

Texas ESRD Emergency Coalition

Policy and Procedures

**Recommendations by
Community Coalition
for ESRD Facilities**





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EMERGENCY TELEPHONE NUMBERS

Your facility is in RAC _____

Electric Company _____

Emergency Contact Number: _____

Water Company _____

Emergency Contact Number: _____

Gas Company _____

Emergency Contact Number: _____

Local EOC contact name _____

Phone number _____

Local Health Department contact _____

Phone number _____

TEEC hotline number 866-407-3773

KCER Toll Free Number 866-901-3773

Corporate Facility Patient hotline number _____

Corporate Facility Staff hotline number _____

(if applicable)

Primary Facility Emergency Contact _____

Off- site phone number _____

Secondary Facility Emergency Contact _____

Off-site phone number _____

Back up Water Supply Contact _____

Phone number _____

Generator Provider Contact _____

Phone number _____

Back up Facility Contact _____

Phone number _____



DISASTER PREPAREDNESS / PLANNING RESOURCE: 2013

Introduction: All ESRD facilities are required to develop policies and procedures for emergency/disaster preparedness. To meet the unique needs of ESRD patients and providers and to minimize the effects of an emergency, one must plan ahead to be prepared **BEFORE** an emergency strikes. In Texas, State Licensure Rules for disaster also apply.

This resource material is to assist ESRD facilities in the development and improvement of their facility-specific emergency preparedness plan. As you know, the Federal regulations, as well as the Interpretive Guidelines are utilized by State Survey Agencies in their certification activities. The following guidelines refer to the regulations and should be considered minimum standards. Federal guidelines emphasize that policies must be written that drills be conducted (*at least annually*), and that staff and patients be trained in emergency procedures.

FEDERAL REGULATIONS (Subpart U):

Section V408 STANDARD: Emergency Preparedness

Written policies and procedures specifically define the handling of emergencies, which may threaten the health and safety of patients. Such emergencies would exist during a fire or natural disaster or during functional failures in equipment. Specific emergency preparedness procedures exist for different kinds of emergencies. These are reviewed and tested at least annually and revised as necessary by, or under the direction of, the chief executive officer. All personnel are knowledgeable and trained in their respective roles in emergency situations.

- (1) There is an established written plan for dealing with fire and other emergencies which, when necessary, is developed in cooperation with fire and other expert personnel.
- (2) All personnel are trained, as part of their employment orientation, in all aspects of preparedness for any emergency or disaster. The plan should provide for orientation and regular training/drills for all personnel in all procedures so that each person promptly and correctly carries out specified roles during an emergency.
- (3) There is available at all times on the premises a fully equipped emergency tray, including emergency drugs, medical supplies & equipment, and staff are trained in its use.
- (4) The staff is familiar with the use of all dialysis equipment and procedures to handle medical emergencies.
- (5) There is enough staffing to allow for coverage of unit, as well as to handle any medical emergency, which may arise.
- (6) Patients are trained to handle medical and non-medical emergencies. Patients must be fully informed regarding what to do, where to go, and whom to contact if a medical or non-medical emergency occurs. Communication should also occur with families and significant others, as applicable.

Ascertain whether there are set procedures for emergencies (fire, disaster, and medical), whether everyone knows their role in such emergencies and whether there is an emergency tray with drugs kept current. Patients who are undergoing dialysis must be aware of procedures for disconnecting themselves from the dialysis equipment in case of fire or other natural disaster.



Drills are essential in maintaining assurance that responses will be automatic when an emergency does arise. The Life Safety Code does not have a specific requirement for outpatient clinics or dialysis activities. Consequently, because of the nature of the ESRD patients being artificially restrained by means of the dialysis mechanism, certain facility requirements for drills are pertinent. There may be a need to demonstrate (with one patient) all of the techniques required for fast, safe and efficient completion of the process of disconnection secondary to the occurrence of an emergency. Drills are to test the efficiency, knowledge, and response of personnel. The purpose is not to disturb or excite patients. The regulatory requirement is that the procedures for different types of emergencies be tested at least annually. Supplemental training and drills are encouraged.

