notify the Utility Companies to determine the exact location of all lines and arrange for shut down or relocation of facilities if necessary. Contact the Safety Unit for help in designing and prescribing appropriate physical safeguards when working in unusual construction sites. If a tree is found to be either partially or fully blocking necessary excavation, the Parkway and Park Commission must be notified immediately at 286-2123 (weekdays) or 286-2100 (after-hours and weekends).

B. Operators shall be aware of workmen and bystanders, and see that they are at a safe distance from the equipment while it is in operation.

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C. An employee shall not attempt to remove or clean excess surface material from the bucket while the trenching machine is in operation.

D. All boulders and other surface encumbrances located so as to create a hazard to employees involved in excavation work shall be moved a safe distance away from the hole or removed completely from the area.

E. Excavations shall be inspected by a Foreman or Supervisor to evaluate changing ground conditions, particularly after rainfall or a freeze.

F. All S&WB employees shall wear personal protective gear. Various work traffic control devices such as barricades and signs shall be provided along with shoring materials.

G. All employees shall wear their orange reflective safety vests at all times.

H. No employees shall be permitted under loads handled by the backhoe operators power shovel.

I. Inspections of excavations shall be made by the Foreman or Supervisor. If evidence of possible cave-ins or slides is apparent, all work in the excavation shall cease until the necessary precautions have been taken to safe guard the employees.

J. Materials used for sheeting, sheet piling, bracing or shoring shall be in good serviceable condition and timbers shall be free from large or loose knots and of proper dimensions.

K. Water shall not be allowed to accumulate inside the trenches. Drainage pumps or other suitable means shall be used to prevent surface water from entering an excavation.

L. Trucks and materials near the trench must be kept away from the work area of the excavation to reduce the extra pressure that is placed on the walls of the trench.

M. Adequate barricade protection shall be provided on all job locations. All trenches, manholes and storm drains shall be barricaded. Upon completion of the job trenches shall be backfilled and manholes and storm drains shall be covered.

N. Sides of trenches in unstable or soft material (5 feet or more in depth) shall be shored, sheeted, braced, sloped or otherwise supported by means of sufficient strength to protect the employees working within them.

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O. Additional precautions by way of shoring and bracing shall be taken to prevent slides or cave-ins when excavations or trenches are made in locations adjacent to backfilled excavations or where excavations are subjected to vibrations from railroad or highway traffic, the operation of machinery or any other source.

P. Portable trench boxes should be used whenever fixed shoring cannot be utilized. Portable trench boxes can be constructed from new trenching timbers. The Safety Unit shall be contacted prior to implementing the use of any portable trench box.

Q. When employees are required to be in trenches 4 feet deep or more an adequate means of exit such as a ladder or steps shall be provided and located so as to require no more than 25 feet of lateral travel. (Refer to attachment 40)

R. Cross braces or trench jacks shall be placed in true horizontal position every 6 feet and be spaced vertically every 4 feet to prevent sliding, falling or kickouts.

S. Backfilling and removal of trench supports shall progress together from the bottom of the trench. Jacks or braces shall be released slowly. In unstable soil ropes shall be used to pull out the jacks or braces from above after employees have cleared the trench.

T. Any trench more than five feet deep must be shored. Trenches less than five feet deep must also be shored if hazardous ground movement may be expected.

U. In no case shall old shoring that is left in a trench or excavation from a previous job be relied upon for protection against cave-ins.

10-8 EXCAVATIONS AND HEAVY EQUIPMENT

Working Around Heavy Equipment

A. All operators shall be properly licensed by the City of New Orleans Office of Safety & Permits.

B. When an end-loader is being loaded by hand the machine shall be turned off and the machine operator shall keep his hands and feet free of all controls. Employees shall not ride in or work out of the bucket of any type of heavy equipment.

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C. Other companies having underground facilities in the area must be contacted before excavations are started.

D. All underground cables and pipelines shall be located, staked or marked. When digging near such facilities, hand dig and expose the utilities. The state law prohibits any digging around utilities with a machine.

E. If the mark is destroyed by the weather or other conditions call for a restake.

F. Trenching machines which are parked or operating on the streets shall be protected by the proper work traffic control warning devices.

G. When leaving excavating equipment unattended the blade, bucket or scoop shall be lowered to the ground and the ignition system locked.

H. All spoil removed from trenches and other excavations shall be piled 2 feet or more from the edge of the excavation preferably on the side of the traffic.

I. Pressure on air tools shall be released before the equipment is left unattended. All hose connections to air tools shall be made secure with metal safety clamps and tiewraps before turning on air pressure.

10-9 MANHOLES

A. Manholes must be adequately tested by use of a gas/oxygen detector before entry and each time before any open flame, welding or other source of ignition is taken into or lighted in a manhole.

B. Manhole covers shall be moved out of the working area around the opening to avoid a tripping hazard.

10-10 CHECKING EXCAVATIONS FOR GAS

A. Before entering trenches or excavations to use welding equipment or do any kind of hotwork tests shall be made with the gas/oxygen detector to determine if it is safe for the crew and safe for hotwork.

B. A welder must be constantly alert to the hazard of escaping gas. He shall at all times assure himself that the job he is to undertake can be done with safety to himself, employees and the public.

SECTION 11

EMERGENCY TREATMENT

INTRODUCTION

The material in this Section is intended to act as an overall guide to first aid activities. It is not designed as a self-teaching course, but merely reviews some aspects of first aid techniques. First-aid can only be administered on a voluntary or "Good Samaritan" basis by individuals with certifiable training, or by personnel who are designated "First Responders" by the Safety Unit when the official Permit-Required Confined Space Entry Program is adopted.

11-1 EMERGENCY TREATMENT

A. Poisoning: Call a doctor or Poison Control Center at once. If victim loses consciousness give no other first aid. Follow the instructions of the doctor or Poison Control Center.

B. Shock: After any injury expect shock. Shock is a condition in which vital body functions are slowed down. The symptoms are: Weakness, cold, pale clammy skin with beads of perspiration on face and palms, rapid weak pulse, chills, nausea and irregular breathing. Any or all of these symptoms may be evident.

C. First Aid involves keeping the victim warm. Cover with blankets to prevent loss of body heat and have them lie down. Keep victim's airway open. If victim vomits, turn his head to the side. If victim is conscious and able to swallow, give clean water. If victim becomes nauseated, stop liquids . Contact a doctor or call for medical assistance as soon as possible.

D. Adult One-Rescuer CPR

- Call for medical assistance.
- Place victim on his or her back.
- Gently shake the victim and speak to the victim. Look for signs of awareness.
- Open the airway by using the head tilt/chin lift maneuver and listen for breathing.
- Do not attempt to administer direct mouth-to-mouth resuscitation. CPR may only be administered by those who possess certifiable training, and then only with the use of either an AMBU Bag (manual resuscitating bag with facial mask), or a Protective Airway Mask, or other such apparatus intended for this purpose.

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- Check for pulse on side of victim's neck. (5-10 secs.)
- If the victim is unconscious, not breathing and has no pulse, locate the breastbone and place the heel of one hand on top of your other hand.
- Push down firmly onto the chest 1 1/2 to 2 inches. Perform 4 cycles of 15 compressions and 2 ventilation. Repeat this procedure until rescuers arrive.

