

**NASA AMES
RESEARCH CENTER**

Web-Based
Hazard Reporting
System

User Guide
for
System Administrators and
Super Users

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Introduction

Hazard reporting is an important day to day operation handled by the System Safety, Reliability, and Quality Assurance Office. In this age of the “paper-less office” and “faster, better, cheaper,” a solution needed to be developed to handle the reporting process more efficiently than in the past.

In the past, several different computerized systems were used by different localized groups with no electronic communication between them. As a result, there was very little commonality or compatibility. A new system needed to be developed that could be accessible to all groups who needed it. It had to cross communications and platform-related barriers and be reached from anywhere. It had to act as a central storage point for all hazard related information. It had to do all this and remain friendly and easy to use.

The solution was to develop a web-based system using a database to store the hazard reports, and a web server to make the data available. All user access will be accomplished through a platform independent web browser. User will be able to enter and update new hazard reports, as well as search and print existing ones.

To accomplish this separation between new and existing hazard reports, several different categories of record classifications needed to be developed. These categories are referred to as “Workspace modes.” These modes identify which state of the creation process a hazard report is in. The following is a description of the workspace modes:

DRAFT

The DRAFT mode can be viewed as a personal workspace, where only the owner can access the reports. A partial report can be entered into the system under the DRAFT mode without being reviewed until the owner deems appropriate. The owner can alter, update, and remove any report in their DRAFT space. Only the owner can promote a report to the next level.

REVIEW

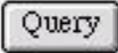
The next level of the hazard report creation process is the REVIEW mode. Reports with this mode can be seen by all users with entry and comment privileges for the project or facility specified in the report. Those reviewing the reports can make remarks on the report in a special Comments page. The owner of the report can continue to alter and update them. The REVIEW mode is a traced environment. When alteration are made to a report, a revision is logged. The user must enter a brief comment or explanation for the revision. Delete privileges are only given to users with administrator privileges or higher. Once all the data has been entered and a close date has been established, the report can be promoted to the final level.

CONTROL

The CONTROL mode is the final designator for hazard reports. Once a report has been given the CONTROL mode, it is viewable to all users. These records are no longer alterable. Only a user with administrator privileges or higher can promote a report to the CONTROL mode.

Conventions

Screen Conventions

<u>Convention</u>	<u>Explanation</u>
	Help button: Click to link to the context-sensitive help page.
	Event button: These are used to submit a form, or call a menu.
Yes <input checked="" type="radio"/> No <input type="radio"/>	Radio buttons: Only one value can be chosen. (Like the preset buttons on a radio.)
<input checked="" type="checkbox"/>	Check box: This is a selection box. An “X” (or “✓”) means the item has been chosen.
	List box: The arrow indicates a drop-down list of valid options for the field.
HERE	Hypertext link: This link will jump to a place on the page, or to a new page. The link is usually underlined and a different color than the rest of the text. An image can also be set as a link.

Manual Conventions

<u>Convention</u>	<u>Explanation</u>
<u>Hazard Report Query</u>	Menu option / Hypertext link
Query	Button
Start	User enter text or commands
<user name>	Text to be replaced by user value

Starting

Security

The Hazard Reporting system has multiple levels of security. These security levels are project specific. This means that for one project, a user may have administrator privileges, and query only privileges for another.

Security is handled through web browser cookies. This means that when a user enters the system, the information about privileges is written to a small file on the user's computer. This file must exist before the user can continue to any of the pages within the system.

Do not bookmark pages within the system! The security cookie has an expiration date. Even though the user has been in the system in the past with a correct user name and password, the system will not allow them to access anything. The user **MUST** enter through the Startup Screen to ensure property security and privileges.

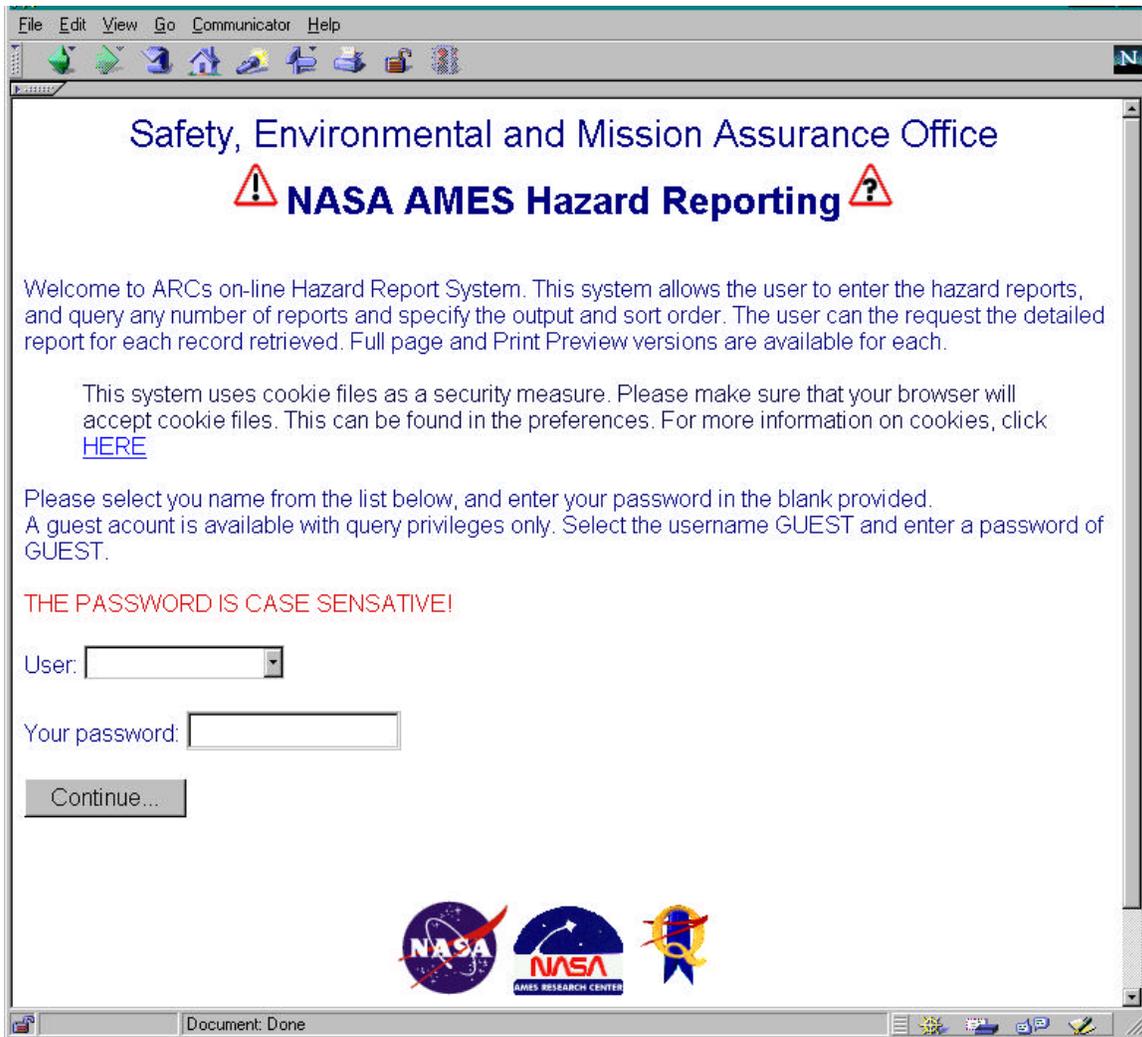
Security Level Description

- 0 No privilege
- 1 Query Only
- 2 Enter/Comment - User can enter Hazard Reports and make comments
- 3 Administrator - User has the privilege to control and transfer Hazard Reports in addition to access to the maintenance tables.
- 4 Superuser - User can access all Hazard Reports and alter the ownership, in addition to Administrator privileges.

Startup Screen

Before a user can enter the system, a user name and password must be entered. To do this:

1. Select the name from the list box.
2. Enter the password
3. Click the **Continue...** button



This will launch the security page. If the password matches the user name, and the privileges are established, the user will be allowed to continue.

Menu Structure

The Main Menu is the point in which all functions can be accessed. In addition to the Hazard Reporting functions, there are also key NASA links provided.

The **Hazard Report Query** module is the primary search page. This page allows the user to query any number of hazard reports based on search criteria. Several detailed report formats are available for viewing.

The **Saved Hazard Report Queries** module is used to run previously saved query parameters. This is one-touch report generation.

The **Hazard Report Entry** module is used to enter the hazard report. Access to this page is restricted to users with “Entry/Comment” privileges.

The **Hazard Report In Process** module is used to access the Hazard Reports in the various states of creation. Owners edit their Hazard Reports in “draft” or “review”. Others can comments on the Hazard Reports in “review.” Follow up information can also be accessed.

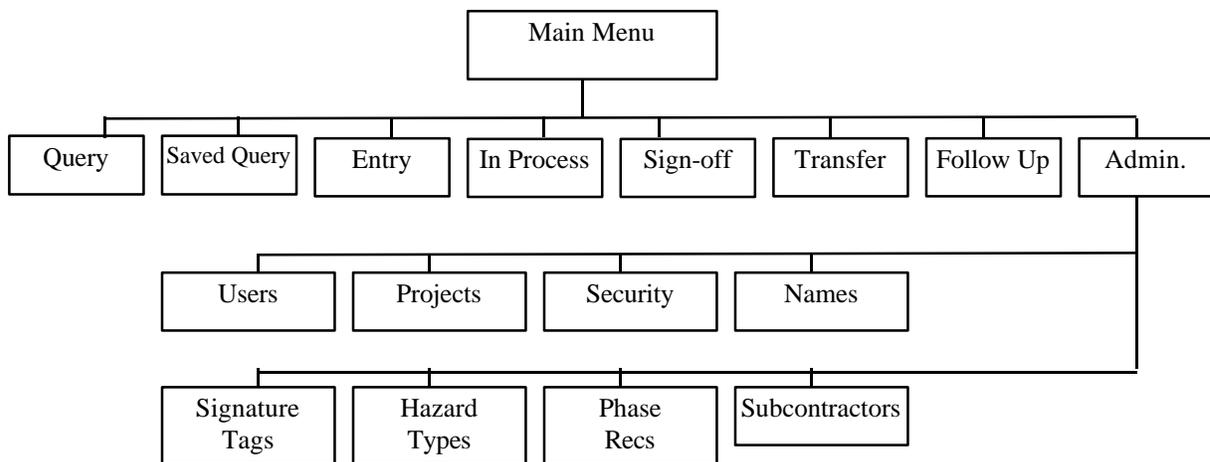
The **Hazard Report Sign-Off** module is used to electronically sign off on hazard reports. A user “signs” by clicking a check box next tot the hazard report number. Once a user signs, the next user is notified by email.

The **Hazard Report Transfer** module is used to transfer a copy of a Hazard Report from one project to another. This is restricted to administrators and superusers.

