

# SCOPING AND SCREENING GUIDELINE (redacted)

## SCOPING AND SCREENING GUIDELINE

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### 1.0 PURPOSE

The purpose of this guideline is to provide additional guidance on how to perform scoping and screening of systems for License Renewal at PBNP. Overall procedural guidance for scoping and screening is provided in , Scoping and Screening for License Renewal. This guideline is intended to be used as a desktop instruction during the scoping and screening process to assist in specific circumstances, in order to produce a consistent product.

### 2.0 DISCUSSION

During the LR scoping and screening process, a number of different activities will take place. This guideline is intended to document a consistent method of addressing and documenting some of the anticipated special circumstances, that are not specifically delineated in the procedure. Guidance will also be provided on how to capture the information in LRPMS.

### 4.0 GUIDELINE

#### 4.1 General Guidance

- During performance of scoping and screening, it is suggested that Attachment A, Scoping and Screening Checklist be referenced for each system. This checklist is intended to remind the LREs of the steps necessary in the scoping and screening process. This is not a requirement, but only a tool to be used to hopefully ensure consistency. The checklist is essentially a summary of the guidance that follows.
- Each system should be walked-down, to validate assumptions made during the scoping and screening process. This walkdown should include the System Engineer, if possible. Attachment B, System Walkdown Checklist can be used as a guideline of what to look for during the walkdown. System specific information/questions can be documented on this checklist, for use later in the project. The walkdown should occur after initial scoping and screening is complete, but before the majority of AMR work is complete.
- Almost all systems cross engineering disciplines (mechanical, civil, electrical). When dealing with cross functional areas, communicate responsibly with the other disciplines. If a component is moved across functional boundaries (i.e. from a mechanical system to a civil/structural system) inform the respective discipline leads.

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### 4.2 LRPMS Pointers

- When updating a system, do it one unit at a time (either PB0, PB1, or PB2) in order to ensure that duplicate information is not added to equipment IDs. (When updating both units simultaneously, there is a potential to duplicate information in the database since the equipment IDs are identical between units, and there is no hard association to the unit # in the database.)
- Attempt to have only one person in a system at a time. If two or more people are in a system, there is a potential to hide data, if one is filtering for only U1, the second person may not be able to access the U2 data.
- Be very deliberate when entering data in LRPMS. "Reset" or "Clear" the data selected after doing bulk updates. Be careful when doing bulk updates to not overwrite good data. If unsure of how something will work, try it first in the "LRPMS - TEST" database.
- Utilize the built-in "sanity-check" buttons in LRPMS. When done with scoping, review all components "In Boundary" and "Not in Boundary", and ensure consistency between both units. ("In Boundary", make sure all components have a Crit. 1, 2, or 3 box checked. "Not In Boundary", make sure no Crit. 1, 2, or 3 boxes are checked.) When done with screening, review components using "Requiring AMR" and "Requiring AMR (w/o IFs)" buttons, to ensure consistency and completeness.
- LR-99, Misc. Components : This system was created as a place holder for equipment/components that will not be used in the LR system evaluations for various reasons. This can also include equipment ids that are not conducive for use in the LRPMS (i.e. weld IDs for ISI, individual cable IDs, etc). All components in this system will have no LR Intended Function, or will have been replaced within the LRPMS by a representative asset or commodity.

### 4.3 Scoping Guidance

- Review the FSAR and DBD for the system being scoped.
- Each LR system may be made up of more than one PB system. Check the LR system listing to ensure each PB system within a LR system is included in the review.
- Review LR System Functions in LRPMS. Determine if function is appropriate (query QA codes as necessary), and add function description and CLB reference in LRPMS. Utilize PB FSAR, DBDs, and MR functions to verify correct system function identification.

