Activity Group Type: QC Sample

This example relates 3 Routine Samples with 1 Trip Blank. The intention of this relationship is that a trip blank set of results needs to be related with certain routine sample results for QC purposes. Here are the 3 routine samples (AA, BB, CC) and the trip blank (XX) as defined in within the Activity section of the WQX schema:

Activity ID	Activity Type
AA	Sample-Routine
BB	Sample-Routine
CC	Sample-Routine
XX	Quality Control Sample-Trip Blank

In order to relate the trip blank with the routine samples, all 4 activities will be placed into Activity Group "Z", with an Activity Group Type Code of "QC Sample". Though not all 4 activities are QC samples, the Activity Group Type that best fits this desired relationship (and thus the grouping) is "QC Sample".

Here's what the XML would look like:

- <ActivityGroup>
  <ActivityGroupIdentifier>**Z**</ActivityGroupIdentifier>
  <ActivityGroupName> **Z Trip Blank Event** </ActivityGroupName>
  <ActivityGroupTypeCode>**QC Sample**</ActivityGroupTypeCode>
  <ActivityIdentifier>**AA**</ActivityIdentifier>
  <ActivityIdentifier>**BB**</ActivityIdentifier>
  <ActivityIdentifier>**CC**</ActivityIdentifier>
  <ActivityIdentifier>**XX**</ActivityIdentifier>
  </ActivityGroup>

The XML would then populate the database in this manner:

ActivityGroupIdentifier	ActivityGroupName	ActivityGroupTypeCode	ActivityIdentifier
Z	**Z Trip Blank Event**	**QC Sample**	**AA**
Z	**Z Trip Blank Event**	**QC Sample**	**BB**
Z	**Z Trip Blank Event**	**QC Sample**	**CC**
Z	**Z Trip Blank Event**	**QC Sample**	**XX**

The trip blank within Activity Group "Z" is identified through the Activity Type "Quality Control Sample – Trip Blank" associated with Activity ID "XX" provided within the Activity section of the WQX schema. The associated routine samples (AA, BB and CC) are also identified by their Activity Type "Sample-Routine".

When the whole activity group "Z" is later retrieved, the system will need to supply each individual activity type along with each activity within the group in order that it is clear which activity is the trip blank to which the routine samples are related.

Activity Group Type: Subsample

This example relates 3 Field Subsamples with a parent sample. This grouping signifies that a parent sample was taken (XX) and three subsamples (AA, BB, CC) where drawn from this parent sample.

Activity ID	Activity Type
AA	Sample-Field Subsample
BB	Sample-Field Subsample
CC	Sample-Field Subsample
XX	Sample-Routine

In order to relate the trip blank with the routine samples, all 4 activities will be placed into Activity Group "Z", with an Activity Group Type Code of "Subsample". Though not all 4 activities are subsamples, the activity group type that best fits this desired relationship (and thus the grouping) is "Subsample".

Here's what the XML would look like:

- <ActivityGroup>
  <ActivityGroupIdentifier>**Z**</ActivityGroupIdentifier>
  <ActivityGroupName> **Z Subsample Event** </ActivityGroupName>
  <ActivityGroupTypeCode> **Subsample** </ActivityGroupTypeCode>
  <ActivityIdentifier>**AA**</ActivityIdentifier>
  <ActivityIdentifier>**BB**</ActivityIdentifier>
  <ActivityIdentifier>**CC**</ActivityIdentifier>
  <ActivityIdentifier>**XX**</ActivityIdentifier>
  </ActivityGroup>

The XML would then populate the database in this manner:

ActivityGroupIdentifier	ActivityGroupName	ActivityGroupTypeCode	ActivityIdentifier
Z	**Z Subsample Event**	**Subsample**	**AA**
Z	**Z Subsample Event**	**Subsample**	**BB**
Z	**Z Subsample Event**	**Subsample**	**CC**
Z	**Z Subsample Event**	**Subsample**	**XX**

The subsamples within Activity Group "Z" are identified through the Activity Type "Sample-Field Subsample" associated with Activity IDs "AA", "BB" and "CC" provided within the Activity section of the WQX schema. The parent sample is the routine sample (Activity ID "XX") though the Activity Type "Sample-Routine" does not explicitly describe it as such.

