Title: AUTOMATION OF PROCEDURE WRITING FOR THE RLWTF

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1. **INTRODUCTION**

1.1. **BACKGROUND**

In August of 1997, the Radioactive Liquid Waste Treatment Facility (RLWTF) at Los Alamos National Laboratory (LANL) recognized the need to re-engineer document management business process. All nuclear facilities at LANL are required to ensure that both the latest approved revision of controlled documents and any changes to those documents are available to operating personnel at all times.

The Nuclear Materials Technology (NMT) Division was also re-engineering its document management business processes and searching for a solution. Both groups contacted several internal and external organizations in search of potential software solutions in use that would meet our requirements. Amy MacDonald from the RLWTF discovered an advertisement in an ASQC periodical that appeared to meet the initial requirements. As a member of the Laboratory’s Records Management Advisory Committee, Amy set up an on-site demo and invited the committee members to attend.

1.2. **PRIMARY OBJECTIVES**

After viewing the MEGA presentation, we compared notes and together developed a list of primary objectives, provided below the list:

- Streamline and/or tailor our current procedures;
- Reduce the volume of our procedures and eliminate duplication;
- Provide traceability and retrievability of approved and implemented procedures;
- Provide the methodology to demonstrate compliance to Safe Work Practice Implementation requirements;
- Include good security features.
- Include multiple output generation capabilities (Word and Internet/HTML);
- Be able to reuse data;
- Have true consistency throughout procedures;
- Have fast & easy access when changes are required;
- Be able to analyze the impact of changes ("what-if" analysis);
- Have fast & easy access to corporate information to anyone who needs it; and
- Provide the functionality to evaluate a process according to:

  Time
  Human resources required
  Level of detail required
  Time to input the data

  The goal of being able to easily simulate business processes on-line.

- Provide management with the methodology to track time, duration, and the frequency of Management walk-arounds in an effort to improve efficiency, quality, and reduce the time and money spent to meet regulatory requirements.

- Year 2000 compliant

2. Procedure Evaluation Process

2.1. System Requirements Evaluation Criteria

Once we decided on our primary objectives, our next step was to develop the evaluation criteria for system requirements. Provided below are the evaluation criteria used during the software review selection. We researched & evaluated several systems. Procedure Design met our requirements as described below, and was chosen as the software solution for the RLWTF.

Automated Procedure Writing
  Feature needed:
  A structured and progressive approach to write and analyze procedures.

Easy-To-Read Process Flowcharts
  Customization Features:
  - Ability to modify organization charts and process flowcharts;
  - Ability to change forms

Hierarchical Procedural Structure
  Feature needed:
  Ability to link between previous and next procedures in order to demonstrate compliance to upper-tier requirement documents.
Interrelationships Between Documents

*Features needed:*

Continuing the hierarchical structure to the operations level, ability to clearly show a "parent-child" relationship between documents:

For example, a parent document *Safe Operating Procedure (SOP)* would identify hazards associated between several operations and may be an authorization document or umbrella document. The corresponding child document *Work Instructions or Detailed Operating Procedures* would describe the step-by-step instructions and the hazards associated with that process as defined in the parent SOP.

Multi-User Support Capabilities (networkable)

*Features needed:*

- Paper;
- Electronic;
- Intranet.

Integration of Windows Tools: Word, Excel, Power Point

*Feature needed:*

An integrated tool to support exporting of data to Word, Excel and Power Point.

Security Features

*Feature needed:*

Ability to assign user access at various authorization levels.

Hazards Identification and Control Links

*Features needed:*

Mechanism to demonstrate compliance to special assessments, or "off-Ramps;"

Standard templates used to identify hazards that may be present during the operation, along with methods to mitigate them:

Links between procedures and associated hazards;

Hazards and controls – the implementation of controls that eliminate or reduce the risk of harm.

Hazards and Risks–two levels of risk

*Initial Risk,* the risk posed by the work before proposed controls are implemented;

*Residual Risk,* the remaining risk posed by the work after the controls are implemented.
Risk levels are based on likelihood and severity of harm.

**Impact Analysis**

*Feature needed:*

Powerful analysis tools that evaluate the impact of modifications before they are implemented;

Demonstrate conduct of operations; Provide for change control.