11-2 BROKEN BONES

A. Call for medical assistance. Make no attempt to move the victim unless absolutely necessary. Attempt to immobilize the injured limb to prevent further injury. If the victim must be moved splint the injured part with any available rigid material long enough to reach above and below the break. Secure the splint above and below the break. Never attempt to set a broken bone. Wait for the arrival of medical assistance.

B. If broken bone pierces the skin, serious injury may have taken place. Make no attempt to move the injured limb. Apply a pressure dressing to control bleeding as described in the next section.

11-3 BLEEDING

A. Call for medical assistance.

B. If Bleeding is severe, apply firm steady pressure to the wound with layers of sterile gauze pads or bandages. If they are not available, use any clean cloth. Do not remove this dressing. If the pad becomes saturated with blood add more layers. Bandage the pads firmly in place. If no gauze or cloth is available, close the wound with your fingers, holding it closed.

C. Keep the victim lying down until medical assistance arrives. Elevate the bleeding part to help control bleeding.

D. Never use a tourniquet to control bleeding unless you are dealing with an amputated, crushed or mangled limb. Use a tourniquet only as a last resort effort to save a victim's life. Applying a tourniquet improperly may result in loss of limb.

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11-4 BURNS

A. Cool water may be used directly on a small burn that is not open and not very deep. Immediately immerse in cool water. Do not add anything to the water.

Cool until pain is reduced and transport to medical facility. Bandage with sterile pad or clean cloth. If pain persists, apply mild burn ointment.

B. Severe Burns: Call for medical assistance. Take immediate steps to relieve pain, prevent infection, and treat victim for shock as described below. If burn was caused by fire, boiling liquid or hot metal do not strip away clothing over the affected area. Keep air away from burn by covering area with the cleanest cloth available. Apply no grease or ointments. Keep victim lying down.

C. Chemical Burns: Flush burn with large amounts of water. Cover burn with the cleanest cloth available, and have victim lie down until medical assistance arrives. For chemical burns of the eye flush with great amounts of water immediately, cover the eye and rush the victim to the hospital.

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PART II

SECTION 12

PORTABLE LADDERS AND SCAFFOLDS

12-1 Portable Ladders

A. An employee shall not use a ladder that has broken, loose or cracked rungs, side rails or braces. Defective ladders shall be tagged and removed from service.

B. When ascending or descending ladders, employees shall face the ladder and grip the sides or rungs with both hands.

C. Boxes, crates, chairs, etc. shall not be used in place of a ladder.

D. Only one employee shall work from a ladder at one time. If the work requires two employees, a second ladder shall be used.

E. If a ladder is to be placed where the opening of a door may displace it, the door shall be locked or otherwise guarded.

F. Metal ladders or ladders with metal side rails shall not be used near energized (electrically charged) equipment or lines.

G. Only approved ladders owned by the S&WB shall be used by employees.

H. When transferring from a ladder to an elevated position, the ladder side rails shall extend at least 36 inches above the landing.

I. All straight and extension ladders shall not be used unless they are equipped with non-skid safety feet or other means to prevent slipping.

J. Ladders shall be placed so the distance from the foot of the ladder to the base of the wall or other support is approximately one fourth the working length of the ladder.

K. NO S&WB EMPLOYEE shall stand on either of the top two rungs of a ladder.

L. Ladders shall not be spliced together.

M. Ladders shall never be placed against an unstable support.

N. Ladders shall be placed on a substantial base.

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O. When working on a ladder at a height of greater than 6 feet, workers will use a safety belt attached to a fixed object or secured to a lifeline with loops or eyes for the attaching of safety belts.

P. Portable ladders in use shall be tied, blocked or otherwise secured to prevent their being displaced.

Q. Employees shall not use the top step of a step ladder under any circumstance.

R. While an employee is working on a step ladder (except a safety platform ladder) at a point 10 feet or more above the ground or floor, the ladder shall be tied, secured or held in place to prevent it from being displaced.

S. Step ladder legs shall be fully spread and locked open when the ladder is in use.

T. Do not use metal ladders in areas containing electrical circuits. Use a wooden or fiberglass ladder in this area.

12-2 SCAFFOLDS

A. All scaffolds shall be of sufficient strength and rigidity to safely support the weight of men and material to which they may be subjected.

B. Employees shall not use a scaffold from 4 to 10 feet in height, and less than 45 inches wide unless proper guard rails are present to provide adequate protection.

C. Employees shall not use a scaffold over 10 feet high unless there is a standard guardrail, with midrail and toeboard, to provide adequate protection.

D. Scaffold planks shall extend over their end supports by not less than 6 inches (unless cleated) nor more than 12 inches.

E. Scaffolds shall not be moved without first removing all loose tools, materials and equipment resting on the scaffold deck.

F. All scaffolds shall rest on suitable footing and shall stand level. Movable scaffolds shall have the casters or wheels locked to prevent movement.

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12-3 GENERAL SAFETY REQUIREMENTS FOR ABRASIVE BLASTING AND PAINTING OPERATIONS

A. General Safety Requirements
Minimum safety equipment requirements for all personnel are as follows:

1. Approved hard hat.
2. Approved steel toed shoes.
3. Approved safety glasses and/or goggles.

B. Any individual working in an area designated as a "Hard Hat Area" or working in the field will be required to wear a hard hat at all times. In addition, anyone operating a forklift will be required to wear hard hats.

C. Sandblasters will be required to wear proper clothing and hearing protection while involved in actual blasting procedures. This includes long sleeves, gloves, hearing protection, and approved blast hood with inner and outer shields. Safety belts with Lanyard will be required at heights above six foot when not on a permanent working surface.

D. Painters will be required to follow the above requirements in addition to all respiratory regulations as outlined in the following section.

E. All sandblasters will, while blasting, have an approved air fed blasthood with the proper fitting face shields and inner shield. All lines will have an in-line moisture filter. Long sleeves, ear protection, and gloves are mandatory. All helpers or other personnel working in the immediate area will be required to wear an approved dust mask.

F. All painters, while engaged in spray painting, will be required to wear the proper respiratory protection. Air fed masks or painthoods will be required while spray painting in enclosed or confined spaces.

G. An approved air purifying mask is required while spray painting outside and in the case of low winds and low concentrations.

H. At no time will anyone be allowed to spray paint without proper respiratory protection.

I. All personnel are to be made aware of the availability of MSDS material pertaining to the paints and solvents being used. Eye protection is to be worn while mixing and cleaning with special effort to prevent solvents from coming in contact with the skin.

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J. All safety equipment will be worn in accordance with the S&WB safety manual.

K. No painting is to be done in the area of blasting. This includes the opposite side of a wall. Blasting causes sparks. All hose connections are to be wired or clipped together. Deadman controls are required on all blast nozzles. All blasting lines are to be inspected by the Supervisor in charge of the operation to insure, and assure, that all safety appliances are in place.

L. No painting is to be done in a confined area until it has been inspected for explosive hazards. Any lighting used must be approved, explosion proof lights.

