



### Lawrence Berkeley National Laboratory

# RMS Database – Overview of Deliverables for Admin Management

L.J. Young 25 October 2014, revised 8 Nov 2014 LBNL doc # 04.04.001.403-AD00

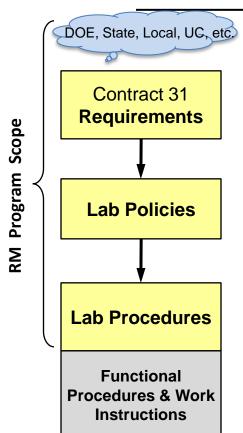
### **Outline**

- RMS high level requirements, objectives
- Requirements & document metadata
- Deliverables Definitions
- The Quirkiness of Deliverables
- Generating Deliverables (typical)
  - Distributing Scheduled and As Required Instances
- Managing Deliverables
  - Notifications
  - Closing a Deliverable Instance
- Generating Deliverables that are tied to 2 or more Reqs



### LBNL Requirements Management (RM) Program

Translated from Contract 31 and related standards and regulations, the Lab's policies and procedures define the operating framework for Laboratory community members to successfully produce outputs that are on time, within budget, and of high quality.



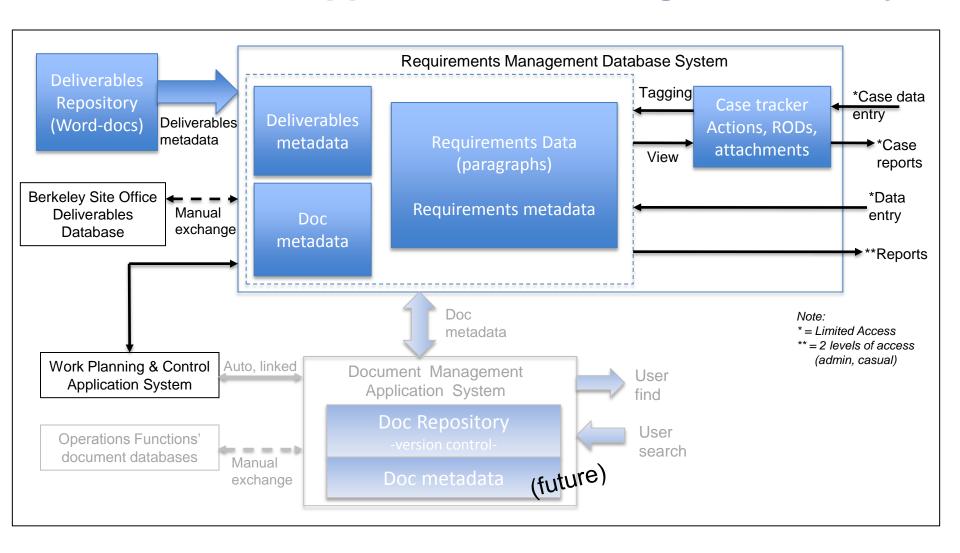
- RM Program: Implementation of a Lab-wide system that simplifies the task of finding, understanding, and implementing requirements, comprising:
  - A process to manage new/changed requirements through implementation (DEFINITION).
  - A hierarchal structure describing the relationships among institutional requirements, documents, and information. (TRACEABILITY).
  - A process for tailoring institutional policies and procedures to allow end users to effectively & efficiently meet requirements. (ACCURACY and USABILITY).

# **RMS** Database Top Level Requirements

- Overall Objectives:
  - Track changes to DOE Contract 31 and associated requirements that the Lab is obliged to follow
  - Show traceability of requirements through the Lab's implementing documents (policies, programs, processes, procedures, etc.)
- Manage entry, maintenance, search, reporting of:
  - Requirements metadata
  - Document metadata
  - RM Cases that follow RM processes and result in reqs or doc change
    - Records of Decision (RODs)
    - Analyses, Implementation Plans, Approvals
  - Interrelationships of the above
- Manage tracking of Contract Deliverables (Reqs subset) including notifications and completion.
- Design for low usage frequency
  - Data entry: 30 users at frequency 3 to 5 times per year
  - Search, report: ~200 users at frequency 1 to 10 times per year



