



January 28, 2010

Director, Supplemental Food Programs Division
Food and Nutrition Service, USDA
3101 Park Center Drive, Room 520
Alexandria, Virginia 22302

Re: Special Supplemental Nutrition Program for Women, Infants and Children (WIC): Revision in the WIC Food Packages

Docket ID: FNS-2006-0037-0003

Dear Director of Supplemental Food Programs Division,

On behalf of Got Mercury, a 501(c)3 non-profit organization dedicated to protecting the environment and the public from mercury, and the Mercury Policy Project (MPP), a project of the Tides Center, I would like to extend our gratitude to allowing the public to provide comments on the foods approved in the WIC Program Food packages.

Got Mercury is a public health education campaign to protect consumers from mercury in seafood and to make healthier, safer choices. Got Mercury hosts an online calculator that uses the EPA formula for mercury exposure with the FDA published data on seafood mercury levels.

The Mercury Policy Project (MPP) works to promote policies to eliminate mercury uses, reduce the export and trafficking of mercury, and significantly reduce mercury exposures at the local, national, and international levels. We strive to work harmoniously with other groups and individuals who have similar goals and interests.

Got Mercury and MPP submitted comments in November 2006 during the public comment period for the interim regulations regarding the inclusion of canned tuna in the WIC Program Food Packages. The regulations, adopted in 2007 do allow up to 30 ounces of canned fish, including light tuna in Food Package VII for fully breastfeeding women. Due to unsafe levels of mercury contained in light tuna, Got Mercury and MPP opposed the inclusion.

In the three years since the interim regulations were adopted, Got Mercury and MPP have become even more concerned about the nutritional health of the most vulnerable members of society, namely pregnant and breastfeeding women and children. Got Mercury and MPP respectfully submit the following comments regarding canned light tuna in WIC Food Package VII.

Tuna of all types is the number one source of mercury in the American diet, contributing more than one-third of all mercury ingested from fish. Of that, about 16 percent comes from canned albacore, 16 percent from canned light tuna and about 6 percent from

fresh or frozen tuna.¹

We encourage the USDA to make the health of women and children a greater priority than the profits of the canned tuna industry, which stands to make an additional one million dollars at the expense of low- income mothers and infants.

Preface: Proposed Rule for Canned Tuna in Food Package VII

The proposed rule would "authorize a variety of canned fish that do not pose a mercury hazard to fully breastfeeding women."² The amount of canned fish allowed for fully breastfeeding mothers is 30 ounces per month (1.875 pounds per month).³

The average US consumer eats only 4.4 ounces of tuna a month (3.3 pounds per year).⁴ These high levels of canned tuna consumption encouraged by the FDA put low-income women and their infants at significantly greater risk than the population at large causing a problem of environment injustice toward program participants.

The USDA cannot guarantee the safety of the mercury levels in canned light tuna because the FDA fails to adequately screen canned tuna and remove high-mercury canned tuna. Contrary to FDA reports of the levels of mercury in light tuna, other studies have found higher average levels and wide variability of mercury levels in light tuna.

1. THE USDA SHOULD STOP OFFERING ALL CANNED TUNA. "LIGHT TUNA CONTAINS UNSAFE MERCURY LEVELS

Repeated studies have shown that even "chunk light" or canned "light tuna" contain mercury levels higher than reported by the FDA and often close to the levels of mercury in albacore tuna. The USDA has acknowledged the risks of continuing albacore tuna, but should also remove light tuna since mercury levels vary widely from can to can and averages mercury levels are high.

The Chicago Tribune reported in 2005 that about 15 percent of "light tuna" was yellow fin tuna and not lower mercury skipjack tuna.⁵ Of these, 90 million cans (about half) are sold without any indication that higher mercury yellow fin tuna are inside the can of light tuna.⁶ FDA testing of yellow fin tuna found an average of 0.325 ppm of mercury, which is three times the amount in skipjack "light tuna" (0.118 ppm) and equivalent to albacore tuna (0.353 ppm).⁷

¹ Center for Science in the Public Interest, Defenders of Wildlife and Mercury Policy Project, *Is our Tuna "Family Safe"? Mercury in America's Favorite Fish* (2006). Available at http://www.defenders.org/resources/publications/programs_and_policy/habitat_conservation/marine/full_report_is_our_tuna_family-safe.pdf.