The "No Smoking" policy will be strictly adhered to. If reusable respirators are used they will be disinfected at the end of each shift.

M. Anyone working over a height of 6 feet will be required to wear a safety belt. No rigging is to be attached to hand rails. It needs to be attached to a portion of the building capable of holding five times the combined weight of an average worker.

N. Abrasive Blasting - This section is established to aid in assuring that S&WB employees engaged in abrasive blasting will not suffer impaired health or injury from these operations.

O. All abrasive blasting operations produce noise levels well into the hazardous range. Ear plugs can be worn effectively under the protective cloth hood to reduce that noise level.

P. All personnel engaged in or located in the immediate vicinity of abrasive blasting operations (enclosed or otherwise) shall wear approved airline abrasive blasting respirators. Only respirators which utilize continuous flow or pressure demand regulators shall be used. Approved particulate type respirators commonly referred to as "dust respirators" may be used for short, intermittent or occasional exposures such as clean up, dumping of dust collectors or filters, or unloading shipments of sand. Sandblaster helpers shall wear a particulate filter if they are remote and upwind of the blasting operations.

Q. All S&WB employees engaged in sand blasting operations whether as an operator or helper shall wear hearing protective devices. Any other person in the vicinity of the operation must wear hearing protection. Either a plug or muff can be used.

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12-4 SAFETY IN TREE TRIMMING AND WOOD CUTTING OPERATIONS

A. Any personnel trimming trees should wear gloves and protective type goggles. He should always wear gloves when working on the blades, chain or engine of a power saw.

B. Power saws should be operated only by authorized personnel who have been trained and instructed in the use of the equipment.

C. Stand well clear of the saw chain when engine is being started.

D. Never run the engine without transmission locked in place.

E. Do not run the chain or do not idle the engine needlessly.

F. Keep clutch in good repair, as this affects the saws safe operation.

G. All signals to be used should be well understood by the workmen involved, before starting cutting operations.

H. All chain saws should be stored properly to insure that employees are not injured when moving about vehicle or storage area.

I. Be sure the bumper on the front of the gear case is against the tree or wood before starting a cut. Otherwise the pulling and starting motion will jerk the engine forward exposing the operator to possible injury.

J. Operate the engine with throttle fully open so that the automatic clutch will not slip.

K. Stop the engine before carrying from one location to another.

L. Exercise good judgment at all times, making allowances for any hazards involving energized wires, ice, dampness, thorns, poison ivy, etc.

M. Tree trimmers should wear shoes with rubber soles, not steel toe boots.

N. All vehicles and equipment parked in the work area involves the safety of employees and the public. Safeguards such as barricades and signs, lights, flags, traffic cones, high level warning devices, barricade safety flags shall be used on approaches to these work areas. All S&WB employees shall wear their hard hat, safety vest and protective eyewear.

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O. Tools should never be thrown or dropped from a tree.

P. The use of wet equipment should be avoided whenever possible.

Q. Hand axes, draw knives and chisels should not be used in trees.

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PART II

SECTION 13

WATER AND BOATING SAFETY

13 - 1 PERSONAL FLOTATION DEVICES (PFD'S)

A. Only approved PFDs or Life Vest shall be worn

B. PFDs shall be worn:

(1) When boarding or off-loading any boat including barge.

(2) When working on overwater areas that do not provide handrail protection on all sides.

C. PFDs shall be securely fastened, snugly fitted and in good condition, and shall bear a tag indicating that they are Coast Guard approved.

D. Supervisors shall be responsible for having personnel under their supervision obey rules and regulations governing the wearing of PFDs.

E. Contractors shall supply Life Vests for their personnel.

13 - 2 BOAT SAFETY PROCEDURES

A. The supervisor of the boat is in charge and employees are expected to obey his direction at all times.

B. The supervisor in charge of the boat can deny permission to board the craft to anyone who appears to be intoxicated or under the influence of drugs.

C. All employees riding inside the boat shall remain seated while the boat is underway.

D. Employees shall wear Coast Guard approved Life Vests (PFDs) when working or exposed over water.

E. Employees shall wear Coast Guard approved Life Vests on the boat at all times.

F. Approved PFDs should be stored in a well marked and accessible area.

G. Personnel shall be familiar with the location of Life Vest (PFDs).

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H. If a person falls into the water, inform the supervisor by shouting "Man Overboard". Assist in the rescue as directed by the supervisor.

I. The operator of any boat which is to carry S&WB personnel shall be knowledgeable and competent in the operation of the boat and shall at all times follow all State, Local, and Federal regulations governing the operation of a vessel on inland waterways.

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PART II

SECTION 14

RAILROAD SAFETY

14-1 RAILROAD PLANT SAFETY

A. Stop and look both ways before crossing any track. Where tracks are at a dead end a standard bumping post should be installed.

B. Expect trains or cars to move at anytime, on any track, in either direction. Set brakes tightly all the time and use car chocks.

C. Step over rails when crossing tracks. Never step, walk or sit on any rail.

D. Never go between moving cars (or cars that may move) for the purpose of adjusting couplers or for any other purpose.

E. Hand signals must be given from a place where they may be plainly seen and in such a way that they cannot be misunderstood. If there is doubt as to the meaning of a hand signal, or for who it is intended, it must be regarded as a stop signal.

F. An employee must not mount, ride or dismount from the sill step of moving equipment unless the equipment has a grab iron permitting him to stand upright on the step. Mount or dismount engines or cars only when facing the equipment and maintaining a secure handhold.

G. Cars spotted for loading or unloading shall be protected against being moved by switching crews. Standard railroad blue flags for daytime and blue lights for night use furnish warnings to train crews. Place these warning signs in the center of the track at least 50 feet from the cars and set a derail to protect workers on or in the car. The blue signals should be removed only by the employees engaged in the loading or unloading operations and only when they are ready to release the cars.

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H. Unloading operations must be performed only by reliable employees properly instructed in unloading hazardous materials. Brakes must be set and wheels blocked on all cars being unloaded.

I. Caution signs must be so placed on the track or cars to give necessary warning to persons approaching the cars from the open end of a siding and must be left up until after the cars are unloaded and disconnected from the discharge connection.

J. Removal of placards and car certifications after unloading: When loading requiring placards or car certificates is removed from a rail car other than a tank car each placard and car certificate must be removed by the person unloading the car. For a tank car which contained a hazardous material, the person responsible for removing the lading must assure that the tank car is properly placarded for any residue which remains in the tank car.

K. As soon as a tank car is completely unloaded all valves must be made tight. The unloading connections must be removed and all other closures made tight.

L. All tools used in connection with unloading must be kept free of oil, dirt and grit. Tank cars must not be allowed to stand with unloading connections attached after unloading is completed. Throughout the entire period of unloading, and while car is connected to unloading device, the car must be attended by the unloader. If necessary to discontinue unloading a tank car for any reason all unloading connections must be disconnected, fill valves must first be tightly closed and the closures of all other openings securely applied.

M. Each loaded placarded tank car must be inspected by the person in charge before acceptance to make sure that it is not leaking. An empty tank car which previously contained a hazardous material and which is tendered for movement or received in interchange must have all manhole covers, outlet valve reducers, outlet valve caps, outlet valve cap plugs, endplugs and plugs or caps or other openings securely in their proper places.