**Emergency Shutdown**

*Feature needed:*

Ability to associate emergency shutdown instructions with a procedure.

**Regulatory Compliance Crosswalk**

*Features needed:*

Compliance crosswalks to demonstrate regulatory compliance;

Upper-tier requirements matrices to ensure procedures are written within the operating bounds in order to prevent endangering personnel, the environment or equipment.

**Glossary of Terms**

*Features needed:*

Link between procedures and terms, definitions, acronyms, and abbreviations to provide standardization within procedures.

**Intuitive, User-Friendly Program**

*Features needed:*

Standard format;

Customizable templates;

Easy-to-produce flowcharts.
Version/Document Control and Management

Features needed:
The document life cycle management as described in the following stages:

- Create Procedures;
- Revise Procedures;
- Validate Procedures;
- Approve Procedures;
- Publish Procedures;
- Distribute Procedures;
- Qualify/Train Personnel to Procedures;
- Archive Procedures.

2.2. System Analysis

Prior to the implementation of the Procedure Design system, we identified modifications we knew would be needed to meet government and nuclear requirements. As a new employee of MEGA International, Michelle Farnham, working with one of MEGA’s technical support representatives developed a customized environment to meet the requirements identified in the System Requirements/Evaluation Criteria section within this document. The following table describes the customized features developed to meet these requirements.

<table>
<thead>
<tr>
<th>Requirement</th>
<th>Features needed:</th>
<th>Customization Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hazards Identification and Control Links</td>
<td>Provide the mechanism to demonstrate compliance to special assessments, or “off ramps.”</td>
<td>A dialog provides an impact analysis tool.</td>
</tr>
<tr>
<td></td>
<td>Standard templates used to identify hazards that may be present during the operation and methods to mitigate them:</td>
<td>Developed an entity named: Hazard. This function provides the user the ability to link hazards to controls or hazards to procedures as appropriate. Each type below is associated with the hazard name and definition with a drop-down list that is customizable if needed.</td>
</tr>
<tr>
<td></td>
<td>Links between procedures and associated hazards</td>
<td>Risk Drop-Down Titles:</td>
</tr>
<tr>
<td></td>
<td>Hazards and controls to eliminate or reduce the risk of harm.</td>
<td>None</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Medium</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Low</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Minimal</td>
</tr>
<tr>
<td>Hazards and Risks – two levels of risk</td>
<td>Likelihood Drop-Down Titles:</td>
<td></td>
</tr>
<tr>
<td>--------------------------------------</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td><strong>Initial Risk</strong>, the risk posed by the work before proposed controls are implemented.</td>
<td>None</td>
<td></td>
</tr>
<tr>
<td><strong>Residual Risk</strong>, the remaining risk posed by the work after the controls are implemented.</td>
<td>Frequent</td>
<td></td>
</tr>
<tr>
<td>Risk levels are based on likelihood and severity of harm.</td>
<td>Improbable</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Regulatory Compliance Crosswalk</th>
<th>Compliance crosswalks to demonstrate regulatory compliance</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Upper-Tier Requirements Matrices</strong> - ensure procedures are written within the operating bounds to prevent endangering personnel, the environment or equipment</td>
<td><strong>Severity Drop-Down Titles:</strong></td>
</tr>
<tr>
<td></td>
<td>None</td>
</tr>
<tr>
<td></td>
<td>Catastrophic</td>
</tr>
<tr>
<td></td>
<td>Critical</td>
</tr>
<tr>
<td></td>
<td>Moderate</td>
</tr>
<tr>
<td></td>
<td>Negligible</td>
</tr>
</tbody>
</table>

| | **Hazard-Type Drop-Down Titles:** |
| | None |
| | Acceleration/Deceleration |
| | Chemical Energy |
| | Electrical Energy |
| | Kinetic Energy |
| | Natural Environment |
| | Pressure |
| | Radiation |
| | Thermal Energy |
| | Toxicants |
| | Vibration/Sound |

| A dialog provides an impact analysis tool. |
| Developed an entity named: **Requirement**. |
| This function provides the user the ability to link regulatory, institutional, operational, etc., requirements to procedures as appropriate. |
| Each type, as described below, is associated with the requirement name and definition, each having a drop down list which is customizable if needed. |

