

RiskTopics

Equipment Breakdown Contingency Plans November 2017

A formal Contingency Plan is a documented procedure or process that prepares a facility to respond appropriately to an unplanned event including the recovery from that event. Its purpose is to minimize business losses caused by unplanned equipment or service outages. This plan will normally specify how a facility will respond to conditions causing the outage and acts as a guide to recovery for the facility's management team. A well-written equipment breakdown contingency plan will provide a planned response to recover from events that result in a forced outage which impacts production and facility equipment. This Zurich Insurance risk topic provides clear guidelines for preparing an equipment breakdown contingency plan that can be applied to most types of operations and a template that can be used to assist in the document preparation.

Introduction

As a response document, an equipment breakdown (machinery breakdown) contingency plan should be developed to be pro-active; to allow for change in plant conditions as they occur. The plan should be reviewed on a periodic basis so it remains a useful tool to the management team.

The basic Contingency Plan document should contain a minimum number of sections necessary to cover the individual facility's unique operation.

The following production equipment and utility suppliers will be incorporated into most plans at some level:

- Electrical, water, natural gas or other fuel source utility suppliers
- Critical equipment repair firms/contractors
- Computer/Server support
- Original equipment suppliers
- Rental equipment sources

Discussion

A contingency plan is a plan of action for a facility. It is intended to be used following a forced outage when a natural disaster, primary utility/services failure or critical/key equipment failure causes an unplanned loss of production. In most organizations today, contingency planning will be just one of the components of the company's overall plans for maintaining business continuity, recovering from disaster and managing their risk.

The following outline might be considered by any organization developing a formal contingency plan:

Develop the contingency planning policy statement: A formal policy provides the authority and guidance necessary to develop an effective contingency plan.

Conduct a business impact analysis (BIA): The BIA helps identify and prioritize equipment and components critical to supporting the organization's mission/business functions.

Identify preventive controls: Measures taken to reduce the effects of equipment or service disruptions can increase system availability and reduce contingency life cycle costs.

Create contingency strategies: Thorough recovery strategies ensure that production may be reestablished quickly and effectively following a disruption.

Develop an information system contingency plan: The contingency plan should contain detailed guidance and procedures for efficiently repairing or replacing damaged equipment or restoring services. These procedures should be specific to the location and the equipment/service in question, rather than generic.

Ensure plan testing, training, and exercises: Testing of the plan validates recovery capabilities, whereas training prepares recovery personnel for plan activation. Exercising the plan identifies planning gaps. When combined, the activities improve plan effectiveness and overall organization preparedness.

Ensure plan maintenance: The plan should be a living document that is reviewed regularly and updated as required to remain current with equipment enhancements and organizational changes.

Guidance

How to Write a Contingency Plan

A contingency plan is an outline of procedures to follow in case of a major event, such as a computer server crash or key equipment breakdown in a single-line production facility. It is a written document demonstrating that, should an unplanned problem arise, a facility has considered ways to prevent the loss of vital information and/or production capacity. By so doing, operations can be maintained, resulting in reduced short term and long term impact to the business. Many quality driven organizations and companies have contingency plans not only for individual systems, but for whole departments.

A plan to account for breakdowns or interruptions to plant equipment or processes can be written using the following steps:

- Begin by forming a contingency planning committee with a committee team leader.
- The contingency plan team leader should be able to provide the skills, tools and knowledge base necessary to guide each department in writing its own plan.

- Meet with department heads and/or senior management to list all potential business interruption (BI) scenarios in the proposed plan
- Prioritize each BI scenario in the proposed plan and examine the impacts these scenarios could have on the company, both in a what-if and a negative light.
- List all critical utility and plant essential services; list every critical object in each department.
- For each key/critical equipment and service, try to determine what events, problems or trends could potentially come up
- List the actions required in case a negative event, problem or occurrence takes place
- How will the facility compensate or adjust to problems to keep the business profitable?
- Structure the contingency plan in a “Big Picture” way.
- This kind of plan can be a big task so make sure the right number of staff is involved along with appropriate staff. Good planning is needed for a good plan.
- Review the plan and the proposed actions
- Things usually get missed the first time through. Contingencies will be able to be created at the right places after a proper review.
- Test the plan!
- Testing the plan will usually make it more cost-effective and possibly more manageable if flaws are found or there are conflicts between departments.

