Health & Safety / Incident Tracking

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ABSTRACT

A custom system was developed to record health and safety incidents, near misses, and management of change activities tracked by the safety and environmental department at the Mallinckrodt Baker, Inc. facility in Paris, KY. The Health & Safety / Incident Tracking System is a Windows-based system that maintains all incident case information in a detailed data entry format that includes location, description, cause, losses, injury / illness, spills and corrective actions. Each incident is also rated on a severity scale and depending on the severity of the incident specific corrective actions are required.

The reports produced by the Health & Safety / Incident Tracking System are tabular and graphical detailing case information and corrective action requirements. The system also produces reports of completed and outstanding corrective actions along with the responsible person.

INTRODUCTION

The Mallinckrodt Baker facility, located in Paris Kentucky, manufactures and stores specialty chemicals. In order to track and manage the health and safety issues at the facility a custom system was developed to record health and safety incidents, near misses, and management of change activities tracked by the safety and environmental department at the Mallinckrodt Baker, Inc. facility in Paris, KY. The Health & Safety / Incident Tracking System is a Windows-based system that maintains all incident case information in a detailed data entry format that includes location, description, cause, losses, injury / illness, spills and corrective actions. Each incident is also rated on a severity scale and depending on the severity of the incident specific corrective actions may be required.

The reports produced by the Health & Safety / Incident Tracking System are tabular and graphical detailing case information and corrective action requirements. The system also produces reports of completed and outstanding corrective actions along with the responsible person.

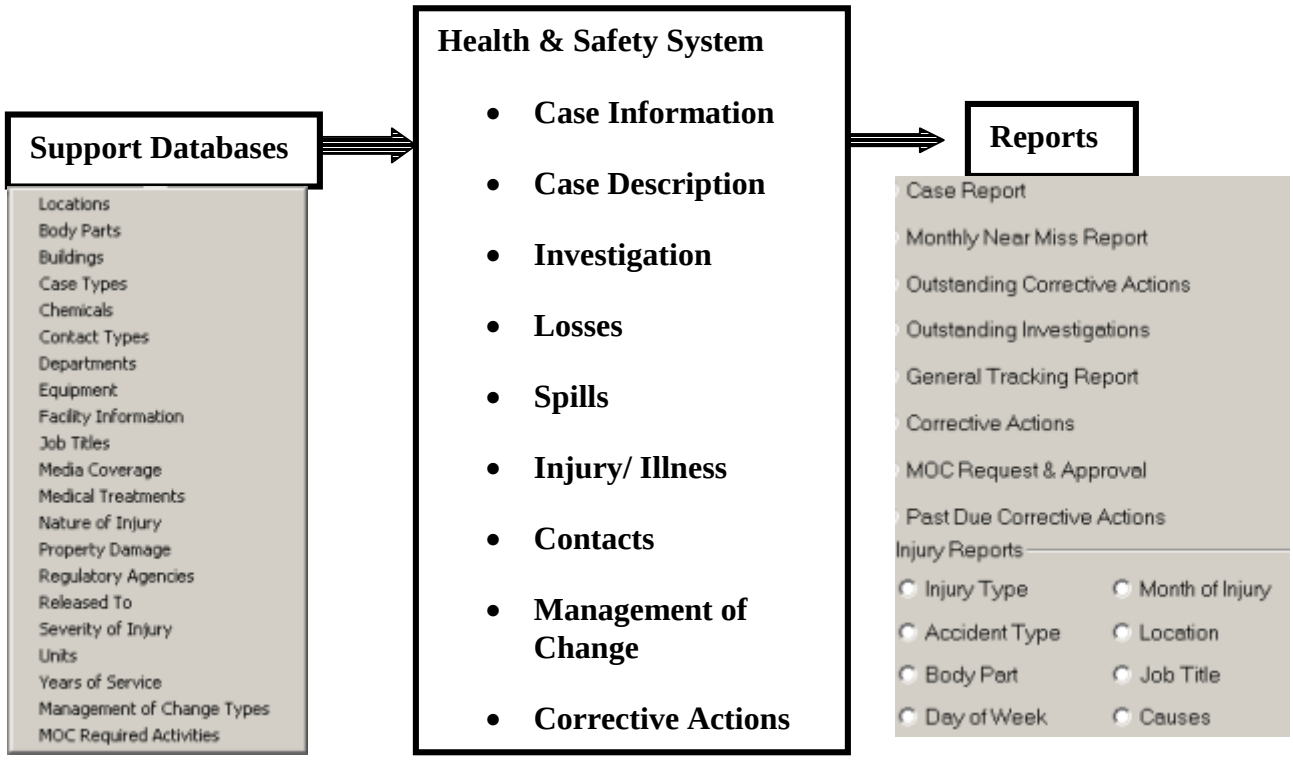
HEALTH & SAFETY SYSTEM

The Health & Safety system for Mallinckrodt Baker, Inc. is an outgrowth from the manual tracking of health & safety requirements throughout Mallinckrodt. The Windows-based system was implemented to provide a comprehensive health and safety tracking system, a corrective action tracking system and produce internal and external reports.

The Health & Safety system was developed using Microsoft's Visual Basic 6. The underlying database used throughout the system is Microsoft Access. The reports that are produced in the system use Crystal Decision's Crystal Reports. The reports are then distributed to responsible personnel via email.

The overall structure of the Health & Safety system is shown in Figure 1.

Figure 1. Overall Structure of the Health & Safety System.

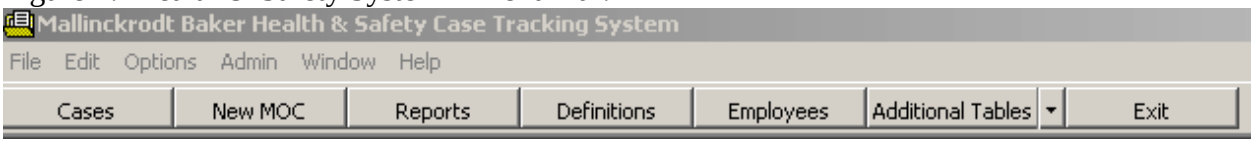


The Support Databases contain the information that is used to populate droplists throughout the system. The Cases entered into the system maintain all of the information on an incident and the reports produced meet the requirements for reporting and tracking.

The Health and Safety system is used by safety and environmental department, but is also available in a read only form to other departments and personnel around the facility. The system maintains all of the health & safety incidents at the site. Besides just tracking health & safety incidents, a Management of Change module is also part of the overall system. The management of change section tracks / documents all temporary and permanent changes that take place at the facility.

When starting up the system users are presented with the menu bar shown in Figure 2.

Figure 2. Health & Safety System – Menu Bar.