<table>
<thead>
<tr>
<th>Requirement Type – Drop Down Titles</th>
</tr>
</thead>
<tbody>
<tr>
<td>None</td>
</tr>
<tr>
<td>CFR</td>
</tr>
<tr>
<td>DOE Order</td>
</tr>
<tr>
<td>Facility/Sub-Contractor</td>
</tr>
<tr>
<td>Institutional Standards</td>
</tr>
<tr>
<td>UC Contract</td>
</tr>
</tbody>
</table>
## Requirement | Features needed: | Customization Description
--- | --- | ---
**Glossary of Terms** | Link between procedures and terms, definitions, acronyms, and abbreviations to provide standardization within procedures. | A dialog provides an impact analysis tool. Developed an entity named **Definition**. This function provides the user the ability to link definitions to procedures as appropriate. Each type as described below is associated with the **Definition** name and its definition with a drop down list that is customizable if needed. **Definition Type** Drop Down Titles: None Abbreviation Acronym Definition Term

**Interrelationships Between Documents** | A parent-child relationship, e.g., Parent document, *Safe Operating Procedure (SOP)* as an authorization document or umbrella document to the Child document, *Work Instructions* or *Detailed Operating Procedures*, describing the step-by-step instructions and associated hazards. | A dialog provides an impact analysis tool. Procedure Design’s standard environment provides the functionality to have a parent-document (previous) with a child-document (next). Providing the functionality mentioned above to associate hazards to a procedure address this requirement.

**Emergency Shutdown Instructions** | Associating emergency shutdown instructions with a procedure. | A dialog provides an impact analysis tool. Developed an entity named **Emergency** to provide the ability to link emergency shutdown instructions to procedures as appropriate. This entity in the customized environment does not come populated. Emergency shutdown information types and their instructions are entered one at a time due to their unique instructions. Note: As with all other objects within Procedure Design, once an object is created, it can be reused over and over again in any procedure.

**Note:** The customized Government/Nuclear Environment can be accomplished by an advanced user of the system and is not dependent upon the company to make these modifications. RLWTF, along with Johnson Controls Northern New Mexico, located in Los Alamos, New Mexico, were selected as the beta test sites for this customized Government/Nuclear Environment.
# RE-ENGINEERING DOCUMENT MANAGEMENT BUSINESS PROCESS

## 3.1. MODEL

<table>
<thead>
<tr>
<th>Subject Matter Expert (SME)</th>
<th>Document Control Coordinator (DCC)</th>
<th>Writer/Editor</th>
<th>Authorized Derivative Classifier (ADC)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>New or Revised Document</strong></td>
<td>Request approval for new document or revision to document</td>
<td>Log in document</td>
<td>Conduct classification review &amp; return to DCC</td>
</tr>
<tr>
<td><strong>No Change to Document</strong></td>
<td>Obtain or verify document number</td>
<td>Route document to SME for review</td>
<td></td>
</tr>
<tr>
<td><strong>If No Change</strong></td>
<td>Verify classification level with ADC</td>
<td>Edit document &amp; return to DCC</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Route document to DCC</td>
<td>2 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Log in document</td>
<td>15 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Determine if Minor or Major</td>
<td>Route document to SME for final review &amp; approval</td>
<td>1 day</td>
</tr>
<tr>
<td></td>
<td>Edit document</td>
<td>1 day</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Route document to SME for revision &amp; approval</td>
<td>2 days</td>
<td></td>
</tr>
<tr>
<td></td>
<td>2 days</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>15 days</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Document Control Coordinator (DCC):**
- Obtain or verify document number
- Verify classification level with ADC
- Route document to SME for review
- Edit document & return to DCC
- Route document to ADC to verify original classification
- Route document to applicable approvers
- Conduct classification review & return to DCC

**Writer/Editor:**
- Log in document
- Log document & distribute to applicable reviewers
- Composite comments & forward to SME for reconciliation
- Route document to SME for final review & approval
- Edit document & return to DCC

**Authorized Derivative Classifier (ADC):**
- Conduct classification review & return to DCC

**Subject Matter Expert (SME):**
- Request approval for new document or revision to document
- Obtain or verify document number
- Verify classification level with ADC
- Route document to SME for review
- Route document to ADC for classification
- Route document to applicable approvers
- Conduct classification review & return to DCC

**Document Control Coordinator (DCC) & Writer/Editor:**
- Proof document & return to DCC with applicable reviewer list
- Modify document & route changes to DCC
- Route document to SME for final review & approval
- Route document to applicable approvers
- Document canceled

**Diagram Description:**
- The diagram illustrates the workflow for document management, including steps for document creation, review, approval, and classification.
- Key points include approval processes, document verification, and classification decisions.
- The workflow integrates multiple stakeholders (SME, DCC, Writer/Editor, ADC) to ensure efficient document handling.

