Procedure: Developing, Reviewing and Approving Institutional Policies

1.   Purpose

This document describes the procedure for developing, reviewing, and approving institutional (or Laboratory) policy and requirements documents at Lawrence Berkeley National Laboratory (LBNL). The procedure is consistent with the five document management elements described in *LBNL Document Management Process*, document number 10.06.001.001.

2.   Applicability – who this is for

This procedure applies to people who write, review, and approve institutional policy and requirements documents that are controlled and maintained.

2.1   Exceptions

For non-policy institutional documents, Procedure 10.06.001.101, *Developing, Reviewing and Approving Non-Policy Institutional Documents* applies. For non-policy department-only or function-only documents, the specific function's or division's or department's procedures apply.

Because Laboratory policies or Laboratory requirements may need support of implementing mechanisms, the approval of a policy or requirement may need to be accompanied by a cost benefit/risk analysis or implementation plan. This procedure refers to completion of such analyses and plans, but does not include specifics on their development. See Section 7.2.

3.   Pre-requisites

- Writing or modifying Laboratory policies and requirements is part of the Requirements Management (RM) process and program. Persons writing, review, and approving policies and requirements are expected to understand the *LBNL Requirements Management Process* (document # 04.04.001.003) and also the *LBNL Document Management Process* (document #10.06.001.001).
- A document repository for storage of source files is established.

4.   Definitions

Term	Definition
Contract 31	"Contract 31" is short for Contract No. DE-AC02-05CH11231 between the U. S. Department of Energy and the University of California describing the terms for management of LBNL. The Contract includes a statement of work (SOW) for the

Term	Definition
	science missions and it details the requirements for managing the operations and business of LBNL.
Change, Major	In regards to changes to documents, this category includes the addition of a new institutional document, the retirement of an obsolete document, or revision to an existing document that significantly changes its meaning, requirements, responsibilities or method of implementation, or is an extensive rewrite of an existing document. May have high impact on other institutional documents
Change, Major + 30 day	In regards to changes to documents, this is a Major change to HR policy that affects employment terms and conditions. The 30 day comment period starts with policy notice announced in *Today at Berkeley Lab* (TABL)
Change, Minor	In regards to changes to documents, this is a change that makes no substantial alteration in requirements or responsibilities, in the judgment of the Sr. Line Manager and/or RMC representative.
Change, Editorial	In regards to changes to documents, these include, for example: - Typos, format, grammar, - Updating hyperlinks, document number changes, - Editing text to clarify or be consistent with existing requirements within the document and/or with other institutional documents.
Document	Written, visual, audio-video-recorded information stored in the form of hard copy, film, magnetic tape, electronic data, or in an on-line, web-based format
Document Information	Also referred to as document metadata, and includes (but not limited to) titles, document numbers, revision dates, and for traceability, the related source requirements and implementing documents' information.
Document Management	A business management process that ensures organization access to current, reliable, and concise information. Document management process includes document control, change control, version control, periodic review, and communication/distribution.
Functional area	A grouping of individuals on the basis of the function each performs in the organization (for example, human resources or IT). A Division, Department, or Office at the Laboratory. Functional areas may have oversight of one or more policy areas, or may share responsibility for a policy area with another function.
Institutional document	A publication authorized by Laboratory management that delineates laboratory-wide or multi-departmental policy, procedures, regulations, programs, plans, and so forth. Scientific and technical publications and reports are not included in this definition.
Laboratory Driving Requirement	Institutional documents that (1) are mandated by the contract, applicable regulations, or UC, and approved by at least Berkeley Lab senior management, and (2) drive institutional policies, processes, or other documents. These driving requirements do not include Laboratory policies, and are typically program or system descriptions.
Metadata	See Document Information
Policy	Statements or directives from the federal, state, or local government; the University of California; or Berkeley Lab senior management that set a course of action, define acceptable conduct, or implement governing principles.
Policy Area (PA)	A grouping of related policies. Policy areas are organizationally neutral; that is, they do not reflect organizational structure. Though organizationally neutral, Policy Areas typically are assigned to an Operations function. Some policy areas may span across more than one function, and a primary functional owner is therefore assigned.
RMS Database	A database tool for managing requirements and related information, including tracking requirements, their associated policy areas, owners, records of implementing mechanisms, and their flow down to implementing documents.
Record of Decision (ROD)	Also known as ROD, a written record of a decision made regarding a requirement, policy, an institutional document, or regarding the implementation mechanisms or plan regarding a requirement, policy, or institutional document.