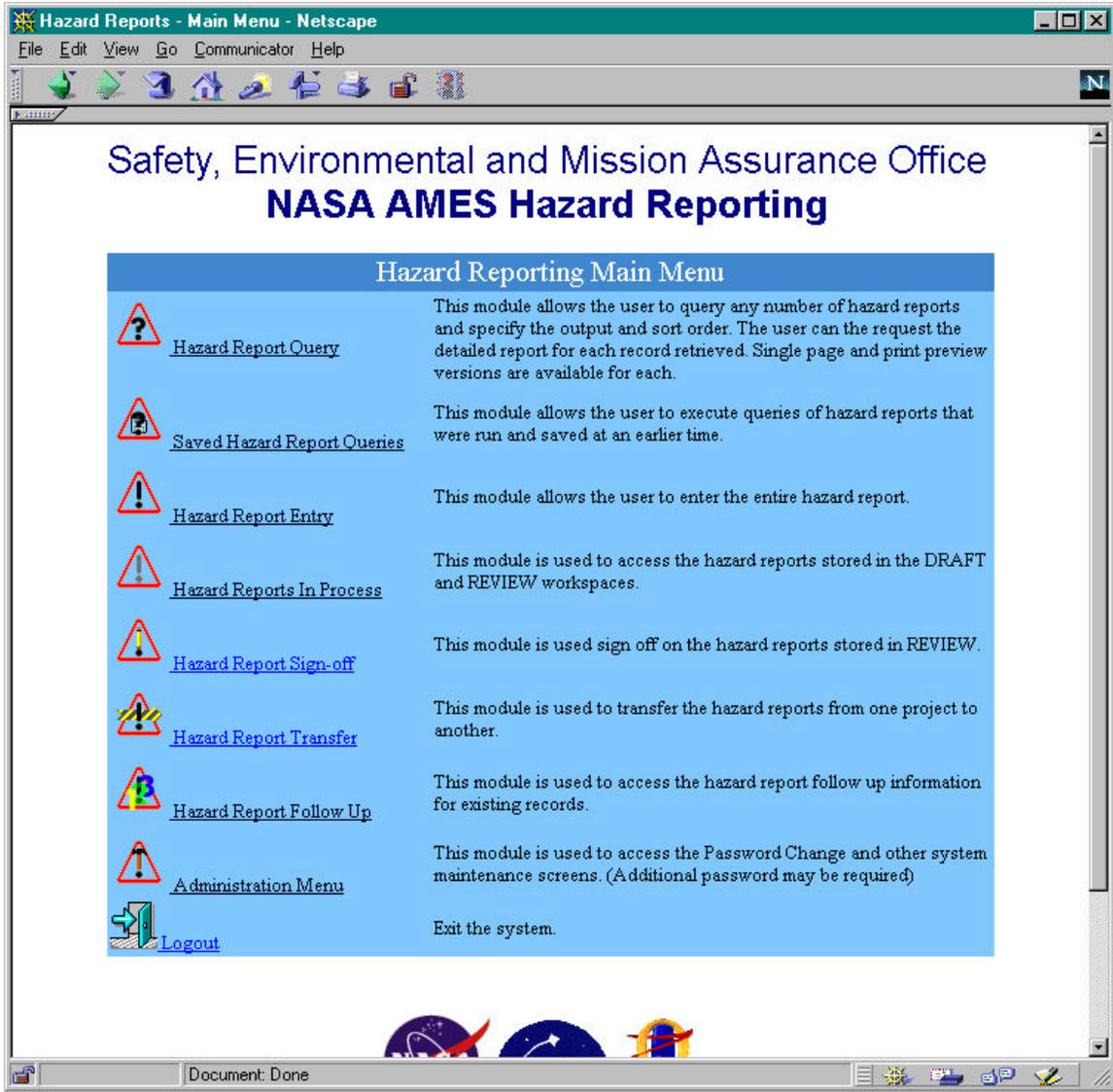
The **Hazard Report Follow Up** module allows the user to access the additional information not found on the Hazard Report.

The **Administration Menu** provides the user links to various system administration functions. General users can also access the Change Password page.

The **Logout** allows the user to exit the system and remove the security cookie from the local computer.



To access one of the menu options, click on the underlined hypertext link in the menu.



Hazard Report Searching

The query form is present in a format that is similar in appearance to the formal Hazard Report. This is to maintain a feel of familiarity for those users comfortable with the report format.

HAZARD REPORT QUERY PAGE
Enter the query parameters in the fields below.

1) FAC/PROJ: ?

2) BUILDING #:

3) REFERENCE:

4) SYSTEM:

HAZARD REPORT #:

STATUS:

CLOSED DATE: (MM/DD/YYYY)

HAZARD TYPE: ?

KEYWORD:

5) DESCRIPTION OF POTENTIAL HAZARD (Include hazardous conditions, cause(s) and effect(s))

Hazard:

Cause(s):
Not a searchable field.

Worst case credible effect(s):

6) EXISTING CONTROLS
Not a searchable field.

7) INITIAL HAZARD RISK ASSESSMENT

SEVERITY PROBABILITY HAZARD RISK ASSESSMENT ?

8) RECOMMENDED CONTROLS
Not a searchable field.

ORIGINATOR: ORGANIZATION: DATE:
(MM/DD/YYYY)

9) PLANNED ACTION(S)
Not a searchable field.

ESTIMATED COMPLETION DATE: (MM/DD/YYYY)

The query is a multiple step process. The first step is to enter the search criteria. Enter values in the fields provided to help narrow the search. Use of wildcards is allowed.

Wildcards

The “%” (percent sign) is a multiple character wildcard. This means it can be used in place of a string of characters.

EXAMPLE: “R%N” returns “RAIN,” “RAN,” “RUN,” and “RADON”

The “_” (underscore) is a single character wildcard. It replaces one letter, number, or special character.
 EXAMPLE: “R_N” returns “RAN” and “RUN,” but not “RAIN” or “RADON”

If all fields are left blank, every record the user has access to, will be retrieved. To select a value from a list box (like Projects or Hazard Type), click and hold the mouse button when the pointer is on the box. Drag the pointer to the desired option, and release the mouse button. Dates must be in the format: **DD/MM/YYYY**. This will avoid any issues with the “Year 2000” problem.

The second step is to the type of tabular report to be displayed. Clicking on the radio button next to the report name will establish the format. If **Custom** is clicked, the user must select the fields to be displayed. Click the checkbox to the left of the field name to select it. A title may be entered for a custom report. The *Details* checkbox will provide a link on the tabular report to access the detailed formats available.

Report formats

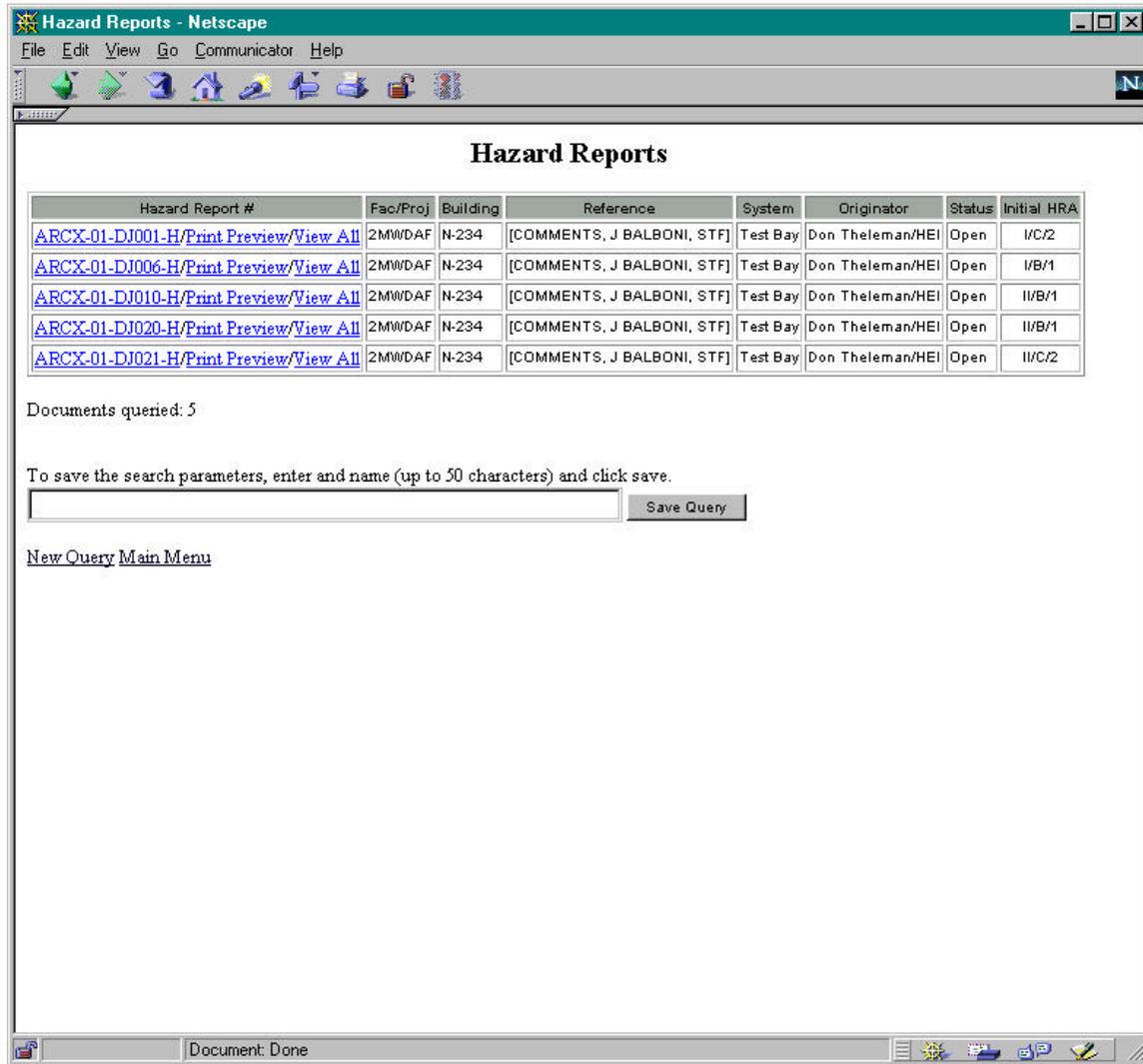
One Page - This is the entire Hazard Report on one scrolling page. This is accessed by clicking on the underlined Hazard Report number.

Print Preview - This is the Hazard Report in its formal multiple page format. To access the other pages of the report, click the link at the bottom of the page.

View All - This is a plain text report showing any information about the hazard reports, including comments, revision history, and follow up information.

The third step is selecting the sort order. Click the radio button next to the desired order. Only one option may be selected.

The last step is to click the **Query** button. This will launch the search.



Above is an example of the tabular report generated by the search. The links to the different Hazard Report formats are found in the **Hazard Report #** column. Note that the query parameters can be saved - not the query results. (See the *Saved Queries* section.)

To recap...

Step 1: Enter the search parameters in the form.

Step 2: Select the report format.

Step 3: Select the sort order.

Step 4: Click the **Query** button.

Hints

Make the query as specific as possible. Fill in as many fields as possible. This will reduce the report generation time, and avoid memory problems. The search parameters are connected using AND. This means that the records returned must match all of the parameters.

Display only the fields you need to see. Using all of the fields may make the report very wide and confusing. A smaller number of fields will also reduce generation time.

Select a sort order that best suits you needs. For example, for a timeline search, sort by date.