**Notes:**
- The diagram is a flowchart that visually represents the document management process.
- Each step is connected by arrows indicating the flow of the process.
- The process includes decision points for approval and classification.

---

**Legend:**
- **New or Revised Document**
- **No Change to Document**
- **If No Change**
- **Proof document & return to DCC with applicable reviewer list**
- **Modify document & route changes to DCC**
- **Route document to SME for final review & approval**
- **Route document to applicable approvers**
- **Document canceled**
- **Log in document**
- **Log document & distribute to applicable reviewers**
- **Composite comments & forward to SME for reconciliation**
- **Edit document & return to DCC**
- **Route document to SME for review**
- **Edit document & return to DCC**
- **Route document to SME for review & approval**
- **Conduct classification review & return to DCC**

---

**Process Summary:**
- The process begins with a request for approval of a new document or revision.
- Verification of document number and classification level follows.
- The document is routed to SME for review.
- Classification decisions are made, and the document is routed to applicable approvers.
- Final review and approval complete the process, leading to document classification and return to DCC.

---

**Key Terms:**
- SME (Subject Matter Expert)
- DCC (Document Control Coordinator)
- ADC (Authorized Derivative Classifier)
- Review
- Approval
- Classification

---

**Data Points:**
- Time stamps are included for each step, indicating the duration of each task.
- The process is designed to ensure timely and accurate document management.

---

**Analysis:**
- The flowchart effectively visualizes the complex interactions required for document management.
- It highlights the importance of accurate document classification and timely review.
- The integration of multiple stakeholders ensures a comprehensive document review process.

---

**Conclusion:**
- The re-engineered document management process enhances efficiency and accuracy.
- Streamlined workflows and clear decision paths are critical for effective document handling.

---

**References:**
- The diagram is based on best practices in document management.
- It incorporates feedback from multiple stakeholders to ensure practical implementation.
4. **PROCEDURE DESIGN IMPLEMENTATION FLOWCHART**

![Flowchart Diagram]

**Note:** The Procedure Design Implementation Plan & flowchart were created in Procedure Design.
5. **RESPONSIBILITIES**

5.1. **ORG-UNITS**

**Document Control**

Document Control is responsible for the implementation and maintenance of Procedure Design at the RLWTF at Los Alamos National Laboratory.

**MEGA International USA, Inc.**

MEGA International USA, Inc., is responsible for assisting the RLWTF at Los Alamos National Laboratory with the implementation of Procedure Design.

**PD Implementation Team**

Members of the Procedure Design (PD) Implementation Team are Amy MacDonald and Bill England from RLWTF and Michelle Farnham from MEGA International. The PD Implementation Team is responsible for the following:

- Installation of Procedure Design;
- Developing an Implementation Plan;
- Customizing the RLWTF Environment and Repository;
- Converting existing procedures into Procedure Design;
- Validating Procedure Conversion; and
- Publishing Procedures to the Web.

6. **PROCEDURE DESIGN IMPLEMENTATION PLAN**

6.1. **PROCESSES**

Submit PR to BUS in accordance with LANL Procurement Procedure
END USER TRAINING

The 2 day End User course trains users to quickly learn the software and more importantly, increase productivity using the software from day one. The course includes a hands-on approach to classroom training, working directly with Procedure Design software.

ADVANCED TRAINING:

Super users learn how to customize MEGA to match their organization or projects' specific needs. This advanced training course covers the topics outlined below.

