

**Santan Generating Station
SRP
1005 South Val Vista Drive
Gilbert, Arizona**

Emergency Response/Contingency Plan

Santan Website

January 2006

Operations:

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Preface

The following Emergency Response/Contingency Plan outlines the general provisions of the Santan Generating Station response activities. Full disclosure is provided to emergency responding agencies through a secured website.

Santan Generating Station personnel do not directly respond to emergency situations. The response to these situations is delegated to the Incident Commander of the responding agency. Santan personnel cooperate with the Incident Commander in all respects.

The Incident Commander will be a member of the Fire Department. The Incident Commander will determine the correct response to the incident, including the need for community involvement. Community involvement may include the need to evacuate or shelter in place. If evacuation is needed, the Police Department will determine the mechanism for accomplishing this.

Should community involvement be necessary, notifications may be made through the media or through the Community Emergency Notification System (CENS). This system is operated by Maricopa County and rapidly notifies by telephone those living or working near the scene of an emergency and provides information and any required emergency instructions in English, Spanish and by a Telecommunication Device for the Deaf (TDD).

Santan has worked with the Fire Department to ensure the Fire Department has the information necessary to quickly and effectively respond to emergencies on site. The local fire stations toured the expansion project during the construction phase of units 5A and 5B in June 2001 and again in August, 2006. These tours were to provide the responders with a familiarity of the materials, processes and response equipment onsite and to address concerns by the responders.

Santan Generating Station has always had an open door policy with responding agencies. Drills have been performed in the past on site with responding agencies and a Table Top exercise is planned for February 2007.

SRP - Santan Generating Station

Emergency Response/Contingency Plan

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1.0 PLAN AND SITE INFORMATION

1.1 Purpose

The purpose of this plan is to eliminate and/or minimize hazards to human health and the environment in emergency situations. This plan details the actions to be taken in the event of a medical emergency, a hazardous material release, a fire, or an explosion.

1.2 Scope

This plan outlines the procedures for controlling hazardous substance releases to minimize the possibility of fire, explosion or any unplanned release to air, soil or surface water. It also outlines procedures for the handling and disposal of hazardous waste, including spill clean-up material. Santan personnel do not respond to releases of hazardous waste and or hazardous materials. Santan personnel only respond to incidental spills of known nature. This plan conforms to the Federal Environmental Protection Agency (EPA) regulation 40 CFR 262 and 40 CFR Part 265 Subpart C (hazardous waste) and applicable Arizona Department of Environmental Quality (ADEQ) and Federal SARA Title III (Community Right to Know). SARA (hazardous substances, extremely hazardous substances), RCRA (hazardous wastes), DOT (hazardous materials) and OSHA (hazardous materials) all regulate the materials covered in this plan. The term "hazardous material(s)" will be used throughout the plan and will represent any of the before mentioned hazardous terms.

1.3 Location

Santan Generating Station is located on the southeast corner of Val Vista Drive and Warner Road at 1005 South Val Vista Drive in Gilbert, Arizona, 85296. The access road leading to the main gate is off Val Vista Drive. There is an alternate access road to the plant site located off Warner Road at the north end of the plant. This road is only used when the main access road is blocked. All deliveries of hazardous materials use the main access road.

Santan is bordered by a residential housing development on the east and northeast, railroad tracks and a rural community on the south, and retail developments on the west and north.

1.4 Responsibilities and Training

The station manager has the following responsibilities:

- 1.4.1. To ensure proper response to all emergencies in order to minimize threats to plant personnel, the surrounding neighborhood or the environment. This includes ensuring that there is adequate equipment to respond to incidental spills and that site personnel are trained to react to emergencies.
- 1.4.2. To ensure that Santan personnel are trained to react to all emergencies, the station manager will ensure that all applicable employees are trained in the duties and responsibilities of being first on scene and a hazardous waste generator. Applicable personnel will also be trained in incipient fire fighting, basic first aid, CPR, and incidental spill response.

