PHMSA IA-Desktop Basic Operations Workshop

Nov 2025

IA Desktop Workshop Sequence

This workshop provides students with a guided series of exercises involving hands-on experience with the core components and functionality of the IA Desktop software and the system that supports it. IA supports several inspection methodologies, including Integrated Inspections, Standard Inspections, New Construction Inspections, etc. This workshop is not geared toward any specific methodology but is focused on the functional aspects of IA that, in turn, support the various inspection methodologies. For specifics on inspection process methodology, we refer you to process-specific documentation such as the Integrated Inspection User's Manual and to courses specific to those methodologies.

Objectives

The student will:

1. Launch, login, and get to the homepage of IA-desktop.
2. Understand the IA application architecture.
3. Set up an inspection with correct configuration, add assets, and establish a team.

4. Plan an inspection.
5. Navigate the planned questions.
6. Add inspector's notes and results for inspection questions.
7. Identify and resolve data conflicts with other team members.
8. Monitor progress toward plan completion.
9. Assign tasks to other team members, complete them, etc.
10. Upload files (attachments).
11. Set up requested items.
12. Run reports.
13. Use the Coverage Heatmap tool.

While this workshop is designed to be worked through in a small group it is also adaptable to solo learning. The ideal group size is 2-5, both for helping each other and to better simulate the team-based inspection process IA supports. IA works for inspection teams of one, but learning how to assign and accept tasks, resolve data conflicts, etc. will be easier and more meaningful in a group.

Assumptions

Depending on your learning scenario, the following are assumed to be true:

<table>
<tr><th>For classroom scenario (using TQ server)</th><th>For individual and/or non-TQ OJT</th></tr>
<tr><td colspan="2">1. You have a functional IA account
2. Your password has not expired, and you remember it.</td></tr>
<tr><td>A. Your account has been synced to the TQ server (this is typically done automatically prior to the workshop start).
B. You have IA-EDU installed on your classroom laptop and iPad. The EDU installs have Orange branding.</td><td>A. You have IA PROD (Blue Icon) installed on your laptop and iPad.

Important: When asked to create new inspections it's important to remember to flag them as "demo" so that they are not seen as actual inspections by the system. The instructions below will remind you to do this when the time comes.</td></tr>
</table>

If the items above are not yet true for you, please stop and get those things sorted out prior to moving on.

Before you start

The following pages include several lessons, each with multiple steps that will lead you through the key features and typical process checkpoints in IA. Some sections are to be worked alone; these are indicated by . Other sections involve a group effort; these are indicated by . From time to time, you'll see a marker in places where you'll need to pause to let your team catch up, or where we intend to have a short presentation and Q&A on important points with the entire class. At most of these pause locations, there will be some optional challenges you can do while you wait.

If you have a question, let one of the workshop team members know and we'll assist you personally.

For future reference, note that you can reach out to IA-support@dot.gov if you have any questions about using IA-Desktop. Additional training materials may also be seen at the following links. Use your IA credentials to log in there to view the materials:

- IA Quickstart Guide (a short refresher if you haven't used IA in a while): https://primis.phmsa.dot.gov/ia/training/docs/IA%20Desktop%20Quick%20Start%20Guide.pdf

IA Training Videos and recorded Demo Sessions:
https://primis.phmsa.dot.gov/ia/training/videos/index.htm

Lesson 1: Preliminary setup

STEP 1.1: Meet your team

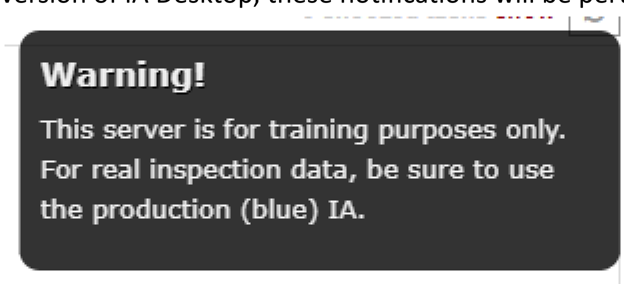
1. You should be arranged in groups of 2-4 people. Take a minute to get settled into your group and introduce yourselves.
2. If you are attending an in-person workshop, get seated such that each person can see their own screen and the screen of at least one other teammate. For remote options, feel free to have someone in the group share their screen while each person works on their own desktop.

Tip: For OJT single-trainees: Keep an eye out for specific instructions below for your situation. It will be a good idea to add your Supervisor to your inspection's team roster (instructions for that below) so they can easily find and help you with it.

STEP 1.2: Launch, login, and home tab

1. Launch IA-Desktop and sign in. IA Desktop is designed to keep you signed in over a long period of time, much like MS Outlook would typically do. However, if you are completing this workshop at TQ or on a shared laptop, be sure to sign out (top right button) of IA Desktop at the end of the day.

2. When you first log in to IA Desktop, you may see some notifications appear at the top right. If you have logged in to the orange EDU/training instance of IA Desktop, you will see a reminder that this version of IA Desktop is for *training only*. When logging into the blue, live production version of IA Desktop, these notifications will be pertinent messages or reminders from PHMSA.



IMPORTANT: Before proceeding, please confirm that you are using an EDU instance of IA. You can verify this by confirming your header is **orange** and the Training Server tab appears at the top of the application window. If this is not the case, please get assistance now before proceeding.

EDU data is purposely isolated from production data. Any changes you make here will **not** be reflected in the actual (live) inspection data. Your workshop is an opportunity to dive into IA, experiment and learn, and try new things without fear of impacting actual inspection records.

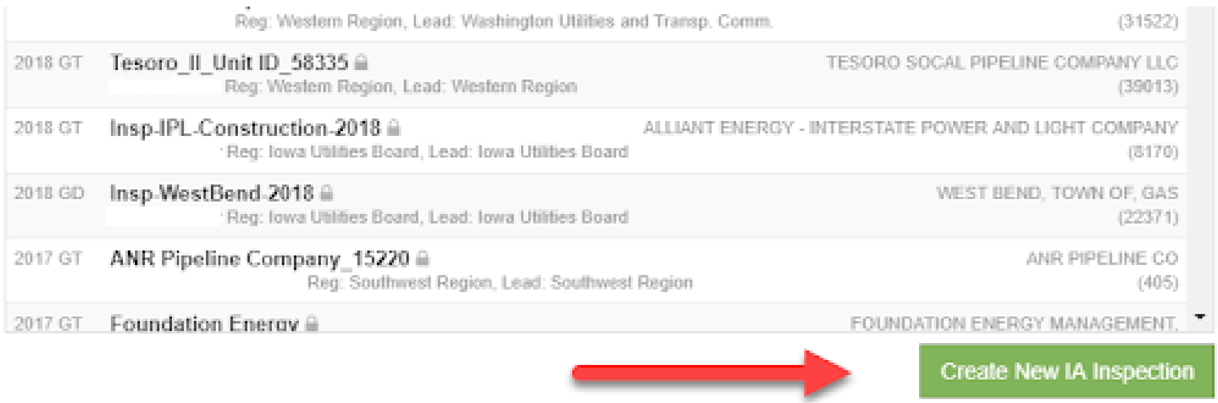
PAUSE here and wait for your group to be ready before proceeding with creating a new inspection. While you wait, you can try the following explorations:

1. Review the Help/Tools tab content, note the various support options and contacts, and see the links for Topical IA Screencasts and a Quickstart help guide.
2. Note who your Regional IA Support Representative is, also via the Help/Tools tab.
3. Click on "Advanced tools" and note the location of the "Zip logs" button, which will send your IA Desktop application logs to the IA Support Team. There is no need to upload your logs right now, but it's helpful to note where this button is. If you are experiencing issues with IA, the IA Support Team may ask you to upload your logs to help troubleshoot your issue. Note that you should not use any advanced tools without instruction to do so by IA Support.
4. Explore the various filter options on the inspection list on the Home tab (years, org, system type, demo, locked, etc). Can you find any inspections that have different organizations for Reg (regulator organization) and Lead (lead organization)? (Hint: Look at inspections from regions with interstate agents.) Note that you will likely see many more locked inspections on the live, production version of IA Desktop. Because we are working on the training version right now, there are likely not a huge number of inspections to sort and filter through.
5. Try using the text-box filter to search for inspections with certain words in the names, or for certain lead inspectors, etc.

Lesson 2: Creating a new inspection in IA

STEP 2.1: Create a new inspection

1. Click the Create New IA Inspection button on the Home tab ( ).



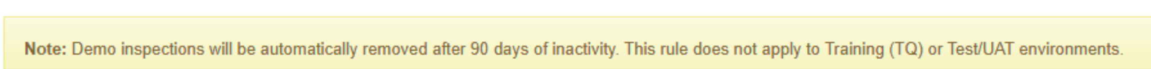
Tip:	Both IA Desktop and IA Mobile are designed to be taken offline for work in areas where internet connections are not possible. However, the process of creating an inspection requires a connection so that the syncing server can set up the master records for the inspection and prepare for syncing to all team member devices.

2. Set up your inspection. Take care to follow the guidelines below. This will help us remain on the same page during the training. You can always circle back later and set up new inspections for other system types and operators.

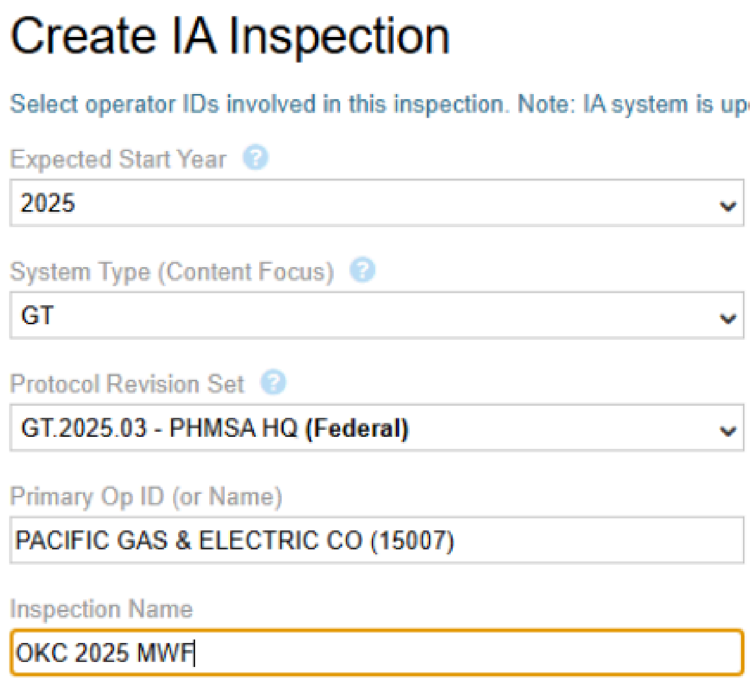
    a. Use the **current year** for the expected start year.
    b. Select **GT (Gas Transmission)** for system type.
    c. Select the **most recent federal PRS Set** (typically GT.20XX.0X) if more than one option is presented.
    d. Choose an operator. *The workshop facilitators will provide a particular OpID to use in this class. If you're working through this workbook independently and would like to match your inspection with the screenshots here, choose 15007 as an operator.*
    e. Give your inspection a name. **Important:** Include your own name in the name of the inspection. This is not a general requirement but will be helpful for training purposes.
    f. Inspections can be flagged as Demo (meaning demonstration) which designates them as non-production and will keep them from being used in reporting and metrics tracking. This is not necessary for TQ (Orange) installations.

Important: If you are NOT using the TQ (Orange) version of IA, you should flag your inspection as Demo.

Tip: Per the Record Retention Policy, demo inspections (and associated files) in the blue/production instance of IA will be automatically removed after 90 days of inactivity. IA will provide a reminder on the "create inspection" screen when the demo box is checked:



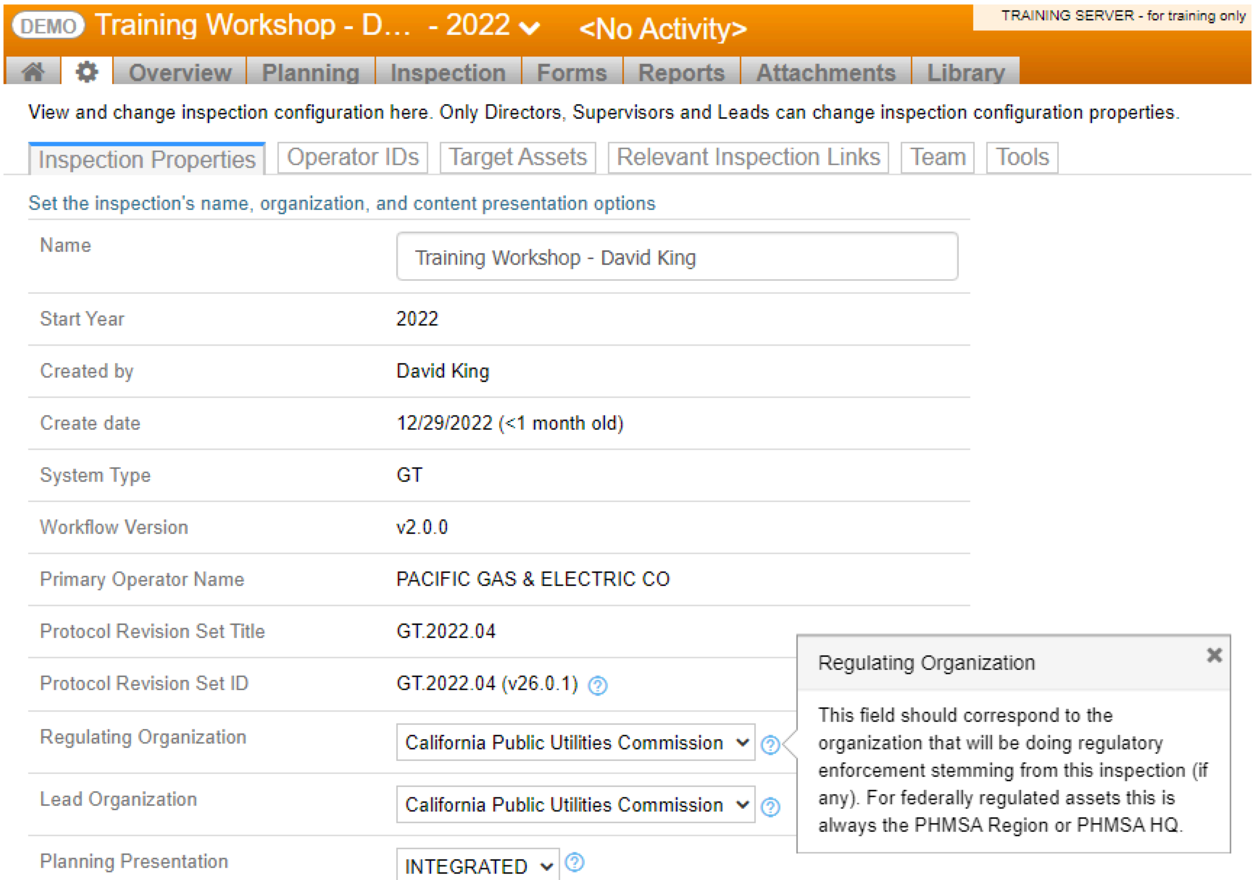
For more information on the IA Record Retention Policy, please reach out to your IAT representative or ia-support@dot.gov



Inspection setup: For training purposes, add your name to the inspection name. If you are NOT on the TQ Server (orange bar), check the Demo Flag.

3. Depending on the operator you have chosen, you may see a warning about similar inspections (perhaps ones your teammates have just created). This is normal and can be ignored today. The purpose of this warning is to help inspectors avoid unintentionally re-creating the same inspection more than once in IA.
4. Once you are ready, compare notes with your teammates (to ensure you have selected the same operator, etc.). Press the Create Inspection button to create your new inspection. Your teammates will do the same, and the result will be that each of you will have a separate but similar inspection to work with in the upcoming steps.

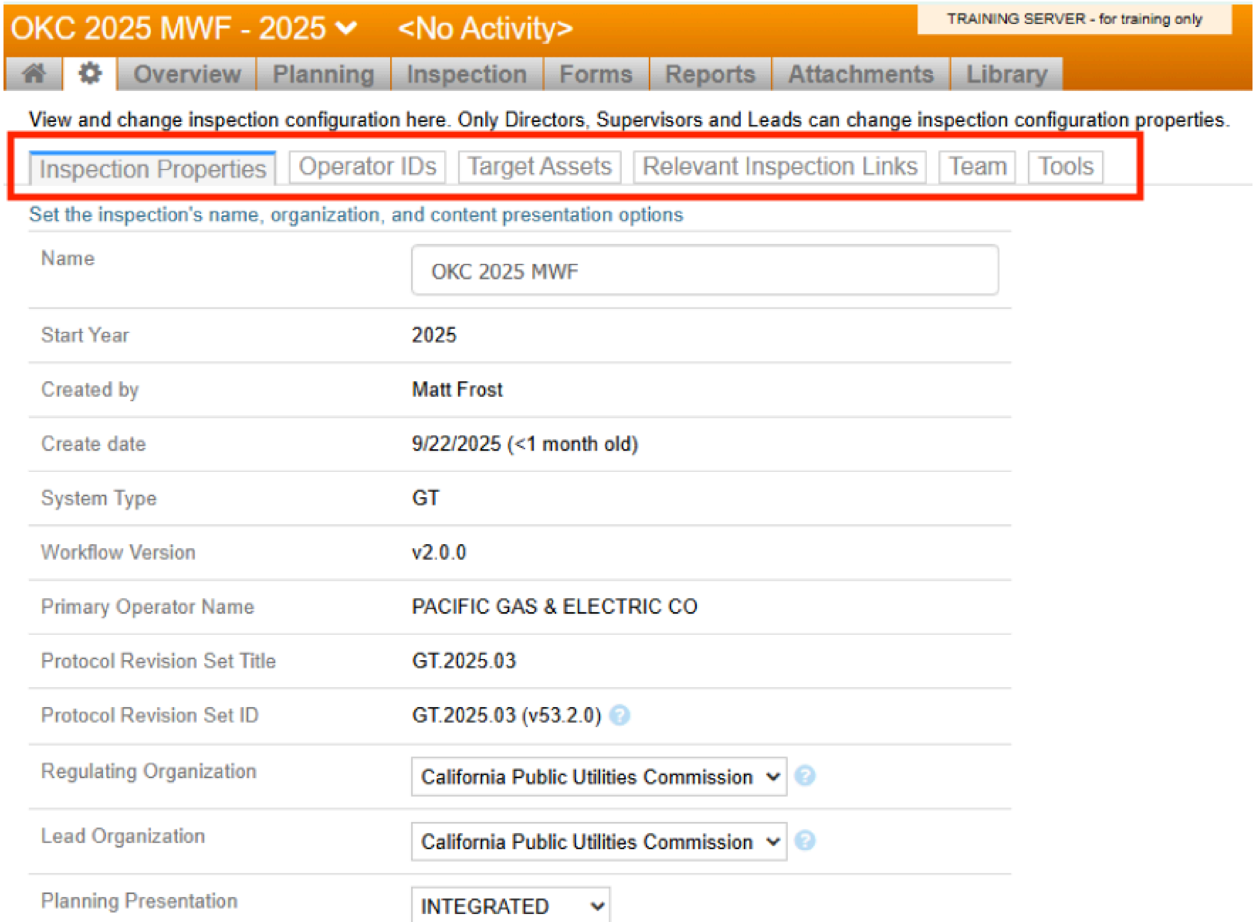
PAUSE here and wait for your team to be ready with their inspections. While you wait, explore the various sub-tabs on the configuration page (see below). Click on each help glyph to orient yourself to the purpose of each configuration control.



Lesson 3: Configuring an inspection

STEP 3.1: Configuring a new inspection

Inspection configuration is done via the configuration (⚙) tab. This screen has several sub-tabs. The purpose of each is described below.



Inspection Properties: View and set up the global properties of the inspection including name, regulating org, lead org, and if applicable, content presentation option.

Operator IDs: List relevant Operator IDs here. You'll need to include the OpIDs for every unit you intend to inspect. Some inspection systems have units from two or more OpIDs in them. You can always add more OpIDs here as needed.

Target Assets: Assets are the elements of the operator's infrastructure that will be targeted in this inspection. For federal inspections, these assets typically contain one or more inspection units. The results you collect will be applied to these assets. On this tab you can also select Exclusions to indicate certain topics that do not apply to or do not exist in the asset in question.

Relevant Inspection Links: IA can provide you a reference of past inspection results in your current inspection. This historical data can be used to pre-fill data forms and populate the Coverage Heatmap report. For this to work, you need to select inspections of interest on this tab. It is recommended that you check any recent inspection of relevance to your current inspection here. You can expand the set of available inspections by adding OpIDs to the List of OpIDs of interest on this tab.

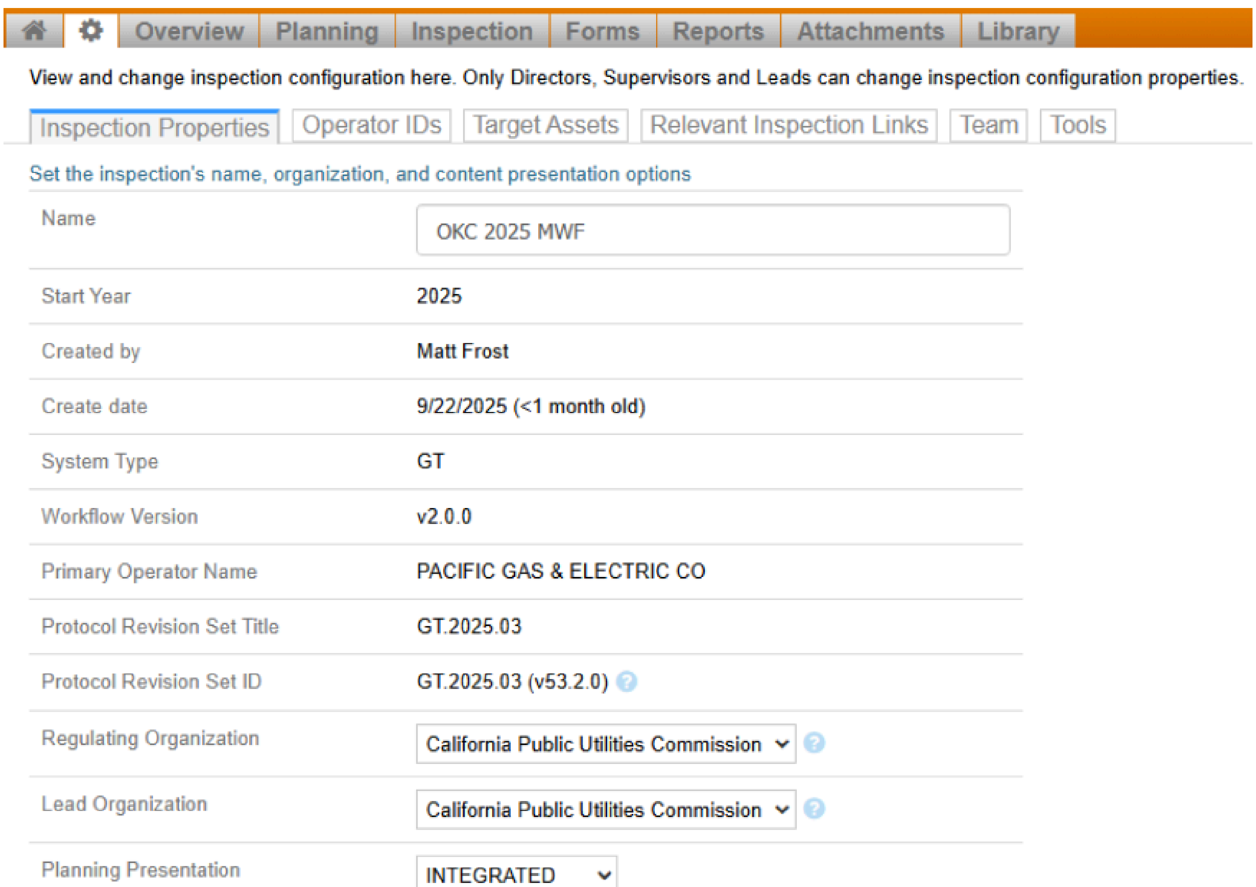
Team: Set up your team and assign roles. Note that Workflow 2.0, which applies to many inspections processes in 2017 on, requires people in Lead and Director roles.

Tools: This tab offers an option to delete this inspection. If you've accidentally created a non-demo inspection in the production (blue) version of IA, you can delete it and start over here.

We are going to work through each of these tabs and make configuration changes on most. Here are the steps you should take with your inspection today:

STEP 3.2: Configuring a new inspection's properties

Set up the Regulating and Lead Organizations. For federal inspections, these will typically both be set to your region. For int**E**rstate inspections, the Regulating Organization will be the PHMSA region and the Lead Organization will be the state partner organization performing the inspection. For intr**A**state inspections, both will be set to the state organization.



Tip: It is important to get the Regulating and Lead Organizations set up correctly as other options in IA depend on them, and the data will be attributed to these organizations in downstream reporting.

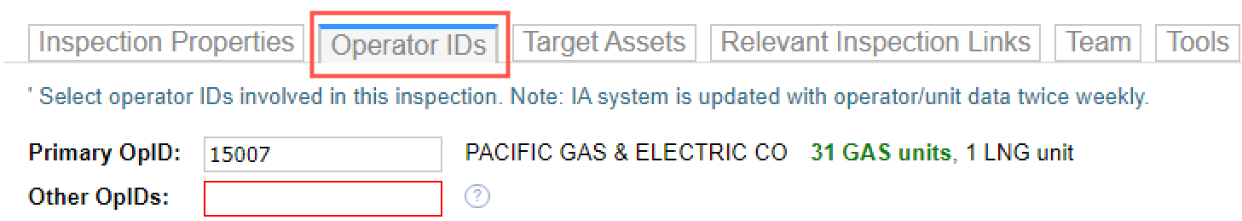
The **Presentation option** may or may not be available depending on the system type of your inspection. Fo example, with Gas Distribution inspections, there are INTRASTATE and INTEGRATED presentations available. These Presentations drive the groupings and order in which the questions will be presented. The content is the same, the grouping and ordering of the questions is different. INTRASTATE organizes the material similar to how it was organized on legacy paper forms. INTEGRATED organizes the material according to **topic**. Unless you have a compelling reason to choose INTRASTATE, the INTEGRATED presentation is preferred as it places questions on related topics together which can help with the interview process. INTEGRATED presentation is also the standard (and only option) for HL and GT inspections and so if you work with those system types you will find it most familiar.

INTEGRATED is the only option for GT system type inspections, so that's what we will be using for this workshop.

Tip: The INTEGRATED presentation is simply a *topical ordering* of the content. It does not imply use of the Integrated Inspection process. That process does use the INTEGRATED presentation, but the presentation does not itself imply any particular process.

STEP 3.3: Configuring Operator IDs

On this tab you can add additional OpIDs if the assets you expect to inspect on this inspection span multiple parent Operating entities. For now, no changes. Leave the Primary OpID as is.



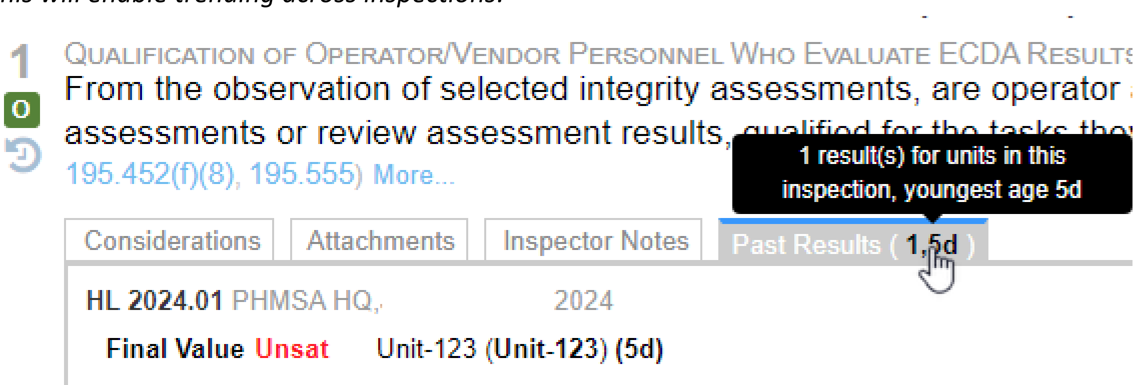
STEP 3.4: Configuring Target Assets

Here is where you establish which parts of the operator's infrastructure will be included in this inspection. Currently IA integrates with only one source for infrastructure: The Pipeline Asset Manager (PAM). The federal units are managed in this system, and State Organizations also have the option of entering and managing units here. One advantage of using PAM to manage assets is that the units, and the various data fields for each unit, will be available in IA. If your organization does not use PAM to manage assets, you can select Other as the Source System and create custom units.

If a unit that you will be inspecting is not in PAM, you may add it as a custom unit. In order to preserve data integrity and trending over time, all members of your organization should collaborate to ensure that inspectors are entering the External ID for that unit the *exact same way* on each inspection. If this is done, you will be able to see historical result data on the Inspection tab and on the Heatmap report (from inspections specified on the Relevant Inspections tab), as demonstrated below.

Adding a custom unit on the "Target Asset" screen, ensuring its External ID is typed exactly the same across all inspections for that unit:

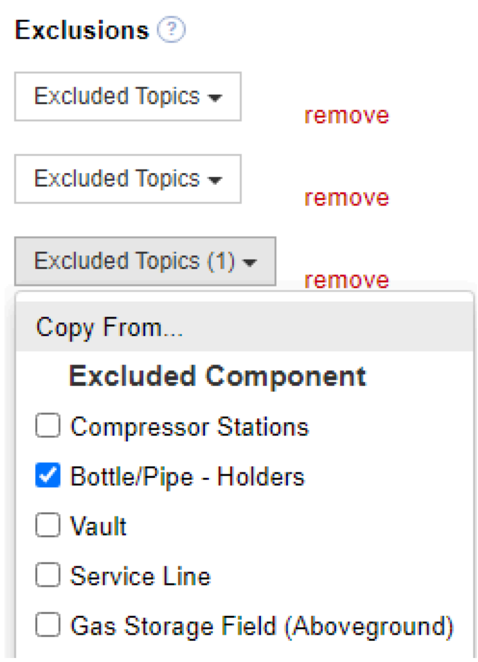
This will enable trending across inspections:



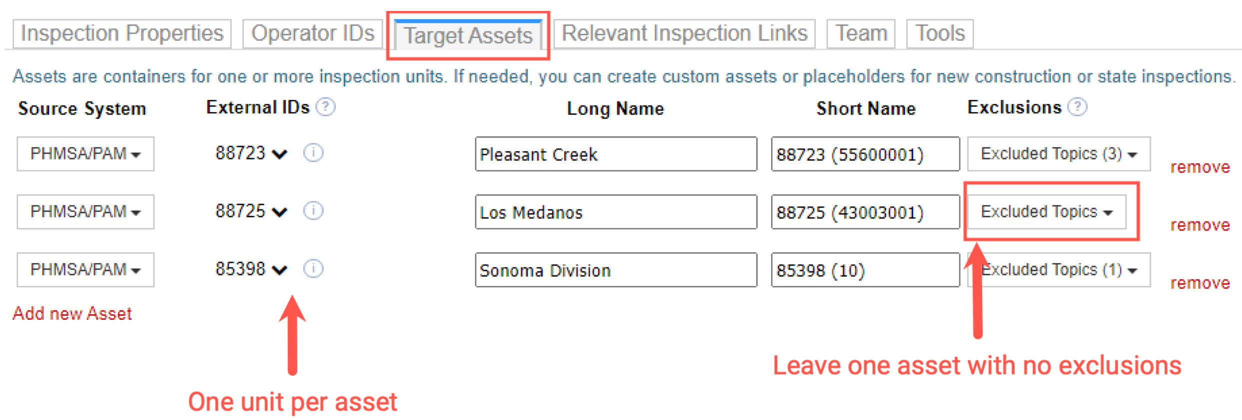
If you're working through this workbook during a live workshop, please refer to the *Setup Guidance Sheet* provided to set up the assets for this scenario. Set exclusions as appropriate for these units. If you're working through this workbook independently and would like to best match your inspection with the screenshots here, you may add the following assets:

1. 88723 - Pleasant Creek
2. 88725 - Los Medanos
3. 85398 - Sonoma Division (exclude Bottle/Pipe - Holders)

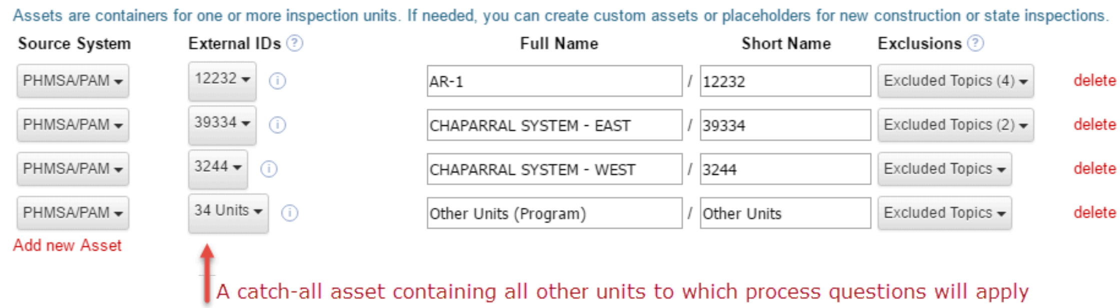
To aid in demonstrations later in the workshop, please make sure that at least one exclusion is set for Bottle/Pipe - Holders.