When the whole activity group "Z" is later retrieved, the system will need to supply each individual activity type along with each activity within the group in order that it is clear which activities are the subsamples to which the routine (parent) sample is related.

Activity Group Type: Replicate

This example relates 3 QC Sample-Field Replicates and 1 routine sample. This grouping signifies that 3 samples (AA, BB, CC) where taken as replicates with the same collection and preparation methods, and should be related to each other and the routine sample (XX) in order to confirm sample results. Here are the 3 replicate samples and one routine sample, as defined in the Activity portion of the WQX schema:

Activity ID	Activity Type
AA	Quality Control Sample-Field Replicate
BB	Quality Control Sample-Field Replicate
CC	Quality Control Sample-Field Replicate
XX	Sample-Routine

In order to relate the 3 replicate samples and 1 routine sample within Activity Group, all 4 activities are placed into Activity Group "Z", with an Activity Group Type Code of "Replicate". The Activity Group Type of "Replicate" best fits the reason for grouping the 4 activities.

Here's what the XML would look like:
- <ActivityGroup>
  <ActivityGroupIdentifier>**Z**</ActivityGroupIdentifier>
  <ActivityGroupName> **Z QC Replicates** </ActivityGroupName>
  <ActivityGroupTypeCode> **Replicate** </ActivityGroupTypeCode>
  <ActivityIdentifier>**AA**</ActivityIdentifier>
  <ActivityIdentifier>**BB**</ActivityIdentifier>
  <ActivityIdentifier>**CC**</ActivityIdentifier>
  <ActivityIdentifier>**XX**</ActivityIdentifier>
  </ActivityGroup>

The XML would then populate the database in this manner:

ActivityGroupIdentifier	ActivityGroupName	ActivityGroupTypeCode	ActivityIdentifier
Z	Z QC Replicates	Replicate	AA
Z	Z QC Replicates	Replicate	BB
Z	Z QC Replicates	Replicate	CC
Z	Z QC Replicates	Replicate	XX

The 3 activities that are replicates are each identified by their individual Activity Types ("Quality Control Sample-Field Replicate") as defined in the Activity section of the schema for Activity IDs "AA", "BB", and "CC". Routine sample "XX" is also identified by Activity Type in the Activity section of the schema.

When the whole activity group "Z" is later retrieved, the system will need to supply each individual activity type along with each ActivityID within the group in order that it is clear that the 3 replicate samples are grouped together along with a routine sample for QC purposes.

Activity Group Type: Field Set

This example relates 3 sampling / field measurement events as a field set. This grouping signifies that 2 routine samples (AA, BB) and a field measurement (XX) were taken at a site. The routine sample (AA, BB) results from the lab need to be related to the field measurement (XX) as all three activities occurred at the same monitoring location. Here are the 3 activities, as defined in the Activity section of the WQX schema:

Activity ID	Activity Type
AA	Sample-Routine
BB	Sample-Routine
XX	Field Msr/Obs

In order to group these 3 activities as a field set, they are placed in Activity Group "Z" with an Activity Group Type of "Field Set" as that is the nature of their grouping.

Here's what the XML would look like:

- <ActivityGroup>
  <ActivityGroupIdentifier>**Z**</ActivityGroupIdentifier>
  <ActivityGroupName> **Z Field Set** </ActivityGroupName>
  <ActivityGroupTypeCode> **Field Set** </ActivityGroupTypeCode>
  <ActivityIdentifier>**AA**</ActivityIdentifier>
  <ActivityIdentifier>**BB**</ActivityIdentifier>
  <ActivityIdentifier>**XX**</ActivityIdentifier>
  </ActivityGroup>

The XML would then populate the database in this manner:

ActivityGroupIdentifier	ActivityGroupName	ActivityGroupTypeCode	ActivityIdentifier
Z	**Z Field Set**	**Field Set**	**AA**
Z	**Z Field Set**	**Field Set**	**BB**
Z	**Z Field Set**	**Field Set**	**XX**

The Activity "XX" within Activity Group "Z" is identifiable as the field measurement by the Activity Type defined in the Activity section of the WQX schema. Likewise, activities "AA" and "BB" are identifiable as the routine samples by their activity type.

When the whole activity group "Z" is later retrieved, the system will need to supply each individual activity type along with each activity within the group in order that it is clear which within the field set are routine samples and which are the field measurements.