1.5 Dissemination, Amendments and Approval

2.0 EMERGENCY RESPONSE

2.1 Emergency Command System

2.1.1. Basic Response

The Gilbert Fire Department will be called whenever there is a fire or release of a hazardous material, which is beyond the capability of the Santan personnel to respond. An outside hazardous material response team is under contract with SRP to provide clean-up and waste management activities associated with the emergency. Santan personnel will only respond to incipient fires and incidental releases of hazardous materials. Santan personnel can take actions necessary to mitigate a release, turning off a valve or pump, up righting a container, etc., if all hazards are known and the actions can be performed safely. The Gilbert Fire Department will also be called to handle medical emergencies and permit-required confined space rescues. Should law enforcement be deemed necessary, the Gilbert Police will be contacted.

There are telephones located throughout the facility to provide timely communication in the event of an emergency. There are two-way radios available for use in responding to emergency situations and a cellular phone used by the emergency coordinator. In the event of an emergency, plant personnel will notify the Santan control room at x212. The working foreman is designated as the emergency coordinator and he/she will determine if outside agencies are needed to respond. The emergency coordinator will contact outside agencies needed to respond to the situation.

There is a dedicated line to the outside to dial the 911 emergency response system in the control room.

Santan's response to emergencies consists of two sets of responsibilities. These two functions are first on scene and emergency coordinator. The following paragraphs define the responsibilities of these two functions. The first on the scene is the first person to come upon the emergency incident.

2.1.2 First on Scene

The first on scene will assess the situation to the extent he/she can safely do so. If the situation involves an incidental spill or a fire in the incipient stage, then the first on scene may respond to the situation, if trained and if this can be safely done using the protective equipment readily at hand. This could include extinguishing a small fire with a hand-held extinguisher, turning off a valve, etc.

NOTE: The first on scene can only approach the incident (fire/spill/release) if the extent of the full risk posed by the incident is known and there is no danger to the first on scene.

If the incident is beyond the capacity of the first on scene to handle, the first on scene will notify the control room at x212 and give the following information.

1. His/her name.
2. Location of the emergency.
3. The size and nature of the emergency.

4. Any materials/equipment involved in the incident.
5. The extent of any injuries or personnel involved.

The first on scene will not break communication unless directed by the control room or a change in the emergency situation jeopardizes the safety of the caller.

In the event of a medical emergency, the first on scene may call for outside emergency services directly by calling SRP Security Operation at x3911. The first on scene will notify the emergency coordinator immediately after emergency services have been called.

2.1.3 Emergency Coordinator

The emergency coordinator has the following responsibilities:

- 2.1.3.1 Identifies the nature of the emergency by determining if anyone is injured and the extent of the injuries and the nature and extent of the release or fire/explosion. Determinations include what is released, how much, what equipment is involved, etc.

The emergency coordinator will also determine if the SRP Trauma Response Plan should be implemented. If so, the notification requirements listed in Trauma Response Plan found in Section 5 of the Risk Management Plans and Procedures Notebook will be followed.

- 2.1.3.2 Determines if outside assistance is needed and makes the appropriate notifications to Santan personnel, through the alarm system, and to the Gilbert Fire Department through SRP Security Services, x63911. A dedicated outside line is available to dial 911 in the control room for use as well. If 911 is called directly, SRP Security Services will be notified next.
- 2.1.3.3 Assesses the potential threat to human health and the environment with the help of the EPA Facility Representative and makes the necessary notifications for site and local evacuation, if necessary.
- 2.1.3.4 Directs the EPA Facility Representative to notify the National Response Center and local coordinating authorities.
- 2.1.3.5 Make best efforts to ensure that the release, fire, etc., does not spread to other areas of the facility.
- 2.1.3.6 During the emergency, the Emergency Coordinator will monitor other plant systems for leaks, pressure buildup or other concerns to prevent additional emergency situations.
- 2.1.3.7 When the situation is under control, provides for waste management with the assistance of the EPA Facility and outside agencies.
- 2.1.3.8 Prepares a written report for the National Response Center (NRC) and other agencies with the assistance of the EPA Facility Representative.

