R. v. KELLY COVE SALMON LTD.

AGREED STATEMENT OF FACTS

THE DEFENDANT COMPANY

Kelly Cove Salmon Limited is the largest independent aquaculture company in North America operating more than 100 aquaculture farms in Atlantic Canada with more than 500 employees.

The company produces approximately 60,000,000 pounds of Atlantic salmon and 2,000,000 pounds of trout annually with annual sales in excess of $165,000,000.

COMMERCIAL AQUACULTURE LICENSES & LEASES

Pursuant to Commercial Aquaculture Licenses & Leases issued by the New Brunswick Department of Agriculture & Aquaculture, ***Kelly Cove Salmon Ltd.*** was at all material times the licensee, lessee, and operator of the following aquaculture sites:

1. Site Number **MF-0003** located in Seal Cove Sound, adjacent to Grand Manan, Charlotte County, New Brunswick;

2. Site Number **MF-0059** located in Clam Cove, adjacent to Deer Island, Charlotte County, New Brunswick;

3. Site Number **MF-0400** located in Seeley's Cove, Maces Bay, Charlotte County, New Brunswick;

4. Site Number **MF-0412** located in Maces Bay, adjacent to Red Head, Charlotte County, New Brunswick;

5. Site Number **MF-0320** located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;

6. Site Number **MF-0496** located in Orange Cove, Maces Bay, Charlotte County, New Brunswick;

7. Site Number **MF-0215** located in Fish Island Harbour, adjacent to Deer Island, Charlotte County, New Brunswick;

8. Site Number **MF-0045** located in Boone Cove, adjacent to Deer Island, Charlotte County, New Brunswick;

9. Site Number **MF-0377** located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;

10. Site Number **MF-0251** located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;

11. Site Number **MF-0370** located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;

12. Site Number **MF-0168** located in Friars Bay, adjacent to Campobello Island, Charlotte County, New Brunswick;

13. Site Number **MF-0179** located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;

14. Site Number **MF-0228** located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;

15. Site Number **MF-0051** located in Doctor's Cove, adjacent to Deer Island, Charlotte County, New Brunswick.

WATER FREQUENTED BY FISH

The above-noted aquaculture sites, owned and operated by ***Kelly Cove Salmon Ltd.***, are all located in "Canadian Fisheries Waters" as defined under s. 2 of the *Fisheries Act* and "waters frequented by fish" as defined under s. 34(1) of the *Fisheries Act.*

Mr. Robert MacDougall, Area Habitat Coordinator for southwest New Brunswick, Fisheries & Oceans Canada, confirms that the listed aquaculture sites are all located in waters "contiguous with the Bay of Fundy which support numerous recreational and commercial fisheries, including but not limited to: lobster, scallop, herring, mackerel, flounder species and clams."

THE SEA LICE PROBLEM

"Sea lice" are a parasitic crustacean and are considered a severe pest for the aquaculture industry. Sea Lice feed on the flesh of farmed salmon until the salmon die or the sea lice are removed.

For a number of years, the aquaculture industry in southwest New Brunswick was using an in-feed additive commonly known as "Slice" to control sea lice infestations in farmed fish. However, the treatment efficacy of this control method decreased over time as sea lice appeared to develop a resistance to the product. By the fall of 2009 and into the summer of 2010, notwithstanding preventative measures by ***Kelly Cove Salmon Ltd.*** including husbandry and area management, as well as permitting sites to lie unused ("fallowing"), there were severe sea lice infestations in the southwest Bay of Fundy salmon farms, contributed to by higher than normal water temperatures and the aforementioned decrease in the effectiveness of the in-feed ("Slice") treatment. The effectiveness of other approved treatment methods had decreased during this time period as well.

During this period, ***Kelly Cove Salmon Ltd.*** farmed salmon were being consumed and destroyed by sea lice. In response to this threat to its salmon stocks, ***Kelly Cove Salmon Ltd.*** used a product containing cypermethrin as part of a bath treatment solution at its affected aquaculture sites.