² Department of Agriculture, Food and Nutrition Service, Special Supplemental Nutrition Program for Women, Infants and Children (WIC): Revisions in the WIC Food Packages; Proposed Rule, 7 Fed. Reg. 246 (Aug. 7, 2006). Available at <http://www.fns.usda.gov/wic/regspublished/foodpackagesrevisions-proposedrulepdf.pdf>.

³ Id.

⁴ National Marine Fisheries Service, *Fisheries of the United States, 2004*, (November 2005). Available at <http://www.st.nmfs.gov/st1/fus/fus04/index.html>.

⁵ Sam Roe and Michael Hawthorne, *How safe is tuna? Federal regulators and the tuna industry fail to warn consumers about the true health hazards of an American favorite*. Chicago Tribune (December 13, 2005). Available at <http://www.chicagotribune.com/news/specials/chi-0512130114dec13.1.2739672.story>.

⁶ Id.

⁷ US Food and Drug Administration, *Mercury Levels in Commercial Fish and Shellfish*. (February 2006). Available at <http://www.cfsan.fda.gov/~frf/sea-mehg.html>.

Testing by GotMercury.Org found that yellow fin tuna sampled from sushi restaurants that averaged 0.563 ppm of mercury.⁸ Twenty-three samples of yellow fin from three major US cities were sampled.⁹ There was a fifteen-fold difference between the lowest level of mercury in yellow fin sampled (0.104 ppm) and the highest mercury level of yellow fin tested (1.522 ppm).¹⁰ Though this was fresh and frozen tuna, restaurants reported the species as yellow fin tuna that could have also been used in canned tuna labeled as "light tuna" and canned for supermarkets.

MPP co-released a report with Defenders of Wildlife in 2006 titled *Is Our Tuna "Family Safe"? Mercury in America's Favorite Fish* that tested a variety of brands of light canned tuna.¹¹ The range of methylmercury varied from 0.012-1.50, with the average mercury content in the 144 cans of light tuna sampled was 0.269 ppm. The brands that tested the highest were imported from Latin America. Previous tests by the FDA focused on American brands, overlooking the higher levels in imported brands.

A review of FDA published data by the Consumer Union in July 2006 found that six percent of the "light tuna" tested by the FDA contained at least as much mercury as albacore tuna – sometimes twice as much.¹² Their study prompted Consumer Union to advise pregnant women to avoid canned tuna completely because of the unpredictable levels of mercury.¹³

Since the 2007 revision in WIC Food Packages new evidence has been published that the adverse effects of methylmercury on cognitive development occur at low mercury doses, well within the range of typical exposure among American women of childbearing age. It is prudent these studies, listed below be considered when women and children are given canned light tuna:

Lederman, S.A., et al. (2008). Relation between Cord Blood Mercury Levels and Early Childhood Development in a World Trade Center Cohort. *Environmental Health Perspectives*, 116(8): 1085-1091.

Oken, E., et al. (2008). Maternal fish intake during Pregnancy, Blood Mercury Levels, and Child Cognition at Age 3 Years in a US Cohort. *American Journal of Epidemiology*, 167(10): 1171-1181.

Seychelles Child Development Nutrition Study most recent papers:

Davidson, P.W., et al. (2008). Association between prenatal exposure to methylmercury and visuospatial ability 10.7 years in the Seychelles child development study. *Nuerotoxicology*, 29: 453-459.

Strain, J.J., et al. (2008). Associations of maternal long-chain polyunsaturated fatty acids, methyl mercury, and infant development in the Seychelles Child Development Nutrition

⁸ Summary of data collected and available at <http://www.gotmercury.org>.

⁹ Id. Combined results from Los Angeles, San Diego, and Chicago.

¹⁰ Id.

¹¹ Center for Science in the Public Interest, Defenders of Wildlife and Mercury Policy Project, *Is our Tuna "Family Safe"? Mercury in America's Favorite Fish* (2006). Available at http://www.defenders.org/resources/publications/programs_and_policy/habitat_conservation/marine/full_report_is_our_tuna_family-safe.pdf.