N. Employees must not walk or stand between the rails of a track unless necessary in performance of their duties.

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O. Employees working adjacent to a track upon which movements are being made must maintain a vigilant lookout for approaching movements. Warning devices must be sounded continuously until the leading end of the car movement has passed.

P. If a tank car or other fuel-gas equipped vehicle is involved in an accident, close the main valve at the tank before wreck clearing starts. If there is any evidence of leakage protect against fire or explosion and report it promptly when discovered.

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ISSUED TO_____

DATE_____

SEWERAGE and WATER BOARD

of

NEW ORLEANS

SPECIFICATIONS

FOR

FURNISHING

TWENTY (20) SUPERVISORY CONTROL AND DATA ACQUISITION PANELS FOR REMOTE MONITORING AND CONTROL OF VARIOUS SEWAGE PUMPING STATIONS

REQ. NO. 28-93-EE

Proposals To Be Opened

11:00 O'Clock A.M. Local Time of Thursday, October 14, 1993

SEWERAGE AND WATER BOARD OF NEW ORLEANS

SPECIFICATIONS FOR FURNISHING

TWENTY (20) SUPERVISORY CONTROL AND DATA
ACQUISITION PANELS FOR REMOTE MONITORING AND
CONTROL OF VARIOUS SEWAGE PUMPING STATIONS

JOB NO. 27-183-695-0368

REQ. NO. 28-93-EE

(1) Sealed proposals will be received by the Sewerage and Water Board of New Orleans, at the office of its Purchasing Agent, Room 133, 625 St. Joseph Street, New Orleans, Louisiana 70165, up to 11:00 o'clock A.M., Local Time of Thursday, October 14, 1993 and publicly opened immediately thereafter for:

TWENTY (20) SUPERVISORY CONTROL AND DATA
ACQUISITION PANELS FOR REMOTE MONITORING AND
CONTROL OF VARIOUS SEWAGE PUMPING STATIONS

in accordance with the following Specifications and as listed in the Form of Proposal. Any proposal received after that time will be returned "unopened".

INFORMATION FOR BIDDERS

(2) All proposals must be made upon the form embodied in these Specifications and this form must not be detached from the Specifications.

NOTE: Bids on forms other than those provided will not be considered.

(3) Permission will not be given for the withdrawal of, alteration of, or addition to any proposal after the final time set for the receipt of sealed proposals.

(4) Proposals will not be received from any person or party in default upon any Contract with the Sewerage and Water Board; and any proposal which does not fully comply with all of the provisions of the "Information for Bidders" and "Specifications" will be considered informal and may be rejected.

(5) Payment will be made within 30 days after delivery and acceptance of the equipment called for herein.

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(6) Each bidder shall state in the Form of Proposal, in the space provided for that purpose, what cash discount, if any, will be allowed for payment within thirty (30) days after delivery and acceptance of the equipment called for herein. In proposals containing multi-item Bids, the cash discount shall be the same for all items or no discount will be considered.

(7) Delivery shall be made to Main Water Purification Plant, Electric Shop, 8801 Spruce Street, New Orleans, Louisiana and must be completed in the time stipulated by the Bidder in the space provided for that purpose headed- "Time of Delivery". Twenty-four (24) hour notice must be given prior to delivery, by telephoning Mr. Ronald H. Mains (865-0500). Delivery must be made on FLAT BED TRUCKS only, prior to noon on a normal working day.

Deliveries attempted on anything other than Flat Bed Trucks or without proper advance notice WILL be refused.

(8) The Lump Sum Price Bid for the equipment shall be F.O.B., Main Water Purification Plant, 8801 Spruce Street, New Orleans, Louisiana.

Risk of loss due to damage of any kind incurred during delivery shall be borne by the manufacturer until receipt and acceptance of the equipment by the Sewerage and Water Board.

(9) Firm proposals are desired and no proposal containing an escalator clause will be considered unless the limit of escalation is clearly defined. The Board reserves the right to add the maximum price increase to proposals providing for escalation, for comparison of proposals only.

(10) The Lump Sum prices bid in the proposal must be written in full in words and also in figures; if there is a difference between the words and the figures in any price bid, the price written in words shall be considered to be the true bid.

(11) Erasures or other changes in the Bid Price must be explained or noted over the Signature of the Bidder.

NOTE: ONLY BIDS WRITTEN IN INK OR TYPEWRITTEN AND PROPERLY SIGNED BY A MEMBER OF THE FIRM OR AUTHORIZED REPRESENTATIVE, WILL BE ACCEPTED. PENCIL FIGURES OR PENCIL SIGNATURES WILL DISQUALIFY BIDDER.

(12) If two or more proposals are received equal in amount and lower than any other proposal, the Board reserves the right to evaluate these proposals and to decide which proposal will be accepted. Preference will be given to home Contractors, all conditions being equal.

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(13) The Contract Order will be awarded in full to the Bidder offering the lowest total lump sum proposal meeting these Specifications, and for furnishing the product of one (1) manufacturer. All equipment furnished shall be made in the U.S.A., foreign equipment will not be accepted.

(14) The bidders proposal to the Sewerage and Water Board shall be on the form provided for this purpose and when accepted by the Sewerage and Water Board, the same shall constitute the Contract.

Acceptance or rejection of Proposal cannot be granted prior to a meeting of the Board scheduled for the second Wednesday of the Calendar month immediately following receipt of Bids. Bidder's proposal shall remain in effect for this period up to maximum of 60 Calendar Days. Proposals which remain in effect for a lesser time shall be considered informal and may be rejected.

(15) Act 1029 of the 1991 Regular Legislative Session, together with R.S. 47:305.20 and R. S. 47:301 (8) (c) exempts the Sewerage and Water Board from all City and State sales and use taxes.

(16) Staff recommended awards based on bid results will be posted on a Bulletin Board located outside the office of the Sewerage and Water Board Purchasing Department within 72 hours after the Bid opening. Bidders may also telephone the Purchasing Department to learn the bid results. If a Contractor or his representative feels that there may be an incorrect award, he must notify the Purchasing Agent, or Assistant Purchasing Agent, in writing, of his objection within 72 hours after the bid award recommendations are posted.

(17) The Sewerage and Water Board reserves the right to reject all proposals and may exercise that right if so doing should appear to be to the best interest of the Board. The Board may waive informalities in the lowest proposal, if this should be to the best interest of the Board.

INSURANCE

(18) The vendor, as well as any sub-contractor, including any sub-contractor performing shipping and delivery as part of this transaction, shall maintain in good standing all appropriate insurance, especially general liability and workers' compensation, in endorsements and limits sufficient to protect himself, the Sewerage and Water Board, and the City of New Orleans from any and all claims arising out of his fulfillment of this transaction. In addition, the vendor shall maintain commercial auto liability insurance, or if sub-contracting for shipping and delivery, the vendor must ensure that the shipping and delivery sub-contractor maintains such auto insurance, and

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this insurance shall also be written in endorsements and limits sufficient to protect himself, the Sewerage and Water Board, and the City of New Orleans from any and all claims arising from the shipping and delivery involved in this transaction.