Exclusions can be modified at any time. In the end, your asset list should look something like this but perhaps with different unit numbers, labels, and exclusion counts.



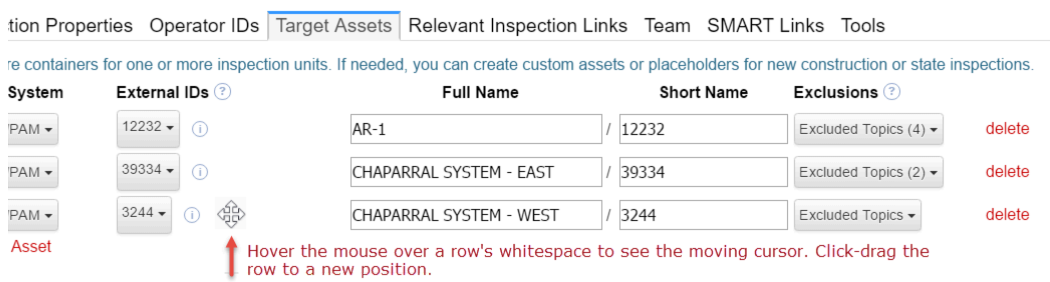
Tip: It's a common error to create one asset with multiple units when you should make a separate asset for each. The only reason to cluster units into a single asset is when you are certain those units can be treated as one for all the questions you will ask. For example, a program inspection that only looks at procedure questions may be simplified this way.



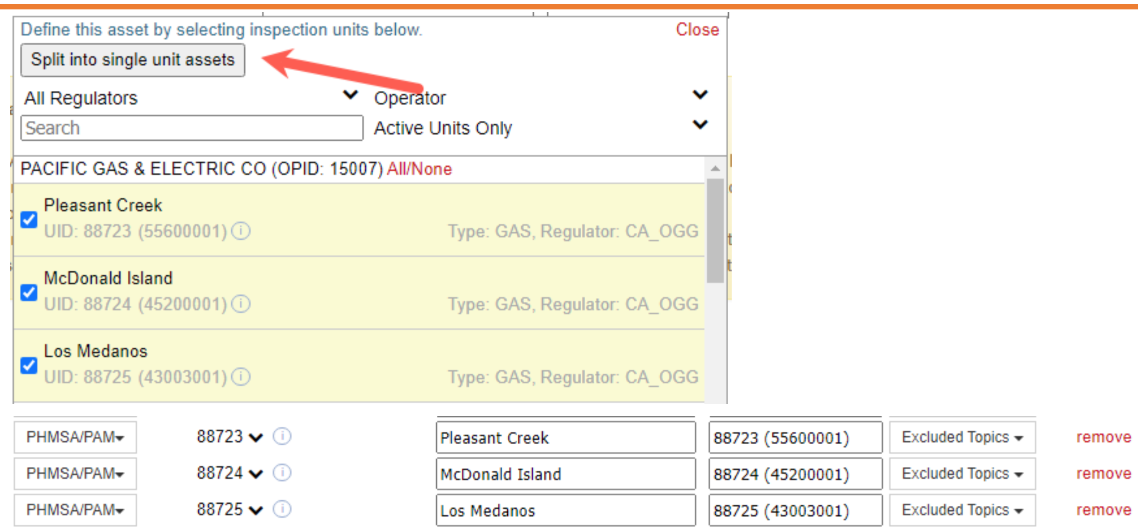
Another use for multi-unit assets is to accommodate all the units that you do not plan to visit in the field but for which the program/procedure questions will apply. This way, your inspection will give coverage on those questions to these un-visited units.

Note: *Unless your inspection scope is large (10+ units) there is very little downside to creating separate assets for each unit so it is recommended to avoid multi-unit assets unless you know it is needed.*

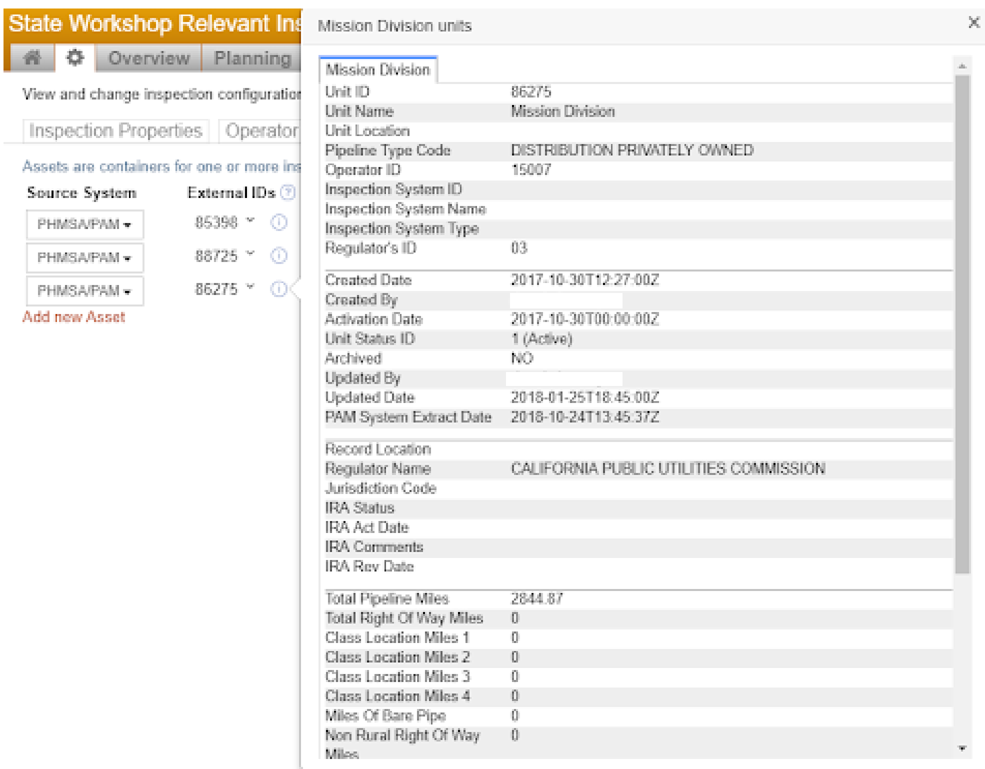
Tip: Assets may be re-ordered by dragging them up or down. The order your assets are presented here will be persisted throughout the application.



Tip: If you know you will be creating many single unit assets from PAM assets, you may select several in the checkbox and then click "Split into single unit assets". Clicking this button will create an individual single unit asset row for each unit you selected.

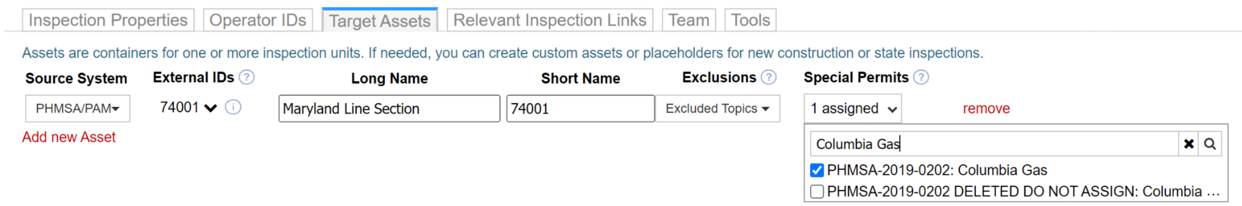


Tip: If your assets are built from PAM-managed units, clicking the information glyphs next to the assets will show the data in PAM for that unit. This information will be kept current with PAM and will be available offline in IA.



Special Permits

Starting in 2025, some question sets include questions and subgroups related to special permits and the conditions under which they apply. If a unit is regulated under a special permit, choose the appropriate permit from the menu when adding the unit to the inspection.



When you then add a new Plan Item that includes the Special Permit (SP) group, all of the questions from subgroups related to the special permit you selected will be added to the inspection plan.

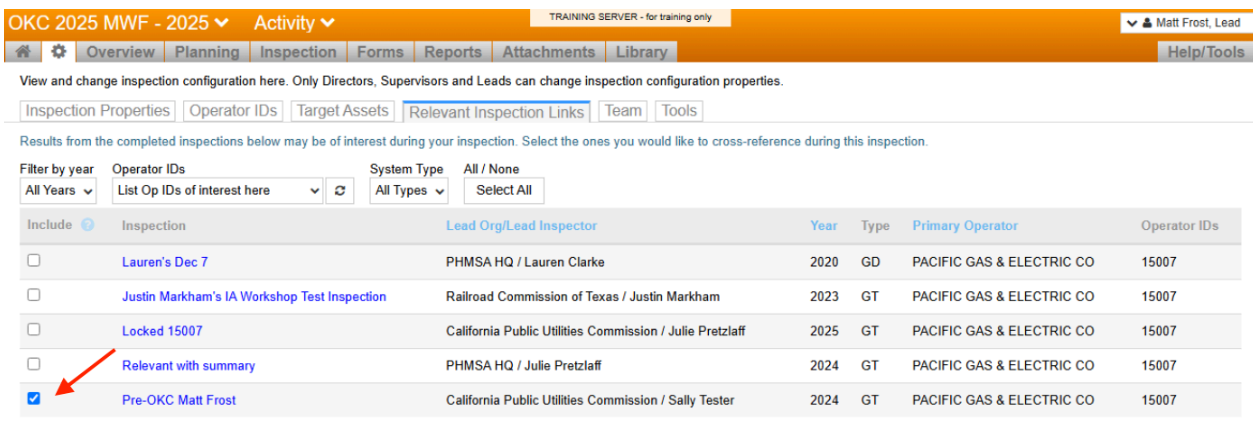
A unit with a special permit displays a blue diamond at the top of its column.

> ***Note:*** Many of the questions in the Special Permit group are repeated from other groups. When you select a special permit for a unit, the inspection's plan will likely show questions from outside the SP group, even if you have not directly planned those groups.

STEP 3.5: Configuring relevant inspection links

Relevant Inspection Links tab: Use the Relevant Inspection List section to check at least one relevant inspection. If you don't see any in the list, add OpIDs of interest to the textbox provided until one does appear. Note: Only locked inspections will appear for linking. This is one reason locking inspections as soon as possible is a good idea; the data becomes available to fellow inspectors (and you!) on other inspections immediately.

If you have set your inspection up with the suggested operator (PACIFIC GAS & ELECTRIC CO) and system type (GT), you'll see one inspection named "Pre-OKC Matt Frost" that has been populated with some results and locked for use in this workshop.

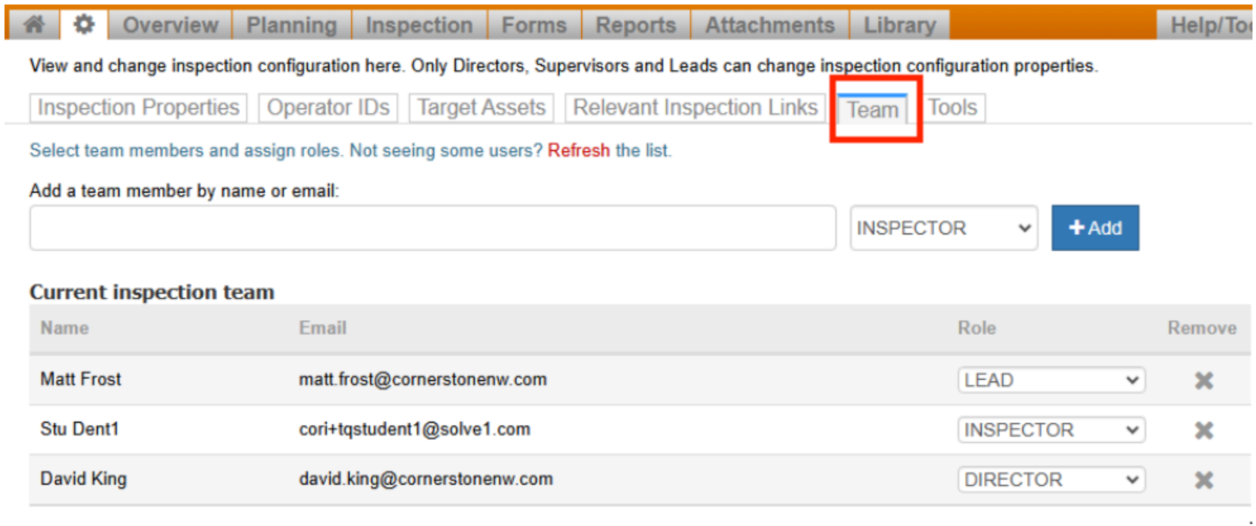


> ***Note:*** If your Relevant Inspections list includes different inspection types (GD rather than GT, for instance), keep in mind that you will not see the results from that inspection associated with your new inspection's questions, even if the question IDs appear to be the same.

STEP 3.6: Configuring team and roles

Move on to the inspection team section and add a team member as Director to your inspection and all other group mates as Inspector roles. Leave yourself as Lead. Each of your group should do this to their own inspections. This will help us later, as you'll all be able to access each other's inspections to complete workflow tasks.

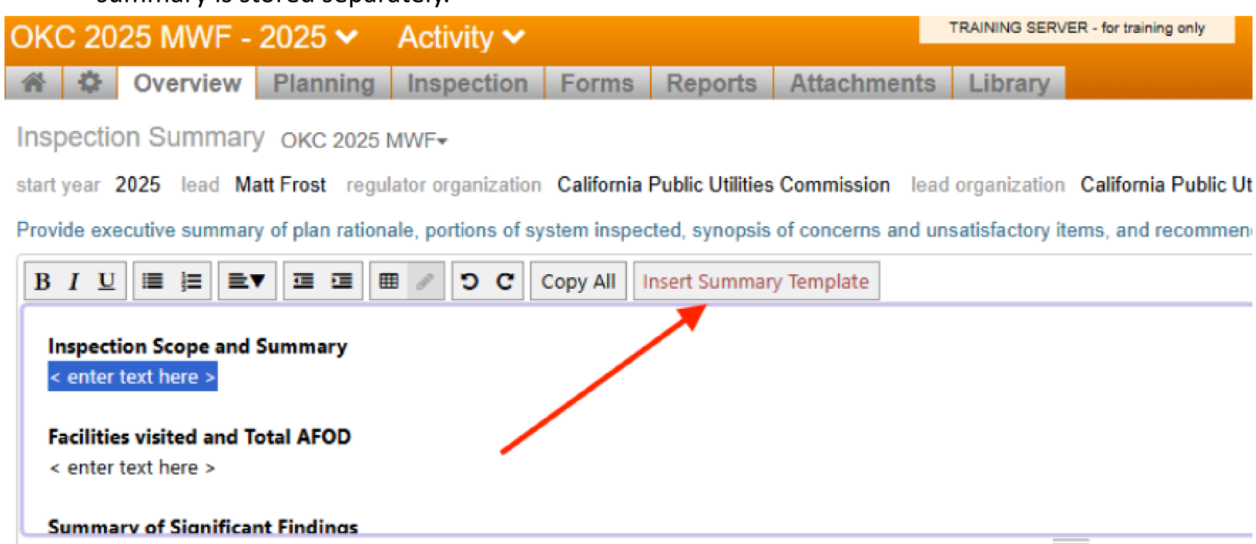
Before moving on to the next step, review the "Roles" table on this screen to get an idea of what each role has the ability to do within an inspection.



Note: At present, the IA Workflow system expects at least a Lead and Director role for each inspection. Note that the Director role is an approval role and could suitably be filled by any supervisor or other person with approval authority. In other words, roles in IA do not necessarily have to align with a person's overall position/job title.

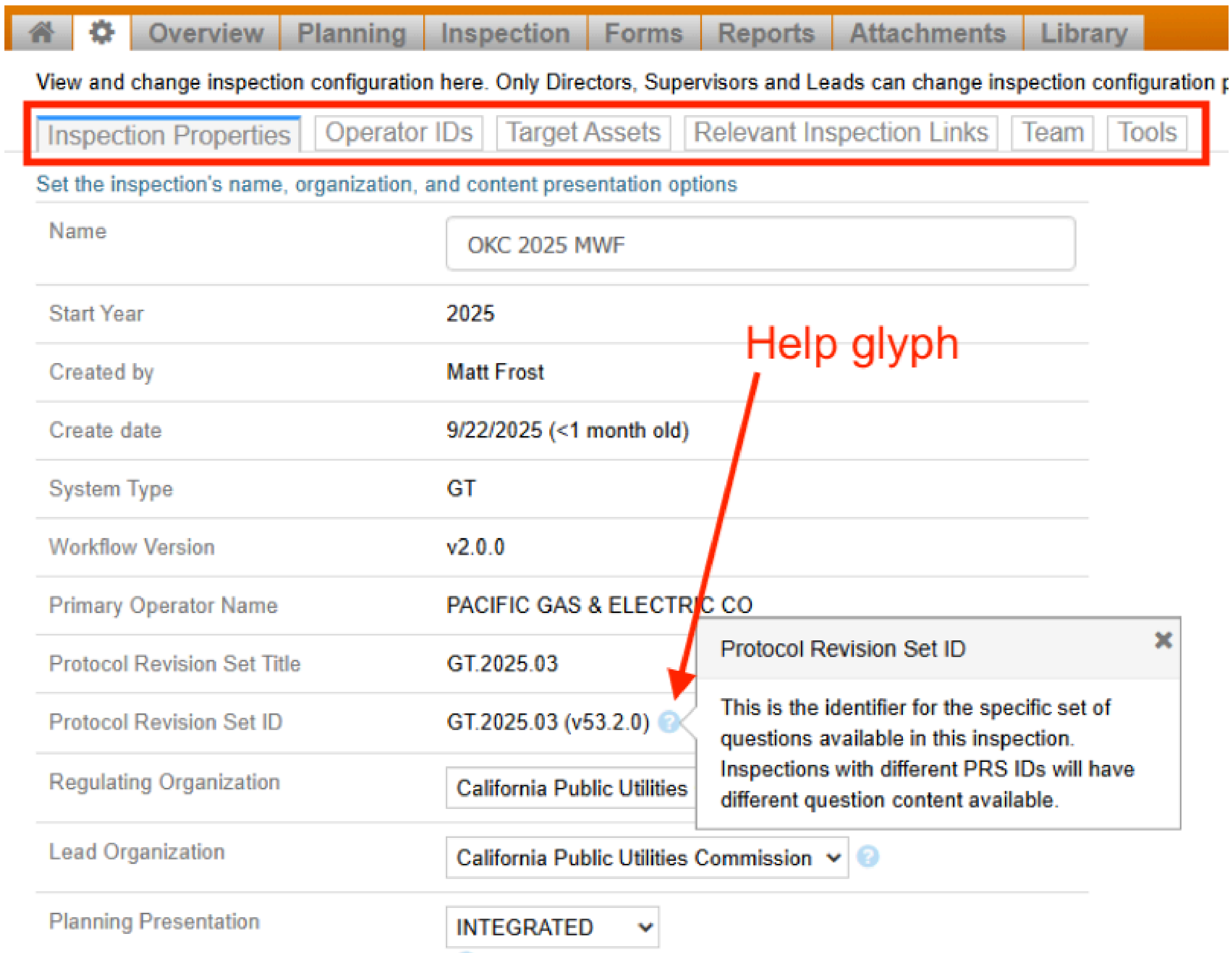
PAUSE and help your group members get to this point if they are not already here. Here are some additional exercises to try while you wait for the rest of the class.

1. Click the Overview tab and add some temporary summary text for this inspection. A template is provided to guide the summary creation if desired.
   The Inspection Summary can be edited by each user on the inspection, but each inspector's summary is stored separately.

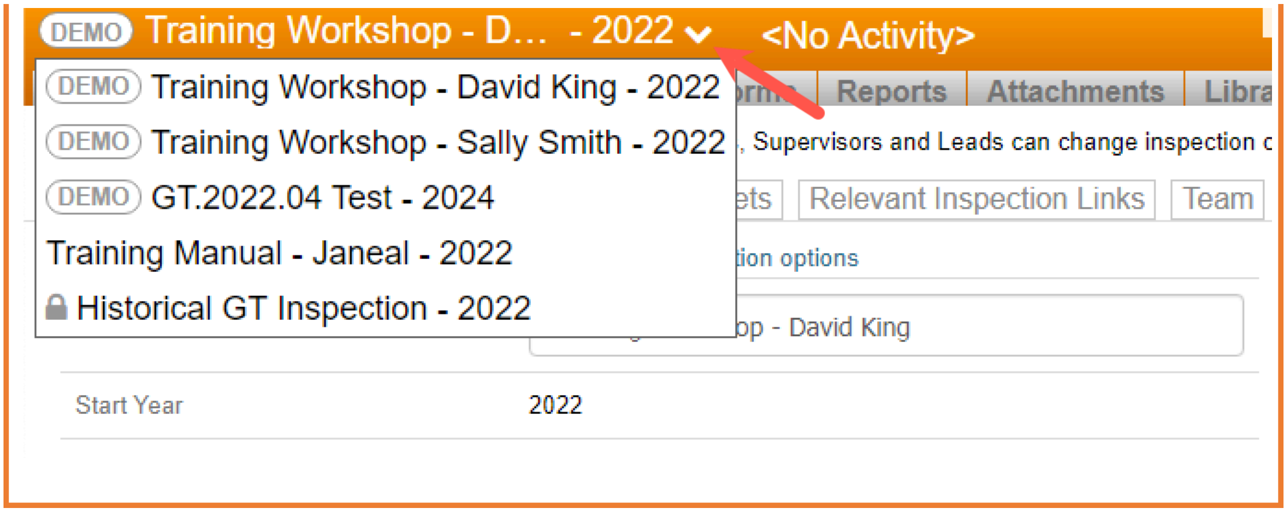


2. Look at the summary for the related inspections (also available on the Overview tab).

3. Return to the configure (⚙) tab, and check out each sub-tab. Click on each help glyph and read the contents.



Tip:	*You can quickly access your five most recently visited inspections via the menu in IA's header. This is useful if you are switching between a few inspections frequently.*



Presentation: Inspection Content and Planning Overview

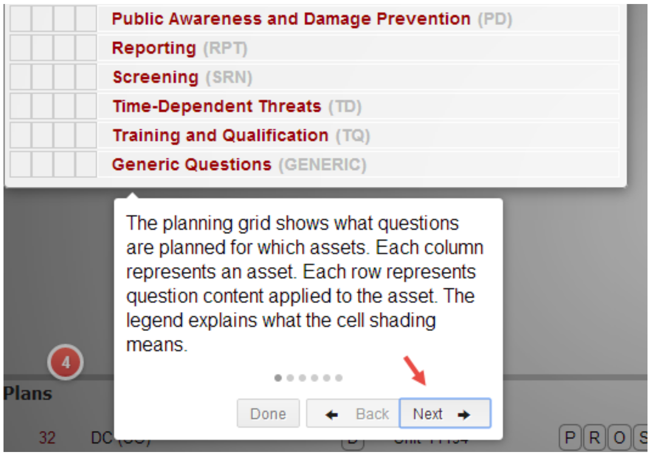
Notes:

Lesson 4: Planning Your Inspection

STEP 4.1: Planning interface orientation

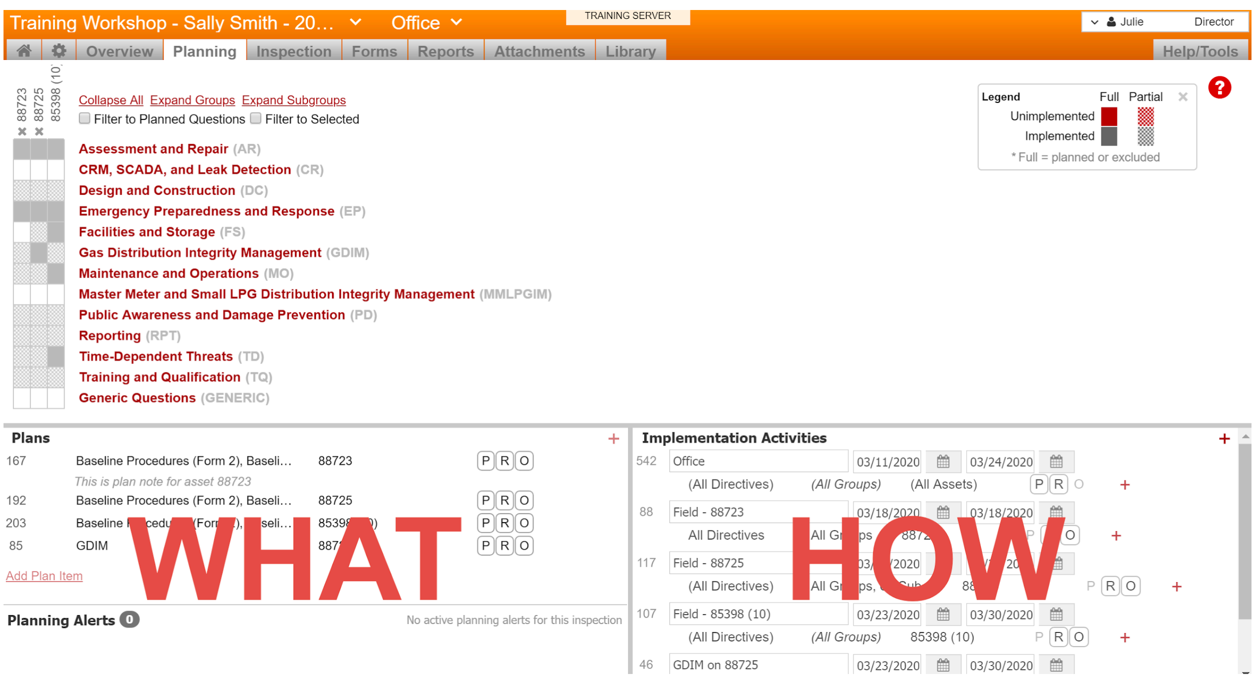
You will now plan your inspection. This is done on the Planning tab. Planning is one area where the inspection methodology you are using will have a significant impact on what you do.

First, orient yourself to the planning interface by pressing the top-right help button  and reading the annotations for each.



After reading each annotation, click the Next button to move onto the next part of the interface.

In some inspection methodologies, setting up a plan is a matter of picking a single directive for a single unit. In others, the plan depends on your preliminary assessment of the operator's strengths and weaknesses and could involve numerous targeted topic areas. As such, planning can be a complex, iterative process. IA takes a divide-and-conquer approach by separating the strategic plan (content applied to assets) and the tactical plan (implementation of the strategic plan). It can be helpful to think of the left-hand pane as the WHAT and the right-hand pane as the HOW of your overall plan. These are separate concerns and IA keeps them separate.



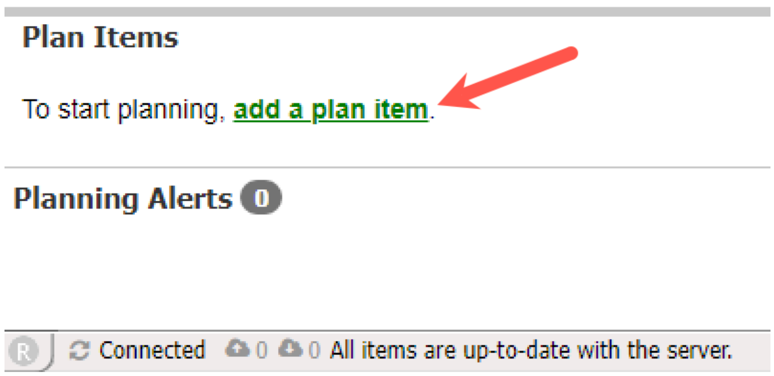
STEP 4.2: Strategic plan – method 1

In this workshop we will not produce a targeted plan typical for the Integrated Inspection methodology. We will also not create the simplest possible plan. Instead, for the purposes of pragmatic training on IA operations, we will select a plan somewhere in the middle of the spectrum. We will create the same strategic plan two different ways and discuss the pros and cons of each.

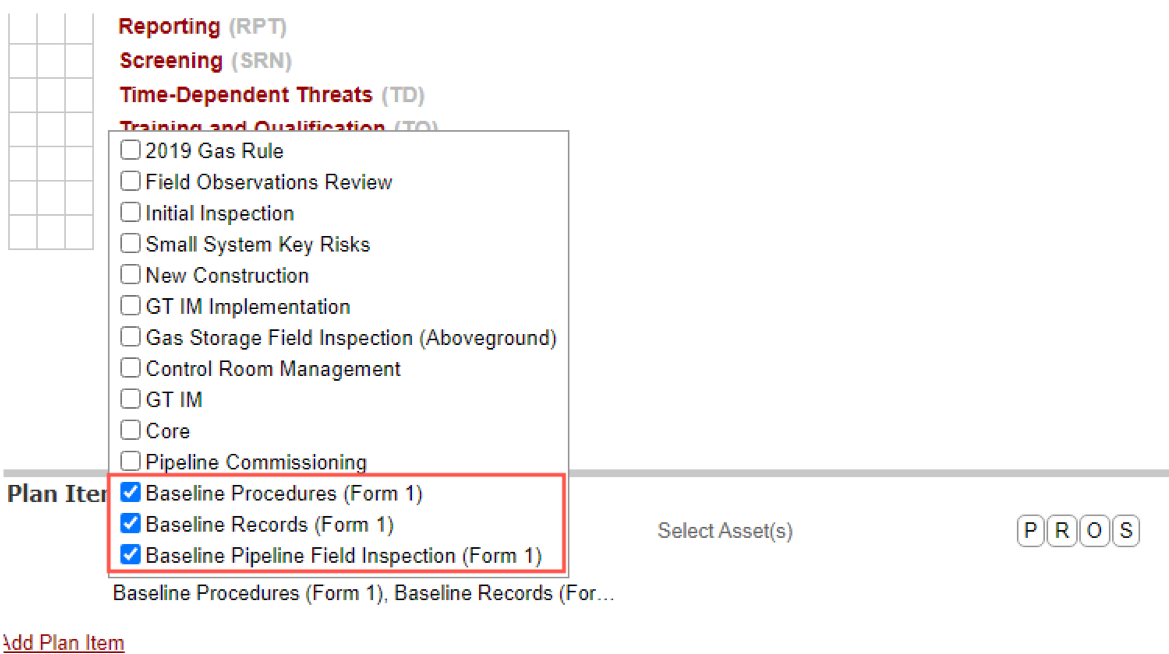
For the moment, we intend to perform a baseline inspection on all three of our assets. Let's set that up.

Steps:

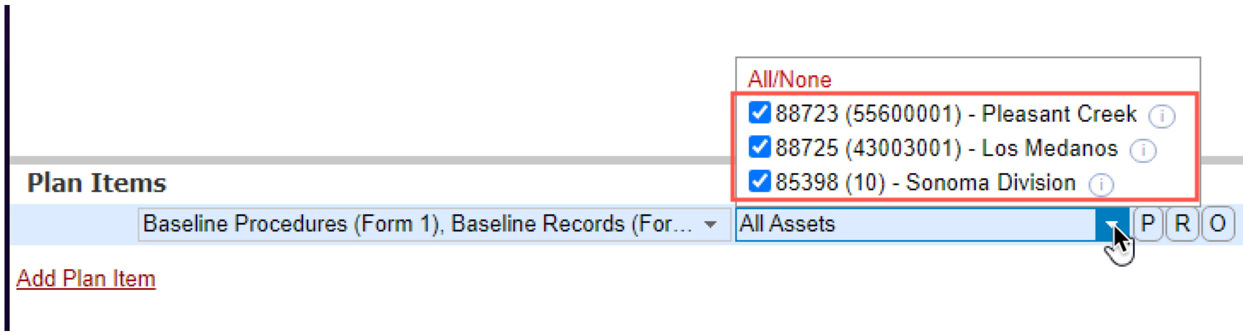
1. Click the Add Plan Item link to create a new plan item.



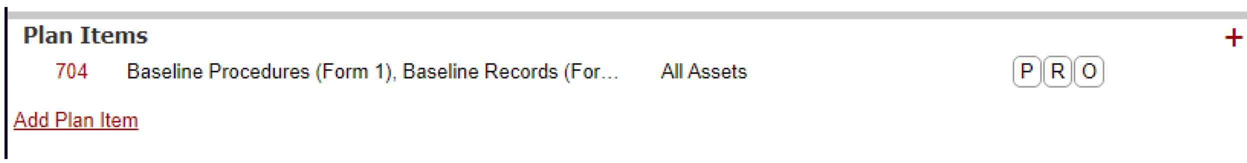
2. Select all three of the 'Baseline' Directives. Note that the "baseline" directives will only be available for selection if the regulating organization (as seen on the Inspection Properties tab) is a state organization.