¹² Consumer Reports, *Mercury in tuna: New safety concerns*. (July 2006). Available at http://www.consumerreports.org/cro/food/tuna-safety/overview/0607_tuna_ov.htm.

¹³ Id.

Bonham, M.P., et al. (2008). Habitual fish consumption does not prevent a decrease in LCPUFA status in pregnant woman (the Seychelles Child Development Nutrition Study). *Prostaglandins, Leukotrienes and Essential Fatty Acids*, 78: 343-350.

The Food and Drug Administration Fails to Monitor and Remove High-Mercury Tuna

A 2004 General Accounting Office report stated that the FDA has not done enough to protect seafood safety. This included noting that the FDA fails to provide protection from mercury in seafood. Among the recommendations, the GAO suggested (and the FDA agreed) that enforcement needed more attention and that the FDA should explore equivalent foreign seafood inspection systems for improving the US seafood safety net.¹⁴

In response to criticism by the GAO, the FDA only slightly increased the number of seafood products it tested at U.S. ports of entry to **only about 1 percent**.¹⁵ The GAO found that the FDA did not prioritize enforcement and, on the rare occasion that the agency took enforcement action, that the FDA took an inordinate amount of time to respond.

Furthermore, because the FDA blends multiple samples of light tuna together for mercury testing, the averages of mercury in light tuna and the extremes of the cans containing yellow fin or bigeye tuna are obscured by this testing method.

The Chicago Tribune review of FDA testing methods showed the composite samples of multiple cans of tuna were tested.¹⁶ Pro-industry policies, not sound science, appear to dictate the testing methods of the FDA. Without accurate data on methylmercury levels in canned tuna from the FDA, the USDA cannot rely on the reported mercury levels claimed by the FDA for light tuna.

Without adequate enforcement of its own regulations, the FDA cannot guarantee that mothers in the WIC program will receive low-mercury canned tuna even when they choose only light tuna instead of albacore tuna. Therefore, the USDA must remove light tuna from the WIC program completely to eliminate an unnecessary and avoidable mercury exposure risk.

Breast Milk Exposes Infants to Methylmercury from Canned Tuna

Although mercury exposure in the womb is more dangerous, postnatal exposure to mercury should also be avoided. There is no safe exposure level of mercury and all steps should be taken to eliminate or reduce the risk of mercury exposure as much as possible.

Repeated studies have shown that mothers exposure their nursing infants to

¹⁴ United State General Accounting Office, *Food Safety: FDA's Imported Seafood Safety Program Shows Some Progress, but Further Improvements Are Needed*. (2004).

¹⁵ Id.

¹⁶ Sam Roe and Michael Hawthorne, *FDA tests show risk in tuna: U.S. agency finds high mercury levels in some cans and in samples of Chilean sea bass*. Chicago Tribune (January 27, 2006). Available at <http://www.chicagotribune.com/news/nationworld/chi-0601270193jan27.1.4214945.story?page=1&coll=chi-newsnationworld-hed>.

methylmercury and inorganic mercury during breastfeeding.¹⁷ Both forms of mercury are neurotoxins that are dangerous to developing nervous system.¹⁸

Researchers have advised mothers to avoid high-mercury fish during pregnancy and lactation while eating low-mercury fish in moderation to obtain the benefits of seafood consumption.¹⁹

Unnecessary exposure to methylmercury in breast milk can be avoided if women are given the option to select canned wild salmon, canned sardines, or other low-mercury canned fish sources. Alternative canned fish should be available to increase the benefits to mothers and their nursing infants, as well as substantially reducing their mercury exposure risks.

Additionally, the promotion of canned tuna as safe for breastfeeding mothers undermines the public health efforts to avoid canned tuna before and during pregnancy. For example, a study found that mercury in fish contributed to increased risk of premature birth.²⁰

Encouraging canned tuna consumption could put future pregnancies at risk. If the USDA hopes to encourage healthier eating habits, then it should promote the canned fish options with little or no mercury exposure risks so that healthier eating habits can be developed during participation in the WIC program.