Shapes Representing Repository Objects
- Shape customization rules
- Customized shapes management

Dialog Boxes Customization
- The repository objects
- Modifying a dialog box
- Dialog box management

Accessing Repository Sub-Sets
- The dialog tool and its standard views of the repository
- Building new views of the repository

Navigating the Repository
- Query language syntax
- Defining selectors
- Selector definition recommendations

Generating and Managing Documents
- Personalized documents and document templates
- Generating a document
- Inserting a new query in a document
- Managing project documentation
Customizing Document Templates
Using selectors to retrieve information from the repository
Defining the information layout (descriptors)
Using Word style sheets

ADMINISTRATION TRAINING

Super users learn how to organize and manage MEGA's work environment. The administrator training course covers the topics outlined below.

MEGA 4.2 Main Concepts
Site: executable files included with software package
Environment:
standard configuration
network configuration
standalone workstation
Repository
Transaction and work session
Users and access rights

Networking
Long transaction management;
publishing transaction
refreshing transaction from repository contents
Anti-conflict mechanisms

Exchange Functions
Work session journal
Exporting a journal to another repository
Importing a journal to another repository

Repository Administration
Repository objects protection by authorization graph
Exporting a repository sub-set
Importing a repository sub-set
Searching isolated objects
Environment Management
- Saving the repository
- Environment and users configuration
- Controlling a repository and an environment
- Management recommendations
- Standalone workstations consolidations

Install Procedure Design
MEGA International Technical Support will work with RLWTF Technical Computer support staff to install Procedure Design on the RLWTF Network. The RLWTF repository, customized Gov/Nuclear Environment, and Administrative Procedure template will be installed by the New Mexico MEGA International representative.

Develop Implementation Plan
Michelle Farnham, from MEGA International will develop Procedure Design Implementation Plan for the RLWTF at LANL.

Create Customized Gov/Nuclear Environment
MEGA International has created a customized Gov/Nuclear Environment within Procedure Design. The following functional requirements are provided in the customized environment:

- Hierarchical procedural structure
- Interrelationships between documents
  - parent-child relationship
- Hazards identification and controls
  - procedures and hazards
  - hazards and controls
  - hazards and risk
- Impact Analysis
- Regulatory Compliance Matrix
- Glossary of Terms
The RLWTF at LANL has agreed to become one of the beta test-sites in Los Alamos. MEGA International has provided them with 2 licenses of this environment at no charge. All future Gov/Nuclear Environment Module purchases will be at full price.

User Diagram

The user diagram is a very important part of the network environment set-up of Procedure Design. The user diagram assigns user access authorization levels.

The user diagram contains two types of objects:

Authorization Keys
Users

User Authorization Access:

Example: When User A, connected to the authorization key “Key 1”, creates an object such as an organizational unit; “Org-1”. The ownership of Org-1 is assigned authorization to “Key 1”. User B, connected to the authorization key “Key 2”, (on another branch of the authorization diagram) will not be able to modify Org-1.

Specifying the hierarchical relationship between authorization keys

Example: Assuming that “Key 1” is linked to “Key 3” and is at a higher hierarchical level than “Key 3”. User A connected to “Key 1”, creates an object called Org-1. User C connected to “Key 3”, will not be able to modify Org-1 but user A will be able to modify any objects created by user C.

1. Preparation

Before entering information into the repository, it is highly recommended that you define the following rules and organize the work between the members of the implementation team.

2. Administrator rules

The Procedure Design Administrators are responsible for the following:

Documentation;
Controlling user rights and accesses;
Controlling object authorization levels if necessary;
Personalization of shapes, documents, templates, descriptions, selections, etc.;
Controlling environment and the repository, making sure that the users dispatch their updates on a regular basis;
Providing internal support for the Procedure Design users, answering general questions and requests, or installing/upgrading new workstations;
Serve as the primary contact for the MEGA International Technical Support team;
Ensuring that there is sufficient disk space etc., deleting unused files as necessary;
Conducting regular repository backups; and
Managing repository consolidations during repository updates.

3. Work assignments between team members

Defining work between the team members;
   Working on organizational charts;
   Entering organizational units to include job functions or job descriptions; and
   Working on procedures.

4. Standards and rules

Document Templates
Procedure document templates;
Quality manual document templates; and
Other required and/or desired report templates.

Created object codes
Projects;
Org-Units (Division)
Org-Unit (Department)
Org-Unit (Job Function) Example: When creating a job function specific to a department, you may want to use the following rule;
Dpt Name – Job Function (QA-Manager)

Note: Org-Units appear in alphabetical order when listed within Procedure Design.

