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**REEVES GENERATING STATION
EMERGENCY RESPONSE
CONTINGENCY PLAN**

March 24, 1993

**PUBLIC SERVICE COMPANY OF NEW MEXICO
ALVARADO SQUARE
ALBUQUERQUE NEW MEXICO 87158**

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APPROVALS:

Jon Bell
Jon Bell, Operation and Maintenance Superintendent,
Reeves Station

3-25-93
Date

Elaine Beckett
Elaine Beckett, Environmental Scientist

3-24-93
Date

D E Pacheco
Dan Pacheco, Industrial Hygienist

3/25/93
Date

Larry Ratliff
Larry Ratliff, Vice President, Power Production

4/5/93
Date

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I. Plan Objective

The purpose of this Contingency Plan is to develop and implement emergency response procedures for Reeves Generating Station located at 4400 Paseo del Norte, Albuquerque, NM 87113. Reeves is owned and operated by Public Service Company of New Mexico, Alvarado Square, Albuquerque, NM 87158.

The plan provides for training, equipment, emergency phone numbers and response procedures in the event of a fire, explosion, or spill of chemicals, petroleum, or non-hazardous and hazardous wastes. The plan is intended to meet the regulatory requirements of the Resource Conservation and Recovery Act.

II. EPA Regulations

The Resource Conservation and Recovery Act, as implemented through regulations 40 CFR 262.34(4), requires that large quantity generators comply with the same requirements as owners and operators of treatment, storage or disposal facilities in subpart D of regulation 40 CFR 265 by developing a Contingency Plan. This Contingency Plan is designed to minimize hazards to human health or the environment from fires, explosions or unplanned releases of hazardous wastes or hazardous waste constituents to air, soil or surface water. In addition, this plan as stated in 40 CFR 265.53 (a) and (b) must be maintained at the facility and submitted to all local police departments, fire departments, hospitals and State and local emergency response teams that may be called upon to provide emergency services.

Although Reeves Generating Station is normally a small quantity generator and therefore would not be required to have a Contingency Plan, any facility during the occasion of a spill, fire or explosion could become a large quantity generator for that month. PNM has determined, therefore, that the development of a Contingency Plan is a safe and prudent response to this possibility.

The contents of the Contingency Plan must include the following:

1. The plan must describe the actions that facility personnel must take in the event of a fire, explosion or release of hazardous wastes.
2. The owner or operator may amend any existing Spill Control and Countermeasures (SPCC) Plan to meet the requirements of the Contingency Plan.
3. The plan must describe any arrangements made with the police, fire department or hospital including arrangements to familiarize them with the plant layout, properties of hazardous wastes, places where people work, and locations of roads and escape routes.
4. The plan must include lists of the names, addresses and phone numbers of persons able to serve as emergency coordinators.

5. The plan must include a list of all emergency equipment on site and a location and physical description of each item.
6. The plan must include an emergency evacuation plan including signals and routes of evacuation in the event of a fire, explosion or release of a hazardous waste.

III. Glossary

ERT	Emergency Response Team
HMT	Hazardous Materials Technician
SCBA	Self Contained Breathing Apparatus
SPCC	Spill Control and Countermeasures Plan
PPE	Personal Protective Equipment

IV. Emergency Response Procedures:

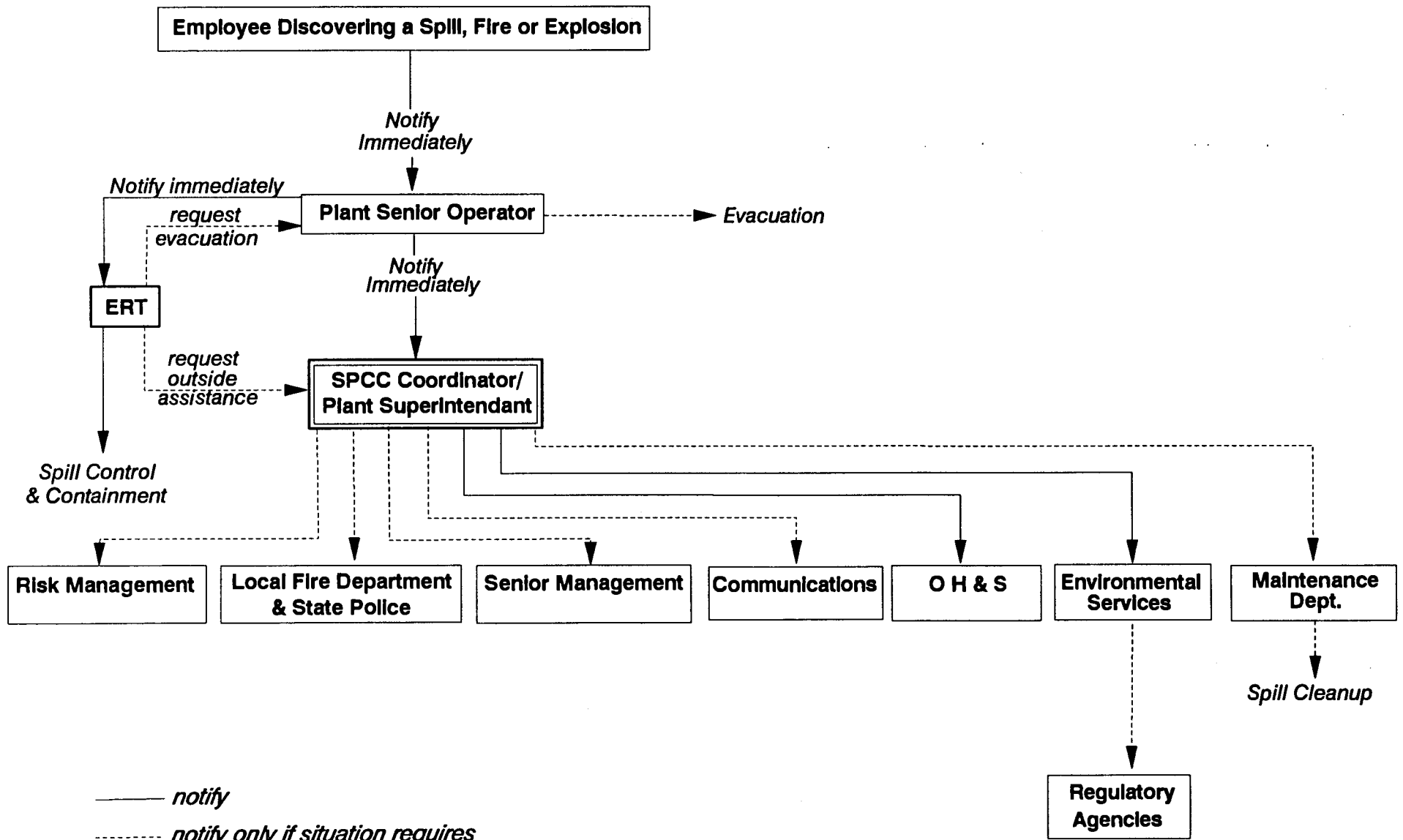
The purpose of this section is to describe the procedures that personnel must follow in the event of a fire, explosion or spill of petroleum or a hazardous chemical or waste. Reeves Generating Station personnel are currently in training to respond to small emergencies. The following procedures describe an in house response to such an emergency. It is understood, however, that until training is complete or for large emergencies, the local fire and police departments will be called in for emergency assistance.

A. Employee Emergency Discovery and Response

In the event of a hazardous chemical spill, discovered by an employee (or reported to an employee by an outside person), such employee shall immediately notify the Plant Senior Operator regardless of the magnitude of the spill (see figure 1). The employee should stay a safe distance away from the spill and assist in isolating or denying entrance into the exposed area. The Senior Operator must immediately notify the Plant Superintendent/SPCC Coordinator and the Emergency Response Team (ERT) Incident Commander. If the Plant Superintendent is not available, the ERT Incident Commander will also serve as the Superintendents backup and perform his assigned duties. The Senior Operator may try to provide the ERT and Plant Superintendent with the following information:

1. Location of the hazardous chemical spill, fire or explosion.

Figure 1
Public Service Company of New Mexico
Reeves Generating Station
Emergency Notification Procedures



2. Estimate:

- a. Quantity spilled (and potentially to be spilled) and/or area covered by spill, fire or explosion.
- b. Name of material spilled and its hazard type (eg. corrosive, flammable, toxic, non-flammable etc.)
- c. Rate of Spill and direction of flow and/or wind direction.
- d. Time before spill would flow into drain or otherwise be carried from plant site.

