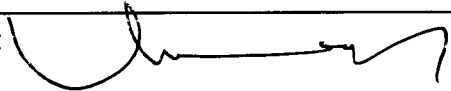
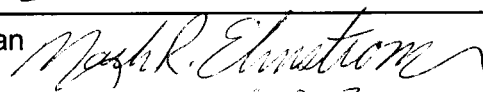


**Software Release Notice
Developed or Modified Software**

1. Software Name: Preclosure Safety Analysis (PCSA) Tool		Software Version: 3.0.1 BetaC
2. Software Function: Allow an experienced user to conduct a preclosure safety analysis		
3. Summary of Actions: <input type="checkbox"/> New Software <input checked="" type="checkbox"/> Update to Existing Software <input type="checkbox"/> Software Retirement		
4. Software Development		
4a. Software Requirements Description (SRD)	Date Approved: <u>12-09-2003</u>	
4b. Software Development Plan (SDP)	Date Approved: <u>10-19-2004</u>	
4c. Software Change Report (SCR) Nos: <u>542, 543, 544</u>		
4d. User's Guide Approval Data: <u>January 2005</u>		
4e. Enclosed: <input checked="" type="checkbox"/> Copy of Program Title Block <input checked="" type="checkbox"/> Sample Source Code Header Block		
Installation Performed by: George Adams		Date: 2-11-2005
Remarks: None		
5. Software Installation		
5a. Computer Platform(s): IBM Compatible PC	5b. Operating System(s): Windows XP	5c. Programming Language(s): Visual Basic 6.0, FORTRAN
5d. Installation Testing: <input checked="" type="checkbox"/> Passed		Testing Performed on: <u>2-11-2005</u>
Description of Testing Performed: Installed as part of making software available for testing of SCR changes. SN614, pg73		
5e. Archive Copy: <input checked="" type="checkbox"/> Enclosed		<input type="checkbox"/> Not Available, Why:
Enclosed on CD		
Installation Performed by: George Adams		Date: 2-11-2005
Remarks: None		
6. Software Assessment		
6a. Acceptance Testing: <input checked="" type="checkbox"/> Enclosed <input checked="" type="checkbox"/> Documented in Scientific Notebook No. <u>635E</u> <input checked="" type="checkbox"/> Documented in SCRs (see above) <u>542, 543, 544</u>		
6b. Validation Status: <input type="checkbox"/> Full Validation <input type="checkbox"/> Limited Validation Date of Validation: _____ <input checked="" type="checkbox"/> Not Validated, Explain: Version 3.0.0 was validated, SCR changes not validated		
Software Developer: George Adams		Date: 4-29-2005
Remarks: Version 3.0.1 BetaC will be used for PCSA Tool Exercise with NRC		
7. Approval		
Manager: 		Date: <u>4-29-05</u>
Remarks:		
7. QA Verification		
SRN Number: <u>357</u>		
Software Custodian: 		Date: <u>4/29/05</u>
Remarks: <u>for RDB</u>		

Enclosures:

Program Title Block

```

*****
' Center for Nuclear Waste Regulatory Analyses
' Southwest Research Institute
*****
' Program Title:      PCSA Tool
' Developed for:      U.S. Nuclear Regulatory Commission (Client Name)
' Customer Information:
'   Office:           Office of Nuclear Material Safety and Safeguards
'   Division:         Division of Waste Management
'   Contacts:         Mysor Nataraja,      Phone: 301-415-6695
'                   Banad Jagannath,     Phone: 401-315-6653
' Software Developer Information:
'   Contacts:         B. Dasgupta,        Phone: 210-522-6815
'                   R. Benke,           Phone: 210-522-5250
' Contract Number:    NRC-02-02-012
*****