Saved Queries

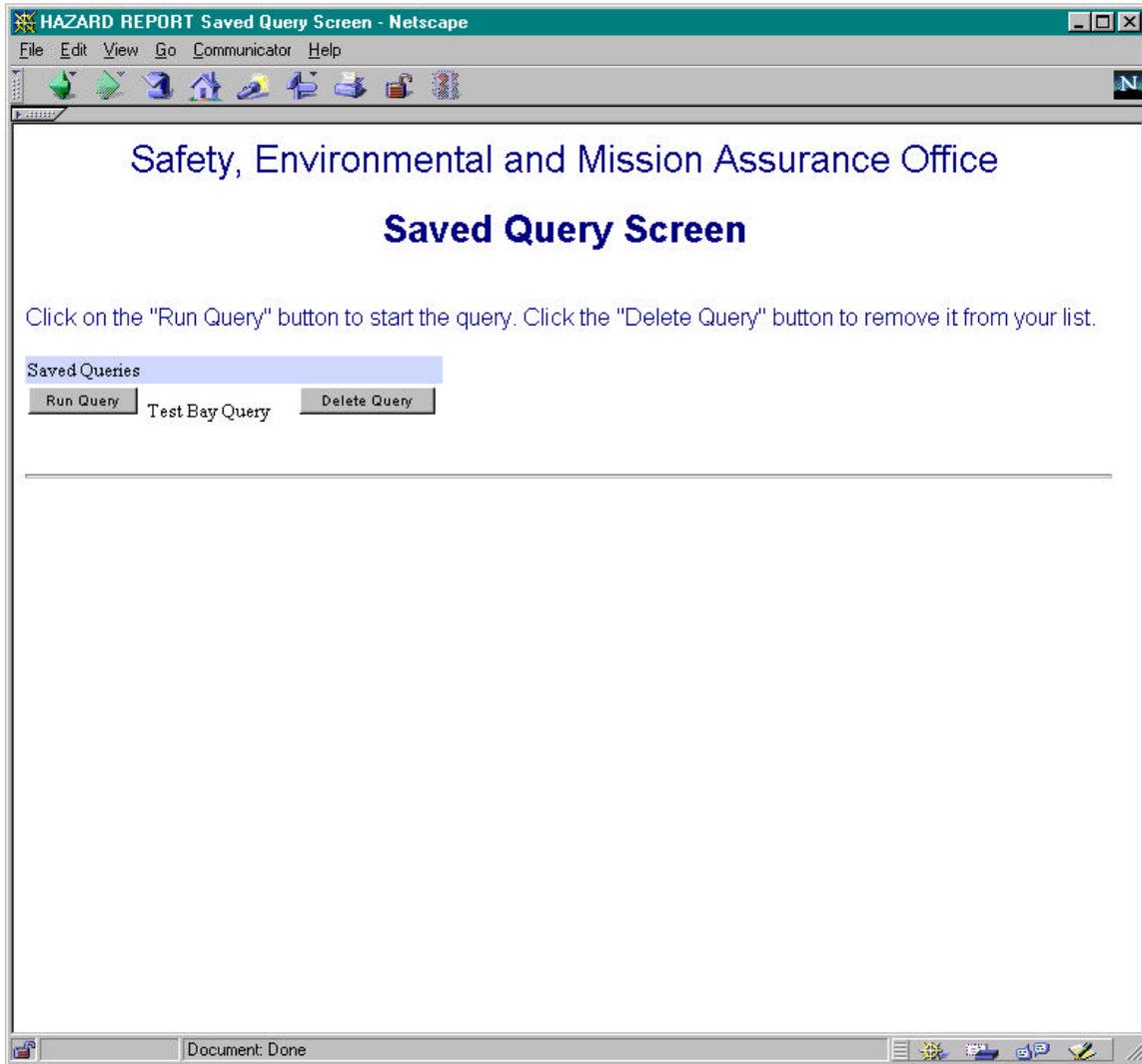
The system has the capability of saving query parameters. This allows a user to rerun the same search in the future. This does not mean that the results will always be the same. As records are added to the system, some of these may add to the results of a saved query. Saved queries are very useful for monthly status reports and anything that would require you to enter in the same parameters over and over.

Saving Queries

Once a query has been entered, the user can save the parameter set. This allows the user to run the same queries over again without retyping the parameters. This is done by entering a unique name in the blank provided at the bottom of the query page. Once the name has been entered, click the **Save Query** button.

Running Saved Queries

The saved queries can be accessed from the Main Menu. In the Main Menu, click the **Saved Hazard Report Queries**. This will open a page with the list of saved queries. To run a saved query, click the **Run Query** button next to the desired query. This will generate the list of hazard reports that match the search parameters.



Deleting Saved Queries

The saved queries can be accessed from the Main Menu. In the Main Menu, click the **Saved Hazard Report Queries**. This will open a page with the list of saved queries. To delete a saved query, click the **Delete Query** button next to the desired query.

Hazard Report Entry

The Hazard Report Entry page is used to enter a fresh hazard report record. If the hazard report does not exist in the system, this is where it must be entered. If it does exist, it must be accessed through the [Hazard Reports In Process](#) page. A couple of factors in the output of the report are determined by the project used. These factors are whether or not to use the REVIEW BOARD block, or to display the instructions. The automatic numbering scheme (NASA center - Project code - sequence # - H) is also determined by project.

To customize the title of the report, click on the TITLE field at the top of the page. Type over the existing title. This new title will follow the report through the entire lifecycle.

HAZARD REPORT Entry Screen - Netscape

File Edit View Go Communicator Help

NASA-AMES RESEARCH CENTER

HAZARD REPORT

1) FAC/PROJ: ?

2) BUILDING #:

3) REFERENCE:

4) SYSTEM:

HAZARD REPORT #: 01 ?

STATUS: Open

CLOSED DATE: (MM/DD/YYYY)

HAZARD TYPE: ?

KEYWORD:

5) DESCRIPTION OF POTENTIAL HAZARD (Include hazardous conditions, cause(s) and effect(s))

Hazard:

Cause(s):

Worst case credible effect(s):

6) EXISTING CONTROLS

Document: Done

Block 1 (fields 1 through 4)

Select the project or facility for the first field. If the project or facility does not exist in the list, notify the system administrator. In the remaining fields, enter the building, reference, and system.

Block 2

The system should auto-generate a Hazard Report number once the record has been elevated to the REVIEW stage. The following is the established procedure for establishing a Hazard Report number:

Identification of the Originating NASA Center - A four letter code identifying the specific NASA Center.

End-item Identifier - A two letter code identifying the end-item.

01 - Facility

02 - Spacecraft

03 - Aircraft

Project and Hazard Identifier - A two letter code assigned to the project. The remainder is a sequential number.

Code Letter - This is a code used to designate the type.

A - Action Item

H - Hazard

N - Nonconformance Report (NCR)

For the DRAFT mode, a temporary hazard report number can be assigned (e.g. JAH001) to identify the record for future edits. This temporary number will be replaced by the system.

Select the values for the STATUS and HAZARD TYPE fields from their respective list boxes. Enter any keywords that would aid in future searches. If the hazard Report is closed, enter the CLOSE DATE in the format: MM/DD/YYYY.

Block 3 (Field 5: Hazard Description)

The Hazard Description has three parts: the Hazard, the Causes, and the Worst case effects. The CAUSES field is a large scrolling text field.

Block 4 (Field 6: Existing Controls)

Enter the existing controls in the large scrolling text field.

Block 5 (Field 7: Initial Hazard Risk Assessment)

Select the appropriate values from the list boxes for SEVERITY and PROBABILITY. Then select the HRA based on the values enter for the first two. For a detailed description of the HRA matrix, click the help button (?) in the block.

Block 6 (Field 8: Recommended controls and Originator)

Enter the recommended controls in the large scrolling text field. Then enter the originator, their organization, and the date. Remember to use the format: MM/DD/YYYY.

Block 7 (Field 9: Planned Actions & Completion date)

Enter the planned actions in the large scrolling text field. Enter the estimated completion date using the format: MM/DD/YYYY.

Block 8 (Facility Manger)

Then enter the facility or project manager. The “signing” date will be entered when that person has “signed off” on the HR.

Block 9 (Verification)

Enter the methods of verification in the large scrolling text field. Then enter the verifier. The “signing” date will be entered when that person has “signed off” on the HR.

Block 10 (Field 11: Final Hazard Risk Assessment)

Select the appropriate values from the list boxes for SEVERITY and PROBABILITY. Then select the HRA based on the values enter for the first two. For a detailed description of the HRA matrix, click the help button (?) in the block.

Block 11 (Field 12: Review Board - *Optional*)

Then enter the facility or project manager. This block may not appear for some projects. It is an option set by the system administrator. The “signing” date will be entered when that person has “signed off” on the HR.

Block 12 (Field 13: Residual Risk Acceptance)

Enter the appropriate names and signature tags for the level of final risk assessment. Signature tags can be selected from the list box. The defaults are NASA tags. If a desired tag does not exist, notify the administrator. If a tag is left blank, that line will not appear on the final report. The “signing” date will be entered when that person has “signed off” on the HR.

Block 13 (Field 14: Hazard Closure)

Enter the appropriate names and signature tags for the level of final risk assessment. Signature tags can be selected from the list box. The defaults are NASA tags. If a desired tag does not exist, notify the

administrator. If a tag is left blank, that line will not appear on the final report. The “signing” date will be entered when that person has “signed off” on the HR.

HAZARD REPORT Entry Screen - Netscape

File Edit View Go Communicator Help

VERIFIED BY: [dropdown]

11) FINAL HAZARD RISK ASSESSMENT
SEVERITY [dropdown] PROBABILITY [dropdown] HAZARD RISK ASSESSMENT [dropdown] ?

12) REVIEW BOARD CONCURRENCE
CHAIRMAN: [dropdown]

13) RESIDUAL RISK ACCEPTANCE (date format: MM/DD/YYYY)

[dropdown] [date field]
(FINAL HRA 1, 2, 3, and 4)

[dropdown] [date field]
(FINAL HRA 1, 2, 3, and 4)

[dropdown] [date field]
(FINAL HRA 3)

[dropdown] [date field]
(FINAL HRA 1 and 2)

[dropdown] [date field]
(FINAL HRA 1)

[dropdown] [date field]
(FINAL HRA 1)

14) HAZARD CLOSURE (date format: MM/DD/YYYY)

[dropdown] [date field]
(FINAL HRA 3 and 4)

[dropdown] [date field]
(FINAL HRA 1 and 2)

Destination: [DRAFT] ?

Save

Document: Done

Destination:

The user has the option of saving a Hazard report to several different “workspace modes.” DRAFT saves the record in a workspace where only the owner and privileged superusers can access it. This is for Hazard Reports under development that are not to be reviewed yet. REVIEW mode allows privileged users to comment on the Hazard Report while it is being developed. CONTROL is the finalized mode where “query only” users can view it.

Saving

Once the values have been entered, press the **Save** button. If the record is saved properly, the Hazard Report will be displayed with the information in it. If a problem occurred, an error message explaining the problem will be displayed.

E-Mail notification

If a record is saved with a close date, and the user is not privileged to control, an optional e-mailer is displayed in the save screen. This will give the user the ability of firing off an e-mail to the responsible person(s) notifying them of a Hazard Report that needs to be controlled.

The screenshot shows a Netscape browser window titled "Hazard Reports - Netscape". The address bar shows the URL "http://instra.gsfc.nasa.gov:9001/naps/hr_save". The main content area displays a green "SUCCESS!" message followed by "Record inserted!". Below this, a message asks if the user wants to request the record be put under CONTROL, noting that a close date has been entered and the following person(s) will be notified. There are three text input fields: "Send email to:", "Send email from:", and "Additional comments:". A "Send an e-mail" button is located below the "Additional comments" field. At the bottom of the page, there are navigation links: "Filename", "Follow-Up", "New Record", "In Process", and "Main Menu". Below these links is a box titled "USRA HAZARD REPORT" containing a table of report details.