CYPERMETHRIN IS A "DELETERIOUS SUBSTANCE"

Cypermethrin is a synthetic pyrethroid used as an insecticide. Pyrethroid class insecticides such as Cypermethrin are amongst the most toxic insecticides known and marine crustaceans are generally more sensitive to Cypermethrin than marine finfish.

In 1998, the Health Canada Pest Management Regulatory Agency (PMRA) denied an application for approval to use EXCIS, a Cypermethrin based pesticide, in the marine environment-concluding that it posed an unacceptable risk of harm to non-targeted marine organisms.

Cypermethrin is used in products as an insecticide to control sea lice in other jurisdictions such as Norway, Chile and the United States. Cypermethrin based products have been registered for use in Canada for commercial agriculture applications and in consumer products for domestic purposes. However, Cypermethrin based products have not been approved for use in the marine environment or for use in the aquaculture industry in Canada.

Cypermethrin is considered as a "deleterious substance" as defined in s. 34(1) of the *Fisheries Act* because of its high toxicity to fish and marine crustaceans, including lobster and sand shrimp. Cypermethrin has also been found to be highly toxic to a variety of freshwater and marine invertebrates and fish. Environment Canada has studied Cypermethrin toxicity at its Atlantic Region laboratory and found it to be toxic to a wide variety of aquatic organisms.

Kelly Cove Salmon Ltd. was aware at all relevant times that Cypermethrin based pesticides were not registered for use in the marine environment, *i.e.* in Canadian waters such as the Bay of Fundy.

THE OFFENCES

On November 19, 2009, Environment Canada was notified that lobster fishermen were hauling traps containing dead lobsters in Seal Cove Sound, adjacent to Grand Manan. Again on December 4, 2009, Environment Canada was notified by Fisheries & Oceans Canada that lobster fishermen had discovered a number of dead lobsters in their lobster storage car located in Clam Cove, adjacent to Deer Island.

NOVEMBER 2009 INCIDENT

Investigation confirmed that between November 18-20, 2009, four commercial lobster fishermen had discovered a number of dead lobsters in traps they had set in Seal Cove Sound, adjacent to Grand Manan. The lobster traps in which these commercial lobster fishers discovered the dead lobsters were set in areas proximate to aquaculture site MF-0003, which was owned and operated by ***Kelly Cove Salmon Ltd.*** in Seal Cove.

Mr. Vincent Guptill, a commercial lobster fisherman, had set approximately 255 lobster traps directly adjacent to active aquaculture sites in Seal Cove between November 18-20, 2009. Mr. Guptill's fishing strategy was to place his lobster traps as close as possible to the active aquaculture sites since lobsters had a tendency to congregate under the salmon pens. On November 20, 2009, Mr. Guptill had strings of lobster traps set around several active aquaculture sites in Seal Cove- including site MF-0003 operated by ***Kelly Cove Salmon Ltd.*** When Mr. Guptill hauled a string of lobster traps set directly adjacent to aquaculture site MF-0003 on November 20th, he discovered 4 dead lobsters. This was the only string of lobster traps he hauled on that date that contained dead lobsters. The dead lobsters were disposed of by the fisherman and were not analyzed for the presence of Cypermethrin.

During the same time period, another commercial lobster fisher reported hauling a significant number of dead lobsters from traps he had set in Seal Cove. The lobster traps in which these dead lobsters were discovered were also set in an area proximate to site MF-0003 operated by ***Kelly Cove Salmon Ltd.*** in Seal Cove, near Grand Manan. The dead lobsters were disposed of by the fisherman and were not analyzed for the presence of Cypermethrin.

Joseph Ingalls, a commercial lobster fisherman, had also set lobster traps in strings adjacent to aquaculture site MF-0003 (operated by ***Kelly Cove Salmon Ltd***) during this time period. When he hauled those traps on November 19, 2009, he discovered 15 dead lobsters. Nine of the dead lobster were subsequently seized and submitted to the Environment Canada Atlantic Laboratory for Environmental Testing for chemical analysis. Three were randomly chosen by laboratory staff for chemical analysis. The analysis registered the presence of Cypermethrin in the lobster samples at levels ranging from 7.9 ng/g to 10.7 ng/g. The method detection limit or "LOD" (which is the minimum concentration of a substance which can be measured by the analytical method and reported with confidence by the laboratory) for Cypermethrin is 5.0 ng/g (5 parts per billion).

