BEQUALM
NATIONAL MARINE BIOLOGICAL ANALYTICAL QUALITY CONTROL SCHEME
Annual Report - Year 13 - 2006/2007

A report prepared by the NMBAQC Coordinating Committee – June 2010

Table of Contents

This Year 13 Annual Report is in a summarised format compared with previous Annual Reports providing a synopsis of the scheme year's activities. Most of the detailed information previously incorporated within the Annual Report is now available as separate reports or bulletins on the scheme's website. The relevant documents are all cited here and the reader is directed via hyperlinks to the NMBAQC as appropriate.

The NMBAQC coordinating committee held three meetings during the Year 13 scheme year on 30th June 2006, October 20th 2006 and 23rd January 2007. The minutes from these committee meetings are now available on the NMBAQC website.

Committee Membership for Year 13 is shown in Appendix 1.

1 Scheme Review

The scope of the NMBAQC scheme continued to develop in Year 13 to encompass the requirement to provide quality assurance for assessments under the Water Framework Directive (WFD), for which monitoring commenced in the UK in 2007. The scheme still maintains its role to provide Analytical Quality Control for Invertebrate and Particle Size data collected for UK CSEMP (Clean Seas Environment Monitoring Programme – formerly the NMMP). Under the UK Marine Monitoring and Assessment Strategy (UKMMAS) the NMBAQC coordinating committee will now report to the Healthy and Biologically Diverse Seas Evidence Group HBDSEG.

Year 13 of the scheme involved training and testing exercises for the Invertebrate, Particle Size, Fish and Phytoplankton Components as before, and the introduction of a training exercise for a new Macroalgae Component. The first Fish Ring Test exercise (FRT01 = RT28) was circulated in April 2006 (see Year 12 Annual Report) and a similar exercise (FRT02 = RT31) was circulated in April 2007 and is reported here. This year the annual Invertebrate component workshop involved a four-day expert taxonomic workshop at the Dove Marine Laboratory in Cullercoats.

This year the NMBAQC had a total of 26 organisations involved in training and testing exercises (see Appendix 2).

Summaries of all the component activities are provided below:

1.1 Invertebrate, Particle Size and Fish components

Contract Manager (Invertebrate and Particle Size): Myles O' Reilly, SEPA
Contract Manager (Fish): Steve Coates, Environment Agency
Component Administrator: David Hall, Unicomarine

1.1.1 Summary of activities

The thirteenth year of the Scheme (2006/07) involved a series of six modules under the Invertebrate, Particle Size, and Fish components:

- Invertebrate Ring Test identification (RT29 and RT30) training exercise.
  Two sets of twenty-five specimens of benthic invertebrates (RT29 general invertebrate ring test, RT 30 'targeted' cirratulid specimens) supplied for identification by participating laboratories.

- Fish Ring Test identification (RT31 - This exercise has been subsequently designated as FRT02) training exercise.
  One set of twenty-five 'targeted' specimens of fish supplied for identification by participating laboratories.

- Macrobenthic invertebrate sample analysis (MB14) training exercise.
  One contractor supplied macrobenthic sample for full laboratory processing (extraction, enumeration and biomass).

- Laboratory Reference (LR) training exercise.
  Participating laboratories submitted twenty-five benthic invertebrate specimens for re-examination by the contractor. The specimens could be either voucher material from their reference collection for confirmation or difficult/problematic taxa about which they are unsure)

- Own Sample (OS32, OS33 and OS34) reanalysis testing exercise, with pass/fail flag for UK NMMP laboratories.
  Participating laboratories were requested to send the contractor their benthic invertebrate data matrices from which three samples were selected. The three chosen samples were submitted and were reanalysed by the contractor. Each 'Own Sample' was assessed on the efficiency of extraction, identification, enumeration and biomass.