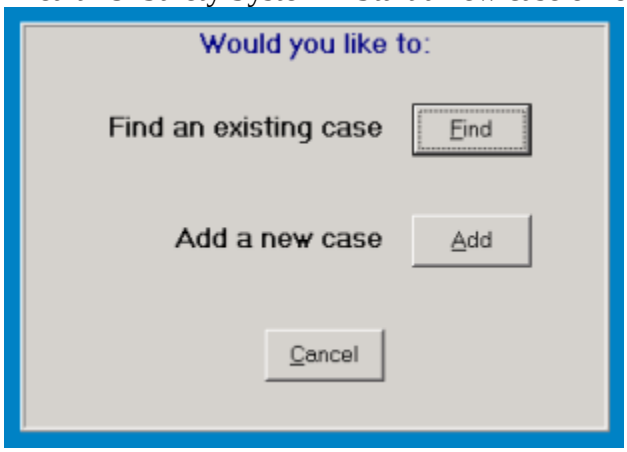


The buttons across the top of the screen have the following functionality:

- Cases - Maintains all health & safety incident information
- New MOC – A short cut to initiating a change at the facility
- Reports – Generate Reports
- Definitions – Maintains definitions used for case severity / probability of occurrence
- Employees – A support database containing personnel information
- Additional Tables – Support tables used as droplists throughout the system

When a user selects the Cases button, the first screen asks the user to either work on a previously entered case or start a new case (Figure 3).

Figure 3. Health & Safety System – Start a new case or locate an existing case



When selecting an existing case or starting a new case, the first screen that is displayed (Figure 4) is the Case flipcard. This screen gives the specifics of a case. Note that each case is identified by a unique identifier that is composed of a site descriptor, year, month and the sequential number of cases for that month.

The other flipcards allow the user to enter additional detailed information about the incident.

Figure 4. Case – Case Description.

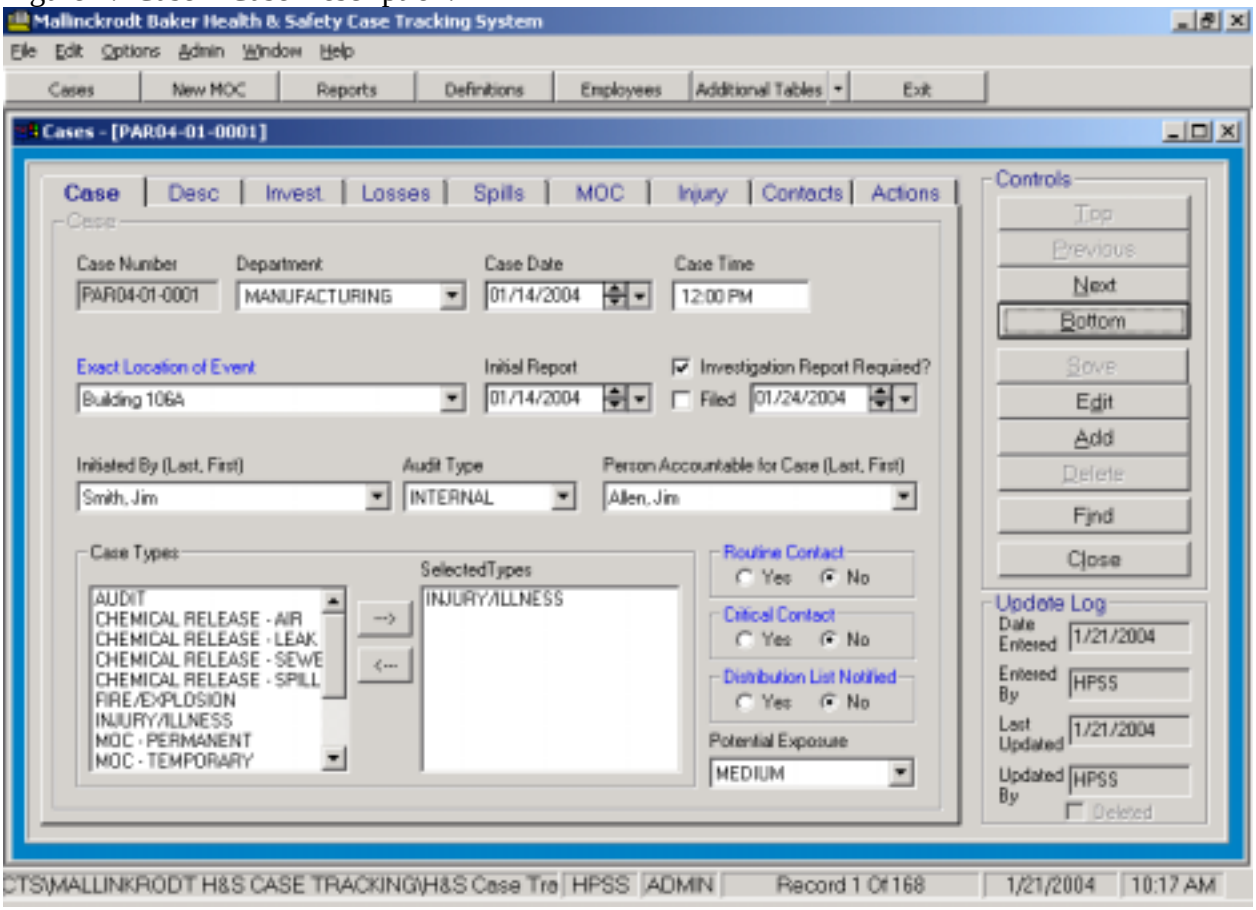


Figure 5 shows the Description flipcard where the user provides detailed information on what occurred in this incident. Note that this screen also includes a severity scoring system based on the severity of the loss and the probability of the occurrence of the event. The severity score then instructs the user on a course of action. Depending on the severity of the incident, the outside media may respond to and report on an incident. If this happens, who was present from the outside media is recorded on this screen.

