Application for the Reassessment of a Group of Hazardous Substances

APP201051 – Anti-foul Paints

Submission By Keith Ingram. Maritime Consultant

4 Prince Regent Drive
Half Moon Bay
Auckland 2012
Phone: 09 5334336
Email: keith@skipper.co.nz

5 March 2012

1. Thank you for the opportunity to make these constructive comments on behalf of a number of key interest groups to the above discussion paper on the use and application of anti-fouling paints in the New Zealand coastal marine environment. These groups have all been consulted and will be submitting their own letters in support of this submission.

2. As the author of this submission I have some 50 years seagoing experience operating all manner of coastal and inshore commercial and pleasure craft within the New Zealand coastal and near shore waters.

3. I am the editor and publisher of *Professional Skipper* magazine, a past President, life member and current board member of the NZ Marine Transport Assn representing the coastal and restricted limits commercial fleet, the immediate past President of the NZ Recreational Fishing Council representing some 254,000 members along with something in excess of 100,000 pleasure craft many of which are moored vessels.

4. Also the current Commodore of the Bucklands Beach Yacht Club with some 1200 members. The club owns and operates its own 104 berth marina at Half Moon Bay, along with its own members fully licensed and approved haul out and hard stand facility, as well as managing our public and commercial landings. The marina is adjaecent to one of the busiest boat ramps in Auckland and the commercial barge landing for SeaLink Ferries. The club is a fully paid up member of the Marina Operators Assn (MOA) Yachting New Zealand and the AYBA among others.

5. Hull fouling occurs throughout the marine environment and its very presence, incurs a huge cost to owners in fuel and time lost, as well as the down stream impacts of repairing hull surface destruction, the blocking of sea chests, valves and cooling systems all of which are capable of putting a vessel at risk at sea if the treatment and protection against bio-foulings remain un-checked.

6. Add to this the further risk to our bio-security with the un-wanted importation of marine invaders, which as history will attest quickly take up residence in our pristine waters and indoing so, add a further risk and cost to both shipping, especially our developing aquaculture industry.

7. In an effort to cut to the chase, speaking from experience, marine foulings fall into three catagories:
    a. Slime – mud and dioton

b. Weed
c. Shell growth – oysters, mussels and barnacles.

8. To combat or deter the growth of these organisms we use products known as "anti-foul" paints, all of which must contain some form of toxin or poison of suffient strength to counter growth.

9. In saying this one of the most successful and proven ingredients in anti-foul paints is copper 'Cu'. This is naturally found mineral right around our coast line and within the marine environment. Copper sheathing was first used on sailing ships even before Captain Cooks voyages to New Zealand to protect the sturdy wooden hulls from marine fouling and the dreaded teredo wood boring worm. Apart from the increasingly number of foreign marine invaders breeching our bio-security defences and becoming established, nothing has changed. So the use of copper or copper based products should be regarded as our first line of natural defence to bio-fouling in New Zealand waters.

10. This brings me to our next concern and begs the question: Who says or where is the evidence, scientific proof and or justification to ban all the named recognised and accepted toxins in known use, including copper, in the listed toxins in the executive summary on page 3 of the Environmental Protection Authority (EPA) report January 2013.

11. While we agree with the general concept of reassessing hazardous substances, the information relied upon would appear flawed, and the main influence appears to be a desire to keep up with overseas regulators rather than develop quantitative data applicable to New Zealand local conditions. The EPA discusses human health and environmental effects as being adverse effects of anti-foul paints (AFP)s, however it should be noted that the EPA admits on page 14 of the application that:
    a. *"there is no epidemiological data currently available for users of AFPs"*

12. So where is the substantive scientific data to support this application for the reassessment of anti-fouling paints? The document remains silent on supporting the many claims to justify its release.

13. Whilst it acknowledges it, the EPA has also failed to investigate fully the many other substances, such as solvents, which are contained in AFPs which may also have an adverse effect on the users' health.

14. Therefore we disagree with the EPA's conclusion on page 14 of the assessment that:
    a. *"Health risks arising from the exposure to active ingredients during the removal stage of AFPs are related to the method of removal. Exposure due to removal of AFPs is generally expected to be negligible"*

15. In our experience, there are more people who remove and apply their own AFPs, many of whom end up covered in the residue of AFPs in the removal process. The same group of people also tend to apply AFPs with brush and rollers which do not pose the same risks as spraying to either themselves or to bystanders.