- Particle Size analysis (PS28 and PS29) testing exercise, with pass/fail flag for UK CSEMP (NMMP) laboratories.
  Two marine sediment samples (one coarse the other much finer) supplied to participating laboratories for Particle Size Analysis.

An Invertebrate Taxonomic Workshop was held at the Dove Marine Laboratory, Cullercoats, Tynemouth, in November 2006. This workshop was tailored for experienced analysts with expert tuition provided for a number of polychaete families including: Cirratulidae, Maldanidae, Glyceridae, Goniadidae, Syllidae. New taxonomic keys were drafted for the workshop and are now available on the scheme website. The workshop programme is shown in Appendix 3.

1.1.2 Summary of exercise results

Twenty-one organisations signed up in total for the Invertebrate, Particle Size and Fish components in Year 13 of which eighteen were active participants (see Appendix 2). Half of the active participants were UK Competent Monitoring Authorities (CMAs) responsible for UK CSEMP (NMMP) sample analysis (excluding subcontracted samples).

The results of the Own Sample (OS32, OS33 and OS34) reanalysis testing exercise were consistent with the results from Yr 12 OS exercise. The Bray-Curtis similarity index (between the participating laboratory and the contractor) was greater than 90% (Pass flag) for 91% of samples. All the laboratories with 'Poor' or 'Bad' sample flags have already addressed their 'failing' samples by undertaking remedial action. For submission and flagging of NMMP invertebrate sampling sites see Appendix 4.

The Particle Size testing exercise, PS28 (mud sample) resulted in seven 'fail' and forty-three 'pass' flags. PS29 (sand sample) received nine data returns (including replicated data) that resulted in four 'fail' and forty-one 'pass' flags. The 'fail' flags were mainly attributed to the difference between the two main techniques employed by participating laboratories for particle size analysis.

Of the training exercises, the Macrobenthic exercise MB14 posed several problems for participants associated with faunal extraction and identification of the taxa. The ring test RT29 revealed some common identification errors attributed to four polychaete and four molluscan taxa. The 'targeted' ring test (RT30 – 'Cirratulidae taxa') posed very few problems for species identification. The fish ring test (RT31=FRT02) produced good agreement between the identifications made by the participating laboratories and those made by the contractor. Finally the Laboratory Reference voucher specimen identification, found the specimens submitted by participating laboratories had generally accurate identifications.

More detailed information on the exercises can be found in the contractor's reports below. Among the recommendations highlighted by the contractor is the need for NMBAQC to develop standard protocols detailing the processing requirements for both macrobenthic invertebrate samples and particle size samples.

Yr 13 Invertebrate, Particle Size and Fish Components Annual Report
Hall, D., 2010. Invertebrate, Particle Size and Fish components - Report from the contractor. Scheme Operation – Year 13 – 2006/07.

Yr 13 Ring Test Bulletins:
RTB 29 - December 2006
Hall, D.J. and Worsfold, T.M., 2006. National Marine Biological Analytical Quality Control Scheme. Ring Test Bulletin: RTB#29. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCrtb#29, 16pp, December 2006.

RTB 30 - March 2007.
Hall, D.J. and Worsfold, T.M., 2007. National Marine Biological Analytical Quality Control Scheme. Ring Test Bulletin: RTB#30. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCrtb#30, 24pp, March 2007.

Yr 13 Macrobenthic Exercise Report:
MB 14 - May 2007.
Hall, D.J., 2007. National Marine Biological Analytical Quality Control Scheme. Macrobenthic Exercise Results - MB14. Report to the NMBAQC Scheme participants. 9pp, May 2007.

Yr 13 Particle Size Reports:
PS29 - March 2007
Hall, D.J., 2007. National Marine Biological Analytical Quality Control Scheme. Particle Size Results: PS29. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCps29, 7pp, March 2007.

PS28 - November 2006

Hall, D.J., 2006. National Marine Biological Analytical Quality Control Scheme. Particle Size Results: PS28. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCps28, 7pp, November 2006.