3. Description of any containment steps taken.

4. Any factual information to assist in determining corrective action to be taken.

In the event of a fire or an explosion discovered by an employee, the employee may attempt, if safe to do so, to extinguish the fire with an extinguisher. In general, if two extinguishers will not put out the fire, the employee must notify the Plant Senior Operator immediately who will notify the Plant Superintendent and the ERT.

The Plant Superintendent/SPCC coordinator is responsible for coordinating all aspects of the incident from beginning to end and must work closely with the ERT and all crews, support staff, contractors and local emergency response personnel involved in the incident. The Superintendent will notify the City Fire Department and the State Police if the ERT determines that they can not handle the incident themselves. The Superintendent must also notify PNM's management, Environmental Services, OH&S, Risk Management, Communications and G/O Maintenance, when necessary. The Superintendent may contact the company dispatcher who can handle these notifications for him. The Plant Superintendent also serves as a member of the ERT in the capacity of Communications Liaison if the media is present during the incident prior to notification of the Communications Department. The Superintendent will coordinate the documentation of all events associated with an incident. He will also chair a meeting of all in-house responders, post incident, to review and evaluate the effectiveness of the emergency response effort and make recommendations, if necessary, to improve the program. Records of the incident will be kept on-site at Reeves for the life of the facility.

The Emergency Response Team (ERT) is responsible for managing the control and containment of the spill, fire or explosion and the rescue of trapped or endangered personnel. The ERT decides if plant evacuation is necessary or if outside assistance is required. The specific responsibilities of each ERT member are described later in the text.

The Plant Senior Operator is responsible for implementing the "Plant Emergency Evacuation Plan" if the ERT determines evacuation is necessary.

PNM's Environmental Service Department is responsible for all verbal and written spill

notifications that may be required by the regulatory agencies. Environmental Services will also assist the Superintendent in any waste transportation and disposal requirements that may exist after the initial containment.

PNM's Occupational Health and Safety Department is responsible for monitoring the health and safety of all employees and other personnel who may be on-site involved in the control and containment of the spill, fire or explosion.

B. The Emergency Response Team (ERT)

The ERT consist of personnel trained to implement the Incident Command System which is recognized by Federal and State Agencies and is a standard (NFPA 472) to handle hazardous material incidents in an organized system of roles, responsibilities and standard operating procedures.

The Incident Command System at Reeves Station requires the following:

1. Incident Commander (IC)
2. Incident Command Post
3. Operational Chief (OC)
4. Hazardous Materials Technicians (HMT)
5. Communication Liaison

The Incident Commander is responsible for all functions and decision making relating to the management and containment of the spill, fire or explosion. The incident Commander will establish the incident command center and is the leader of the Emergency Response Team. He will, with the assistance of his team, evaluate the nature and extent of the spill or explosion in order to determine if evacuation is necessary and if PNM personnel are capable of handling the spill, fire or explosion without outside assistance. The Incident Commander is also trained in the evacuation or rescue of endangered or trapped personnel and can provide emergency medical services. The Incident Commander will secure the site from onlookers, media, etc. The incident Commander will participate in the control and containment of a hazardous spill as training permits.

The Operation Chief will cooperate, communicate and work as a co-leader in the incident. The Operation Chief will be responsible for the management of all activities directly applicable to spill or leak control. The Operation Chief will also be trained in evacuation or rescue of endangered or trapped personnel and provide emergency medical services. The Operation Chief participates in spill, fire or explosion containment or control as training permits.

The Incident Commander, Operations Chief and other ERT members will respond immediately to the designated location of the spill, fire or explosion and will set up the Incident Command Post.

If the Incident Commander determines that evacuation is necessary, he will inform the Senior Operator who will sound the alarm, announce evacuation over the plant Geitronics inter-com system, and implement the "Plant Emergency Evacuation Plan" included later in this text.

If the Incident Commander determines that outside assistance is required to control the spill, fire or explosion, he will inform the Plant Superintendent who will notify the Fire Department, the State Police or any other local emergency response team that can respond to emergencies in the area. The Incident Commander must provide the Superintendent with all pertinent information necessary to advise police or the fire department of the nature and extent of the hazards which may be present.

To summarize, the incident Commander and Operational Chief will do the following:

1. Establish a Command Post and secure the site.
2. Evaluate hazards involved and determine PNM's capability of managing the incident. Determine if outside assistance is required.
3. Determine if evacuation is necessary.
4. Evacuate or rescue endangered or trapped personnel (if this can be done without endangering his or herself).
5. Take charge of the spill or leak control activities.
6. Provide and assist HMT with necessary equipment to contain the leak/spill.
7. Participate in spill or leak control efforts as training permits.

The Hazardous Material Technicians serve as members of the ERT who are trained specifically in chemical spill, fire or explosion containment and control (see training requirements in Table 2). This involves such activities as leak repair, placement of booms or barricades, spraying, or applying absorbent or neutralizing agents to contaminated areas. A minimum of two HMT personnel must be present at the plant during an emergency to safely execute containment procedures.

The Communication Liaison (the Plant Superintendent) is responsible for communications with the media, if they are present on-site, during an incident before PNM Communications can be contacted. He may elect to provide the media with Communication's mobile phone number.

C. Routine Chemical Handling

1. Sulfuric Acid Storage, Unloading and Transfer System:

Reeves Station has two horizontal steel elevated storage tanks for sulfuric acid. The tanks are equipped with level indicators for visual indication and are painted to provide external corrosion protection.

The #1 acid tank is located at the north end of the #2 cooling tower (see figure 2). The #3 acid tank is located at the south end of the #3 cooling tower. Each tank has a capacity of 5,000 gallons.

Sulfuric acid arrives at Reeves Station in tanker trucks. Unloading is accomplished by pressurizing the tanker causing the acid to flow into the storage tank. At least one PNM employee accompanies the tanker truck driver when filling the tank and assures there is running water available. In the event of a spill, quick shut off is possible.

Acid is transferred to its point of consumption through CPVC piping.

The acid tanks are inspected daily for evidence of corrosion or leaks. Table 6 provides an equipment inspection schedule.

2. Chlorine Cylinders and Chlorination System:

Reeves Station uses gaseous chlorine contained in 150 pound cylinders. A gas chlorinator dilutes the gas with water and pipes this solution to the point of consumption. A chlorine level indicator and gaseous leak alarm system are in place.

3. Hydrazine (35%) Storage and Use:

Hydrazine is used at Reeves Station as a thirty-five percent solution in water. Hydrazine is delivered to Reeves Station in thirty gallon drums. Hydrazine use is \leq one liter of hydrazine solution per shift.

Drums are stored in a warehouse and moved one at a time to a chemical feed room inside the plant for use.

4. Sodium Hydroxide:

Sodium hydroxide is stored in the Demineralizer building. Sodium hydroxide arrives at Reeves by tanker truck, where it is pressurized and put into an indoor tank. The tank has a capacity of 4000 gallons.

At least one PNM employee accompanies the tanker truck driver during filling and running water is made available. In the event of a spill, quick shut off is possible.

The sodium hydroxide tank is inspected daily for evidence of corrosion or leaks.

5. Hydrogen Gas:

Hydrogen gas is supplied to Reeves in 220 ft³ cylinders. Full cylinders are chained off in a cylinder bank inside the power plant units. Each bank contains 4 cylinders.

Cylinders are dollied to a cylinder bank. Cylinders are connected by a valve and line to the generator.