1) FAC/PROJ: SOFIA-USRA	HAZARD REPORT #: ARCX-03-TE001-H
2) BUILDING #: 12	FINAL HRA: 3
3) REFERENCE: TEST	CLOSED DATE: 06/12/1997
4) SYSTEM: TEST	HAZARD TYPE: 211
	KEYWORD: TEST

There is an additional optional step to add file links. At the bottom of the Save page, click the **Filename** link. This will launch the Filename Link page. Enter the ENTIRE web path of the file and a description. Press **Save** when done.

To recap...

- Step 1: Enter the Hazard Report data in the form fields. Date format: MM/DD/YYYY
- Step 2: Select the destination mode.
- Step 3: Click the **Save** button. Optional "Closed HR" E-mail notification.

Hazard Report Updating

Once a record has been entered into the system as either “Draft” or “Review,” it can be accessed through the **Hazard Report In Process** page. This page displays several groups of records. The first group is the users “Draft” records. These records can be edited, viewed, or deleted. The second group of records is the “Review” records. These records commented on or viewed. The owner has the additional privilege to edit and delete. Superusers will have a third group containing the “Control” records.

DRAFT Records

The DRAFT records are those records found in personal workspaces. The In Process page will display a list of the available records with this mode. If the user has “Superuser” privileges, a flag will be displayed.

System Safety, Reliability and Quality Assurance Office
NASA AMES Hazard Reporting

Hazard Report DRAFT Workspace Check ?

SUPERUSER MODE

Click on the "Work" next to the record to continue work. Click on the "Delete" next to the record to remove it. Click on the "Preview" next to the record to preview and print it.

	Proj/Fac.	Hazard Report #	Hazard	Originator	Orig. Date	User
Work Delete Preview	SOFIA	100000		Kent S.	08/27/1997	ABRICENO
Work Delete Preview	DC8	9999-99x				RNAVARRO
Work Delete Preview	SOFIA	ARCX-01-SF999-H	Test			JHOFSTETTER
Work Delete Preview	SOFIA	ARCX-01-TE001-H	Failure to show full report	Jim	10/15/1997	JHOFSTETTER
Work Delete Preview	SOFIA	ARCX-03-SA003-H	Excessive temperature changes induce differential stress in aircraft structure and all components located in the aircraft's aft cavity.	D.A. Zimmer	08/31/1995	RMORRISON
Work Delete Preview	SOFIA	ARCX-03-SA004-H	Loss of Aircraft control.	D.A. Zimmer	08/31/1995	RMORRISON
Work Delete Preview	SOFIA	ARCX-03-SA005-H	Death or serious injury to crew while trying to exit the aircraft cabin in an emergency situation.	D.A. Zimmer	08/31/1995	RMORRISON
Work Delete Preview	SOFIA	ARCX-03-SA006-H	Crew contact with sharp edges or points during normal operations or if thrown off balance as a result of in-flight turbulence.	D.A. Zimmer	08/31/1995	RMORRISON
Work Delete Preview	SOFIA	ARCX-03-SA007-H	Rapid depressurization of aircraft main cabin at altitude (41,000 feet).	D.A. Zimmer	08/31/1995	RMORRISON
Work Delete Preview	SOFIA	ARCX-03-SA008-H	Excessive pressure differential in Telescope Cavity causes damage to cavity door, door support structure operating mechanism, or cavity aft bulkhead.	D.A. Zimmer	08/31/1995	RMORRISON
Work Delete Preview	SOFIA	ARCX-87872-S12	This is a test			JHOFSTETTER
Work Delete Preview	SOFIA	ARCX-9080-1A	Heavy control mechanism	Rich	08/01/1998	RMORRISON
Work Delete Preview	DC8	ARCX-XX9999-99				RNAVARRO

To view a draft record, click the **Preview** link. This will display the Hazard Report in the formal multi-page format.

To edit a draft record, click the **Work** link. This will open a page very similar to the entry screen. The form will contain the values previously entered for the record. These values can be changed by typing over them. If the report is complete enough to be reviewed, the Destination can be changed to REVIEW. Once the values have been entered, press the **Save** button. If the record is saved properly, the Hazard Report will be displayed with the information in it. If a problem occurred, an error message explaining the problem will be displayed.

E-Mail notification

If a record is saved with a close date, and the user is not privileged to control, an optional e-mailer is displayed in the save screen. This will give the user the ability of firing off an e-mail to the responsible person(s) notifying them of a Hazard Report that needs to be controlled.

There is an additional optional step to add file links. At the bottom of the Save page, click the **Filenames** link. This will launch the Filename Link page. Enter the ENTIRE web path of the file and a description. Press **Save** when done.

To delete a draft record, click the **Delete** link. A confirmation page will be displayed. If you are sure this is the record you want to delete, click the **Delete** button at the bottom of the page.

Superuser Note:

This group will contain all records saved as draft for the project(s) you have privileges for. The owner of the record will appear on the right side of the table. To change the owner of the record, click the **Work** button. An "Owner" list box will be displayed at the top of the screen. The default value in the field is the current owner. To change it, select another name in the list. This will give the new owner privileges to edit this record.

REVIEW Records

The REVIEW records are visible to everyone with “Entry / Comment” privileges.

Hazard Report REVIEW Workspace Check ?

Click on the "Review" next to the record to continue work. Click on the "Delete" next to the record to remove it. Click on the "Preview" next to the record to preview and print it.

	Proj/Fac.	Hazard Report#	Hazard	Originator	Orig. Date
Review Delete Preview	SOFIA	ARC-01-A001-01	Test		
Review Delete Preview	SOFIA	ARC-H123-RAY	Power failure		
Review Delete Preview	SOFIA	ARC-XX-YYYY-Z	This is a test hazard report.	Rich Morrison	08/22/1997
Review Delete Preview	SOFIA	ARCX-03-SA001-H	Exposure of personnel to electric shock due to:	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SA002-H	Ignition of combustibles due to electrical overheating / sparks:	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SA009-H	Overpressurization leading to rupture of LN2/O ₂ component.	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SA010-H	Asphyxiation of crew due to presence of Nitrogen. Loss of consciousness can occur within 30 seconds without awareness of symptoms	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SA011-H	Exposure of science crew to high noise level.	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SA012-H	Inadvertent activation of cavity door during low speed/altitude flight (landing, takeoff or go-around).	O. Overton	03/26/1996
Review Delete Preview	SOFIA	ARCX-03-SE001-H	Exposure of personnel to glass fragments:	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SE002-H	Exposure of personnel to electric shock due to:	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SE003-H	Ignition of combustibles due to electrical overheating / sparks:	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SE004-H	Failure of aircraft cockpit controls to properly operate or accurately indicate data (including Auto Pilot and guidance systems):	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SE005-H	Loss of aircraft control due to MCCS interface with the aircraft Auto Pilot.	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-SE006-H	Crew contact with sharp edges or points during normal operations or if thrown off balance as a result of in-flight turbulence.	D.A. Zimmer	08/31/0095
Review Delete Preview	SOFIA	ARCX-03-SE007-H	Release of corrosive materials from the 120 volt back-up battery power system in the Un-interruptible Power Supply (UPS). Type of batteries not defined; lead/acid batteries assumed.	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-ST001-H	Exposure of personnel to electric shock due to	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-ST002-H	Ignition of combustibles due to electrical overheating / sparks:	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-ST003-H	Failure of aircraft cockpit controls to properly operate or accurately indicate data (including Auto Pilot and guidance systems):	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-ST004-H	Excessive temperature changes induce differential stress in telescope primary, secondary or tertiary mirror, or in the telescope structure.	D.A. Zimmer	08/31/1995
Review Delete Preview	SOFIA	ARCX-03-ST005-H	Crew contact with sharp edges or points during normal operations or if thrown off balance as a result of in-flight turbulence.	D.A. Zimmer	08/31/1995

To view a review record, click the **Preview** link. This will display the Hazard Report in the formal multi-page format.

To edit a REVIEW record of which you are the owner, click the **Review** link. This will open a page very similar to the entry screen. The form will contain the values previously entered for the record. Type over these values to change them. Once the values have been entered, press the **Save** button. Once the record has been saved as “Review,” revision tracking is enabled. Before completing the save process, the user must enter a brief description or reason for the change. If the record is saved properly, the Hazard Report will be displayed with the information in it. If a problem occurred, an error message explaining the problem will be displayed.

E-Mail notification

If a record is saved with a close date, and the user is not privileged to control, an optional e-mailer is displayed in the save screen. This will give the user the ability of firing off an e-mail to the responsible person(s) notifying them of a Hazard Report that needs to be controlled.

There is an additional optional step to add file links. At the bottom of the Save page, click the **Filenames** link. This will launch the Filename Link page. Enter the ENTIRE web path of the file and a description. Press **Save** when done.

To comment on a hazard record, click on the **Work** link. A page will be displayed containing the record. At the bottom of the page, there are several links: **Enter Comments**, **View Comments**, **View Revision History**, **Filenames**, and **Followup**. Click the **Enter Comments** link to launch the comment page. Select the block to comment on from the list box. Enter the comments in the large text field. Click the **Save** button when done.

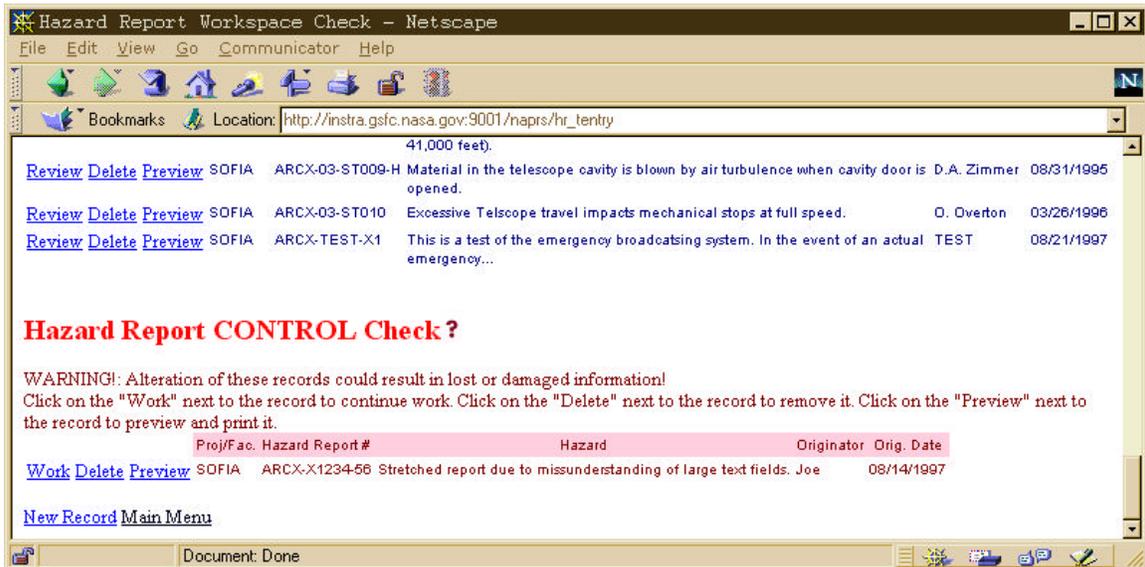
To delete a draft record, click the **Delete** link. A confirmation page will be displayed. If you are sure this is the record you want to delete, click the **Delete** button at the bottom of the page.

Superuser Note:

This group will contain all records saved as “Review” for the project(s) you have privileges for. The owner of the record will appear on the right side of the table. To change the owner of the record, click the **Review** link. An “Owner” list box will be displayed at the top of the screen. The default value in the field is the current owner. To change it, select another name in the list. This will give the new owner privileges to edit this record. Demoting a Hazard Report from “Review” to “Draft” will NOT remove any revision history.