Figure 5. Case – Incident Description

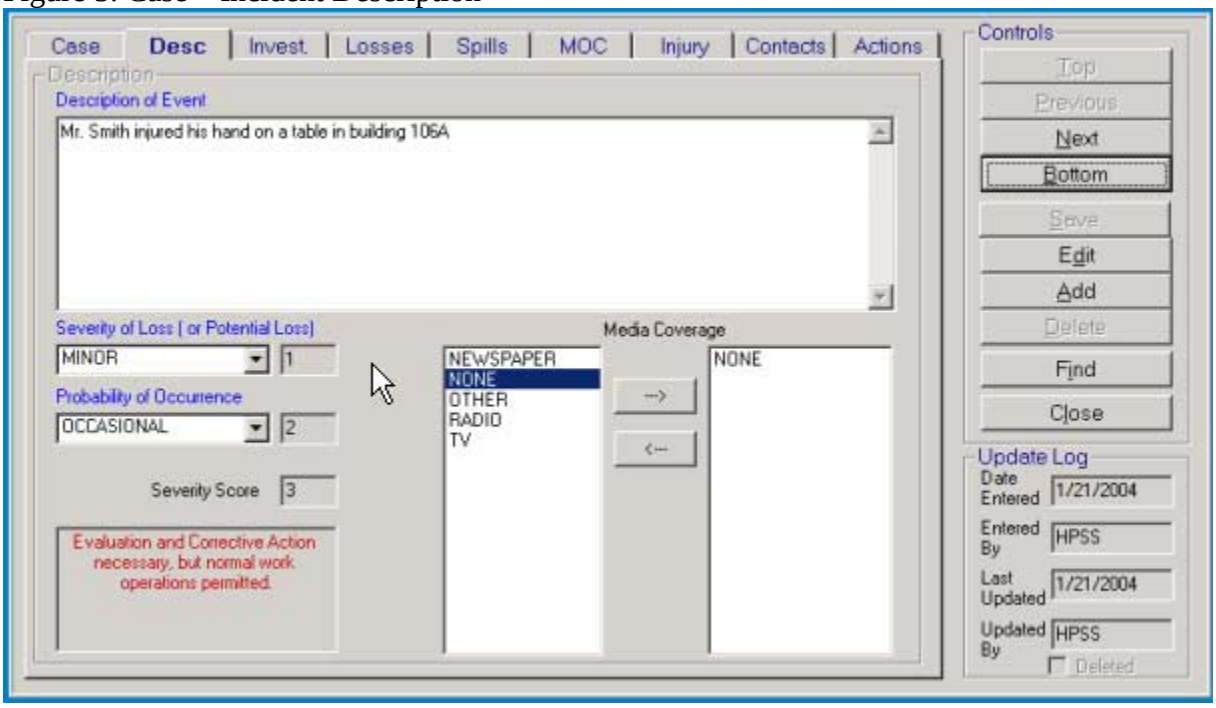
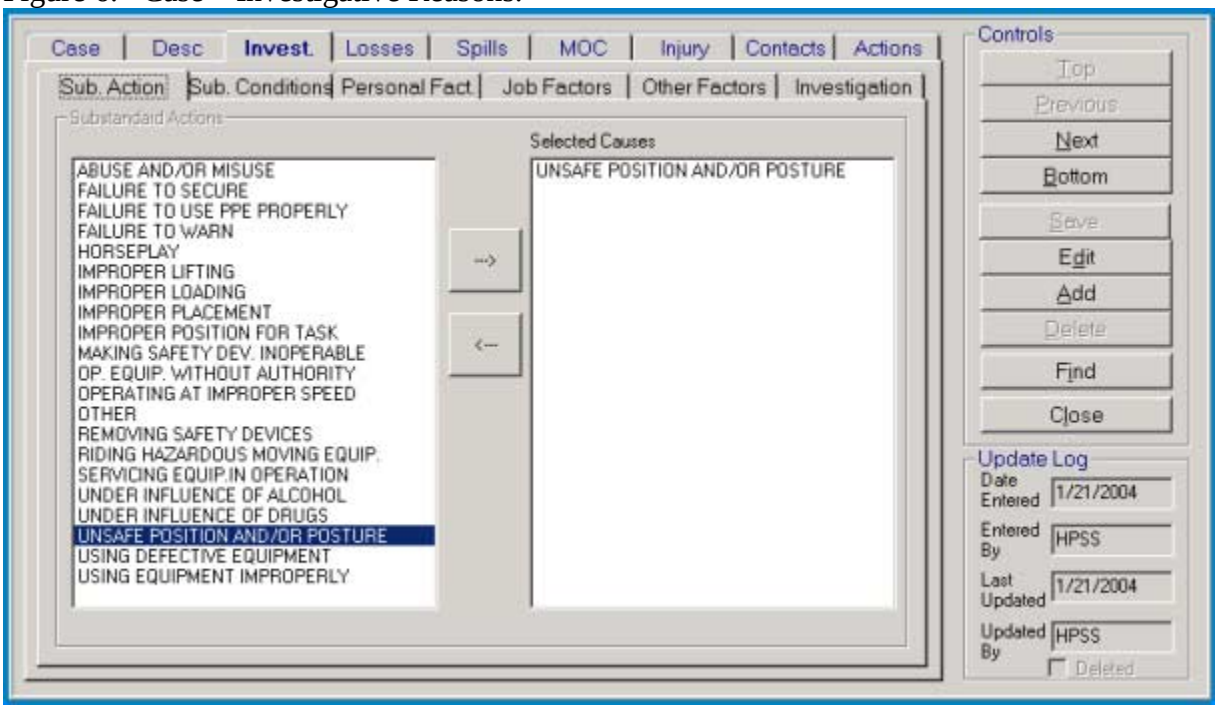


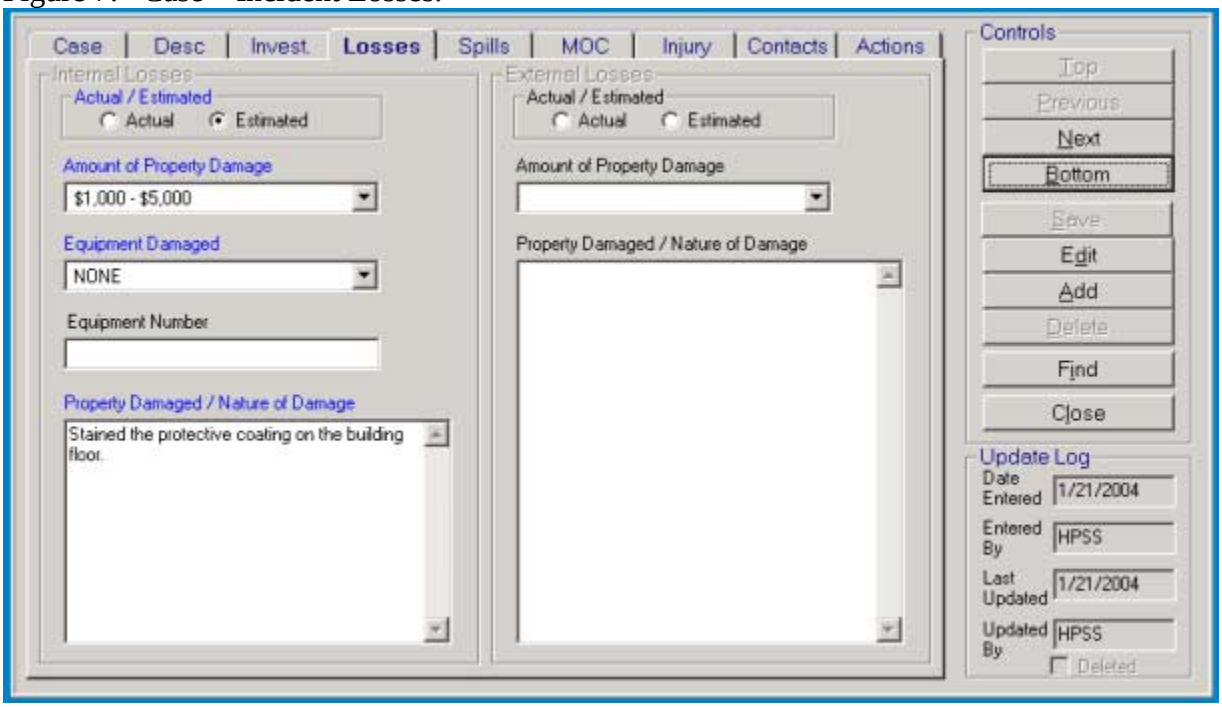
Figure 6 shows the Investigation flipcard that allows the user to select the reasons for the incident. These include substandard actions, substandard conditions, personal factors, job factors or other factors that may have contributed to the incident. The user can select one or more factors that best describe the event.