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- System Reassignment: If a component is more logically addressed within another system or commodity, it should be moved to that system/commodity in order to address the aging with other like-components. The reason for moving shall be included in the comment field of the LRPMS. Some system reassignments will come from the system boundary agreements between Point Beach and Reference plant. If additional components are desired to be moved, consult with PB lead personnel to ensure system boundaries remain similar between the two plants.
- If a group of components is moved out to another LR system/commodity, make sure the system function is removed, if appropriate. (i.e. Pipe supports are moved out of LR systems and into Component Support Commodity. Remove system function R, House or support SR equipment, from the LR system, if no other components provide the R function for that system.) In some cases, it is not appropriate to remove the system functions, such as when the system is in-scope, but all in-scope components are reassigned to another interfacing system. The Plant Sampling System is an example. We intend to show Plant Sampling being in-scope to avoid questions from the regulator/reviewer. Therefore, keeping system intended functions in Plant Sampling is necessary to show the system is in-scope.
- Criterion 3 events will be reviewed in a vertical slice manner, and the appropriate function(s) will be verified or added to each system in LRPMS, as applicable. Ensure that all components associated with these regulated events are also flagged (in the Criterion 3 box) in LRPMS, for each individual component.
- When all functions are reviewed by the responsible lead engineer, and assessed as acceptable, push the "All Functions Evaluated" button, and print the scoping summary report out of LRPMS. Add this report to the system folder/file.

### 4.4 Setting System Boundary

- Using the Green Line Drawings (GLDs) and the data sort from CHAMPS download, hi-light the components that are in-scope. Cloud or otherwise indicate where the boundary is, between in-scope and out-of-scope components. Tic-check or otherwise indicate out-of-scope (OOS) components near these boundaries, to verify that these components were checked. It is not necessary to tic-check all OOS components, if there are no potential in-scope components that may be missed.
- The data sort from the CHAMPS download has an LR flag (Y/N) set. This flag was set based on the Safety Related flag and the definitions of PB QA codes which were deemed to be equivalent to Criterion 2 or 3 criteria. This LR flag was a first cut, it is not the final call. This flag can be changed on a component - specific basis. If you do make a change to this flag, you need to change the LRPMS database, and include your reasoning. (For example: Many control board indicators have a QA code 16, Seismic II/I, associated with them. This QA code refers only to the mounting of these indicators, and not the indication. Therefore, these indicators are actually out of scope, and the mounting issues will be handled in the structural review of the control room panels.)

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- After highlighting the drawing(s), review the CHAMPS download data to ensure that all items expected to be seen on a drawing, have been accounted for. (i.e. Check to make sure all in-scope valves have been identified and hi-lighted on the drawing). Identify and assess missing components.
- Utilize CHAMPS to verify actual plant data, because the download data is not refreshed routinely.
- When system boundaries have been set, and assets/subcomponents added as needed, review the data in LRPMS for consistency and completeness. When data is acceptable, push "Boundary Complete" button in LRPMS, and print out the list of all components that are in-scope, for this system. Include this report in the system file/folder.

### 4.5 Create Additional Assets

- Additional assets need to be created whenever a specific component ID does not exist, or when the existing ID is not sufficient to address all material/environment combinations. When creating additional assets in LRPMS, ensure that the appropriate 'LR Criterion' and 'In LR Boundary' boxes are checked appropriately for each new asset/subcomponent.
- An asset can be generated for a system to cover multiple examples of identical pieces of equipment. The most common would be bolting (to include all pressure boundary bolting in a system, e.g. valve bonnet bolting, flange bolting, etc.). Create enough assets to cover all generic material combinations.
  - RC bolting - CS
  - RC bolting - CS (HIGH) *indicating high strength bolting*
  - RC bolting - SS
  - RC bolting - SS (HIGH) *indicating high strength bolting*
- Create subcomponents for individual assets as needed to identify all possible material/environment combinations.
  - Heat Exchangers
    - HX-15A (CHAMPS ID to indicate shell)
    - HX-15A-tubing-OD-PB (pressure boundary)
    - OD-HT (heat transfer)
    - HX-15A-tubing-ID-HT
    - ID-PB
    - HX-15A-tubesheet- shell side
    - HX-15A-tubesheet- channel head side
    - HX-15A-channelhead or endbell
  - Valves
    - SI-853 (CHAMPS ID to indicate body of valve)
    - SI-853-bonnet

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- Vessels/Tanks
  - T-1 (CHAMPS ID to indicate shell)
  - T-1 - cladding
  - T-1 - manway
- Piping/Environment Combinations: After boundary drawings are complete, identify all piping class specifications that are in-scope. For each specification, identify all internal/external environment combinations that exist. Include a piping size where the size indicates the break point for ISI. Create a separate asset in LRPMS for each piping spec./size/environment combination, for each system. For PB, the standard ISI size cutoff is 4", except for High Head SI, which is 2". Move all original piping class component IDs to system LR-99, Misc. Components.