6. Raw Chemical and Waste Storage:

Reeves maintains two storage warehouses, one for raw chemicals and the second for non-hazardous and hazardous wastes. The waste warehouse is divided into two areas. One side is dedicated to non-hazardous waste such as used oil, the other to hazardous waste, typically spent solvent although there may be other hazardous waste on occasion. Waste is stored in 55 gallon drums, properly labeled, and placed on pallets capable of holding 80 gallons as secondary containment. The amount of waste generated at Reeves generally places the plant in the "Small Quantity Generator" category.

7. PCB Warehouse:

PNM maintains a PCB warehouse at Reeves Station, where PCB contaminated waste materials and equipment are stored before disposal. This facility is operated by the Warehouse Department pursuant to 40 CFR 761.65 which describes criteria for managing a PCB storage facility.

8. Asbestos:

Reeves Station has asbestos containing thermal insulation throughout most of the steam related system at the plant. The insulation is wrapped by lagging cloth and/or aluminum jackets. In addition, there is non-friable asbestos containing equipment and building material. An asbestos source identification program is presently in place at Reeves Station to identify equipment which contains asbestos.

D. Spill Containment Procedures

The following information is designed to provide the basic steps required to stop and then contain a spill or leak. In all cases the personal protective equipment listed for each type of chemical must be worn to manage the spill.

In all emergency situations a buddy system shall be used. Based on the types and volumes of hazardous materials that occur at Reeves Station, a two man buddy system is sufficient. A single employee may don protective equipment and attempt to repair a leak if and only if a second employee is in ready standby position which means he is fully dressed in protective equipment, has the first employee in his line of site and is no more than 20 yards away.

In addition to the specific spill containment procedures listed below for each chemical stored and used at Reeves Station, a file is available on-site with Material Safety Data Sheets (MSDS) for each chemical. In the event of a spill, the MSDS can provide valuable information concerning safety and containment or neutralization.

1. Sulfuric Acid Spill Containment and Clean-Up Procedures:

Sulfuric acid is corrosive, can cause burns to eyes and skin, and is toxic if inhaled or swallowed. It may ignite other flammable materials or cause release of explosive or toxic gases through rapid reaction with other materials.

Personal Protective Equipment includes a full face particulate respirator. Outer clothing includes Tyvecs with either a polyethylene or Saranex coating (or equivalent) for splash protection. Rubber boots and gloves will be worn. Assure that emergency shower is operational.

- a. Two employees must don appropriate personal protective equipment and determine that it is operational. One of the employees may enter the spill or leak area to facilitate repairs. The second employee shall be in ready standby position with personal protective equipment on, able to see the first employee and within 20 yards.
- b. Stop or minimize the leak if possible and evaluate the leak for volume and level of hazard.
- c. Contain the acid spill.
 - i. If the leak is small, rinse with water without splashing, in a safe direction, and allow to soak into the ground. Neutralize with soda ash if necessary.
 - ii. If the spill is running or is a large volume, confine the spill to a low area or depression by damming such area.
 - iii. If possible confine spill to plant site. Minimize hazard and exposure to workers and public.
- d. Cleaning up an acid spill.
 - i. Evaluate spill to determine the clean-up procedure.
 - ii. If spill covers a small area, slowly dilute with water. Neutralize if necessary.
 - iii. For a large spill, mix acid with soda ash. Take caution not to add too much caustic or to add it too quickly. Use Ph indicators to determine the appropriate endpoint. After neutralization is complete, remove contaminated soil to an appropriately permitted landfill or evaluate the material for treatment/recycle alternatives. Replace the spill area with clean dirt.

2. Chlorine leak from cylinder or transfer system:

Chlorine is toxic and may be fatal if inhaled in sufficient quantities. Contact may cause burns to

soft tissue. It may ignite other flammable materials. Chlorine gas reacts with carbon monoxide (eg. vehicle exhaust) to form Phosgene gas.

The following chlorine leak repair and containment procedures are taken from procedures used at Public Service Company's Sangre De Cristo Water Company. These procedures have been modified for applicability to Reeves Station.

I. Level One

- a. **Definition:** An environment believed or known to NOT be of immediate hazard to life and health.

Chlorine less than 1.0 ppm. Odor of chlorine can be detected but no eye, nose or throat irritation occurs.

- b. **Actions to take:**

- i. One clean shaven and adequately trained person may enter alone into the chlorine leak area provided they are wearing a SCBA and protective suit.
- ii. Incident Commander or Operations Chief assures that one back-up employee (with SCBA and protective suit) is in a ready state if an employee enters a chlorine leak area. The back-up employee must be able to observe the first employee and be within 20 yards should a rescue be necessary.
- iii. Employees prior to entry must assure proper working order of the SCBA and the protective suits.
- iv. Entry into the chlorine leak area is for the purpose of evaluation such as leak detection, to identify the potential for the leak to develop into a public hazard (e.g. pinhole leak vs. breaks in a manifold line or cylinder valve leaks). Entry is also for the purpose of minor leak repair such as tightening fittings or closing cylinder valves etc. Upon completion of this the employee exits the leak area.
- v. If the minor repair does not control the leak, the employees must exit leak area and notify Incident Commander that they are upgrading to level II.
- vi. If minor leak repairs make the leak worse and uncontrollable, go to level III. If controllable, go to level II.
- vii. If the leak looks serious and major repairs (kit A) won't help and the leak presents a potential hazard to the public, notify Incident Commander and to proceed to level III.

- viii. If the minor leak repair controls the leak situations, notify Incident Commander that the situation is resolved.

II. Level Two

- a. **Definition:** An environment believed, known or could become an environment immediately dangerous to the health of employees.

Minor leak repairs have failed in Level I and may present an unreasonable risk to employees. Chlorine is equal to or greater than 1.0 ppm or if chlorine irritates eyes, nose or throat.

- b. **Actions to take:**

- i. The Incident Commander may determine it is necessary to notify the City Fire Department of the situation and request assistance.
- ii. One clean shaven and properly trained employee may enter the area to facilitate repairs.
- iii. Entry into the chlorine area is only allowed if the following conditions are met:
 - 1. A second employee is in a ready standby position to provide short term assistance (less than 5 min.) or rescue as necessary. The second employee must be able to see the first employee and be within twenty yards.
 - 2. Both employees are wearing an SCBA and protective suits which are gas tight and totally encapsulating.
- iv. Extensive repairs such as using the Kit A repair kit on valves, cylinder tank leaks etc., are done here at Level II.
- v. Employees not properly protected should be evacuated from the area.
- vi. If repairs do not control the leak but proceeds at the same rate without posing a hazard to employees or the public, monitor the leak until it quits or a plan of action for leak control is determined.
- vii. If repairs make the leak worse, increasing potential harm to employees or to the public, go to level III.
- viii. If repairs control the leak, inform the plant superintendent that the situation is resolved.

- ix. The plant superintendent will initiate a post-response incident investigation to determine the cause of the leak, future leak prevention methods, and the effectiveness of the Emergency Response Team.

III. Level Three

- a. **Definition:** Any condition believed or known to pose an immediate hazard to life and health of employees and/or the general public. It will be the responsibility of the Fire/Police Departments to determine when evacuation of the general public is required.

Chlorine concentration is in excess of 10 ppm. Irritation of eyes, nose and throat occurs outdoors downwind of the leak.

Previous response levels have determined that the chlorine leak situation is uncontrollable and that potential harm to the public is possible.

- b. **Actions to take:**
 - i. Conduct air monitoring (colorimetric indicating tubes) downwind to determine air concentrations of Chlorine at ground level and at PNM property lines.
 - ii. Notify the Fire/Police Departments for emergency response assistance and to allow them to evaluate the situation to determine the need for public evacuation.

3. Hydrazine (35%) spill from storage or handling:

Hydrazine is a toxic substance and caution should be used to avoid inhalation, swallowing or contact with the skin. During fire, Hydrazine (35%) can be dehydrated to higher percentages potentially causing flammable conditions and incompatible reactions.

Personal protective equipment includes a self contained breathing apparatus (SCBA) and chemical resistant protective clothing.