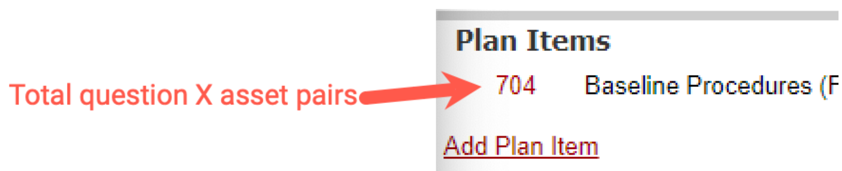
3. Select all three assets.



Your plan item list should now look something like this:



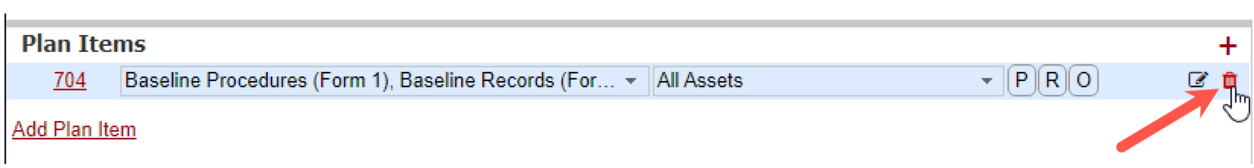
The red number on the left may differ in your case. This is the total count of question * asset results that must be collected to complete this plan. This number corresponds to the question-level cells in the planning grid that have been planned.



At this point our strategic plan is done, and we could move on to creating our tactical (implementation) plan. However, there are some downsides to how this plan is set up. Let's set it up another way, with one plan item for each asset.

STEP 4.3: Strategic plan – method 2

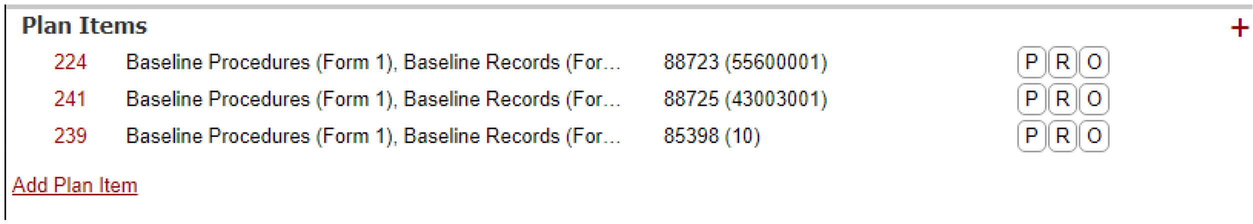
1. Delete the plan created in the previous step by hovering over the row and clicking the trashcan icon that appears on the far right.



2. Create a new plan item.
3. Select all three Baseline directives.
4. Select only one of the three assets.

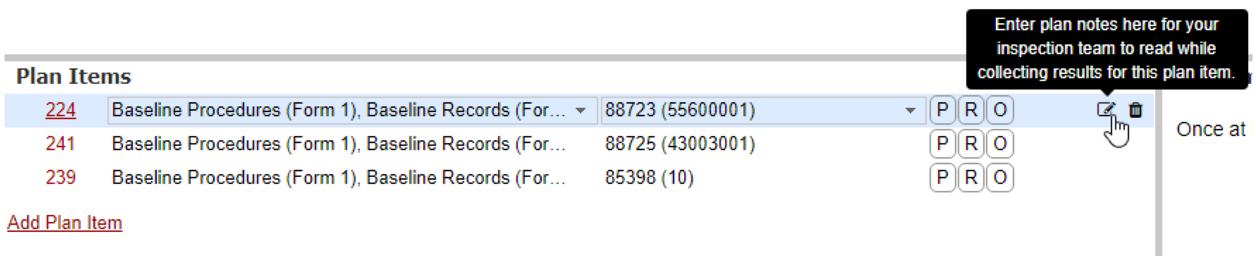
Repeat steps 2-4 for each asset.

Your plan should now look like the following. Again, the numbers on the left may differ; that's OK.



In this case the exact same questions have been planned for the same assets as in Method 1 in the previous step. However, this approach has the following benefits:

1. You can see the different counts (explained below) for each asset.
2. You can create asset-specific notes for each plan item. Let's do that now. Click the note icon for your first plan item.



3. Enter a plan note and close the edit window.

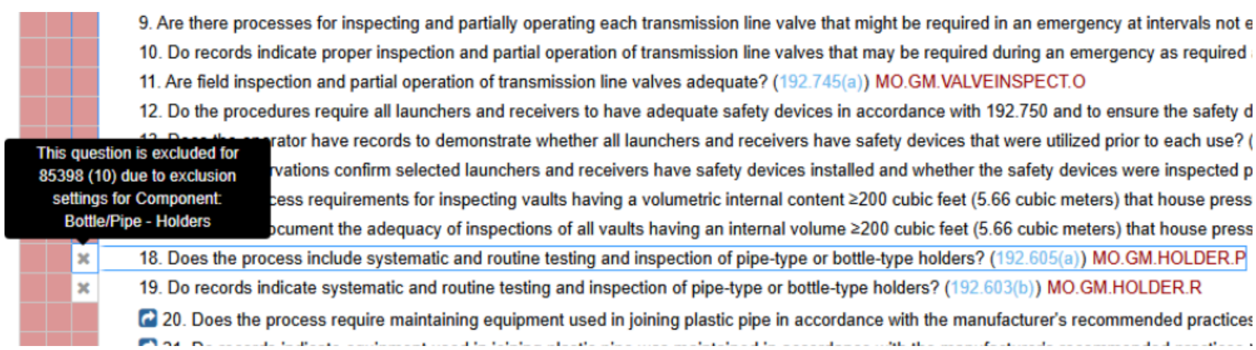
Of course, you could extend this approach to a total of ten different plan items if you wanted to address each directive/asset pair separately. It's up to you; the resulting plan is the same either way.

The disadvantage of creating many planning items is that, for large plans, the list can become long and difficult to manage.

STEP 4.4: Understanding planning counts

Let's address the numbers we are seeing to the left of the plan items. As mentioned above, these are counts of question * asset pairs. If you click on any of these numbers, the planning grid will expand and filter to just the rows (questions) planned in that plan item.

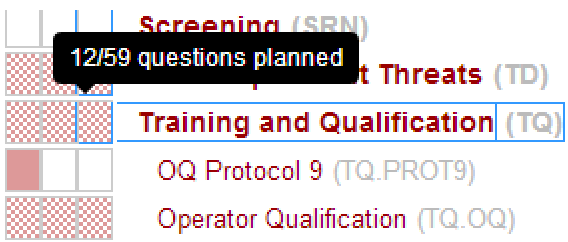
If you scroll down through the grid, you'll see the reason behind the different counts. IA is following the exclusions you set up during Asset configuration and is automatically avoiding creating plans for items that are not relevant for the specific assets. In this case, the MO.GM subgroup holds the excluded items, and the exclusion only applies to one asset.



*Two questions are excluded for the second asset in this example, leading to a different question * asset pair count for that plan item.*

Spend some time expanding the planning grid to see what the effects of your plan are on the cell shading of the grid. Solid shading indicates that every question below that level is included in the plan. Checkered shading indicates that only some of the questions are included.

Cell shading indicates partial or full coverage.



Hover over any cell to see how many questions are planned for that asset/content combination.

You'll notice that all your cells are colored red at this point. This is because your strategic plan has not yet been included in a tactical implementation plan. In fact, at this point, you have no implementation plan at all. Let's set that up next.

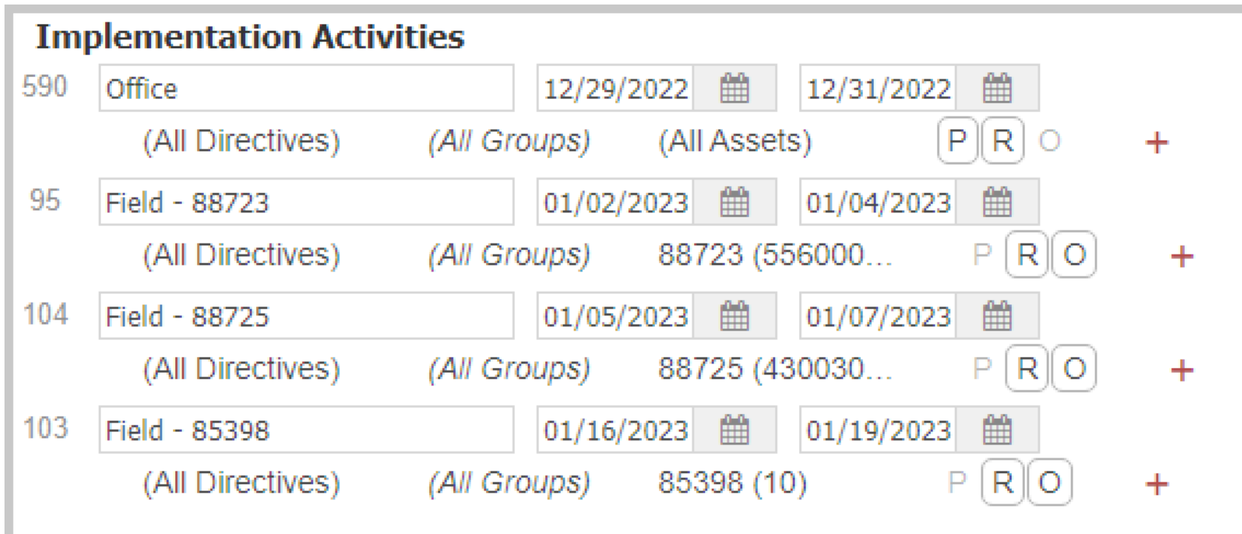
STEP 4.5: Implementing the plan

We will now *implement* the plan. That is, set up implementation activities that capture various parts of the plan until every asset/question pair is captured by at least one activity.

Click Add Implementation Activity to add each activity.

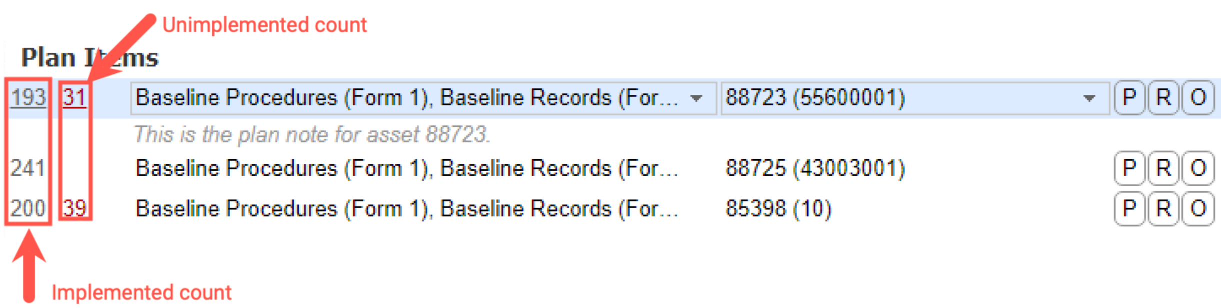
1. Add activities as follows:
   a. One Office activity for all assets for the P and R questions.
   b. A Field activity for each of the single-unit assets covering the R and O questions.
   c. Enter some start and end dates for all your activities. This can help with planning awareness among your team members and is required for inspection validation.

After this, your implementation activities should look like this:



Important: When setting up activities it is best to set up the *minimum* filters that capture what you want to cover during that activity. You do not need to match your strategic plan exactly. Think of your Implementation plans as a net to capture your plan. It is ok to over-implement certain aspects of your plan (as we have done with the R questions here). You will not have to answer questions more than once, and some results may require multiple visits to set up.

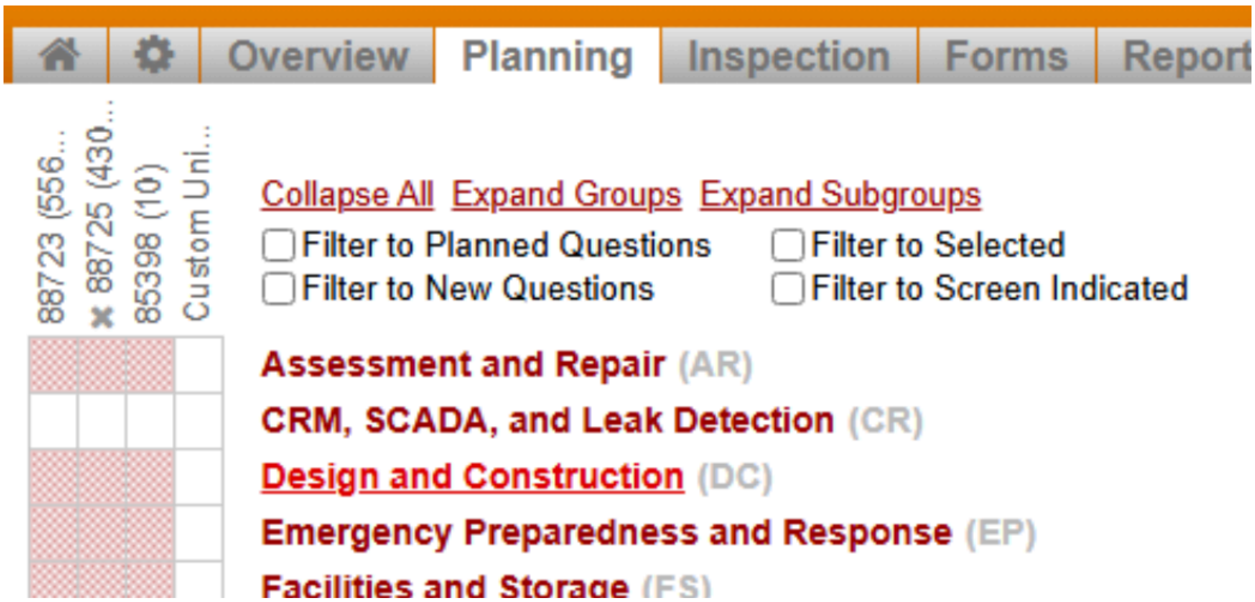
Tip: *As you add activities, the question/asset counts for your plan will transition from red (unimplemented) to grey (implemented). You can click the grey and red numbers to see the corresponding questions highlighted in the grid.*



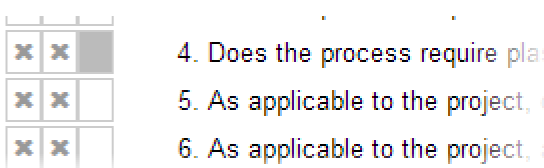
The total counts of question/asset pairs will change from unimplemented (red) to implemented (grey) as the plan is captured by your implementation plan. IA will expect results for all planned questions, so the goal is for all numbers to be grey - signifying that all planned questions are included in an implementation activity.

PAUSE and help your group members get to this point if they are not already here. Here are some additional explorations to try while you wait.

1. Try to expand and collapse groups and subgroups of questions, and explore the filter checkboxes above the grid.
    - "Filter to Planned Questions" only shows questions covered by a Plan Item.
    - "Filter to Selected" shows the questions in the plan item or implementation activity that was most recently clicked on.
    - "Filter to New Questions" displays only questions added in the year prior to the inspection's PRS year
    - "Filter to Screen Indicated" only shows groups and subgroups that have been identified in screening results as a "Relevant Topic."



2. See if you can find additional excluded questions in the planning grid (it will display as an X). These questions will not be planned for the corresponding assets even if there is a plan item that would normally plan them. Excluded topics are automatically blocked from planning.



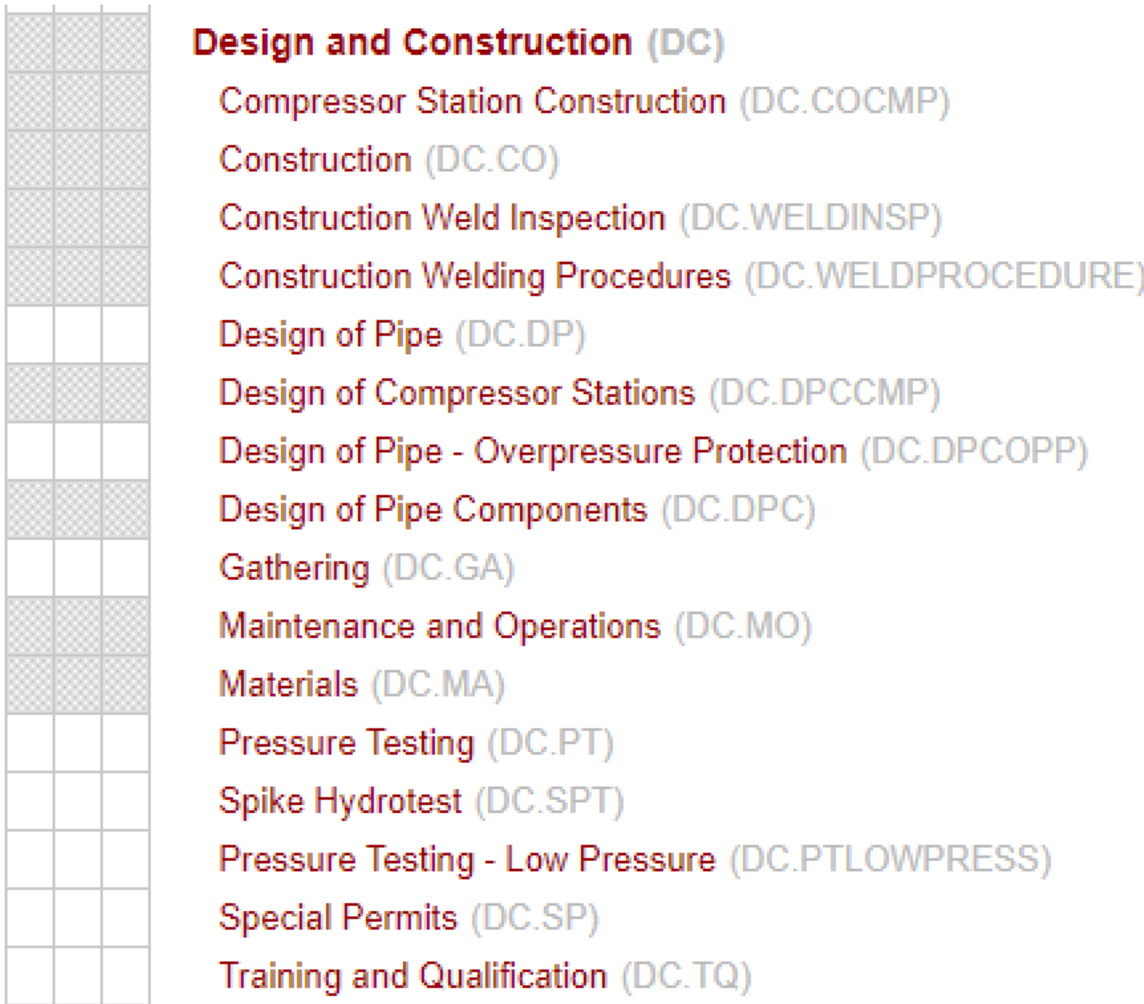
3. Try Ctrl+click on a grid cell that corresponds to a Group, Subgroup, or question. What effect does it have for each?

STEP 4.6: Modifying the plan

Since we've already done planning via directive, let's select the content via subgroup this time. And on top of that, we'll use a shortcut to create the plan item.

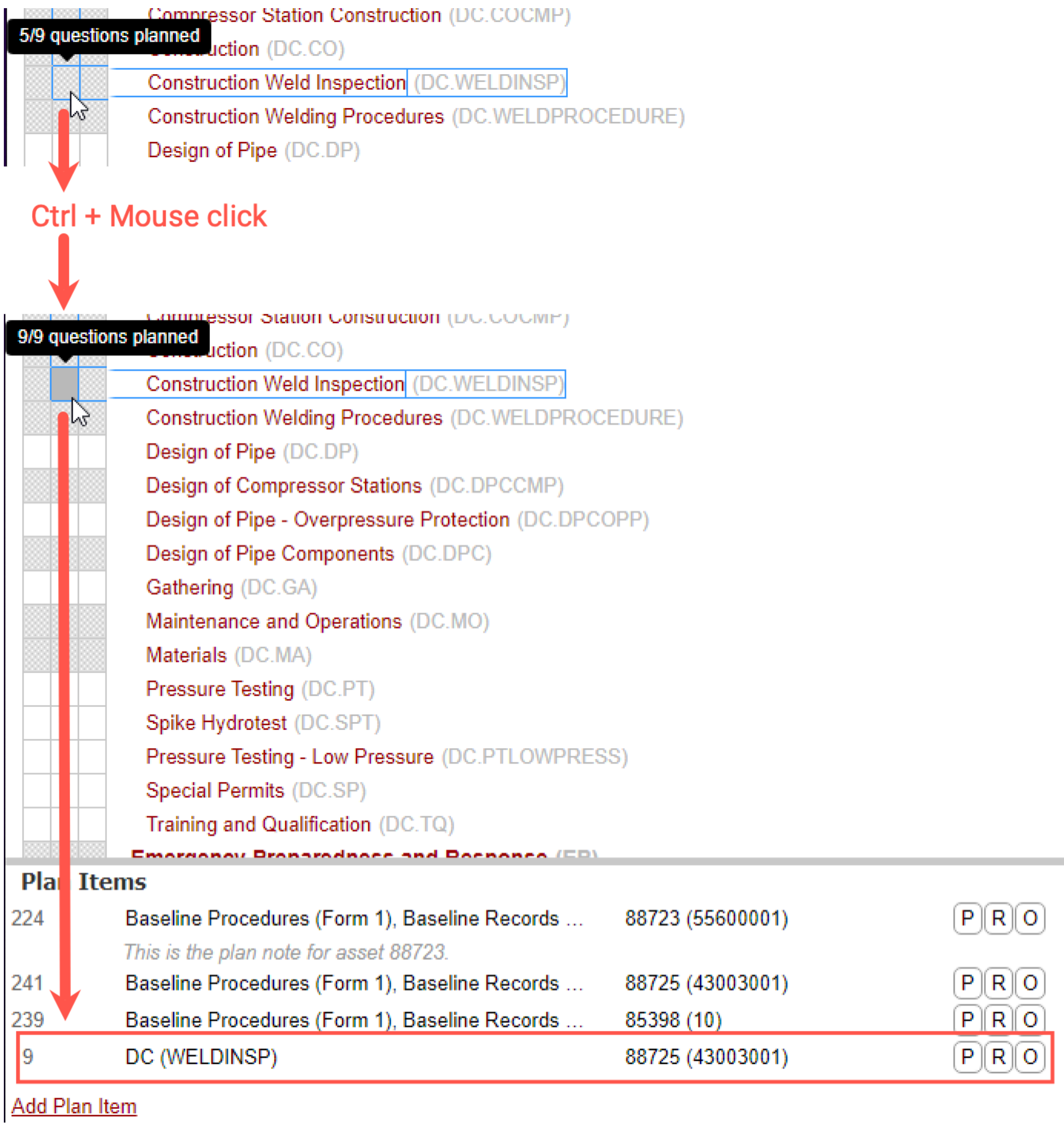
Let’s suppose you were later asked to also perform a Construction Weld Inspection on one of the assets in your inspection. Let’s augment the strategic and implementation plans to accommodate this request.

1. Expand the planning grid to show the DC group.

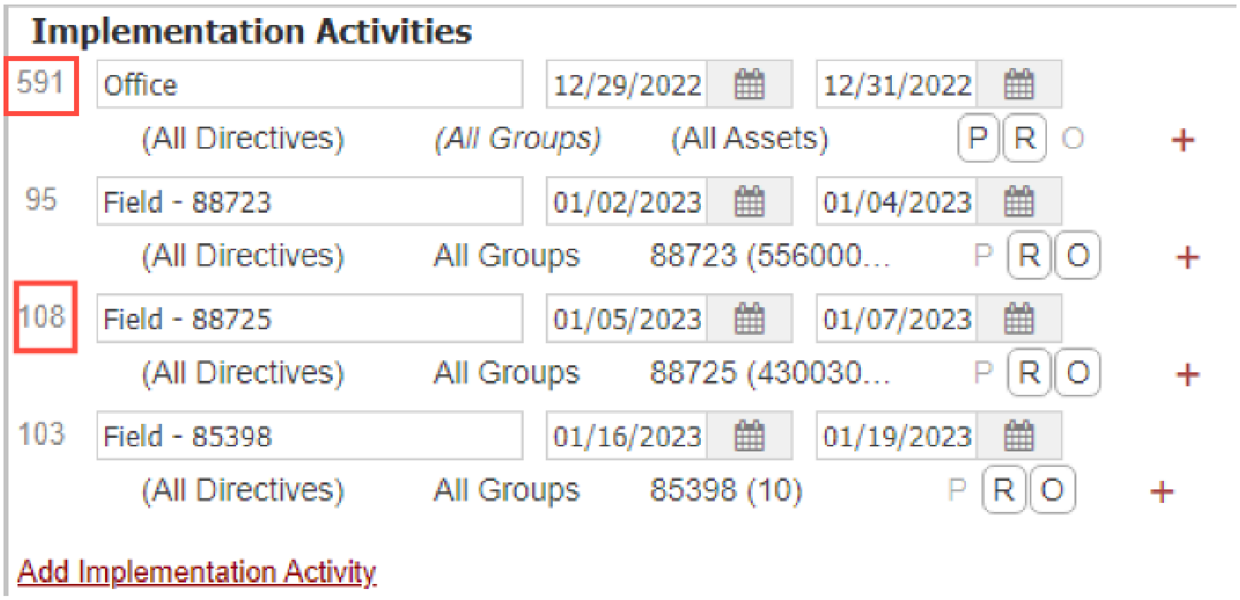


Note how the Construction Weld Inspection (DC.WELDINSP) subgroup is already showing as partially implemented for all assets. This is because there are questions in the planned baseline directives present in the Weld Inspection subgroup. Our next step is to plan the *entire* subgroup for one of our assets.

2. Place your mouse pointer over one of the DC.WELDINSP cells, and press Ctrl (on the keyboard) then click the mouse button. This will automatically create a new plan item for that asset.

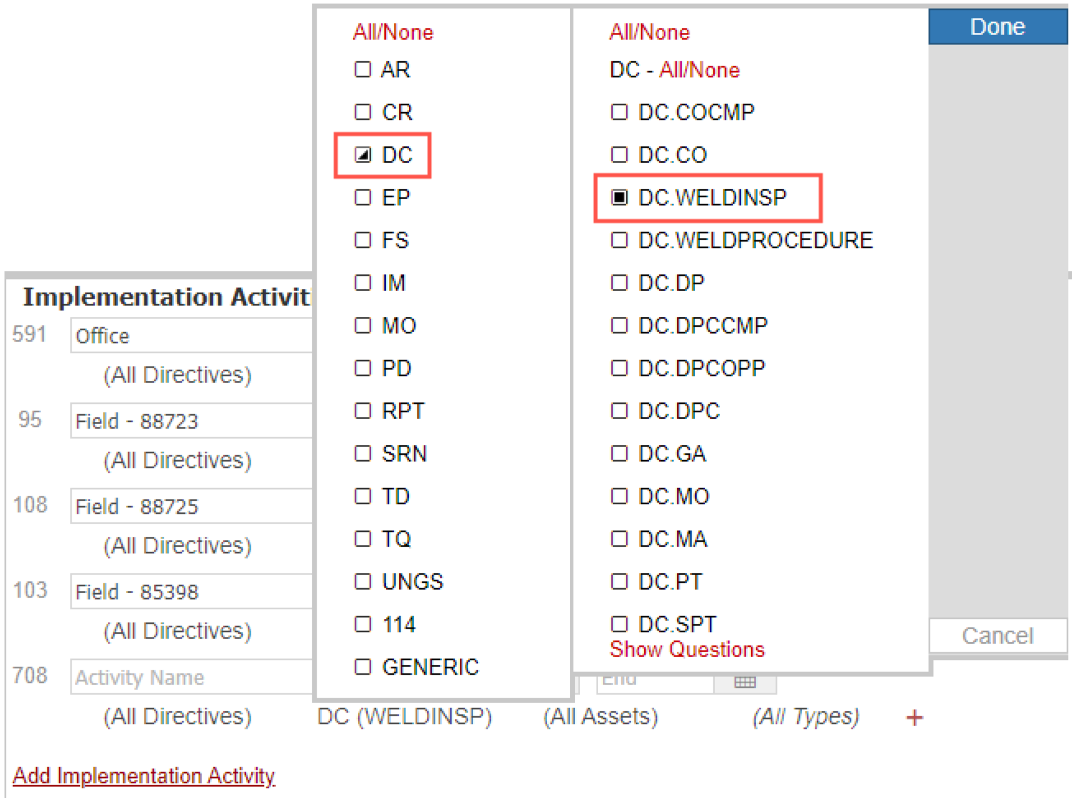


The question * asset pairs corresponding to the WELDINSP questions applied to the 88725 asset have already been implemented via the Office activity (P/R questions) and the 88725 Field visit activity (R/O questions). The implementation counts for those activities have risen accordingly.

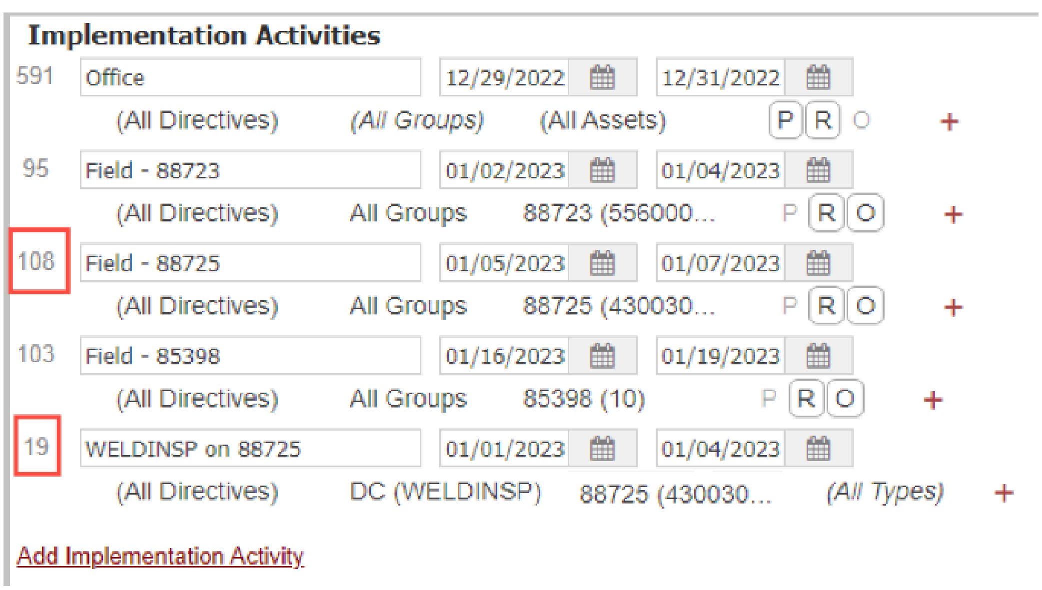


Even though our strategic plan is fully implemented, in certain situations you may wish to send an SME out on a separate activity to perform the Construction Weld inspection. An activity focused on those questions can be set up as follows:

1. Click the Add Implementation Activity link.
2. Create a separate activity for the DC.WELDINSP subgroup content against the asset in question.

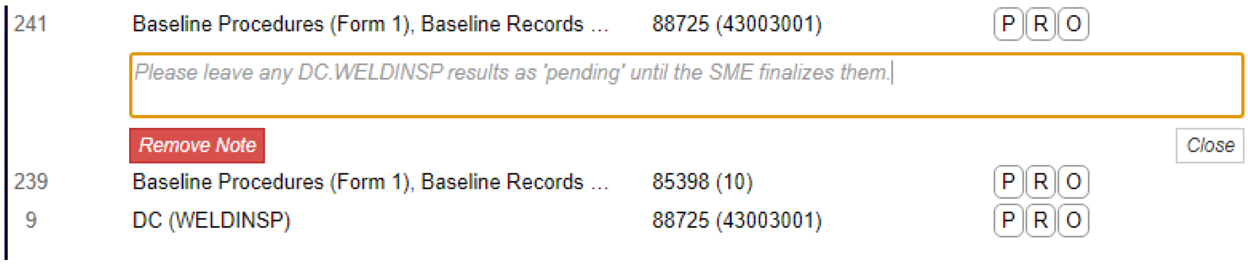


It is important to note a limitation here. IA does not separate the implementation plans. The Weld Inspection on 88725 plan overlaps with the Field – 88725 plan. This may be problematic, especially if the Weld Inspection activity comes after the Field activity. While it is expected at times for different inspectors to develop results over multiple activities, this sort of overlap can be confusing.