CONTROL Records

Access to the Control group is restricted to superusers. The Control group works the same as the Review group. This group will contain all records saved as “Control” for the project(s) you have privileges for. Demoting a Hazard Report from “Control” to “Review” or “Draft” will NOT remove any revision history.



Sign-Off

Hazard Reports are signed off through an electronic process. The originator can spawn an e-mail to the first person to sign off on a Hazard Report. Once that person has signed off, the next person in the chain is e-mailed.

The signing process is handle in it's own module that can be accessed from the main Hazard Report System menu. Once in the Sign-Off page, the user has several options. The first option is to sign the HR. To sign off on a HR, select "SIGN" in the drop-down list next to the number. It is possible to sign a Hazard Report out of sequence, so, to maintain the signing sequence, please view the HR before you "sign". To do this, click on the HR #.

The second option is to reject a hazard report. To reject a HR, select "REJECT" in the drop-down list next to the number. This will notify the originator of the rejection via an e-mail.

The last option is to skip the record. Leaving the "Sign/Reject" column blank will make the computer skip the hazard report and leave it unchanged.

When finished, click the **Done** button at the bottom of the page. Remember to use the **Back** button to return to the SIGN-OFF page.

To recap...

Step 1: To view the HR, click on the HR #. Review the information.

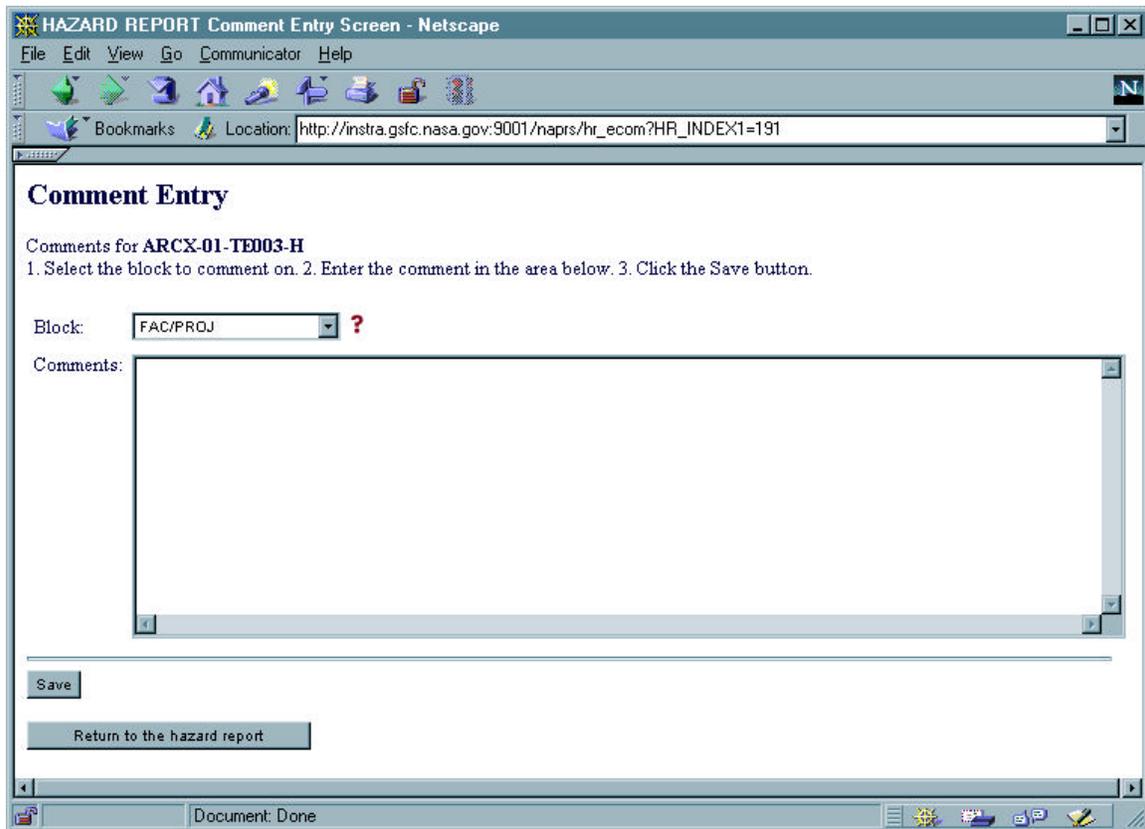
Step 2: Enter the status.

- To sign off on a HR, select "SIGN" in the drop-down list next to the number.
- To reject a HR, select "REJECT" in the drop-down list next to the number.

Step 3: Click **Done** to save.

Commenting

To comment on a hazard record, click on the **Review** link in the REVIEW workspace check. A page will be displayed containing the record. At the bottom of the page, there are several links: **Enter Comments**, **View Comments**, **View Revision History**, **Filenames**, and **Follow up**. Click the **Enter Comments** link to launch the comment page. Select the block to comment on from the list box. Enter the comments in the large text field. Click the **Save** button when done.



Transferring

The Hazard Report Transfer module allows an administrator or superuser to transfer a copy of a Hazard Report from one project to another. The user must have “Administrator” or “Superuser” privileges for the originating project, and at least “Entry/ Comment” privilege for the destination project. The comments, revision history, signatures, and signature tags are NOT transferred to the new project.

The first step in the transfer process is to select the originating project/facility and mode. Select the project from the list box. Then select either “Review” or “Control”. This will determine which group of records will be made available for the user to transfer. Once these two things are done, click the **Continue...** button.

The next step is to select the destination project from the list box. Records can only be transferred into the “Review” group. This allows a user to complete the signature block for the new project. A check list of available records for transfer will be displayed under the destination selection. Click on the check box to select a record for transfer. More than one can be chosen.

Once the destination is selected, and the records are checked, click the **Transfer** button. This will start the transfer process.

To recap...

Step 1: Select the origination project or facility and workspace mode.

Step 2: Click the **Continue...** button to get the list of available records.

Step 3: Select the destination project or facility.

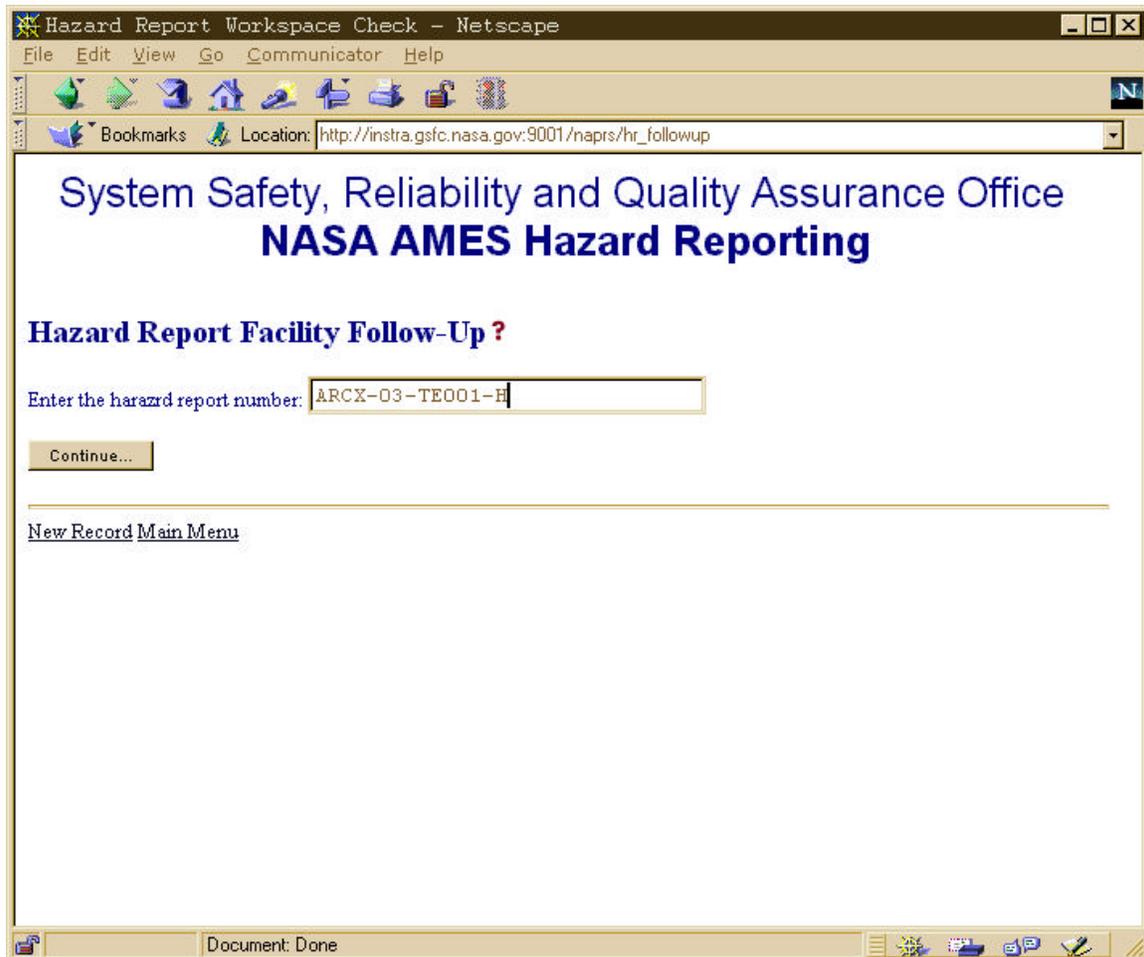
Step 4: Check the boxes of the records to be transferred.

Step 5: Click the **Transfer** button to start the automated process.

Follow Up

The follow up module allows a user to review or add information to be tracked with the Hazard Report that is not found on the formal form. A user must have “Entry / Comment” privilege to access this module. A user can also access the follow up information directly from the “Draft” and “Review” section of the **Hazard Report In Process** module.

The first step is to enter the Hazard Report number, and press the **Continue...** button. This will launch the follow up information page for the record.



Hazard Report Workspace Check - Netscape
File Edit View Go Communicator Help
Location: http://instra.gsfc.nasa.gov:9001/naps/hr_followup

System Safety, Reliability and Quality Assurance Office
NASA AMES Hazard Reporting

Hazard Report Facility Follow-Up ?

Enter the hazard report number:

[New Record](#) [Main Menu](#)

Document: Done

The next step is to fill in the available fields. The PROJECT STATUS flags the record as referring to an operational or non-operational project. The HISTORICAL flag allows the record to remain open for historical purposes and not appear in an “open” hazard report list. The PROJECT ENGINEER, FACILITY ENGINEER, and SUBCONTRACTOR fields are list boxes with all the available names. If a name does not appear, notify the system administrator. The PHASE selection is a check list. More than one can be chosen.

The PHASE RECOMMENDATIONS are list boxes containing general and project specific options. If the desired value does not appear, notify the system administrator.