```

Source Code Header Block (File frmEventTree)

```

*****
' Center for Nuclear Waste Regulatory Analyses
' Southwest Research Institute
*****
' Program Name:      PCSA Tool
' Client Name:       U.S. Nuclear Regulatory Commission
' Contract Number:   NRC-02-02-012
*****
' SRD Section Reference: 2
'
' File Type:         form
'
' File Name:         frmEventTree.frm
'
' Use:               To View/Edit/Add/Print Event Tree Groups
'
' Description:       This form presents information from the EVG tables.
'
' Modification History:
' Date              Software Developer      Reason
' 9/25/2003         David Stead                               Created, SCR434
' 10/06/2003        David Stead                               Added rules for Uncertainty & Linking
' 10/07/2003        David Stead                               Added rules for SSC ID
' 10/14/2003        David Stead                               Added 2nd 'Close' button on tab #1
' 10/16/2003        G Adams                                   Added Crystal Report
' 10/31/2003        David Stead                               Added Worker mode
' 12/05/2003        David Stead                               Chg'd to gconLEVTR_FRM constant
' 2/24/2004         G Adams                                   Added optIncl_fPerfAnal_Click
' 3/12/2004         David Stead                               Changed 'DOE' to 'Manual Data', SCR434
' 3/17/2004         G Adams                                   Removed Event Sequence SSC table, SCR438
' 3/22/2004         David Stead                               Added field length checking, SCR434
' 12/15/2004        G Adams                                   Within cmdAddRec_Sub_Click, removed check
'                                                           for duplicate event ids since duplicate ids
'                                                           are allowed. Also, initialize the event id
'                                                           to the empty string prior to opening the form
'                                                           to get a new one. SCR542
' 12/15/2004        G Adams                                   For event tree subsequent events. No longer
'                                                           require the Uncertainty Data and Link Details
'                                                           fields to be blank when the associated Y-N
'                                                           field has a value of 'N' SCR542
' 2/1/2005          G Adams                                   Modified the instructions on the frmEnterNewID
'                                                           form to no longer request a unique id within
'                                                           cmdAddRec_Sub_Click, SCR544
'

```

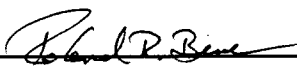

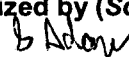
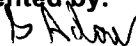
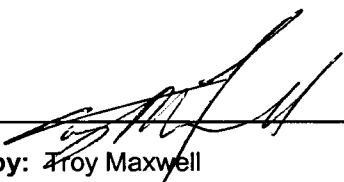
Subroutine Module Header

```

Private Sub MainTextBoxesLocked(bLocked As Boolean)
*****
' Use:               Keep text boxes locked when editing would
'                   cause a crash when no current record exists
'
' Description:       Locks/unlocks all text & combo boxes
'                   (except does not unlock 'Item No' box unless adding a record)
'
' Modification History:
' Date              Software Developer      Reason
' 9/25/2003         David Stead                               Created
' 3/12/2004         David Stead                               Changed 'DOE' to 'Manual Data', SCR434
' 3/22/2004         David Stead                               Clear 'SapphireDataPath' if Init. Event
'                                                           'Manual Data' box is checked, SCR434
*****

```

SOFTWARE CHANGE REPORT (SCR)

1. SCR No. (Software Developer Assigns): 542	2. Software Title and Version: PCSA Tool, Version 3.0.1 (Beta A)	3. Project No: 20.06002.01.334
4. Affected Software Module(s), Description of Problem(s): CrystalRiskResultsGraph.rpt, CrystalRSACCCDF.rpt, frmCrystalSSC.frm, CrystalSSC.rpt, frmEditTables.frm, mdLYMPModule1.bas, frmSevereEvents.frm, frmInitEvFrmHazIdSel.frm, CrystalSSCDBandDC.rpt, frmSSC_Data, frmSSCFrmHazIdSel.frm See attachment, "Affected Software Module(s), Description of Problem(s)." 		
5. Change Requested by:  Name: G. Adams, R. Benke, B. Dasgupta Date: September 28, 2004	6. Change Authorized by (Software Developer): Name: G. Adams  Date: September 28, 2004	
7. Description of Change(s) or Problem Resolution (If changes not implemented, please justify): See attachment, "Description of Change(s) or Problem Resolution."		
8. Implemented by: G. Adams 	Date: January 4, 2005	
9. Description of Acceptance Tests: See attachment, "Description of Acceptance Tests."		
10. Tested by:  Troy Maxwell	Date: January 5, 2005	

