Surveillance Report
Aker Biomarine Antarctic Krill Fishery

Certificate No.: **MML-F-059**

Intertek Moody Marine
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Authors: A Hough, P Medley

Intertek Moody Marine
Merlin House
Stanier Way
Wyvern Business Park
Derby. DE21 6BF
UK
Tel: +44 (0) 1332 544663
Fax: +44 (0) 1332 675020

1.0 GENERAL INFORMATION

Scope against which the surveillance is undertaken: MSC Principles and Criteria for Sustainable Fishing as applied to the Aker Biomarine Antarctic Krill Fishery

Species: Antarctic Krill (*Euphausia superba*)

Area: Southern Ocean, CCAMLR Area 48

Method of capture: Pelagic Trawl (continuous fishing system)

Date of Surveillance Visit:	**25-26 April 2012**			
Initial Certification	**Date: 15 June 2010**		**Certificate Ref: MML-F-059**	
Surveillance stage	**1st**	**2nd**	**3rd**	**4th**
Surveillance team:	**Lead Assessor: A Hough** **Assessor(s): P Medley**			
Company Name: **Address:**	Aker Biomarine Oslo Norway			
Contact 1	Sigve Nordrum			
Tel No: **E-mail address:**	0047 91630188 sigve.nordrum@akerbiomarine.com			

2.0 RESULTS, CONCLUSIONS AND RECOMMENDATIONS

This report contains the findings of the second surveillance cycle in relation to this fishery.

The client's response to the Conditions of Certification was set out in an Action Plan, which was appended to the final certification report. Action on this was examined as a part of this first surveillance. For each condition, the report sets out progress to date. This progress has now been evaluated by the Intertek Moody Marine audit team ('Observations' and 'Conclusion') against the commitments made in the Action Plan. This assessment includes a re-evaluation of the scoring allocated to the relevant Performance Indicators in the original MSC assessment. Where the requirements of a condition are met, the Performance Indicators (PIs) are re-scored and if the score for all relevant PIs is 80 or more, then the condition is closed.

Information regarding this years audit has been collected from the client and their consultants MRAG.

Information Sources:

Meetings
25 April 2012. MRAG; R Wakeford, T Peatman, S Martin
26 April 2012. Aker Biomarine (AKBM); S Nordrum. MRAG; R Wakeford, T Peatman, S Martin

Reports etc
1. Scientific Committee for the Conservation of Antarctic Marine Living Resources (October 2011). Report of the Thirtieth Meeting of the Scientific Committee. Hobart, Australia. (Includes Report of the Working Group on Ecosystem Monitoring and Management).
2. Nicoll, R & L. Douglass (April 2012). Mapping krill trawling and predator distribution. Mapping selected krill predator summer foraging ranges with fishing activity of Aker Biomarine's Saga Sea 2007 – 2011
3. MRAG (May 2012). Analysis of larval bycatch on the Saga Sea during continuous trawling for krill in CCAMLR Areas 48 between December 2007 and September 2011
4. Krafft, B. A., Skaret, G & Calise, L. (2011). Antarctic krill and apex predators in the South Orkney Islands area, 2011 surveyed with the commercial fishing vessel Saga Sea. IMR, Bergen.

Standards and Guidelines used:

1. MSC Principles and Criteria
2. MSC Certification Requirements v1.1

Stock status and Catch Data	
Update on Stock Status	There have been no changes in the understanding of the stock status since last year, i.e. the re-estimation of the 2000 synoptic survey raised the estimate of krill biomass within Area 48 from 37.3 million tonnes to 60.3 million tonnes. This also raised the precautionary catch limit based on the krill harvest control rule from 3.47 million tonnes to 5.61 million tonnes. However, the certification was awarded on the basis of the catch being less than the trigger level of 620 000 t, which remains unchanged. Given that the estimate of biomass has increased with the improved assessment methodology, the catch trigger level appears more precautionary than when the original assessment was carried out. It is noted that in the Report of the 30th Meeting of the CCAMLR Scientific Committee (SC), the issue of recruitment variability was raised, particularly whether this may be greater than the values included in current models. Accordingly, the SC concluded that an investigation of