Yr 13 Fish Ring Test Report:
RTB 31 - May 2007 (This exercise subsequently designated as FRT02)
Hall, D.J. and Worsfold, T.M., 2007. National Marine Biological Analytical Quality Control Scheme. Fish Ring Test Bulletin: RTB#31. Report to the NMBAQC Scheme participants. Unicomarine Report NMBAQCrtb#31, 18pp, May 2007.

1.1.3 Taxonomic literature

The following taxonomic guides/keys and keys to literature where produced through the NMBAQC in Yr 13:

Family Maldanidae - A guide to species in waters around the British Isles, 2007
Garwood, P. R. 2007. Family Maldanidae - A guide to species in waters around the British Isles. NMBAQC 2006 taxonomic workshop, Dove Marine Laboratory.

Goniadidae, with notes on Glyceridae, 2007
Worsfold, T.M., 2007. Identification guides for the NMBAQC Scheme: 2. Goniadidae, with notes on Glyceridae (Polychaeta) from shallow seas around the British Isles. Porcupine Marine Natural History Society Newsletter, 22: 19-23.

Scalibregmatidae, 2006
Worsfold, T.M., 2006. Identification guides for the NMBAQC Scheme: 1. Scalibregmatidae (Polychaeta) from shallow seas around the British Isles. Porcupine Marine Natural History Society Newsletter, 20: 15-18.

Keys to and Literature on Glyceridae and Goniadidae, 2006
O'Connor, B., Worsfold, T.M. 2006. Keys to and Literature on Glyceridae and Goniadidae for the NMBAQC 2006 taxonomic workshop, Dove Marine Laboratory.

1.2 Phytoplankton component

Scheme Administrator: Joe Silke, Marine Institute, Galway, Ireland. Registration and fee collecting arranged through BEQUALM Website (based at CEFAS Lab, Lowestoft).

The Marine Institute in Galway have been undertaking Phytoplankton Intercomparison (PHY-ICN) exercises since 2004. The first held under the BEQUALM / NMBAQC banner was in November 2005. The following exercise under the NMBAQC scheme (PHY-ICN-07-MI4) took place in February 2007.

1.2.1 Summary of activities

The inter-comparison exercise comprised of two parts: Enumeration of cells (micro-particles based on latex), and multiple-choice Identification of 24 images of marine phytoplankton species. The results of the inter-comparison exercise were discussed at a one-day workshop at the Marine Institute in March 2007.

1.2.2 Summary of results

Twenty-one analysts from ten laboratories participated in the Phytoplankton enumeration and identification ring test in 2007 (see Appendix 2). The enumeration exercise found no significant difference in variation between the participating laboratories. The identification exercise showed that 95% of the analysts got a mark over 85% of correct identifications. There was no correlation between the identification skills and enumeration skills. The statistical robustness of the enumeration exercise would benefit from the development of standard reference materials. The possibility of fabricating such a standard using new technologies should be explored.

More detailed information on the exercise can be found in the following contractor report:

Phytoplankton Enumeration And Identification Ring Test, 2007
Moran, S., Salas, R.G., Silke, J., 2007. Phytoplankton enumeration and identification analysis. Ring Test Round 3 Exercise Report. 29pp.

1.3 Macroalgae component

Contract Manager: Alison Miles, Environment Agency
Component Administrator: Emma Wells, Wells Marine

1.3.1 Summary of activities

This exercise involved the identification of twenty-seven species of algae, where laboratory photos within sorting trays and stereo and compound microscope images were provided to highlight different morphological features.

1.3.2 Summary of results

Nineteen laboratories participated in the first macroalgae ring test (RT01) circulated in September 2006 (See Appendix 2). RT01 gave varying results for participants, with correct identification scores ranging between 29 and 81 (based on 3 points awarded for correct species identification and 1 point awarded for correct genus). The maximum score possible was 81. Only 3 species were correctly identified by all 19 participants. As this was the first macroalgae ring test, participants also filled out questionnaires and provided comments to help improve this ring test in the future.