Affected Software Module(s), Description of Problem(s)

- 1) When probabilistic assessments were performed with 300 or more realizations, it was observed that RSAC output CCDF plots and the probabilistic risk assessment CCDF plot would show some points above the curve.
- 2) Once the user begins editing on the System Description form, General Tab, the ventilation flowrate becomes a required field and the user needs to enter a value (e.g. 0) even though no value may be desired.
- 3) The System Description form, Human Actions Tab identifies categories A, B, C, and D. This is not consistent with the other tabs. Also, the System Description form, Operation Sequence Tab has Distance Traveled misspelled. Traveled contains 2 l's.
- 4) When selecting a hazard ID from the initiating event form, the Select Hazard ID form that comes up may have no data or it may have data from another functional area.
- 5) For the Energy Method Severe Events, the identifier for records from different categories may not be unique.
- 6) On the Event Tree Form, Subsequent Events, Event IDs do not need to be unique but when a record is added, the PCSA Tool enforces uniqueness. When a record is edited, the PCSA Tool does not enforce uniqueness.
- 7) On the Event Tree Form, Subsequent Events, Safety System or SSC field, the user should be able to select another SSC field. The user may have made a mistake when adding the SSC and may want to move the SSC to a different subsequent event.
- 8) The SSC Data Crystal Report needs to only display the SSC for the Functional Area currently selected. It displays the SSCs for all functional areas.
- 9) On the Results Table for Performance Assessment, Current Level Results, the end state is not displayed. This field should be displayed instead of the Description field.
- 10) On the Event Tree Form, Subsequent Events, it is not required that the Uncertainty Data and Link Details fields be blank if the corresponding Yes-No fields (Uncertainty and Linking) are 'N.'
- 11) Sample data is present for the avalanche record within the template database in table ExternalAndNaturalEvents. This data needs to be removed.
- 12) The System Description Form, Operation Sequence Tab Crystal Report could display more text information in each row for operations sequence, additional information and DOE reports if the Duration of Operation, Lift Height, Distance Traveled, and Speed of Travel fields were all combined together into one row of information.
- 13) On the SSC Data Form Design Bases and Design Criteria tab, when a design basis or criteria is deleted, only the corresponding functions are removed from the database. Hazards, initiating events, and event trees remain in the database. Also, modified the Hazards tab in the secondary grid to allow the user to select external events and internal events (both severe and not severe internal events).
- 14) The deterministic default for wind speed needs to be modified from 3 m/s to 4.3 m/s. The probabilistic defaults for wind speed need to be updated to the following User Supplied Discrete distribution:

Wind Speed	Probability
0.9	0.25
2.55	0.29
4.35	0.20
6.95	0.18
9.75	0.06
12.25	0.02