Contingency Plan Document

Once the Contingency Plan team is assembled and it is determined how to proceed, there may be a question of exactly what to write into the plan. This will vary with each facility based on the needs and equipment in the facility. Zurich Risk Engineering offers the following as a guide to the facilities management team for developing their own formal Contingency Plan based on the outline above.

“The key to an effective contingency plan is to keep it as simple as possible, with clear language and directions.”

Cover Page:

The contingency plan cover page should be a directive by management to the facility staff regarding the facility’s commitment to respond to an emergency condition. It should state that the formalized contingency plan has the full support of the highest levels of management and should be the standard by which a facility should respond to abnormal conditions. A cover page can be standard for multiple facilities under one management group.

Contents Page:

The Contingency Plan, contents page(s) should be a basic outline of the plan and contain the emergency response chain of command, the various divisions within the facilities and the responsibilities by division for the plan’s administration.

A basic outline of the facility's process areas and services should be contained within the contents page(s) so that a chain of command for emergency response can be established and that there is no question as to the plan administration.

Plan Overview

There should be specific direction provided for how the contingency plan is maintained. Maintenance of the plan should include how it is controlled, revised, tested and controlled. A strategy should be provided outlining how production processes are backed up.

Equipment List

The Contingency Plan equipment list is a means for the facilities to audit and maintain the production and facilities equipment that is considered critical to continued operations.

It may also serve as a central clearinghouse for the facility to maintain a list of parts required to operate its critical equipment as well as provide a readily available onsite spare parts list. The equipment list can be incorporated into the facilities Preventative Maintenance (PM) Program so there is no redundancy of effort between the two programs.

Typically such a list will contain the following.

- In-house redundancy of equipment,
- Spare parts availability through suppliers,
- Rental equipment resources,
- Transportation resources and delivery concerns,
- Installation concerns and contracted agreements for spare parts
- How the facility will respond to emergency situations by contractual agreement should be listed.

Critical Path Response

The Contingency Plan, critical path response section is the area for the facility to ask themselves the "What if" and "How are we to respond" questions. The facility itself is the most qualified to determine what its response should be to various situations based on its own equipment and operating history. Critical analysis of how the facility should plan its response to various situations will provide a controlled action when it is needed. This will allow the management team to react to the dynamic changes of an emergency situation. A pre-planned response to certain situations eliminates confusion created by emergencies and allows for a controlled restart of plant operations.

Crisis Management

Equipment Crisis Management should also be addressed in the contingency plan. The business continuity plan should include a plan to recover from the loss of the facility's critical production machinery, production support equipment or utilities. This plan should be identify the following for each critical object:

- Qualified service providers that can repair the equipment or provide for its replacement
- A reliable source of replacement parts, whether in-house or readily available

- A plan of how and where to obtain replacement rental equipment and how it will be installed; this plan should include who will operate the equipment and what permits/licenses may be needed to install temporary equipment.

Call List

The Contingency Plan call list is a central clearinghouse for the management team to have a readily available phone and contact list of supplier's.

Emergency phone numbers should include those resources identified by the facility for 24-hour emergency response. By knowing the critical path response of the equipment identified in the facility, the plant can maintain a viable call list.

Contractual agreements and suppliers are subject to change based on business demands and there is a potential for the various business divisions to remain isolated from each other because of the facility's operations and changes to personnel. A regularly updated Emergency call list can help to overcome this.

Plan Review

The Contingency Plan review requires a formal review of the plan on a periodic basis. It is imperative that the contingency plan remains a "living document" so the response to an emergency situation can reflect the most current practices as well as equipment and personnel data pertinent to plant operations.

The following areas should be considered during the review:

- Equipment changes.
- Process changes.
- Personnel changes.
- Contact details.
- Supplier and contractor details.

Conclusion

For many facilities, the most critical part of the business is the equipment that keeps the business productive. When that equipment or the systems that support that equipment break down, the business can start to suffer quickly as production grinds to a halt, revenue begins to fall, profits start to melt and customers begin to get anxious about their orders.

Short-term effects can lead to very difficult long-term consequences for the business if production is not restored quickly. Zurich Risk Engineering believes that a well-planned, strategic business interruption contingency plan is key to being able to facilitate the kind of rapid recovery so important to today's competitive global economy.

References

<http://whatis.techtarget.com/definition/contingency-plan>

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