

The Glass Container Advisory, LLC

**Partial Glass Container Plant Disaster Recovery Check List**

No glass plant emergency can be adequately anticipated. Effective response requires on-site evaluation by qualified practitioners.

**Users of this check list assume all risks**

Notes

Team Performance

- Disasters can immobilize team participants
- Advance planning and training greatly improves personnel effectiveness
- Ensure every participant has an assignment to keep them engaged and focused
- Even a low level of physical exertion helps reduce stress

Personnel Safety

- Account for all personnel
- Treat the injured
- Activate the business continuity plan
- Establish a site incident coordinator and response team
- Establish that emergency personnel have the immediate hazard contained
- Establish and maintain a safe perimeter for non-essential personnel
- Establish if the building/structure is safe to enter
- Contain all flammable materials and gases
- Contain all hazardous/toxic materials and gases
- Establish that electrical and compressed gas systems are safe
- Identify risks of burns or scalds from water or molten glass
- Advise personnel of potential hazards and escape routes
- Assign personnel to work in teams of at least two
- Provide radio communication if possible
- Ensure there is suitable lighting and visibility

Coordination

- Notify first responders if required
- Position attendants to guide first responders to the incident area
- Provide a knowledgeable individual to coordinate with first responders
- Advise first responders of air, water, hazardous materials, spill or other issues
- Advise regulators of air, water, hazardous materials, spill or other issues
- Estimate impacts on personnel, infrastructure, finished goods and the environment
- Determine if there are impacts beyond the plant boundaries
- Brief senior management and third party insurers
- Establish a meeting schedule, agenda and note taker

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- Advise OSHA of any reportable injuries or deaths
- Establish leaders and teams for around the clock coverage
- Plan to test services and equipment as soon as possible
- Determine hourly personnel needs and advise workers of work schedules
- Assign procurement, expediting and receiving personnel
- Secure standby power, fuel and liquid oxygen if needed
- Coordinate with electrical and natural gas suppliers before increasing draw
- Assign cost control responsibilities
- Assign customer relations and alternate supply responsibilities
- Advise suppliers of potential curtailments
- Seek clarification on insurance and financial approval procedures

**Resources**

- Contact list for key company and third party personnel
- Request assistance from corporate and other locations
- Put third party contractors and specialists on stand by pending funding approval

**Public Relations**

- Appoint a spokesperson
- Prepare and rehearse a statement
- Establish a press briefing schedule
- Contact and support injured workers

**As soon as possible after access is considered safe:**

**Furnace Assessment**

- Minimize water contact on refractories
- Assess the furnace refractory, firing and exhaust system
- Re-establish firing and a holding temperature as soon as possible
- If firing systems are inoperable request third party heat up burners immediately
- If furnace temperature can not be maintained plan for a controlled cool down
- If refractory or steel is damaged contact third party furnace repair contractors

**Batch Plant Assessment**

- Make batch as soon as possible to confirm system integrity
- If batch-making fails attempt to transfer cullet to the furnace

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If batch-making and cullet transfer fail, put the furnace into hot idle

Forming Assessment

Turn over forming machines as soon as possible  
Identify malfunctioning components and parts availability  
Attempt to have at least one operating machine per furnace  
Contact forming machine suppliers for technical assistance and parts

Hot Cullet System Assessment

Confirm that hot cullet drain chutes, quench and transport are operational  
Use caution in basement areas as hot water may accumulate

Forehearth Assessment

Drain glass from the forehearth as soon as glass level and hot cullet system allow  
Establish forehearth temperatures  
Monitor forehearth drains to control pull and potential plugging

Forming Services Assessment

Verify compressor, fans, shear spray and machine lubrication systems

Electrical Assessment

Verify power feed components  
Verify PCB filled transformers and switch gear have not leaked

Lehr Assessment

Verify lehr belt operation, tracking and heating system operation

Cold End Assessment

Verify ware handling, inspection and packaging equipment operation

Warehouse Assessment

Review warehouse for weather integrity and contaminants

Environmental Controls

Verify environmental controls are functional and hazards are contained

**As soon as possible after positive assessment:**

Furnace pull and temperature

Increase furnace pull and temperature to achieve at least 30 ton/day pull  
If conditions permit establish a minimum drain on all shops

Resources

Advise workers of start up plan and shift assignments  
Advise suppliers of production plans

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Form bottles	Gradually increase pull to form bottles on one shop Continue until all shops are in operation
Quality Review	Hold ware until product quality is assessed
Coordination	Return operational control to plant supervision

<b>As soon as possible after negative assessment:</b>	
Mitigate	Acquire required power sources and furnace heating equipment
Contain	Contain any hazardous materials
Repair Scope	Identify list of failed systems and components
Schedule	Prioritize systems and components and estimate repair times
Resources	Determine personnel, contractor and material requirements
Costs	Estimate repair costs and business interruption impacts
Funding	Seek approval for repair costs
Project Management	Assign responsibilities for repair scopes, cost and schedule
Initiate	Order parts, activate contractors and specialists
Control	Evaluate and seek approval for all spending on improvements before proceeding

<b>After operations are normalized:</b>	
Lessons Learned	Document and communicate root cause, preventive measures and training needs
Train	Develop training drills and an implementation schedule
Audit	Review and correct identified vulnerabilities at other locations
Update	Keep the business continuity and contact list up to date
Recognize	Publicly thank contributors and continue to stay in contact with the injured
Insurance	Provide documentation to support the insurance claim

**For assistance developing a disaster recovery plan please contact**

[gordonstewart@TGCALLC.com](mailto:gordonstewart@TGCALLC.com)

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