	recruitment variability (including estimating recruitment strengths in years since the early 1990s) is needed and may require reassessment of the catch limit. It also agreed that alternative application of the decision rules that would be appropriate in these circumstances (such as the decision rules used to establish annual catch limits for icefish) may need to be investigated if recruitment variability is too high or there are long-term trends in recruitment. The SC also concluded that these should be afforded a high priority. This, however, is considered unlikely to affect the very precautionary trigger level (620 000 t).
Total TAC in most recent fishing year	As noted above, the precautionary catch limit remains at 5.61 million tonnes, but the fishery is managed (each year) to a trigger level of 620 000 t. The total catches in the last two years were: 2009/10: 211 974 2010/11: 179 131
Client share of TAC (green weight of catch)	Aker Biomarine catches (for Saga Sea) were: 2009/10: 100 868 2010/11: 70 396

Conditions

Condition 1 was closed during the first annual audit; PI 1.1.2 being rescored at 90.

Condition	**Condition 2. Larval fish catch**
PI	2.1.1, 2.1.2
SG 60	(2.1.1) Main retained species are likely to be within biologically based limits or if outside the limits there are measures in place that are expected to ensure that the fishery does not hinder recovery and rebuilding of the depleted species. and (2.1.2) If the status is poorly known there are measures or practices in place that are expected to result in the fishery not causing the retained species to be outside biologically based limits or hindering recovery. There are measures in place, if necessary, that are expected to maintain the main retained species at levels which are highly likely to be within biologically based limits, or to ensure the fishery does not hinder their recovery and rebuilding. The measures are considered likely to work, based on plausible argument (e.g., general experience, theory or comparison with similar fisheries/species).
SG 80	(2.1.1) Main retained species are highly likely to be within biologically based limits, or if outside the limits there is a partial strategy of demonstrably effective management measures in place such that the fishery does not hinder recovery and rebuilding. and (2.1.2) There is a partial strategy in place, if necessary that is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits or to ensure the fishery does not hinder their recovery and rebuilding. There is some objective basis for confidence that the partial strategy will work, based on some information directly about the fishery and/or species involved. There is some evidence that the partial strategy is being implemented successfully.

SG 100	(2.1.1) There is a high degree of certainty that retained species are within biologically based limits. Target reference points are defined and retained species are at or fluctuating around their target reference points. and (2.1.2) There is a strategy in place for managing retained species. The strategy is mainly based on information directly about the fishery and/or species involved, and testing supports high confidence that the strategy will work. There is clear evidence that the strategy is being implemented successfully, and intended changes are occurring. There is some evidence that the strategy is achieving its overall objective.
Score	2.1.1: 65 2.1.2: 60
Rationale	The condition stated: Larval fish catch within all fisheries for Antarctic krill is expected; although the Aker BioMarine fishing method allows this amount to be measured (the suction technology maintains the integrity of the larvae). At the current level of catch, the rate of larval fish capture is not likely to place species beyond biologically based limits or hinder recovery and rebuilding of depleted species. However, this has not been demonstrated with appropriate scientific rigour. Action required: Assess the risk that the main retained species are beyond biologically based limits as a result of larval fish catch at current and trigger levels; concentrating on *C.gunnari* and *N.rossii* but with consideration for other species which may be of concern. If the risk is unacceptable a strategy should be tested and then implemented which would be expected to maintain the fish species at levels which are highly likely to be within biologically based limits or to ensure the krill fishery does not hinder their recovery and rebuilding. Timescale: The risk assessment must be completed within 2 years from certification. If required, the strategy must be implemented within 4 years from certification.
Client Action Plan	Within 2 years of certification Aker Biomarine will assess the associated risks that the main retained marine fish species are beyond biologically based limits, at current and trigger levels. The assessment programme will focus on *C.gunnari* and *N.rossii* whilst still monitoring all retained marine larvae. Independent scientific observers will be employed during all krill fishing operations to assess marine larvae by catch. Data will be made available to stakeholders. Standard sampling protocols will be employed (described in the CCAMLR Interim protocol for Fish/Fish Larvae by-catch observation in Krill fishery). Methods and results will be independently verified by experts in the field of Antarctic marine larvae from British Antarctic Survey and other relevant organisations. Potential influences on by-catch will be recorded for each trawl and included in the analyses. These include trawl type, CCAMLR Area (48.1,48.2 and 48.3), season (‘Summer‘ from October to March and ‘winter‘ from April to September), Time of Day (Day‘ from 0600hrs to 1800hrs and ‘Night‘ from 1800hrs to 0600hrs), sea state (recorded on a categorical scale from 1 to 8), sea-surface temperature (SST), bottom depth, fishing depth and the krill catch for that particular trawl. With the use of advanced statistical modelling, seasonal and geographic influences can be determined on the frequency and species of marine larvae by-catch. From this any key factors can be identified that increase the risk of marine larvae by catch. Aker Biomarine has been monitoring marine larvae by catch, as described above, for all its operations since 2006. This information can be made available to increase the data and reliability of the modelling. Once risk factors have been identified then management programmes can be established within 4 years to avoid vulnerable populations and reduce impact. As with condition 1, Aker Biomarine will work closely within the framework and management requirements of CCAMLR and CEMP. Key stakeholders will be involved in the programme, including WWF Norway to validate the process, outputs and final reporting. Final reports will be independently