2.2 Evacuation Procedures

There is an emergency alarm at Santan used to signal an emergency that requires evacuation from plant areas to a predetermined assembly area. This emergency alarm is activated in the control room at the request of the emergency coordinator, or anyone who has determined the need for evacuation. There are several area alarms within the plant area that serve to alarm personnel of the presence of fire or release of fire suppressant. The activation of these alarms may or may not lead to the activation of the emergency alarm. These area alarms are detailed in Section 2.4, Fire Response and Equipment, and Section 2.5, Chemical Spill Response, of this plan.

All personnel, with the exceptions noted below, will report to the area south of the administration building, by the flagpole, when the emergency alarm sounds. Personnel will avoid apparent hazards on the way to this primary assembly area. The employee will report to the main gate if the assembly area cannot be reached safely. The employee will notify the control room from the front gate phone and give his/her location. Employees at either assembly location may be directed to relocate during any part of the emergency, if it is deemed necessary to ensure the safety of the personnel. Employees will escort visitors as directed above. Visitors or contractors who may perform unsupervised work will be informed of emergency procedures prior to being left alone.

Should it become necessary to evacuate personnel off the plant site, three exits are available for exiting the site. The main gate and the gate at the raw water storage tank (SW corner of the plant) lead an access road that leads to Val Vista Drive. The raw water storage gate is normally open and guarded during the day and locked at night. The gate can be opened by a key in the possession of operators. The third exit is the gate located at the northeast corner of the property leading to Warner Road. This exit is normally locked, but can be opened with a key.

The following personnel are exempted in the evacuation procedure described above:

1. The emergency coordinator will report to the control room.
2. The control room operator will remain in the control room.
3. Additional operating personnel will report to the control room upon hearing the emergency alarm.

NOTE: In the event that the control room is unsafe for occupancy, operating personnel will meet at the flag pole.

4. Operator personnel will ensure the Visitor Log Book, if safe to do so, gets to the emergency coordinator so any visitors on site can be accounted for.

The Emergency Coordinator will designate someone to immediately account for all visitors and personnel. If needed for the emergency, the Emergency Coordinator will also designate someone to ensure that the emergency diesel fire pump is operational. The Emergency Coordinator will notify the outside emergency responders upon arrival of any visitors or personnel not accounted for.

2.3 Medical Emergency

Many personnel have been trained in basic first aid and CPR and can render assistance until outside medical personnel arrive.

There are several first aid kits located throughout the facility for minor emergencies. Locations include the O & M Supervisor's office, the Chemical Lab, the mechanical maintenance shop, the weld shop, the tool room and all plant vehicles.

There are several eye wash/safety shower devices, safety shower only and one eyewash only devices for the immediate treatment of chemical exposure. The location of the eyewash/safety shower devices can be found on the inspection forms located on EMIS. These are inspected regularly.

2.4 Fire Response And Equipment

2.4.1. Fire Emergency and Response

The response to fires at Santan Generating Station is an incipient stage response as defined by OSHA Regulations, 29 CFR, and Part 1910.155(c) (26). This means that our employees will only be trained and qualified to fight fires in the beginning stages. The general rule to be used is:

If you can fight the fire with no more protective gear than ordinary street clothes and a hand-held fire extinguisher, you are fighting an incipient stage fire. Do not enter a structure to fight a fire.

The training and experience required to fight an interior structure fire exceeds that which Santan personnel currently receive. If you are fighting a fire inside a building, for example a fire in a trash container and the fire is getting larger, back away BEFORE it gets too hot or smoky.

Note: Any use of the fire fighting equipment requires notification to the O&M Supervisor so a work order can be written to service the equipment.

2.4.2 Fire Systems and Equipment.

The Plant has a Private Fire main System –Fire water is stored in the Raw Water Tank (800,000 gallons), the fire pumps take suction from the tank and pressurize the plant fire main loop. Fire Main System pressure is maintained by the Jockey pump, when a pressure drop occurs in the system the Electric driven pumps starts, if this pump is unable to maintain system pressure the Diesel Engine driven pump starts. The fire main loop supplies water to all Plant fire hydrants and fire sprinkler systems. The Electric driven fire pump is rated at 2500 GPM, Diesel Engine driven fire pump is rated at 2500 GPM and the Jockey pump is rated at 25 GPM.