Figure 6. Case – Investigative Reasons.



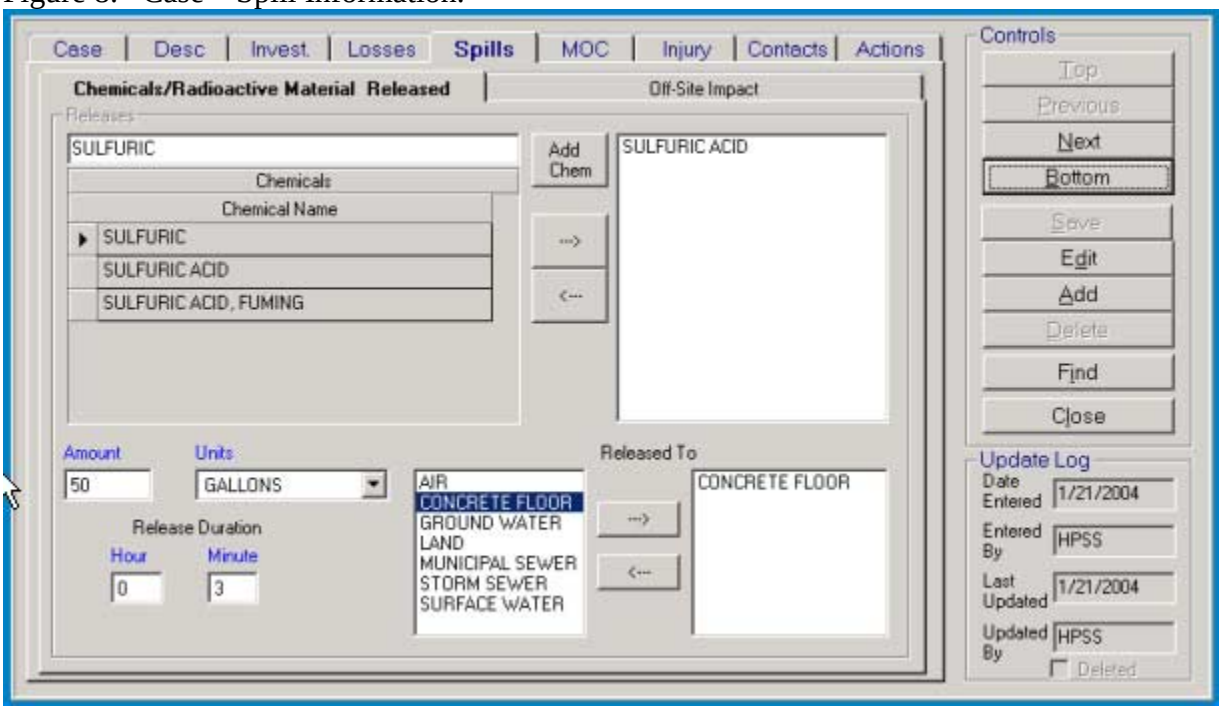
The Losses flipcard (Figure 7) allows the user to quantify the internal or external capital losses that may have occurred during the event. Also included on this screen is any damage or losses to equipment or property.

Figure 7. Case – Incident Losses.



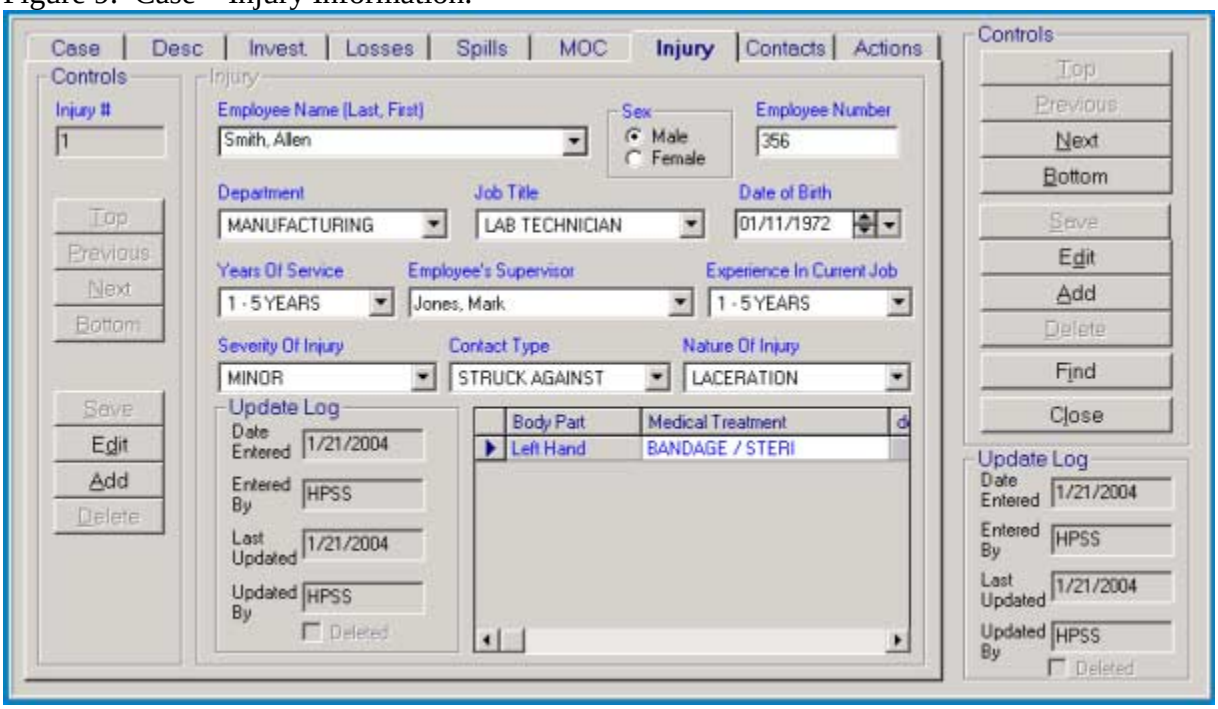
If the case involved a spill of a material the Spills flipcard (Figure 8) allows the user to select the materials spilled, the amount, duration and where the spill was released to. If there are any off-site impacts, a narrative of these impacts is added on the Off-Site Impact tab along with the wind speed, wind direction and temperature at the time of the incident.

Figure 8. Case – Spill Information.