	peer reviewed.
Client Progress	The conclusion of the first annual audit was "Work is currently well underway to address this condition. The work is scoped to address the issues raised in the condition and is in line with the client action plan. Action to address this Condition is considered to be **On-Target**." In 2012, a report has been completed by MRAG (MRAG, May 2012; due to be tabled at CCAMLR where this will be subject to peer review) describing a comprehensive analysis of larval bycatch, with an assessment of the risk posed on populations in each Area (48.1, 48.2, 48.3). The conclusion of the report was as follows: *"Precautionary estimates of larval bycatch of Aker BioMarine's MSC certified fishery were calculated for different fishery scenarios using data collected by CCAMLR international scientific observers from the 2007/08 season to the 2010/11 season. Fish larvae counts were summed by species group in order to determine the effects of potential explanatory variables on bycatch rates through the use of GLMs. Myctophid (lanternfish) and Channichthyidae (icefish) species dominated bycatch, with lower levels of Nototheniidae (notothenid) species present.* *There were clear spatial and temporal differences in presence/absence and observed densities of bycatch rates by species groups. Consequently species group and Subarea specific GLMs were used. Time of day, krill catch, sea surface temperature, bottom depth and fishing depth and season were statistically significant explanatory variables for the presence absence of species group specific bycatch for at least one species group and Subarea specific GLM.* *The GLMs were used to predict larval bycatch rates for the Saga Sea for different fishery scenarios.It was clear that the bycatch rates of Myctophids across Area 48 were insignificant compared to available biomass estimates. The Channichthyidae and Nototheniidae species group specific larval bycatch estimates were then used to estimate the biomass at age of 50 % maturity that was removed from stocks due to the mortality on fish larvae caused by the Saga Sea.* *It was assumed that the bycatches of the Channichthyidae and Nototheniidae species groups were exclusively accounted for by C. gunnari and N. rossii, the species of most concern in the analysis. These estimates of biomass at age of 50 % maturity were compared to available estimates of stock abundance from groundfish surveys throughout Area 48. N. rossii in Subarea 48.2 was the only species and Subarea combination for which precautionary bycatch estimates accounted for greater than 0.25 % of the lower 95 % confidence limit of stock biomass. However no N. rossii fish larvae have actually been observed as bycatch on the Saga Sea in Subarea 48.2.* *In total, 40 % of Nototheniidae records in Subarea 48.2 were accounted for by G. Gibberifrons, which has a mean estimated biomass of 29,000 t in the Subarea. Consequently it is unlikely that bycatch rates of Nototheniidae in Subarea 48.2 pose significant risk to the N. rossii stock, or other stocks of Nototheniidae in the Subarea for which stock biomass estimates are available. In conclusion it is highly unlikely that larval fish bycatch rates of the Saga Sea pose any threat to groundfish stocks in Area 48.* *Aker BioMarine's Antarctic Sea will operate in the MSC certified fishery in Area 48 for the first time in the 2011/12 season. It is unlikely that the addition of the Antarctic Sea to the MSC certified fishery will result in significant risk to groundfish stocks in Area 48".* MRAG *"confirm that the risk assessment covers both the current catch and trigger level catch scenarios, as the assumed catches of the Saga Sea for both normal and low sea-ice years reflect the vessel operating at full capacity. The expansion of the krill fishery to the trigger catch level would not result in an increase in catches of krill, or larval bycatch, for the MSC certified fishery.* *Additionally, it was concluded that even if the Antarctic Sea were to catch the same total krill catch as the assumed catches of the Saga Sea, the MSC fishery would still be unlikely to pose any risk to groundfish stocks. In other words, even if the Antarctic Sea and the Saga Sea were*