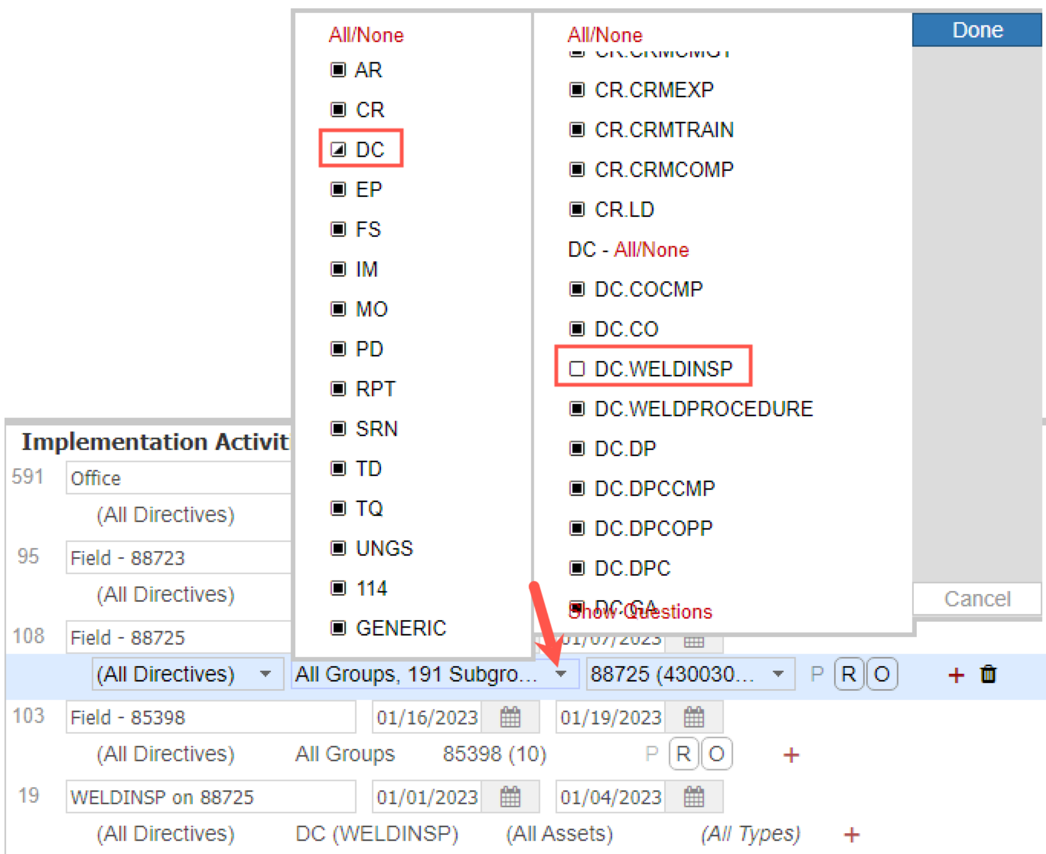


Here are some mitigation approaches when this situation arises:

1. Arrange for the more specialized inspection activity to occur first.
2. Ensure good communication between the teams performing these activities; make them aware of the overlap and establish a consensus on how they will handle it.
3. Set up an inspection note on the respective plans to communicate intentions in-field.



4. Use the Pending result value to ensure both teams see the questions during inspection (if that is intended).
5. Set up more specific plan implementations to better isolate the content to the respective assets (not always possible, but it is in this case).



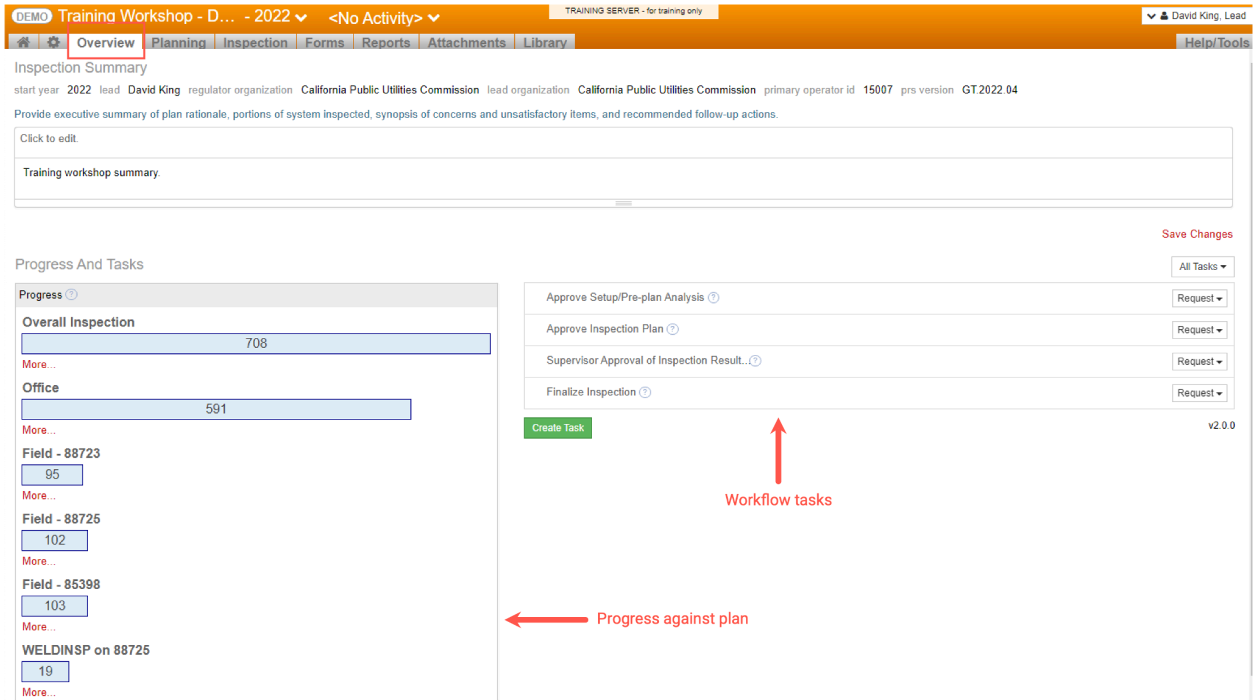
One way to isolate implementation activities is to filter out the questions intended for others.

Presentation: Planning System Review, Q&A and wrap-up

Notes:

Lesson 5 Overview Tab

Now that we have completed the plan for our inspection, let’s back up a moment and have a look at the overview of the inspection as it stands now.



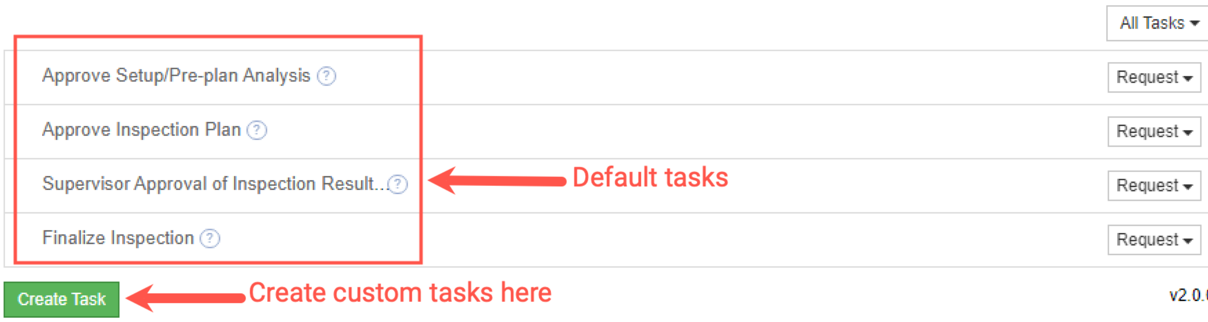
The inspection overview tab provides a summary of progress against the plan and tasks. At this point, we see a plan with no progress and no assigned tasks. Since we are done with planning, let's request approval.

Lesson 5 IA Workflow

Step 5.1: IA Workflow: Assigning tasks

On the main Overview tab, IA provides a workflow system that allows team members to assign tasks (to themselves or others) and to track the completion of those tasks. In addition to the four required tasks, the workflow system allows teams to create ad-hoc tasks and track their completion.

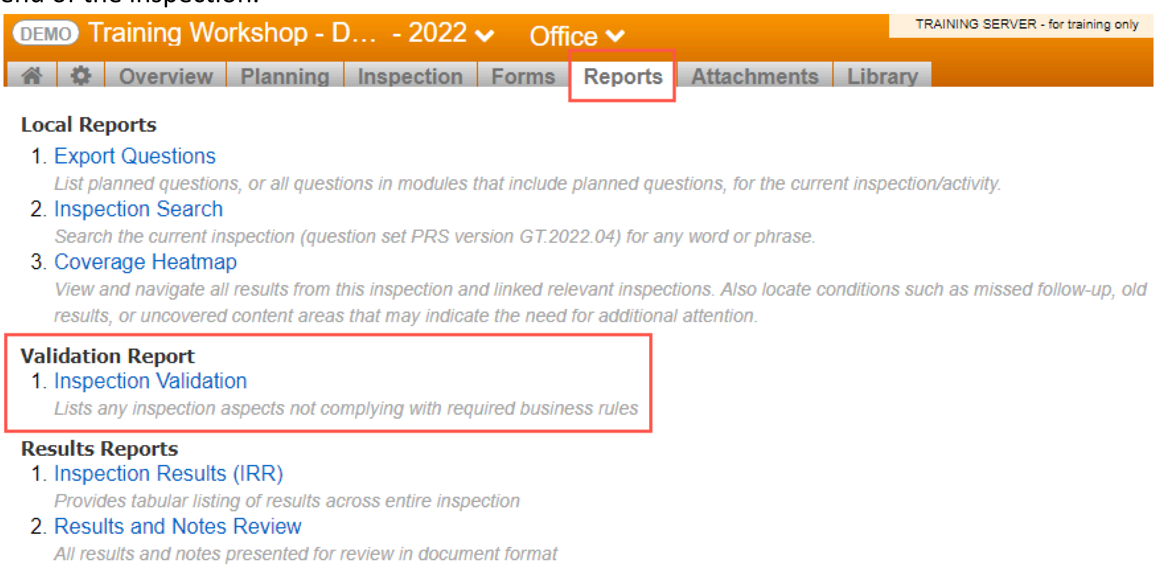
For GT and HL, IA has four built-in tasks, standard for all federal inspections. For other system types (GD, LNG) there are three default tasks. Teams may also create and assign ad-hoc tasks via the Create Task button.



The workflow system helps teams track what phase an inspection is in and who has responsibility for the next step(s).

Since we are done with Inspection Planning, let's request approval for our plan.

Tip: Before we request approval of our first two steps, it would be wise to first run a Validation report to see if our inspection violates any business rules. The validation report will find potential issues in your inspection and provide you with links to the places where you can fix them. Over the course of an inspection the Validation report will be run numerous times. Note that it is not always possible to clear all the validation issues immediately, but all should be cleared by the end of the inspection.



Requesting approval is accomplished by selecting an approver from the list of team members.

Tip: Inspection Plans and Results Approval can be done by either Supervisors or Directors, but only the person in the Director's role can approve the Finalize Inspection step, so if you can just have one other team member, give them the director's role.

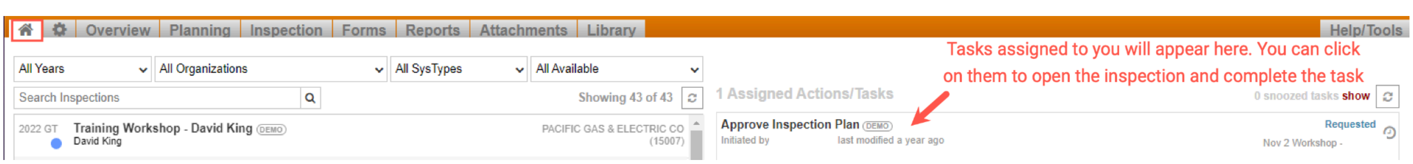
To understand which team members can request and approve each workflow task, you can visit the configuration ( ) tab and then the Team tab. There you may view a chart outlining this information:

Note: roles in IA do not necessarily have to align with a person's overall position/job title. See below for more information:

Role	Inspection Access	Can request these workflow tasks	Can approve or reject these workflow tasks
Assignee	Can view, but cannot modify any records in the inspection.	Can only create *custom* tasks	Only *custom* tasks to which they've been assigned
Observer	Can view, but cannot modify any records in the inspection apart from their own inspector notes.	None	None
Inspector	Can view and modify records in the inspection.	None	None
Lead	Can view and modify records in the inspection.	• Approve Setup/Pre-plan Analysis • Approve Inspection Plan • Supervisor Approval of Inspection Results	None
Supervisor	Can view and modify records in the inspection. When the "Supervisor Approval of Inspection Results" task is pending, can create and modify "Final Results".	Finalize Inspection	• Approve Setup/Pre-plan Analysis • Approve Inspection Plan • Supervisor Approval of Inspection Results
Director	Can view and modify records in the inspection. When the "Finalize Inspection" task is pending, can create and modify "Final Results" and "Regulatory Actions".	Finalize Inspection	• Approve Setup/Pre-plan Analysis • Approve Inspection Plan • Supervisor Approval of Inspection Results • Finalize Inspection

Step 5.2: IA Workflow: Completing tasks

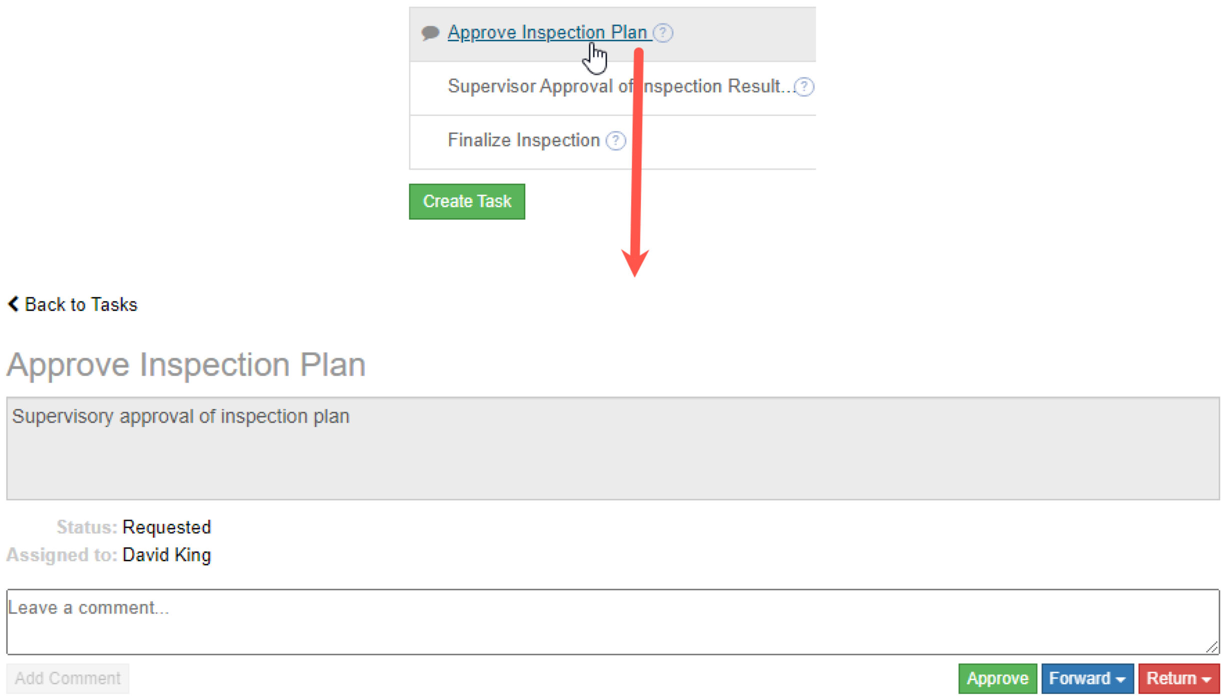
Go to your Home tab and look for pending tasks from your group's inspections. You may not see any if you do not occupy the supervisor or director role on any inspections.



To complete any tasks assigned to you, do the following. If you don't have a task assigned, don't worry; you will in the next step.

1. Click on the task in the Assigned Actions/Tasks (this will open the corresponding inspection).
2. Review the task(s) assigned to you and accept or reject them as appropriate.

Commenting on tasks: It is also possible to leave a comment without actually approving or returning a task. To do this, drill down into the task by clicking the link on the task's title.



Once the plan has been approved, it cannot be changed. Implementation activities, however, can still be updated as needed to account for scheduling, travel, etc.

At this point in the workshop, please do not request Supervisor Approval of Inspection Results or Finalize Inspection tasks. Doing so will prevent your team from being able to add and edit results in later lessons. If you have already requested one of these tasks, don't worry; see the next paragraph for instructions on undoing a task request and/or approval.

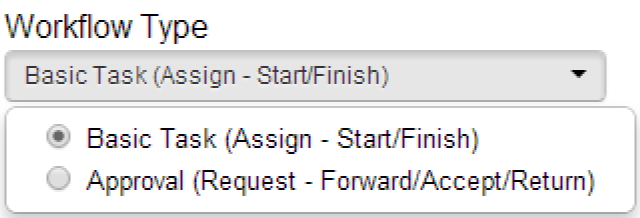
In some cases these workflow tasks may need to be reversed/unapproved. For example, if the Supervisor has already approved the Supervisor Approval of Inspection Results task, but an inspector needs to modify a result note, the approval of this task will need to be undone. This can be achieved by the following steps:

1. The Supervisor can Unapprove the task.
2. The person who originally requested the task can un-request it.
3. From there, changes to the inspection can be made.

4. Once appropriate changes have been made, the task should be re-requested.

Step 5.3: IA Workflow: Custom Tasks

For custom tasks, IA supports two workflow types: Basic and Approval. Basic tasks are simple assign-start-finish tasks, while the Approval tasks follow a Request – Forward/Accept/Return cycle. Try both to become familiar with the differences.



Work as a team and perform the following steps:

1. Have each team member create a task (using the Create Task button) and assign it to another team member. Make sure everyone gets at least one task assigned to them.
2. If everyone is connected to the internet, you should see your tasks appear on the task list.
3. You can also see your assigned tasks on the **Home tab**.
4. Find a task assigned to you by a group member and add a comment to it (see step 5.2 above for instructions on how to do this).
5. Assign an approval-type task to yourself and then forward it to a team member. Note: Basic tasks cannot be forwarded, only Approval tasks.
6. Take a trip to the Home tab and see all your pending tasks (across all inspections) listed in the right hand pane. Note that clicking on them opens the related inspection.
7. It's OK to assign custom tasks to yourself. Try it.

Tip: *Tasks are synced in IA immediately, so you will become aware of task assignments and completions immediately. In addition, IA Workflow Alerts are sent out twice daily via email. See an email example below.*

At this point your group should be familiar with the IA Workflow system.

PAUSE here and wait for other groups to complete the step above. Here are some exercises to try while you wait.

1. Now that your plan is approved, modify your plan and see what effect that has. Unless you are only adding a comment, you will be warned that your plan approval will be removed, requiring re-approval.
2. Go ahead and change the plan, and then request re-approval from a group member.
3. Have a group member assign you an approval task, reject it, and see what happens.
4. Add some comments to tasks.

Presentation: Question Data Structure

Notes:

Lesson 6: Inspection Tab Operations

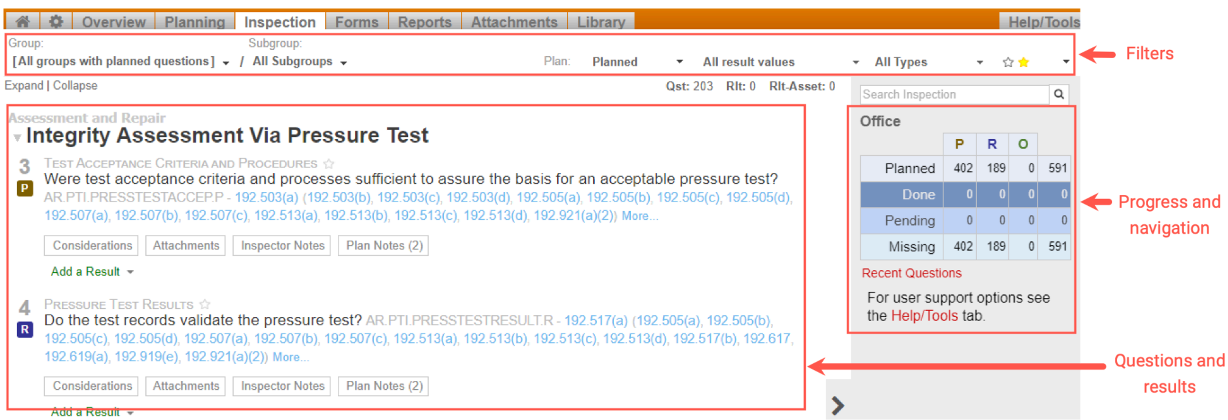
Step 6.1: Inspection Tab Operations

Now that we've set up and planned our inspections, let's get ready to collect some results. Most of your inspection result collection will be done in the Inspection tab. Let's look at the layout and function of various controls on this tab.

1. Switch back to your personal inspection.
2. Select the Office activity from the activity selector in the header.

Note: *The Activity selected in the header will determine what you see in many different screens. If you aren't seeing the questions or results you expect to see, confirm that you've selected the appropriate activity in this menu.*

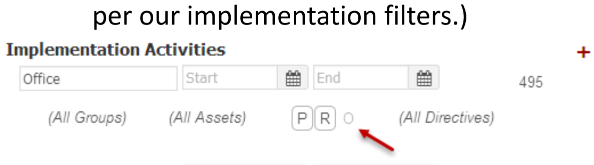
3. Doing this will move you to the Inspection tab, where all the results are collected. It will also cause inspections planned for the Office visit to be displayed as planned.



4. Explore the question filters provided at the top of the question list.

See if you can get the following question sets displayed via the filters:

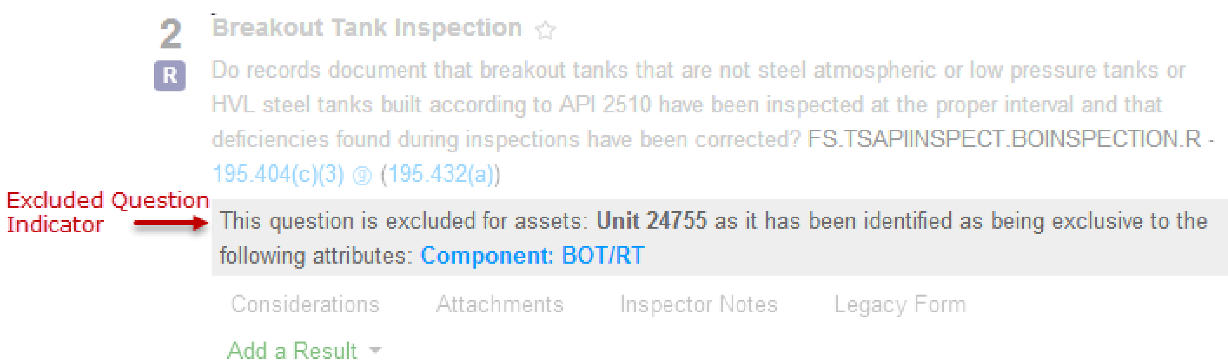
a. The **planned** questions for the current activity for all groups with planned questions. (Hint: This should be easy; it's the default.)
b. The questions in the FS.FG (Facilities and Storage/Facilities General) subgroup (**planned** and **unplanned** and **ALL**).
c. All **planned** questions of type **procedure** or **records**
d. The **planned** questions of type **observation**. (Hint: There will be zero of these in Office, per our implementation filters.)



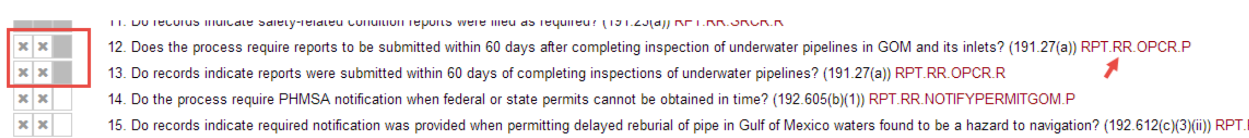
   e. The **planned** questions in the **Time-Dependent Threats – External Corrosion – Coatings (TD.COAT)** subgroup.

5. Clicking the star next to a few questions will flag them as favorites. Once checked, you can use the favorites filter to isolate them. *Note: Favorites are local only to the machine you are working on. They are not synced to your team or other devices like your iPad.*

6. Find an excluded question. *Note: Excluded questions are unplanned, so you will have to change your plan filter to All and may need to select an unplanned group to see these.* It should look something like the example below.



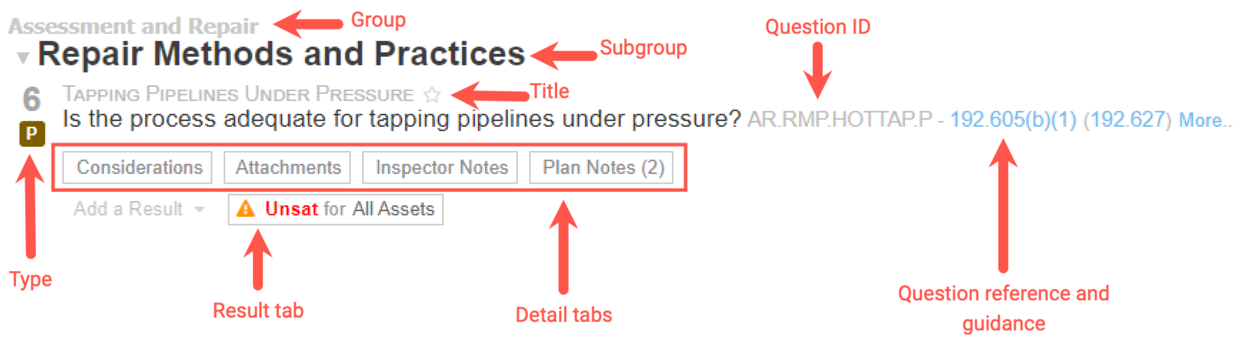
Hint: Another way to find an excluded question is to return to the planning grid, expand it, and find a question that is planned for some assets but excluded for others. Then click the link for that question provided in the planning grid.



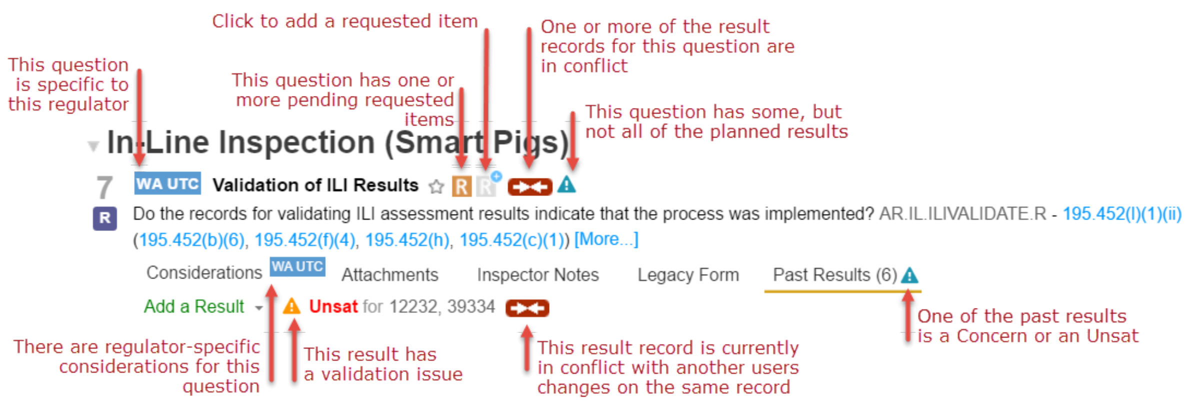
Step 6.2: Question Layout

In IA, each question is organized in a similar format. Let's look at the various components.

1. The basic layout of each question in IA is as seen in the figure below.

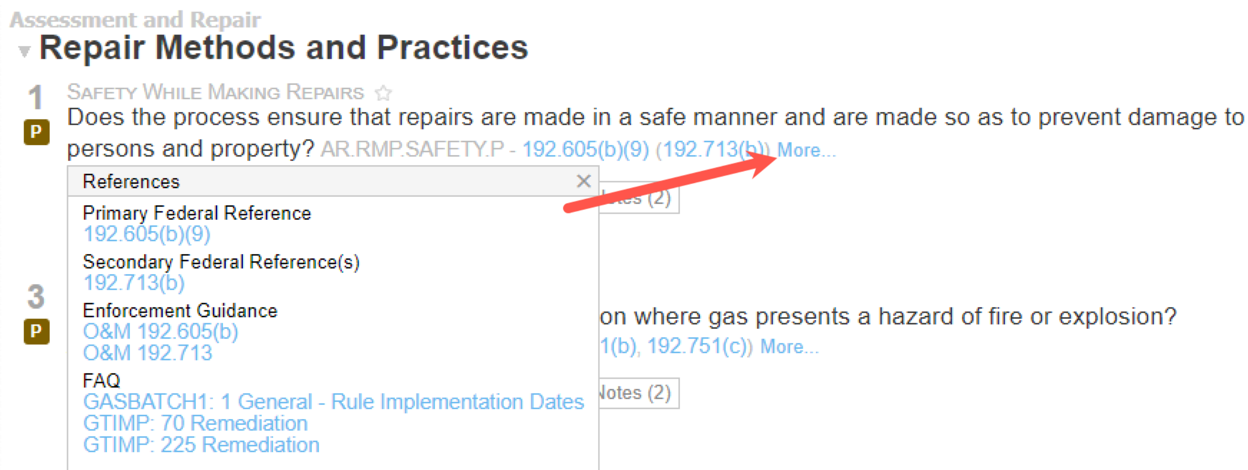


2. There are also many glyphs that are displayed when certain conditions are true of the plans or results for a given question. The figure below shows the possible additional glyphs and their meanings.

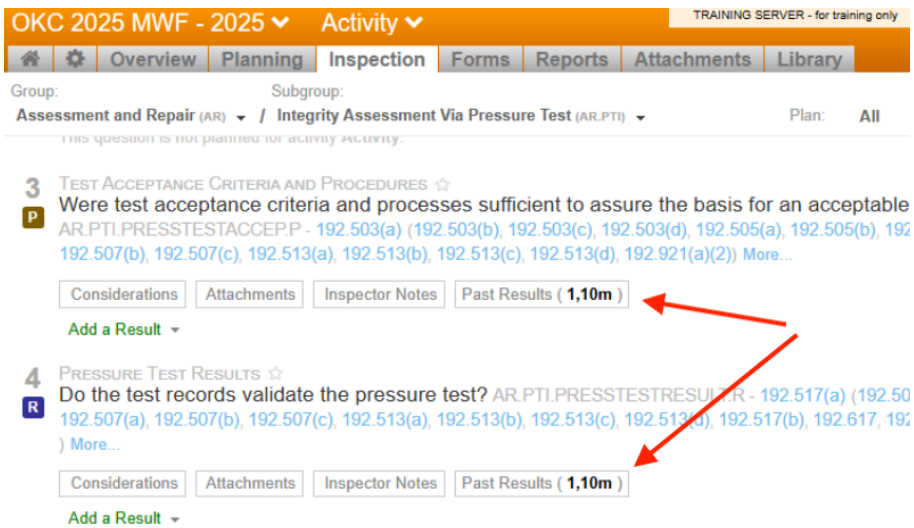


Let's explore the questions and related content.

3. Select a question and click on the **More…** link to see available reference materials. Explore the reference materials for that question.

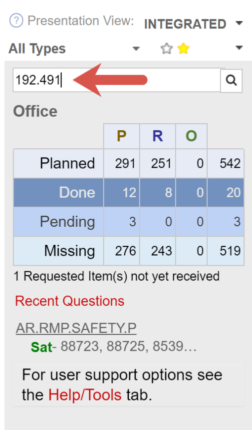


4. Read the **considerations** for several questions.
5. Find a question with Past Results and read them. (Hint: Have a look in the AR.PTI subgroup. These are results from the previous inspection you have checked as a Relevant Inspection in your inspection configuration (see Lesson 2 above).



6. Some questions are repeated (displayed in more than one subgroup context). For example, see TD.CP.RECORDS.P. Repeated questions are indicated via a counter link which allows quick navigation to the other locations. See the Tip below for more details on repeated questions.