16. Because AFPs must contain some form of toxin to be effective, we agree that there is some environmental risks posed by the use of AFPs, and agree in principle with attempts to control their unintended leaching into the environment. By this statement we assume that the EPA is talking about the control, collection and disposal of hull cleaning residue, sandings and scrapings.

17. In the case of the BBYC and the majority of haul out facilities used by small commercial and pleasure craft, we are advised that like the BBYC, most facities now have collection areas, sand filters and traps to mitigate against the potential leaching of residue toxins into the marine environment resulting from either sanding, cleaning or the application of AFPs.

18. We note the if the EPA is concerned about small haulout facilities up many of our backwaters, then it is a compliance issue to contain residue rather than introducing a blanket ban on recognised suitable products. We do not agree with the emphasis placed on marina and hardstand facilities as being disproportionately responsible for environmental risks, when the EPA cannot effect compliance over the greater marine coastal space for which it remains responsible for.

19. It is totally irresponsible of the EPA to suggest or attempt to delegate this responsibility to others.

20. Diuron has been identified as an active ingredient which will be phased out in four years, yet it is an active ingredient in several products available to boat owners, such as Micron Extra and Awlcraft. We note "this biocide was tested for in Westpark's 2010 Sediment Quality Investigation for its dredging and dumping consents, which found that that it was not detected in concentrations higher that the analytical method minimum detection limits – less than 0.010 mg/kg dry weight".

21. Diuron is a herbicide and algaecide used in over 100 products in Australia and New Zealand. The Australians recently reviewed its use. "The Australian authorities commenced a review of diuron on the basis of environmental and human health concerns, specifically the potential for diuron to contaminate the marine environment through agricultural runoff, with a noted lack of reference to AFPs. Of particular interest, although anti-fouling paints containing Diuron are no longer permitted for use in the United Kingdom and Europe, the risk assessment approach undertaken in Australia, using a very conservative model, concluded that diuron anti-fouling use patterns in Australia did not present risks to aquatic organisms".

22. We note that all of the named toxins in the report are currently available from any garden centre and are used in domestic gardens to control weeds and other undesirable garden growth. Likewise these same products are available, and in fact are essential for, weed control and pasture management in farming and the management and control of weeds and noctious pests in horticulture, agriculture and forestry area. Which means any residue is at risk of and will continue to enter the marine environment via either rural or urban run-off through our storm water systems, creeks, streams and rivers.

23. Which begs the question:
    - Just how robust is the international research of which the EPA appear to be basing their recommendations on?
    - Where is the robust documented supporting evidence?
    - Where is the independent peer review?

24. In returning to copper, we note the recent article by Kieran Campbell in the Weekend Herald January 26, where the author claims "Boats' copper leaching into Milford Sound". In this article the author quotes some outlandish claims of copper leaching from AFPs applied to boats working in the Sounds and is destroying the local marine environment in Milford Sound. As previously stated copper is an mineral found naturally in our coastal marine envirionment.

In fact mining for copper was a recognised business in Fiordland and Milford Sound as late as 1914. We know the mines, batteries and smelters were close to shore and we also know that the RMA was not in effect then.

25. Meaning that what these old miners did back then was largely uncontrolled, with the resulting risk of high polution discharges of heavy metals etc into the marine environment. We raise this question to counter the environmental stated claims of blaming boats and AFPs in the media. As a result we know copper is found naturally in the marine environment and Fiordland has naturally high consentrations occuring in its near shore waters to no detrimental effect on the marine envirionment. The naturally occuring high levels of fresh water layers up to 10m in depth has a greater impact on marine growth in the intertidal zone than any detected levels of copper in AFPs, natural occuring or otherwise.

26. We understand that in the Fiordland example, the NIWA scientists quoted did not physically check Fiordland, rather they based their damning statements on a model taken from Auckland's Westhaven Marina. Here we have the two extremes at best. Westhaven and St Marys Bay have a centuries old history of commercial activity, with its many open slipways and boat building yards. It is now home to New Zealand's largest marina and is bounded by the northern motorway and Auckland's harbour bridge along with all its associated polution and urban runoff that remains unchecked. Hydro-carbons, nitrogen dioxide, sulphur dioxide, rubber residue and break lining dust all add to the mix, including high levels of copper, arsenic, mercury and you name it. With years of abuse Westhaven is just not a satasfactory reference point in this situation and as such this evidence and statement of claims should discarded.

27. Therefore, we challenge the EPAs assumptions in regards to using Fiordland as any example for justification of its report, for it is just not robust, enough to withstand even a casual scrutiny.