Term	Definition
Requirement	A specific obligation to perform an action mandated by LBNL senior management or the federal, state, or local government; or to comply with the Laboratory's contract with the Department of Energy; or to comply with agreements made between the Laboratory and its corporate manager, the University of California.
Requirements review case	An instance or a question related to a requirement that has been logged into the Requirements Management database for disposition by the RM Committee.
Revision	The act of altering or modifying a document.
Significance Rating or Level	A value that reflects the significance of a new or revised institutional policy, program, process or other document. The value provides a means to grade (a) the approach for development (or revision) of the policy or program, (b) the amount of rigor associated with the various steps of the process, and/or (c) the level of approval authority for the policy or program.
Source requirements document (SRD)	A high level document that establishes performance expectations as a result of a citable policy, directive, law, regulation, or contract. Examples: Clause H.18, *Application of DOE Contractor Requirements Documents*; 10 CFR 851, *Work Safety and Health Program*
Version	An altered or modified document, which is the result of revising.

4.1 Acronyms

ALDO/COO	Associate Laboratory Director of Operations/Chief Operating Officer
LM	Line Manager
PA	Policy Area
RM	Requirements Management
RM PM	Requirements Management Program Manager
RMC	Requirements Management Committee
ROD	Record of Decision
RPM	Regulations and Policy Manual
SME	Subject Matter Expert
SRD	Source Requirements Document
WG	Working Group

5. Roles and Responsibilities

The list below emphasizes the roles and responsibilities pertinent to only this procedure. For the most comprehensive and up-to-date version of Requirements Management roles and responsibilities, see *LBNL Requirements Management Governance, Document 04.04.001.002*.

Role	Responsibilities
Document Author	• Recommended by the Sr. Line Manager, or Requirements Management Committee (RMC) member to prepare institutional documents. Usually is a SME. Appointed by Sr. Line Manager. Assignment is on a per case basis. • Ensures clarity, accuracy, usability, and conciseness of the document(s). • Provides technical expertise to support the interpretation and implementation of requirements. • Gathers information from other functional and/or policy areas that have knowledge or expertise relevant to the document. • At the direction of the RMC member or SME, prepares document for review and approval by others. Obtains approvals for the assigned document. • With the oversight of the RMC member and assistance of CSO editor prepares institutional documents for publication. Has responsibility for all technical content and the integrity of any links introduced.
Subject Matter Expert	• A Laboratory employee or consultant with specialized knowledge about a certain topic

LBNL

Role	Responsibilities
(SME)	- or field of interest. - Provides technical expertise to the RMC and/or Working Group as it relates to the interpretation and implementation of requirements, including the development and review of policies and implementing documents. - May be a Working Group member, may be an author or reviewer (Lead or senior functional SME) Has ownership and accountability for the technical content, accuracy, and completeness of policies. - Leads in the identification and translation of requirements. Seeks and has the assistance of Working Groups (WG) and RMC member - Leads the development and/or revision of policy and implementing documents within area of responsibility in accordance with requirements. Seeks and has the assistance of WG and RMC member. - Coordinates document reviews, comment resolution, and implementation actions. - May be delegated by Sr. Line Manager to approve certain institutional documents upon completion of required reviews. - Must be trained on LBNL RM and document management processes. - Communicates progress, actions and/or assignments to the RMC and respective Division Sr. Line Manager on regular basis.
Requirements Management Committee (RMC)	- Provides centralized coordination and communications on Contract 31 requirements and related Lab policy matters. - Applies the RM process in the review and disposition of Requirements Review Cases related to requirements, Laboratory policies, and on a case-by-case basis Laboratory implementing documents. Ensures that flow-down from requirement into implementing documents is addressed. - Reviews and recommends best qualified cross-functional team to address requirements analyses, implementation mechanisms and plans, policy and procedure documents. - Reviews and applies cross-functional knowledge and judgment on WG, SME work products (analyses, implementation plans, policies). - Advises responsible Sr. Line Manager on WG/SME work products. - Reviews communications plan to ensure effectiveness and thoroughness. - Reports to ALDO/COO. - Champions RM and institutional document management processes.
Requirements Management Program Manager (RM PM)	- Manages the Laboratory's requirements management and institutional document management processes. Is the main driver and champion of these processes. Has author/review/recommendation responsibilities for quality and completeness of RM process and institutional document management process documentation. - Serves as the Laboratory's contact point on requirements and institutional document management-related matters. - Coordinates inputs from the RMC members, the Working Groups, and the responsible Sr. Line Manager. Presents to RMC for discussion and resolution. - Oversees management of Laboratory's policy manual. - Maintains the Requirements Management (RM) database for tracking requirements, their associated policy areas (PA), owners, records of implementing mechanisms, and their flow down to implementing documents. Maintains accuracy and currency of the RM tracking system. Has review/approval responsibility for quality and completeness of requirement, policy, and document metadata.
Sr. Line Manager	Has responsibility and accountability for managing Laboratory requirements that pertain to his/her area of responsibility, including identification of what the