If this transaction involves the delivery of hazardous materials, a vendor shall ensure that he or any deliverer is at all times in compliance with CFR49, Parts 100-177. Vendor shall also ensure that manufacturer maintains product liability insurance for any commodity involved in this transaction which, if defective, could cause bodily injury and property damage. The vendor, any and all sub-contractors, and all insurers shall agree to waive all rights of subrogation in favor of the Sewerage and Water Board of New Orleans as a condition of the required insurance.

INDEMNIFICATION

(19) Vendor shall indemnify, hold forever harmless and defend the Board, its officers, agents, employees, representatives and insurers from any and all claims, demands, suits, money judgments, costs and expenses arising out of any accident, injury or damage to loss of property or life or personal injury during the performance of this transaction, growing out of resulting from or by reason of any act or omission by the vendor, its agents or employees, to the extent caused or contributed by the vendor, his agents or employees.

Vendor shall further indemnify and hold harmless the Board from any and all claims and liens for labor, services or materials furnished to the vendor in connection with this transaction.

WORKERS' COMPENSATION

(20) The vendor expressly agrees and acknowledges that he is an "independent contractor" as defined in LSA-R.S. 22:1021 (6). That its employees shall not be considered employees of the Board for workers' compensation coverage, and that the board shall not be liable to the vendor or its employees for any workers' compensation benefits or coverage.

EXCLUSION OF UNEMPLOYMENT COMPENSATION COVERAGE

Vendor herein expressly agrees and acknowledges that it is an "independent contractor" as defined in LSA-R.S. 22:1472 (E), that neither the vendor nor any one employed by the vendor shall be considered an employee of the Board for the purpose of unemployment compensation coverage.

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ACT 318 OF 1958

(21) Under terms of Act 318 of 1958, of the Regular Session of the Legislature of the State of Louisiana, all things being equal, preference must be given to either (1) firms doing business in the State of Louisiana or (2) to products produced (or) grown (or) manufactured in the State.

Before any bill for supplies shall be paid to any non-resident firm, a statement in writing shall be submitted by the seller to the effect that his firm has paid all taxes duly assessed by the State of Louisiana and its political subdivisions including franchise taxes, privilege taxes, sales taxes and all other taxes for which it is liable to the State and its political subdivisions.

TERMS AND CONDITIONS OF SALE

(22) The Sewerage and Water Board can honor only terms of sale specified herein. Proposals submitted which are based on Bidder's "Standard Terms and Conditions of Sale", or any terms and conditions other than those expressed herein, shall be considered informal and may be rejected.

SPECIFICATIONS

(23) GENERAL

a. The intent of these specifications and the accompanying drawings is to define the minimum requirements to be met by the Manufacturer in fabrication, furnishing and delivery of a total of Twenty (20) Supervisory Control and Data Acquisition (SCADA) Panels, including all Programmable Controller Devices, Data Communications Equipment, temperature controls, terminal blocks, etc. required for full, complete and proper operation. The SCADA Panels, when complete, will be capable of becoming a remote slave on a master-slave remote network for the monitoring and control of various Sewage Pumping Stations. Additionally, each Panel must have the capacity to operate as a stand alone Programmable Logic Controller at the site which it is located should the need arise.

b. The major equipment to be furnished shall be Allen-Bradley SLC 500 Small Family Programmable Controller Devices or Approved Equal, as specified herein.

c. Installation of the Panels in the Sewage Pumping Stations shall be performed by others.

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(24) MANUFACTURER'S QUALIFICATIONS

a. Manufacturer shall be an established local firm with a minimum of 10 years of experience as an Original Equipment Manufacturer of Custom Electronic Control Panels.

b. Manufacturer shall have Registered Professional Field Service Engineers on Staff to provide troubleshooting, diagnostics, and warranty revision or repair services.

c. Manufacturer shall submit proof of the above qualification requirements with his proposal including a list of comparable projects within the last 10 years.

d. Bids received without documentation of Manufacturer's Qualifications will be considered informal and are subject to rejection.

(25) DRAWINGS

a. The drawings pertaining to the work as described herein are intended to depict the actual details of panel construction, device placement and required point to point wiring.

b. The Manufacturer shall not deviate from methods of wiring required on the drawings. Report any discrepancies to the Board Engineer for clarification prior to performance.

c. Applicable Drawings are as follows:

#4307 P1 & P2: New SCADA Panels for Monitoring and Control of Sewage Pumping Stations

(26) SUBSTITUTES

a. All equipment, devices, terminal blocks, etc. shall be furnished as shown on the drawings and as specified herein.

b. Manufacturer shall submit full and complete catalog data on any components he may wish to offer as substitute to that specified to the Board Engineer for approval. The decision of the Board Engineer shall be final and binding with regard to the equality and serviceability of the proposed substitute.

c. No substitution will be allowed without the expressed written approval of the Board Engineer.

(27) SYSTEM OPERATION

Note: This section (27) is included for informational purposes only to provide the bidders with a basic overview of the system. All Master Control Unit Devices, System Software, etc. are existing and are not part of this contract.

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a. The complete SCADA System shall be capable of operating on a Master Control Unit consisting of an Allen-Bradley PLC 5/11 Programmable Controller with a Personal Computer as the operator interface.

b. The system shall be capable of communicating with up to 100 remote SCADA Panels. Connection between the Master Control Unit and Remote SCADA Panels shall be by means of DF1 polling master-slave half duplex serial communications protocol over a 1200 baud radio modem link through an 800 MHZ Trunked Mobile Radio Channel. Capability shall be provided for expansion up to 200 Remote Connected SCADA Panels.

c. The system shall provide automatic system alarms based on detected faults in the master control unit, individual remote SCADA Panels and/or their connected devices, or the communications network.

d. The Master Control Unit shall have the capability of being programmed and modified on-line. It shall not be necessary to shut down any part of the system during these programming operations. On-Line programming and modifications to the data tables of the remote systems shall be possible. Programming and modifications at a remote SCADA Panel which require the panel to be brought off-line must only cause a shut down at the location in question.

e. The system shall have the capacity to generate alarms, solicit operator intervention, initialize control functions, produce reports for management evaluation, etc. based on data gathered from the Remote SCADA Panels. A summary of the proposed monitoring functions are shown below.

1. Data Element: Suction Level

   Source Signal: 4-20ma from Pressure Xducer installed in bubbler cabinet.

   Method of Reporting:

   a) Instantaneous level shown on station graphic.

   b) Graphically trended over 24 hr. period, displayed in daily report with points taken on 15 min. intervals.

2. Data Element: High Wet Well Alarm

   Source Signal: 4-20ma from Item #1 - Suction level Xducer.

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Method of Reporting:

a) Alarm and level shown on station graphic.

b) Concurrent printout of alarm condition noting station and description of alarm.

c) Listing of alarm and time on station daily printout.

3. Data Element: Low Wet Well Alarm

Source Signal: 4-20 ma from Item #1 - Suction Level Xducer.

Method of Reporting:

a) Alarm and level shown on station graphic.

b) Concurrent printout of alarm condition and station name.

c) Listing of alarm and time on station daily printout.