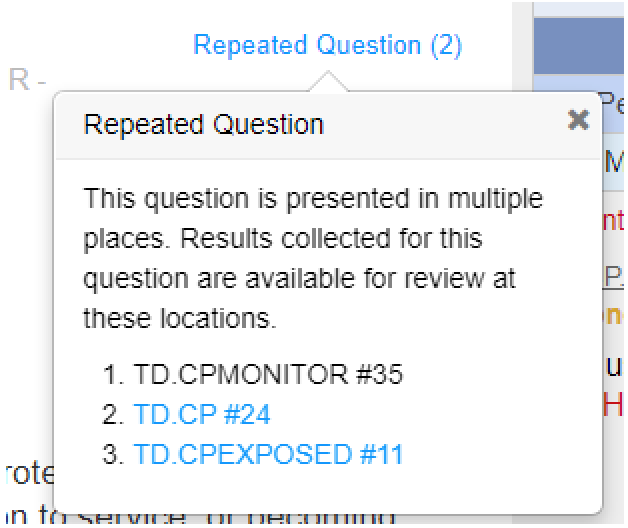
7. Use the search tool to locate questions that reference a certain word, phrase or code section.



Tip: *The search tool will search the entire inspection, including question content and user-entered results.*

Tip: *If a particular question is deemed relevant to multiple topical subgroups, it may be "re-presented" or repeated across those multiple subgroups. If this is done, you will see a "Repeated Question" note to the right of the question. Clicking that will display all of the presentations for that question, with links to its other presentations. In this case of the screenshot below, we see a single question appear in 3 subgroups.*

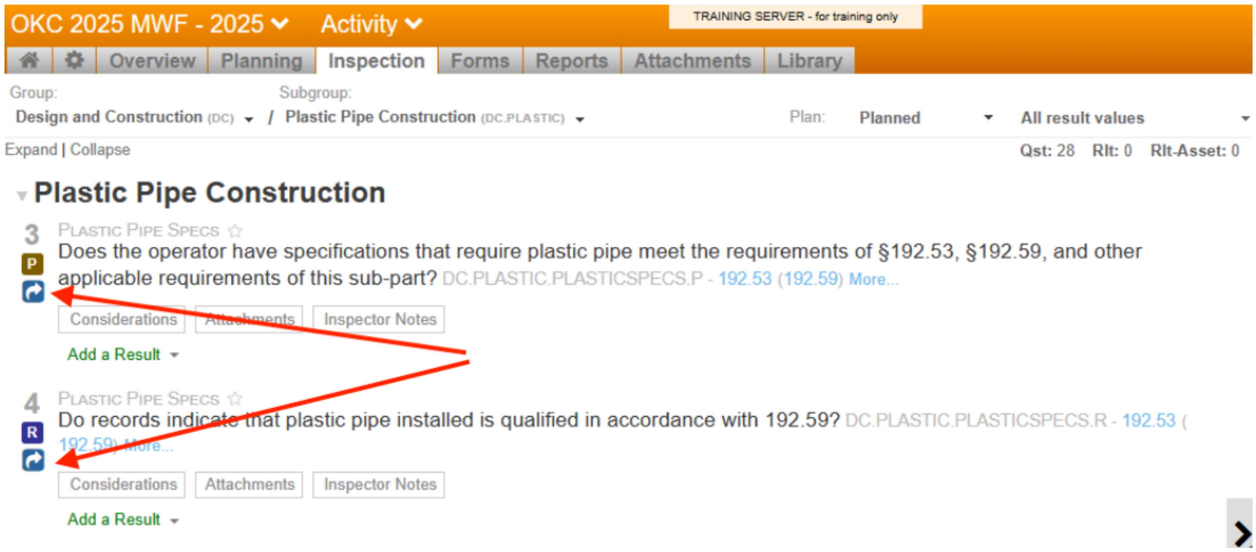
However, it is still just one single question, and assigning a result to the question in one subgroup will display that result in the other subgroups as well. For example, if you provide a result for the below question in its "TD.CPMONITOR" subgroup, you will see the result when you view that *question in the "TD.CP" and "TD.CPEXPOSED" subgroups as well.*



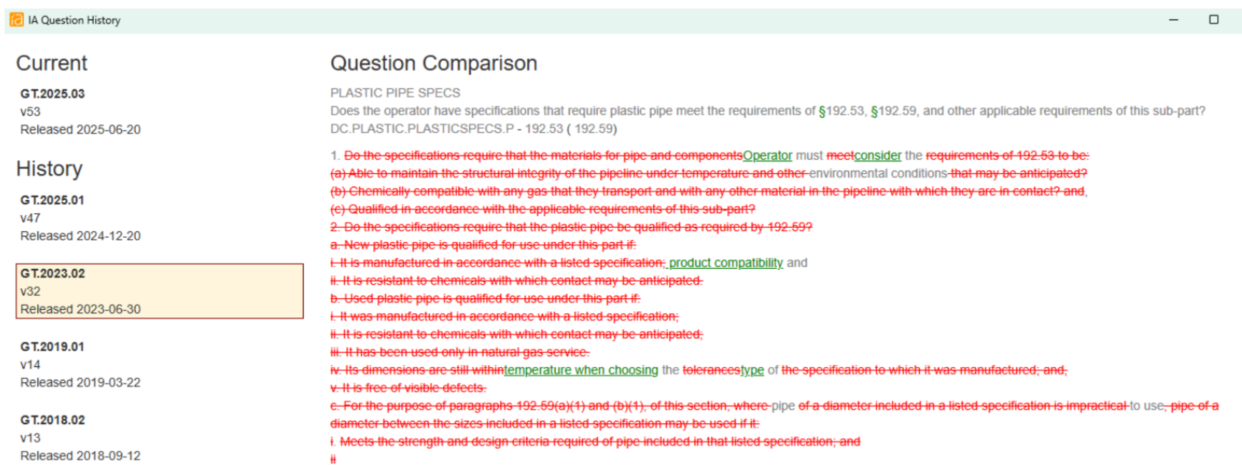
Step 6.3: Question change tracking

Looking through the Inspection tab, you might see additional, blue icons to the left of some questions. These icons denote that a question was added or updated in a previous PRS/question set. A plus icon signifies it was added as a new question, and an arrow icon signifies it was updated in some way.

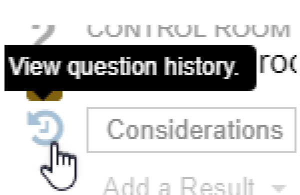
1. Find a question that has one of these icons (questions that were added in the year prior to the current question set can be found on the Planning tab with the "Filter to New Questions" option). The Plastic Pipe Construction subgroup in Design and Construction contains some questions that were modified in the year before this workshop's 2025 question set. Click the icon.



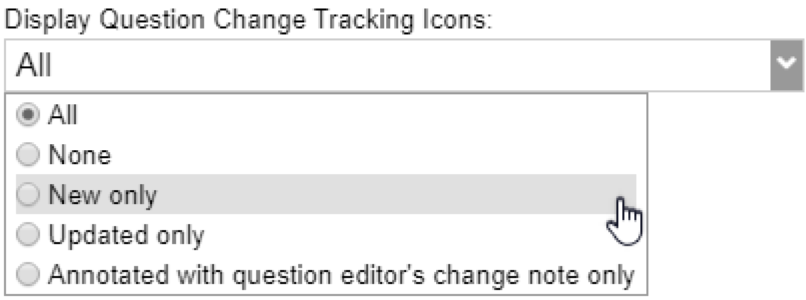
2. Clicking this icon will open a Question Comparison window, where you may view how this question has changed since some previous version (selected in the left sidebar). Text that has been removed is struck through in red, while text that has been added is green:



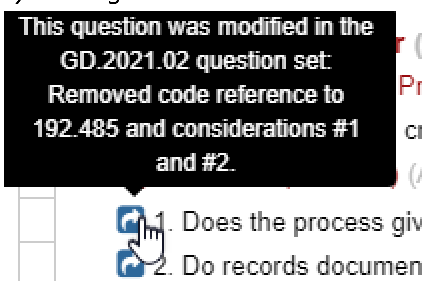
3. Additionally, you may view the history of any question, even if it has not been modified recently. Hover over a question on the Inspection tab and you'll see a small blue clock icon appear. Click it to view the question's history.



Note: You can select which of these new/updated icons you'd like to see (all, none, new only, etc.) by visiting the Help/Tools tab and then clicking Options. Your selection here will persist across inspections.



Tip: *If these icons are filled/solid, it means the change is substantive and the content team and/or question editor has added a specific note regarding this change. You can hover over the icon with the mouse to see this "editor's change note" as well as view it in the Question Comparison window by clicking the icon.*

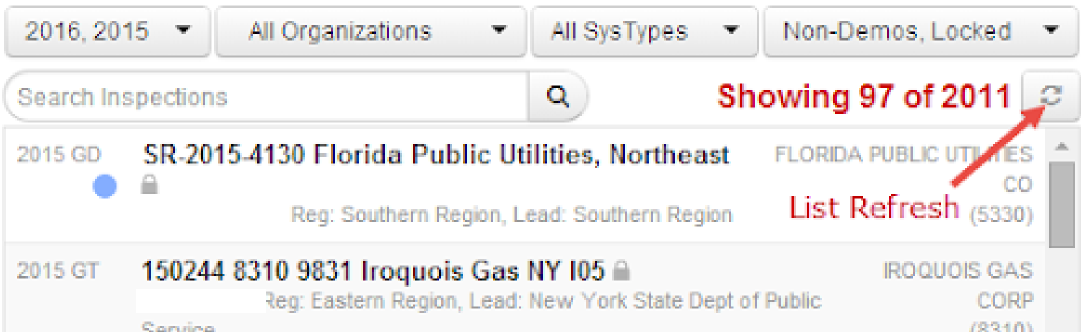


Step 6.4: Join your team on a single inspection

At this point we will switch your group to working on a single inspection together. **Select one member's inspection as your shared inspection, and make sure each person in your group is added to the team for that inspection.** Then all other group members should find it on their home tab and open that inspection.

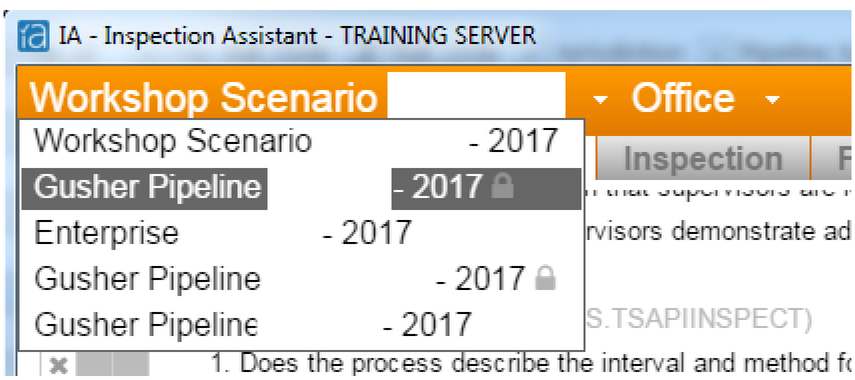
a) Find and load the target inspection from the Home tab list. You may need to refresh the list and/or adjust the filters to find it.

Tip: *If you have been recently added to an inspection, you may not see it in your Home tab inspection list. To be sure you are looking at all inspections you have access to, click the refresh button at the top of the inspection list.*



From this point forward, the instructions assume your group is looking at the same inspection. It's fine to switch back to your own inspection later if you want to try some explorations on your own; just remember to switch back to your group's selected inspection before proceeding with the next steps.

Tip: *Remember that you can use the recently-used-selector to quickly switch between recently loaded inspections.*

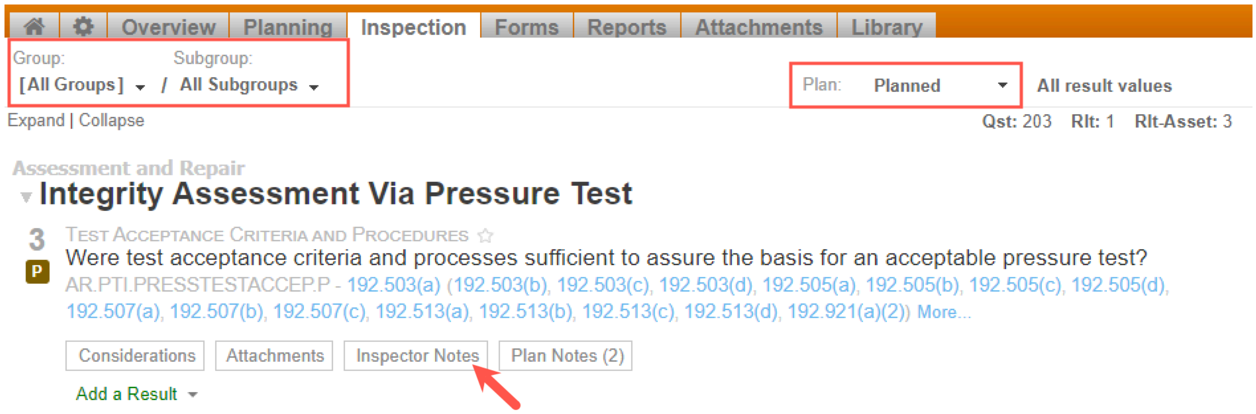


Lesson 7: Inspection Tab Operations

Step 7.1: Creating and finding Inspector's Notes

Each inspector can record his or her own temporary scratch notes for any question. Each team member can see the other's notes but cannot edit them. Inspector's notes are a good place to work if you have multiple team members working on the same questions at the same time as there will be no conflicts between them. If you attempt to work directly in the results records for the same questions at the same time you are more likely to create conflicts that will have to be resolved manually (we will do this purposely shortly).

1. Select a question with your group to work with, each person should get that question open in their IA Inspection tabs.
2. Click the Inspector Notes tab and add a note. Each team member should do this.



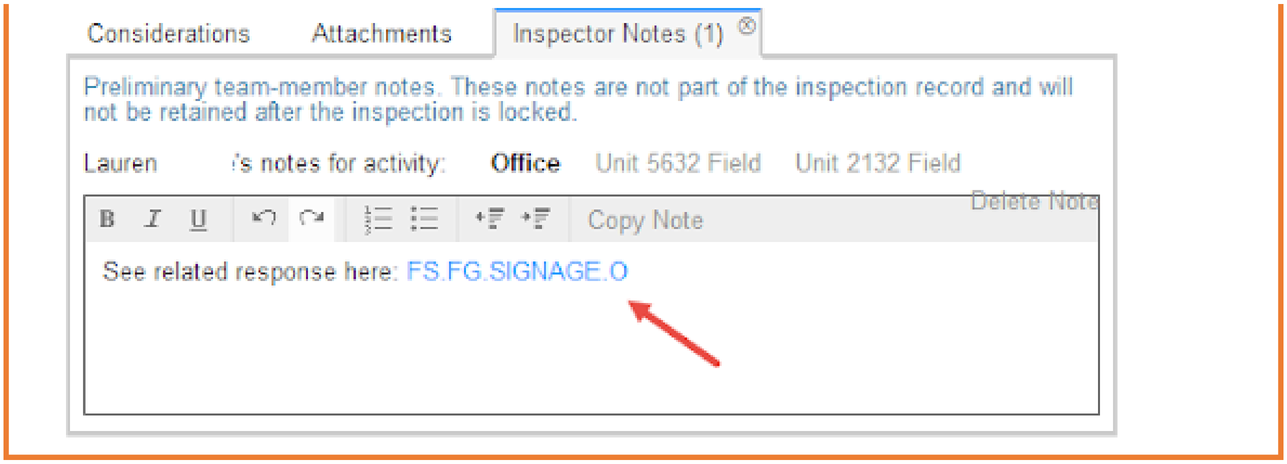
3. Wait for the other team members' notes to sync and view them.
4. Each question accommodates an inspection note for each implementation activity. Create notes for additional activities and view other activity-specific member notes.

Important: *Inspector's notes are temporary 'scratch' notes. They are not part of the inspection record. They will be automatically removed when the inspection is locked, so it is important to record the final documentation in result records, not inspector's notes.*

5. Inspector's notes and result text can be searched along with all other content. You can use this feature to tag things you want to find later. For example, add "#followup" to one of your inspector's notes. And then search for that "#followup" using the search text box in the sidebar. In this way you can easily locate things you wish to revisit.

Important: *At this time, only inspector's notes and results are searched in the search report. Attachments, requested items, planning notes, etc. are not part of the search set.*

Tip:	*In most text fields in IA, if you enter a question's ID, it will be converted to a link that can be used to navigate to that question quickly later.*



PAUSE here for other groups to finish the steps above. In the meantime, here are some extension exercises to perform.

1. Try the Recent Questions links on the sidebar and see how they work.
2. Use the Search report to locate questions that reference the Abnormal Operations. (Hint:.402 (Liquid) or .605 (Gas Transport) or .631(g))
3. You can also control how IA acts when results are created. Go to the Help/Tools tab and click the Options link in the sidebar. Check (or uncheck) the “Always expand results on create” option and experiment with the difference when creating SAT results.

Presentation: Result value types and structures

Notes:

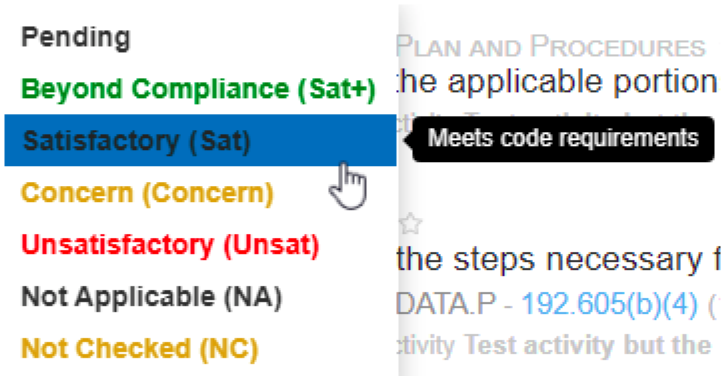
For the next step, we will **switch back to working on individual inspections**. To do this, return to the Home tab, locate the inspection with your name on it and load it. Alternatively, you can use the header menu to select your inspection from the list there.

Lesson 8: Creating Results, tracking progress

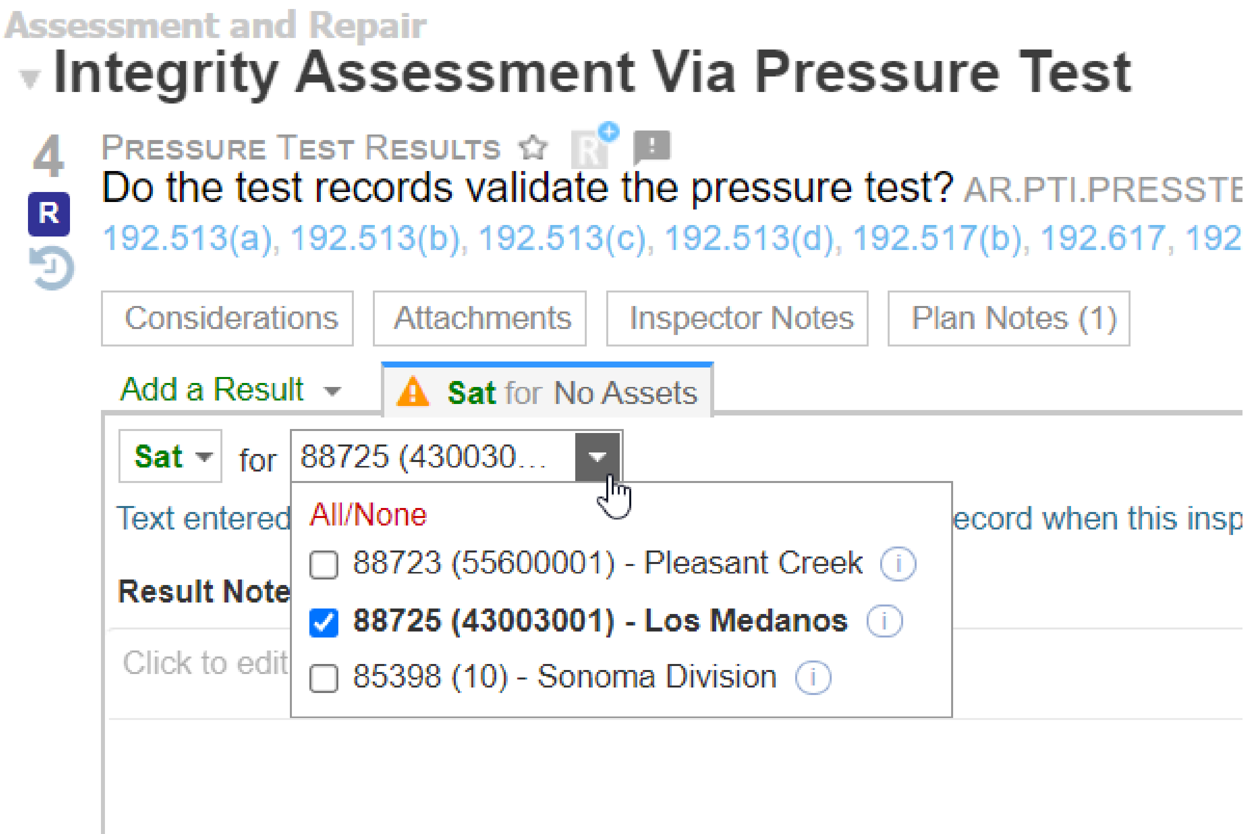
Step 8.1: Creating Results

In your own inspection, select a series of planned questions and record the following results.

1. Record a result of type PENDING, SAT+, SAT, CONCERN, UNSAT, NC and NA respectively. Note the requirements are not the same for each. If you are in need of a refresher on what each result means, you can hover over it in the list to see a brief definition.



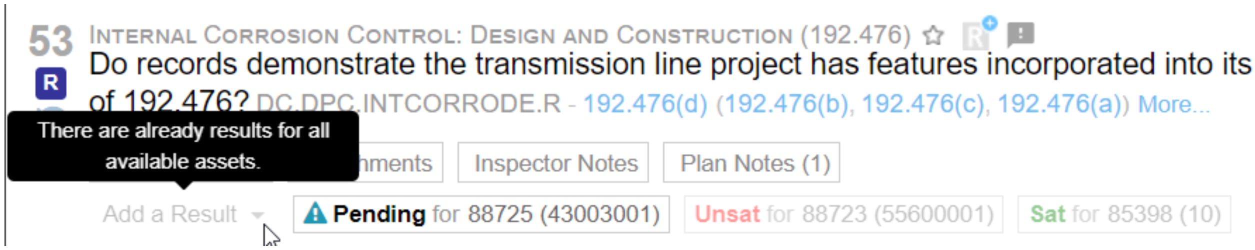
2. Note that your results are each assigned to specific assets and *the assets planned for the current activity are shown in bold and selected by default.*



The assets planned for the current activity are selected by default and are shown in bold.

Important: The bold assets are in the plan for the current activity, this does not necessarily mean that the question is not planned for other assets in other activities.

3. Add at least one Standard Issue to the Unsat result you have created.
4. Record a result for an **unplanned** question.
5. Observe how your sidebar progress matrix changes in response to result creation for planned question/asset pairs.
6. Two areas of common confusion in first-time IA users is the following: The difference between a question and a result, and the difference between an asset and an activity. Think back over what you've done so far in this workshop. Do you know the differences? If not, ask your group members and/or an instructor. It's important to have these concepts clearly understood.
7. Finally, IA typically disallows the collection of multiple results for the same question/asset pair. Go ahead and assign a result to all assets. Then try to create a new result for that same question. You should see the Add a Result link disabled like in the figure below.



Add a Result link is disabled if there is already a result for all available assets

8. You can also add a result for unplanned questions. Simply hover over the question and click Expand to add a result:

Tip:	*The PENDING result value exists to allow you to start a result without having to commit to a (Sat/Unsat) value. Later on, it is easy to return to these pending results, finalize the result findings and select a value. PENDING results are not considered "done" in progress monitoring.* *It is a good idea to use PENDING for any result you expect to be developed over multiple visits and in different contexts. Otherwise, it might be missed in subsequent interactions with the operator.*

Note that while the "Supervisory Approval of Inspection Results" and the "Finalize Inspection" workflow tasks are pending (when either of those tasks have been requested but not yet approved), the Supervisor and Director may create a Final Result that differs from the result that the inspectors recorded. This Final Result will override the team result in data exports and downstream reporting. Both results will be stored with the inspection and will be available to specialized reports such as the coverage heatmap.

Note fields related to questions and results:

Inspector Notes: Information entered into this box will be purged after the inspection is locked. These notes are temporary in nature and are not part of the inspection record.

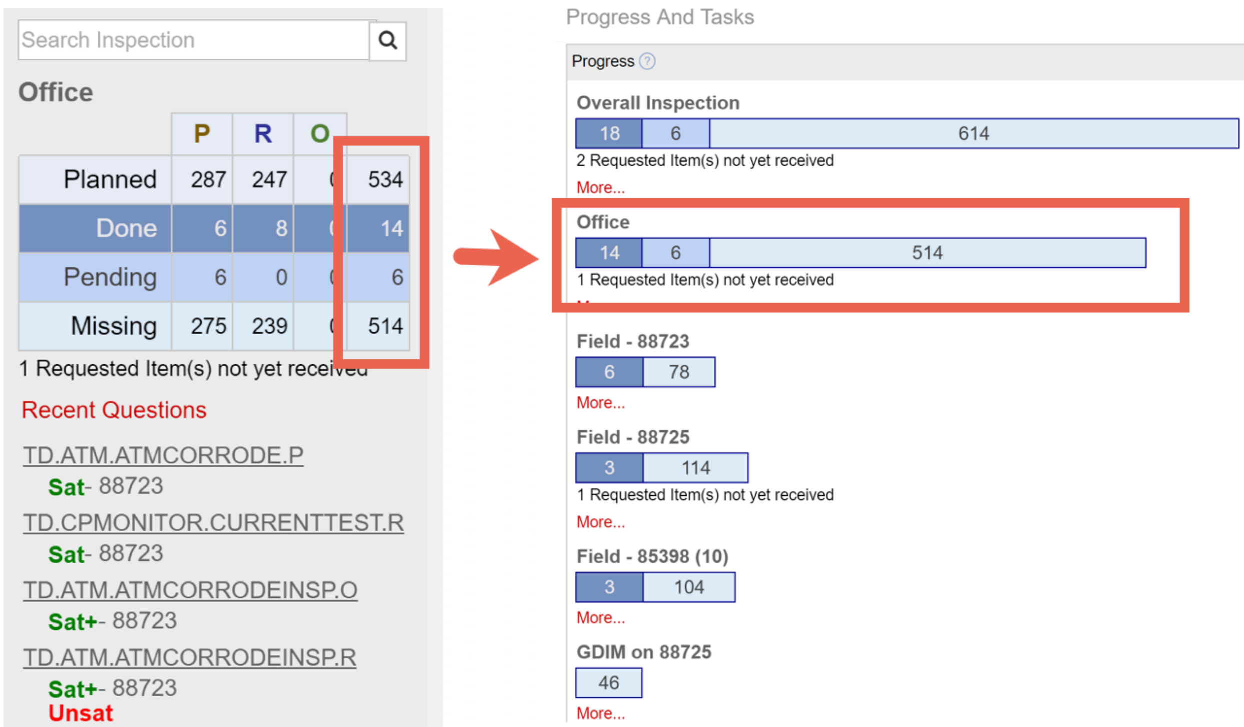
Result Notes: Information added here is part of the permanent inspection record. These should be detailed enough to describe what was reviewed, operator responses, and discussion summaries.

Result Summary/Result Issue Summary: Also part of the permanent inspection record. When the question has an Unsat or Concern result, this field must be filled out as well. It is a shorter summary of the specific issue(s) found. Often this field will contain draft language to be used in future enforcement communications.

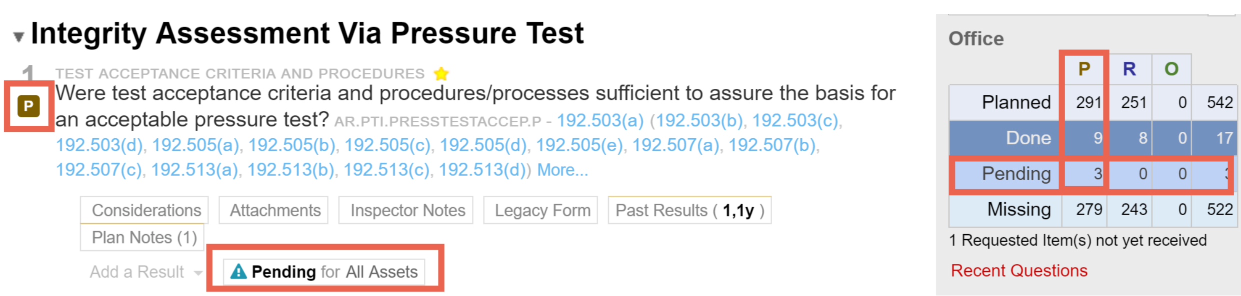
Step 8.2: Tracking Progress

The progress matrix in the Inspection Tab's sidebar is a valuable guide to your progress in completing the set of questions designated to the current activity.

For each question type, the grid shows the total Done, Pending, and Missing asset-specific results. The counts in each cell represent the number of question-asset pairs that exist in each condition.



The right-hand totals on the progress matrix correspond to the activities progress bar on the overview tab.



In this example, the 3 in Pending [P]rocedure questions corresponds to a single result in which all three assets are selected.

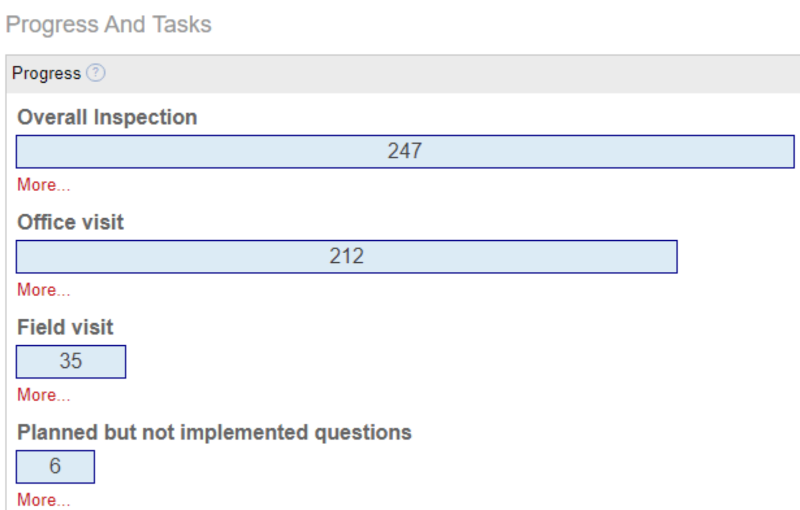
You can use the matrix links to quickly find questions that need attention and also to be aware of what types of questions need attention. For example, if you are thinking about going inside to review procedures, you might want to: a) confirm there are no remaining [O]bservation questions requiring results and that there are, in fact, remaining [P]rocedure questions that are Missing or Pending.

You can see here how leaving results as Pending is important if you expect to revisit them. Doing so will ensure they stay out of the Done row and in view for all inspection teams.

Each cell in the progress matrix is also a link that will modify the inspection tab's filters to display the corresponding set of questions and results. The same is true for the segments of the activity-specific progress bars. Try clicking these links to see how they affect the Inspection tab filters.

Finally, create a few more results and see how the result value (Pending or other) and the selected assets affect the way the numbers in the progress matrix and progress bars change.

Tip: *If there are any red numbers remaining on the Planning interface (which indicate questions that were planned but not included in an implementation activity), those corresponding questions will appear on the Overview tab in the "Progress And Tasks" section as "Planned but not implemented questions". Hovering over this progress bar will display a reminder to include these questions in an implementation activity (which can be done even if the plan is already approved and locked).*



PAUSE here for your group to complete the result exercises above and then switch back to working on a single inspection together.

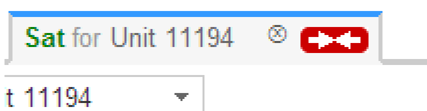
Lesson 9: Creating and resolving conflicts

Step 9.1: Resolving Conflicts

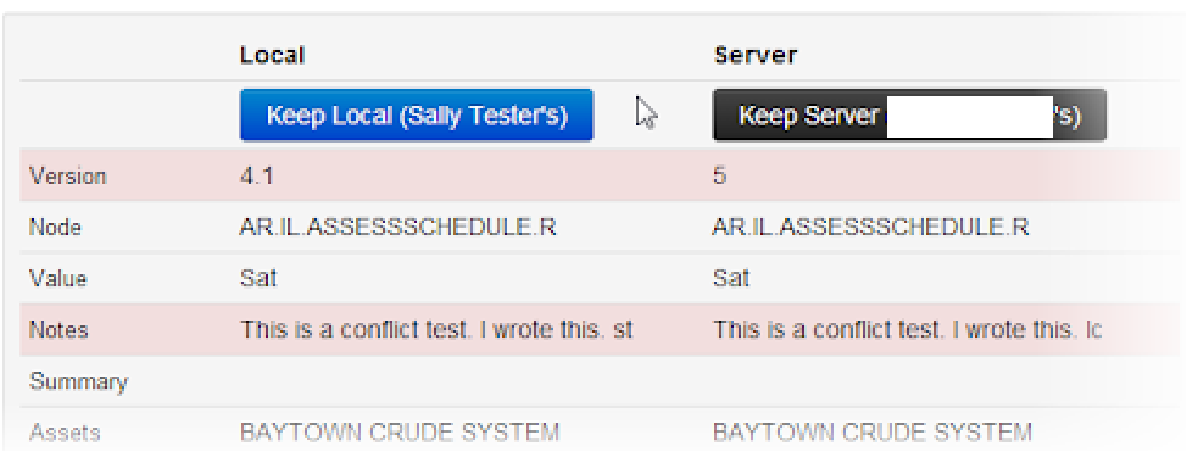
When working together as a team on a single inspection, it is possible to get into situations where users edit the same result notes (or other record) at the same time and the system needs human intervention to resolve the conflict. In this step, we will purposely create conflicts and then resolve them. It is important to be working together on the same inspection for this next section.