HAZARD REPORT Follow-Up Entry Screen - Netscape

File Edit View Go Communicator Help

1. Type in the new data (or type over the old,) to change. 2. Click the SAVE button at the bottom of the page.

NASA AMES RESEARCH CENTER HAZARD REPORT FOLLOW-UP

Hazard #: ARCX-01-DJ001-H Rev: 1

<p>Project Status: <input type="text" value="OPERATIONAL"/></p> <p>Historical: <input type="radio"/> Yes <input checked="" type="radio"/> No</p> <p>Project Engineer: <input type="text"/></p> <p>Facility Engineer: <input type="text"/></p> <p>Subcontractor: <input type="text"/></p>	<p>Phase: ?</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td><input checked="" type="checkbox"/> Design</td> <td><input checked="" type="checkbox"/> Construction</td> </tr> <tr> <td><input checked="" type="checkbox"/> Test</td> <td><input checked="" type="checkbox"/> IST</td> </tr> <tr> <td><input checked="" type="checkbox"/> Operation</td> <td></td> </tr> </table> <p>Recommendations</p> <p>Design: <input type="text"/></p> <p>Development: <input type="text"/></p> <p>Verification: <input type="text"/></p>	<input checked="" type="checkbox"/> Design	<input checked="" type="checkbox"/> Construction	<input checked="" type="checkbox"/> Test	<input checked="" type="checkbox"/> IST	<input checked="" type="checkbox"/> Operation	
<input checked="" type="checkbox"/> Design	<input checked="" type="checkbox"/> Construction						
<input checked="" type="checkbox"/> Test	<input checked="" type="checkbox"/> IST						
<input checked="" type="checkbox"/> Operation							

Analysts Comments:

This duplicates what we have in Hazard Report Comments/RL. It requires that the

To do:

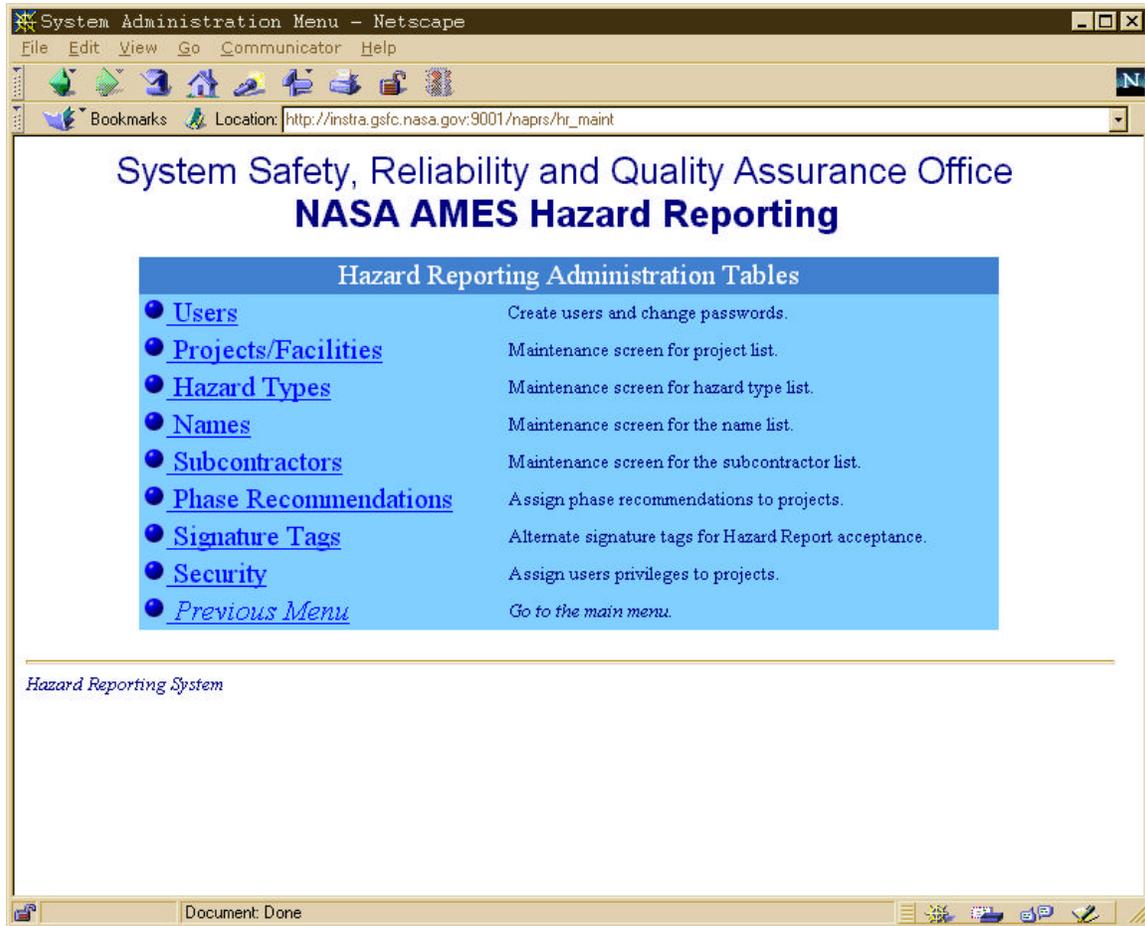
Document: Done

The last two fields are large text areas. The first is the ANALYSTS COMMENTS. This is to be used for any additional comments not directly related to the information found on the Hazard Report. The second is the TO DO area.

If data already exists in the fields, type over it, or make a new selection from the list. Click the **Save** button when done.

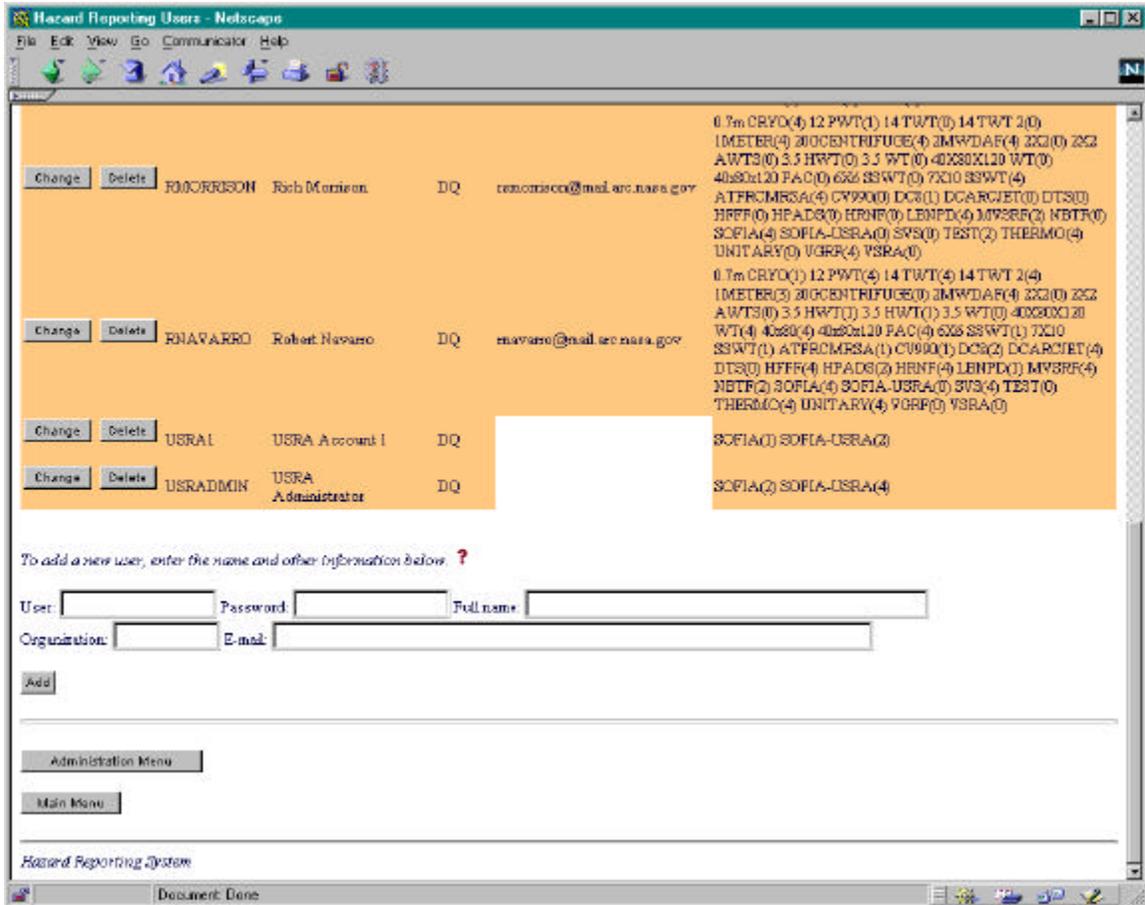
Administration

The Administration menu contains the pages that allow users to maintain the common list elements used in drop-down fields and validation. Most of the administration pages have a similar format. At the top of the page is a list of the existing records. Next to each existing record are the buttons to modify or delete it. At the bottom of the page is the form for entering a new record.

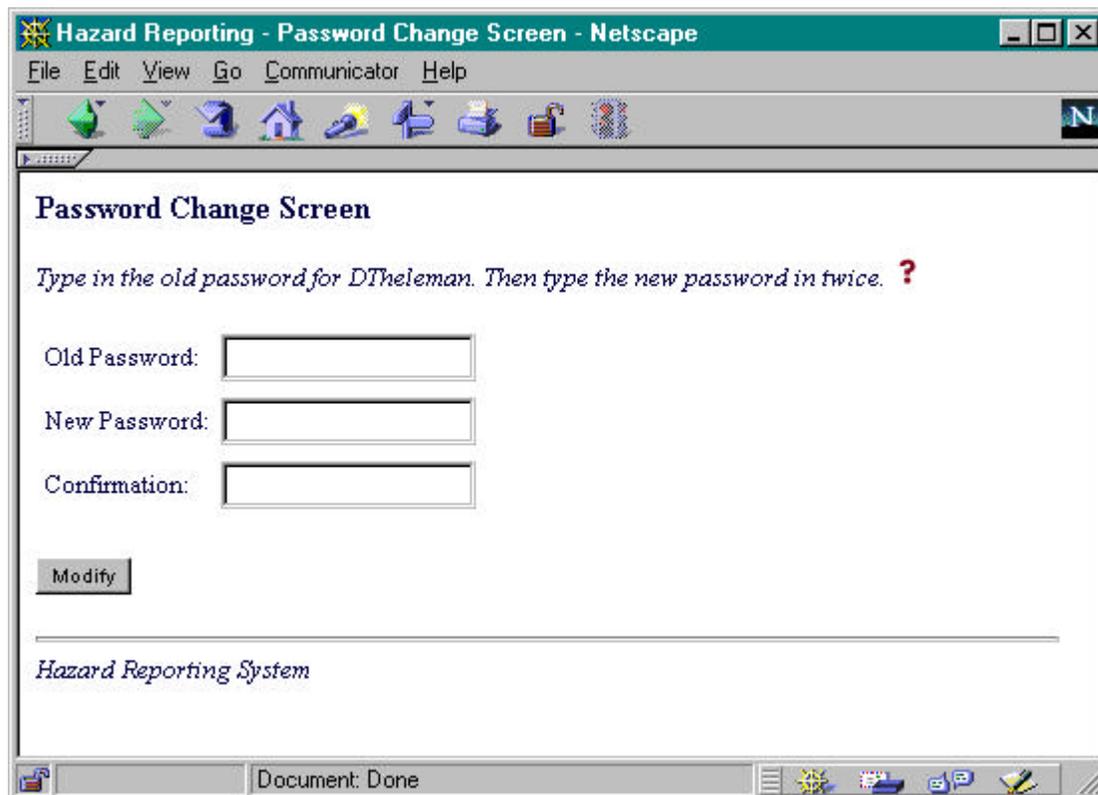


Users

The only administration module available for the general user is one for changing the user password. From the Main Menu, click the **Administration** link. This will display a limited administration menu. Select the **Users** link to launch the change password module. The System Administrator has more control of the users. The entry screen is a list of all the users.



To change the user's password, click the **Change** button. In the first field, enter the original password. The password will appear as a series of dots in the field. This is to hide the password.



