



# NMBAQC

NE Atlantic Marine Biological Analytical Quality Control Scheme

## Own Sample Interim Report Review and Remedial Action Processes

Benthic Invertebrate Component

June 2016

# Own Sample Interim Report Review Process

Own Sample Interim Report issued to participating laboratory

Key:
NMBAQC Scheme representative action
NMBAQC Scheme participant action

Participating laboratory reviews the interim report and returned samples (taxa and residue re-sort material)

Do you have any issues/questions to raise regarding the report?	no
Yes	

Data from interim report will be presented in the OS summary report, annual report (anonymous) and shown on statement of performance sheet  
All participants are encouraged to update their master data with audit data and notify other data users

Provide the NMBAQC auditor with detailed queries within a reasonable timeframe  
Supply specimens for reanalysis by the auditor if requested

Auditor feedback on queries

This may include a revision of the Own Sample Interim Report

Have your issues/questions been resolved?	yes
No	

Data from interim report will be presented in the OS summary report, annual report (anonymous) and shown on statement of performance sheet  
All participants are encouraged to update their master data with audit data and notify other data users

Provide the NMBAQC auditor with detailed queries within a reasonable timeframe  
Supply specimens for reanalysis by the auditor if requested

Where specimen identification is contested, these may be sent to a third party or recognised expert for comment

Auditor feedback on queries

This may include a revision of the Own Sample Interim Report

Have your issues/questions been resolved?	yes
No	

Data from interim report will be presented in the OS summary report, annual report (anonymous) and shown on statement of performance sheet  
All participants are encouraged to update their master data with audit data and notify other data users

Do you wish to escalate your issues?	no
Yes	

Continue discussions with the NMBAQC auditor until satisfied with the outcome  
Note that the NMBAQC auditor may recommend that the issues are escalated to the Contract Manager or NMBAQC Committee, if at an impasse

Request that the NMBAQC auditor passes queries to the Contract Manager for comment

Contract Manager provides a response to the participating laboratory

Have your issues/questions been resolved?	yes
No	

Data from interim report will be presented in the OS summary report, annual report (anonymous) and shown on statement of performance sheet  
All participants are encouraged to update their master data with audit data and notify other data users

Notify the NMBAQC auditor and Contract Manager that your issues have not been resolved and table the detail for discussion by the NMBAQC Committee via your Committee Representative

[Up to date Committee Representatives and contact details can be found on the NMBAQC website](#)

The NMBAQC Committee will review the details and provide a final ruling

Data from interim report will be presented in the OS summary report, annual report (anonymous) and shown on statement of performance sheet

All participants are encouraged to update their master data with audit data and notify other data users

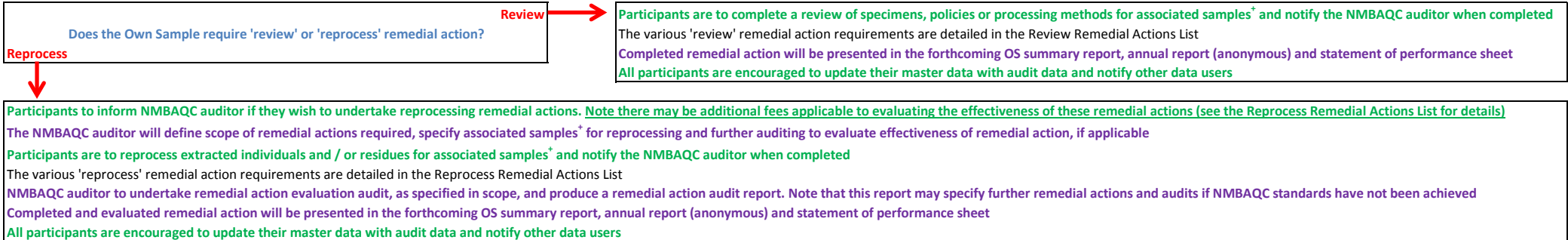
# Own Sample Remedial Action Process

Own Sample Interim Report issued (following Interim Report Review Process) with details of recommended/suggested remedial action