Important: All group members will need to have an active internet connection for these next steps.

1. In pairs (or group of 3 if needed), select a specific question with a result and open it on your respective computers. *Note that these next steps need to be followed with the same result on both computers, not two separate results. If you need to create a result first, have one person do that and let it sync to both computers. Then continue with editing that result.*
2. Together, make a small, unique change to the results notes (e.g.,: write your name).
3. Together, as a group, collapse the result (close the tab) or otherwise move off the text area to cause the changes to sync.
4. One or more of your group should see a conflict icon appear on the result.



Click the icon (or the button on the alert box that also appears) and resolve the conflict by selecting one of the options.



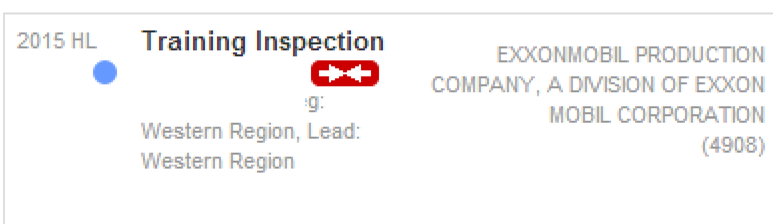
5. It's very important to understand what happens when you have a conflicted record:
    a. The conflict will keep your changes from being recorded by the server and seen by others.

   b. You can resolve the conflict (in fact you <u>must</u> in order to be able to participate in future revisions of the conflicted record), but take care when doing so. Select the record version with the most value. In some cases, you may wish to copy/paste text out of the record you are rejecting prior to resolution. This way, you can return to that result and paste in the text you wished to preserve.

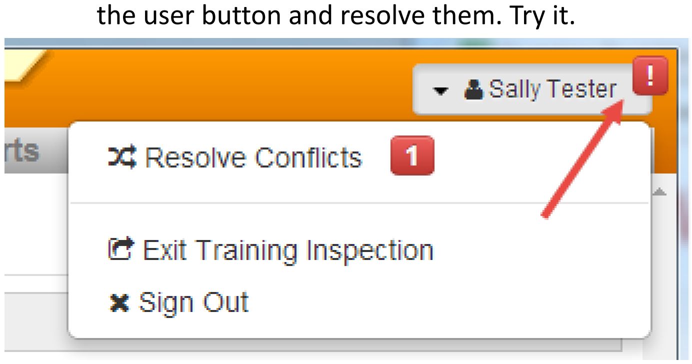
6. Attempt to create and resolve conflicts until your entire team has seen and resolved at least one conflict on their own machine.
7. Conflicts are very rare when all members have stable internet connections and take basic precautions (see below) to avoid double entries. However, they can occur more easily when a team member is disconnected from the internet. In that case, the probability of un-synced changes on the disconnected machine conflicting with changes made by others increases.

PAUSE here for all groups to complete the conflict exercises. Here are some exercises to try while you wait.

1. Disconnect one team member (press F6 to do this). Change the same results on both the connected machine(s) and the disconnected one.
2. Then, restore the connection on the disconnected team member's computer (press F6 again to do this).
3. Resolve the conflicts.
4. Repeat the steps above, but before reconnecting, close IA on the disconnected machine. Then restart IA and notice the conflict warnings in the home tab inspection list. When you see this, it is important to re-open the inspection and resolve those conflicts. Otherwise, your changes will never be synced, and you will also not get the latest changes for the conflicted records from your team members.



5. Finally, conflicts are also notified in the upper right-hand side of the IA window. You can click on the user button and resolve them. Try it.

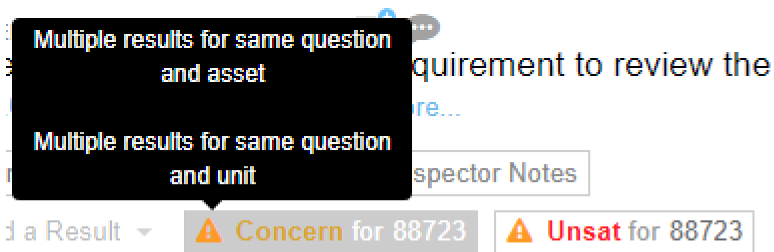


6. Think about and discuss everyday scenarios that could increase the potential for data conflicts and what steps you can take to eliminate and/or mitigate them.

Summary

1. Avoid conflicts by designating a scribe (who alone does results entry) and/or using inspector-specific notes to capture findings which are later used to create the final result.
2. Re-connect your device and re-open your inspection as soon as possible if you have collected results while disconnected.
3. If you see conflict warnings, deal with them right away. They won't go away by themselves and the longer you wait, the greater the chance your input will not be useful in the development of results.

Tip: *In the above examples, a conflict occurs when two team members edit the same set of "result notes" (on the same result record) at the same time. However, if two team members each added a* ***new*** *result to the same question, for the same asset, at the same time, IA will accept both independent results. IA will provide a warning glyph in situations like this, so that the team can be sure to select the most appropriate result and remove the other.*



Lesson 10: Attachments

In addition to results, IA can also collect, link, and track other entities, collectively called Attachments. At present there are eight different types of attachments, let's look at a few of them.

Step 10.1: Requested Items

During an audit, there are often documents requested that are not available at the time they are requested. IA provides a means to track these requests, link them to relevant questions, and confirm when they have been received and reviewed.

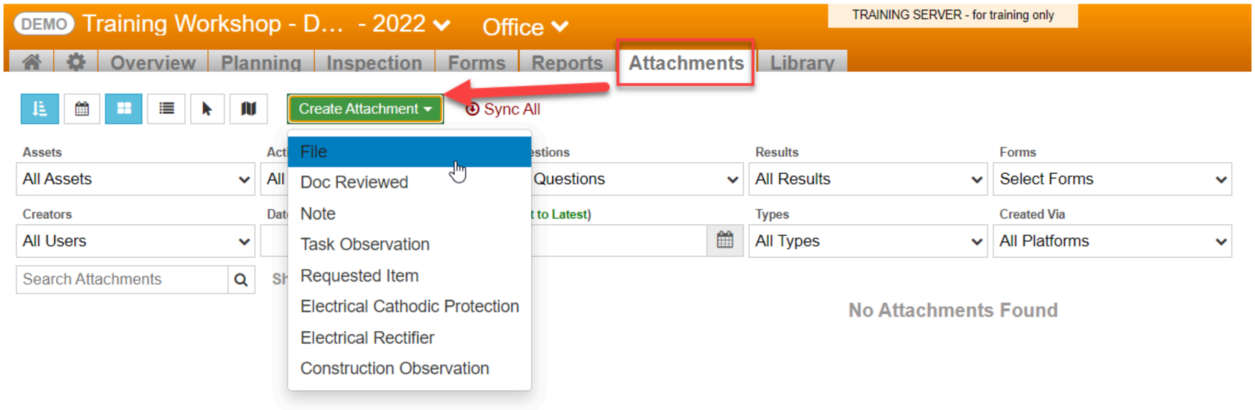
1. Requested items can be linked to any question, or to multiple questions. The simplest thing is to click the  glyph that appears when you hover over a question.
2. Click the "add requested item" link to add the item (note how the question ID of the selected question is automatically provided.)
3. Add a description, notes, but leave date received blank.
4. Note the "R" glyph that now appears next to the question, indicating there is a requested item pending for this question.
5. You can Click the R to open the requested item list with that item highlighted, from there you can receive it (which will stamp the current date on the record), or click 'edit' to make further edits to the item.
6. You can also click the R tab in the lower left to see a list of requested items

7. Add several more requested items for different questions.
8. Finally, there is a requested item report that we will look at later.

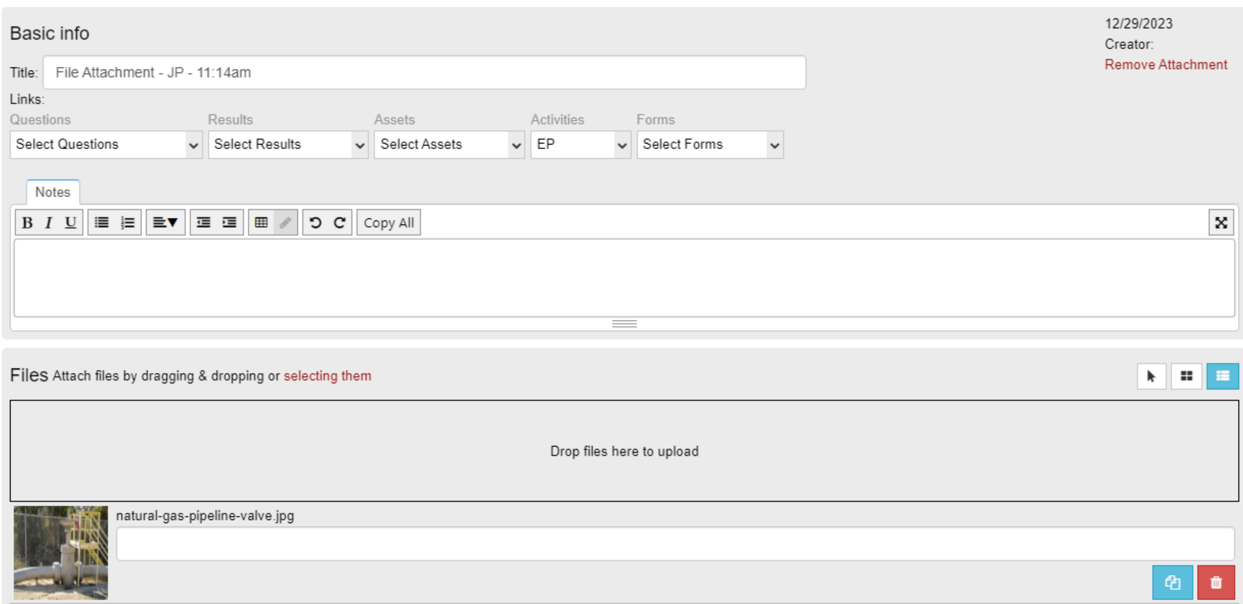
Step 10.2: File Attachments

A requested item (above) is a specific example of a more general "file" attachment. The basic file attachment does not have the additional fields needed to track requested items. Files can be photos, pdfs, Word documents, and other sorts of files that may be generated during an inspection. Let's create a file attachment.

1. Locate a suitable file (you may have been provided a sample file to work with)
2. Open the Attachments Tab, click the Create Attachment button and select "File" type.



3. Select or drag-and-drop a file (photo, pdf etc) into the File Attachment. If you wish, you can add multiple files.



4. Add a title and perhaps some notes to complete the File attachment.

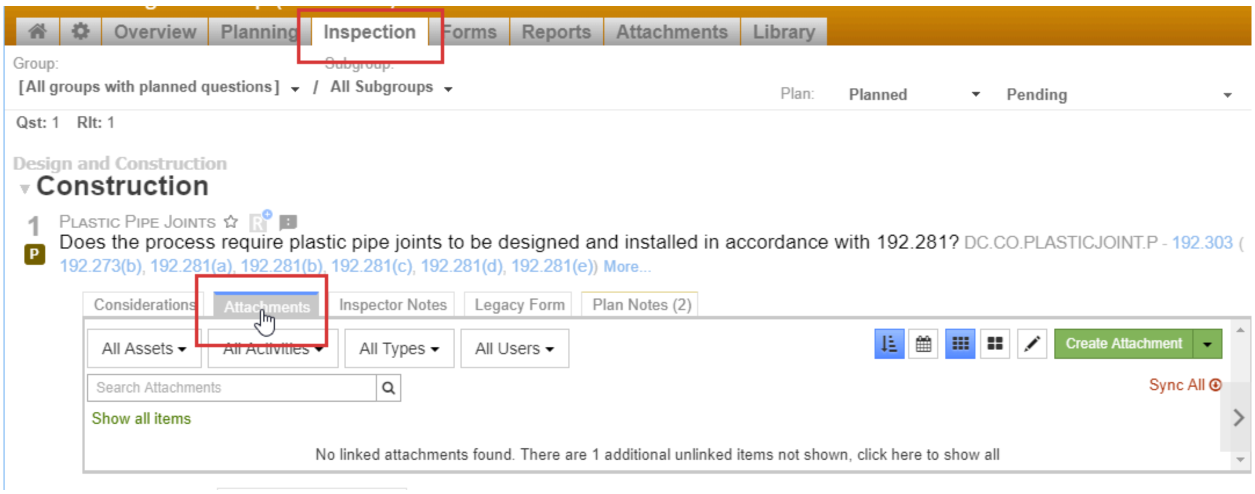
When a "photo observation" is created in IA Mobile, it comes in as a "File" attachment in IA Desktop.

Note: *Most iPhones capture images as .heic files. IA Desktop only accepts web-compatible image file formats like .jpg and .png. If you use your iPhone to take pictures at an inspection and then download them for use in IA Desktop, please make sure to export them to a compatible format in a manner that preserves any metadata you hope to keep, like geographic coordinates.*

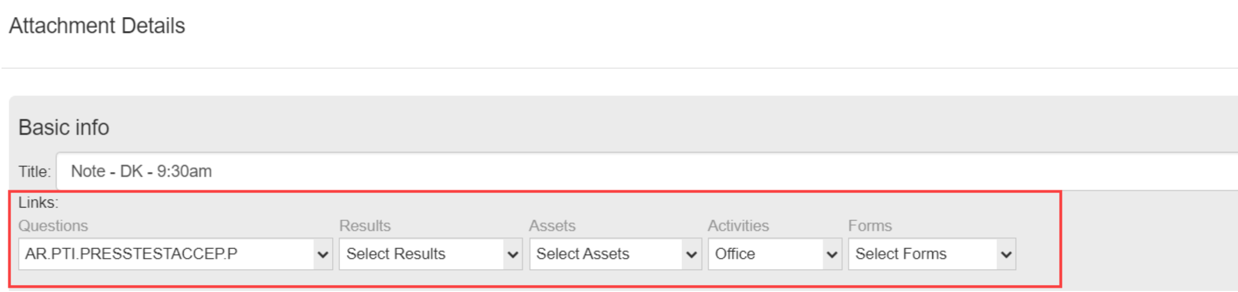
Step 10.3: Attachment linking in context

IA also supports “attachments” which can be linked to nothing except the inspection, or further linked to questions, results, assets, activities and forms. Attachments can be files, photos, notes or structured observations such as CP readings. Let’s create a few more attachments to practice linking.

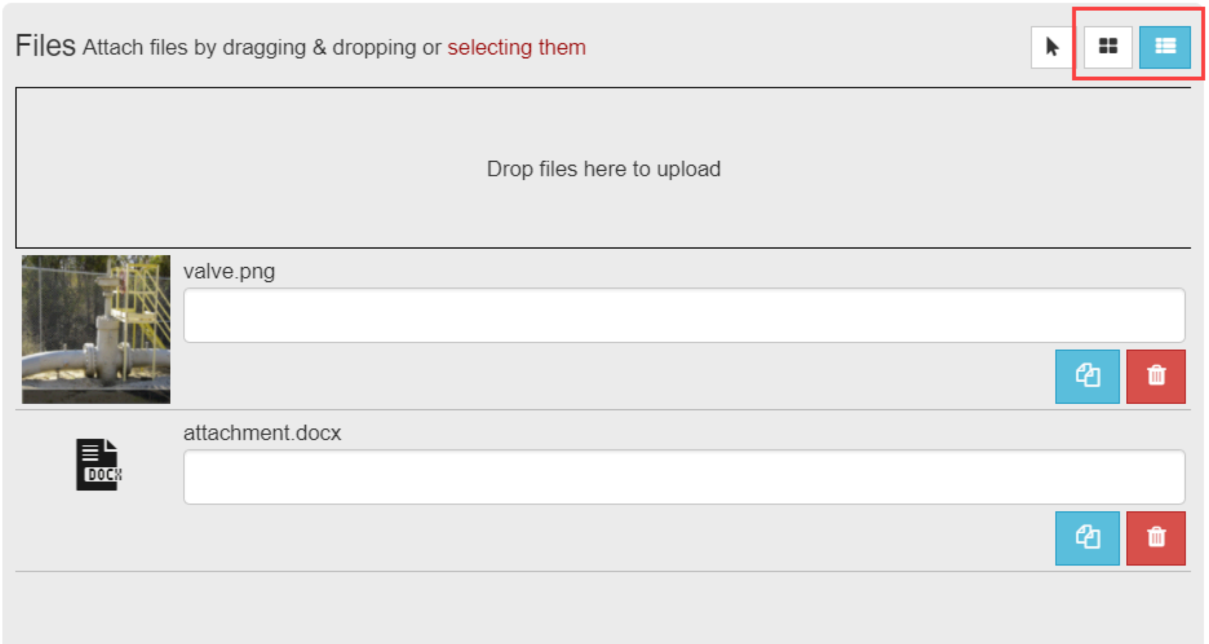
1. Move to the Inspection tab
2. Click the “Attachments” tab on any question.



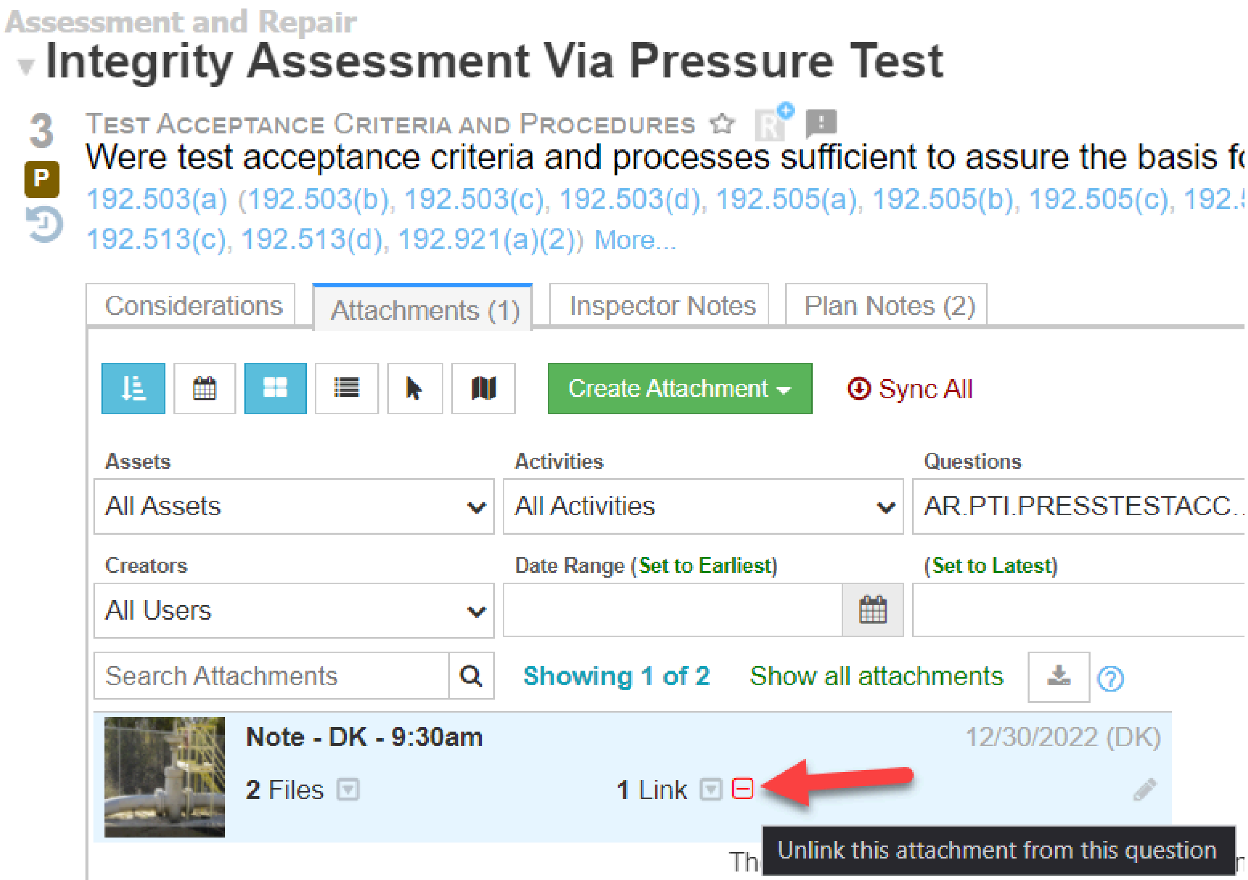
3. Click the green “Create New Attachment” button and select “Note”
4. Each attachment can be “linked” to multiple entities via the link selectors at the top



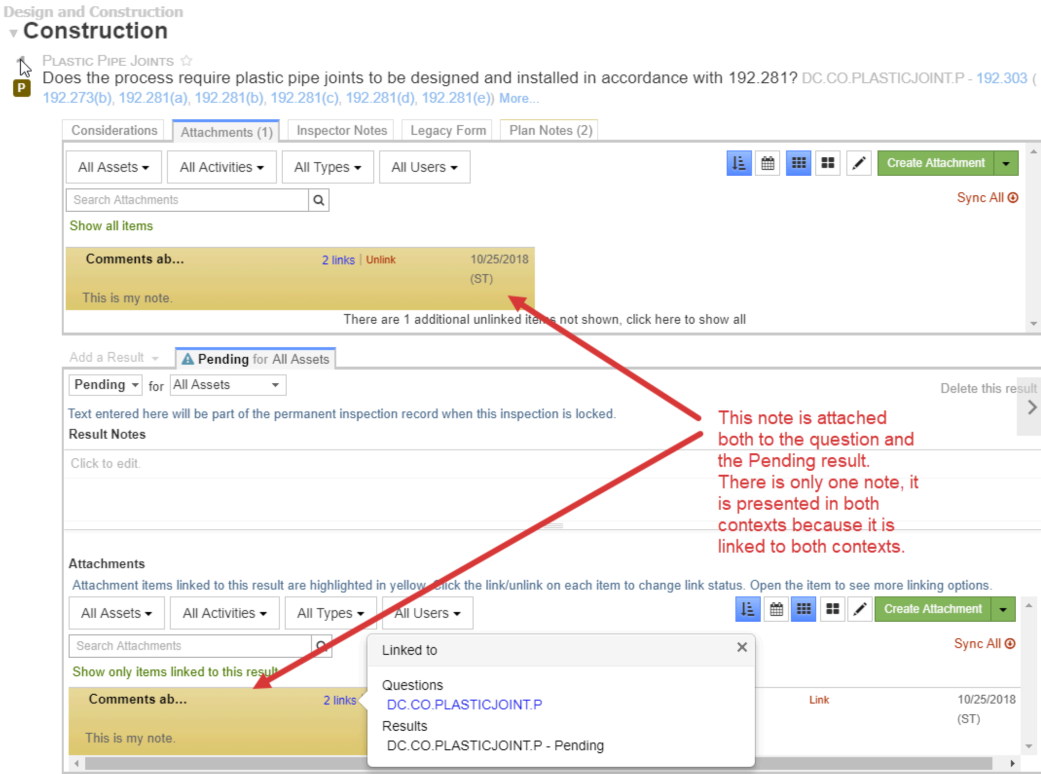
5. Attachments can be added at the inspection-level on the “Attachments” tab, at the question level on the “Inspection” tab and at the result level on any result tab. Try navigating to each of these levels and adding an attachment from that point. Note how the default links change depending on where you are adding it from.
6. You can control how much space is allotted (and how much information is displayed) for each attachment via the buttons provided. Try the different settings to see the different effects.



7. You can link and unlink attachments to the current context (question, result etc) with one click via the links provided on the attachment tile.



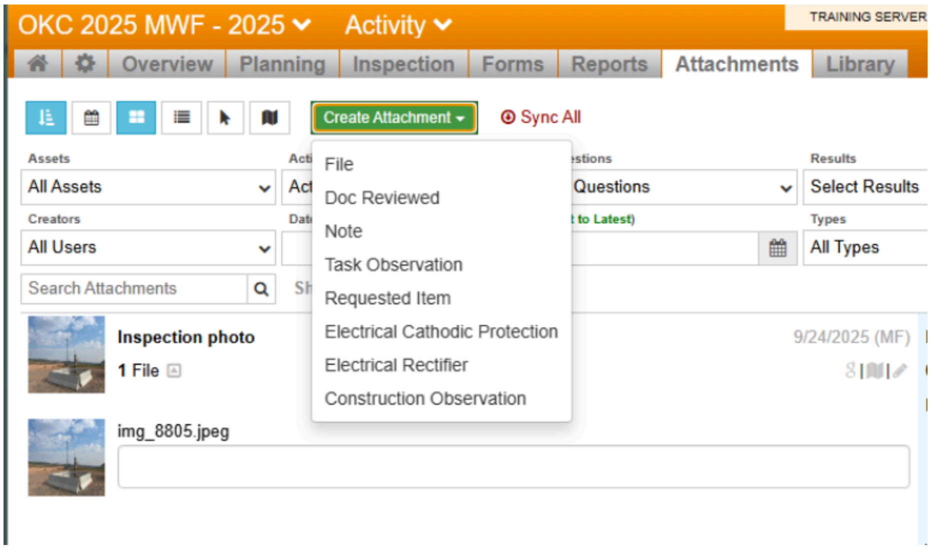
8. Link an attachment to two different questions and then click the '2 links' link to see what is displayed. You should be able to navigate quickly between the two questions that share an attachment. Attachments are not "owned" by any link-point, they are simply pointed to. Before removing (or modifying) an attachment, it is a good idea to check these links to confirm it would not be better to just leave the attachment and unlink it from the current context instead.
9. Linking to a question and linking to a result are different things. Link an attachment to a question, and then link it to one of the question's results. Check the link list to see the difference.



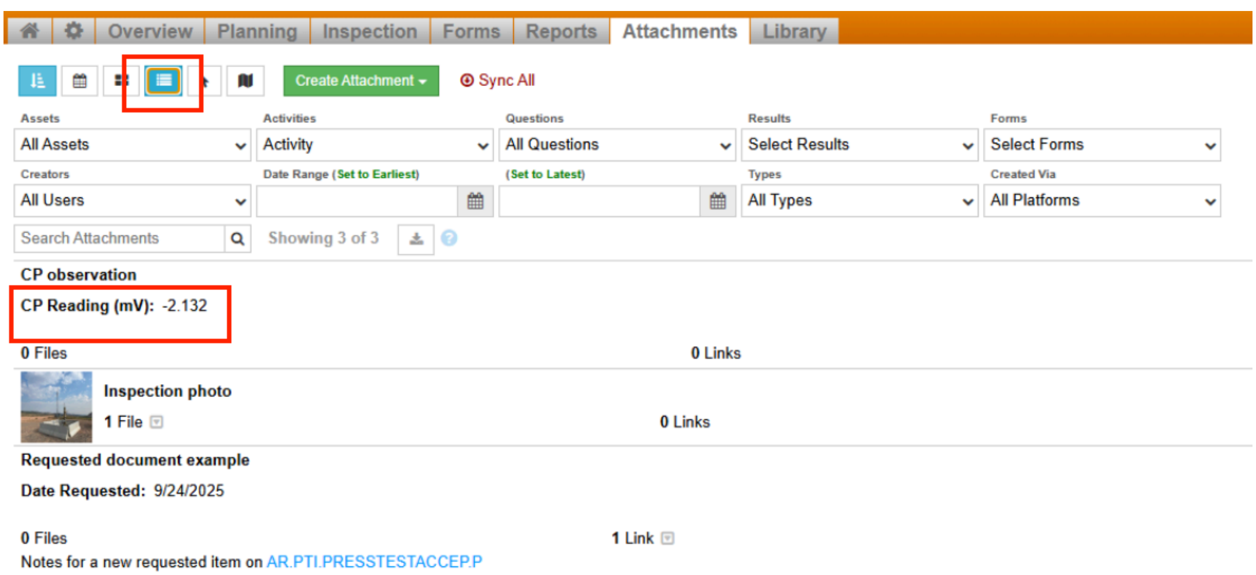
10. Link an attachment to an UNSAT result. After that, have a look at the attachment's representation in the lists. You should see an "evidence" marker next to it. Attachments related to UNSAT or CONCERN results are marked as evidence and if the inspection is linked to PHMSA's Work Management System (WMS), the attachments will be imported into WMS when the inspection is locked.

Step 10.4: Other Attachment Types

Specialized attachment types have attributes for recording CP readings, construction observations, or other data types that inspectors have requested. If your inspections involve collecting these types of records, experiment with adding them and share any questions or suggestions with the instructors.



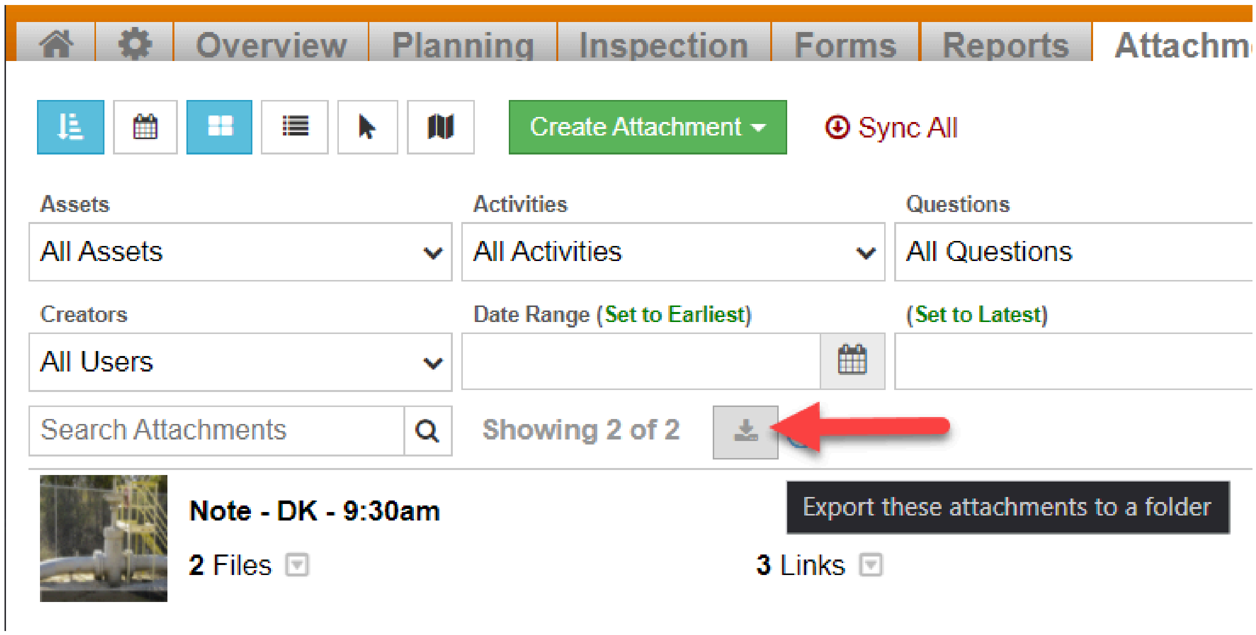
Some attachment types have additional fields to store type-specific data. An Electrical Cathodic Protection attachment, for example, can record the electrode potential in mV. An Electrical Rectifier attachment has input fields for current and voltage. These additional values are not visible in the "Compact View" but can be seen in the "Detailed View."