On December 4, 2009, Environment Canada seized a salmon **sample** from aquaculture site MF-0003 (operated by ***Kelly Cove Salmon Ltd.***) and submitted it to the Environment Canada laboratory for chemical analysis. The analysis registered the presence of Cypermethrin in the salmon sample at levels ranging between 6.3 ng/g to 7.4 ng/g.

On the same date, salmon samples from other active aquaculture sites in Seal Cove were also seized by Environment Canada and submitted for chemical analysis. The salmon sample obtained from site MF-0003 was the only one of these samples to test positive for the presence of Cypermethrin.

DECEMBER 2009 INCIDENT

Commercial lobster fishermen Bryant Green and Derek Green stated that on December 3, 2009, they had stored approximately 14.5 crates of lobsters in a lobster car located in Clam Cove, adjacent to Deer Island. The Greens' lobster car was located near aquaculture site MF-0059 (operated by ***Kelly Cove Salmon Ltd.***). MF-0059 was the only aquaculture site located in Clam Cove. When the Greens proceeded to collect lobsters from the car located in Clam Cove on December 3, 2009, they discovered three crates (estimated at several hundred pounds) of dead lobsters in the car.

Five of the dead lobsters collected by the Greens on December 3, 2009, were seized and submitted to the Environment Canada Atlantic Laboratory for Environmental Testing for chemical analysis. The analysis registered the presence of Cypermethrin in the dead lobster at concentration levels ranging from 10.2 ng/g to 46.1 ng/g.

On December 4, 2009, Environment Canada seized a salmon sample from aquaculture site MF-0059 (operated by ***Kelly Cove Salmon Ltd.***) in Clam Cove. That sample was submitted to the Environment Canada Atlantic Laboratory for Environmental Testing for chemical analysis. The results registered the presence of Cypermethrin in the salmon sample at concentration levels ranging from 23.2 ng/g to 503.6 ng/g. Site MF-0059 was the only possible source of the Cypermethrin detected in the dead lobsters retrieved from the Green's lobster car the day before.

INSPECTION PROGRAM

As a result of the lobster kills in November-December, 2009, and the related concerns from local commercial fishermen's associations, Environment Canada conducted routine inspections at numerous aquaculture sites operating in the Bay of Fundy in 2010 to monitor for compliance with s. 36(3) of the *Fisheries Act*. Numerous salmon samples were collected from the various aquaculture sites and submitted to the Environment Canada Atlantic Laboratory for Environmental Testing for chemical testing.

The test results registered the presence of Cypermethrin in significant concentration levels in salmon samples collected from a number of aquaculture sites owned and operated by ***Kelly Cove Salmon Ltd.*** The results are summarized as follows:

(1) Site Number **MF-0400**, located in Seeley's Cove, Maces Bay, Charlotte County, New Brunswick;
- Sample # 3594 collected on May 27, 2010;
- Cypermethrin concentration of 6.00 ng/g registered in gill sample 2010000262.

(2) Site Number **MF-0412**, located in Maces Bay, adjacent to Red Head, Charlotte County, New Brunswick;
- Sample # 3595 collected on May 27, 2010;
- Cypermethrin concentration of 7.60 ng/g registered in gill sample 2010000263.

(3) Site Number **MF-0320**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 9003 collected on July 20, 2010;
- Cypermethrin concentration of 6.40 ng/g registered in gill sample 2010000734.

(4) Site Number **MF-0496**, located in Orange Cove, Maces Bay, Charlotte County, New Brunswick;
- Sample # 4655 collected on September 23, 2010;
- Cypermethrin concentration of 40.10 ng/g registered in gill sample 201001336.

(5) Site Number **MF-0215**, located in Fish Island Harbour, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 4652 collected on September 22, 2010;
- Cypermethrin concentration of 64.00 ng/g registered in gill sample 2010002998.

(6) Site Number **MF-0045**, located in Boone Cove, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 4679 collected on September 22, 2010;
- Cypermethrin concentration of 51.20 ng/g registered in gill sample 2010002997.