Section V770 Affiliation Agreement:

- (1) A renal dialysis facility and renal dialysis center have in effect an affiliation agreement or arrangement with each other, in writing for the provision of inpatient care and other hospital services.
- (2) The affiliation or arrangement provides the basis for effective networking relationships under which inpatient hospital care or other hospital services are available promptly to the dialysis facility's patients when needed. The dialysis facility has in its files, documentation from the renal dialysis center to the effect that patients from the dialysis facility will be accepted and treated in emergencies.
- (3) **AFFILIATION AGREEMENT:** In preparing for emergency planning, each dialysis facility should arrange for a mutual aid and affiliation agreement with another facility to provide emergency services and continuation of dialysis therapy for their patients. The agreement should include, but not be limited to the following: shared staffing arrangements, inclusive of credentialing, liabilities, salaries, orientation, and training; billing arrangements; shared equipment and supply arrangements; and medical records arrangement.

It is strongly recommended that consideration be given to establishing a local affiliation (back-up unit), as well as a distant affiliation (back-up unit), in the event that a catastrophic event affects a broad area. This may not be as critical for corporate dialysis facilities, but it is paramount with independent dialysis facilities.

Section V725 Medical Records

ESRD regulations require facilities to safeguard medical records against loss, destruction, or unauthorized use.

DSHS Emergency Rules

[Next Rule>>](#)

Texas Administrative Code

TITLE 25 HEALTH SERVICES

PART 1 DEPARTMENT OF STATE HEALTH SERVICES

CHAPTER 117 END STAGE RENAL DISEASE FACILITIES

SUBCHAPTER D MINIMUM STANDARDS FOR PATIENT CARE AND TREATMENT

RULE §117.45 Provision and Coordination of Treatment and Services

c) Emergency preparedness.

(6) A written disaster preparedness plan for natural and other disasters specific to each facility shall be developed and in place.

- The plan shall be based on an assessment of the probability and type of disaster in each region and the local resources available to the facility.



- The plan shall be reviewed by the governing body at least annually.
- Contact shall be made annually with a local disaster management representative to assess the need to revise the plan and to ensure that local agencies are aware of the dialysis facility, its provision of life-saving treatment, and the patient population served.
- The plan shall include procedures designed to minimize harm to patients and staff along with ensuring safe facility operations.
- The plan and in-service programs for patients and staff shall include provisions or procedures for responsibility of direction and control, communications, alerting and warning systems, evacuation, and closure.
- Each staff member employed by or under contract with the facility shall be able to demonstrate their role or responsibility to implement the facility's disaster preparedness plan.

VULNERABILITY (RISK) ANALYSIS

All dialysis facilities are vulnerable to any number of natural or manmade hazards. Reviewing the following analysis will enhance your ability to predict emergencies/disasters, which may be faced in the future.

An analysis of your facility's vulnerability to particular hazards can provide the basis for developing and maintaining a practical, workable emergency operations plan or checklist and appropriate standard operating procedures. In analyzing and assessing the vulnerability of your dialysis facility, consider your unique environmental, indigenous, and economic factors as the basis for:

- *Estimating the likelihood of damage, either by direct effects or by indirect effects resulting from a facility(s) damaged elsewhere.*
- *Making plans for protective measures within individual facilities to minimize the impact on daily operations and structural damage.*

Each facility must recognize their vulnerability to particular hazards. For example, if your facility is located near an industrial plant, the facility may be vulnerable to the effects of explosions or chemical leaks. Facilities located near rivers or creeks are at risk for flooding or potential water contamination.

All facilities are possible targets of violence, sabotage or bomb threats. It is important to realize that just because your facility is not considered at risk during a disaster or emergency, your proximity to facilities that can or are affected could affect your operations if the impaired facility needs to transfer patients. The following is a list of emergencies that might be experienced.