More detailed results can be found in the following contractor report:

RT01 - October 2006
Wells, E., 2006. National Marine Biological Analytical Quality Control Scheme, Intertidal Macroalgae Ring Test RT01. Report to the NMBAQC Scheme participants. Wells Marine Surveys, October 2006.

Appendix 1 - NMBAQC Co-ordinating Committee – Year 13 - 2006/2007

Name	Organisation	Position
Matt Service	Agri-Food and Biosciences Institute, NI	Chair, from 2006
Tim Mackie	Environment & Heritage Service, NI	Secretary, from 2006; Chair, from 2007
Alison Miles	Environment Agency	Finance Manager
Paolo Pizzolla	Joint Nature Conservation Committee	Secretary, from 2007
Myles O'Reilly	Scottish Environment Protection Agency	Invertebrate Contract Manager
Steve Coates	Environment Agency	Fish Contract Manager
Joe Silke	Marine Institute, Ireland	Phytoplankton Contract Manager
Penny Coad	Ecomaris Ltd.	Contractors representative
Carol Milner	Scottish Environment Protection Agency	CMA Representative
Keith Cooper	Centre for Environment, Fisheries & Aquaculture Science	CMA Representative
Clare Greathead	Fisheries Research Services, Aberdeen	CMA Representative , stepped down from June 2006
Mike Robertson	Fisheries Research Services, Aberdeen	CMA Representative , joined from October 2006

Appendix 2 - NMBAQC scheme participation for Year 13

Organisation	Invertebrate and PSA	Fish	Phytoplankton	Macroalgae
Agri-Food & Biosciences Institute	✓	✓		
AstraZeneca UK Ltd., Brixham Environmental Laboratory	✓			✓
Centre for Environment, Fisheries & Aquaculture Science	✓	✓	✓	
CMACS Ltd	✓			
Countryside Council for Wales	✓			✓
Department of Local Government and the Environment, Isle of Man			✓	
Ecomaris Ltd.	✓			
EMU Ltd.	✓			✓
Environment & Heritage Service	✓	✓	✓	✓
Environment Agency	✓	✓		✓
Environmental Protection Agency, Ireland			✓	
Environmental Services, Inst. of Aquaculture, University of Stirling	✓			
ERT (Scotland) Ltd.	✓	✓		✓
Fish Vet Group	✓			
Fisheries Research Services Marine Laboratory (Aberdeen)	✓		✓	
Fugro Survey Ltd	✓			
Institute of Estuarine and Coastal Studies, University of Hull	✓			✓
Joint Nature Conservation Council	✓(Info only)			
Marine Ecological Surveys Ltd	✓			
Marine Institute, Galway, Ireland	✓		Contract administrator	
Queens University				✓
Scottish Association for Marine Science			✓	
Scottish Environment Protection Agency	✓	✓	✓	✓
Scottish Natural Heritage	✓(Info only)			✓
Unicomarine	Contract administrator	Contract administrator		✓
Wells Marine				Contract administrator

Appendix 3 - BEQUALM/NMBAQC Scheme Taxonomic Workshop November 2006

BEQUALM/NMBAQC Scheme Taxonomic Workshop 6th-10th November 2006 (Dove Marine Laboratory, Cullercoats, Tynemouth)