## RM Database Application: Tracking, Traceability



### **RMS Data Definitions:**

### **Requirement and Document Concept Types**

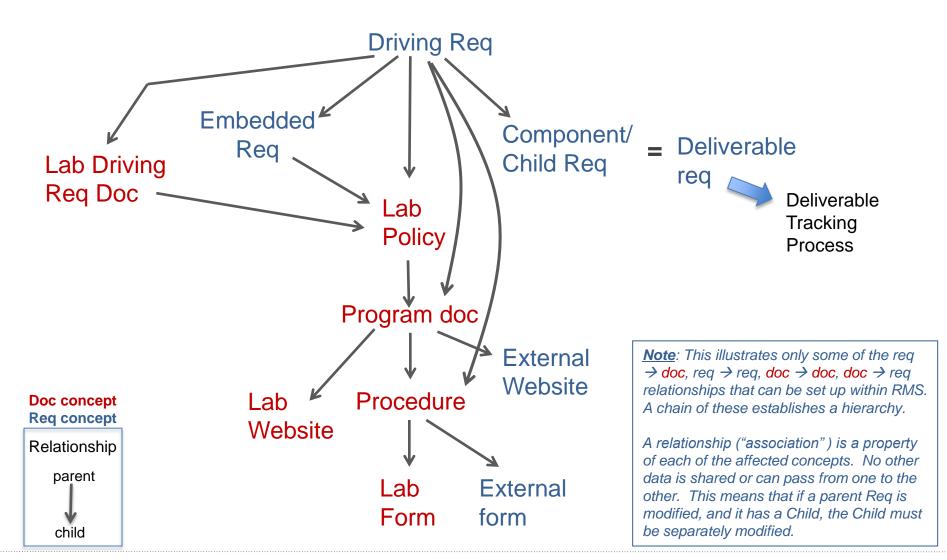
### REQUIREMENT Concept Types **DOCUMENT** Concept Types (<u>Lab-controlled</u>) **Driving Requirements Policies** Child "component" Requirements **Processes** (specific section or paragraph of Parent/"main") Lab Driving Contract Req Docs Deliverable regs **Programs Ý**lans **Forms** Websites **Embedded Requirements Procedures** (required by reference) **Manuals** Fed, State, Local, UC controlled policies, forms, "Concept": An object that is stored in RMS. It is

comprised of properties (title, date, owner, etc.) which

include designated relationships (associations)

websites, etc.

### RMS Data Relationships: Some possibilities



# **General Definitions:**Requirements & Deliverables we track in RMS

### Requirements:

- Explicit Contract 31 line items
- Applicable Fed, State, local regulations as submitted to Lab RM for tracking (that is, we do not try to determine and track the exhaustive list).
- Applicable UC policies, requirements
- Documents (letters, memos, etc.) clarifying any of the above, or acting in the interim before formal issue of directive, clause, law and incorporation into C31.
- Deliverables: "Work product or output, resulting from addressing a requirement, that is provided to the contracting agency as demonstration of compliance to the requirement"
  - "Requirement" as defined above
  - Not included unless requested: calls for data that (a) are in addition to the above requirements and (b) are one-time events.