- a. Two employees must don personal protective equipment and determine that it is operational. One employee may enter the spill or leak area to facilitate repairs while the other is in ready standby position, with PPE on, able to see the first employee and within 20 yards.
- b. Stop or minimize the leak.
 - i. Turn off leaking valves.
 - ii. Turn damaged barrel in such a way that it stops leaking.

c. Clean up the spill.

- i. Outside spill - dilute chemical with water and allow to soak into soil. Remove contaminated soil or residue to an approved location for disposal.
- ii. In-plant spill - Absorb spillage and runoff with noncombustible absorbent, such as dry soil, containerize and remove to a permitted landfill for disposal or evaluate for treatment/recycle alternatives. See MSDS for neutralization procedures. Rinse spill area thoroughly with water.

4. Sodium hydroxide spill containment and cleanup procedures:

Sodium Hydroxide is corrosive and can cause burns to any tissue it comes into contact with. Swallowing sodium hydroxide may cause severe burns of the mouth, throat, and stomach. Sodium hydroxide is not considered flammable or combustible, however, contact with water or acids may generate sufficient heat to ignite nearby combustible materials.

Personal Protective Equipment for small spills include a half-face particulate respirator in combination with chemical goggles. Alternatively use a full-face particulate respirator. Outer clothing shall include sodium hydroxide impervious materials such as Tyvec with either a polyethylene or Saranex (or equivalent) coating for splash protection. Rubber boots and gloves will be worn. Assure the nearest emergency shower/eye wash is located and operational.

- a. Two employees must don appropriate personal protective equipment. One of the employees may enter the spill or leak area to facilitate repairs. The second employee shall be in ready standby position with personal protective equipment on, able to see the first employee and within 20 yards.
- b. Stop or minimize the leak if possible. Evaluate the leak for volume and level of hazard.
- c. Contain the base spill.
 - i. For a leak which remains in the sodium hydroxide tank room, rinse without splashing, toward drain leading to evaporation pond permitted to accept demineralizer waste. Can take up with sand or other noncombustible absorbent.
 - ii. If spill is in large volume and running to the outside, confine the spill to a low area or depression by damming such area.
 - iii. If possible, confine spill to plant site. Minimize hazard and exposure to workers and public.

d. Clean up base spill.

- i. Evaluate spill to determine the clean up procedure.**
- ii. Carefully dilute and neutralize base with water and dilute acid (acetic acid). Sodium bicarbonate may also be used to partially neutralize the spill. After neutralization is complete, remove contaminated soil or residue to a permitted landfill for disposal or evaluate treatment/recycle alternatives. Replace spill area with clean dirt.**

5. Hydrogen gas leak from cylinder or transfer system.

Hydrogen gas is extremely flammable and may be ignited by heat, sparks or flames. Gases may cause dizziness or suffocation, liquid contact causes frostbite. Personal protective equipment includes SCBA and structural firefighters' protective clothing. These provide limited protection.

- a. Clear the area of all personnel.**
- b. Two employees shall don personal protective equipment and check that it is operational. One employee may enter the leak area while the other employee keeps him in line of site and no more than 20 yards away.**
- c. Close off cylinder valves if it can be accomplished safely.**
- d. Eliminate ignition hazards in the area of the leak as long as an arc source is not created (e.g. shut a remote circuit breaker if possible).**
- e. Ventilate closed spaces before entering.**
- f. If valves cannot be shut off safely allow the contents of the tank to dissipate before re-entry. Provide ample ventilation and monitor for explosive atmosphere prior to re-entry.**

6. Used oil or waste solvent spill

Solvents are both irritants and toxic. Exposure routes are typically through the skin or inhalation. Many are nonflammable.

Personal protective equipment includes impervious gloves, disposable overalls and boot covers.

- a. Two employees shall don personal protective equipment. One employee may enter the spill area as long as the second employee is wearing protective equipment, can see the first employee and is within 20 yards.**

b. Contain the oil or solvent spill

- i. If the spill is small, absorb oil or solvent with collection agents, adsorbents, sand or dry dirt.**
- ii. If the spill is running, confine the spill to a low area or depression by damming such area.**

7. PCB spill

PCBs are relatively inert, chemically stable compounds that can cause skin and eye irritation. PCBs can affect liver enzyme production and fat metabolism but the health significance of these changes is unknown. However, combustion by products of PCB contaminated materials are highly toxic and are documented carcinogens.

For spills \geq 50 ppm PCBs, protective equipment includes impervious gloves, disposable coveralls, disposable boot covers, safety goggles and a half face respirator with a HEPA (type H) cartridge. For spills of PCBs with concentrations of $>$ 50 ppm, with temperatures $>$ 140°F and involves confined space entry where vapors may occur, supplied air is required. Fires involving PCBs require SCBA and gas tight, totally encapsulating suits.

PCB spills associated with the PCB warehouse will only be addressed by the Reeves ERT if the spill occurs outside (e.g. on the warehouse loading dock). Response will be limited to stopping the leak if possible and containment procedures. Warehouse personnel shall be called to come in and further manage the situation.

- a. Two employees shall don personal protective equipment. One employee may enter the spill area as long as the second employee is wearing protective equipment, can see the first employee and is within 20 yards.**
- b. Stop or minimize leak.**
- c. Contain the spill.**
 - i. Take up spill using a noncombustible absorbent.**
- d. Spills involving fire require immediate notification of the Albuquerque City Fire Department and the State Police.**

For greater detail on the management of a PCB spill, see PNM's Manual For PCB Management available at Reeves Station.

8. Asbestos Abatement Procedures

Asbestos is the common name for a group of naturally occurring silicate minerals which through

sufficient exposure may cause fibrotic lung disease and is a carcinogen. Asbestos abatement is typically done in a non-emergency situation and requires specifically trained "qualified abatement workers" and a "competent person". Only the need to evacuate and not the actual abatement is managed through the incident command system. Reeves Station has several staff members trained to remove small amounts of asbestos. In addition, the company maintains active contracts with asbestos abatement firms who can respond to large scale asbestos removal jobs almost immediately.

Personal protective equipment during abatement includes a half face or full face particulate respirator, Tyvec with hood, boot covers and gloves.

- a. In the event of an explosion involving large surface areas of insulation disturbance or significant asbestos containing material (ACM) debris or when there is an indoor exposure to employees of greater than 2-3 ft² of friable asbestos, limited ventilation or visible fiber emissions, clear personnel from the area.
- b. Asbestos abatement activities must comply with OSHA and EPA asbestos specific regulations and Section XII-Q "Asbestos" of the PNM Electric Employee Safety Manual. These regulations stipulate the types of protective equipment to be worn, methods for emissions control during removal, air monitoring requirements, as well as notification, transport and disposal requirements.

Table 1 provides chemical substance information on the primary chemicals and wastes employed or stored at Reeves Generating station. Figure 2 shows the building or outside location of chemical storage.

V. Personnel Training Requirements, Equipment Lists and Emergency Phone Numbers

A. Training and Practice Drills

All employees of Reeves Station are to be familiar with the contents of this Contingency Plan. They must be trained in HazCom/Haz Mat, Fire Extinguishers and be familiar with the emergency evacuation routes provided in the Emergency Evacuation Plan presented later in the text. Emergency Response Team members are required to receive training in those areas related to their assigned emergency response tasks. Table 2 is a list of training requirements designed to allow Reeve's Emergency Response Team to respond to small emergency incidents and to provide Employee Right To Know emergency response information to all plant staff. This list also indicates which personnel are required to take each class. All training obtained by Reeves personnel will be documented and records kept on-site at Reeves Station.

Practice drills of the Contingency Plan are to be conducted at least annually. These drills and the results should be documented and recommendations for any changes and improvements included. Different situations should be tested such as evacuation due to fire, explosion or spill and certain parameters measured to determine the effectiveness of the plan. Measure the time it

takes to evacuate, time it takes to obtain head-counts of personnel. Simulate injuries and measure the time it takes for First-Aid to be administered to injured personnel. Measure time taken to locate missing personnel.