	to operate at the full fishing capacity of the Saga Sea, the MSC fishery does not pose any risk to groundfish stocks. This conclusion will hold, irrespective of the catch limit in place or the level of total catch for the Antarctic krill fishery, until the fishing capacity of the MSC certified fishery increases significantly e.g. addition of new vessels to the MSC fishery."
Observations	An assessment of the risks posed by fishing of saga Sea on populations of affected fish species (considering all taxa present, but concentrating on those most occurring in the samples, and identified as most likely to be at risk – i.e. lanternfish, notothenids and icefish) has been carried out generally according to the terms of the client action plan. Independent review has not yet been carried out (the report having only recently been completed), but this is fully expected to occur within the CCAMLR system. The analysis takes account of factors such as krill density, location (area), season, depth, sea surface temperatures etc on each of the species groups represented. The assessment also takes a conservative approach at each stage of the assessment in evaluating the effects of fishing. Importantly, the assessment has considered the effect of ice cover - which affects the temporal and spatial distribution of fishing. Accordingly conservative (high) catches are evaluated under both low-ice and 'normal' ice cover situations in terms of their effects on fish populations caught as larval bycatch. The results of the analysis are that the effects of the removal of larval fish on the populations are as follows: **Lanternfish, all Areas**. Lanternfish are the least easily identifiable to species level of the taxa examined. Recent estimates of lanternfish in the Scotia Sea were in the region of 5 million tonnes. Removals due to fishing by Saga Sea are considered highly unlikely to pose any risk to the populations present. **Sub-Area 48.1.** Icefish. Several species are likely to be caught as juveniles, but identification to species level may be uncertain. Catches by Saga Sea are considered highly unlikely to pose a threat to C gunnari populations (or other Channichthyidae species). Notothenids. Only 8 individuals of the notothenid species group were present in 7 sampled hauls out of total of 281. It is therefore taken that larval bycatch on the Saga Sea poses no risk to notothenid stocks in Subarea 48.1. **Sub-Area 48.2.** It is considered highly unlikely that larval bycatch on the Saga Sea poses a risk to icefish (*C gunnari* or other Channichthyidae species). A high number of notothenid larvae were recorded in this area; if these were all ascribed to N rossii, this may represent the highest risk factor in the analysis. However, other species make up the recorded (adult) notothenid population in the area, natural mortality rates for N rossii are expected to be much higher than those used in the analysis and the most abundant notothenid in the area (humped rockcod G gibberifrons) has a stock biomass of 29 000 tonnes in the area. So, while no risk to any N rossii (or other notothenid) population is expected, further work is recommended to confirm this through further discrimination of notothenid bycatch species composition. **Sub-Area 48.3.** In the context of the estimates of abundances of icefish and notothenid species, it is highly unlikely that larval bycatch on the Saga Sea poses a risk to *C. gunnari*, *N. rossii* or other species from the Channichthyidae or Nototheniidae families in Subarea 48.3. The work carried out by MRAG is considered to be an appropriate evaluation of the risk posed to fish populations by AKBM operation. The conclusion that there is no significant risk to any populations within Area 48 appears well supported. MRAG also evaluated the additional risk posed by the Antarctic Sea entering the fishery. Assuming equivalent catches to the Saga Sea (which is unlikely), the outcome of the assessment above would not be changed – i.e. if both vessels (the MSC unit of certification) operated to maximum possible capacity, there would not be a significant threat to affected fish populations.
Conclusion	For PI 2.1.1, the risk assessment described above has identified no significant risk to any populations within Area 48 based on the current management measures and fishing practices