Description of Change(s) or Problem Resolution

- 1) Crystal Reports summarizes the data when two points have the same x-value. The summary option formerly chosen was to sum the data. This resulted in the corresponding y-values being added when x-values were the same. X-values would be the same for a higher number of realizations due to round-off errors. To correct the problem, in Crystal Reports, the maximum was selected for the summary option. In addition, the y-axis scale was bounded to between 0.0 and 1.0.
- 2) Corrected the update functionality on the System Description, General Tab for ventilation flowrate to check if a value was entered before checking if it was numeric. This change allows the user to not enter a ventilation flowrate.
- 3) Modified the Human Actions Tab to no longer identify categories A, B, C, and D. Also, modified the Operation Sequence Tab to spell traveled correctly (formerly spelled travelled).
- 4) Corrected the initiating event form to populate the severe events table. Wrote a common module, gFillInternalEvents, to populate the severe events table for both the severe events form and the initiating event form.
- 5) For Energy Method Events, modified the type/item displayed so that the leftmost three characters of the event category are included with the type. This allows different energy method records with the same item number to be distinguished from each other.
- 6) Corrected the Event Tree Form, Subsequent Events Tab to allow the user to enter duplicate event ids.
- 7) Corrected the Event Tree Subsequent Events tab to allow the user to select 'None' if no SSC is desired for the subsequent event. The user can select 'None' for any number of subsequent events. This allows the user to make changes or reselect SSCs for subsequent events.
- 8) The SSC Data Crystal Report was corrected to only display SSC data for the associated functional id.
- 9) Modified the current level results grid within the PCSA Tool and the associated Crystal Report to display the End State instead of the Description field.
- 10) Modified the Event Tree Form Subsequent Events so that the Uncertainty Data and Link Details fields are editable regardless of the state of the corresponding Yes-No fields (Uncertainty and Linking).
- 11) Sample data was removed from table ExternalAndNaturalEvents for the avalanche record within the template database.
- 12) Combined the Duration of Operation, Lift Height, Distance Traveled, and Speed of Travel fields together into a single row on the System Description Form, Operation Sequence Tab Crystal Report.
- 13) Updated the SSC Data form Design Bases and Design Criteria tab to remove hazards, initiating events, and event trees from the database when a design basis or criteria is removed. Modified the hazards tab in the secondary grid to allow the user to select a hazard from lists of external and internal hazards.
- 14) Updated the deterministic default for wind speed from 3 m/s to 4.3 m/s and the probabilistic default for wind speed to a User Supplied Discrete distribution with the following wind speed (m/s), probability pairs: 0.9,0.25 2.55,0.29 4.35,0.20 6.95,0.18 9.75,0.06 12.25,0.02. This change affected tables RSAC Meteorological Data, RSAC_LHS_Table, and WkrRSAC Meteorological Data.

Description of Acceptance Tests

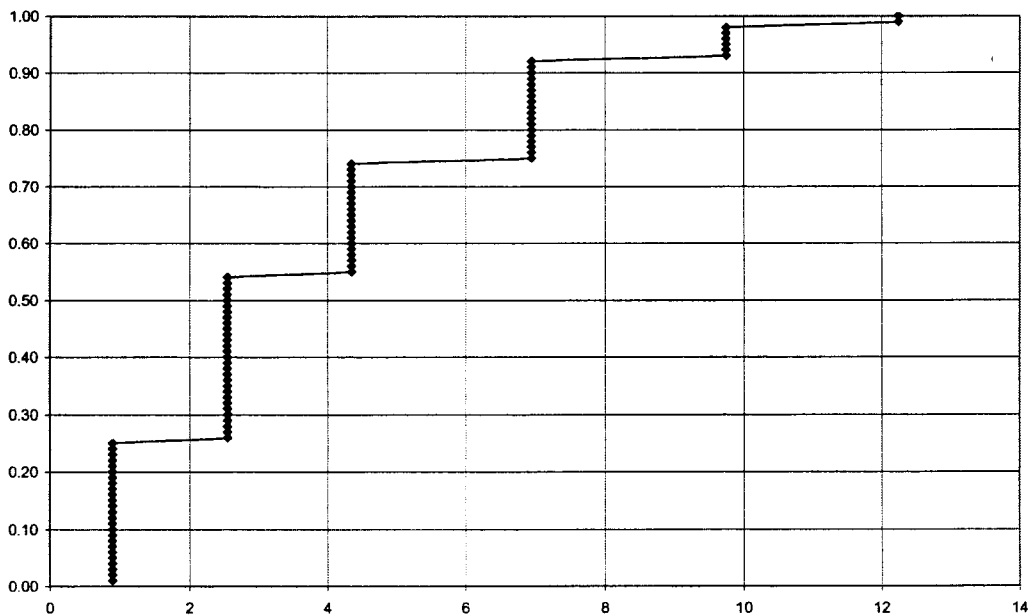
The following table documents the acceptance testing conducted for this SCR:

Pass	Fail	Description of Test
1	<input checked="" type="checkbox"/> <input type="checkbox"/>	When 300 or more realizations are performed, the RSAC output CCDF plot and the probabilistic risk assessment plot no longer show points above the curve.
2	<input checked="" type="checkbox"/> <input type="checkbox"/>	On the System Description Form, General Tab, the ventilation flowrate no longer requires an entry.
3	<input checked="" type="checkbox"/> <input type="checkbox"/>	On the System Description Form, Human Actions Tab, the categories A, B, C, and D are no longer identified. Also, on the System Description Form, Operation Sequence Tab, Distance Traveled is spelled correctly.
4	<input checked="" type="checkbox"/> <input type="checkbox"/>	When the user switches between functional areas, the Select Hazard ID form is populated with severe events for the associated functional area.
5	<input checked="" type="checkbox"/> <input type="checkbox"/>	For Energy Method Events displayed on the Severe Events List and the Select Hazard ID form (opened from the initiating event form when the user chooses to edit a hazard id), the type/item no field uniquely identifies the event with the event type.
6	<input checked="" type="checkbox"/> <input type="checkbox"/>	On the Event Tree Form, Subsequent Events, the Event IDs are no longer required to be unique when the user adds a record.
7	<input checked="" type="checkbox"/> <input type="checkbox"/>	On the Event Tree Form, Subsequent Events, Safety System or SSC field, the user always has the option of deselecting an SSC by instead selecting 'None.'
8	<input checked="" type="checkbox"/> <input type="checkbox"/>	The SSC Data Crystal Report only displays the SSCs for the functional area currently selected instead of SSCs for all functional areas.
9	<input checked="" type="checkbox"/> <input type="checkbox"/>	On the Results Table for Performance Assessment, Current Level Results, the end state field is displayed instead of the Description field.
10	<input checked="" type="checkbox"/> <input type="checkbox"/>	The Event Tree form, Subsequent Events, no longer requires that the Uncertainty Data and Link Details fields be blank if the corresponding Yes-No fields (Uncertainty and Linking) are 'N.'
11	<input checked="" type="checkbox"/> <input type="checkbox"/>	A new project was created and the external events information was empty for each of the listed external events within the Naturally Occurring and Human-Induced Events form.
12	<input checked="" type="checkbox"/> <input type="checkbox"/>	The System Description, Operation Sequence Crystal Report contains the duration of operation, lift height, distance traveled, and speed of travel fields in a single row beneath the detailed operations sequence, additional information and DOE reports and references fields
13	<input checked="" type="checkbox"/> <input type="checkbox"/>	On the SSC Data form, Design Bases and Design Criteria tab, when a design basis or design criteria is deleted from the database, the corresponding functions, hazards, initiating events, and event trees are removed. When a hazard is added or edited, lists of external and internal events are displayed, and the user can select hazards from the lists.
14	<input checked="" type="checkbox"/> <input type="checkbox"/>	For a deterministic run, the RSAC input file displays a wind speed of 4.3 m/s. For the probabilistic case, the lhs.out file displays the user specified sample distribution: 0.9,0.25 2.55,0.29 4.35,0.20 6.95,0.18 9.75,0.06 12.25,0.02


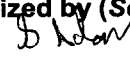
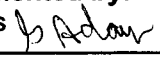
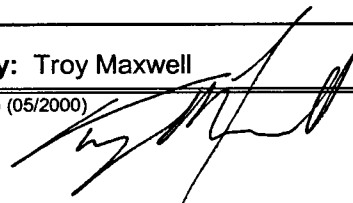
The following test were performed for Version 3.0 and Version 3.0.1 to verify the changes were properly implemented.

- Test 1: Performed a RSAC probabilistic run of 300 realizations and verified the CCDF plot does not show points above the curve.
- Test 2: Viewed System Description Form and verified flow rate no longer requires entry.
- Test 3: Viewed System Description Form and verified categories A, B, C, and D are removed and misspellings were corrected.
- Test 4: Verified Select Hazard ID form is populated with correct severe events.
- Test 5: Verified Select Hazard ID form uniquely identifies the event with the event type.
- Test 6: Input data and verified new records for Subsequent Events no longer require a unique Event ID.
- Test 7: Verified user is provided "none" as an option for the Event Tree Form, Subsequent Events, Safety System or SSC fields.
- Test 8: Viewed SSC Data Crystal Report and verified the data displayed is for the Functional Area currently selected.
- Test 9: Viewed Performance Assessment, Current Level Results and verified "end state" has replaced "description" in the form.
- Test 10: Input data into the Event Tree form, Subsequent Events and verified selecting "N" will not erase the Uncertainty data and Link Details fields.
- Test 11: Created a new project, opened Ext. Events, and verified the form was empty.
- Test 12: Opened the System Description, Operation Sequence Crystal Report and verified the duration of operation, lift height, distance traveled, and speed of travel fields were located below the primary fields.
- Test 13: Opened the SSC Data form, Design Basis and Design Criteria tab and verified the functions, hazards, initiating events, and event trees are removed when a design basis or design criteria is deleted.
Note: Version 3.0.1 now displays the lists of external and internal events when a hazard is added or edited.
- Test 14: Opened RSAC input file and verified the default value for the wind speed is 4.3 for a deterministic run and the probabilistic case the sample distribution is: 0.9, 0.25 2.55, 0.29 4.35, 0.20 6.95, 0.18 9.75, 0.06 12.25, 0.02. Performed a 100 realization RSAC run and plotted the cumulative distribution of the wind speed from the lhs.out file to view the probabilistic wind speed data.