1. Quit Procedure Design, and make sure that all users have dispatched their transactions. (From the “session” menu, choose “quit”. Then choose “Close Transaction” and “Dispatch updates of transaction”).
2. Run the program ADMINISTRATION.

3. In the first screen that appears: verify that the correct environment is selected and “Current”. Then click on the environment button and choose “Open”.

4. Select “Administrator” as the username (this option is generally highlighted) and enter his/her password. Then click “OK”.

5. Select the repository RLWTF.

6. Click the “Processing” button, and select “Import”.

7. Indicate the file path and file name for the log file that will be generated. Use the “Browse” button to select a different path and filename (i.e., creating the file on a 3.5” disk). Make sure that the filename ends in “.mgl”. If you are still in the “Browse” screen click “OK” to get back to the Export screen.

8. Uncheck the “technical data” box and then click on the “Export” button.

9. The export is finished when a “report” screen appears. Click “OK” to close that and then click “Close” to leave the export window (It is imperative not to forget where your export files were created).

10. If you are still inside the window “Administration of Environment”, click on the Administer button and select “Initialize Logfile” Then click the “delete” button.

11. Click on the “Close” button to close the administration window. Then click “Close” again to exit the Environments window.

12. Send the export file to the other site’s administrator (or whoever is in charge of updating the other repository with files received from remote users). (Disk, email, etc.)

13. The users can now open new transactions and continue to work in Procedure design if desired.

---

Import the Repository
and Updates

1. Run the program ADMINISTRATION.

2. In the first screen that appears: verify that the correct environment is selected and "Current". Then click on the environment button and choose "Open".

3. Select "Administrator" as the username (this option is generally highlighted) and enter his/her password. Then click "OK".

4. Select the repository RLWTF.

5. Click the "Processing" button, and select "Import".

6. "Browse" until the file received from the remote user workstation is found. Check the Reprocess checkbox, leave the "technical data" box unchecked and then click on "Apply".
Automation of Procedure Writing for the RLWTJ

Note: There may be rejects that may occur during this process (less than 10 is okay). Remember rejects are not necessarily bad, but data that may have been previously imported into the repository. The system will not allow duplications and thus reads that part of the import as a reject. The Administrator (the person responsible for MEGA’s Procedure Design) checks these rejects.

7. After the import process has reached 100% then click the “Close” button to get to the previous screen. Next, click the “Close” button for the screen too.

8. If you are still inside the window "Administration of Environment", click on the Administer button and select "Initialize Log file" Then click the "delete" button.

9. Click on the "Close" button to close the administration window. Then click "Close" again to exit the Environments window. (It is recommended to store a backup copy of the imported file).

10. The users can continue normal work in Procedure Design.

Conversion Existing Procedures into PD

Creation or Reengineering of Documentation:

The creation or reengineering of documentation is described in the following steps:

1. Organizational chart creation
   - Corporate organizational charts
   - Division/department charts
   - Job functions- org-units

2. Procedure creation
   - Purpose, scope,
   - Flowchart
   - Glossary of terms – definitions
   - Hazards & Controls
     - Risk
       - Severity – Likelihood
     - Requirements

3. Documentation generation
   - Word Document
   - Web-site
An automated Administrative Procedure Template will be developed by Michelle Farnham of MEGA International based upon requirements by the RLWTF Implementation Team. The document template is made up of selectors, descriptors, and report templates.

**Generate RLWTF Word Documents**

**To generate a Word document from Procedure Design complete the following:**

1. Select the document icon from the left tool bar;
2. Type in a document name;
3. Select In Repository under “location”;
4. Select the appropriate template under “From Document Template”;
5. Select procedure and the name of the procedure you would like to generate under “The Documented Object”;
6. Select OK
7. Right click on the procedure you would like to generate and click on “Open Document”

**Validate Word Document Procedures**

**When conducting a procedure validation for Word generated documents complete the following steps:**

1. Ensure all items on the document have been incorporated into the new formatted procedure;
2. Check grammar and spelling;
3. Resolve conflicts with the Subject Matter Expert as necessary.