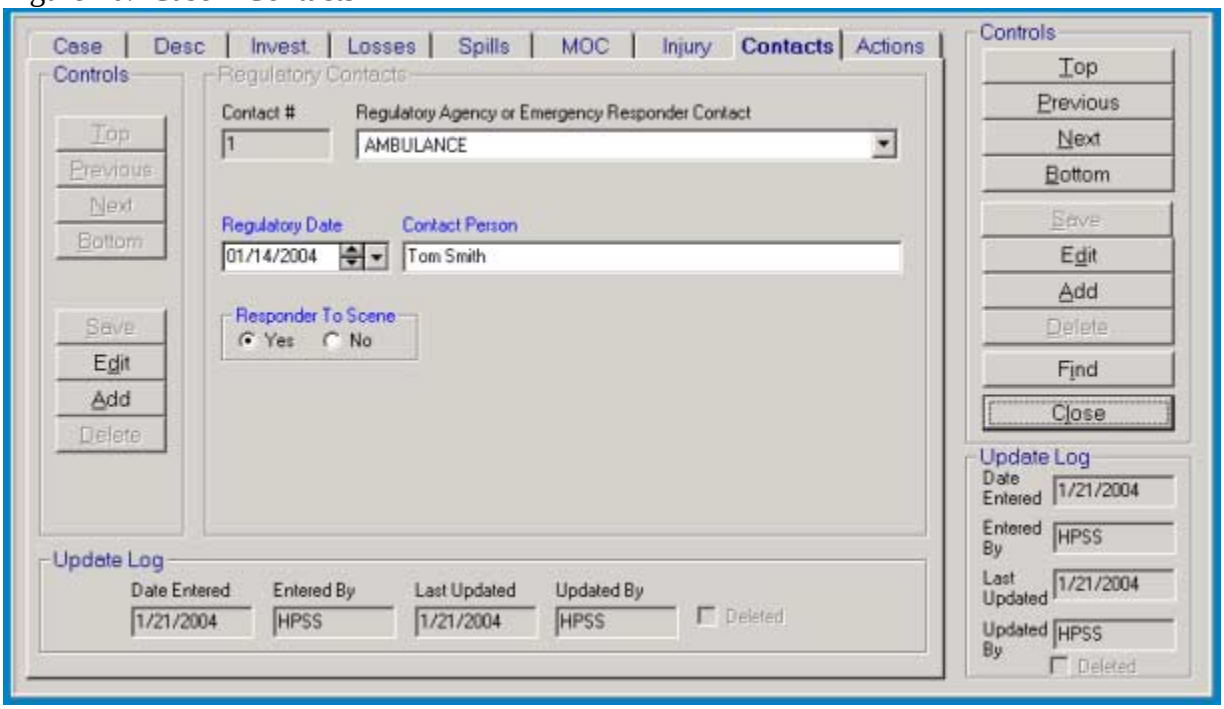
If an injury or an illness occurred as part of this case then the Injury flipcard (Figure 9) gives the specifics on the injured/ill personnel. Note that this flipcard allows the entry of multiple personnel that may have been injured during an event. This screen contains general job experience information on the employee as well as specifics on any injuries and treatment.

Figure 9. Case – Injury Information.



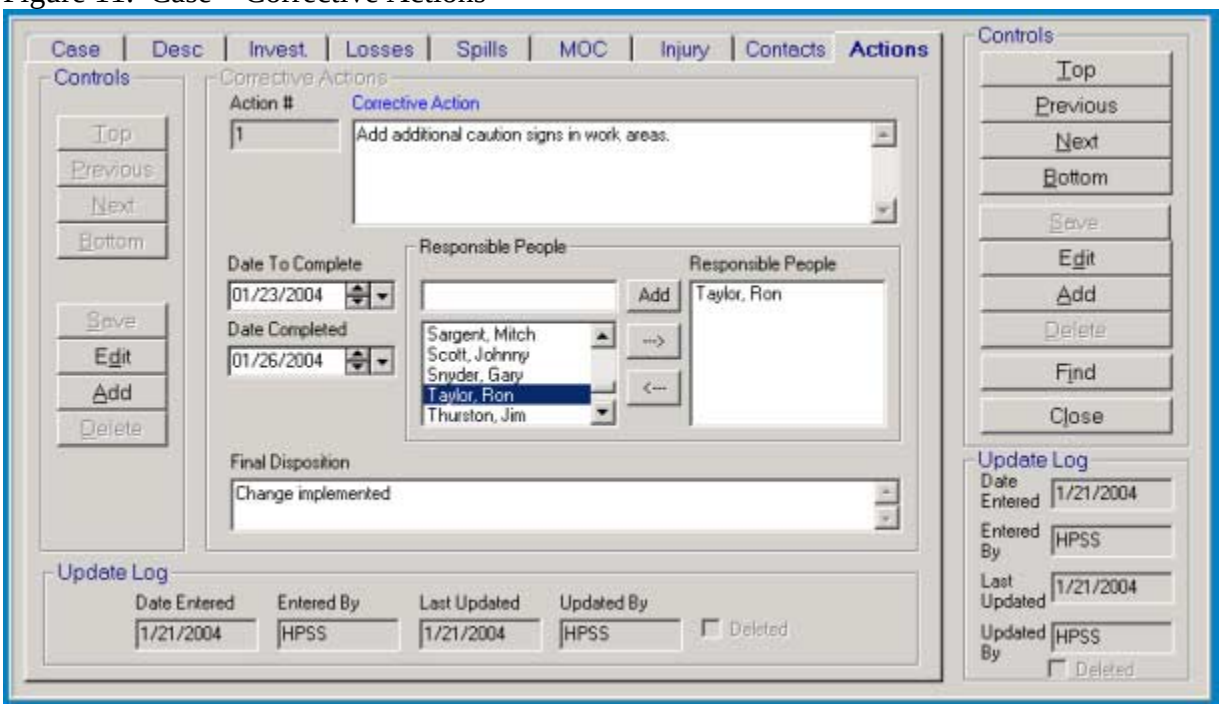
If during an incident an outside (non Mallinckrodt Baker personnel) responder is present or must be notified, the information on this contact is stored on the Contact flipcard (Figure 10). Note that this flipcard allows the entry of multiple contact personnel.

Figure 10. Case – Contacts



If during an incident corrective actions are identified to help prevent future occurrences, the individual corrective actions are included on the Actions flipcard (Figure 11). Each corrective action is assigned a responsible person and a date to complete. After the corrective action is completed, a date completed and final disposition of the action is entered on this screen.