Manmade Hazards

Bomb threat
Hazardous spills (chemical)
Utility Failure (electric, water)
Equipment Failure
Explosion
Gas Leak
Sabotage/violence
Nuclear Events

Natural Hazards

Hurricane
Earthquake
Fire
Flood
Tornado
Severe storms
Snow & Ice
Droughts



SPECIAL PATIENT VASCULAR ACCESS CONSIDERATIONS

- **Implanted vascular access ports (e.g., Life-Sites)** – Ascertain that any applicable patients have copies of cannulation procedures/techniques, as well as supplies to last for at least two weeks in the event of evacuation. In the event of evacuation(s), early transient placement is suggested for these patients to ensure staff capabilities at the receiving dialysis facility.
- **Buttonhole Technique** -MAKE copies of applicable buttonhole cannulation techniques and/or procedures, as well as any special instructions for vascular access cannulation to accompany patient records in the event of evacuation. Be sure patient is educated about the buttonhole technique and can discuss patient-specific requirements with transient dialysis unit.

FACILITY EMERGENCY PREPAREDNESS

If you prepare for emergency situations, the unit response can be more efficient during an actual emergency. Consider the following when developing and/or reviewing your plan.

- Seek all local emergency resources as a means of networking (fire officials, emergency management agencies, American Red Cross, etc.).
- Have an affiliation agreement with a back-up provider.
- Maintain current telephone list of all staff (remember to prepare a contingency plan for use when telephone service has been disrupted).
- Maintain current list of all emergency telephone numbers, contacts and supply vendors.
- Maintain an emergency supply box.
- Provide protection of patient records (i.e., maintain computer discs in a fireproof box which contains patient dialysis prescriptions, hepatitis status, drug & dialyzer allergies. **THIS INFO MUST BE UPDATED ROUTINELY!**)
- Provide patient and/or significant other education for emergency preparedness and documentation of all patient education, reviews.
- Maintain facility checklist for emergency preparedness.
- Maintain current patient telephone number list.

EMERGENCY SUPPLIES FOR FACILITY

The following is a list of suggested emergency supplies for your facility. Adjust the quantities based on your facility size and don't forget pediatric supplies if applicable. Keep supplies in an accessible area and make area known to all staff. Remember to check expiration dates on supplies.

SUPPLIES: Portable radio, gloves, protective eyewear, protective masks, airway(s), tongue blades, S-tube, two (2) 1000 cc bags 0.9% Normal Saline, four (4) fistula needles, tourniquet(s), flashlight & spare batteries, portable BP cuff/sphygmomanometer, stethoscope, Oxygen tank with mask/cannula, tape, gauze, arm board(s), alcohol wipes, two IV administration sets, two tube-occluding forceps/clamps, and one protective mouthpiece for CPR. PD supplies (if applicable) should include outlet port clamps, transfer sets, beta clamps, minicaps, variety of PD solutions, and connection systems.

STAFF EMERGENCY PREPAREDNESS

Suggestions for your staff education program:

- Staff members should be encouraged to make personal emergency plans and maintain adequate emergency supplies in their homes.
- Have a unit-specific emergency plan, including all responsibilities of all staff members.
- Fire / evacuation drills and documentation of reviews



- Policies and procedures for power failure
- Policies and procedures of water outage
- Policies and procedures for emergency termination of dialysis services
- Preparation of emergency / evacuation supplies
- First aid / CPR
- Suggested assignments for staff in evacuation of facility after emergencies. Review responsibilities during drills.

NURSES

- (1) Assist with assessment and evacuation of patients.
- (2) Retrieve patient records and emergency supply box.
- (3) Collect blankets and sheets while leaving building and distribute to patients and /or injured persons.
- (4) Once outside, assist patients and/or injured persons as needed (i.e. , administer first aid, assessments of status, accesses, etc.).

TECHNICIANS

- (1) Assist with transfer of patients from dialysis chairs to wheelchairs or from chairs onto sheets on the floor.
- (2) Transfer patients from building via wheelchairs, sheets.
- (3) Retrieve solutions and tubings, extra supplies as needed.