2.4.2.1. Water Sprinkler Systems:

There are three types of water sprinklers systems fed from the plant fire water main.

1. Wet pipe sprinklers systems are in the Warehouse, North and South Maintenance Warehouse, Admin. Building Maintenance Shop and Tool Room, Water Treatment Building Office/Lab and Fire Pump Building.
2. Deluge sprinkler systems are on Units 1,2,3,4 station Transformers, Aux. Transformers and Lube oil Tanks.

3. Pre-Action sprinkler systems are on Cooling Towers 5 and 6, Unit 5 Steam Turbine Bearings and Unit 6 Steam Turbine Bearings

2.4.2.2 Foam Deluge Sprinkler Systems:

There are two AFFF (Aqueous Film Foaming Foam) Deluge systems these systems are heat sensor activated or manual released.

- 1 Unit 5 Steam Turbine Lube oil tank.
2. Unit 6 Steam Turbine Lube oil tank.

2.4.2.3. Carbon Dioxide Low Pressure System

Units S1-S4 gas turbine compartments are protected by a 2-Zone CO₂ Fire Suppression System. This system floods the gas turbine compartment, load tunnel, and accessory gear compartment with CO₂ when a heat sensor is activated or by manual discharge. An alarm sounds 60 seconds before the CO₂ is released to warn employees in the area to evacuate.

Units S5A, S5B, and 6 are protected by a 3-Zone CO₂ Fire Suppression System protect S5A-S5B gas turbines compartments. This system is heat activated and floods the gas turbine compartment and gas fuel valve compartment, #2 bearing compartment, and lube/hydraulic compartment with carbon dioxide when the sensor is activated or by manual discharge. An alarm sounds 60 seconds before the carbon dioxide is released to warn employees in the area to evacuate.

These systems are routinely inspected and are subject to regularly scheduled preventative maintenance. Maintenance schedules and inspections records are kept in maintenance files.

2.4.2.4. Water Sprinkler Systems:

There are three types of water sprinklers systems fed from the plant fire water main.

1. Wet sprinklers systems are in the Warehouse, North and South Maintenance Warehouse, Admin. Building Maintenance Shop and Tool Room, Water Treatment Building Office/Lab, Unit 5 Steam Turbine Bearings and Unit 6 Steam Turbine Bearings, and Fire Pump Building.
2. Delude sprinkler systems are on Units 1,2,3,4 station Transformers, Aux. Transformers and Lube oil Tanks.
3. Pre-Action sprinkler systems are on Cooling Towers 5 and 6.

2.4.2.5. Hand-Held Fire Extinguishers:

There are approximately 150 wall-mounted ABC dry chemical or Clean Agent fire extinguishers located throughout the plant site. Each extinguisher is labeled as to the type of fire it can extinguish. Each extinguisher has a number associated with it for the purposes of inspection and servicing. The fire extinguishers are inspected monthly for location and charge.

2.4.2.6 FM200 Clean Agent Systems --Steam Turbine buildings 5 and 6.

Each system is set up in 2 cylinder banks consisting of a Main system and reserve system. Four cylinders total per system. Activation is by smoke detector or manual release.

1. Unit 5 Steam Turbine Building, second level.
2. Unit 6 Steam turbine building, ground level.

2.5 Chemical Spill Response

2.5.1. Response to a Chemical Spill

Santan personnel only respond to incidental releases under OSHA Hazard Communication 1910.1200. Personnel are trained to respond to incidental spills involving commonly used materials on site.