Figure 11. Case – Corrective Actions

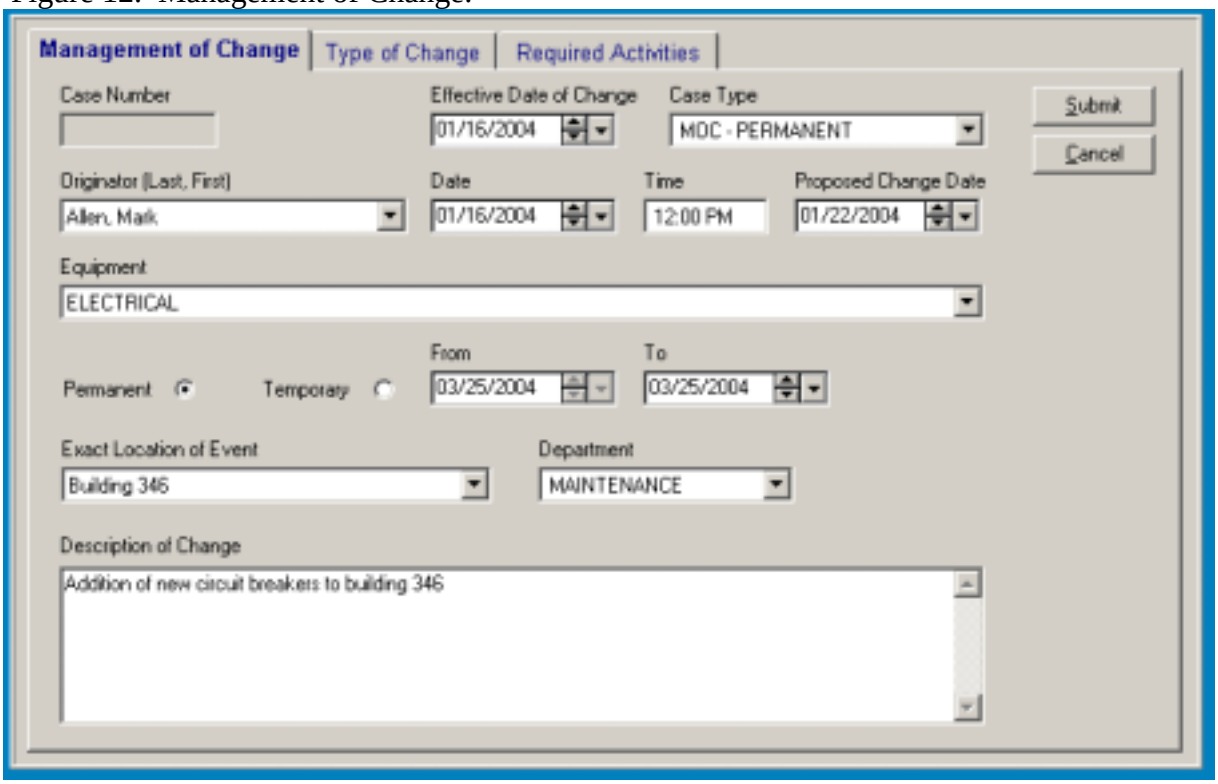


MANAGEMENT OF CHANGE

In addition to tracking Health & Safety incidents, the system is integrated with a Management of Change System. The reason for this is that typically, a temporary or permanent change at the facility is driven by corrective actions resulting from health & safety incidents. So a management of change module was incorporated into this system.

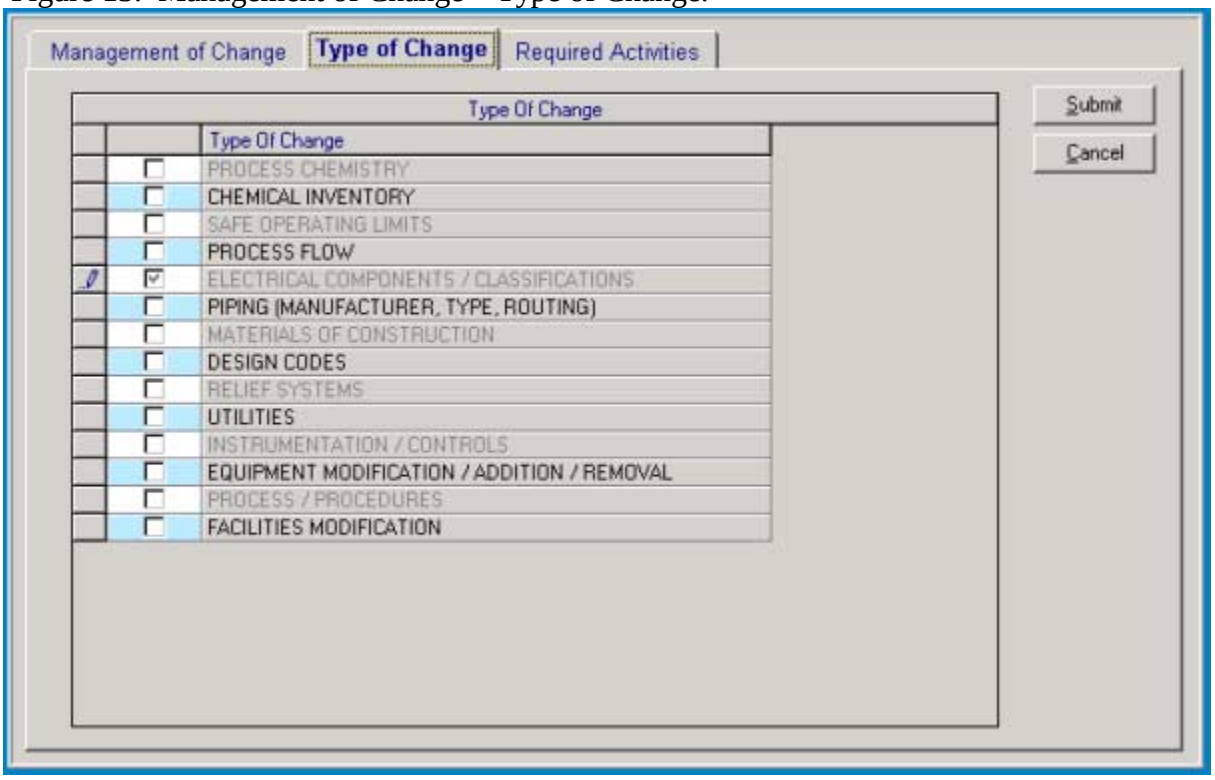
When the user selects Management of Change, the screen in Figure 12 is displayed. This screen lets the user enter specific information about the change.

Figure 12. Management of Change.