28. I would now like to focus on the development of AFPs. New Zealand is an island nation surrounded by water and as such, we are a relative minnow in the world of shipping. Although it is worthy to note that ninety nine percent of all goods, trade and exports in and out of the country comes or leaves by ship. Anti-fouling paints are principally developed for international commercial shipping, whose vessels must remain fuel efficient and as such their AFPs paint costs must also be affordable.

29. TBT based paints were banned in New Zealand in 1999, nine years before the global ban was introduced in 2008. Even today ships from third world nations are still coated in TBT paints and continue to arrive here. Sadly the EPA has no ability to effect compliance.

30. In Auckland alone, we have between 2200 to 2400 international ship visits per annum. Combine these visits to other port calls in New Zealand, with many ships having an average stay on our coast of up to 10 days. Any one of these large ships has a far greater surface area than a marina full of pleasure craft and we have no idea, what toxins are being carried in their hull paint systems. We just know that most have clean bottoms and as such these paints contain a high percentage of toxins to be effective. The very toxins that are contained in the proposed phase out or banning list for New Zealand in the EPA document.

31. This raises the next question. If we go ahead and impose the proposed bans, who will effect compliance? We will still have visiting ships exposing a greater risk to our coastal and near-

shore waters than the entire domestic fleet. Never mind the natural runoff from both urban and rural use of these existing chemicals.

32. Any discussion of a phase out period when we have no proven alternative, is just pie in the sky, the stuff dreamers were made of. Irrespective of any new technology, copper is natural and remains one of the most cost effective ingredients in AFPs available, one that has durability to give a long standing means of protection and as such, we must retain the ability to use copper based products. Period!

33. I would reiterate the importance of retaining the ability for boat owners to carry out their own annual R&M. At the BBYC haul out facility, we provide a cost effective facility that complies with all the current rules and RMA, because without access to such a facility, many members could not afford to remain in boating.

34. We agree with the report that all careening grids should be banned for fouling removal, bottom paint preparation and anti-fouling paint application, as there is no existing paint formulation that allows for between tide applications. But would recommend that these grids not be removed by force or law as they are an important facility to do urgent hull fitment, propeller and rudder repairs.

35. A recent NIWA survey has revealed that 69% of boat owners are DIY when it comes to servicing, haulout and painting of hull protective paints. At the BBYC we can confirm this trend. We also believe up to 73% of both recreational and small commercial craft owners are choosing as part of cost savings to prepare and reapply anti-foul paint systems to their vessels.

36. Therefore, we strongly oppose any suggestion for the banning of, or placing prescriptive controls on DIY boat owners. We would also object to the restriction in access to cost effective anti-foul paint systems to the DIY user in preference of licenced applicators only. We have no objection to some controls being place on spray applications, but recognise that spraying is beyond most DIY capabilities.

37. Therefore, we question just what is meant in the document when you suggest additional controls? And then the document remains silent!

38. Just what does this mean? We ask and expect to be advised and consulted on this subject, so that we might make further comment in a timely manner before such additional controls become law.

39. We would be very concerned if any proposed controls were to deny access for DIY applicators to quality known AFPs as this would lead to the development of pirate back yard production of AFPs.

40. At this point it is timely to note a recent letter to the editor in Professional Skipper magazine relating to a by-gone-era when DIY pirate additives were added to hull paints to boost the toxin levels.

41. *Anti-foul idiocy*

    Dear Sir

    Having read in the Herald this morning (Sunday January 27, 2013), Rodney Hide's column entitled, "Real facts buried under the twitterings of idiots". I was delighted to hear you on Radio New Zealand National's 10 am news, giving your opinion on the proposed new rules covering the application of anti-fouling paint.

    NIWA have apparently discovered that "copper is leaching from the paint" WELL! Cut me off at the knees and call me tripod, Keith, I knew that over 50 years ago, and to think that all the taxes I have paid since then may have helped them come up with that conclusion leaves me gobsmacked beyond belief.

    NIWA do a good job in many respects but I can't help thinking that one or three of Rodney's "twittering idiots" have now taken up residence there.

    When I was young, my old man (TA 215), and one or two other commercial fishermen at Mt Maunganui and many other places no doubt, used to whack powdered DDT, and later on liquid paraquat, into each gallon tin of anti-foul, a practice no longer continued as you can't get those products anymore.

    However! There are a myriad chemicals available today, equally as nasty, being used in the agricultural sector and, as you pointed out in your interview, if the "twittering idiots" (aka "Big Brother"), get their way, there'll be rebellious boaties all over the country - in bloody spades mate! I wonder if the "Twits" have ever heard of letting sleeping dogs lie?