Cumulative Distribution Wind Velocity



SOFTWARE CHANGE REPORT (SCR)

1. SCR No. (Software Developer Assigns): 543		2. Software Title and Version: PCSA Tool, Version 3.0.1 (Beta C)		3. Project No: 20.06002.01.334																
<p>4. Affected Software Module(s), Description of Problem(s): See "Affected Software Modules" attached</p> <p>For multiple users to build a problem within the PCSA Tool, replication needs to be developed to allow the users' changes to be merged together.</p> <p>If a user opens a Crystal Report in one project and then chooses to open another project and show the Crystal Report, the Crystal Report will not display</p>																				
<p>5. Change Requested by: Name: B. Dasgupta  Date: January 5, 2005</p>			<p>6. Change Authorized by (Software Developer): Name: G. Adams  Date: January 5, 2005</p>																	
<p>7. Description of Change(s) or Problem Resolution (If changes not implemented, please justify):</p> <p>Upgraded the database from Access 97 to Access 2000. Modified the error message within frmRSAC_Main to generate an information message instead of an error message when attempting to delete tables and not all tables are deleted since this is expected for replicable tables.</p> <p>Modified the Crystal Reports to remove the report reference when unloading the Crystal Report.</p>																				
<p>8. Implemented by: G. Adams </p>				<p>Date: January 7, 2005</p>																
<p>9. Description of Acceptance Tests:</p> <table border="1"> <thead> <tr> <th>Pass</th> <th>Fail</th> <th>Description of Test</th> </tr> </thead> <tbody> <tr> <td align="center">1</td> <td align="center"><input checked="" type="checkbox"/></td> <td align="center"><input type="checkbox"/></td> <td>No errors were observed when adding, modifying, and deleting data when using both an unreplicated Access 2000 database and a replicated Access 2000 database.</td> </tr> <tr> <td align="center">2</td> <td align="center"><input checked="" type="checkbox"/></td> <td align="center"><input type="checkbox"/></td> <td>Replication allows multiple users to interact with the database independently and have their changes merged.</td> </tr> <tr> <td align="center">3</td> <td align="center"><input checked="" type="checkbox"/></td> <td align="center"><input type="checkbox"/></td> <td>Crystal Reports can be viewed when the user opens a new project after already viewing a Crystal Report in the previous project.</td> </tr> </tbody> </table> <p>See additional comments in the attachment, "Description of Acceptance Tests."</p>						Pass	Fail	Description of Test	1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No errors were observed when adding, modifying, and deleting data when using both an unreplicated Access 2000 database and a replicated Access 2000 database.	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replication allows multiple users to interact with the database independently and have their changes merged.	3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crystal Reports can be viewed when the user opens a new project after already viewing a Crystal Report in the previous project.
Pass	Fail	Description of Test																		
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	No errors were observed when adding, modifying, and deleting data when using both an unreplicated Access 2000 database and a replicated Access 2000 database.																	
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Replication allows multiple users to interact with the database independently and have their changes merged.																	
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Crystal Reports can be viewed when the user opens a new project after already viewing a Crystal Report in the previous project.																	
<p>10. Tested by: Troy Maxwell </p>				<p>Date: February 18, 2005</p>																