Example:     SI-2501R, 3/2, 4" and over  
              SI-2501R, 3/2, under 4"

- Instrument/elements (LE, PT, LT, FT): Add a subcomponent for each one of these instrument elements to represent the tubing, fittings, valves, and manifolds associated with the instrument, that may not be shown on a P&ID and do not have CHAMPS IDs. This subcomponent will have an intended function of pressure boundary, while the transmitter may be screened out as active.

### 4.6 Environment Identification

- After scoping a system, identify components with different internal environments on the boundary drawing. This can be done by clouding or high-lighting components/areas. The environment list was originally supplied by the Reference plant Materials Engineer. If you identify an environment not previously listed, this will need to be fed back to the Materials Engineer for inclusion in his Tools evaluation. DO NOT create your own environments without input from the Materials Engineer.
- Once internal environments are identified, obtain a drawing-specific component list, and fill in the appropriate environment. Some items will have no applicable internal environment (i.e. control board indicators, pipe supports, etc) and can be marked N/A. The intent is to speed up the process by updating environment fields that are most common, for subsequent upload into the LRPMS. If it does not make sense to do this (i.e. only a few components requiring AMR on one drawing) this step can be skipped, and environments added manually during the AMR process.
- External environments will be updated based on the component location. Some location identifiers are generic, and therefore the environment fields for these components will need to be input manually within the database during the AMR process.

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### 4.7 Screening

- Mark components active per NEI 95-10. Add reference to which section of Attachment B that you are using for basis.
- Temperature Elements: Mark all TEs as passive and include a comment that the TE is being carried forward to represent the thermowell installed in the piping, or if it is direct immersion, to represent the pressure boundary fittings. Component intended function will be pressure boundary.
- Some air operators and solenoids need to maintain their function to modulate during accidents/regulated events. This could cause the AOV and SOV to be passive and require a pressure boundary intended function. Example is the PORV on the pressurizer.
- For passive components, add component intended functions, per NEI 95-10. Reference plant has a few different component intended functions that will be available to choose in the drop down menu.
- When all in-scope components are screened, review the resulting LRPMS data with the discipline lead, for consistency and correctness. If results are acceptable, push the "Scoping and Screening Complete" button, in order to forward the system for AMR.

### 4.8 Issues Requiring Resolution (IRRs)

- When you find discrepancies or questions, throughout the process of scoping and screening, identify them on an IRR form, with a short description of the problem/question. IRRs can take the form of a question that will need to be resolved prior to submittal of the LRA. Discrepancies can be drawing errors, inconsistencies between CHAMPS and the GLDs, U1/U2 inconsistencies, etc. IRRs will be addressed according to LRPG 1.7, IRR Guideline.

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ATTACHMENT A  
LICENSE RENEWAL SCOPING AND SCREENING PROCESS CHECKLIST