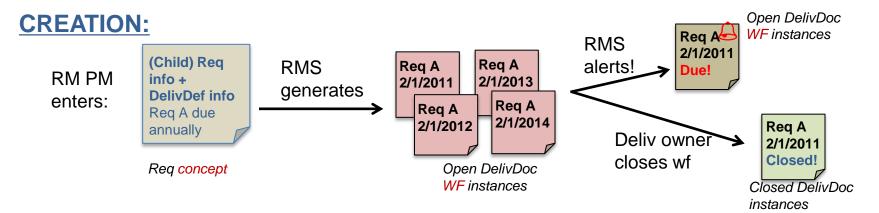


### **Deliverables Process Definitions**

- "Scheduled" deliverable:
  - A deliverable that has a specific due date and frequency.
  - Due dates for C31 deliverables are typically agreed to with BSO Contracting Officer.
  - Date and/or definition changes for C31 deliverables require approval by BSO Contracting Officer.
- "As Required" deliverable:
  - A deliverable that is submitted only if triggered by the circumstances as defined by the specific requirement.
- Deliverable Definition
  - The requirement that defines the deliverable.
- Deliverable Instance (a workflow)
  - Generated by the Deliverable Definition, with specific due date.
- RMS = Requirements Management System database
- Lab SME (or POC)
  - The person assigned responsibility for a particular deliverable.
  - Lab SME must notify RMC Rep and/or RM PM of changes.



### **How RMS Database Creates Deliverables**

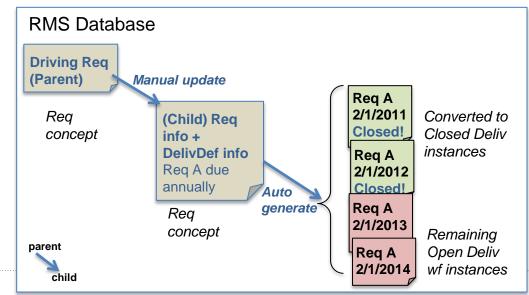


<u>Note</u>: Modifying Child Req/DelivDef info results in update of any OPEN Deliv wf. Closed Deliv are not changed (good!)

# DATA & RELATIONSHIPS:

#### Notes:

- The different concept types are searchable.
- Relationships between Child Req & generated DelivDoc wfs & Closed wfs remain established, when Child Req is modified.
- Must update Parent & Child Reqs separately.