Affected Software Modules

Changes to upgrade Access to Access 2000:

frmEditRSACLHS.frm, frmEnergyAnalSELTable.frm, frmEnergyAnalysisForm.frm, frmEnergyAnalysisTable.frm, frmEventSequenceForm.frm, frmEventSequenceTable.frm, frmEventTree.frm, frmExternalEvents.frm, frmFailureModeChecklist.frm, frmFaultTree.frm, frmFaultTreeEventTable.frm, frmHEPTables.frm, frmHRA_SELTable.frm, frmHRAForm.frm, frmHRATable.frm, frmImages.frm, frmInitEventForm.frm, frmInitEventTable.frm, frmInitEvFrmHazIdSel.frm, frmFMEAForm.frm, frmMDIFMEATable.frm, frmMDIWHATIFTable.frm, frmMelcorInput.frm, frmProbDisplay.frm, frmProbTree.frm, frmReadRSAC.frm, frmResultsSSCITSTable.frm, frmResultsTable.frm, frmRiskAssessment.frm, frmRiskEventSequence.frm, frmRiskResults.frm, frmRSAC_Main.frm, frmSafetyAssessmentCombinations.frm, frmSafetyAssessmentSSCITS.frm, frmSafetyAssessmentWorker.frm, frmSELTable.frm, frmSevereEvents.frm, frmSoftwareSys.frm, frmSSC_Data.frm, frmSSC_ViewAll.frm, frmSSCFrmHazIdSel.frm, frmSystemDescription.frm, frmSystemLog.frm, frmViewTable.frm, frmWhatIfForm.frm, frmWhatIfSELTable.frm, frmWorkerDry.frm

Changes to clear database references in Crystal Reports:

frmCrystalAssumptions.frm, frmCrystalEnergyMethod.frm, frmCrystalEventSequence.frm, frmCrystalEventTree.frm, frmCrystalExternalEvents.frm, frmCrystalExternalEventsDetail.frm, frmCrystalFaultTree.frm, frmCrystalFaultTreeEvents.frm, frmCrystalFireHazards.frm, frmCrystalFMEA.frm, frmCrystalFunction.frm, frmCrystalGeneral.frm, frmCrystalHRA.frm, frmCrystalHumanActions.frm, frmCrystalInitiatingEvent.frm, frmCrystalOperationSequence.frm, frmCrystalProjectTree.frm, frmCrystalResultsTableCurrent.frm, frmCrystalResultsTableProject.frm, frmCrystalRiskResultsGraph.frm, frmCrystalRiskResultsTable.frm, frmCrystalRSACCCDF.frm, frmCrystalRSACInput.frm, frmCrystalRSACInputWorker.frm, frmCrystalRSACOutput.frm, frmCrystalRSACOutputWorker.frm, frmCrystalSafetyAssessmentCombinations.frm, frmCrystalSevereEvents.frm, frmCrystalShielding.frm, frmCrystalSoftwareSystem.frm, frmCrystalSoftwareSystems.frm, frmCrystalSSC.frm, frmCrystalSSCDBandDC.frm, frmCrystalSSCIS.frm, frmCrystalWasteCharacterization.frm, frmCrystalWhatIf.frm, frmCrystalWorkerDry.frm

Description of Acceptance Tests

1. Two replicated databases were created and one non-replicated. Data was entered into each form, RSAC and MELCOR runs were performed, and SAPHIRE was opened. The crystal report was activated for each screen. No errors were observed for any function within the PCSA Tool.
2. The two replicated databases were merged using Access 2000. The merged database was opened in the PCSA Tool. The Crystal Report was opened for each screen, RSAC and MELCOR runs were performed, and SAPHIRE was opened. No errors were observed in any function within the PCSA Tool.
3. First the crystal report was opened for the first replicated database and the second database was opened. Then the crystal report was opened using the second database and the non-replicated database was opened. Finally the crystal report was opened for the non-replicated database. No errors were observed when opening the crystal reports for any database.