SECRETARIES

- (1) Call local emergency number for assistance.
- (2) Retrieve rosters of patients and staff.
- (3) Retrieve patient records and/or disc with patient information.
- (4) Conduct roll call of patients and staff immediately outside of building.

DIETITIANS

- (1) Ensure that patients are aware of dietary/fluid complications during crisis situations.
- (2) Have dietary/fluid fact sheet available for easy reference for patients and families.

SOCIAL WORKER ROLE

The Dialysis Unit Social Worker has some very “concrete” tasks during emergencies and/or disasters. It includes reviewing the patient’s needs for shelter and transportation and keeping updated information on the same.

Patient Needs Assessment: Prior to any weather-related season, consideration should be given to hurricane-prone areas. However, the sample could be modified to address any weather-related situations.

Shelter and Transportation: In the event that a weather emergency such as a snowstorm, ice storm, or flood is forecast, the social worker should review with each patient/family contingency plans for evacuation from home, if necessary. This includes knowing where the patient will be staying (friend, relative, or a shelter). Obtaining phone numbers is necessary in order to contact the patient regarding any change in treatment (time, location, etc.).

Planning for alternative transportation is an absolute necessity. “Normal” transportation will most likely be disrupted by the disaster itself. Discussions should take place between the social worker and patient/family about emergency transportation options. Your facility may want to generate and distribute a “tip sheet” for each patient, which lists emergency phone numbers, community resources, etc. In the event that the social worker has responsibilities for more than one dialysis unit, contingency plans should be included in policies/procedures to address need for assisting social worker as necessary.



- * Possible resources for emergency shelter include friends, relatives, American Red Cross shelters (check with local chapter), motels/hotels, churches, schools, and vacancies at local apartments/condos.
- * Possible resources for emergency transportation include military reserve units, bus/taxi, area agency on aging, church affiliated groups, ambulance, highway departments and a last resource is your local police. The police are usually extremely busy in a time of community crisis.

Along with these concrete tasks of assisting with shelter and transportation, the social worker has an important role to alleviate the stress inherent in the situation. Any type of change in routine can cause stress for patients and staff alike. The change in routine that a disaster can cause in a dialysis unit can be immobilizing. The social worker, as a mental health provider, can assist in helping patients, families, and staff members effectively cope with the additional stress of the disaster.

WATER AND POWER OUTAGE

Maintenance of water supply: A well informed staff and a close relationship with both a reputable water treatment vendor and your local water authority are crucial to ensure a continuous water supply in the event of an emergency. Your local water authority must be made aware that you provide a life-sustaining therapy (DIALYSIS). It is important that your location and particular needs such as quality and quantity are known. This is particularly important for freestanding facilities as your needs may not be as clearly recognizable as with hospital based facilities.

Common causes for water supply failures are contaminated source of water supply, frozen pipes, broken water mains, and fires. Reduced water pressure from broken water mains or fires requires the use of a booster pump. Booster pumps can be rented or purchased from your water treatment vendor. Total absence or intermittent reduction of supply water requires bulk potable water from water supply vendor to be processed through existing water treatment systems. Bulk purified water from a treatment vendor can be utilized to directly feed the service loop to individual dialysis stations. It is highly recommended that portable activated carbon and DI exchange tanks followed by appropriate monitoring and 0.2 micron (or better) filters be used. Stainless steel or food grade plastic tanks should be used for the sole purpose of transporting or storing potable water is required. Bulk water, whether potable or purified, must be pressurized to obtain the minimal pressure requirements of the reverse osmosis apparatus or dialysis machines.

The use of DI tanks is highly recommended when using transported water due to the high waste levels (up to 50%) when using water softeners and reverse osmosis. Remember an assessment is in order if you work in an area of frequently below freezing temperatures as to outside storage of water. NOTE: These recommendations will work with all dialysis water systems - direct feed and recirculating. Facilities, which utilize recirculating systems with storage tanks, activated carbon, DI, and submicron filtration as final treatment, are easier and less costly to adapt for this purpose. This system also serves as an alternative treatment in the event of a reverse osmosis or other water treatment component failure.