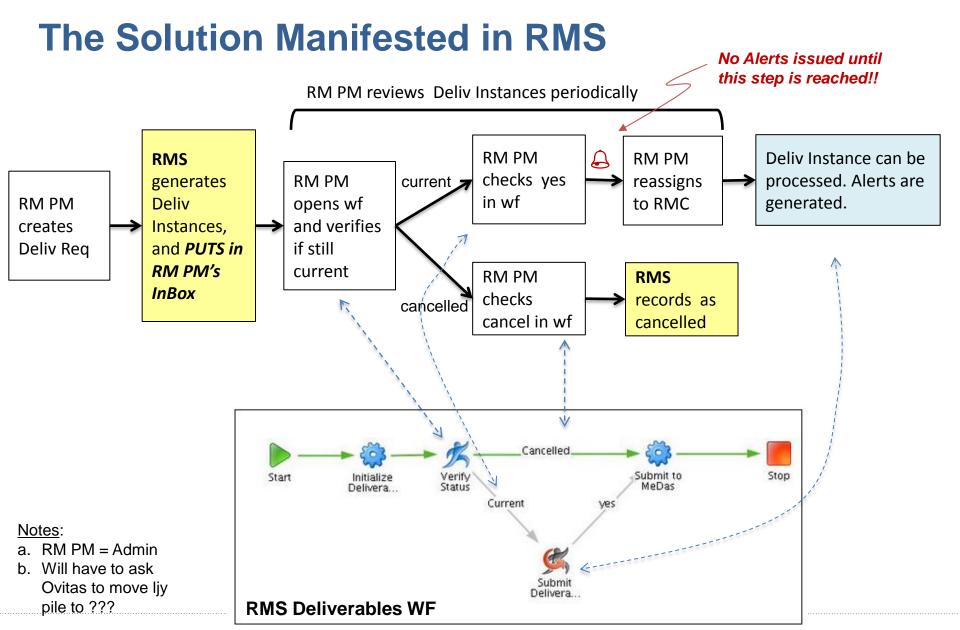




# The Quirkiness of Deliverables (the reasons for complexity)

- Arises because:
  - Only RM PM/Admin are permitted to modify reqs (to ensure their integrity!)
  - A deliverable is a child of a parent requirement (concept)
  - Deliverable <u>instances</u> are <u>workflows</u> so that someone can take action.
     Requirements are <u>concepts</u> pieces of info.
  - Concepts are deprecated (and remain in the system); open workflows are deleted from the system.
  - If a deliverable requirement is modified, then
    - We want to modify <u>only</u> any remaining open wf instances, and preserve the closed deliverable instances exactly as they were closed.
    - If the mod is cancelled/retired, we want to preserve the closed ones AND classify the remaining open ones as cancelled, closed and preserved in the system. We must NOT delete them from the system).
  - The Admin cannot pull back any wfs already in a user's Inbox.

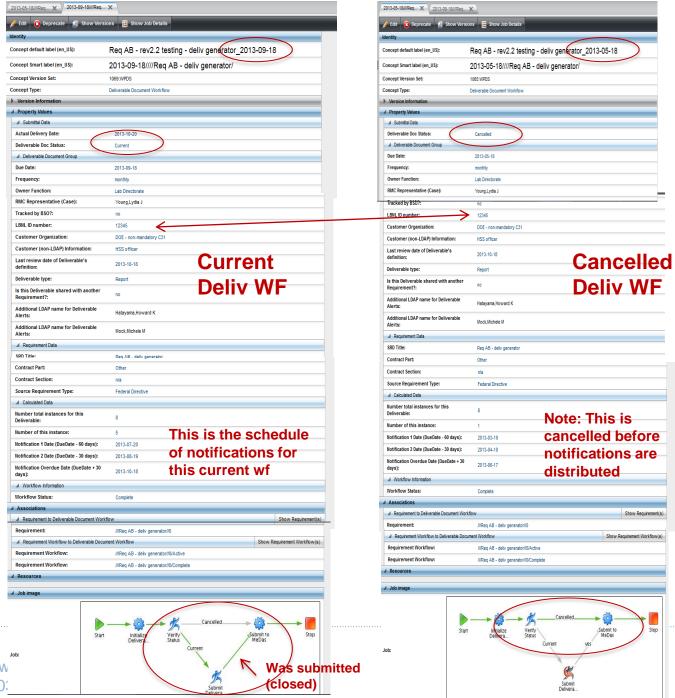
This is the hard-part.





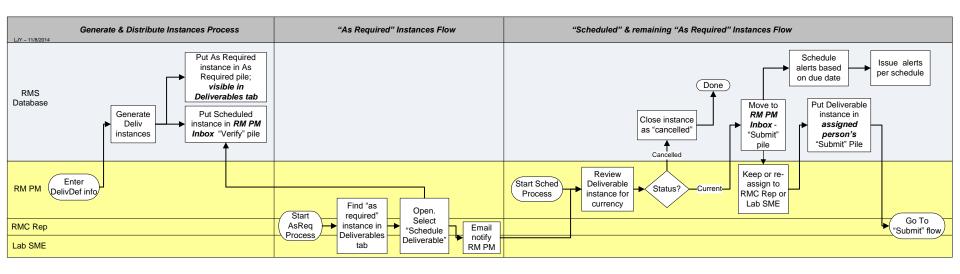
# Cancelled vs Current Deliverable

- Search Closed Deliv WF
- The results of RM PM selecting "cancelled" or "current" in "Verify Status" step of Deliv WF
- Version 2.x lets
   us retain a record
   of DelivDocs that
   were cancelled
   rather than
   deleting them.