    Ian McDonald, Auckland

42. I believe the letter speaks for itself and highlights the real risk of us seeing a return to the use of DIY pirate toxin additives available from any garden centre, if the EPA were to impose restrictions on access to quality cost effective anti-foul paints. It is because of this very real risk that we oppose any suggested or proposed restriction of access or use by DIY applicators using brush and roller.

43. We also note that there are a range of health and safety rules applicable to commercial applicators of anti-foul or any paint system, most around protection from dust and spray. We agree that these measures are applicable for the professional who is doing these tasks day after day.

44. However, we do not believe that there is any need for such prescriptive rules for the DIY applicator who is using brush and roller predominently in the open air. Any DIY operator must already comply with the yards local rules and they must also be responsible for his or hers own actions and safety – most do. In support of this claim we note that there are no reported public health effects from these activities, other than what might be found to be associated with the DIY home renovator.

45. We note, as in the BBYC case and most yards and haulout facilities that are open to the public, that apart from advising best practices the yard has no authority or even ability to police application compliance other than the standard yards safety rules pertaining to yard safety, cradles, scaffold, electric tools etc.

46. It has no ability and nor should they be expected to effect or police compliance on behalf of the EPA, when they have no legal responsibilty and as such may end up liable for any ramifications resulting from any action taken on behalf of the EPA.

Recommendations to controls.

47. We strongly recommend that the EPA step back and take a good look at what is currently happening overseas and in the international bio-fouling protection development world wide.

48. We recommend that the Government, instead of taking the forefront in leading where we do not know the world outcome may take us, that the Government and the EPA look at these world developments and adjust its review process to coincide with world trends and changes and not venture where angels fair to go.

49. It is important that the domestic fleet can continue to operate on a compatable footing with the international fleet in maintaining bio-security protection against bio-fouling and not be further penalised by added costs before the rest of the world adjusts or even complies.

50. We would strongly oppose any suggestion of restricting access or use of quality cost effective marine anti-foul paints to the DIY operator.

51. We would caution against the phase out of the use of the identified key toxin ingredients in these paints until acceptable alternatives have been developed overseas tried and tested.

52. We would also recommend that when these toxins are phased out for the purpose of protecting the marine environment, that these toxins be phased out of all products available to the rural and urban community in New Zealand at the same time. If this cannot happen then don't bother, because the greatest threat will remain from these external sources.

53. We do not support the banning or reduction in the use of copper within anti-fouling formulations at this time, as non-copper containing formulations are in their infancy and far from commercial reality.

54. Therefore we do not support the phase out of copper based AFPs at all. Rather we would ask that the EPA endorsees' the use of copper as a naturally occurring element and mineral as an approved additive substance in AFPs available to the domestic fleet.

55. A minimum phase in time of at least 10 years is required before any changes to the current use of the other named substances and or chemical additives before these AFPs are altered or modified.

56. As much as the EPA might like to think so, we are not a world leader on the subject of AFPs. Therefore it would be prudent for us to wait and see what develops world wide before we jump into the unknown and all its associated costs. The hull protection and fuel efficiencies for international shipping will dictate what protects the hulls of these ships in the future, not the EPA. New Zealand has no authority, a limited voice and no ability to dictate to world shipping how they might paint their bottoms.

57. Our greatest concerns with any proposed legislation is that we do not wish to see the local ownership of pleasure craft and commercial shipping being subjected to large unacceptable cost increases that will prohibit the right to own a boat and enjoy boating activities our country offers, or see New Zealand introduce regulations that will increase commercial costs or drive away boat building, refit and maintenance business opportunities for the New Zealand marine industry.

58. While we might have got away with our nuclear free stance when we took on the USA. Try the same trick by banning the same range of AFPs on international ships and they could bring

this nation to its knees with crippling results in 30 days.

59. For example New Zealand has **No Strategic Fuel Reserves**, we are assuming the oil tankers will continue to come regularly. Forcing ship owners to paint their bottoms with something eco-friendly will see tankers diverted elsewhere, so we cannot rely on "business-as-usual" planning.

60. If the EPA cannot impose the same rules on visiting ships as what it is suggesting the domestic fleet must endure, it leaves itself and Government open to yet another legal challenge. Is this the outcome the Government is seeking? I think not.

So how just do we bring some commonsense to this debate? In this submission we suggest some answers worthy of your consideration.

In closing I request to be heard in support of this submission.

Thank you.

Keith Ingram