B. Spill Response and Control Equipment

Table 3 is a list of all spill response and control equipment available to the Emergency Response Team or to an outside local responder at Reeves Station. This list includes the location of the equipment and the number of Reeves personnel trained, as of the date of this document, in their use.

C. Emergency Phone Numbers

Table 4 is a list of emergency response personnel and their home and work phone numbers. Table 5 is a list of federal, state, and local agency phone numbers.

VI. Spill Response Equipment Inspection Program

Reeves personnel must inspect and maintain all equipment used for the transfer, loading, unloading and storage of raw chemicals and non-hazardous and hazardous waste. Personnel must inspect and maintain all safety, emergency response and personal protective equipment. Table 6 provides a schedule for equipment inspection.

In addition to table 6, respiratory equipment maintenance procedures may be found in the Respiratory Inspection Maintenance Section of The Respiratory Protection Program Manual already developed by PNM's OH&S department. These and other procedures regarding the use of PPE are documented in this manual and are available at Reeves Station. A summary of the maintenance requirements is provided here.

Reeves personnel are required to include at least:

A. Inspection for defects.

If properly performed, inspections will identify damaged or malfunctioning respirators before they can be used. Two types of inspections will be performed.

1. Field inspection prior to it being used
2. While it is being cleaned
 - a. It is the responsibility of the person assigned to do the cleaning of the respiratory equipment to examine each respirator thoroughly during this process. Respirators shall also be inspected after cleaning operations and reassembly have been accomplished.

- b. When used routinely, respirators should be exchanged daily for cleaning and inspection.
- B. Clean and disinfect.
- C. Repair as required.
- D. Proper and sanitary storage of equipment.

VII. First-Aid/Medical Assistance

During an emergency there will be two types of medical situations which may arise. One is physical trauma such as cuts, broken bones, and burns. The other is exposure to toxins. Exposure to a toxic chemical during an emergency may result in acute symptoms (such as those from chlorine gas poisoning).

When providing first-aid for a victim in an emergency situation there are several basic things to remember:

- A. Protect yourself from Bloodborn Pathogen exposure by using "Universal Precautions" which require the use of barriers (gloves, coveralls, eye/face protection as appropriate to prevent your contact with the victims blood or body fluids.
- B. If the victim is unconscious, first check to see if there is a pulse and if they are breathing. If not, have qualified individuals administer CPR.
- C. If the victim is not mobile, always check for broken bones before attempting to move them. If the victim is in a safe area, do not move them - wait for professional medical help.
- D. Be aware of the symptoms of shock. Victims, regardless of their apparent condition, should be allowed to find a comfortable position, kept calm, kept warm, and have their feet elevated slightly above their heads.

First Aid should be administered to victims of physical trauma by Reeves personnel trained in First-Aid techniques. The individual administering First-Aid must be able to report to arriving professional medical assistance teams on the current status of any victims at the site. Reporting should be made in order of priority - the most seriously injured individuals first.

Exposures to toxic materials during emergency situations may cause illness and injury. Symptoms of exposure to a toxic chemical may cause difficulty in breathing, irregular heartbeat, tremors, and irritation of eyes, nose throat or skin. The symptoms of exposure will vary from situation to situation and depend upon the following factors:

- A. The toxic properties of the chemicals to which one is exposed.
- B. The length, concentration and mode (skin absorption, inhalation etc.) of exposure.
- C. The current health status of the individual exposed.

If the chemical a victim has been exposed to is known, the Material Safety Data Sheet (MSDS) for it should be consulted for emergency medical advice. In most, if not all, situations of exposure the following emergency procedures should be implemented:

- A. Remove the victim from the exposure - get them into fresh air if it can be done without injury to the rescuer.
- B. If contact with the chemical has occurred, flush skin or eyes with running water for 15 minutes. Removal of contaminated clothing may be required.
- C. Keep the victim warm. In case of shock, maintain body temperature. +
- D. Reassure and calm the victim.

In all emergency situations be sure to call for professional medical assistance as soon as possible.

VIII. Coordination With Local Response Agencies

The State Police and the City of Albuquerque Fire Department are the local responders for any emergencies which may occur at Reeves. They have visited Reeves in the past. Arrangements are presently being made to invite the City of Albuquerque Fire Department for another tour of the plant designed to familiarize the Fire Department with the locations of hazardous materials and wastes, the location of emergency response equipment and to discuss the details of this contingency plan and any rescue situations (including confined spaces) that could arise at Reeves.

Copies of this Contingency Plan will be sent to:

City of Albuquerque Fire Department
New Mexico State Police
Presbyterian Hospital
St. Joseph Hospital
Lovelace Hospital
University of New Mexico Hospital
New Mexico Environment Department:
 Hazardous Waste and Radioactive Materials Bureau
Local Emergency Planning Commission

Copies of all current receipts and letters of transmittal will be kept on file at Reeves Station and readily available for inspection.

IX. Plant Emergency Evacuation Plan

In the event of a spill, fire, or explosion the Incident Commander will make the decision if plant personnel evacuation is necessary. If deemed necessary the Incident Commander will inform the Senior Operator to initiate evacuation procedures. The Senior Operator is in charge of plant personnel evacuation.

The Senior Operator will sound the alarm (siren), and announce evacuation over the plant Geitronics inter-com system. All personnel shall leave their post and convene on the north side Administration building parking lot (figure 2). This location is accessible to all areas of the facility and is a safe distance from the power plant. On a case by case basis, the Incident Commander may decide not to evacuate the control room. If the north side Administration parking lot is due down wind of an air emission, employees shall convene at the frontage road.

Each area foreman (maintenance, electric, instrumentation and operations) is responsible for a head count of his staff. Each foreman is responsible for reporting the results of the head count to the Senior Operator. If it is determined that there are missing personnel, the Senior Operator will notify the Incident Commander who will initiate rescue procedures as training permits.

Where appropriate, evacuation routes from within the power plant units will be posted for all employees, contractors or other visitors to use in finding the safest exits from the building (Appendix B).

Signs have been posted on all service elevators prohibiting use and directing personnel to use the stairways during a fire.

Practice drills of this evacuation plan will be conducted at least annually as described in Section V on training.

Table 1
Chemical Substance Information Sheet

<u>Chemical</u>	<u>Sulfuric Acid</u>	<u>Sodium Hydroxide</u>
CAS Number	7664-93-9	1310-73-2
Amount	12000 gal.	4000 gal.
Container	2 Bulk Tanks	Bulk Tank
Concentration	93-95%	50%
Solid/Liq./Gas	Liquid	Liquid
Storage Pressure	Atmospheric	Atmospheric
Boiling Point	338°C	142-148°C (50% sol.)
Vapor Pressure	< 1 at 20°C	13 mm Hg @ 60°C
Molecular Weight	98.08	40.0 (solute)
Specific Gravity	1.841	1.5 (50% sol.)
Storage Temperature	Ambient	75°F
Incompatibilities	Organics, chlorates, metals, H ₂ O	H ₂ O, acids, metals, flam. liq., organics
Release Detect. Method	sight, smell	sight, smell
<u>Chemical</u>	<u>Hydrazine</u>	<u>Chlorine</u>
CAS Number	302-01-2	7782-50-5
Amount	150 gal.	7 150 lb. cyl.
Container	Barrels	Cylinder
Concentration	35%	> 99%
Solid/Liq./Gas	Liquid	Gas, liquid
Storage Pressure	Atmospheric	unknown or > atmos.
Boiling Point	118.5°C	-34.6°C
Vapor Pressure	NA	2748 mm Hg @ 0°C
Molecular Weight	50.07	70.06
Specific Gravity	1.03	3.214
Storage Temperature	Ambient	ambient
Incompatibilities	Oxidizers, metals, oxides, acids	Combustibles
Release Detect. Method	Sight, smell	Alarm, smell, irritation
<u>Chemical</u>	<u>PCBs</u>	<u>Asbestos</u>
CAS Number	53469-21-9, 11097-69-1	1332-21-4
Amount	Variable	Variable
Container	Barrels and equipment	Construction mat. and insul.
Concentration	Variable	Variable
Solid/liq./gas	Solid, liquid	Solid
Storage Pressure	Atmospheric	Variable
Boiling Point	325 to 366.11°C.	N/A
Vapor Pressure	1x10 ⁻⁴ to 1x10 ⁻⁶ torr @ 20°C	N/A
Molecular Weight	258 to 326	N/A
Specific Gravity	1.4-1.5	2.5
Storage Temperature	Ambient	Variable
Incompatibilities	Strong oxidizers	None
Release Detect. Method	Sight	Visible emissions, monitoring