4. Data Element: Alarm-Water Accumulation, Pump Room

Source Signal: Float switch N.O. contact. installed where

Method of Reporting:

a) Alarm shown on station graphic.

b) Concurrent alarm printout.

c) Listing of alarm and time on station daily printout.

5. Data Element: Unauthorized Entry

Source Signal: Limit switch on Door/Hatch. (Defeated by proper entry through Card Reader).

Method of Reporting:

a) Alarm shown on station graphic.

b) Concurrent alarm printout.

c) Listing of alarm and time on station daily printout.

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6. Data Element: Hand-Off-Auto Selection

   Source Signal: 120 VAC input from Pump Control Switch spare contacts.

   Method of Reporting:

   a) Displayed on station graphic.

   b) Alarm in "Hand" of "Off" positions on graphic.

   c) Concurrent printout of alarm.

   d) Listing Alarm/Time on daily report.

7. Data Element: Pump Running

   Source Signal: N.O. contact on starter.

   Method of Reporting:

   a) Shown on station graphic.

   b) Graphically trended over 24 hours.

   c) Running time stored for pump greasing, packing. Operator resettable.

8. Data Element: Discharge Pressure

   Source Signal: 4-20ma from Discharge Pressure XMTR.

   Method of Reporting:

   a) Shown on station graphic.

   b) Graphically trended over 24 hours.

   c) Alarm on High Pressure.

   d) Concurrent printout of alarm.

   e) Listing Alarm/Time on daily report.

9. Data Element: Power Loss - Primary

   Source Signal: 120 VAC input.

   Method of Reporting:

   a) Alarm shown on station graphic.

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b) Concurrent printout.

c) Listing Alarm/Time on daily report.

10. Data Element: Power Loss - Secondary

Source Signal: 120 VAC contact.

Method of Reporting:

a) Alarm on graphic.

b) Concurrent printout

c) Listing Alarm/Time on daily report.

11. Data Element: Security

Source Signal: Card Reader, Scanner Decoder.

Method of Reporting:

a) Indicate Employee number on graphic.

b) Concurrent printing of station entry with Employee number.

c) List entry, time in and time out on station daily report. Time out taken from door closure.

d) Provide three (3) outputs:

1) Green Light = Entry Allowed.

2) Red Light = Entry Denied.

(25) EQUIPMENT ENCLOSURE

a. Each Remote SCADA Panel shall be built in an equipment enclosure designed to house electronic equipment and provide the requisite degree of protection from the environment.

b. The panel enclosure shall be a Single Door Stainless Steel NEMA 4X Enclosure, Hoffman #A-48H3612SSLP with Aluminum Device Mounting Panel #A-48P36AL.

c. The enclosure shall have a 14 gauge type 304 stainless steel body with integral trough offset. Doors shall be constructed from 14 gauge type 304 stainless steel with all welds ground smooth. Steel body stiffeners shall be applied as necessary to form a rigidly constructed panel. All exterior components shall be made of type 304 stainless steel. Door shall be removable, interchangeable and reversible with type 304

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stainless steel hinges. Body and door ground studs shall be provided for positive ground.

d. The enclosure furnished shall be UL Listed and a NEMA 4X rated Panel and shall adhere to the following applicable standards:

NEMA Type 3, Type 4, Type 4X, Type 12 and Type 13
UL 508 Type 4 and 4X
JIC Standard EGP-1-1967
E.I.A. RS-310-C
IEC 529, IP66

e. Each panel shall also be fitted with forced air ventilation and space heating as specified hereinafter.

(29) PROGRAMMABLE CONTROLLER COMPONENTS

a. Each Remote SCADA Panel shall be equipped with a programmable controller capable of providing the required local monitoring, control and interfacing functions necessary for operation. The controller shall be an Allen-Bradley SLC 500 Small Programmable Controller consisting of one each the items specified below.

1. Modular hardware rack shall be Allen-Bradley 1746-A10 modular, 10 Slot SLC 500 Controller Rack.

2. The Rack Power Supply shall be Allen-Bradley 1746-P2 Modular Hardware Style Power Supply. The supply's line voltage shall be 120/240 VAC, jumper selectable. The internal current capacity shall be 5 Amps at 5 VDC and 0.97 Amps at 24 VDC. Current capacity of 0.2 Amps at 24 VDC shall be available for user applications.

3. The Central Processing Unit shall be Allen-Bradley 1747-L532 SLC 5/03 Central Processing Unit. The CPU shall have a user memory capacity of 12k instructions and be suitable for on-line programming. Battery backup on the CPU shall be standard. The CPU shall be able to operate in an industrial environment up to 140 degrees Fahrenheit. The CPU may only be placed in the first slot of the modular rack.

4. The AC/DC Relay Output Module shall be an Allen-Bradley 1746-OX8 Relay Output Module. The module shall have 8 individually isolated relay contacts, each with the capacity to control a 5 Ampere resistive load.

5. The AC Input Module shall be an Allen-Bradley 1746-IA16 100/120 VAC Input Module. The AC Input Module shall have the capacity for 16 AC inputs (8 per common). These inputs are non-current sourcing.

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6. The BASIC Communications Module shall be Allen-Bradley 1746-BAS BASIC Module. The module shall have two configurable serial ports, of which one has the capacity to be configured for modem operations. The module shall be programmable in BASIC Computer Language using an ASCII terminal. Additionally, a DH-485 port shall be available to allow the module to be a drop on a DH-485 Network.

7. The Input Analog Module shall be Allen-Bradley 1746-NI4 Analog Input Module. The module shall contain four analog input channels that are individually user selectable for voltage or current.

(30) RADIO FSK MODEM

a. A Radio Frequency Shift Keyed Modem shall be used in each Remote SCADA Panel to allow for communications with the Master Control Location through the 800 MHZ Radio Network.

b. The modems shall be the Miille Applied Research Company, Inc. (MARC) Model 166-101 Frequency Shift Keyed (FSK) Modem

c. The modem shall be standard Allen-Bradley SLC 500 Module size with A-B SLC style mounting panel which will occupy one slot on an SLC 500 Modular Card Rack, drawing a nominal 300 mA from the backplane.

d. Port and line status indicators shall be visible from the front of the modem when installed in the rack to provide troubleshooting and maintenance information.

e. The modem shall conform to CCITT V.22, Bell 212, V.21, and Bell 103 standards operating at 1200 baud synchronous over radio links.

f. The modem shall have a 9 pin male "D" connector for the serial synchronous data link and a 6 pin RJ11 telephone line jack for modem connections.

(31) MOBILE RADIOS, G.E. MARK VE TMX8825

a. Furnish for each Remote SCADA Panel a General Electric Mark VE TMX8825 Mobile Radios with standard product features to provide:

1. Dash/Remote Mount.

2. 36 Areas/9 Group Capability.

3. Special Call.

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4. Multi Area/Group Scan.