Day	Session	Discussion / Demonstration / Practical	Aims	Session Leader
Monday 6th Nov. 2006	am	Arrival. Registration. Laboratory set-up.	Register participants. To prepare laboratory equipment for practical sessions.	David Hall (Unicomarine Ltd.)
	1:00pm	Buffet lunch	-	-
	2:00pm	Introduction. General information.	Welcome participants. Q&A session regarding workshop. Outline timetable.	Tim Mackie (NMBAQCC) David Hall (Unicomarine Ltd.)
	2:15pm	Introduction – The Dove Marine Laboratory. Brief details. Local information. Lab. rules (H&S issues).	To give brief history of Dove Marine Lab. and facilities. Tour/Maps – areas of local interest (biological and otherwise). Pub & food guide.	Jane Delany (Dove Marine Laboratory)
	2:45pm	Discussion - Cirratulidae – Interim updates to key.	To introduce preliminary update to cirratulid workshop key, highlight changes and request information/comments. Q&A session.	Tim Worsfold (Unicomarine Ltd.)
	4:00pm	Practical - Examination & identification of range of Cirratulidae taxa from reference material.	To obtain identification experience. View / verify reference material.	Tim Worsfold (Unicomarine Ltd.)
Tuesday 7th Nov. 2006	9:00am	Discussion / Demonstration - Introduction to Maldanidae. Literature. Problem areas. Identification techniques.	To introduce the major features / terminology used for identification of maldanids.	Peter Garwood (Identichaet)
	am/pm	Practical - Examination & identification of range of Maldanidae taxa from reference material.	To obtain identification experience. View / verify reference material.	Peter Garwood (Identichaet)
	4:00pm	Practical continued.	To obtain identification experience. View / verify reference material.	Peter Garwood (Identichaet)
Wednesday 8th Nov. 2006	9:00am	Discussion / Demonstration - Introduction to Glyceridae & Goniadidae. Literature. Problem areas. Identification techniques.	To introduce the major features / terminology used for identification of Glyceridae & Goniadidae.	Brendan O'Connor (Aqua-fact International Services Ltd.)
	am/pm	Practical - Examination & identification of range of Glyceridae & Goniadidae taxa from reference material.	To obtain identification experience. View / verify reference material.	Brendan O'Connor (Aqua-fact International Services Ltd.)
	4:30pm	Blue Reef Aquarium group trip.	Visit local aquarium.	-
Thursday 9th Nov. 2006	9:00am	Discussion / Demonstration - Introduction to Syllidae. Literature. Problem areas. Identification techniques.	To introduce the major features / terminology used for identification of syllidae.	Peter Garwood (Identichaet)
	am/pm	Practical - Examination & identification of range of Syllidae taxa from reference material.	To obtain identification experience. View / verify reference material.	Peter Garwood (Identichaet)
	4:00pm	Practical continued.	To obtain identification experience. View / verify reference material.	Peter Garwood (Identichaet)
	7:30pm	Workshop Dinner – Spanish restaurant, El Torrero, Newcastle.	-	-
Friday 10th Nov. 2006	9:00am	Workshop feedback. Group photograph. Equipment pack up.	Distribute/collect workshop feedback forms. To pack up equipment & prepare for departure.	Tim Mackie (NMBAQCC) David Hall (Unicomarine Ltd.)
	10:30am	Tea & coffee; Departure	-	-

Appendix 4 - Submission and Flagging of CSEMP (NMMP) invertebrate data.

The grading and flagging process for CSEMP(NMMP) samples and data is described and discussed in the Benthic Invertebrate Component Scheme Standards (2010) on the NMBAQC website. NMMP data is submitted on an annual basis by the relevant Competent Monitoring Authority (CMA) to the NMMP Merman database. The CMAs are also required to submit information indicating whether Analytical Quality Control has been successfully completed for their own NMMP sites. The relevant NMMP data remains flagged until confirmation is received that audited samples have passed according to the NMBAQC criteria. Where samples fail to achieve acceptable standards it is mandatory for CMAs to undertake appropriate remedial action in order to achieve a "remedial action pass". Guidelines for undertaking remedial action and for amending NMMP data following completion of analytical quality control are available in the Year 12 Annual Report.