Table 1 (Cont.)**Chemical Substance Information Sheet**

<u>Chemical</u>	<u>Hydrogen</u>	<u>Natural Gas</u>
CAS Number		
Amount	10-20 Cylinders	
Container	Cylinders	Pipelines
Concentration	220 ft ³ cylinders	
Solid/liq./gas	Gas	Gas
Storage Pressure	high pressure	
Boiling Point	-252.77°C	-161.5°C
Vapor Pressure	0.231 kPa @ 10°K	
Molecular Weight	2.02	16.04
Specific Gravity	0.069	0.422 @ -160°C
Storage Temperature	Ambient	
Incompatibilities	Heat	Chlorine, bromine in light, oxygen
Release Detect. Method	smell	

Table 2

**Emergency Response
Training Requirements**

<u>Courses Required</u>	<u>Hours</u>	<u>Frequency</u>	<u>Personnel</u>
a. HazCom/Haz Mat	4	Once	IC,OC,HMT,All
b. Fire Extinguisher	1	Yearly	IC,OC,HMT,All
c. Haz/Mat Emerg. Response Plan	1	Yearly	IC,OC,HMT
d. SCBA	2	Yearly	IC,OC,HMT
e. Total Encapsulating Suit	2	Quarterly	IC,OC,HMT
f. ERT Training-Fire Fighting (Health Assessment Required)	40	Once	IC,OC,HMT
g. ERT Training (Health Assessment Required)	16	semi-annually	IC,OC,HMT
h. Health Assessment		Yearly	IC,OC,HMT
i. Cl2 Repair Kit A	2	Yearly	HMT
j. H2 System	2	Yearly	HMT
k. Acid, Base, Hydrazine	8	Yearly	HMT
l. Incident Command	2-4	Yearly	IC,OC,HMT
m. First Aid/CPR	8	Every 2 yrs.	IC,OC,HMT,All
n. First Aid/CPR Update	2	Yearly	IC,OC,HMT,All
o. Hazardous Materials Transporting/ Chemicals Compatibility	2	Yearly	All who transport chemicals
p. Bloodborne Pathogens	1	Once	IC,OC,HMT,All First Aid Trained

IC = Incident Commander

OC = Operations Chief

HMT = Hazardous Materials Technician

All = Reeves Plant Staff

Table 3**Emergency Response, Safety
and Personal Protection Equipment**

<u>Personal Protection Equipment</u>	<u>Location</u>	<u>Personnel Trained</u>
2 - MSA 60 minute SCBA's	Control Room	5
2 - MSA 30 minute SCBA's	Admin. Bldg.	
2 - spare 60 minute air cylinders	Control Room	
2 - spare 30 minute air cylinders	Admin. Bldg.	
2 - Class A Totally Encapsulating Suits	Control Room	5
1 - Set of Bunker Gear		1
<u>Emergency Response Equipment</u>		
1 - Tractor	# 1 Circulator	
1 - Hose Reel	# 2 Boiler	
1 - Chlorine leak alarm	Chlorine Bldg.	
1 - Tunnel fire alarm system		
1 - Wind Sock	Chlorine Bldg.	
1 - Chlorine Cylinder Repair Kit A (150 lb cylinder)	Demineralizer	5
1 - Hazardous Waste Spill Kit (absorbent, face shield, goggles, shovel, gloves, dust paint, rain gear, oil boom, socks)		4
Fire Extinguishers	various (see appendix A)	
Clean up drums		
<u>Safety Equipment</u>		
Plant alarm system (siren)	various	
Eye washes	various	All
Emergency showers	various	All
First-Aid supplies	various	All

Table 4**Reeves Personnel Phone Numbers**

<u>Designation</u>	<u>Contact</u>	<u>Phone Number</u>
Reeves Front Office	Renee Martinez	Office - 848-4762
Plant Superintendent	Jon Bell	Office - 848-4763 Home - 877-4929 Pager - 768-8519
Incident Commander ¹	* Chuck Arater	Office - 848-4744 Home - 344-3007
Operations Chief ¹	* Rick Villanueva	Office - 848-4709 Home - 344-1377
	* Joe Trujillo	Office - 848-4709 Home - 664-3016
Hazardous Materials Technicians	Chuck Arater	see above
	Joe Trujillo	see above
	Rick Villanueva	see above
	Jim Farrell	Office - 848-4743 Home - 865-4737
	Louie Lipcaman	Office - 848-4719 Home - 345-5148
	* Jerry Betts	Office - 848-4709 Home - 883-7405
Senior Operators	Thumbie Aikens	Office - 848-4709 Home - 268-4887
	Celiz Valles	Office - 848-4709 Home - 888-4737
Maintenance Shop Foreman	Marvin Poitras	Office - 848-2063 Home - 275-7158
Electric Shop Foreman	Angus Brown	Office - 848-4742 Home - 1-552-9649
Instrument Shop Foreman	Robert Morgan	Office - 848-4743 Home - 865-0129

Table 4 (cont.)

Communication Liaison	Jon Bell	see above
Environmental Services	Ron Johnson	Office - 848-2998 Home - 821-4536 mobil - 263-3166
	John Ferraiuolo	Office - 848-4871 Home - 281-2877
	Nancy Norem	Office - 848-2385 Home - 268-5604
	Erick Seelinger	Office - 848-2659 Home - 268-2109
	Dan Pacheco	Office - 848-2682 Home - 891-8924 Pager - 768-8191
Public Affairs Director	Rick Brinneman	Office - 848-2622 Home - 865-5610 Mobil - 263-5494
Company Dispatcher		Office - 848-5888
Management	Larry Ratliff	Office - 598-7590 Home - (1) 326-5106
	Jerry Godwin	Office - 848-2838 Home - 294-8076

1 Position may be manned by any ERT member. ERT members are indicated with an astrick.

Table 5

**Federal, State, and Local Agency
Phone Numbers**

Federal Agencies:

U.S. Coast Guard

National Response Center (NRC) 24-Hour: (800) 424-8802

U.S. EPA (Region 6)

**Emergency Response Branch 24-Hour: (214) 655-2222
Hotline: (800) 424-8802**

Other Federal Agencies

SARA Bureau Day: (505) 827-9223

Dept. of Transportation (800) 424-8802

State Agencies:

Environment Department of New Mexico 24-Hour: 827-9329

UST Bureau Day: 827-0188

Ground Water Bureau Day: 827-2918

Surface Water Bureau Day: 827-2913

Hazardous Waste Bureau Day: 827-4300

Air Quality Bureau Day: 827-0070

NM State Police 24-Hour: 841-9256

Local Agencies:

City of Albuquerque Fire Dept. 24-Hour: 764-6300

Table 6
Equipment Inspection Schedule

<u>Area/Equipment</u>	<u>Specific Item</u>	<u>Type of Problem</u>	<u>Inspec. Frequency</u>
Sulfuric Acid Tanks	Tanks	Leaks, spills	Daily
Sodium Hydroxide Tanks	Tanks	Leaks, spills	Daily
Raw Chemical Storage	General area	Leaks, spills	Weekly
	Containers	Leaks, spills	Weekly
	Container seals	Open bungs, lids	Weekly
	Pallets	Cracks, damage	Weekly
Used Oil/Haz. Waste Storage	General area	Leaks, spills	Weekly
	Containers	Leaks, spills	Weekly
	Container seals	Open bungs, lids	Weekly
	Container labels	Missing or wrong information, visibility	Weekly
	Container spacing	Aisle space, compatibility	Weekly
	Pallets	Cracks, damage	Weekly
	Warning signs	Damaged, faded	Weekly
	Debris, refuse	Aesthetics	Weekly
Safety and Emergency Equipment	Emergency shower and eye wash	Water pressure leaks drainage	Monthly, before use
	Hazardous waste spill kit:		
	Absorbent, gloves, rain gear etc.	Out of stock	Monthly
	Face shields, goggles	Broken, dirty	Monthly
	Protective clothing	Holes, wear and tear	Monthly, as used
	SCBA	Missing or defective hoses, masks, regulators, harness	Monthly, as used
		Low tank pressure	Weekly

Table 6 (cont.)