Use care in your choice of a vendor to assure quality water and to minimize interruption of dialysis therapy to patients. Once alternate sources for your emergency needs are identified, coordinate meetings to plan design modifications (if needed) to permit efficient implementation of emergency plans.



WATER USED FOR DIALYSIS MUST BE TESTED TO ENSURE IT MEETS THE REQUIRED AAMI QUALITY STANDARDS.

Maintenance of Electric Supply: Just as maintaining water supply is crucial to the provision of uninterrupted dialysis therapy, being prepared for power interruption is also vital. Again, like water, some thought should be given to how you will handle a loss of electricity and the extent of your backup plan. Plans can range from having battery-powered lighting for evacuation of the building to installation of a permanent generator which will handle power for the whole facility. Generators may be a consideration for your facility if power interruptions occur frequently.

Emergency Generators: Consideration should be given to expense, space and ongoing maintenance, but under emergency situations, they might make it possible to provide dialysis services. As you perform your vulnerability (risk) assessment, consider potential of owning vs. renting a generator. Things to consider:

- (1) Determine How Much Power Needed / Size of Generator;
- (2) Know Where to Obtain Generators and Related Equipment; and then
- (3) Develop a Generator Plan, inclusive of addressing fuel and security needs.

How to Calculate Critical Electrical Loads

Use the following formula to express the number of kilowatts needed:

Amps X Volts = Watts, Watts / 1000 = Kilowatts

Number of machines X (Kilowatts per machine) = Minimum Electrical Load

EXAMPLE: A Fresenius 2008E draws 15 amps maximum and runs on 110 volts

15 amps X 110 volts = 1650 watts

1,650 watts divided by 1,000 = 1.65 kilowatts per machine

ACKNOWLEDGMENTS: This resource was developed after reviewing many materials generated from other Networks, CMS, FEMA, and the American Red Cross. Thanks to all.



Facility to Share with Patients Peritoneal Dialysis Emergency Disaster Evacuation Items

In the event of an evacuation from your normal PD dialysis setting, it is important that you have the following supplies in a bag to take with you as you leave your home.

1. Bag labeled “Emergency Evacuation Supplies”
2. Hand Sanitizer
3. Dialysate Bags for manual exchanges (Take a mix of high, low and medium bags)
4. Mask (1/2 box)
5. Mini-caps (1/2 box)
6. 2 Scissor-type plastic clamps
7. IV pole or 1 Hanger; if IV pole does not fold up to hang dialysis solution
8. Plastic bags (couple)
9. IV sponges (1 box)
10. Gauze (1 box)
11. 1 bottle of Except or other approved disinfectant
12. Clean bath size towel
13. Extra tubing (1-2)

Important Telephone Numbers:

Emergency Numbers

Fire Department:	911
Police Department:	911
Sheriff Department:	911 or _____
Ambulance Department:	911
Poison Control:	1-800-222-1222
Office of Emergency Services:	_____
Local Red Cross Office:	_____
Local NKF Office:	_____
Water Company:	_____
Electric/Gas Emergency Number:	_____
Plumber:	_____
Transportation Company:	_____
Phone Company:	_____

Medical Numbers

Your Doctor:	_____
Your Dialysis Center:	_____
Your Dialysis Center Emergency Number:	_____
Back-up Dialysis Center:	_____
Hospital (the one you usually go to):	_____
TEEC Emergency Number	1-866-407-3773

Personal Contacts

Family Member/Friend:	_____
Family Member/Friend:	_____
Family Member/Friend:	_____
Contact Person Outside Area:	_____



AUTHORIZED EMERGENCY HEALTHCARE WORKER

TO:
Authorized Personnel

FROM:

RE:
Affected Areas

DATE:

NAME: _____

Sample Only

****PHOTO ID REQUIRED****

The Texas ESRD Emergency Coalition has authorized the person named above
to provide emergency and technical assistance and to make damage assessments
at _____ Dialysis Facility.