In the next field, enter the new password. Since the password is not visible, re-enter the same new password in the CONFIRMATION field. This will insure that no typos where made. If the two new passwords do not match, the user will be required to re-enter them.

Projects/Facilities

The Projects/Facilities page is used to maintain the project names used in the system. The project (or facility) is the primary organization tool. All hazard reports are associated with a project or facility. Security levels for system users are set for a project or facility. Selections made in the Projects/Facilities page can also alter the appearance of the hazard report form.

Projects and Facilities

To change project information, click "Modify". To remove a project, click "Delete". ?

Modify	Delete	Project	Description	Code	Block 12	Directions
Modify	Delete	12 PWT	12 foot Pressurized Wind Tunnel		Y	Y
Modify	Delete	40x80	40 by 80, 80 by 120 foot Wind Tunnel	NF	Y	Y
Modify	Delete	DC8	DC-8 Modification	AL	Y	Y
Modify	Delete	HPADS	High Pressure Air Distribution System	HP	Y	Y
Modify	Delete	MVSRF	Multiple Vehicle Simulation Facility	AC	Y	Y
Modify	Delete	SOFIA	Stratospheric Observatory for Infrared Astronomy	SA	Y	Y
Modify	Delete	SOFIA-USRA	SOFIA for USRA	S1		
Modify	Delete	TEST	Test Project	TE	Y	Y

Enter the new project and description, and click "Add" to save. ?

Project Code:

Description:

2 Letter Code:

Block 12:

Directions:

At the top of the page is a list of the existing projects. Next to each existing record are the buttons to modify or delete it. At the bottom of the page is the form for entering a new project or facility.

Adding a new project or facility

The first field is the project code. This unique code is how the project will be referenced throughout the system. The 2-letter code is critical for the hazard report auto-numbering feature. At the bottom of the form are two check boxes that alter the form. The "Block 12" check box allows the administrator to turn

the “Review Board Chairman” field on or off. The “Directions” check box turns the instruction list on the bottom of page one of the printed form on and off. Once the fields have been filled, click the **Add** button.

Modifying an existing project or facility

Click on the **Modify** button next to the existing record. This will open the Modify page with a form similar to the Add form with the information already in the fields. Type over the existing data and click the **Modify** button.

WARNING!

Modifying a project/facility code could have adverse effects on existing records in the system. Records with the old project code will no longer be visible to the users!

Deleting an existing project or facility

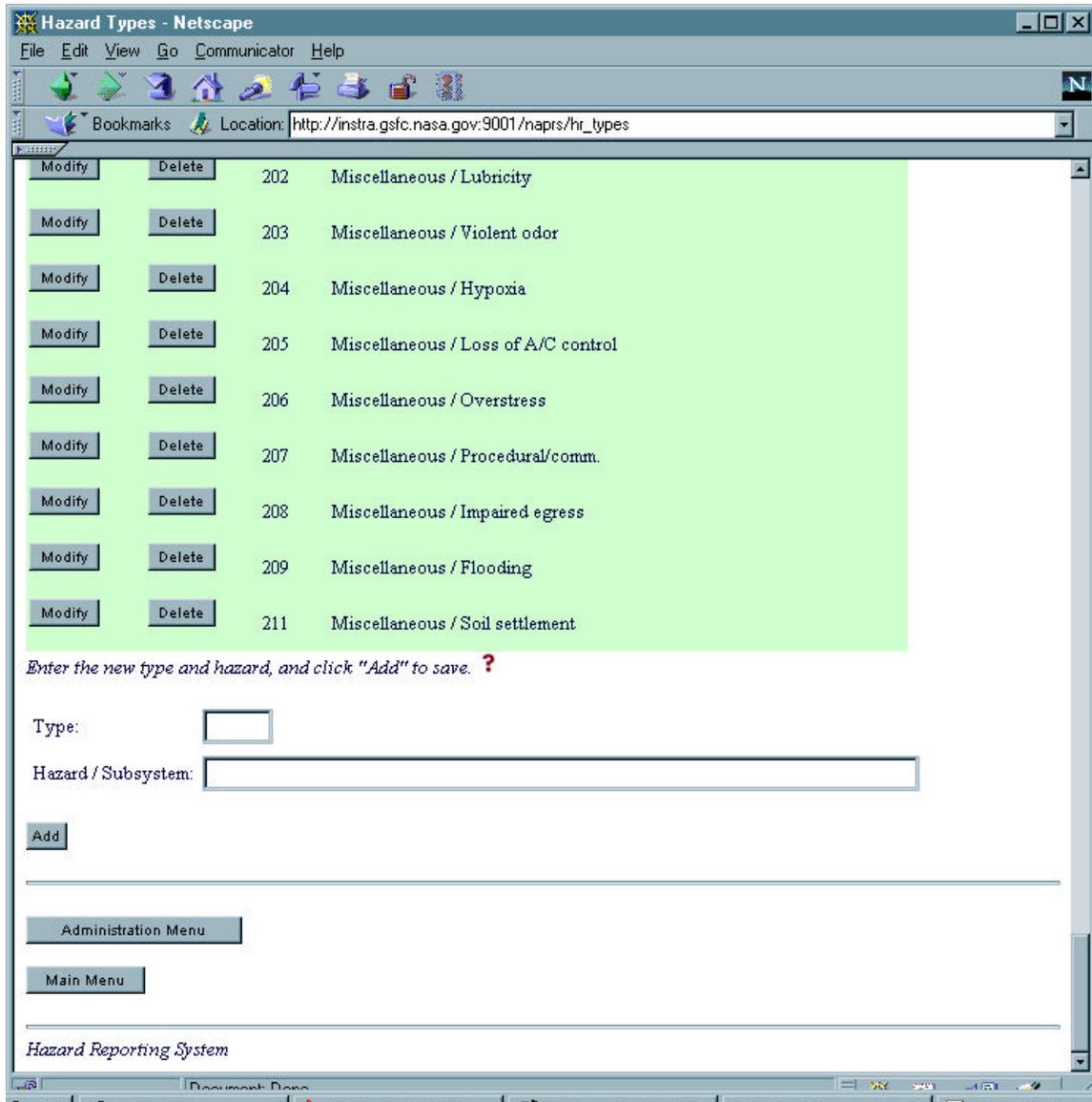
Click the **Delete** button next to the existing record. This will open a confirmation page. If you are sure you want to delete the record, click the **Delete** button.

WARNING!

Deleting a project/facility code could have adverse effects on existing records in the system. Records with the deleted project code will no longer be visible to the users!

Hazard Types

The hazard type list is used in the Hazard Report form.



Adding a new Hazard Type

The first field is the type code. This unique code is how the type will be referenced throughout the system. Once the fields have been filled, click the **Add** button.

Modifying an existing Hazard Type

Click on the **Modify** button next to the existing record. This will open the Modify page with a form similar to the Add form with the information already in the fields. Type over the existing data and click the **Modify** button.

WARNING!

Modifying a Hazard Type could have adverse effects on existing records in the system. Records with the old type could generate errors!

Deleting an existing Hazard Type

Click the **Delete** button next to the existing record. This will open a confirmation page. If you are sure you want to delete the record, click the **Delete** button.

WARNING!

Deleting a hazard type could have adverse effects on existing records in the system. Records with the deleted type could generate errors.

Names

The Names list is used in the Hazard Report for such lists as contact points and engineers. The list also associates people with their e-mail address.

Hazard Reporting Names

To change a name, click "Change". To remove a name, click "Delete". ?

Change	Delete	Name	Code	E-mail
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	Ericeno, Anthony	DQA	abriceno@mail.arc.nasa.gov
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	Morrison, Rich	DQA/HEI	rmorrison@mail.arc.nasa.gov
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	Navarro, Robert	DQA	rnavarro@mail.arc.nasa.gov
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	Stansberry, Ray	SF	rstansberry@mail.arc.nasa.gov
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	Wong, Allan	WT12	awong@mail.arc.nasa.gov

Enter the new name information, and click "Add" to save. ?

Name:

Code/Org.:

E-mail:

Hazard Reporting System

Adding a new name

The first field is the name. Names should be entered in the format: “Last name, First name.” The e-mail address is important for auto-notification. Once the fields have been filled, click the **Add** button.

Modifying an existing name

Click on the **Change** button next to the existing record. This will open the Modify page with a form similar to the Add form with the information already in the fields. Type over the existing data and click the **Modify** button.

WARNING!

Modifying a Name could have adverse effects on existing records in the system. Records with the old name could generate errors during an auto-notification procedure!

Deleting an existing name

Click the **Delete** button next to the existing record. This will open a confirmation page. If you are sure you want to delete the record, click the **Delete** button.

WARNING!

Deleting a name could have adverse effects on existing records in the system. Records with the deleted type could generate errors during an auto-notification procedure!

Subcontractors

The subcontractor list is used in the Hazard Report Follow-up.

The screenshot shows a Netscape browser window titled "Hazard Reporting Subcontractors - Netscape". The address bar displays the URL "http://intra.gsfc.nasa.gov:9001/naps/hr_subs". The main content area features a heading "Hazard Reporting Subcontractors" followed by instructions: "To change a name, click 'Change'. To remove a name, click 'Delete'." Below this is a table with two rows of subcontractor data. Each row has "Change" and "Delete" buttons to its left. The first row lists "Orbital Sciences Corp." with phone number "301-220-5600". The second row lists "Raytheon/E-Systems" with a masked phone number "xxx-xxx-xxxx". Below the table, there is another instruction: "Enter the new subcontractor information, and click 'Add' to save." This is followed by input fields for "Name:" and "Phone:". Below these fields is an "Add" button. At the bottom of the form area are two menu buttons: "Administration Menu" and "Main Menu". The footer of the page reads "Hazard Reporting System". The browser's status bar at the bottom shows "Document: Done".

Change	Delete	Name	Phone
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	Orbital Sciences Corp.	301-220-5600
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	Raytheon/E-Systems	xxx-xxx-xxxx

Adding a new subcontractor

The form contains two data fields: name and phone number. Once the fields have been filled, click the **Add** button.

Modifying an existing subcontractor

Click on the **Change** button next to the existing record. This will open the Modify page with a form similar to the Add form with the information already in the fields. Type over the existing data and click the **Modify** button.

Deleting an existing subcontractor

Click the **Delete** button next to the existing record. This will open a confirmation page. If you are sure you want to delete the record, click the **Delete** button.

Phase Recommendations

The Phase Recommendation list is used in the Hazard Report Follow-up. Recommendations can apply to one or all projects.

Hazard Reporting Phase Recommendations - Netscape

File Edit View Go Communicator Help

Bookmarks Location: http://instra.gsfc.nasa.gov:9001/naps/hr_phaserecs

Hazard Reporting Phase Recommendations

To change a recommendation, click "Change". To remove a recommendation, click "Delete". ?

Change	Delete	Project Recommendation
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	-ALL- Agreed
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	-ALL- Closed
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	-ALL- Design complete
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	-ALL- Open
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	-ALL- Ready for test
<input type="button" value="Change"/>	<input type="button" value="Delete"/>	-ALL- Tested

Enter the new recommendation, and click "Add" to save. Select "-ALL-" for all projects. ?

Project:

Recommendation:

Document: Done

Adding a new recommendation

The form contains two data fields: project and recommendation. If the option “-ALL-“ is selected, the recommendation will appear for all projects. Once the fields have been filled, click the **Add** button.

Modifying an existing recommendation

Click on the **Change** button next to the existing record. This will open the Modify page with a form similar to the Add form with the information already in the fields. Type over the existing data and click the **Modify** button.