LR SYSTEM: \_\_\_\_\_ LR-\_\_

Scoping Process	Tech Area	Initials
Review CHAMPS systems within LR system – see Master List.	All	
Review LR system functions, add appropriate CLB references.	All	
Check all system intended functions have appropriate Criterion (1,2 or 3) applied.	Lead	
Highlight boundary drawings.	All	
Identify different internal environments on boundary drawings.	All	
Identify/Create piping assets (piping spec, int/ext environment, size).	Mech	
Move original piping assets to LR-99.	Mech	
Create bolting assets for systems exposed to borated water leaks (CS,SS, high strength).	Mech	
Create HX subcomponents (tubing ID/OD, PB/HT, tubesheet, etc.).	Mech	
Move panels, terminal boxes, control boards, and cabinets to PANELS Commodity Group.	Elec	
Move penetrations to EPA Commodity Group.	Elec	
Move pipe supports to Component Support Commodity Group.	Mech	
Move ‘future’ assets listed in CHAMPS with “Reserved for XYZ” descriptions to LR-99.	All	
Notify <b>Leads</b> of components which are moved between Technical Areas.	All	
Create instrument subcomponent to represent instrument tubing, fittings, valves, manifolds, etc., that are not shown on drawing and are not in CHAMPS.	Mech /Elec	
Ensure comments are consistently applied for moved component types.	All	
Check all in-scope components have at least one appropriate Criterion (1,2 or 3) applied.	All	
Check all out-of-scope components have no Criterion (1,2, or 3) checked.	All	
Check out-of-scope components to ensure appropriate boundary was applied.	Lead	
Compare U1 and U2 data to ensure in-scope boundary consistency.	Lead	
Identify scoping boundaries which may require walkdown verification/confirmation.	All	
Screening Process		
When marking components active, add reference to NEI 95-10 App. B, item number.	All	
Verify empty or non-active MCC cubicles with MDB, Section 3. Move into PANELS Commodity Group.	Elec	
Set TEs as passive with comment to address the thermowell or other pressure boundary.	Mech	



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Check air operators and solenoids for potential pressure boundary need, mark as passive.	Mech	
Check all component types to ensure correct intended function is applied.	All	
If components moved during screening, re-evaluate system functions, move if necessary.	Lead	
Review components using built-in buttons, to ensure consistency and completeness.	Lead	
<b>Preparation for Aging Management Reviews</b>		
Identify internal environments for each P&ID, for upload into LRPMS.	Mech	
Upload component materials into LRPMS.	All	
Identify missing materials for further follow-up.	All	
<b>System and Component Walkdowns</b>		
Contact System Engineer (SE) to review Scoping, Screening, and AMR review status.	All	
Perform system walkdown with SE using License Renewal System Walkdown Checklist (Attachment B), if determined to be necessary.	All	

[illegible]

Lead	Date
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ATTACHMENT B  
LICENSE RENEWAL SYSTEM WALKDOWN CHECKLIST

LR SYSTEM NUMBER \_\_\_\_\_

**Purpose:** The purpose of the License Renewal walkdown is to verify that the LR interpretation of the plant configuration, based on the reference documents used, accurately reflects field conditions. The walkdown is a confirmatory check made to ensure the license renewal process is accurately reflecting system material/environment combinations. Walkdowns should focus on identifying signs that: A) an aging effect is apparent, B) conditions where an aging effect could be hidden, or C) localized unique environments that may introduce a previously unsuspected aging mechanism.

**A. Apparent Aging Effect**

Code, Location, Comments

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Corrosion (Rust, Scale, etc.)</li><li>2. Loss of Material</li><li>3. Cracking</li><li>4. Distortion/Plastic Deformation</li><li>5. Loss of Integrity (Leaks)</li><li>6. Other (List)</li></ol> |
|---|

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**B. Areas Where Aging Effects May be Masked**

Code, Location, Comments

- |   |
|---|
| <ol style="list-style-type: none"><li>1. Insulated</li><li>2. Painted</li><li>3. Inaccessible</li><li>4. Other (List)</li></ol> |
|---|

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**C. Local Unique Environmental Conditions**

Code, Location, Comments

- |  |
|--|
| <ol style="list-style-type: none"><li>1. Possible Stagnate or Dead Legs</li><li>2. Heat Traced</li><li>3. Located Near Corrosives (not event specific)</li><li>4. Environmental Hot Spots (near hot pipe, heater, etc.)</li><li>5. Galvanic Interaction (hangers/pipes, dissimilar metals, etc.)</li><li>6. Other (List)</li></ol> |
|--|

LRE \_\_\_\_\_ Date \_\_\_\_\_

Sys Engr \_\_\_\_\_ Date \_\_\_\_\_