| Role	Responsibilities
	requirements are and implementing them through policies, programs, procedures, etc. • Has full responsibility and authority to make and enforce policies related to his/her respective area of expertise and responsibility • Ensures compliance with LBNL requirements and document management policies and procedures. • Has ownership and accountability for the technical content, accuracy and completeness of respective Function's documents. Approves institutional documents upon completion of required reviews.. • Reviews and approves policy recommended by a Working Group and the RMC. • Has option to delegate approval authority to SME or RMC member.
Chief Operating Officer (COO)	• Has full responsibility and authority to make, implement, and enforce policies related to the Laboratory Operations. • Works with the RM PM and Sr. Line Managers to resolve difficult or complex policy matters, (for example, setting priorities or providing judgment on controversial policy or implementation, or allotting funds) that may arise in the process of review and translation of requirements or policy into implementation. • Reviews and approves policy and detailed implementation plans recommended by the Sr. Line Managers and the RMC. Reviews and approves institutional documents, as required. • Appoints RMC members and RMC chairperson.
Reviewers	• Review and provide comments and comment resolution concurrences on documents that directly affect operations. Reviewers may be other SMEs, members of Working Group(s), RMC members, affected users, members of Laboratory institutional committees, Laboratory managers, and so forth.
CSO (Creative Services Office) Editor	• Works closely with RM PM to maintain the Laboratory's Requirements and Policies Manual (RPM) • Works closely with the RMC members, RM PM, Document Author, and SMEs to develop and maintain Laboratory policy documents. • General duties include: rewriting, copy editing, proofing Laboratory policies ; verifying that referenced • URLs are correct and current; publishing approved Laboratory policies in the RPM.Updates as necessary user-accessible web features such as links, institutional glossary, search parameters, and so forth. • At the direction of the RM PM or Director of Office of Institutional Assurance performs searches for past policies.
Functional Document Control Coordinator	• An optional resource hired by a Function to manage the Function's portfolio of institutional and functional documents per the Laboratory document management process and policy. • Works closely with Document Author, PAM, SMEs and WG to develop documents. • Manages Function's document database • Manages Function's repository of functional documents. Ensures uploading of final approved institutional documents into institutional document repository, and provides the RM PM with accurate and current institutional document metadata.

6.   Procedure

This procedure is integrated with LBNL's requirements management process and players, and is in concert with the LBNL's document management process. It covers Laboratory policies and Laboratory-generated requirements. This group of documents is published in the Laboratory's Requirements and Policies Manual

(RPM), which is the responsibility of the COO, who may delegate oversight to the RM Program Manager. Material that is published in the policy manual is edited and prepared by Creative Services Office (CSO) staff.