The specific actions will depend upon the quantity and type of material released. Spill response will follow the following procedure:

- 2.5.1.1. Identify material spilled/released. This can be done from container labeling and process knowledge. Categorize the material. Is it toxic - corrosive – Flammable - Hazardous Waste? Response to hazardous waste spills must be performed by outside personnel.
- 2.5.1.2. Survey the area for conditions that would impact response. Is the area confined and poorly ventilated? Are there nearby ignition sources? Are there any drains nearby? A positive response to any of these questions would require outside response agencies to be contacted.
- 2.5.1.3. If all conditions are known and the release is defined to be incidental, then the first person on the scene can clean the spill up. All clean-up materials and debris will be containerized for the disposal. If there is any doubt as to the safe clean up of the spill, the first responder will page the working foreman and give the pertinent information. The working foreman, or designee, will contact the appropriate outside response agencies, if deemed necessary.
- 2.5.1.4. If the release is not incidental, the first on scene trained to operations level will safely take whatever action necessary to minimize the release.

Spills resulting in the generation of containerized waste will be documented using the Incident Report Form in Section 6 of the Risk Management Plans & Procedures.

Spills involving petroleum products will follow the procedures outlined in the Santan SPCC Plan.

All spill incidents will be reviewed at staff meetings and at tailboards.

2.5.2. Spill Response Equipment

Spill response equipment is maintained at Santan for use for responding to incipient releases. Absorbent materials, PPE, drums, liners, shovels, etc. are available through the central warehouse or the maintenance warehouse for spill response. Primary storage areas are inventoried monthly to ensure adequate supplies.

There are additional kits used to skim oil from water. The contents of these kits are described in the Santan SPCC Plan.

2.5.3. Spill Reporting

The EPA facility representative will be notified immediately if a released material leaves the plant site in any way. The EPA facility representative, working with Environmental Compliance, will ensure proper notification to the appropriate outside agencies.

3.0 CHEMICAL STORAGE AND SPILL PREVENTION

3.1 Hazardous Waste Accumulation Sites

Hazardous waste satellite accumulation sites, where hazardous wastes (solvents, flammables, etc.) may be collected or accumulated in approved containers on secondary containment are located at temporary storage sites used during overhauls or construction activities at locations where solvents are being used.

The central waste accumulation site is located in the building north of Unit 1. There is secondary containment for drums stored. There is normally only non-hazardous waste stored at this site.

The areas for accumulation of hazardous waste are maintained in a manner to minimize health hazards and environmental pollution. Each of the satellite sites is posted with the phone number to call in case of an emergency. Portable fire extinguishers are mounted near each satellite site. These areas shall remain clear of fire hazards. The access to these areas shall remain free from obstruction to allow admission of responding personnel. When the drums are not being used, they shall be kept closed. The EPA facility representative shall ensure that satellite drums will be moved to the central accumulation area within 72 hours of becoming full. Drums may remain in the central accumulation area for up to 270 days before being shipped to out of state disposal facilities.

3.2 Hazardous Materials Storage Sites

Materials that are defined by the Hazard Communications Standard as "physical hazards or health hazards" are stored in the following locations.

1. Warehouses
2. Water treatment lab, water treatment buildings
3. Chemical feed areas for the cooling towers
4. Mechanical maintenance shop area.
5. S1-4 Basement
6. Boiler chemical feed areas for S5&6.
7. S5-6 Steam Turbine Building
8. Lube shed/Weld Shop
9. Paint shed/Waste Storage Shed
10. Units 5A, 5B and 6A

Oil storage is detailed in the Santan SPCC Plan.

Chemicals that are defined as "extremely hazardous" or hazardous materials stored in quantities causing concern are listed in the on-line emergency plan for use by emergency responders.

These materials are used in treatment of circulating and make-up water and in the NO_x pollution control system.

Spills near the cooling towers would be retained on-site by existing plant drainage system. Spills in the cooling tower treatment building/areas would be retained in a secondary containment. Spills in S5&6 boiler chemical feed areas would be retained in a secondary containment system.

Santan is manned 24 hours per day/7 days per week. Operators routinely inspect the premises. Plant personnel oversee all deliveries. Any release would be seen in a timely manner to ensure proper clean up.

Typical vendor route is east on I-60 to Val Vista Drive, south on Val Vista Drive to the Santan access road.