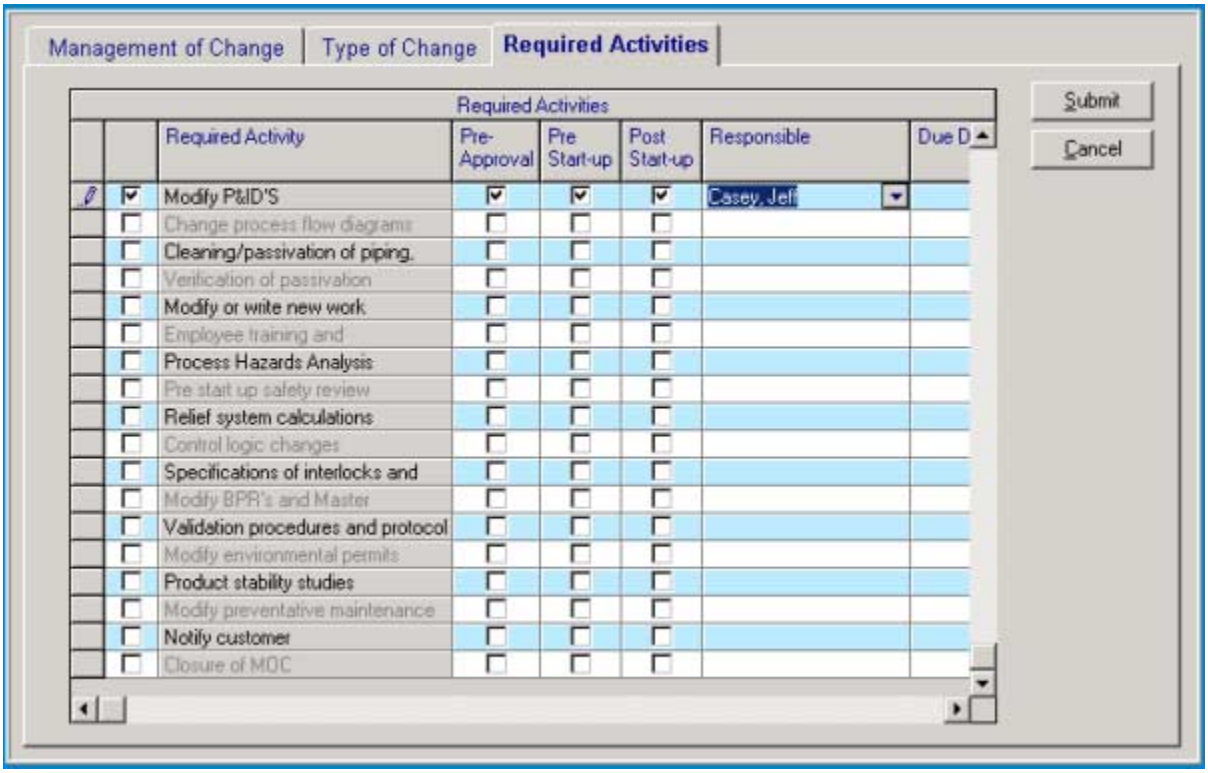
The next flipcard (Figure 13) allows the user to select the type of changes that are to be made at the facility. The user can select multiple types.

Figure 13. Management of Change – Type of Change.



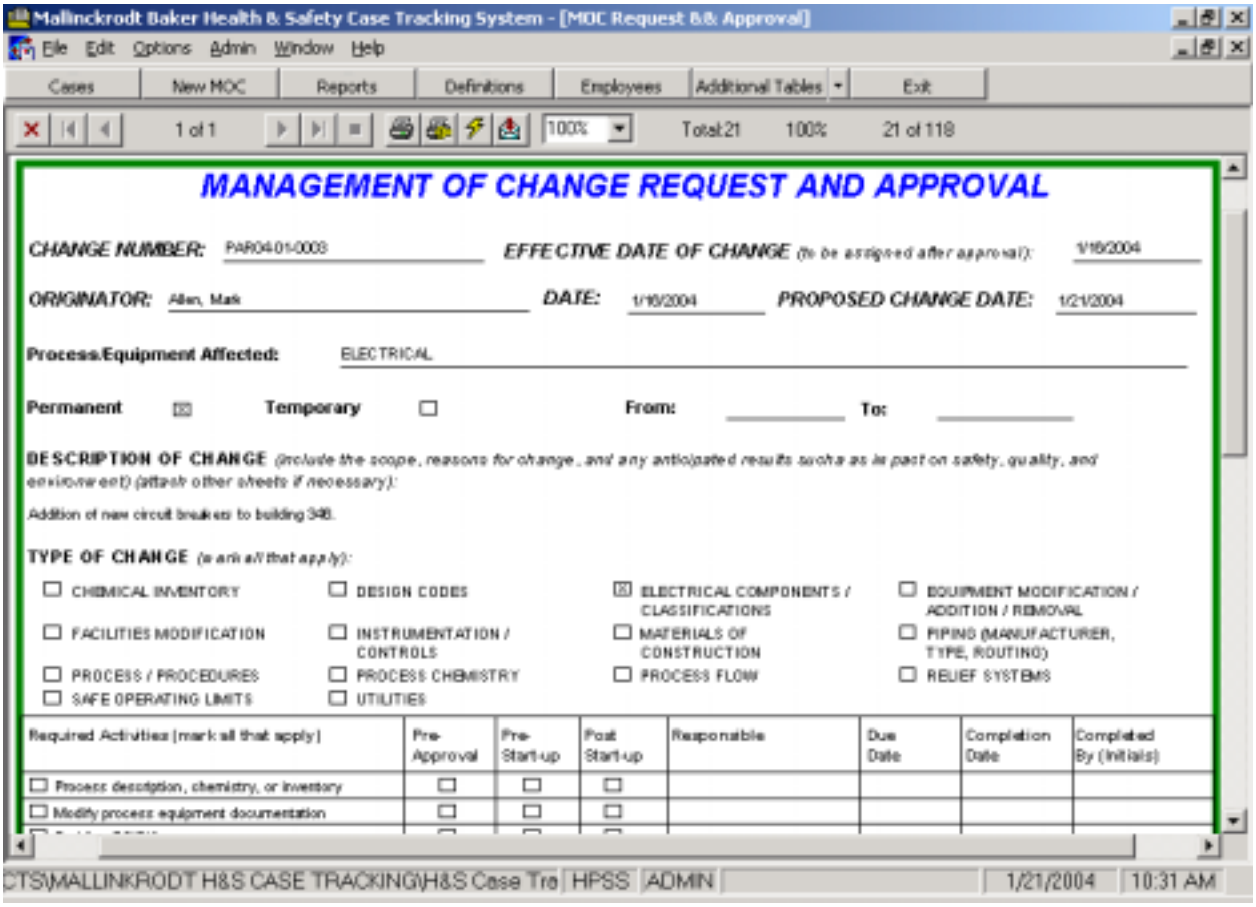
The Required Activities flipcard (Figure 14) lists the activities that must take place during this change during the pre-approval, pre-startup and post-startup time period along with the responsible person for these activities. Multiple required activities can be selected for this change.

Figure 14. Management of Change – Required Activities



After completing a Management of Change request, a report is automatically generated with the entered information (Figure 15). This report is then distributed to all personnel at the facility who are affected by the change.

Figure 15. Management of Change - Report.



REPORTS

The Health & Safety system contains reports that are used to summarize the case information and track any outstanding requirements that need to be taken to close out a case. Figure 16 shows the Reports screen and Figure 17 shows an example of a Case Report.

Figure 16. Health & Safety System Report Types.