<u>Area/Equipment</u>	<u>Specific Item</u>	<u>Type of Problem</u>	<u>Inspec. Frequency</u>
	Chemical and particulate cartridge respirator	Seals, dirt, damage	Monthly, before use, after cleaning
	Chlorine cylinder repair kit	Inventory and availability	Monthly, as used
	Chlorine alarm	Power failure	Weekly
	Chlorine detector	Operation	Weekly
		Calibration	Quarterly
	Clean up drums	Out of stock	Monthly
	Cable tunnel alarm system	Power failure	Weekly
	Plant alarm system (siren)	Power failure	Weekly
	Fire extinguishers	Recharging	Monthly, after use
	First aid equip. and supplies	Out of stock	Monthly
	Geotronic intercom system	Power failure	Per NFPA
	Telephone system	Power failure	Per NFPA
Security devices	Facility fence	Corrosion, damage	Daily
	Main gate	Damage, lock	Daily

Appendix A
Fire Extinguisher List

REEVES STATION FIRE EXTINGUISHERS - LOCATION & NUMBER

1 GROUND FLOOR INSIDE PLANT

1	2	3	4	5	6	7	8	9	10	11	12	13	14
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2 MEZZANINE

16	17	18	19	20	21	22	23	24					
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3 TURBINE DECK

25	26	27	28	29	30	31	32	33	34				
----	----	----	----	----	----	----	----	----	----	--	--	--	--

4 BURNER DECK

35	36	37	38	39	40	41	42						
----	----	----	----	----	----	----	----	--	--	--	--	--	--

5 COOLING TOWERS

43	44	45	46	47	48								
----	----	----	----	----	----	--	--	--	--	--	--	--	--

6 BURNER DECK 3rd FLOOR

49	50	51											
----	----	----	--	--	--	--	--	--	--	--	--	--	--

7 RELAY HOUSE

52													
----	--	--	--	--	--	--	--	--	--	--	--	--	--

8 OUTSIDE PLANT - CIRC. PUMP HOUSE

53	54	55	56	57	58	59	60						
----	----	----	----	----	----	----	----	--	--	--	--	--	--

9 WATER LAB

61													
----	--	--	--	--	--	--	--	--	--	--	--	--	--

10 OIL LAB

62													
----	--	--	--	--	--	--	--	--	--	--	--	--	--

11 SHOP

63	64	65	66	67									
----	----	----	----	----	--	--	--	--	--	--	--	--	--

12 ADMINISTRATION BLDG.

68	69												
----	----	--	--	--	--	--	--	--	--	--	--	--	--

13 BANES BLDG.

70	71												
----	----	--	--	--	--	--	--	--	--	--	--	--	--

14 OIL TANKS & UNLOADING PUMP HOUSES *EXTRA ONE IN TUNNEL 016

72	73	74	75	76	*								
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15 WAREHOUSE

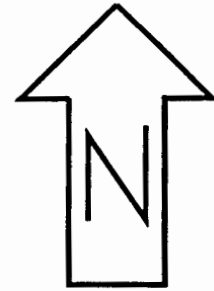
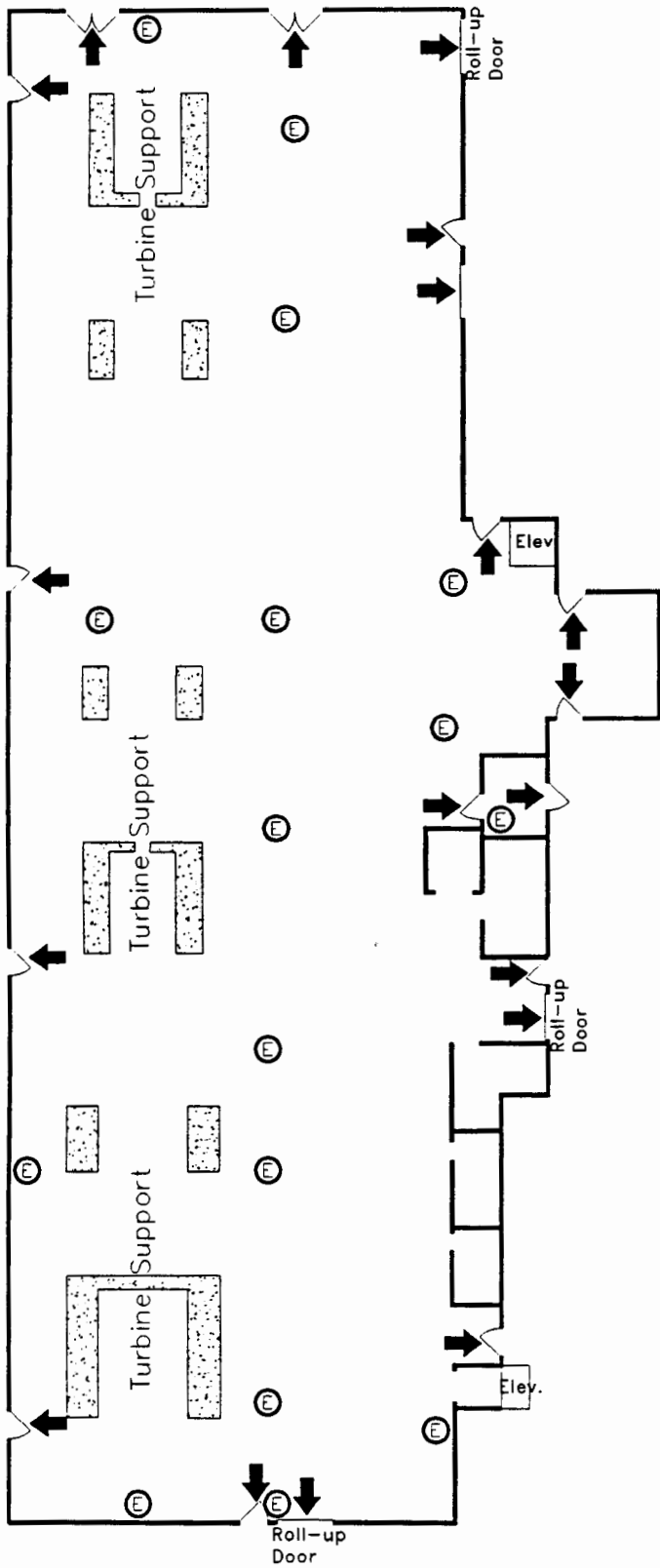
77	78						
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16

TUNNEL UNDER PLANT

79	80	81	82	83
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Appendix B
Fire Escape Routes
and Extinguisher Locations