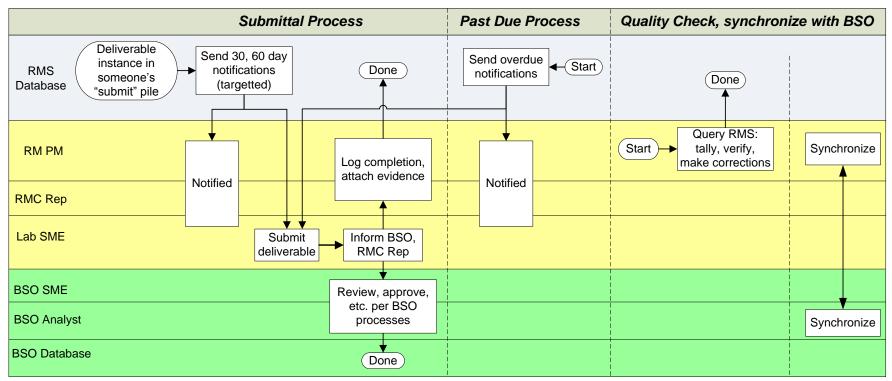


# Distributing Deliverable Instances: How-To #A08

- The flow below is taken from How-To #A08.
- "As Required" release is an additional step to the release of "scheduled" deliverables.
- No alerts are issued until the Deliverable Instance is in a "Submit" folder



## Closing Submitted Deliverable Instances



- Notifications are not issued unless they are in someone's "Submit" pile.
- See How-To # A08 and How-To# DE04 if a Deliverable is "As Required"
- As of 3/2014, RMC reps have been closing RMS instances for Lab SMEs. (SMEs are responsible to submit deliverable to BSO).



### **Deliverable Reminder Notice Example:**

### Contract 31 Deliverable 30 Day Reminder Notice

RMS Mailer < RMSAdmin@lbl.gov>

Thu, Oct 9, 2014 at 8:02 AM

Reply-To: RMS Mailer <RMSAdmin@lbl.gov>

To: "Young Lydia J" gov>, "Lundell, Christopher A" <CALundell@lbl.gov>, "Greenwood, Gregg H" <GHGreenwood@lbl.gov>, "Carlson,Tammy" <TCarlson@lbl.gov>, "Moore,Anne M" <AMMoore@lbl.gov> Cc: RMS Mailer < RMSAdmin@lbl.gov>

Non-owner To's are per RMC rep and SME's instructions.

RMC representative and RM PM are included in the distribution.

This is a reminder that your Contract Deliverable is due on Mon Nov 10 00:00:00 PST 2014. You must submit it directly to BSO, DOE, or other customer, including any internal approvals if needed.

Please notify your RMC member or the RM Program Manager when you have submitted your deliverable.

Per Contract 31, Section D.2, Marking, be sure to mark any email and document correspondence with the citation information.

Deliverable Doc Owner: Greenwood, Gregg H ← Owner is listed here to distinguish from others who are included as "fyi"

Contract Part: Contract Section Contract Section: G Contract Subsection:

SRD Citation: G.4

SRD Title: Reporting Procedure for Recovery Act Work

SRD Section/Paragraph Citation:

SRD Section Title: ARRA Costs Reports

This is the CITATION information that should be included in correspondence (for example, email subject heading.

Brief summary of requirement: Contractor will (a) separately identify costs that pertain to the Recover (b) provide a monthly report that (i) identifies total amount drawn on the letter of credit, (ii) separates and Recovery Act costs associated with each appropriation at Recovery Act program and project levels. (iii) the reported costs were incurred only to accomplish Recovery Act work per the work scope. LBNL ID #: 924018 <

This number helps synchronization with BSO data. It is an easy reference number for searchina

If this deliverable satisfied another requirement, it would be listed here. (RMS can connect 2 or more requirements having the same deliverable)

- Lab POCs receive a 60 day reminder and a 30 day reminder for scheduled Deliverables.
- RMC Reps and RM PM get copies of the reminders.