[The NMBAQC scheme's Own Sample standards and pass/fail criteria are available on the scheme's website](#)

'FAIL' sample flags will remain until the remedial action process has been completed and evaluated

Key:  
NMBAQC Scheme representative action  
NMBAQC Scheme participant action



The processing laboratory can raise and escalate any issues/concerns throughout the remedial action process

If not resolved, the participating laboratory can request that the NMBAQC auditor passes their queries to the Contract Manager for comment

If still not resolved, the participating laboratory can notify the NMBAQC auditor and Contract Manager that the queries have not been resolved and table the detail for discussion by the NMBAQC Committee via your Committee Representative

[Up to date Committee Representatives and contact details can be found on the NMBAQC website](#)

The NMBAQC Committee will review the details and provide a final ruling

<sup>+</sup> Associated samples will be defined by the NMBAQC auditor with assistance from the participating laboratory (i.e. reviewing full data set and sample variables). Remedial actions must not be undertaken without agreement of the scope required. Remedial action requirements can include reprocessing all remaining samples in project/survey or an isolated batch of samples based upon sample type, habitat or analyst.

## 'Review' Remedial Actions List

'Review' remedial actions are completed and evaluated to attain 'Pass' sample flags for failing Own Samples. These remedial actions are mandatory for CMA data. The 'review' category is activated when an audit sample scores less than 90% Bray Curtis Similarity and the respective extraction (taxa/individuals) and taxonomic error values are between 5 and 10% or >10% and involving 2 or less units (taxa/individuals).

Remedial Action	Error Category	Requirement	Evaluation
Review extraction (individuals)	Individual missed in residue	Review methods/protocols for extraction, possible errors include: floating & blasting methods, petri dish searching methods, tray extraction procedures, quality assurance mechanisms, analyst capability/training	Receipt of written (email) confirmation of details and completion of review actions from participating laboratory. Sample flag changed to 'Pass - Remedial Action'
Review extraction (taxa)	Taxa missed in residue	Review methods/protocols for extraction, possible errors include: floating & blasting methods, petri dish searching methods, tray extraction procedures, quality assurance mechanisms, analyst capability/training, extraction policy	Receipt of written (email) confirmation of details and completion of review actions from participating laboratory. Sample flag changed to 'Pass - Remedial Action'
Review taxonomic errors	Taxonomic errors in extracted biota	Review methods/protocols for identification, possible errors include: literature, reference collection, staff training/contractor, quality assurance mechanisms, transcription error	Receipt of written (email) confirmation of details and completion of review actions from participating laboratory. Sample flag changed to 'Pass - Remedial Action'
Review enumeration methods	Count variance	Review methods/protocols for enumeration, possible errors include: mechanical counter malfunction, biomass loss/damage, handling care, 'countable' recording policy, <i>in situ</i> approximation, transcription error	Receipt of written (email) confirmation of details and completion of review actions from participating laboratory. Sample flag changed to 'Pass - Remedial Action'

**'FAIL' sample flags will remain until the remedial action process has been completed and evaluated**

## 'Reprocess' Remedial Actions List

'Reprocess' remedial actions are completed and evaluated to attain 'Pass' sample flags for failing Own Samples. These remedial actions are mandatory for CMA data. The 'reprocess' category is activated when an audit sample scores less than 90% Bray Curtis Similarity and the respective extraction (taxa/individuals) and taxonomic error values are between >10% and involving 2 or more units (taxa/individuals).