**Generate RLWTF Procedures to the Web-site**

**To generate a Web-site document from Procedure Design complete the following:**

1. Select the WEB-site generator icon from the left tool bar
2. Right mouse click on the icon to properties
3. Ensure the following are provided within the properties of the web generator icon
4. The web-site path is: c:\mega\envnucl\intranet\pages
5. Type in the source object type; i.e., Procedure or Project
6. Type in the Source Object Name (must be spelled exactly)
7. Right click on the WEB-site generator icon and select generate.
When conducting a procedure validation for generated HTML documents, complete the following steps:

1. Ensure all items on the document have been incorporated into the HTML format for procedures.
2. Check grammar and spelling;
3. Resolve conflicts with the Subject Matter Expert as necessary.

The process defined below will be linked to sub-procedures describing how each element will be implemented at the RLWTF demonstrating compliance to the Safe Work Practice Implementation requirement at LANL.
8. **CONCLUSION**

Upon completion of the implementation plan all documents will be generated through Procedure Design. Many organizations within Los Alamos and National Laboratory and Sandia National Laboratory are in the process of implementing Procedure Design. We will be holding our First Annual Procedure Design Users Group at the NIRMA’s 22nd Annual Symposium in San Diego, August 9-12, 1998.

9. **ATTACHMENTS**

Automation of Procedure Writing at the RLWTF presentation viewgraphs
the RLWTF
Procedure Writing
Automation of

Moving Into The Millennium
Procedure Automation Project Outline

- Identify primary objectives
- Develop system requirements
- Conduct a system analysis
- Develop Implementation Plan
- Re-engineer Document Management Business Process
- Develop and Link Safe Work Practice Implementation requirements
Our Principle Objectives

- Streamline and/or tailor your current procedures
- Reduce the volume of your procedures and eliminate duplication
- Provide traceability and retrievability of approved and implemented procedures
- Provide the methodology to demonstrate compliance to Safe Work Practice Implementation requirement
Principle Objectives

• Reuse data

• Include multiple output generation capabilities (word and Internet/HTML)

• Have fast & easy access when changes are required

• Have consistency throughout procedures
Our Principle Objectives

• Be able to analyze the impact of changes ("what-if" analysis)

• Have fast & easy access to corporate information to anyone who needs it

• Year 2000 compliant
Develop System Requirements

- Hierarchical procedural structure
- Interrelationships between documents
- Hazards identifications and control Links
  - procedures and hazards
  - hazards and controls
  - hazards and risk
- Impact Analysis
- Regulatory Compliance Crosswalk
- Glossary of Terms
Develop Implementation Plan

Document Control
- Pressure Procedure Design
- Attend End User Training
- Attend Advanced Training
- Install Procedure Design

PD Implementation Team
- Attend Admin Training
- Develop Implementation Plan
- Create Customized Gen Radioactivity Environment
- Create Authorization User Privileges

MEGA International USA, Inc.
- Create Operational Repository
  - Exporting the Repository Update
  - Importing the Repository and Updates
  - Converting Existing Procedures into PD
  - Validate Word Documents Procedures
  - Generate RLWTF Word Documents
  - Generate RLWTF Procedures to the Web-site
  - Validate Web Generated Procedures
- Implement New Document Control Business Process

User Diagram

Style: Diagram

Focus: Develop Implementation Plan

Structure: Hierarchical

Strategy: Implement new document control business process

Tools: Workflow, Automation, Customization

Constraints: Radiography

Outcome: Improved Efficiency, Security, Compliance
Re-engineer Document Management Business Process
Develop and Link Safe Work Practice
Implementation Requirements

- Define Work
- Identify & Evaluate Hazard
- Develop & Implement Controls
- Perform Work Safely
- Provide Feedback & Continuing Improvement
Procedure Design

A 5 Step Process

1. Create the flowcharts - Map the Process
2. Comment the flowcharts - Step by Step Instructions
3. Produce your documents - Word or HTML
4. Distribute your documents - Intranet, Notification Via Email
5. Update & maintain documents
Provide links between procedures and associated hazards

- Procedures
- Hazards
- Controls
- Risks
- Severity
- Likelihood
Provide links between procedures and requirements

- Procedures
- Requirements

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Previous-Procedure

Next-Procedure
### Glossary of Terms
- Web Site
- User Friendly Interface
- Glossary of Terms
- Standardization
- Requirements
- Compliance Crosswalk
- Impact Analysis
- Change Control
- Procedure Relationship
- Document Hierarchy
Questions?