SOFTWARE CHANGE REPORT (SCR)

1. SCR No. (Software Developer Assigns): 544		2. Software Title and Version: PCSA Tool, Version 3.0.1 (Beta C)	3. Project No: 20.06002.01.334
4. Affected Software Module(s), Description of Problem(s): CrystalSSCDBandDC.rpt, mdlYMPModule1.bas, MDI_PCSA_Frm1frx, MDI_PCSA_Frm1.frm, frmExtEventAnalysis.frm, CrystalOperationSequence.rpt, CrystalEnergyMethod.rpt, frmEventTree.frm 1) The records on the SSC Design Bases and Design Criteria Crystal Report are not sorted by item number. 2) The PCSA Tool Version 3.0 User Guide needs to be added to the Help Menu. 3) The Operation Sequence Crystal Report subheadings do not need to be bold. The Energy Method Crystal Report Additional Information heading is cutoff. 4) Demo files do not need to be included with the PCSA Tool setup. 5) The CheckLst database should be converted to Access 2000. 6) The popup window for entering a subsequent event id says to enter a unique id, but unique ids are not required for event tree subsequent events.			
5. Change Requested by: <i>B. Dasgupta</i> Name: B. Dasgupta, G. Adams Date: January 20, 2005		6. Change Authorized by (Software Developer): Name: G. Adams <i>G. Adams</i> Date: January 20, 2005	
7. Description of Change(s) or Problem Resolution (If changes not implemented, please justify): 1) Modified the SSC Design Bases and Design Criteria Crystal Report to sort records by item number. 2) The User Guide in PDF format with links from the table of contents was added to the Help Menu. Also, a directory, "Help" was created which contains the User Guide. Corrected the file launch routines to check for return values for errors less than or equal to 32. 3) Made the Operation Sequence Report subheadings plain text instead of bold. Adjusted the Energy Method Crystal Report Additional Information heading. 4) Removed demo files from the PCSA Tool setup to include PCSADemo.mdb, PCSADemo directory, Working.mdb, IWorking.mdb, and Sapphire Projects directories: Demo, YMP1, and Ymp1_ATS1. 5) Converted the CheckLst database to Access 2000 format. 6) Corrected the popup window for event tree subsequent events to no longer request a unique event id.			
8. Implemented by: G. Adams <i>G. Adams</i>		Date: February 4, 2005	
9. Description of Acceptance Tests:			
Pass	Fail	Description of Test	
1	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Records on the SSC Design Bases and Design Criteria Crystal Report are sorted by item number
2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The User Guide can be opened from the Help Menu. Links from the Table of Contents direct the user to the correct area of the User Guide.
3	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Operation Sequence Crystal Report subheadings are no longer bold. Energy Method Crystal Report Additional Information heading is no longer cutoff.
4	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The PCSA Demo database, working database files, and Sapphire Demo Projects have been removed from the distribution.
5	<input checked="" type="checkbox"/>	<input type="checkbox"/>	The Component Failure Mode Checklist and the HEP Generation forms function with the CheckLst database updated to Access 2000 format.
6	<input checked="" type="checkbox"/>	<input type="checkbox"/>	When a new event tree subsequent event is added, the popup window used for entering an event id no longer requests a unique id.
10. Tested by: Troy Maxwell <i>Troy Maxwell</i>		Date: February 28, 2005	

Description of Acceptance Tests

1. Three records were input into the SSC Design Bases and Design Criteria. The following item numbers were input in this order: 1.0, 2.0, and 1.5. The Crystal report properly sorted the item numbers for Beta C. The same test was performed for Beta B and the numbers did not sort properly.
2. The User Guide was opened from the Help Menu. The User Guide was functional and the links within the Guide operated correctly.
3. Verified the Operation Sequence Crystal report subheadings are no longer bold by opening the report in Beta B and C.
4. Verified the the PCSA Demo database, working database files, and Sapphire Demo Projects have been removed from the distribution by viewing the PCSA Tool un-installation and installation on a laptop computer.
5. Verified the checklist database was updated to Access 2000 by opening the database. Verified the functionality of the HEP Generation and Component Failure Mode Checklist by operating the forms within the PCSA Tool.
6. Verified the Event Tree Subsequent Event popup window no longer request a "unique ID" when adding a new event by opening a new event in Beta B and C.