	(notably the precautionary trigger level of 620 000t of krill and distribution of catches of krill between sub-areas in 48). Therefore, while some species may be outside of biologically based limits (notably *N rossii*), the partial strategy of management measures has been demonstrated to be effective in ensuring that the fishery does not hinder recovery and rebuilding. The SG80 requirement has therefore been met. The SG100 requirement (There is a high degree of certainty that retained species are within biologically based limits. Target reference points are defined and retained species are at or fluctuating around their target reference points) only appears to apply to one species in one area (C gunnari in 48.3). Therefore all elements meet SG80 and a few achieve higher performance, but most do not meet SG100. PI 2.1.1 is therefore rescored at 85. For PI 2.1.2 the partial strategy described above is expected to maintain the main retained species at levels which are highly likely to be within biologically based limits or to ensure the fishery does not hinder their recovery and rebuilding. The risk assessment carried out by MRAG (using information directly about the fishery and the species involved) provides an objective basis for confidence that this partial strategy will work. There is ample evidence through the monitoring and management of the fishery, and AKBM vessels in particular, that the partial strategy is being implemented successfully. The SG80 requirement has therefore been met. The SG100 level requires a specific strategy for the management of larval bycatches. Such a strategy is not in place, and so the SG100 requirement is not met. PI 2.1.2 is therefore rescored at 80.

Condition	**Condition 3. Ecosystem Effects**
PI	2.5.2
SG 60	There are measures in place, if necessary, that take into account potential impacts of the fishery on key elements of the ecosystem. The measures are considered likely to work, based on plausible argument (eg, general experience, theory or comparison with similar fisheries/ ecosystems).
SG 80	There is a partial strategy in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance. The partial strategy is considered likely to work, based on plausible argument (eg, general experience, theory or comparison with similar fisheries/ ecosystems). There is some evidence that the measures comprising the partial strategy are being implemented successfully.
SG 100	There is a strategy that consists of a plan, containing measures to address all main impacts of the fishery on the ecosystem, and at least some of these measures are in place. The plan and measures are based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem. This plan provides for development of a full strategy that restrains impacts on the ecosystem to ensure the fishery does not cause serious or irreversible harm. The measures are considered likely to work based on prior experience, plausible argument or information directly from the fishery/ecosystems involved. There is evidence that the measures are being implemented successfully.
Score	75
Rationale	The PI requirements is that "There is a partial strategy in place, if necessary, that takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance." While it is noted that at the current level of catch, the impacts on predators are predicted to be negligible, recent simulation modelling has demonstrated that the current krill catch trigger level may not be precautionary in all situations.

	Action required: It is noted that the issue of sub-dividing the krill TAC is being considered within CCAMLR; and also that the likelihood of such a situation arising appears very low. The implementation of an appropriate mechanism within the term of this certification would therefore fulfil this condition (i.e. will prevent significant local depletion). Aker Biomarine should also support the development of appropriate strategies through the provision of any information required by CCAMLR to assist this process and an appropriate strategy should be developed and implemented. Should situations arise whereby significant localised depletion could occur, Aker should adapt its fishing patterns to reduce such localised depletion to the greatest extent possible. Timescale: Provision of information should be carried out in accordance with Voluntary Condition [4], and information provided to CCAMLR on request. An appropriate strategy to prevent significant localised depletion must be implemented within 4 years of certification.
Client Action Plan	To support management strategy for CCAMLR, AKBM will collect data during fishing operation and submit data to CCAMLR. Data will be collected according to Conservation measure 51-04 (2009) (General measure for exploratory fisheries for *Euphausia superba* in the Conservation Are in the 2009/10 season, ANNEX 51-04A). This would provide data on local krill abundance in the areas/seasons where the fishery operates. A research plan will be made before 2011 season based on (ANNEX 51-04B), adapted to Aker BioMarine fishing operation and fishing gear. Aker BioMarine will support by data and operative knowledge development of appropriate strategy to avoid local depletion. This matter has been discussed with CCAMLR member states and agreement has been reached for AkerBiomarine to support developing a suitable strategy within the four year timescale Aker BioMarine will implement a new operation procedure to minimize localized depletion.
Client Progress	The conclusion of the first audit was "Significant steps have been taken within CCAMLR to begin the process of distributing catches to avoid effects on dependent predators. As outlined above and under Condition 4 below, significant steps have been taken by Aker BioMarine to provide information to CCAMLR from its own activities, and through a newly formed industry association. The situation has not apparently arisen whereby significant localised depletion could occur (catches remain significantly below the precautionary trigger level) and so no responses through adaptation of Aker BioMarine fishing patterns have been required. Progress with this condition is generally **On target**, and in terms of data provision, **ahead of target**." The previous annual audit reported the establishment of catch limits by Subarea under CM 51-07. This conservation measure has been reconfirmed for 2010/11 (CM 52-07 (2011)). The distribution of catches of krill between sub-areas in 48 remains as follows: 48.1 25% 48.2 45% 48.3 45% 48.4 15% This measure has the particular aim of avoiding disproportionate effects on land-based predators until more detailed management arrangements (requiring further research information) are in effect. During 2009/10, the largest catch of krill was taken from the Antarctic Peninsula Bransfield Strait West due to an unusual absence of sea ice; this also resulted in the higher catches for 2009/10 which were reduced in 2010/11 when ice cover was more normal. Catches of krill in 2009/10 reached the apportioned limit for Subarea 48.1 (25% of the trigger level: 155 000