Figure 1: Flow for Developing, Reviewing, Approving Institutional Policies
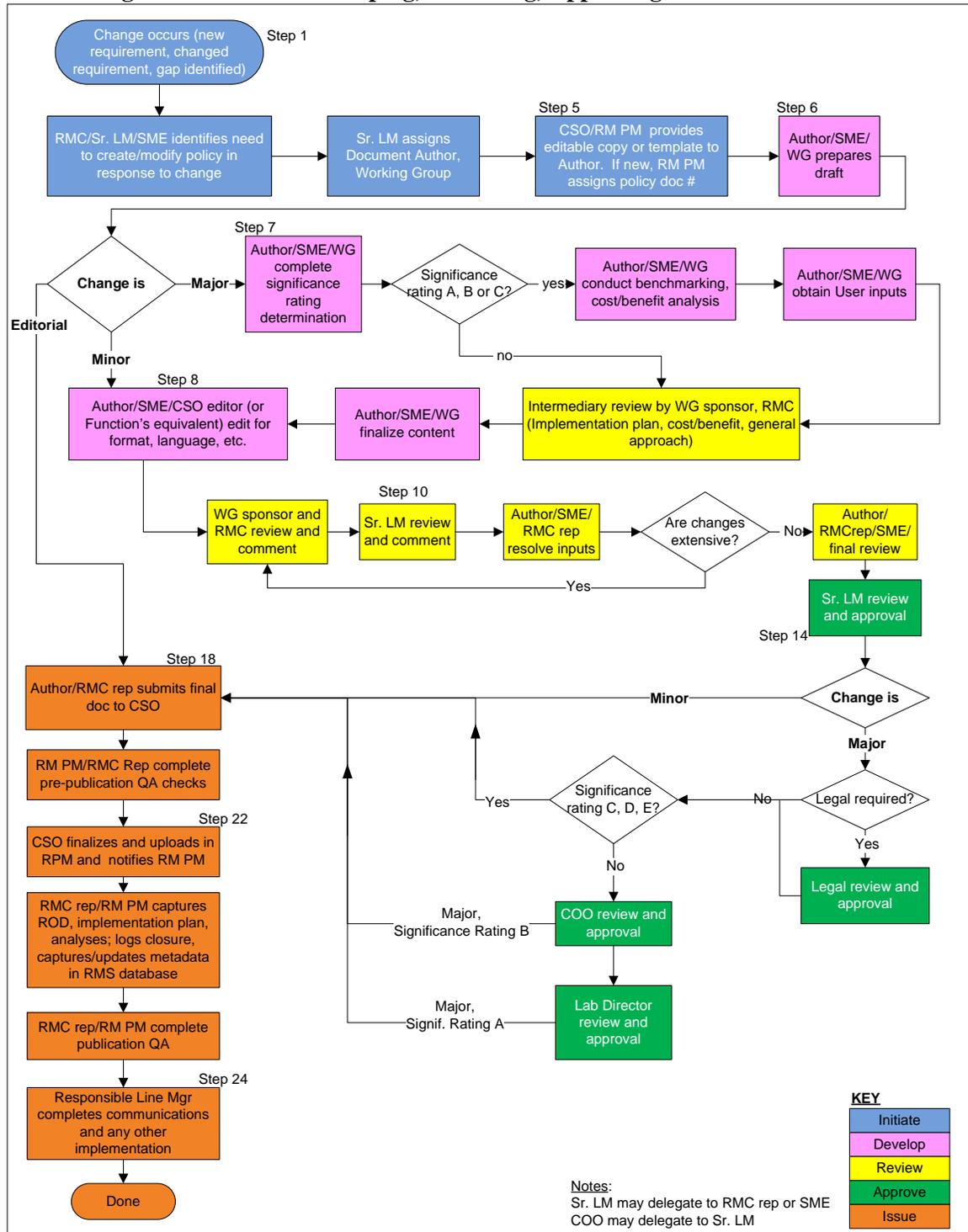
All work must be performed in accordance with LBNL environmental, safety, health, and security requirements.