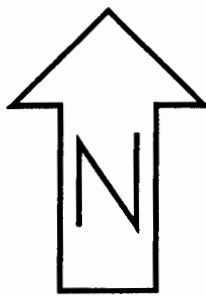
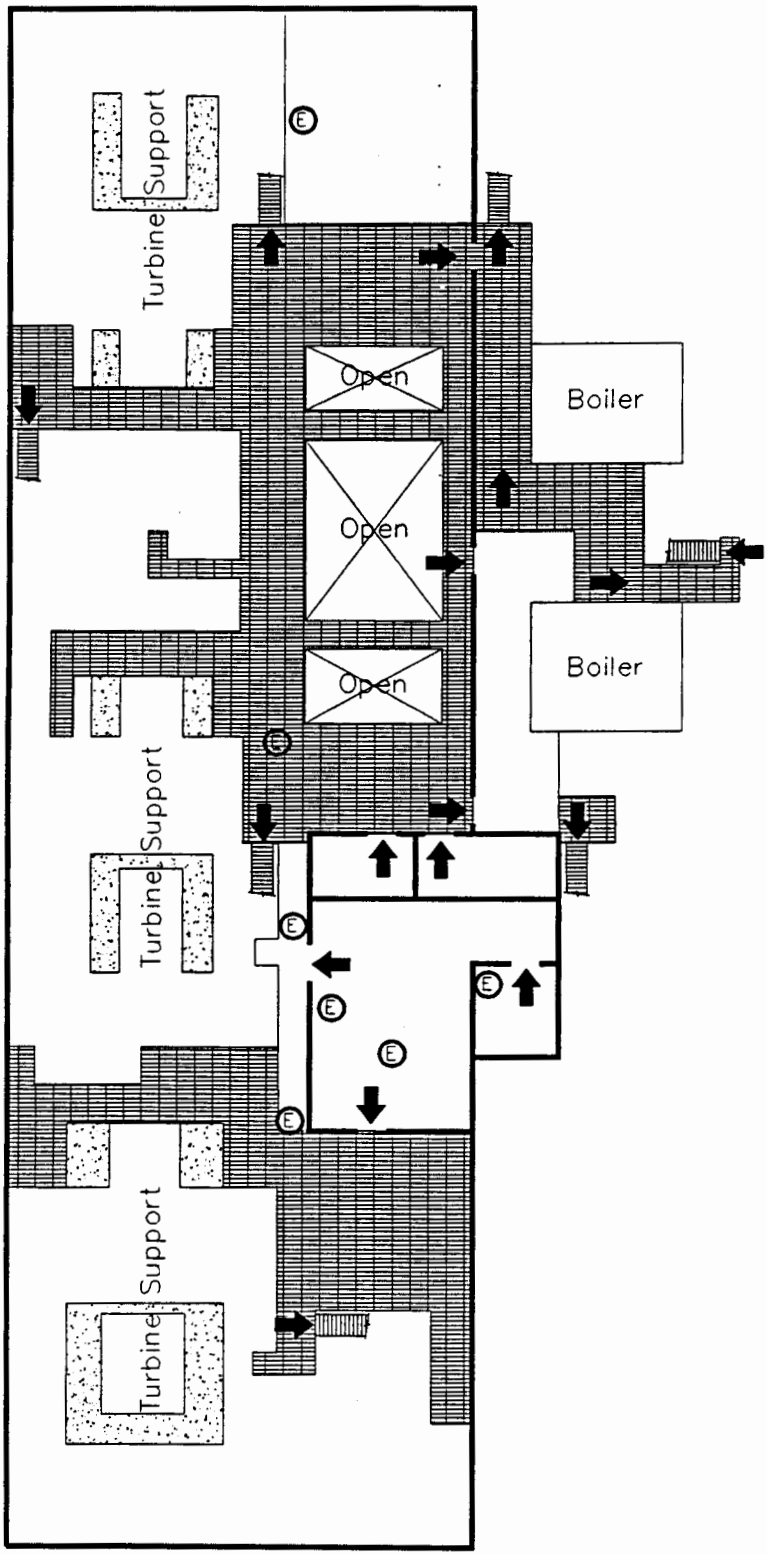


No Scale

REEVES POWER PLANT

- ⓔ Fire extinguisher location
- ➔ Emergency exits

GROUND FLOOR PLAN

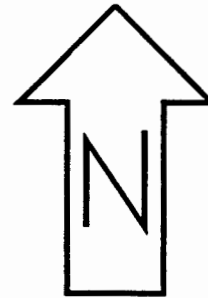
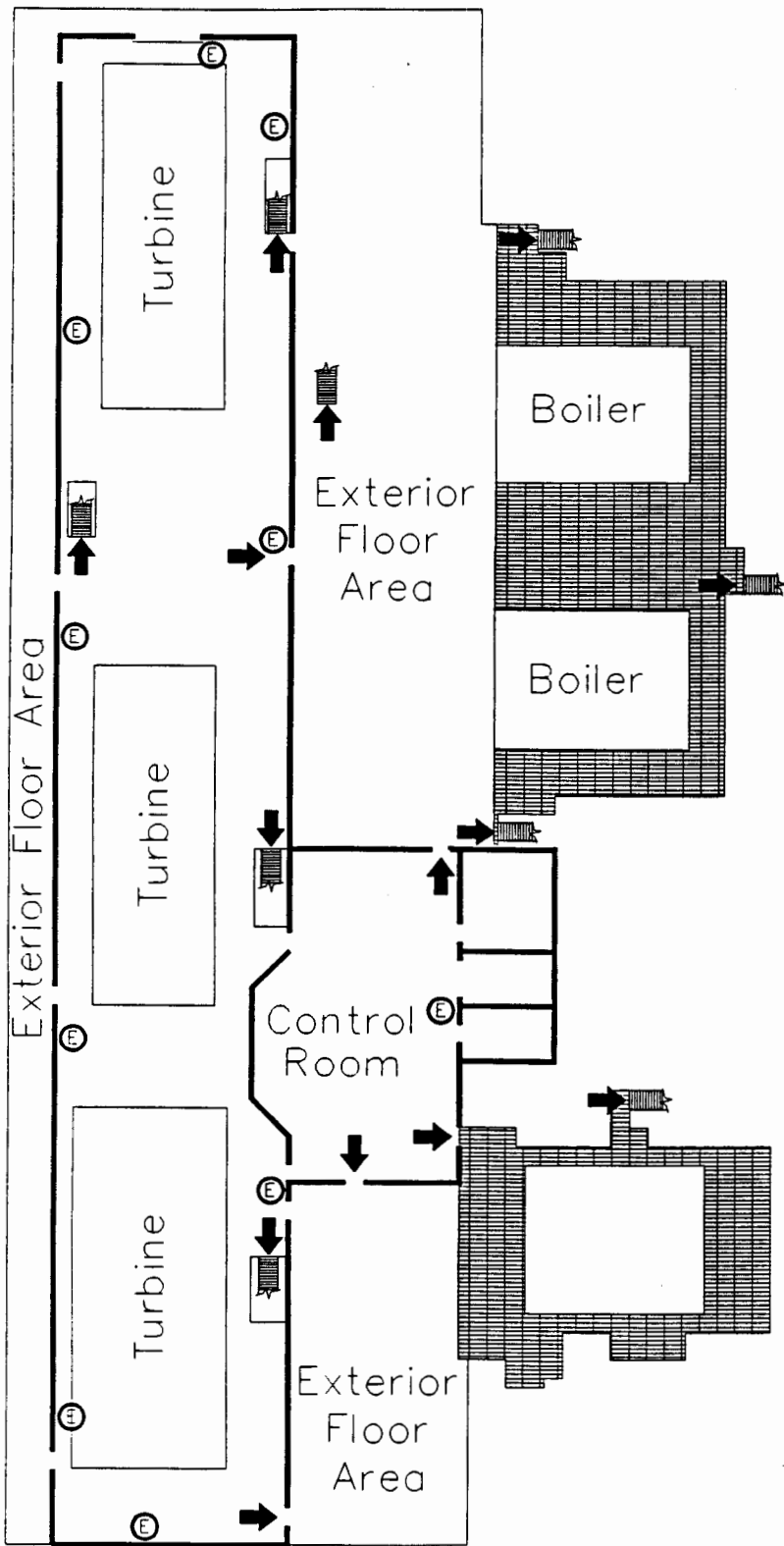


No Scale

REEVES POWER PLANT

- ⓔ Fire extinguisher location
- ➔ Emergency exits

MEZZANINE FLOOR PLAN



No Scale

REEVES POWER PLANT

- ⓔ Fire extinguisher location
- ➔ Emergency exits

OPERATING FLOOR PLAN

**TO VIEW THE MAP AND/OR
MAPS WITH THIS DOCUMENT,
PLEASE CALL THE
HAZARDOUS WASTE BUREAU
AT 505-476-6000 TO MAKE AN
APPOINTMENT**