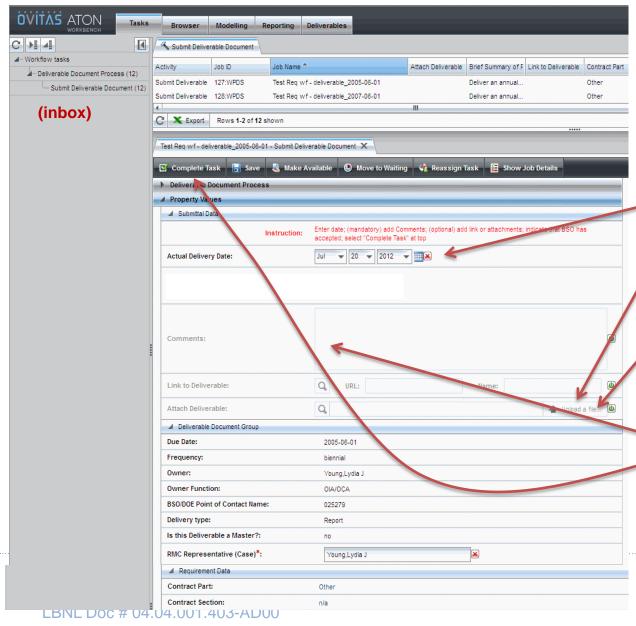
## **Submitting Deliverables (1)**

### Lab SME:

- Works with BSO counterpart as required before completing deliverable.
- Submits completed deliverable to BSO counterpart.
- Marks all correspondence with Contract 31 citation information.
- Works with BSO counterpart as required if deliverable is not satisfactory.
- Once deliverable is accepted, closes item in RMS. (Or, informs RM PM and RMC rep that item has been accepted, and RM PM or RMC rep closes the item)
- These steps apply for "scheduled" and "as required"
   Deliverables



# **Submitting Deliverables (2)**



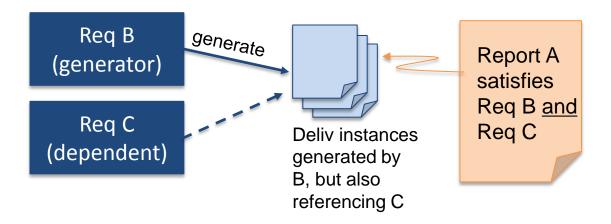
After selecting the specific deliverable workflow from your Inbox:

- Enter Actual Delivery Date.
- Attach evidence of closure (pdf of email to BSO, for example
- Attach deliverable (
   3Mb, not confidential)
- 4. Comments optional
- 5. Hit "Complete"



# One More Feature (which is Complex!) – Tying 2 or more Reqs to a single Deliv.

- This is tedious to set up.
- Fortunately, there are less than a half dozen of these.
- See written instructions for exact how-to



### Set-up Scenario 1:

Req B and Req C are entered together as sharing

### Set-up Scenario 2:

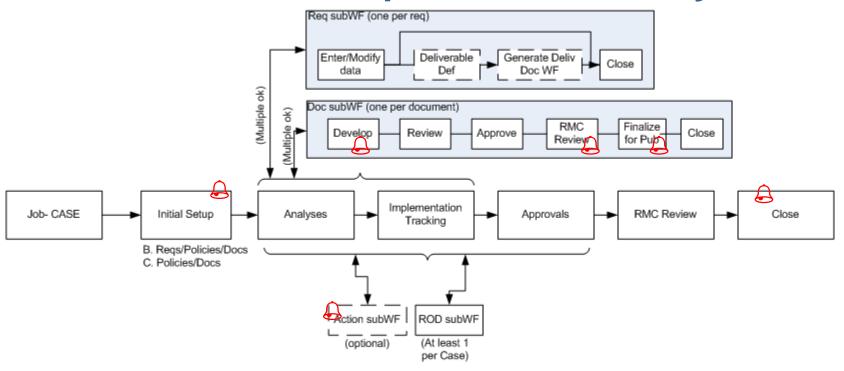
Req B already generated Deliv instances. Then later, new Req C is tied to Req B.



# **END**



### Add sub-WFs for Reqs, Docs data entry



Users	RM PM, RMC
Alerts	- Owners of Late Actions - CSO Editor for Doc/Dev and Doc/Approved - Doc Owner, RMC, for Docs/Closed (published)

- Enter & complete sub-Workflows through the main Case WF
- Steps may be skipped if they don't apply



### RMS Design: Case Workflow - Data Entry - Reqs, Docs