	Step	Role	Action	
Initiate	1	RMC/ Sr. Line Mgr/SME	Determines need to create or modify a policy	
	2	Sr. Line Mgr or RMC	Assigns Document Author	
	3	RMC	Assigns Working Group	
	4	RM PM	Logs info into database, assigns doc number	
	5	RM PM or CSO editor	Provides editable copy of last version or template to Author	
Develop	6	Author/WG/SME/RMC rep	Prepares draft of policy; completes entries for doc info (metadata)	
	7	Author/ WG/SME/RMC rep	If…	Then…
			Change is Editorial	Proceeds with Step 18
			Change is Minor	Proceeds with Step 8
			Change is Major	• Completes risk/impact analysis and determines significance rating, implementation plan. • Conducts benchmarking (Significance rating = A, B or C.) • Obtains user inputs, blend into document (Significance rating = A, B, or C) • Conducts intermediary review with RMC (and WG's sponsor, if applicable). • Finalizes content.
	8	Author/RMC rep/CSO Editor	Edits document for format, language, etc.	
Review and approve	9	RMC & WG sponsor	Reviews and comments on final draft	
	10	Sr. Line Mgr	Reviews and comments on final	
	11	Author/RMC rep	Resolves all inputs, revising document accordingly.	
	12	Author/RMC rep	If…	Then…
			Changes are extensive	Proceeds with Step 10
	13	Author/RMC rep	Conducts final review with RMC, Sr. Line Mgr	
	14	Sr. Line Manager	Approves (may delegate if significance rating D)	
	15	Legal	If…	Then…
			Change is major and Legal opinion is required	Reviews and approves.
	16	COO	If…	Then…
			Change is major and significance rating is B	Reviews and approves (may delegate, or may request Lab Director review).
	17	Lab Director	If…	Then…
			Change is major and significance rating is A	Reviews and approves (may delegate).
Issue	18	RMC rep	Submits final approved doc to CSO editor	
	19	CSO Editor	Prepares for publication.	
	20	Author/SME/RMC Rep	Reviews and approves final edits	
	21	RM PM/RMC rep	Complete pre-publication QA checks	
	22	CSO Editor	Uploads in RPM; notifies RM PM	
	23	RM PM/RMC rep	- Perform post-publication QA checks - Updates RM database as required with accurate document metadata.	
	24	Functional owner	- Issues communication on policy publication to affected people. - Completes implementation per plan (if any)	

7. References

7. 1	Source Requirements Documents
Requirement ID	**Title**
DOE Order 414.1D	*Quality Assurance*
Lab PUB 3111	*LBNL Operations and Quality Management Plan*
04.03.001.000	*RPM, Quality Assurance Policy*
04.04.001.000	*RPM, Requirements Management Policy*
10.06.001.000	*RPM, Document Management Policy*
10.06.001.001	*LBNL Managing Institutional Documents Process Description*
04.04.001.003	*LBNL Requirements Management Process Description*

7. 2	Related Implementing Documents (including procedures, forms, training)
Document Number	**Title**
10.06.001.202	Form – *LBNL Policy Template*
10.06.001.104	Procedure: *Managing the LBNL Requirements and Policy Manual (RPM)*
04.04.001.101	Procedure: *Analyzing Requirements and Determining Risks and Impacts*
04.04.001.102	Procedure: *Developing, Reviewing, Approving an Implementation Plan*
04.04.001.202	Form: *LBNL Implementation Plan Template*
04.04.001.201	Form: *Analyzing Requirements*
04.04.001.206	Form: *Determining Significance Rating*

7. 3	Other Documents (if any)
Document Number	**Title**
04.04.001.103	Procedure: *Parsing Requirements*
04.04.001.002	*Requirements Management Governance*

8. Contact

Email: requirementsmgmt@lbl.gov
Requirements Management Program Manager
LBNL Office of Contract Assurance

9. Revision history

Date	Revision	By whom	Revision Description	Sections affected
11/24/10	0.0	L.Young	Initial	
2/7/11	0.1	L.Young	Add flows, descriptions, split into 2 procedures	All
6/2/11	0.2	L.Young	Misc reference fixes	
10/25/11	0.3	L.Young	Update with Significance Ratings	all
12/12/11	0.4	L.Young	Prepare for signature; pre-release to OCA web	
8/5/2014	1.0	L. Young	Review; align with current practice	Sections 5, 6

Appendix A: LBNL Document Types

> *Warning:* See Process 10.06.001.001, LBNL Document Management Process Description for most up-to-date version. First two categories are addressed by this procedure. Third and fourth categories are addressed by Procedure 10.06.001.101 (Non-Policy Institutional Documents).