Dialysis treatments are required to be given every 2 – 3 days in order to sustain life for patients. Consequently, it is imperative that we restore these dialysis facilities to full operational status as soon as possible. We appreciate your assistance in this effort.

Should you need to verify the credentials for this individual please call: _____



GENERATOR TIPS

1. Has generator training been provided to a staff member?
2. Does a staff member know how to test the generator?
3. Do you know what size generator the facility needs or uses?
4. Has facility electrical capacity been evaluated?
5. Is the facility able to safely use the generator?
6. Does the facility have any information for trouble shooting?
7. If you have a portable generator, have you addressed security for the generator?

FUEL

1. Do you have an alternate fuel source or backup fuel source for the generator?

Note: In the event of a wide power outage fuel will be needed for generators and for employees to get back and forth to work.

SECURING THE BUILDING

- ✓ Ensure power is turned off.
- ✓ Ensure that medications that must be refrigerated are kept cold.
 - Set up a backup agreement with a pharmacy to keep medications cold.
 - Keep icepacks in your refrigerator (should hold temperature for approximately 24 hours).
- ✓ Turn water main off.
- ✓ Turn Natural Gas off.
- ✓ Board up windows.

BACK UP WATER SUPPLIES

1. Do you have a backup agreement with a water vendor?
2. Does your unit have an interior or exterior water connection? If no, a connection would need to be created.
3. Are there extra pre-filters available at the facility?
4. Are the necessary connectors available and accessible?
5. Have technical staff and any other appropriate staff members been trained on properly connecting the out sourced water supply?



POST DISASTER CONSIDERATIONS

Even though the Dialysis Facility may be ready to receive and treat patients, there are other important necessities that should be evaluated prior to opening the facility.

Y/N

1. Is the electricity on at patients' residence?	
2. Can the patient access their residence?	
3. Is the water potable at the patients' residence?	
4. If the residence uses Natural Gas for heating and cooking is it available?	
5. Are Gas Stations open for business?	
6. Are Grocery Stores open for business?	
7. Is the Hospital open with which the Dialysis Facility has an agreement?	
8. Does the Hospital have operational ambulatory services?	
9. Has local government officials allowed residence to return?	

Additional Comments:



Post Disaster Facility Start- Up Recommendations

1. Utility Services contacted & availability status discussed.
2. Carbon Tanks manually backwashed & Softener regenerated prior to RO start up. Check incoming chlorine levels. Change prefilters as necessary.
3. RO (s) disinfected & rinsed as required by manufacturer and facility specific policy and procedure. Tested for residual disinfectant levels.
4. Water Treatment Distribution System disinfected & rinsed as required by facility specific policy and procedure. Tested for residual disinfectant levels.
5. Disinfect & rinse the Bicarb Mixer & if applicable the Bicarb Distribution Loop as required by facility specific policy and procedure. Tested for residual disinfectant levels.
6. Disinfect & rinse bicarb containers, caps and draw tubes as required by facility specific policy and procedure. Tested for residual disinfectant levels.
7. All Dialysis Machines chemically disinfected, rinsed & tested for residual disinfectant levels.
8. Bacteria and Endotoxin Tests obtained as soon as possible and results within limits on Product Water used to prepare dialysate, reprocess dialyzers and mix concentrates. (Use Facility Specific Parameters)
9. All Dialysis Machines brought up into Dialysis Mode and samples obtained for Bacteria and Endotoxin testing. (Use Facility Specific Parameters)
10. Chemical (AAMI) Analysis obtained as soon as practical on water used to prepare dialysate and results within limits.
11. Water Treatment Testing completed, documented and within facility parameters. Recommendation to increase frequency of testing.
12. All Quality Control documentation to include Water Treatment Logs, AAMI Analysis, Bacteria and Endotoxin tests reviewed and approved by the Medical Director.
13. Emergency Equipment tested for safe operation.
14. Evaluate the need to perform electrical leakage/ground wire resistance on all equipment due to possible water damage & humidity problems.
15. Patient Scale tested for proper operation and accuracy.
16. Hand washing sinks tested for proper operation.