(7) Site Number **MF-0377**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 4695 collected on September 22, 2010;
- Cypermethrin concentration of 38.90 ng/g registered in gill sample 2010002988.

(8) Site Number **MF-0251**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 3681 collected on November 16, 2010;
- Cypermethrin concentration of 50.80 ng/g registered in gill sample 2010002747.

(9) Site Number **MF-0370**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 3673 collected on November 16, 2010;
- Cypermethrin concentration of 46.90 ng/g registered in gill sample 2010002744.

(10) Site Number **MF-0168**, located in Friars Bay, adjacent to Campobello Island, Charlotte County, New Brunswick;
- Sample # 4681 collected on September 22, 2010;
- Cypermethrin concentration of 18.2 ng/g registered in gill sample 2010001338.

(11) Site Number **MF-0179**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 4694 collected on September 22, 2010;
- Cypermethrin concentration of 21.7 ng/g registered in gill sample 2010002991.

(12) Site Number **MF-0320**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 4693 collected on September 22, 2010;
- Cypermethrin concentration of 22.4 ng/g registered in gill sample 2010002992.

(13) Site Number **MF-0059**, located in Clam Cove, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 4692 collected on September 22, 2010;
- Cypermethrin concentration of 21.90 ng/g registered in gill sample 201001337.

(14) Site Number **MF-0228**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample # 4682 collected on September 22, 2010;
- Cypermethrin concentration of 31.1 ng/g registered in gill sample 2010002989.

(15) Site Number **MF-0051**, located in Doctor's Cove, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample #3659 collected on September 22, 2010;
- Cypermethrin concentration of 13.80 ng/g registered in gill sample 201001344.

(16) Site Number **MF-0370**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample #3658 collected on September 22, 2010;
- Cypermethrin concentration of 9.10 ng/g registered in gill sample 201001343.

(17) Site Number **MF-0320**, located in Passamaquoddy Bay, adjacent to Deer Island, Charlotte County, New Brunswick;
- Sample #4548 collected on November 16, 2010;
- Cypermethrin concentration of 27.0 ng/g registered in gill sample 2010002984.

During the same period of the 2010 aquaculture site inspections referenced above, there were no reports of Bay of Fundy lobster mortalities nor were any lobster samples analyzed by Environment Canada for the presence of Cypermethrin.

Salmon samples, collected by Environment Canada at various times in 2010 from aquaculture sites owned and operated by two companies other than ***Kelly Cove Salmon Ltd.*** were analyzed for the presence of Cypermethrin and tested positive for "easily detectable levels beyond the normal calibration curve for that compound." In September 2010, Environment Canada issued "Notices of Intent to issue an 'Inspector's Direction'" to these companies warning them to "immediately stop any current use of illegal pesticides as well as to prevent any future occurrences of such use."

ACQUISITION OF CYPERMETHRIN BASED PESTICIDES

Kelly Cove Salmon Ltd. acquired significant quantities of Cypermethrin based pesticide from a specialized supplier in 2009. Records obtained from the supplier confirm that in 2009, 72 cases (8 pints per case) of a Cypermethrin based pesticide, sufficient for numerous treatments at the various ***Kelly Cove Salmon Ltd.*** aquaculture sites, were purchased by ***Kelly Cove Salmon Ltd.***

SUMMARY

Kelly Cove Salmon Ltd. used Cypermethrin based pesticide at 15 separate aquaculture sites owned and operated by the company in an effort to control sea lice infestation and the associated losses to the Company. These aquaculture sites were located in 6 different areas in the Bay of Fundy, including Grand Manan, Deer Island, Sealy's Cove, Red Head, Maces Bay, and Campobello Island. Cypermethrin based pesticides are a known "deleterious substance" (particularly to marine crustaceans such as lobster) and are not permitted for use in the marine environment in Canada. In two instances (November 2009 and December 2009), the deposit of Cypermethrin based pesticides into the marine environment by ***Kelly Cove Salmon Ltd.*** contributed to the above-mentioned lobster mortalities.