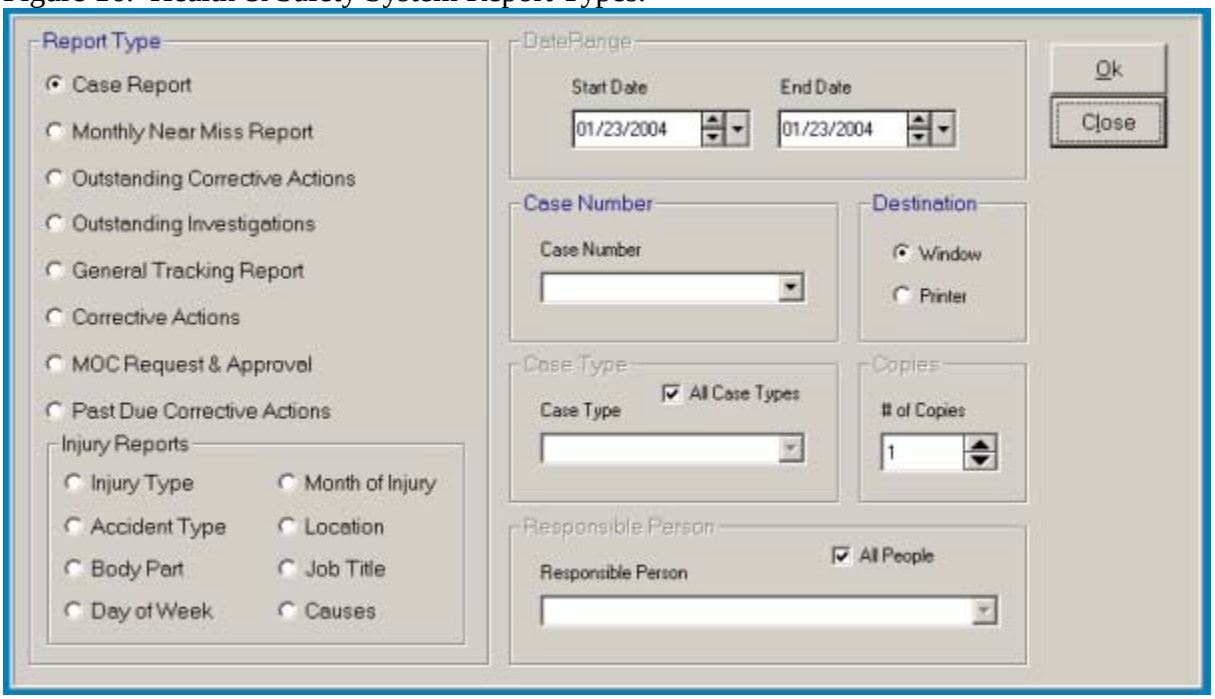
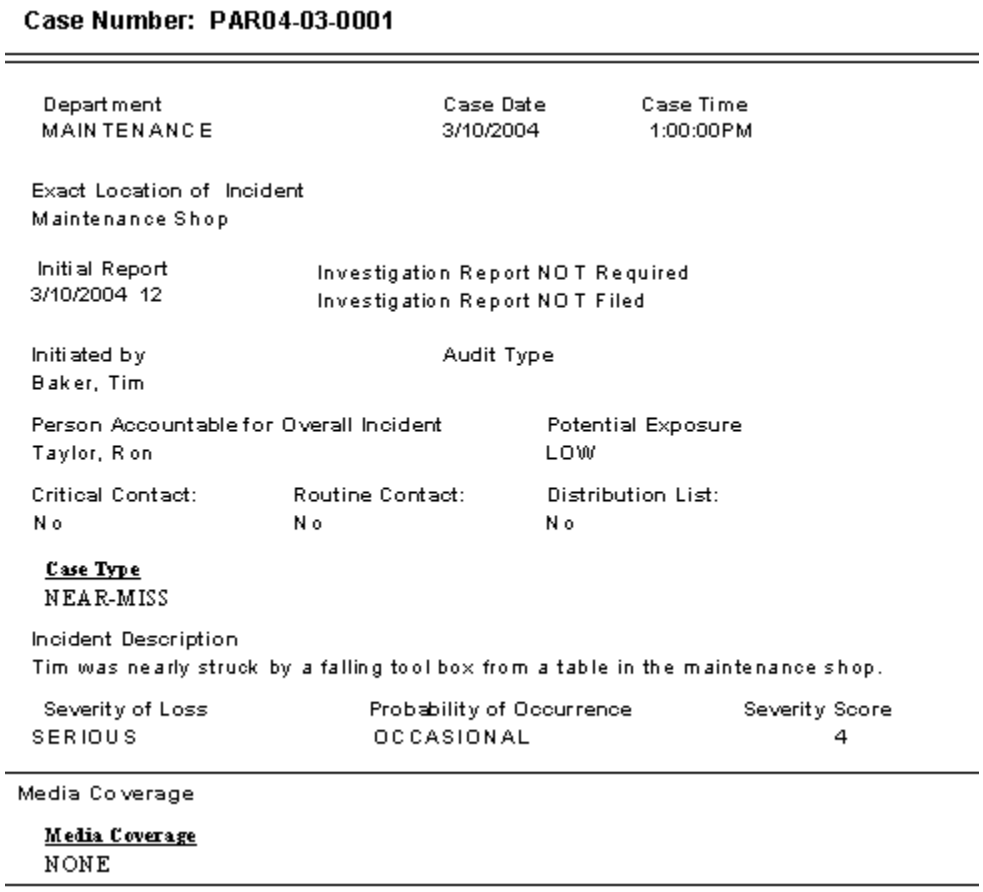


Figure 16. Example of a Screen Preview of a Case Report.



Case Number: PAR04-03-0001

Department	Case Date	Case Time
MAINTENANCE	3/10/2004	1:00:00PM

Exact Location of Incident
Maintenance Shop

Initial Report
3/10/2004 12

Investigation Report NOT Required
Investigation Report NOT Filed

Initiated by
Baker, Tim

Audit Type

Person Accountable for Overall Incident
Taylor, Ron

Potential Exposure
LOW

Critical Contact:	Routine Contact:	Distribution List:
No	No	No

Case Type
NEAR-MISS

Incident Description
Tim was nearly struck by a falling tool box from a table in the maintenance shop.

Severity of Loss	Probability of Occurrence	Severity Score
SERIOUS	OCCASIONAL	4

Media Coverage

Media Coverage
NONE

CONCLUSION

Mallinckrodt Baker's Health & Safety system is used at the Paris Kentucky facility to record health and safety incidents, near misses, and management of change activities. The Health & Safety / Incident Tracking System maintains all incident case information in a detailed data entry format that includes location, description, cause, losses, injury / illness, spills and corrective actions. Each incident is also rated on a severity scale and depending on the severity of the incident specific corrective actions are required. The reports produced by the Health & Safety / Incident Tracking System are tabular and graphical detailing case information and corrective action requirements. The system also produces reports of completed and outstanding corrective actions along with the responsible person.

This system has streamlined health & safety and management of change tracking allowing quick and easy access to the information and reports.

KEY WORDS

Health & Safety, EIMS, EMIS, Software, Management Systems, Management of Change, Environmental Data Management