For Year 13 the NMMP data matrices submitted for Own Sample audits are shown in the table below. Data is derived from the previous sampling year, 2005, except for Lab K which is ahead of schedule and has submitted 2006 data. Data was presented for 56 NMMP sites, although the NMMP Green Book (v.9, Dec.2005) cites 76 benthos sites. For Lab C one of the NMMP sites was moved and renamed in 2005 while two were dropped form the programme due to unsuitable sediments. However, as no data was presented for the remaining in Year 13 then these sites remain flagged for sampling year 2005. Lab J failed to provide 2004 sampling data for its 7 sites in Year 12 (which thus remain flagged) but has produced 2005 sampling data and samples for audit in Year 13. Lab B2 presented 2003 sampling data for audit in Year 12 and 2005 sampling data in Year 13. Data for the intervening 2004 sampling year does not appear to have been presented for audit and hence would remain flagged. Lab G supplied data and samples but failed to provide the associated sample residues. It appears the 2005 NMMP sample residues from this lab have been inadvertently discarded by a subcontractor. Thus the sample audits are incomplete and all their samples remain flagged.

In Year 13, three of the audited NMMP samples failed to achieve acceptable grades. All of these have since passed following completion of remedial action. However completion of some outstanding remedial actions from Years 11 and 12 has yet to be confirmed.

Although performance for the Year 13 sample audits is generally satisfactory, **it is of concern that many NMMP samples remain flagged. Collection and analysis of NMMP samples is very expensive. It is unacceptable that data subsequently remains flagged due to failure of labs to ensure that samples are processed properly or to follow up and complete remedial actions. CMA Laboratories responsible for the NMMP programme must make more effort to fulfil their obligations. They must:**

a. Ensure samples are not compromised

b. Provide requested NMMP data sets to the NMBAQC Scheme

c. Supply requested Own Samples and residues for audit

d. Complete all required remedial action

e. Complete post-audit data amendments

f. Ensure the amended data is submitted to the Merman database

g. Confirm completion of AQC to the Merman database

SAMPLE FLAGGING - YEAR 13				
Lab	**Data Matrices Submitted**	**Own Samples Selected**	**Grade**	**Flag status**
A	2005_NMMP45 CMT5	RepA (OS32)	Good	PASS
	2005_NMMP55 CMT7	-		PASS
	2005_NMMP70 STN H Irvine Bay	RepA (OS33)	Good	PASS
	2005_NMMP76 L.Linnhe	RepA (OS34)	Fail - Poor	PASS - RA
B	2005_NMMP175 Kingston Hudds	RepD (OS34)	Good	PASS
	2005_NMMP208 Kincardine	RepD (OS33)	Good	PASS
	2005_NMMP176? Cromarty Firth	RepD (OS32)	Good	PASS
B2	2005_NMMP25 Offshore Solway	-	-	PASS
	2005_NMMP35 Firth of Clyde	-	-	PASS
	2005_NMMP85 Minches	RepC (OS32)	Good	PASS
	2005_NMMP95 Moray Firth (intermediate)	RepC (OS33)	Excellent	PASS
	2005_NMMP105 Moray Firth (offshore)	-	-	PASS
	2005_NMMP165 Forth/Tay Offshore	RepC (OS34)	Good	PASS
C	2005 NMMP210 Yarrow Slake	No data submitted	deemed Fail	FLAGGED
	2005_NMMP220 Budle Bay	moved in 2005 - renamed as 221	no data submitted - deemed fail	FLAGGED
	2005_NMMP225 Hebburn	No data submitted	deemed Fail	FLAGGED
	2005_NMMP235 Ferry Crossing	No data submitted	deemed Fail	FLAGGED
	2005_NMMP265 Alex. Bridge	dropped from NMMP programme		
	2005_NMMP270 Off Seaham	No data submitted	deemed Fail	FLAGGED
	2005_NMMP275 Sandy Point	dropped from NMMP programme		
	2005_NMMP305 Bamlett's Bight	No data submitted	deemed Fail	FLAGGED
	2005_NMMP315 No23 Buoy	No data submitted	deemed Fail	FLAGGED
	2005_NMMP325 Phillips Buoy	No data submitted	deemed Fail	FLAGGED
C1	2005_NMMP755 Seacombe Ferry, Mersey	-	-	PASS
	2005_NMMP765 Ch. C1 Buoy	RepC (OS32)	Good	PASS
	2005_NMMP766 u/s 11 mile post, Ribble	-	-	PASS
	2005_NMMP767 North Bay, Morecambe Bay	RepC (OS33)	Excellent	PASS
	2005_NMMP768 St. Bees	RepC (OS34)	Good	PASS
D	2005_NMMP356 Inside Spurn	-	-	PASS
	2005_NMMP357 Grimsby Roads	RepA (OS33)	Good	PASS
	2005_NMMP358 Sunk Island	RepA (OS34)	Excellent	PASS
	2005_NMMP388 WW19 off Boston	Rep.A (OS32)	Good	PASS
	2005_NMMP390 Blackwater	No data submitted?		PASS?
F	2005_NMMP435 Woolwich	RepC (OS34)	Good	PASS
	2005_NMMP455 Mucking	RepB & C (OS32)(OS33)	Good	PASS
G	2005_NMMP505 Dock Head	RepB (OS32)	No residues submitted - deemed Fail	FLAGGED