	tonnes) and on 10 October 2010 the subarea was closed to krill fishing for the remainder of the season. The final verified catch was 153 262 tonnes. The CCAMLR Working Group on Ecosystem Monitoring and Management (section 2.79) concluded that during 2009/10, the fishery concentrated its operations in a manner that was not typical of the distribution of catches during either the previous 10 years or over the whole history of the fishery (as described above). Thus, it was further agreed that application of the subdivision of the trigger level in CM 51-07 had been successful, capping the catches in Subarea 48.1 during 2009/10, while maintaining flexibility in where vessels could fish up to that point. After the fishery in Subarea 48.1 was closed, flexibility was limited to the other subareas. It was noted, however, that there was not sufficient data on predator populations and foraging behaviour to precisely determine the effects of high localised catches on dependent predator populations, but that further work (notably through feedback management) was underway on this issue. It is noted that the CCAMLR Scientific Committee endorsed a programme of work on developing suitable indicators in this area beginning in 2012 and extending until 2014.
Observations	As noted above, the estimate of krill biomass within Area 48 has risen from 37.3 million tonnes to 60.3 million tonnes. This also raised the precautionary catch limit based on the krill harvest control rule from 3.47 million tonnes to 5.61 million tonnes. However, the certification was awarded on the basis of the catch being less than the trigger level of 620 000 t, which remains unchanged. CM 52-07 (2011) has confirmed the distribution of catches of krill (up to the trigger level) between sub-areas in 48. The situation of an unusual absence of sea ice in 2009/10 meant that catches reached the apportioned limit for Subarea 48.1 (25% of the trigger level: 155 000 tonnes). This resulted in the closure of this subarea in October 2010 for the remainder of the season. The final verified catch was 153 262 tonnes. This system of catch distributions was therefore tested in the 2009/10 season with demonstrable success. AKBM has also committed to supporting five annual surveys of krill in Subarea 48.2 – the first being carried out in 2011 (Krafft et al 2011). Following from the research plan reported in the first annual surveillance audit, AKBM has also supported research mapping krill predator foraging ranges overlapping with Saga Sea fishing patterns from 2007-2011 (Nicoll and Douglass, 2012). This analysis has shown significant degrees of overlap with few species – the worst case apparently being Antarctic fur seal for which krill trawling may take place over around 15% of the area predicted to be most used for foraging around the South Orkney Islands. In the absence of detailed foraging studies in the area, it would therefore appear highly unlikely (70% or more of the area not being affected) that the ecosystem would be disrupted to the point of serious or irreversible harm. AKBM have introduced a standard operating procedure (covering both Saga Sea and Antarctic Sea) requiring skippers to determine the availability of krill in an area; if the swarm being fished seems to be the only available in an area, then the vessel will move on before fishing the available krill – so fishing in a manner that would help to prevent localised depletion within an area.
Conclusion	The reconfirmed and tested strategy for the distribution of catches of krill between sub-areas in 48 is considered to represent a suitable partial strategy for the management of effects of the fishery on the receiving ecosystem. This takes into account available information and is expected to restrain impacts of the fishery on the ecosystem so as to achieve the Ecosystem Outcome 80 level of performance (i.e. it is highly unlikely that the ecosystem would be disrupted to the point of serious or irreversible harm. The plan and measures are not yet based on well-understood functional relationships between the fishery and the Components and elements of the ecosystem, (CCAMLR WGEMM noted that there was not sufficient data on predator populations and foraging behaviour to precisely determine the effects of high localised catches on dependent predator populations, but that further work (notably through feedback management) was underway). This issue therefore meets the SG80 requirements at present; ongoing work is expected to attain the SG100 level in