Document Category	Definition	Review[Note1]	Content Approval [Significance Rating] [Note2]
Laboratory Mission	A public declaration of the mission and objectives of Lawrence Berkeley National Laboratory. Document Types: • Laboratory Mission	• Lab Director • Legal	Lab Director [A]
		RM PM reviews/approves for quality control	
Policy	Statements or directives from the federal, state, or local government; the University of California; or LBNL senior management that set a course of action, define acceptable conduct, or implement governing principles. Document Types: • Lab Policy	• COO • Sr. Line Manager • Legal • RMC	Lab Director [A, B] COO (or designee) [B, C] Legal [A, B, C]
		RM PM reviews/approves for metadata completeness & quality control	
Description Document	A document that describes overall purpose and/or attributes of a program, system, or process, and how the elements align. It may be used to provide context for multiple implementation documents, or to identify how requirements are satisfied in procedures, processes, or other implementing mechanisms. Document Types: • Program Description • System Description • Process Description • Plan Description (per DOE requirement)[Note4] Two review/approval levels: I. DOE/UCOP/Lab – (per DOE requirements) II. Lab initiated documents	Level I: • DOE Site Office • UCOP • Lab Director • COO • Sr. Line Manager Level II: • Sr. Line Manager (or designee) • RMC representative • Working Group	Level I: • DOE Site Office • UCOP • Lab Director or COO [A, B] • Sr. Line Manager [C, D, E] Level II: • Sr. Line Manager (or designee) [C, D], E
		RM PM reviews/approves for metadata completeness & quality control	
Implementing Document	A document that details the set of actions or steps that prescribe a method for performing a task or implementing a requirement. It specifies the how, who, and when for the performance of the task or requirement. Document Types: • Procedure • Form • Training • Charter • Roles, responsibilities, authority, accountability (R2A2)	• Sr. Line Manager (or designee) • SME • RMC representative • Working Group • User group • Lab standing committee	Sr. Line Manager (or designee) [C, D, E]

Note 1: Each document must be reviewed by at least 2 groups or persons who are not the Author.

Note 2: This column shows possible approvers. Approvals are graded and based on (a) type of change [Major, minor, editorial – see table in Section 3.2.1], and (b) if major, Significance Rating [A, B, C, D, E - see Appendix B, extracted from document 04.04.001.206]. The assigned person may designate, preferably on a case-by-case basis, an alternate to review or approve.

Note 3: "Plan Description" refers to those few and select cases in which the DOE Contract requirement explicitly uses the "plan" rather than "program". Otherwise, the LBNL adopted definition for "plan" is an implementation document that describes execution details (budget, resources, tasks) of a program or project and covers a fixed time span.

Appendix B – Significance Rating – *See 04.04.001.206 for latest version*

Instructions: For each line, select a value (1,2,3). Sum up each column, then sum the sums and divide by the number of lines. The resulting Impact Total and Implementing Total should be between 1 and 3 (inclusive). Definitions for low, medium, high for Impact are in Appendix A. Definitions for low to high for Implementing can be a bit more subjective. Note that the complexity/cost of Implementing Mechanisms is likely to scale with number of people impacted.