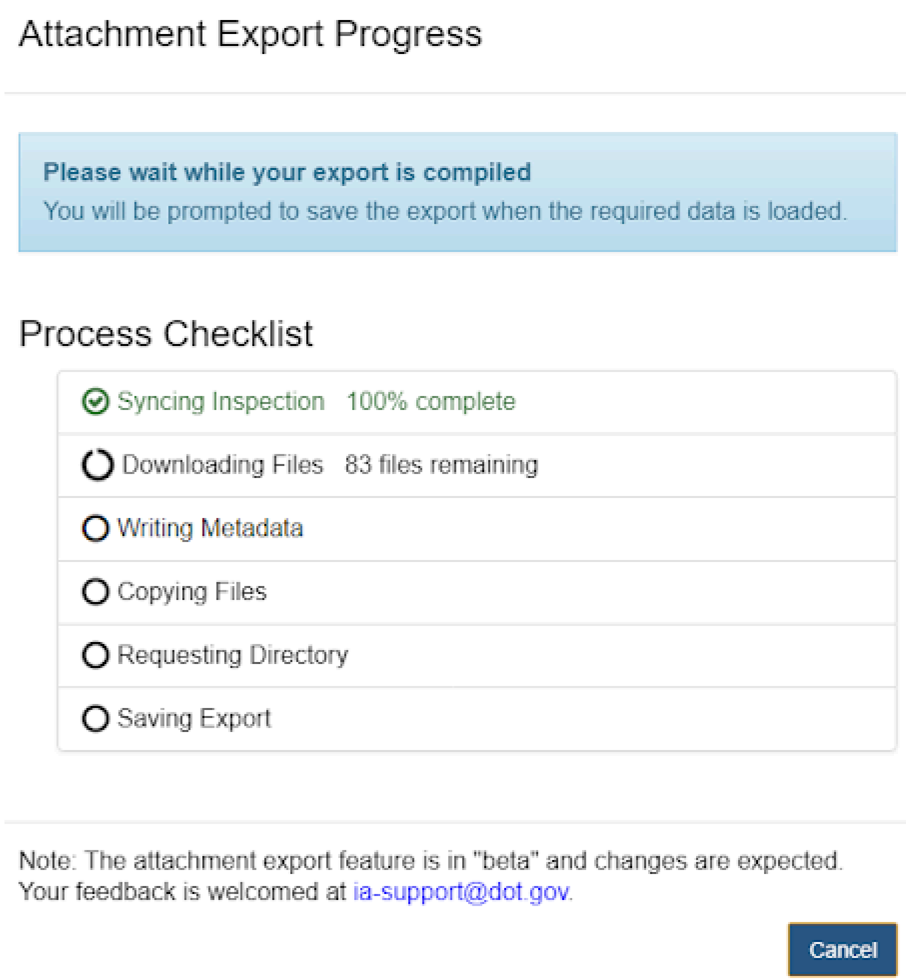
Step 10.5: Exporting Attachments

Most inspection information can be exported from IA Desktop via the Reports tab, however there is one export feature that can be found on the Attachments tab. If you wish to export attachments and associated files, you can do so by following these steps:

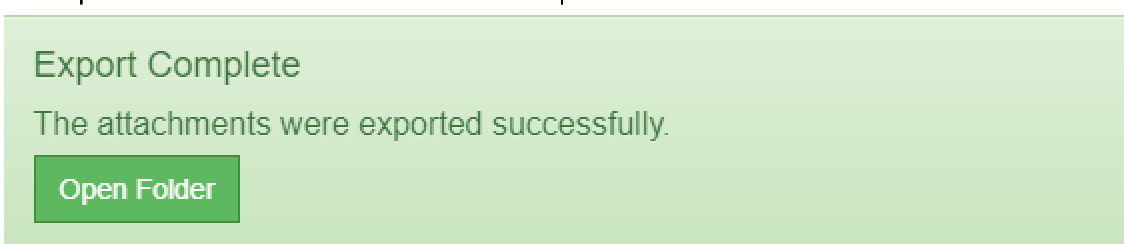
Using the controls above the attachment list on the attachment tab, filter attachments to those you wish to export, and then click the "download" icon to begin the export process:



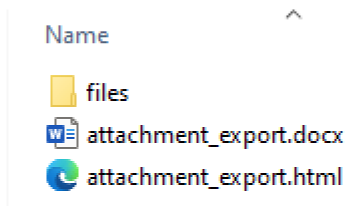
1. When a Windows File Explorer window appears, you will be able to select a location to save the Attachment Export. Please note that exporting to a shared/network drive can take an extremely long time and at times may not complete successfully. Because of this, we highly recommend saving the Attachment Export to your Desktop. When the export is complete, you may then move it from your Desktop to the desired location.
2. After selecting a location to save the Attachment Export, you will see the "Attachment Export Progress" modal appear. Note that all attachment files need to be downloaded from the server. If this has not been done already, the export process may take longer (see "Downloading Files: … files remaining")



3. When the Export is complete, IA Desktop will alert you via the progress modal and you may click the "Open Folder" button to be taken to the Export folder.



4. The Word document will contain links to any associated attachment files (images, Word docs, PDFs, etc). These full-sized files are included in the export folder, in the "files" folder. **For the links in the Word document to function, the entire folder must be present and kept in the same order/structure as when it was exported from IA Desktop, and internal folders/files should not be renamed.**

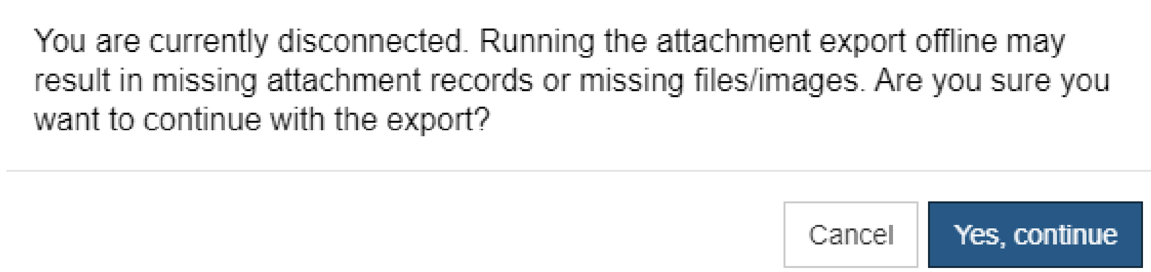


5. Open the Word document to get familiar with this export.

Important: If you wish to share the attachment export with others, please ensure you copy/send the entire attachment export folder. The MS Word document produced by the export may include links to files and images. In order to preserve those links, do not move or rename any files/folders within the attachment export folder.

Tip

It is highly recommended to only run the Attachment Export when IA Desktop is connected to the internet. Since your local machine may not yet have all the associated files downloaded, the exporter will fetch the files. Without an internet connection, the export may be incomplete due to missing attachment records or missing files/images. If you attempt to run the export while disconnected, you'll see the following message:

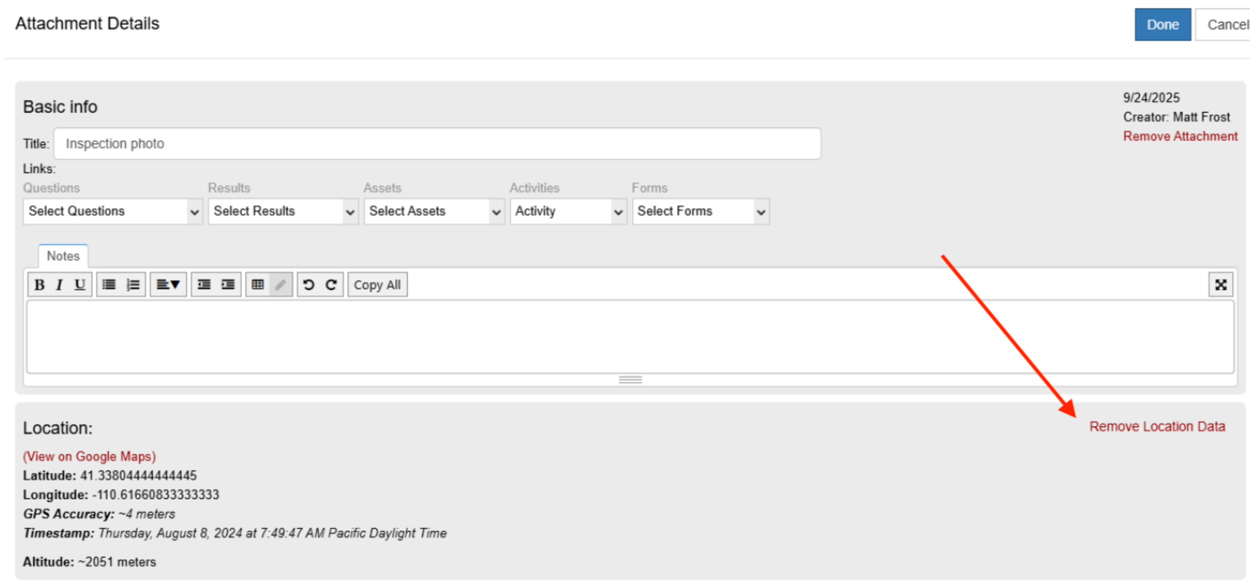


Step 10.6: Attachment locations

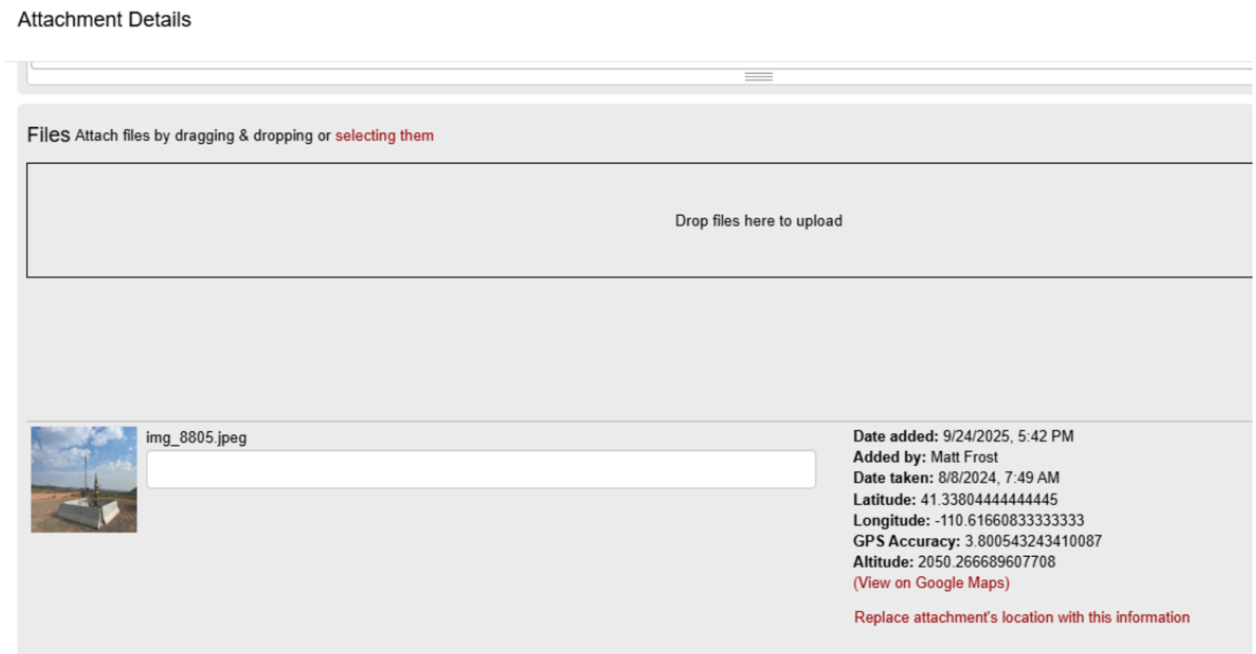
Inspectors may add location information to attachments in multiple ways:

1. By creating an attachment in IA Mobile (and having appropriate location settings in place).
2. By applying GIS information from an image to the attachment (in IA Desktop or in IA Mobile).

If an attachment has location information associated with it, that information will appear in IA Desktop. It may be removed/cleared out by clicking the "Remove Location Data" link.



If an image on an attachment contains location data, that information will be displayed as well. Not all images will have location information, it depends on the source of the image and the source's settings.

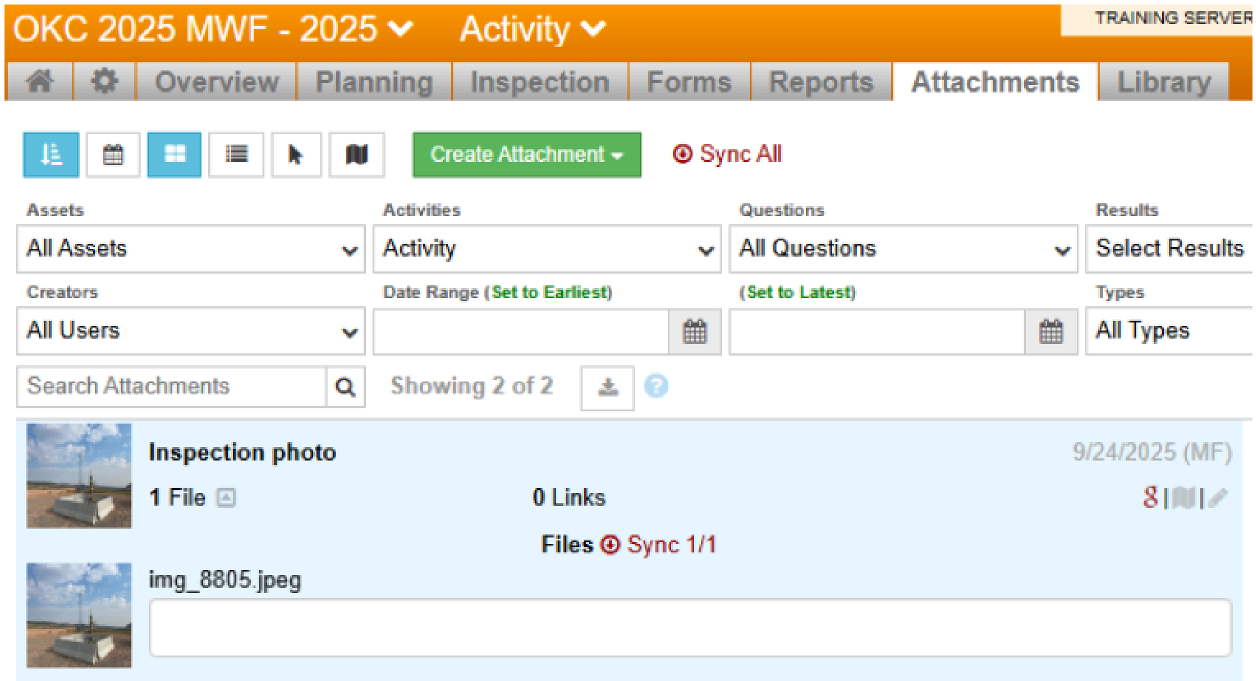


Note that each attachment may have multiple images on it. The attachment itself may have a location (which is saved to IA) and each image may have a different location of its own. These image locations are not saved to IA, they are simply data that is bundled into the images themselves.

In IA Desktop, you may opt to use the location from an image and apply it to the attachment. This can be done with the "Replace attachment's location with this information" button next to an image.

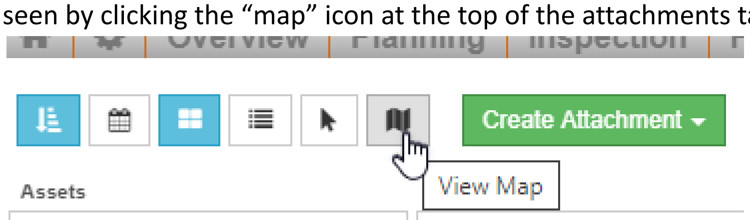
Try out these steps to experiment with attachment locations:

1. Obtain an image with location information (either from Workshop facilitator, from IA Mobile, or perhaps from sending yourself one from your phone).
2. Create a new attachment in IA Desktop. By default in IA Desktop, this new attachment will have no location.
3. Add the image to your new attachment, see the location information for this image displayed.
4. Click the "Replace attachment's location with this information" button and see that the attachment now contains this image's location information.
5. Click "Done" in the top right to save this change.
6. Click the "g" icon for this attachment in the attachment list to see the attachment's location on a Google map.



Step 10.7: Viewing Attachments on a Map

If you or a teammate has been using IA Mobile or images to add locations to attachments, these can be seen by clicking the “map” icon at the top of the attachments tab:



You can interact with these attachments by hovering over or clicking the icons on the map:

Lesson 11: Reporting

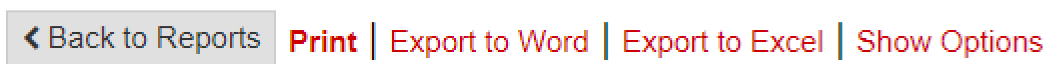
Step 11.1: Reporting

IA can generate many reports. Except for the Supervisor's report, the reports available in IA are focused on the execution of a single inspection, not cross-inspection review.

Reports in IA are divided into two categories

a) Local– these reports function without a connection and are based solely on local data
b) Remote – these reports require a connection to function (they are executed on the server, not the client).

Each report has a set of links that allow export to external documents and options settings. You'll need to use these links in the next exercise.

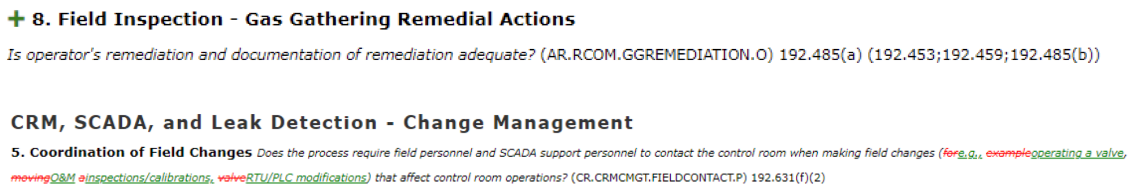


The following exercises can be performed individually or as a group.

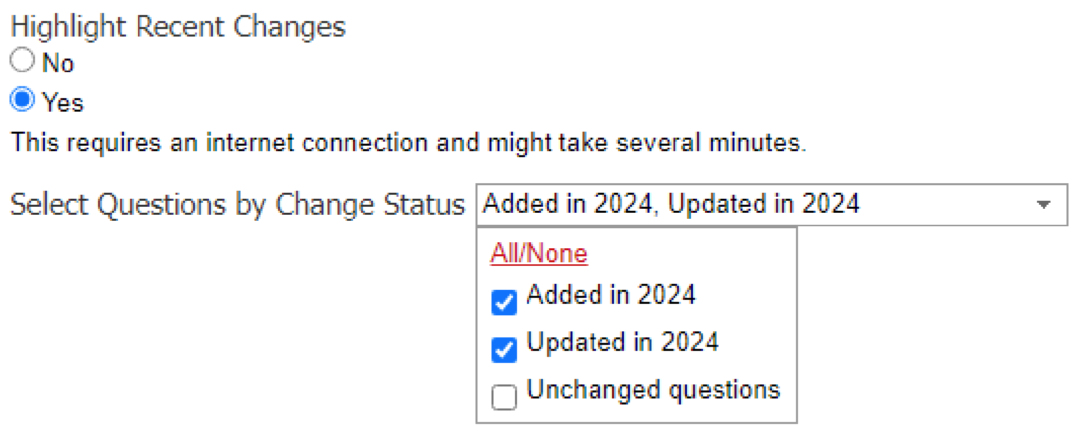
Export Questions

1. Use the Export Questions report to create a Word document of all the planned questions in your inspection.
2. Use the Export Questions report, and the Display Type = Tabular to create an Excel workbook of all the planned questions in your inspection.
3. Use the Group/Subgroup selector in the Export Questions report to winnow your report down to a single subgroup (click "Show options" to see these filters plus others)
4. Explore what the other options on the Export Questions report will do (start by using some of the presets provided).
5. Ask your IAT member what your region's policy is on providing exported questions to Operators.

Tip	*Try the "Recently created and updated questions" preset on the Export Questions report. This will include considerations and filter the report to questions that were added or updated during the calendar year of the PRS/question set selected for the current inspection. For example, in an inspection using GT.2024.02, selecting this option would only include questions which were added or updated in GT.2024.01 and GT.2024.02. Like the [Question change tracking feature] seen on the Planning and Inspection tabs, this preset will also display green/red styling to represent text that has been changed during that calendar year.*



Apart from the preset, these options can be toggled by using these controls:



Validation Report

Tip	*The validation report is the most important report in IA. It helps assure the quality of your inspection data. Use it often.*

1. Run the validation report. Find the issues and correct them.
2. Run the validation report with the "Include Rule Inventory "option checked. Create violations of at least three rules in your inspection. Then, re-run the report, see the items and fix them.

Inspection Results Report

6. Use the IRR report to list your results. Use the links in the report to jump to the results.

Results and Notes Review

This report is intended for review of long text, and is recommended for review prior to requesting approval of the inspection.

Inspection Output (IOR)

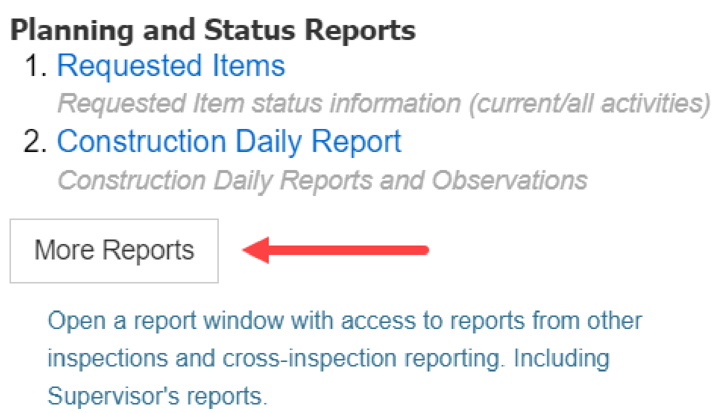
Tip	*The IOR is the replacement for the PIM (Post Inspection Memo) as a final report for the inspection.*

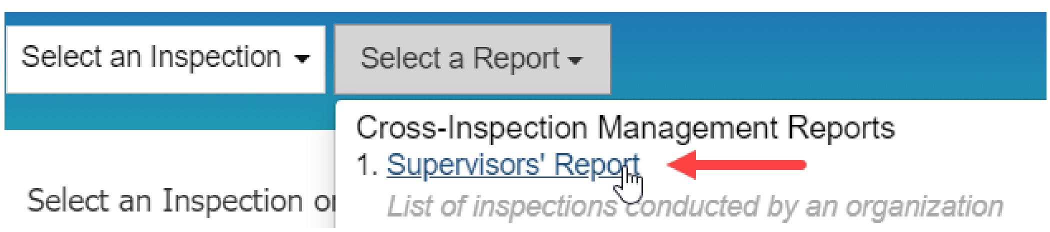
1. Run the IOR, test the various options.

2. Add an inspection summary (on the overview tab) and then re-run the IOR
3. Note the planned and required columns in the Scope (Assets) table. They are probably the same value for each row.

Supervisor's Report

This report is primarily targeted at users who oversee multiple inspections. However, it can be useful for others as well. To view the Supervisor's Report, click the "More Reports" button at the end of the list, and then select "Supervisor's Report" from the "Select a Report" dropdown.



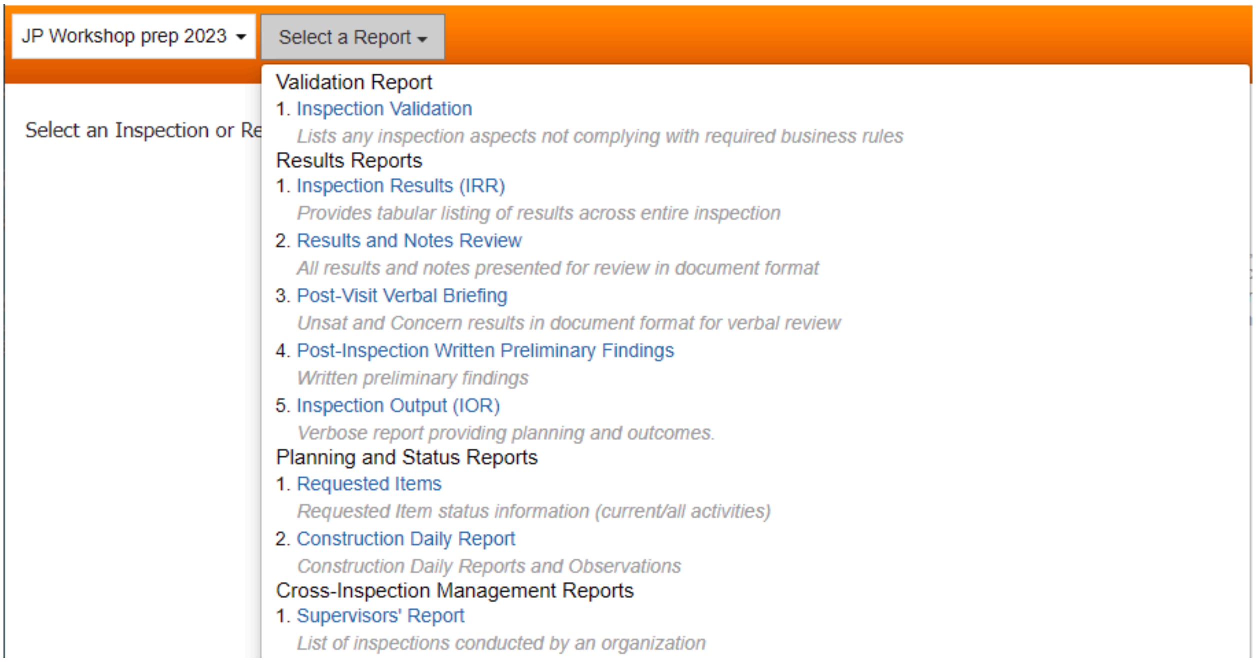


1. Run the supervisor's report, test the various options.
2. Note how the "Inspection Name" column is a link for some inspections, while "Reports" is a link for all.

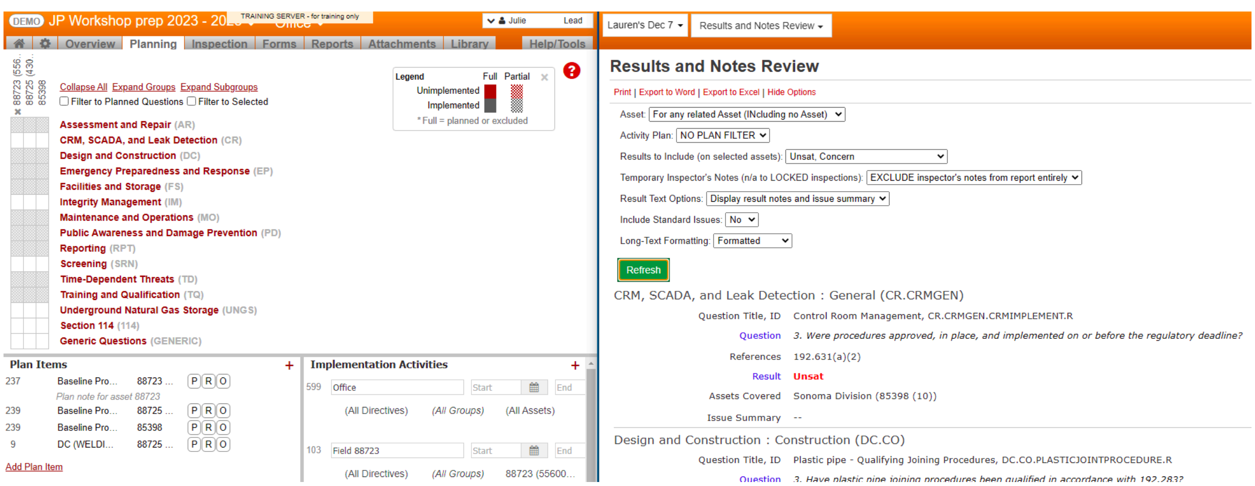
More Reports

While we have this "More reports" window open, let's see how else we can utilize it.

In addition to running the Supervisor's Report, from this window you can select to run any IA report for an inspection other than the one that you have currently open in the main IA window. For example, you can select an inspection that you are a team member of (or a locked inspection) via the "Select an Inspection" dropdown. From the "Select a Report" dropdown, you can then choose a report you'd like to run on the selected inspection.



You now have the advantage of having two IA Desktop windows open - each looking at data from a different inspection. For example, you can have the current inspection open in one window, planning this inspection. In the second window, you can have a report from a relevant, locked inspection open to help inform your planning. See below for an example of how IA can be used side-by-side to compare information from two different inspections:



Try any reports you have not yet tried and then move on to the next step.

Tip

On many reports in IA Desktop, you will see a checkbox to "Suppress repeated result output for re-presented questions". If you recall from Lesson 6.2, questions can be re-presented across multiple subgroups. When this happens, reports will typically display all presentations of that question, and recall that all presentations will share the same result(s). To prevent the same question/results from appearing multiple times on the report, you may check this box.

The "IRR" report displaying all presentations of a question separately:

Row	Assets	Result	(Note[1])	Sub-Group	Qst #	Question ID
1.	88723	Concern	3	TD.CP	24.	TD.CP.RECORDS.R
2.	88723	Concern	3	TD.CPMONITOR	35.	TD.CP.RECORDS.R
3.	88723	Concern	3	TD.CPEXPOSED	11.	TD.CP.RECORDS.R

The "IRR" report suppressing repeated output, because the box has been checked:

☑ Suppress repeated result output for re-presented questions

Refresh Report

88723 (1)

Row	Assets	Result	Sub-Group(s)	Qst #	Question ID
1.	88723	Concern	TD.CP TD.CPMONITOR TD.CPEXPOSED	24. 35. 11.	TD.CP.RECORDS.R

Tip

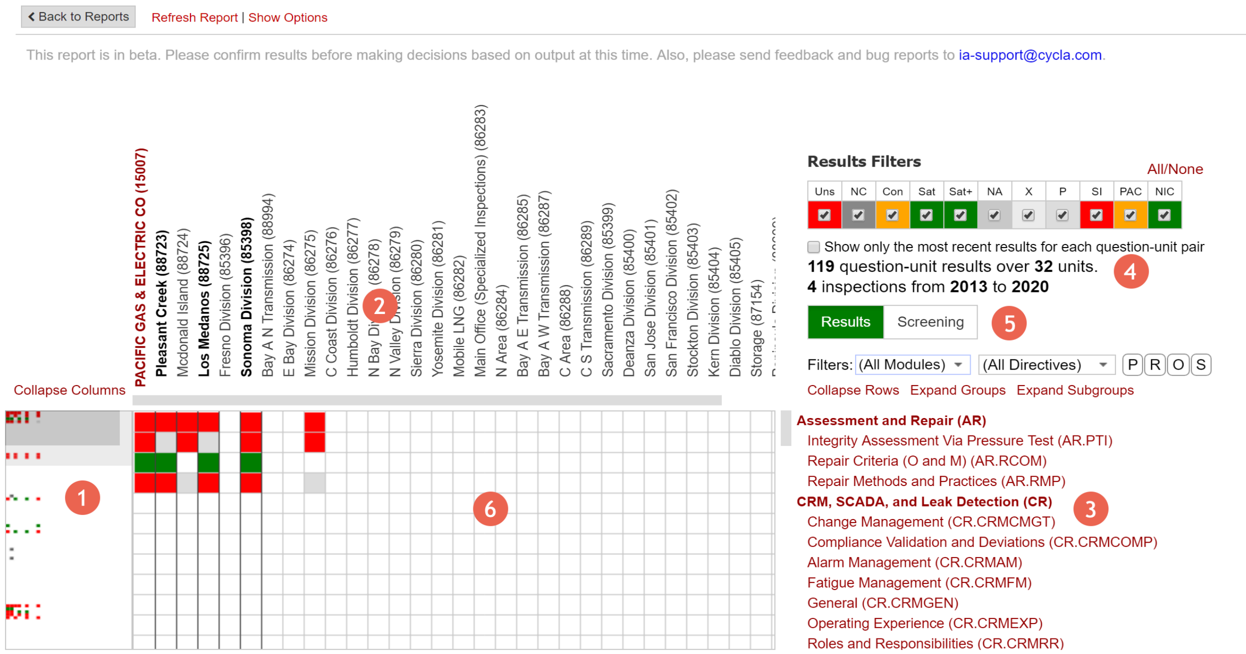
The Monthly Open Inspection Report (MOIR) is generated on a monthly basis for each regulating organization. It is emailed to active IA account holders who are listed as LEAD, SUPERVISOR, or DIRECTOR on any open inspection for which that organization is the designated regulator. This report provides information on inspections that have been open for more than 12 months, so that the organization can ensure those are finalized and locked in IA when complete.

Step 11.2: Reporting – Coverage Heatmap report

The Coverage Heatmap report is more of a tool than a report. Let's look at it specifically.

1. Run the report for your inspection and have a look at the results. Depending on where you recorded your results, your display will differ, but the layout should look similar to the image

below.