5. PC Programmable.

6. Telephone Interconnect.

7. Multimode Operation.

b. Detailed product specifications are as follows:

1. General:

Operating Voltage: 13.8 Volts ±20%

Battery Drain:
Receiver 13.8 Vdc:
Off 0.01 Ampere (Maximum)
Squelched 0.65 Ampere (Maximum)
Unsquelched 1.00 Ampere (Max. at 3 Watts Audio)

TR-Transmitter (13.6 Vdc): 9.0 Ampere
(Max. at 25 Watts RF)

Channel Spacing: 25 KHZ

Frequency Stability: ±2.5 PPM (±0.00025%)

Temperature Range: -22 Degrees F to +140 Degrees F

Dimensions:

Height: 2.15 inches Body, 2.46 inches Nose
Width: 7.15 inches
Depth: 8.5 inches

Weight: 4.5 Pounds

Antenna Impedance: 50 ohms

2. Transmitter:

Output Power: 12.5-25 Watts, adjustable
Audio Sensitivity: 20-80 millivolts RMS
Spurious and Harmonics: -57dB below carrier
Audio Distortion: 5% Maximum
Modulation Limiting: ±5 KHZ (Maximum)
FM Hum and Noise: -50dB

Frequency Range: 806.0125-824.9875 MHZ
851.0125-869.9875 MHZ

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Audio Frequency Response: Within +1, -4.5dB of a 6 dB/octave pre-emphasis curve from 300-3000 HZ per EIA Standards.

3. Receiver:

Frequency Range: 851-866 MHZ

Modulation Acceptance: ±7 KHZ

Sensitivity (12dB Sinad): -119dBm (Minimum)

Spurious Response: 70dB minimum

Adjacent Channel Selectivity: 70dB typical at 25.0 KHZ

Inter-modulation: 70dB typical

Audio Output: 3 Watts

Audio Distortion: 5% Maximum

Audio Frequency Response: Within +2, -8dB of a 6dB/octave de-emphasis curve from 300 to 2700 Hz.

4. Accessories:

Each radio shall be furnished complete with the following:

a) Microphone W/Hook Switch.

b) 9 Ft. Ignition/Power Cable.

c) Mounting bracket and hardware for dash or remote mount.

c. Furnish radio and accessories for mounting to a Hoffman #A-CSHEXF12 12"X12" folding equipment mounting shelf as shown on the plans. Mounting and wiring of radios shall be by others.

(32) BAR CODE WORKSTATION

a. Each remote SCADA Panel shall be equipped with a Bar Code Workstation to be used with a Bar Code Slot Scanner to read and decode security badges.

b. The Bar Code Workstation shall be Allen-Bradley Model 2755-DH1 Multi-Purpose Bar Code Workstation or Engineer Approved Equal.

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c. Bar Code Workstation shall be mounted directly to the rear mounting panel in the remote SCADA Panel enclosure as shown on the drawings.

d. The Bar Code Workstation shall operate at 115 VAC, with a maximum current draw of 0.5 Amperes. The power to the workstation shall be derived from the backup power supply in the system.

e. The Bar Code Workstation shall have autodiscrimination of the following symbologies: Code 39, Interleaved 2 of 5 UPC, UPC with Supplemental Digits, Codabar, and Code 128.

f. The Bar Code Workstation shall be programmable through an ASCII terminal connected to its display port.

g. The Bar Code Workstation shall be connected to the SLC 500 Programmable Controller through Serial Port 1 on the BASIC Communications Module. Based on the validity of the input to the SLC 500 from the Bar Code Workstation the system shall be programmed to supply a contact closure to illuminate a green light for valid entry or a red light for indication of denial of access. An audible indication shall also be available through the output audio port on the workstation.

(33) BAR CODE SLOT SCANNER

a. A Remote Bar Code Slot Scanner shall be furnished with each Remote SCADA Panel for use with the Bar Code Workstation. The Slot Scanner shall be installed by others.

b. The Slot Scanner shall be Allen-Bradley 2755-B2 Slot Scanner in NEMA 13 enclosure for indoor/outdoor application.

c. The Slot Scanner shall have a high scan velocity and use an infrared (880nm) light source. The Scanner shall be capable of scanning low, medium and high density labels through thick laminates.

(34) COOLING FAN

a. Each Remote SCADA Panel shall be equipped with a compact cooling fan to aid in temperature control inside the panel enclosure.

b. The cooling fan shall be Hoffman A-10AXFN 10 Inch Axial Cooling Fan complete with A-BRKT10 Mounting Bracket, A-VK88 Louver Plate Kits And A-FLT88 Filters, or Engineer Approved Equal.

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c. The cooling fan supply voltage shall be 115 VAC, drawing 0.35 Amps, and shall have a nominal air flow of 560 Cubic Feet Per Minute. Power to the fan shall be supplied through the back up power supply.

d. The fan shall be constructed with Aluminum or Zinc venturi blocks and have a rigid frame with dymanically balanced impellers molded from polycarbonate material. Fans shall have ball bearing construction and split capacitor motors.

e. The finger guard furnished with the fan shall be mounted such that it faces the interior of the enclosure with the air flow into the enclosure.

f. The Manufacturer shall drill and cutout enclosure for proper mounting of upper and lower louver plate kits and filters. Fan and mounting brackets shall be placed in the enclosure in such a way that minimum clearance required for maintenance of the filters exists between the rim of the fan and the filter brackets.

g. Fan shall be controlled by Hoffman D-TEMA Temperature Control Switch. The temperature control switch shall be mounted to the rear mounting panel of the enclosure outside of the path of direct air flow of the fan.

(35) HEATER

a. A heater shall be supplied with each Remote SCADA Panel to aid in the protection of the panel against the effects of condensation, corrosion, and low temperatures.

b. The heater shall be Hoffman D-AH2001A Electric Heater or Engineer Approved Equal.

c. The heater shall be Thermostatically controlled with range adjustments between 0 degrees F and 100 degrees F. The heaters are fan-driven.

d. The supply voltage to the heater shall be 115 VAC, drawing 1.5 Amps. The heater shall be connected directly to the supply voltage and shall not be run through the back up power supply.

(36) BACK-UP POWER SYSTEM

a. A back-up power supply shall be provided with each Remote SCADA Panel to provide protection to the panel against brownouts, blackout, lightning and power surges.

b. The backup power supply shall be American Power Conversions BK1250 Back-UPS or Engineer Approved Equal.

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c. The supply shall have a 120 VAC nominal input voltage rating. The output voltage shall be 115 VAC and shall vary no more than +/-5% when the system is on batteries. The maximum capacity of the supply shall be 1250 Volt-Amps and 900 Watts. The thermal dissipation shall be 50 BTU/hr operating on line voltage and 860 BTU/hr on batteries.

(37) RADIO POWER SUPPLY

a. A switched mode power supply shall be provided for each Remote SCADA Panel to supply the necessary voltage for the GE Mobile Radio in the panel.

b. The switched mode power supply shall be Sola Model no. 86-12- 312 Single Output Switcher, or Engineer approved equal.

c. The switched mode power supply shall have an input supply voltage of 115 VAC. The output voltage shall be 12 VDC at 12.5 Amps. Power to the switched mode power supply shall be provided through the back-up power supply.