17. Eyewash and Drench shower tested and in good working order.
18. Evaluation interior lighting and replace bulbs as needed.
19. Evaluation HVAC System for operation and set as needed.
20. Dialysis machines brought up into conductivity and tested for accuracy. (Perform any automated or manual tests as required by manufacturer)
21. Cleaning Services completed as needed.
22. Medication/Lab refrigerators checked for proper temperature and within limits as required by facility specific policy and procedure.
23. Patient/Staff Parking area free of debris. (Handicap spaces and ramps accessible)
24. Evaluate and insure the stockroom and supplies are usable and not damaged.
25. Take inventory of disposable supplies and determine adequacy.
26. Assess for any hazardous chemical spillage.

IMPORTANT NOTE: Consult with local contractor regarding any structural issues if necessary.



Other Resources

Texas ESRD Emergency Coalition (TEEC)

<http://www.texasteec.org>

TEEC Patient Resources

<http://www.texasteec.org/tools/index.asp>

Kidney Community Emergency Response (KCER) Coalition

<http://www.kcercoalition.com/>

KCER Patient Resources

<http://www.kcercoalition.com/resources.php>

AAMI Recommended Practices for Dialysis Water Treatment Systems (RD 52 and RD 62)

<http://aami.org/publications/standards/dialysis.html>

Guidelines for Dialysis Care Providers on Boil Water Advisories

http://www.cdc.gov/ncidod/dhqp/dpac_dialysis_boilwater.html

Water Related Emergencies

www.bt.cdc.gov/disasters/watersystemrepair.asp

Tips about Medical Devices and Hurricane Disasters

www.fda.gov/cdrh/emergency/hurricane.html

Medical Devices that Have Been Exposed to Heat and Humidity

www.fda.gov/cdrh/emergency/heathumidity.html

Medical Devices Requiring Refrigeration

www.fda.gov/cdrh/emergency/refrigeration.html

Fact Sheet: Flood Cleanup – Avoiding Indoor Air Quality Problems

www.epa.gov/iaq/pubs/flood.html

NIOSH Hurricane Response: Storm and Flood Cleanup

www.cdc.gov/niosh/tipics/flood

OSHA Fact Sheet

www.osha.gov/OshDoc/data_Hurricane_Facts/Bulletin3.pdf

American Institute of Architects: Procedures for Cleaning Out a House or Building Following a Flood

www.aia.org/liv_disaster_floodproc



UTILITIES & SUPPORT SYSTEMS

1. Is the power on?
2. Is there incoming water?
3. Is the HVAC system operational?
4. Is the phone system operational? Backup analog phones?
5. Is the sanitary sewer system working?
6. Is there any damage to medical, computer or electronic equipment in the facility?
7. Is there any damage to the water treatment system and is it operational?
8. Is there any damage to the inventory supplies? Wet?
9. Is the Security, Fire Monitoring & Sprinkler Systems operational?

Comments:



POST DISASTER PRELIMINARY DAMAGE ASSESSMENT

EXTERNAL INSPECTION

1. Are there surrounding street closures or impediments?
2. Are entryways, sidewalks & parking lots safe?
3. Are there any power lines down or fallen trees near the building?
4. Is the building secure? All doors still locked? Any evidence of illegal entry?
5. Any exterior wall damage? Examine all sides.
6. Any visible roof damage?

Comments:

INTERNAL INSPECTION

1. Any internal flooding or water damage?
2. Are there any unusual smells? gas, smoke, electrical, chemicals?
3. Are there any unusual sounds? Hissing? Electrical arcing?
4. Are there any hazardous material spills or leakage?
5. Are there any broken pipes or water leaks?
6. Are there any cracks in the interior walls or ceiling?



Are there any broken windows?

Comments:

2013 Updates: added contact name and phone number for generator provider and backup water supplies. Added page 13: generator tips, fuel, securing the building, and backup water supplies. Updated dates and other resources list.