

ASA S12 Committee on Noise
Working Group (WG) 47 – Underwater Noise Measurement of Ships

Fifth Meeting February 5-6, 2008
Florida Atlantic University (FAU), SeaTech Campus

MEETING MINUTES
REVISION 1 – 02/11/2008
Prepared by Michael Bahtiarian

The WG47 meeting started around 10am in Room 259 of SeaTech Building at FAU SeaTech Campus. The meeting agenda is attached along with the attendee list. After brief personal introductions a summary of the last meeting (via telecom) in November was given. Also, the Chair would like to welcome Greg Hassell, an Acoustics Test Technical Manager for British defense contractor, QinetiQ (Dorchester, UK).

Chair passed out the FIRST draft (Rev 0) and went over some ground rules on the review. He suggested that editorial comments not necessary and would only review sections 1-6. Sections 7-10 have not been prepared yet so no need to comment on those sections.

The following two days were spent going over sections 1, 4 & 5. Section 2 is normative references and there were not many comments. Chair offered anyone to suggest additional references to this section. Section 3 (Terms and definitions) was read by members, but no additional changes were made as the chair thought this could be done off line. Kevin O'Neill suggested adding all terms from Table 1 (Grades Matrix). Chair said that he had one committee member that had offered to help with definitions. Greg Hassell also offered to provide some definitions too. Section 6 (Post Processing) was not covered during the meeting.

It was also decided that the water depths were set at 3x, 2x and 1x the water depth. This was change from 5x, 3x and 1x from previous Grades Matrix.

One important matter that was discussed at length was size, nature of integration period/window (i.e. the period/window during which the sound measurements from the ship under test are made). The U.S. convention is to use $\pm 15^\circ$ with data sampled about every second with linear averaging and the UK convention is to use $\pm 30^\circ$ with data sampled every second with exponential averaging. Other possibilities of integration window was $\pm 1x$ Ship Length or some time duration (chair suggested 30 seconds in Rev 0). It was decided that to provide best accuracy/repeatability that the integration window should be \pm angle and that integration window would be different for each Grade as follows:

- **Grade A:** $\pm 30^\circ$, independent data sets at ≤ 2 sec/data set, CPA calculated from acoustic center, linear averaging.
- **Grade B:** $\pm 30^\circ$, independent data sets at ≤ 2 sec/data set, CPA calculated at center of ship for low speeds and propeller at high speeds, linear averaging

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- **Grade C:** $\pm 30^\circ$, single data set for entire integration period, CPA calculated at center of ship.

Detailed discussions on the standard section were not recorded by the chair except for the actual changes to the Rev 0 standard. Chair said he would make changes to standard and send to all meeting participants as Rev 1. After meeting participants review this version will be sent out to full WG47 committee for first set of comments.

The next meeting was proposed for June 4 & 5 in Woods Hole, MA (at Woods Hole Oceanographic Institute). Alternate dates are May 28 & 29 and June 11 & 12. At this meeting, the WG47 committee will give final review on Sections 4 & 5 and start detailed review of Section 6.

ATTENDEE LIST

NAME	ORGANIZATION	EMAIL
David Vendittis	FAU	dvendittis@aol.com
Rich Taddeo	NAVSEA	richard.taddeo@navy.mil
Ben Racine	Glosten Associates	bjracine@glosten.com
Bob Myers	SSRNM/Mantech	Bob.myers@mantech.com
Greg Hassell	QinetiQ (UK)	gmhassell@qinetiq.com
Michael Bahtiarian	Noise Control Engineering	mikeb@noise-control.com
Tim Gates	Mantech	tgates@mantech.com
Bob Herman	Orbis Inc (PEO Ships)	bobherman@orbisinc.net
Kevin O'Neill	NSWC	kevin.oneill@navy.mil

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AGENDA

Feb 5th

- 10:00am: Start Meeting, Seatech Building, Room 259
Introductions and updates from previous meeting(s), as necessary.
- 10:30am: Hand out FIRST Draft standard (prepared by chair).
Top level review, table of contents, sub-sections, etc.
- 12:00noon: Break for Lunch
- 1:30pm: Tour/Presentation by FAU on recent underwater noise testing
- 2:00pm: Detail review of section by section. Possibly break into groups to work on sections separately. Individuals review during evening and bring in additional comments following day.
- 5:00pm: Break for evening
- 6:00pm: Dinner out (location TBD)

Feb 6th

- 9:00am: Discuss comments from evening review
- 10:00am: Review list of things & sections to be added into the standard
- 12:00noon: Break for lunch
- 1:00pm: Develop action list of section of standard needed to be worked on. Get volunteers associated with review writing of additional sections.
- 3:00pm: Discuss next meeting dates. End meeting.