(38) WIRING

a. All wiring shall be as specified on the Equipment Wiring Layout Drawing.

b. Wiring terminating under screwheads or on stubs shall be fitted with AMP insulated shank crimp-on ring tongue terminals. Terminations to box type connections on terminal strips shall be made directly with no additional hardware required.

c. All wiring shall be labeled as shown on the drawings with AMP vinyl cloth wire markers or equal numbering method. Jumpers which are not coded on the drawings shall be identified with wire markers in a manner similar to that used elsewhere on the plans. All individual conductors shall be labeled with wiring destination on each end.

d. Wiring shall be bundled in a neat competent workmanlike manner. Conductors shall be run straight and parallel within each bundle without twisting. Bundles shall be routed in a logical manner with all bundles run parallel and perpendicular to sides and rear of the panel.

e. Panduit two-piece type FS surface raceway shall be used to route, protect and conceal control, data network and electrical wiring. The surface raceway shall be manufactured from impact resistant plastic material with a flammability rating of U.L. 94 V-0. Raceway size shall be nominal 1.5" wide by 3" high. The raceway will have a non-slip, snap-on cover, which when installed

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is flush with the raceway base. Raceway shall be attached to rear cabinet mounting panel using stainless steel or brass machine screws. Layout of raceway shall be as shown on equipment layout drawings.

f. All devices shall be attached to Enclosure Mounting Panel by means of Brass or Stainless Steel Machine Screws into drilled and tapped holes.

(39) TESTING REQUIREMENTS

a. Remote SCADA Panels

1. Factory Acceptance Test

Panels shall be tested as a system at the manufacturer's factory prior to delivery of each panel. The primary elements and control elements shall be simulated. This test will be witnessed by the Board's Representative(s). This Factory Acceptance Test shall be performed in accordance with a written plan which shall be submitted to the Engineer for approval. A finalized copy of the plan as approved by the Engineer shall be in the Engineer's hands no less than 10 working days prior to the start of the test. The Manufacturer shall advise the Board of the planned test start date not less than ten (10) working days prior to the start.

2. Factory Acceptance Test Objectives

The Factory Acceptance Test shall be a demonstration of the complete operational capabilities of the system hardware, utilizing simulated inputs, data transmission, and outputs to represent actual field conditions. Prior to the start of the test, the Manufacture shall review the complete documentation package with the Representative(s) of the Board present to witness the test. At minimum the test shall demonstrate the following test:

a) Auto operation of selected loops using simulated inputs and lights or meters to simulate outputs.

b) Manual operation of selected loops as in a) above.

c) System shutdown and restart.

d) Loss of system power to show operation of backup system.

e) System security which shall include operation of Slot Scanner and Bar Code Workstation.

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(40) WORKMANSHIP

All work performed shall conform to the highest degree and standards of workmanship. All component placement and wiring shall be performed in a competent workmanlike manner to the satisfaction of the Board Engineer. Any and all work which, in the opinion of the Board Engineer, does not conform to the desired degree of quality and workmanship shall be redone at no additional cost to the board. The decision of the Board Engineer shall be final and binding with regard to the acceptability of workmanship. Payment shall be withheld on subpar workmanship until corrected to the satisfaction of the Board Engineer.

(41) SUBMITTALS

a. The Manufacturer shall furnish four (4) copies of all submittal data, as defined below, to the Board Engineer for consideration. The Board Engineer shall review all submittals and return two stamped and annotated copies to the Manufacturer. A maximum of 15 working days shall be allowed for the Engineer's review of these submittals.

b. The following data shall be submitted for review and approval:

1. Data on requested material and equipment substitution as previously specified.

2. Knockout, layout and drilling plan showing full details on all device mountings, dimensions, and nameplate locations.

3. Acceptance Test Plan and Procedure.

(42) WARRANTY

Manufacturer shall warrant to the Sewerage and Water Board that the equipment furnished shall contain no defects in workmanship, materials, components, or title, and shall be of the kind and quality described in these specifications. Manufacturer shall remedy any defects due to faulty materials or workmanship which appear within a period of one (1) year from the date of acceptance of delivery.

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PROPOSAL

(43) MADE BY _____

ADDRESS _____

CITY AND STATE _____

DATE _____

_____ have carefully examined the foregoing Specifications and do hereby agree, should our Proposal be accepted, to furnish and deliver the equipment, in accordance with and under the conditions of the foregoing Specifications, and as specified below, at the following price which is in words and figures.

TWENTY (20) SUPERVISORY CONTROL AND DATA ACQUISITION PANELS FOR REMOTE MONITORING AND CONTROL OF VARIOUS SEWAGE PUMPING STATIONS

FOR THE LUMP SUM OF _____

_____DOLLARS ($_____).

(44) TERMS

_____ will allow a cash discount of _____% for payment within thirty (30) days of delivery and acceptance of the equipment.

(45) The equipment that we propose to furnish is manufactured by:

NAME _____

ADDRESS _____

CITY AND STATE _____

POINT OF SHIPMENT:

_____

(46) TIME OF DELIVERY

_____ will make delivery complete within _____ days from date of Contract Order.

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(47) ESTIMATED SIZE AND WEIGHTS

_____

_____

_____

(48) We _____ (have/have not) taken exception to these Specifications.

(49) In the event of possible price escalation, we certify that the final delivery price will not exceed _____ Dollars.

(50) ADDENDA

The below signed acknowledges receipt of following Addenda:

NO. _____ DATED _____

NO. _____ DATED _____

NO. _____ DATED _____

(51) SIGNATURE OF BIDDER

NAME _____
(PLEASE PRINT)

TITLE _____

ADDRESS _____

CITY AND STATE _____

TELEPHONE _____ _____
(NORMAL) (WEEKENDS-HOLIDAYS)

SIGNATURE _____

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(52) **SOUTH AFRICAN ANTI-APARTHEID POLICY OF THE SEWERAGE AND WATER BOARD**

PER RESOLUTIONS R-10-86, R-108-87, and R-154-87

REPRESENTATION

a. No funds of the Sewerage and Water Board of New Orleans shall be used for the purchase of supplies, materials, goods or services from businesses which are South African National Corporations or business entities organized under the laws of South Africa or from any business or subsidiary of any business which has investments, licenses or operations in the Republic of South Africa.

b. All bidders, at the time of submitting bids, shall certify that they are in compliance with the above requirements and understand that their failure to comply or to submit a false declaration may result in the rejection of their bid or revocation of award, and such other penalties as allowed under the law.

c. The Board shall have the right to waive the imposition of this policy where it is demonstrated that such supplies, materials, goods or services cannot be otherwise purchased or they are essential to the delivery of public services, or to bidders who satisfactorily demonstrate to the Board that their sole activity in South Africa is the manufacture, processing, and/or distribution on a nondiscriminatory basis of food or medical supplies.

CERTIFICATION

I hereby certify that I have read and understand the statement prohibiting the use of SEWERAGE AND WATER BOARD OF NEW ORLEANS funds for purchase of supplies, material, goods and services from businesses which are South African National Corporations or business entities organized under the laws of South Africa or from any business or subsidiary of any business which has investments, licenses or operations in The Republic of South Africa. I certify to the SEWERAGE AND WATER BOARD OF NEW ORLEANS that this company and the work to be performed under this contract will be in compliance with this policy.

_____

AUTHORIZED SIGNATURE/TITLE

_____

COMPANY

_____

DATE

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