	time. There is now direct evidence that the measures comprising the partial strategy have been implemented successfully and so the 'partial' strategy is expected to work. The SG80 requirements are now met and PI 2.5.2 is rescored at 80. SG100 requirements are expected to be met by further work within CCAMLR, possibly within the term of the current certification.

Condition	**Condition 4. Additional Voluntary Condition – SSMUs and Krill-Predator Interactions**
PI	n/a
Rationale	SSMUs. If the fishery expands beyond current catch trigger levels (620 000 mt) then SSMUs, as defined by CCAMLR, must be introduced within two years of expansion beyond the trigger levels or (in the absence of other relevant and compelling information) the certification will be voluntarily withdrawn. Krill-Predator Interactions. Within 12 months of certification, the Aker BioMarine krill fishery will develop a comprehensive research programme to map their fishing operations in relation to information on predator distribution and abundance to help to address the key uncertainties associated with the relationship between krill biomass and predator populations.
Client Progress	The requirements of the first part of this Condition are not required at this time – catches being below the trigger level. The requirements of the second part of this condition have been met – a collaborative, costed research programme has been instigated within 12 months of certification and the outputs of the research are now available (Nicoll and Douglass 2012).
Observations	This voluntary condition remains open to ensure that if the fishery expands beyond current catch trigger levels (620 000 mt) then SSMUs, as defined by CCAMLR, must be introduced within two years of expansion beyond the trigger levels or (in the absence of other relevant and compelling information) the certification will be voluntarily withdrawn. The second part of this voluntary condition has been met.

Any complaints against the certified operation; recorded, reviewed and actioned
None reported

Any relevant changes to legislation or regulation.
There have been no changes to Conservation Measures relevant to this fishery since the last annual audit. The only difference is the extension of CM 51-07 (subdivision of the trigger level between Subareas) to 2011/12.

Any relevant changes to management regime.
There have been no significant changes to management of the fishery within CCAMLR or within the Norwegian management system. It is noted that within the scope of the existing certificate, Aker Biomarine have expanded their fleet to include both the Saga Sea (the original vessel) and the Antarctic Sea (an recently acquired vessel). The Antarctic Sea has not yet commenced fishing operations.

Overall Conclusions
Three Performance Indicators have been re-scored, all within Principle 2: PI 2.1.1 – 85 PI 2.1.2 – 80 PI 2.5.2 – 80 The overall score for Principle 2 has therefore increased from 91 to 94.3. There are now no MSC-related conditions open. Principle scores are: P1 – 88.8 P2 – 94.3 P3 – 93.4 No changes in management have taken place that would detrimentally affect the performance of this fishery against the MSC standard and the fishery continues to meet the requirements of the MSC Standard. No destructive fishing practices or unilateral exemptions have been introduced. MSC Certification should therefore continue with audits annually. As no conditions remain, the next (third) surveillance audit will be an off-site surveillance audit (given the ecological sensitivity of the resource base), although if catches exceed the trigger level, an on-site audit will be required. The fourth surveillance audit shall be carried out on-site.

Annex 1

Written Stakeholder submissions to the surveillance audit and IMM responses to points raised. –

None received.

Annex 2

Notification of surveillance audit

Annex 3

Records of Stakeholder Meetings