

**Table S3** Summary of FISH and CARD-FISH results.

Probe	Target group	Sample/Detection method			
		903-day sample		2,013-day sample	
		FISH	CARD-FISH	FISH	CARD-FISH
ARC915	Most <i>Archaea</i>	+	+	+	+
ANME-1-350	ANME-1	+	NT	+	NT
ANME-2a-647	ANME-2a	-	+	-	+
ANME-2c-760	ANME-2c	-	+	-	-
ANME-3-1249	ANME-3	-	NT	-	NT
MBGD-318	MBG-D	-	+	-	+
MBGB-380	DSAG	-	+	-	+
MCOCID442	<i>Methanococcoides</i>	+	NT	+	NT
EUB338	Most <i>Bacteria</i>	+	+	+	+
Mγ669	<i>Methylobacter</i> and <i>Methylomonas</i>	+	NT	+	NT
UncGam731	Gammaproteobacterial phylotype MK903D_B5	+	NT	+	NT

+: detected, -: not detected, NT: not tested.