Deleting an existing recommendation

Click the **Delete** button next to the existing record. This will open a confirmation page. If you are sure you want to delete the record, click the **Delete** button.

Signature Tags

The signature tag lists is used in the Residual Risk Acceptance and Hazard Closure blocks of the Hazard Report. The signature lines have default names that apply to NASA. Alternative tags can be selected from a drop-down list. These alternative tags are entered in this maintenance page. At the top of each list is the default tag.

Hazard Signature Tags

Below are the alternate signature tags for the hazard report 13)RESIDUAL RISK ACCEPTANCE and 14)HAZARD CLOSURE blocks. Under each default tag, is the list of replacement tags.

To remove a tag, click "Delete". ?

SRMQA IPT Leader (FINAL HRA 1, 2, 3, and 4)

Delete Tag

Delete USRA SRMQA IPT Leader

Enter the new tag and click "Add" to save. ?

Tag: Add

SRMQA Manager (FINAL HRA 1, 2, 3, and 4)

Delete Tag

Delete USRA SRMQA Manager

Enter the new tag and click "Add" to save. ?

Tag: Add

Branch Manager (FINAL HRA 3)

Delete Tag

Delete RESY Program Manager

Enter the new tag and click "Add" to save. ?

Document: Done

Adding a new tag

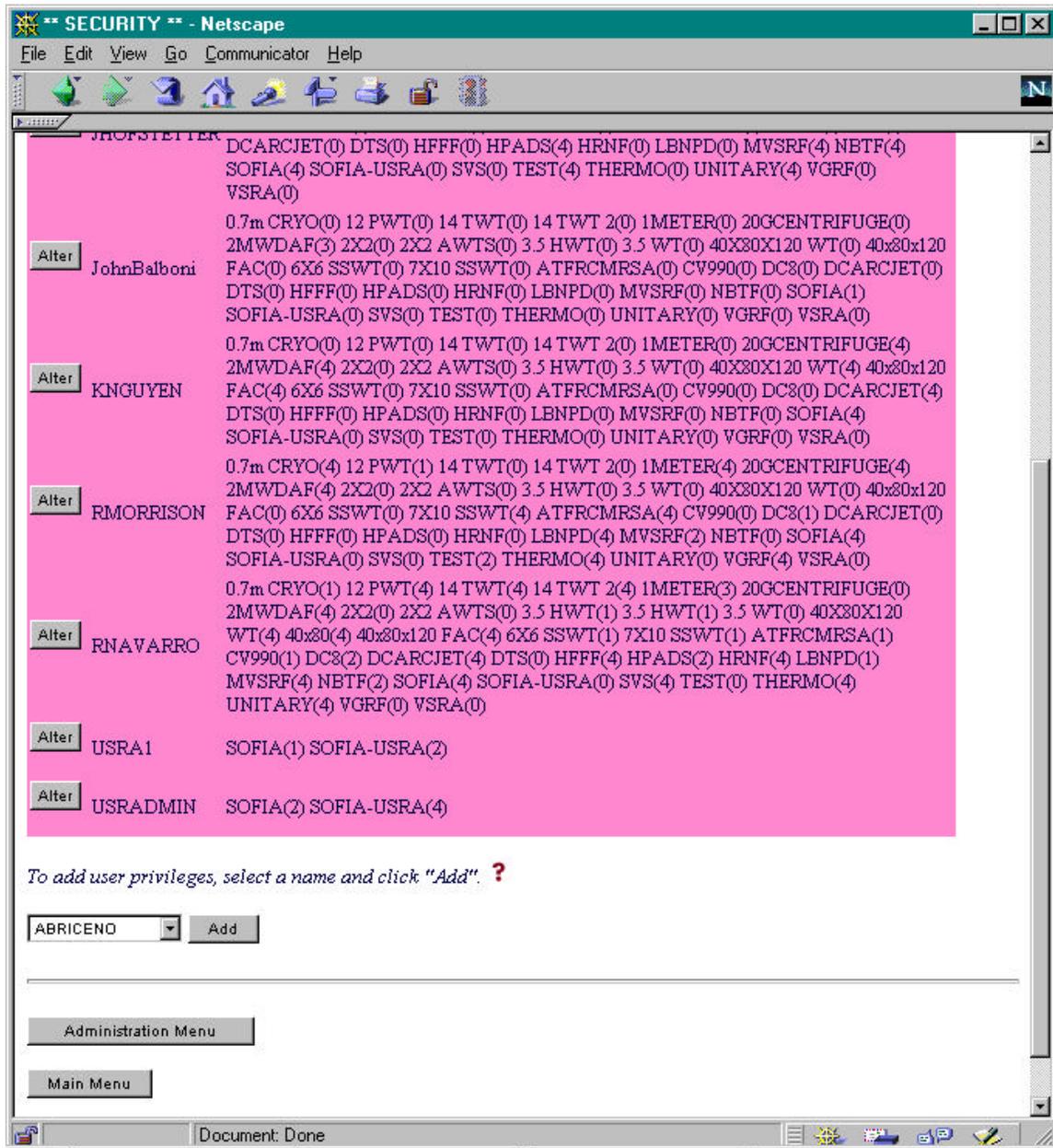
Enter the tag in the field and click the **Add** button.

Deleting an existing tag

Click the **Delete** button next to the existing record. This will open a confirmation page. If you are sure you want to delete the record, click the **Delete** button.

Security

The Security page is utilized for establishing the level of privilege for a user on a project. Before entering a record, the user must be established in the User table, and the project or facility must exist in the Projects table.



Adding new user privileges

Select the user from the drop-down list. If the user does not exist, enter it in the User page. This will launch a page containing all of the projects that the user has not already by assigned to. If the user is new, all projects will be listed. If the project or facility does not exist, enter it in the Projects/Facilities page.

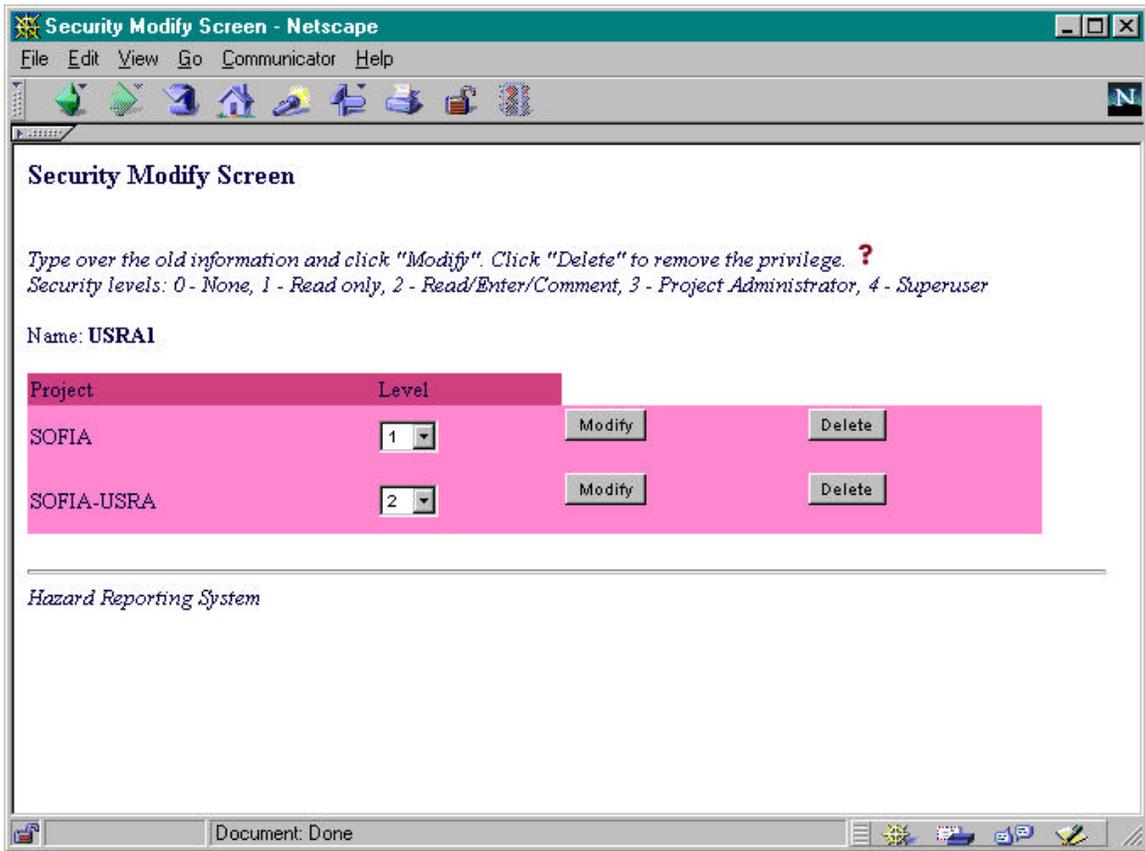
Select the level of privilege for the user. The default is **0**. You cannot issue someone a level higher than the one you currently have for the project. Once the desired projects have been assigned, click the **Add** button at the bottom of the page.

Security Level Description

- 0 No privilege
- 1 Query Only
- 2 Enter/Comment - User can enter Hazard Reports and make comments
- 3 Administrator - User has the privilege to control and transfer Hazard Reports in addition to access to the maintenance tables.
- 4 Superuser - User can access all Hazard Reports and alter the ownership, in addition to Administrator privileges.

Modifying an existing user privilege

Click on the **Alter** button next to the user. This will open the Modify/Delete page with a form similar to the Add form with the information already in the fields. Type over the existing data and click the **Modify** button.



WARNING!

Modifying a user privilege could have adverse effects on existing records in the system. Changes may result in the user no longer being able to access their records!

Deleting an existing user privilege

Click the **Alter** button next to the user. This will open the Modify/Delete page with a form similar to the Add form with the information already in the fields. Click the **Delete** button next to the project. This will open a confirmation page. If you are sure you want to delete the record, click the **Delete** button.

WARNING!

Deleting a user privilege could have adverse effects on existing records in the system. Access to that user's existing records will be limited to Super users.

Appendixes

Appendix A: Definitions

Bookmark: An address tag that points to a page on the WWW.

Browser: Software that provides an interface to the World Wide Web.

Cookie: Cookies are a general mechanism which server side connections can use to both store and retrieve information on the client side of the connection. The addition of a simple, persistent, client-side state significantly extends the capabilities of Web-based client/server applications.

HTML: Hypertext Markup Language is a language specification for the transfer of text, menus, and graphics between a WWW server and a client.

HTTP: Hypertext Transfer Protocol is an Internet Protocol intended for the retrieval of hypertext information from a WWW server.

Internet: A collection of two or more disparate networks tied together via a common protocol. More specifically, it refers to the global connection of IP-linked computer networks that developed from the Army's ARPAnet. TCP/IP was originally developed to link the ARPAnet's computers together.

IP: Internet Protocol. The network layer responsible for packetizing, addressing, and forwarding data.

Radio button(s): Radio buttons are a group of buttons linked together so that only one of them can be selected at one time. They are much like the programmed station buttons on a car radio.

RDBMS: Relational Database Management System

Superuser: A user who has the ability to perform the widest range of functions; often overriding some lower security measures.

URL: Uniform Resource Locator is an Internet address syntax used to access a WWW server through HTTP.

Wildcard: A replacement character that represents one or more characters in a string.

WWW: World Wide Web, "The Web" - a second generation service providing multi-media-capable hyperlinks between Internet resources, regardless of their physical location.