| a		Brief description of what is being analyzed:			
		Value	**1**	**2**	**3**
b	**Impact**	# Policy Area(s)	☐ 1		☐ > 1
		# of people	☐ < 100	☐ 100 to 1000	☐ > 1000
	(see Table	Risk area (safety)	☐ Low	☐ Medium	☐ High
	for definitions)	Risk area (business)	☐ Low	☐ Medium	☐ High
		Risk area (compliance)	☐ Low	☐ Medium	☐ High
		Sums (# checks times Value):			
		Impact Total (sum total divided by 5)			
c	**Implementing Mechanisms**	Documents (number)	☐ Small (1-2)	☐ Medium (2-4)	☐ Large (>4)
		Documents (complexity)	☐ Easy (< 10 hr)	☐ Modest (<30 hr)	☐ Complex (>30 hr)
		Training	☐ Easy (dept)	☐ Modest	☐ Complex
		Resources, roles	☐ Small change	☐ Modest addition to existing	☐ Substantially different, new hires
		Property/equipment	☐ Small cost (< $10K)	☐ Modest cost (<$100K)	☐ High cost (>$100K)
		Communication	☐ Easy	☐ Modest	☐ Complex (pamphlets, multiple announcements over several months, etc.)
		Testing	☐ None	☐ Beta	☐ Alpha, Beta, Pilot
		Program	☐ No change	☐ Modest change	☐ Form new
		Sums (# checks times Value):			
		Implementing Total (sum total divided by 8)			
		Enter SIGNIFICANCE RATING *(use Figure 1 and Impact and Implementing Totals. Round up for fractions greater than or equal to 0.5. Round down for fractions less than 0.5)*			
		Using the resulting Significance Rating, determine Approval Levels from Table 1 and Minimum Required Program Elements from Table 2.			

FIGURE 1: Significance Rating

Impact	1	2	3
3	B	B	A
2	D	C	B
1	E	D	C

Implementing Mechanisms
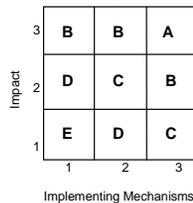
TABLE 1: Approvals:

Significance Rating	Approval
A	Lab Director (or designee)
B	COO (or designee)
C, D	Sr. Line Manager(s)
E	Sr. Line Manager (or designee)

TABLE 2: Minimum Required Program Elements

Significance Rating	Minimum Required Program Elements of a Management System
D, E	• Document gap analysis and comparison to current implementation methods • Select approach with input from users • Develop communications approach • Draft program/policy change for review • User review/input as needed
C	• Document gap analysis and comparison to current implementation methods • Benchmark (telephone calls and e-mails may suffice) • Select approach with input from users • Develop communications approach • Develop cost-benefit analysis • User/Lab Institutional Committee input* (consider an early committee briefing as appropriate) • Consider test period prior to full implementation (pilot testing) • Prepare implementation approach
A, B	• Document regulatory analysis and comparison to current implementation methods • Develop communications approach • Early briefing of Lab Institutional Committee* (for example, SAC) on new or changed requirement • Additional briefings to line management and users (as needed) • Benchmark (up to site visits) • User participation on development of approaches, evaluation of alternatives, and selection of final approach to implementation • Develop cost-benefit analysis • Develop detailed implementation approach • Run both an alpha test and beta test before implementation

*Lab Institutional Committee – for example, Laboratory Safety Advisory Committee (SAC)

Appendix C – Exchanging Documents for Edit and Review

C1. Background and Purpose:
In the drafting, editing, and review steps, versions of documents are often changing quite rapidly and extensively. Often exchanges are made between two or more people, and tracking which person has the "latest" version can be challenging.

This Appendix describes a suggested process and tool for exchanging documents between two or more persons for edit and review purposes, maintaining control of versions, comments, and dates of completion, and using semi-automatic email notifications.

C2. Suggested Approach
Tool: Collaborative on-line spreadsheet with (a) email notifications triggered when the spreadsheet is changed, and ability (b) to accept changes by multiple users, (c) to accept attachments by multiple users, (d) to retain previous attachments.

Spreadsheet column headings for managing a document (examples!):
    a. Document identification information (number, title)
    b. Author's name
    c. Editor's name
    d. Reviewer name(s)
    e. Date submitted
    f. Date edit complete
    g. Date review complete
       [multiple step f-g cycles]
    h. Approval date
    i. Approver name
       [multiple step h-i cycles, depending on number of approvals required]
    j. Publication date
    k. Storage location of final approved version.

Triggering email notifications:
    Any time an author, editor, reviewer enters a completion date or attaches a new version or enters a comment, the collaborative application issues a notification that a change has occurred to the parties who sign up to receive notifications.
    [The level of sophistication of the application determines how soon after the change a notification is delivered, who controls enlistment for notifications, and so forth.]

The above process can work with a collaborative tool such as Smartsheet, Inc., and perhaps Google Docs.