SAMPLE FLAGGING - YEAR 13				
Lab	**Data Matrices Submitted**	**Own Samples Selected**	**Grade**	**Flag status**
	2005_NMMP526 Burham	RepB (OS33)	No residues submitted - deemed Fail	FLAGGED
	2005_NMMP527 Sun Pier	RepB (OS34)	No residues submitted - deemed Fail	FLAGGED
H	2005_NMMP245 NSTF14	RepE (OS32)	Acceptable	PASS
	2005_NMMP345 NSTF53	-		PASS
	2005_NMMP536 Lyme Bay	-		PASS
	2005_NMMP605 Celtic Deep	RepE (OS33)	Fail - Poor	PASS - RA
	2005_NMMP805 SE IOM	RepE (OS34)	Acceptable	PASS
I	2005_NMMP555 Warren Point	RepA (OS32)	Good	PASS
	2005_NMMP565 Hamoaze	RepA (OS33)	Good	PASS
	2005_NMMP566 Upper South Deep	-		PASS
	2005_NMMP567 Wytch	RepA (OS34)	Good	PASS
	2005_NMMP576 Jennycliffe	Audited Year 12	-	PASS
J	2005_NMMP625 Purton	RepA (OS32) CMA	Good	PASS
	2005_NMMP635 Bedwin	RepA (OS33) CMA	Good	PASS
	2005_NMMP645 Peterstone	RepA (OS34) CMA	Good	PASS
	2005_NMMP646 Cosheston Point	RepA (OS32) Contractor	Good	PASS
	2005_NMMP647 Ynys-hir	RepA (OS33) Contractor	Good	PASS
	2005_NMMP648 Bontddu	RepA (OS34) Contractor	Fail - Bad	PASS - RA
	2005_NMMP649	-	-	PASS
K	2006_NMMP809 SAC(Green I.)	RepE (OS32)	Good	PASS
	2006_NMMP845 BL5	-	-	PASS
	2006_NMMP? BL7	RepB (OS33)	Good	PASS
	2006_NMMP820 BR3	-	-	PASS
	2006_NMMP880 Kilderry	-	-	PASS
	2006_NMMP825 IS1	RepC (OS34)	Excellent	PASS
L	2005_NMMP806 NMP4	RepA (OS33)	Excellent	PASS
	2005_NMMP807 NMP5	RepD (OS34)	Excellent	PASS
	2005_NMMP808 Buoy(NMP6)	-		PASS
	2005_NMMP815 Buoy(NMP3)	RepA (OS32)		PASS
	2005_NMMP865 NC2(NMP2)	-	Good	PASS
	2005_NMMP875 NC1(NMP1)	-		PASS