Remedial Action	Error Category	Requirement	Evaluation
Reprocess residues and taxonomic errors for associated samples <sup>+</sup>	Extraction and identification	Reprocess associated samples <sup>+</sup> - resort residues and extracted biota for all associated samples <sup>+</sup> processed by a particular analyst or isolated by cluster analysis of the original data ( <a href="#">to be defined by NMBAQC auditor</a> ). Provide the NMBAQC auditor with details of resorted residues and an updated data matrix for the full sample batch. A further sample will be randomly selected to evaluate the effectiveness of remedial actions ( <a href="#">a separate purchase order will be required to commission additional auditing</a> )	Receipt of revised data matrix following completion of remedial actions defined by the NMBAQC auditor. Successful audit of additional sample randomly selected by the NMBAQC auditor ( <a href="#">additional fees apply @ 100% Own Sample rates</a> ). Sample flag changed to 'Pass - Remedial Action'. Note that failing additional audit samples will require further remedial actions.
Reprocess residues for associated samples <sup>+</sup>	Individuals missed in residue	Reprocess associated samples <sup>+</sup> - resort residues for all associated samples <sup>+</sup> processed by a particular analyst or isolated by cluster analysis of the original data ( <a href="#">to be defined by NMBAQC auditor</a> ). Provide the NMBAQC auditor with details of resorted residues and an updated data matrix for the full sample batch. A further sample residue will be randomly selected to evaluate the effectiveness of remedial actions ( <a href="#">a separate purchase order will be required to commission additional auditing</a> )	Receipt of revised data matrix following completion of remedial actions defined by the NMBAQC auditor. Successful audit of additional sample residue randomly selected by the NMBAQC auditor ( <a href="#">additional fees apply @ 30% of the standard Own Sample rates</a> ). Sample flag changed to 'Pass - Remedial Action'. Note that failing additional audit samples will require further remedial actions.
Reprocess residues for associated samples <sup>+</sup>	Taxa missed in residue	Reprocess associated samples <sup>+</sup> - resort residues for all associated samples <sup>+</sup> processed by a particular analyst or isolated by cluster analysis of the original data ( <a href="#">to be defined by NMBAQC auditor</a> ). Provide the NMBAQC auditor with details of resorted residues and an updated data matrix for the full sample batch. A further sample residue will be randomly selected to evaluate the effectiveness of remedial actions ( <a href="#">a separate purchase order will be required to commission additional auditing</a> )	Receipt of revised data matrix following completion of remedial actions defined by the NMBAQC auditor. Successful audit of additional sample residue randomly selected by the NMBAQC auditor ( <a href="#">additional fees apply @ 30% of the standard Own Sample rates</a> ). Sample flag changed to 'Pass - Remedial Action'. Note that failing additional audit samples will require further remedial actions.
Reprocess taxonomic errors for associated samples <sup>+</sup>	Taxonomic errors in extracted biota	Reprocess associated samples <sup>+</sup> - reanalyse biota associated with taxonomic errors across full data set. Provide the NMBAQC auditor with a revised data matrix as evidence of completion of remedial actions and submit further specimens for identification review if requested to do so	Receipt of revised data matrix following completion of remedial actions defined by the NMBAQC auditor. Successful identification audit of any additional material requested by the NMBAQC auditor. Sample flag changed to 'Pass - Remedial Action'. Note that failing additional audit specimen identification will require further remedial actions.
Reprocess enumeration for associated samples <sup>+</sup>	Count variance	Reprocess associated samples <sup>+</sup> - re-enumerate extracted biota associated with count variance errors across full data set. Provide the NMBAQC auditor with a revised data matrix as evidence of completion of remedial actions and submit further taxon vials for enumeration review if requested to do so.	Receipt of revised data matrix following completion of remedial actions defined by the NMBAQC auditor. Successful enumeration audit of any additional vials requested by the NMBAQC auditor. Sample flag changed to 'Pass - Remedial Action'. Note that failing additional audit enumeration will require further remedial actions.

Participants to inform NMBAQC auditor if they wish to undertake reprocessing remedial actions. [Note there may be additional fees applicable to evaluating the effectiveness of these remedial actions \(contact the NMBAQC auditor for current audit rates\)](#)

The NMBAQC auditor will define scope of remedial actions required, specify associated samples<sup>+</sup> for reprocessing and further auditing to evaluate effectiveness of remedial action, if applicable

'FAIL' sample flags will remain until the remedial action process has been completed and evaluated

<sup>+</sup> Associated samples will be defined by the NMBAQC auditor with assistance from the participating laboratory (i.e. reviewing full data set and sample variables). Remedial actions must not be undertaken without agreement of the scope required.

Remedial action requirements can include reprocessing all remaining samples in project/survey or an isolated batch of samples based upon sample type, habitat or analyst.