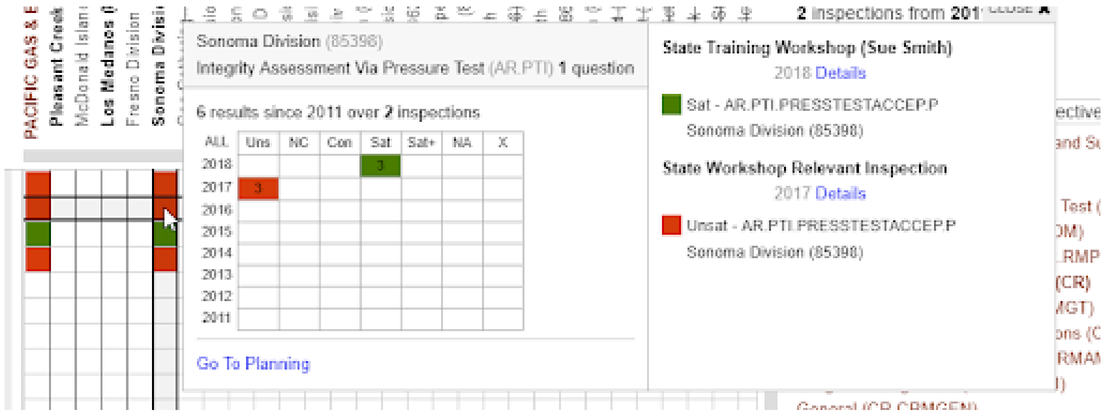


Coverage heatmap layout.

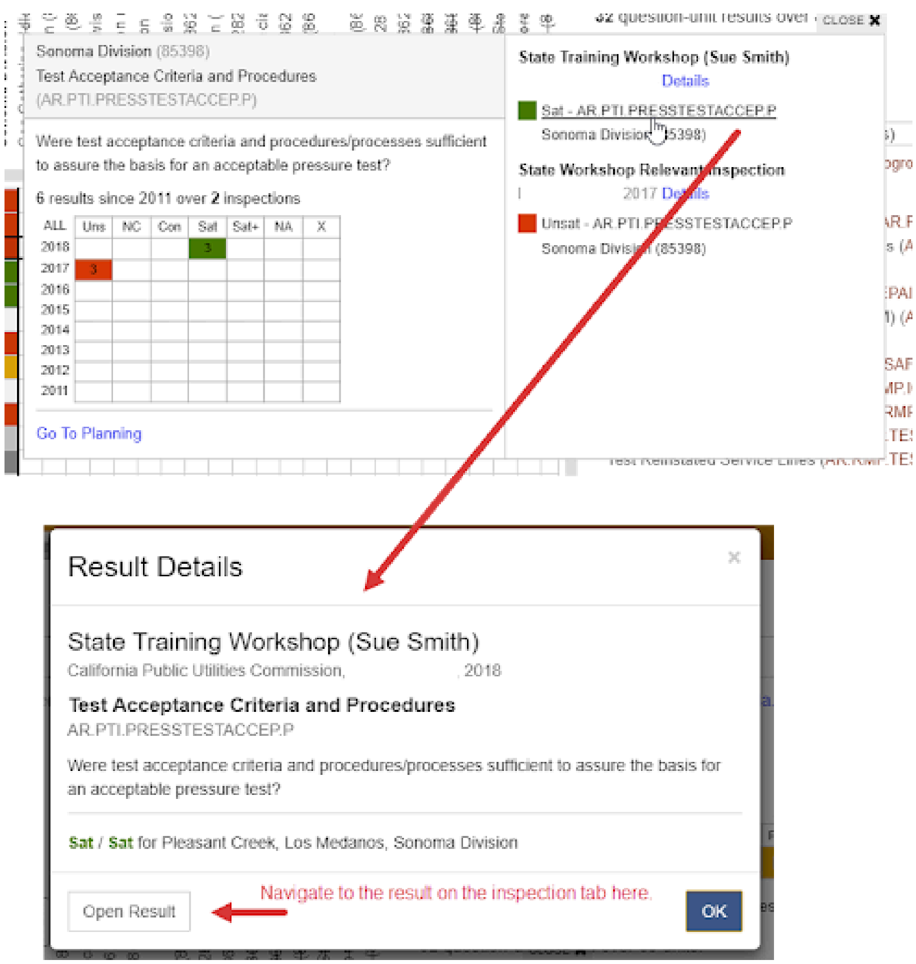
1) Navigation grid, slide the grey region around to scroll up/down left/right.
2) Units (Note: these are UNITs or External Unit Ids, not Assets (which can be a combination of multiple units)
3) Question Content (organized by Module/Submodule/Question)
4) Filter Controls
5) Result-display mode (see below)
6) Result grid

The Coverage Heatmap is a tool to look at your inspection's results along Unit X Question coordinates. Consider it a "map" of results collected. Each cell represents a "location" where results can be collected. Some cells, such as those corresponding to Operators or Modules and Submodules are representative of the aggregation of all the results collected "under" them. Just like the planning grid, you can expand and collapse the question content rows to "drill down" into the results.

Also, the results under each cell can be viewed by hovering over it, and drilled-into by clicking.



Finally you can see a summary of the result (notes etc) by clicking on the item in the result list.



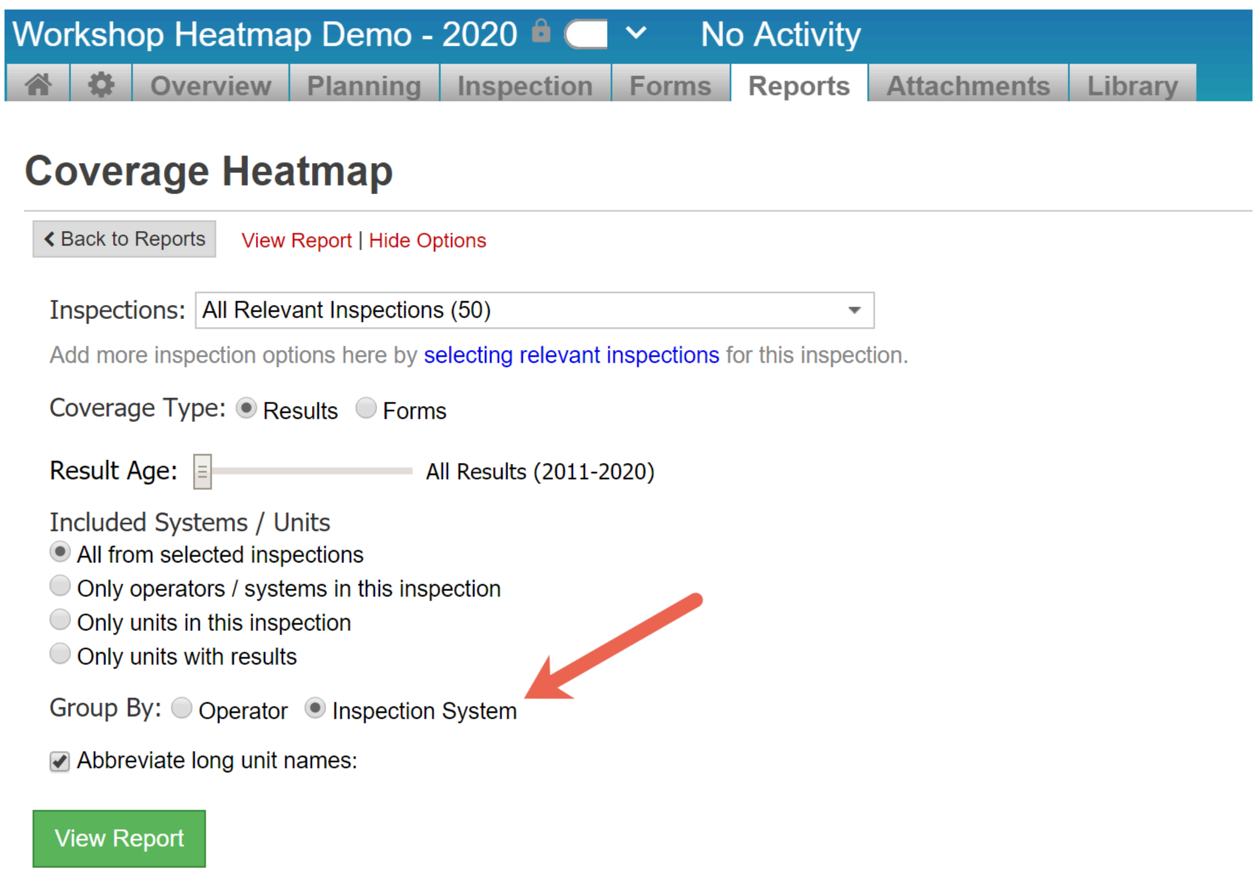
So, in summary the heatmap provides a way to look over the entire set of results for your inspection.

However, the primary purpose for the Coverage Heatmap is actually to look at *previous* inspections results. If you expand the reports Options, you'll see that all the relevant inspections flagged for this inspection are available. In our example here, we have only one other relevant inspection. It is difficult to review this feature without real data, so let's watch an instructor demo and follow along in 11.3 and 11.4. .

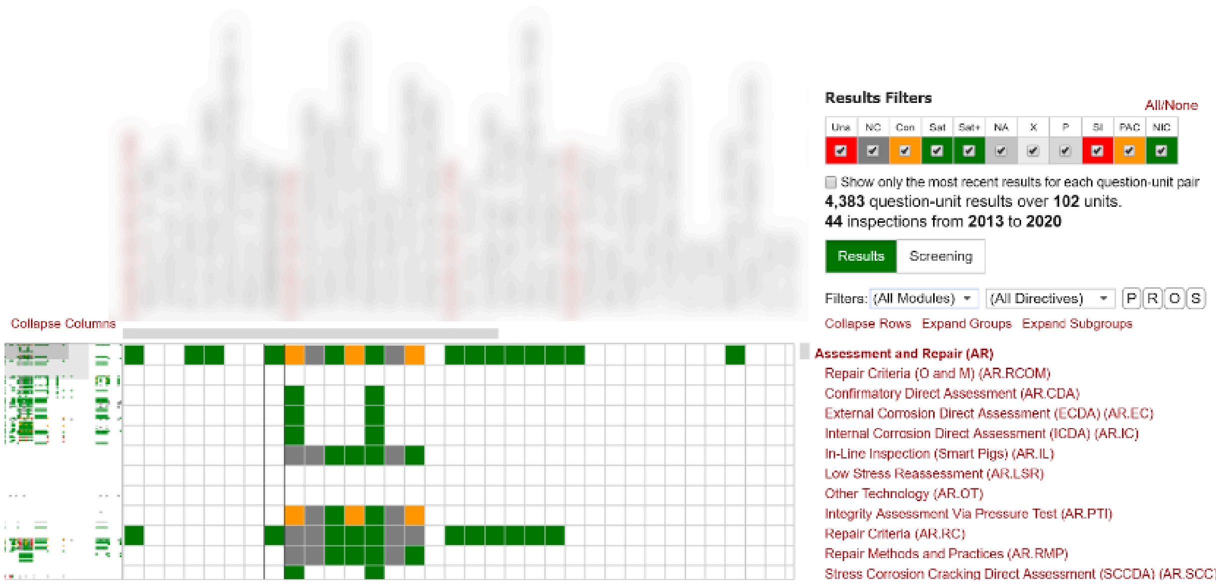
Step 11.3: Reporting – Coverage Heatmap report part 2

In order to see how this works, your instructor will give a demo of the following steps (there is no need to complete these steps on your own, just follow along with the instructor's demo). In this inspection, we have flagged around 50 previous inspections for review.

Before running the report, select the "Inspection System" option in "Group By:"



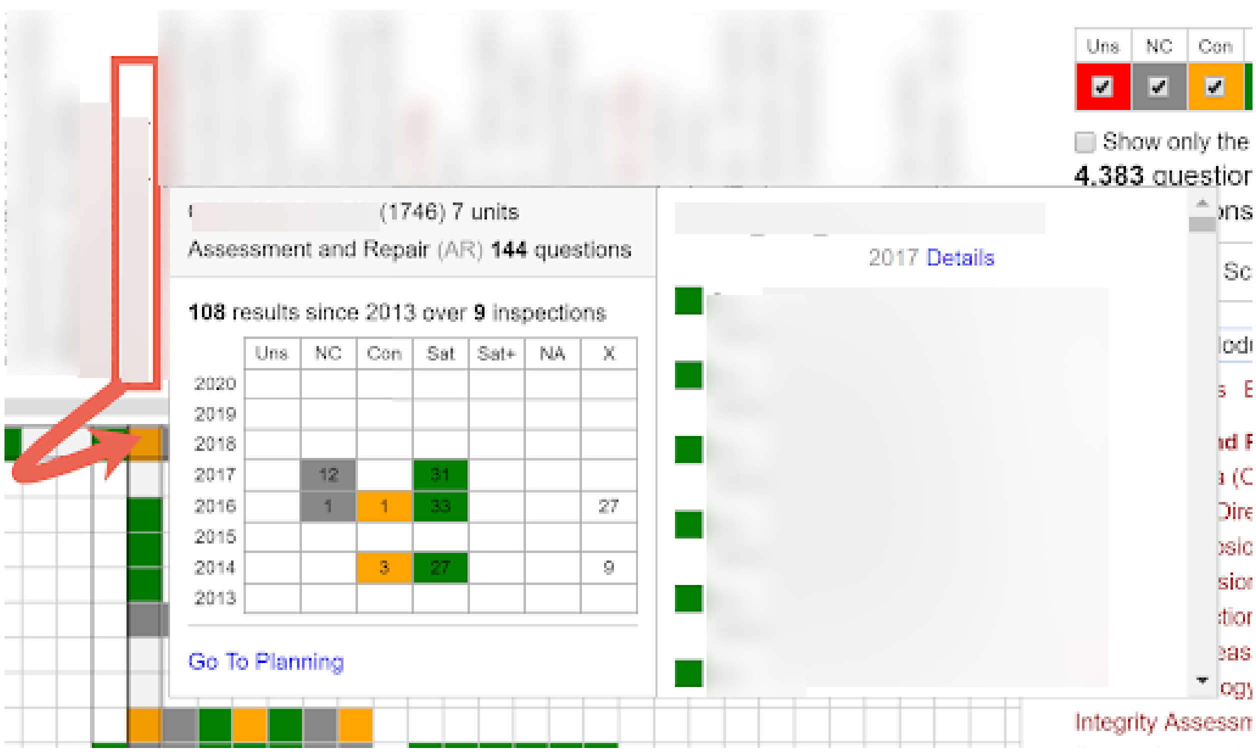
Run the report and you should see the following:



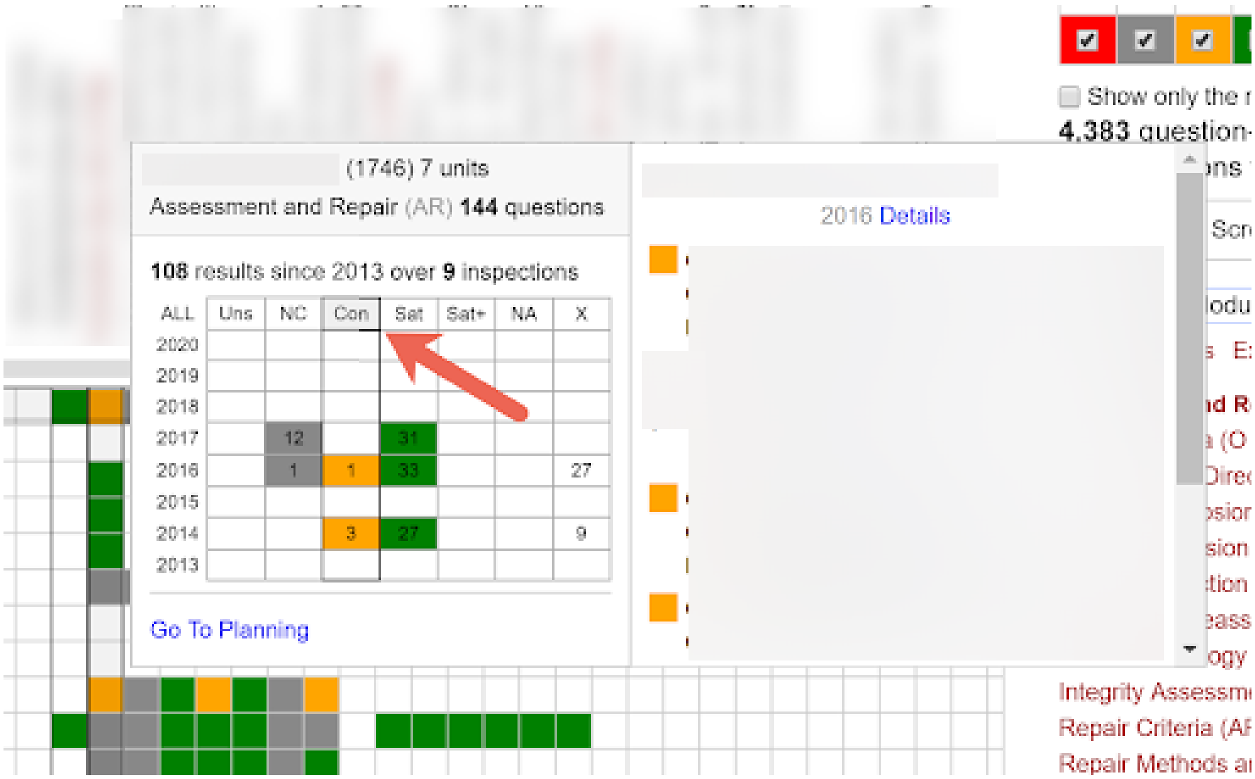
Over 4K until-level results displayed in the heatmap, collected over 44 inspections.

Explore the heatmap by taking the following steps

1. Drill down into a system-level cell by clicking on a cell under one of the System column headers.



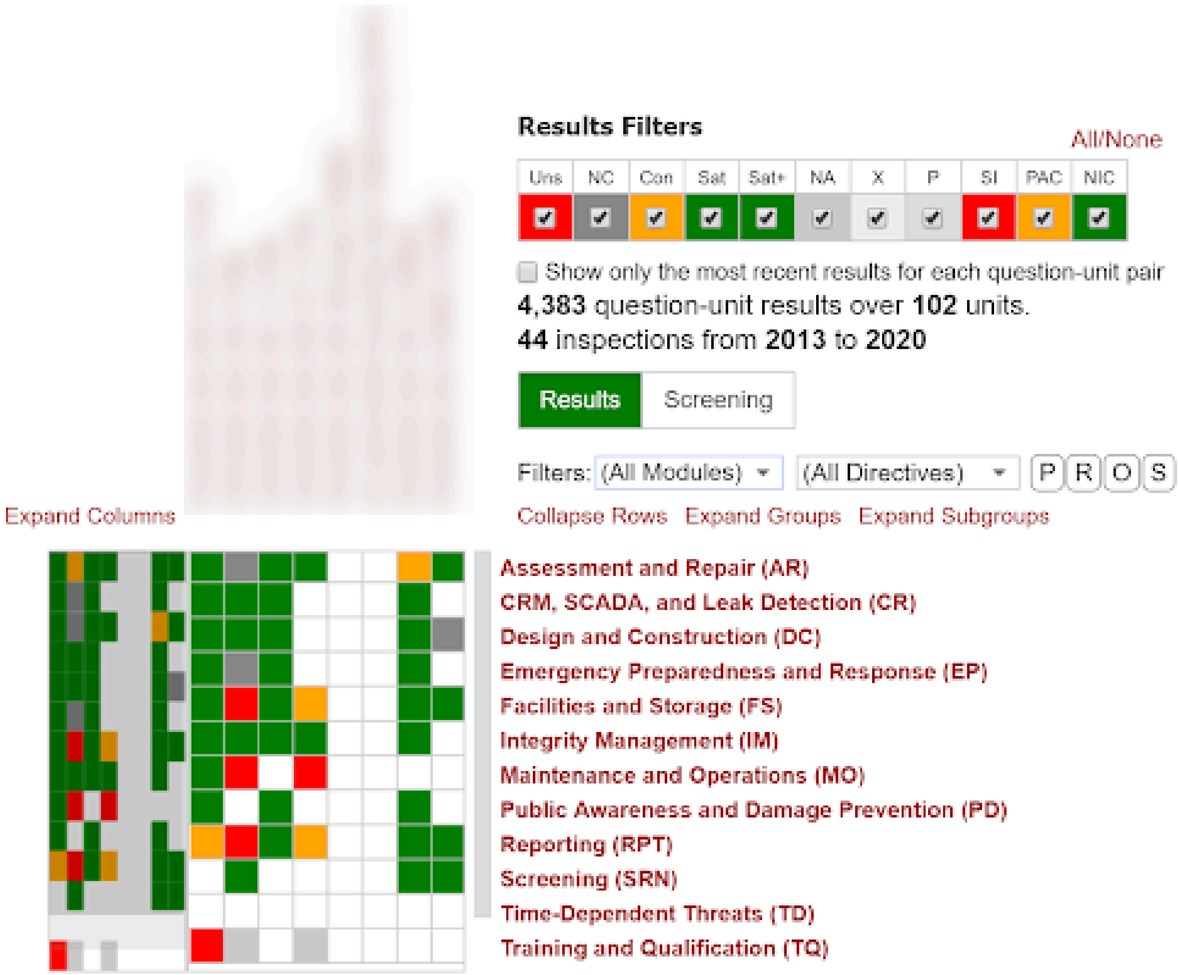
2. Filter the list of results by clicking on cells (including row and column headers)



Here, we have filtered to just Concern valued results by clicking the column header.

3. Reset the filter by clicking the “All” cell in the upper left of the result grid.
4. Drill down into some individual level results.

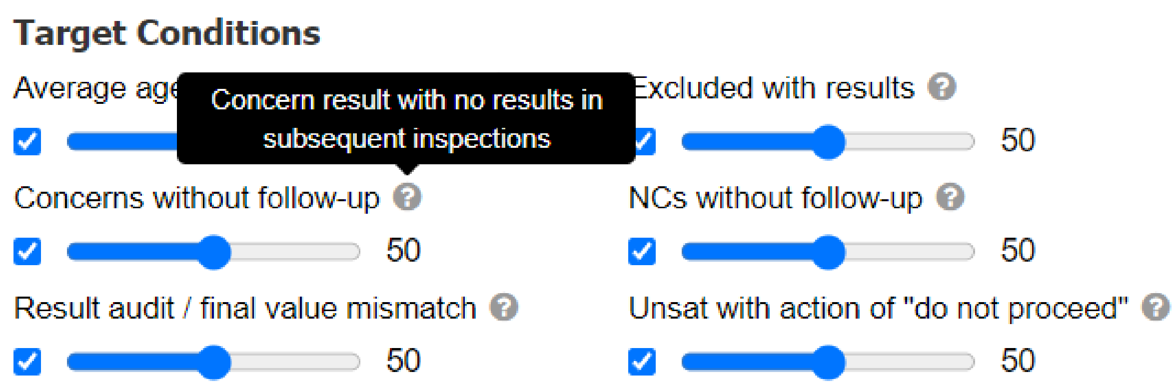
5. Experiment with the expand/collapse options for rows and columns. Can you make the display look like this?



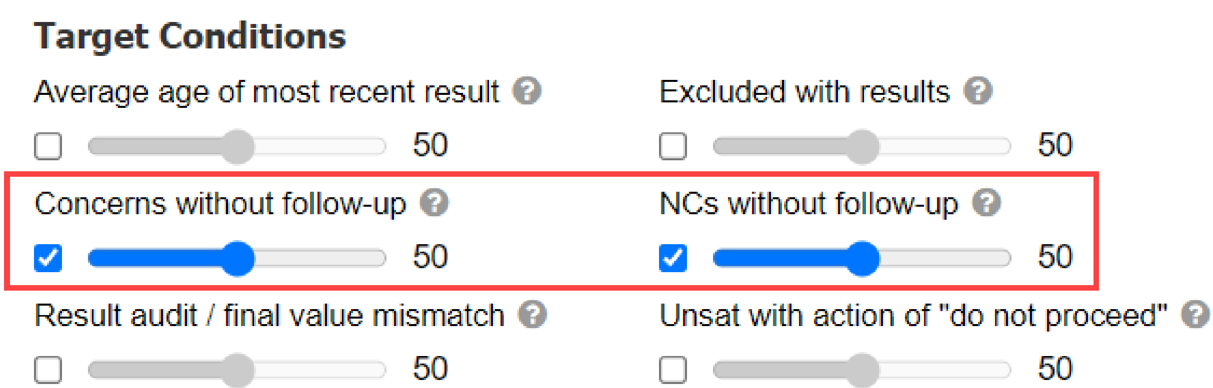
The Coverage Heatmap can also help you find specific conditions in the data that may indicate the need for additional inspection activity.

Step 11.4: Reporting – Coverage Heatmap report part 3

Click the “Screening” mode selector to put the display in Screening mode. This changes the display and reveals a set of target condition options.



1. Hover over each ? marker to see what condition is being represented by each control.
2. With the checkboxes, turn off all the conditions except “Concerns without follow-up” and “NCs without follow-up”.



The idea behind the screening condition heuristics is to find conditions that may warrant additional inspection activity. In this case, we are looking for Concern and NC results for which there has not been (as yet) a subsequent result collected for the same question and unit. These situations may warrant a follow up review on subsequent inspections. If your inspection planning process allows for targeted inspection, you may wish to use the coverage heatmap in this way to locate potential areas for review.

3. Experiment with the various screening condition filter heuristics.

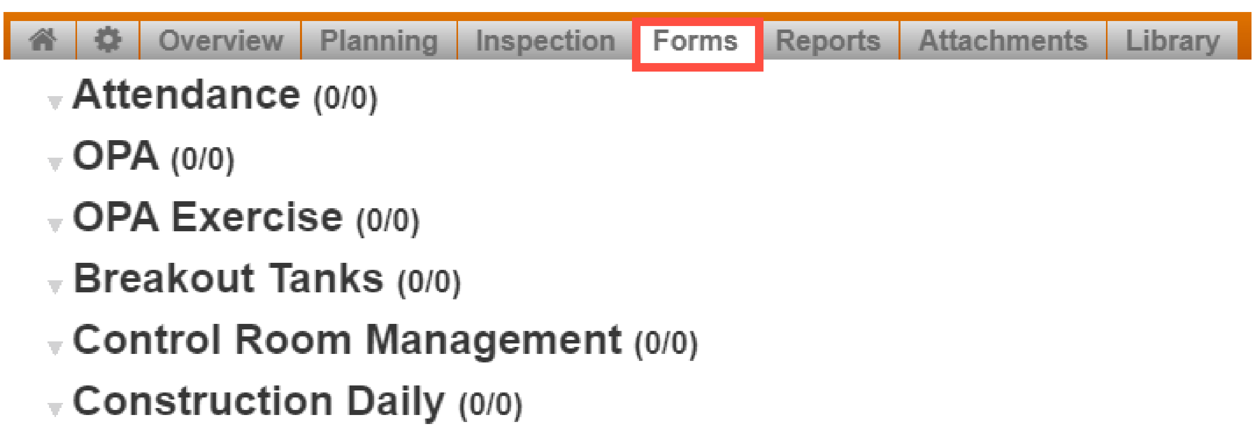
Presentation: IA Reports Overview

Notes:

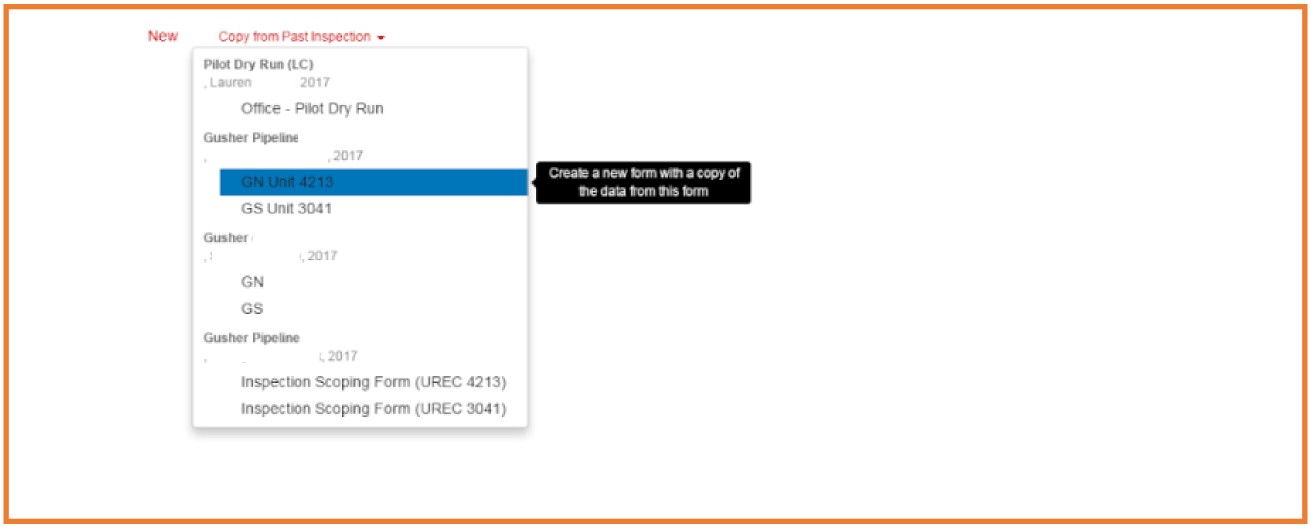
Lesson 12: Data Forms

Step 12.1: Creating Data Forms

IA contains several data forms. All are housed under the “Forms” Tab.



Tip *It is possible to copy form data both from this current inspection’s forms, as well as from previous related inspections. The inspections available for recall are configured in the “relevant inspections” sections on the configuration page.*



1. Create at least one instance of each form to become acquainted with the content in each.

Lesson 13: Final Challenges

You are almost done, here are a few challenges to test your knowledge of the concepts you have learned in the steps above.

1. Start from scratch
    a. Create a new inspection
    b. Configure it (and select a few relevant inspections)
    c. Run the Heatmap report to gain information on areas of potential risk
    d. Plan it (any way you want)
    e. Get the plan approved by someone in your group
    f. Answer two questions on desktop
    g. Add a requested item from desktop
    h. Add an attachment from desktop
    i. View the heatmap report
    j. Run the validation report
    k. Fix any validation issues
    l. Run the IOR

Congratulations! You've completed the objectives of this workshop. Remember that you can reach out to IA-support@dot.gov if needed.

IA Glossary

Activity (also see Implementation Activity): A tool for dividing the plan into separate, scheduled sections during which inspectors will have contact with the operator. Activities typically correspond to 'visits' to the operator.

Attachment (also known as observation): An item such as a note, OQ task, requested item, electrical reading, etc that is related to the inspection. These can be linked to particular activities, assets, forms, questions or results, and thus used as evidence for unsatisfactory results. (referred to as "attachments" in IA Desktop and "observations" in IA Mobile)

Asset: A "container" for one or more units to be investigated during the inspection.

Directive: A predefined set of questions that assist the inspector in consistently evaluating specific compliance topics.

Implementation Activity (also see Activity): A tool for dividing the plan into separate, scheduled sections during which inspectors will have contact with the operator.

Inspection Assistant (IA): The PHMSA Data System used for reviewing trends from past inspections, planning an inspection, and conducting an inspection. Users primarily interact with this system via two 'client' applications: IA Desktop (IAD) and IA Mobile (IAM).

Multi unit asset (MUA): An asset that contains multiple units (as opposed to a single unit asset). MUAs are typically used for planning procedure (P) and records (R) questions that will apply to multiple units. Setting up a MUA for these sorts of questions can make planning and assigning results easier, and generally ensure that appropriate 'coverage' is assigned for questions asked.

Observation (also known as attachment): An item such as a note, OQ task, requested item, electrical reading, etc that is related to the inspection. These can be linked to particular activities, assets, forms, questions or results, and thus used as evidence for unsatisfactory results. (referred to as "attachments" in IA Desktop and "observations" in IA Mobile)

Observation questions: Questions that involve the observation of operator personnel performing various tasks and/or observing various locations of the pipeline and associated facilities.

Operator: The operator of the pipeline unit(s) to be investigated. Each inspection in IA has a 'primary operator' and may also have one or more secondary operators when the assets under review are held under multiple operator IDs.

Plan: A selection of question content that will be used to conduct the inspection.

Procedure questions: Questions that involve process oriented reviews such as programmatic and/or procedural requirements.

Records questions: Questions that specify the review of operator records, regardless of where the records may be maintained.

Single unit asset: An asset that only contains a single unit (as opposed to a multi unit asset). In general this is the preferred way of collecting results.

SMART: SMART activities were once linked to IA inspections and implementation activities and used by PHMSA to track time/resources. This internal PHMSA system has been replaced by WMS which interoperates with the IA System directly, reducing the need for manual linkage.

Unit: A segment of a pipeline system (or in some cases, if the system is small, an entire pipeline system).

WMS (Work Management System): WMS activities are linked to federal inspection activities and used by PHMSA to track time/resources

Please, help us improve this workshop.

Please jot down responses to the following questions and hand to your instructor.

1. What topic areas do you feel you are strongest on now?

2. What is the most important/useful thing you learned today?

3. What areas did we miss or should have spent more time on?

4. Generally, what should we do differently next time?