Environmental Justice Issues Presented by Canned Tuna Promotion

Low-income families of color are already exposed to higher levels of mercury and other environmental contaminants than more affluent families. Promoting canned tuna and not healthier alternatives will continue to contribute to health disparities between different ethnic and racial groups in the US. This creates an environmental justice issue when low-income ethnic and racial groups are disproportionately consuming canned tuna and encouraged to do so through the WIC program.

African-American and Mexican-American children had higher hair mercury levels than Caucasian children in studies of US mercury levels in women of childbearing age and children.²¹ Mercury levels in the children corresponded to the amount of fish consumed per week.²²

Further analysis of the national testing data showed that Asian, Pacific Islander, Native American (including Alaska Natives), or multiracial women tested had higher levels of

¹⁷ Karolin Björnberg et al., *Transport of Methylmercury and Inorganic Mercury to the Fetus and Breast-Fed Infant*, *Environmental Health Perspectives*, 113(10): 1381–1385 (October 2005). See also H. Drexler and K.H. Schaller *The Mercury Concentration in Breast Milk Resulting from Amalgam Fillings and Dietary Habits*. *Environmental Research*, 77(2):124-129(6). (May 1998).

¹⁸ Id.

¹⁹ Mineshi Sakamoto et al., *Maternal and fetal mercury and n-3 polyunsaturated fatty acids as a risk and benefit of fish consumption to fetus*. *Environmental Science Technology*, 38:3860–3863 (November 2004).

²⁰ Fei Xue et al., *Maternal Fish Consumption, Mercury Levels and Risk of Preterm Delivery*, *Environmental Health Perspectives* (September 2006). Available at <http://www.ehponline.org/docs/2006/9329/abstract.html>.

²¹ McDowell, M. et al, *Hair Mercury Levels in U.S. Children and Women of Childbearing Age: Reference Range Data from NHANES 1999–2000*, *Environmental Health Perspectives* (August 2004). Available at <http://www.ehponline.org/members/2004/7046/7046.html>.

²² Id.

A 2009 report from the University of California Los Angeles found that one third of women in the U.S. has mercury in their blood.²⁴

More canned tuna through WIC can only increase mercury levels in these women and children.

These statistics illustrate only a portion of the health risks and environmental justice issues presented by the continued promotion of canned tuna by the USDA, not only in the WIC program, but also in other food programs.

2. THE USDA SHOULD HAVE MANDATORY CANNED FISH ALTERNATIVES

Canned fish options exist that have little or no mercury risk, but carry greater health benefits to mothers who consume them. In some cases, the alternatives may be equal to or cheaper than the prices of canned tuna.

Canned Wild Salmon The FDA reports that mercury is not detectable in canned salmon that the agency has tested.²⁵ Other studies of canned salmon have found low levels of mercury.

About four times lower than even the best estimates of mercury levels in canned light tuna and nearly 10 times lower than albacore tuna. As stated above, since albacore tuna and light tuna have similar actual averages, then wild canned salmon would be the ideal substitute for canned tuna.

Canned Anchovies The FDA reports the average level of mercury in anchovies as 0.043 ppm of mercury. By comparison, canned anchovies are almost three times lower in mercury than the FDA's reported light tuna data and more than 8 times lower in mercury than albacore tuna.

Canned Sardines The FDA reports average mercury levels in sardines as 0.016 ppm of mercury.²⁶ The FDA does not report any specific data from studies of canned sardines. Scientists have tested canned sardines that tested higher in mercury, but still less than canned tuna. While the mercury levels should be further studied, the available data suggests that canned sardines are still a better option than canned tuna because of higher Omega-3 fatty acid levels.

Canned Mackerel Canned mackerel has been found to substantially lower levels of mercury than canned tuna.²⁷ Testing in one study found that mercury levels were nearly

²³ Jane Hightower et al., *Blood Mercury Reporting in NHANES: Identifying Asian, Pacific Islander, Native American, and Multiracial Groups*, *Environmental Health Perspectives* 114: 173-175 (2006). Available at <http://www.ehponline.org/members/2005/8464/8464.html>.

²⁴ Dan R. Laks, *Assessment of chronic mercury exposure within the U.S. population, National Health and Nutrition Examination Survey, 1999-2006*, *BioMetals*, ahead of print, 2009. doi: 10.1007/s10534-009-9261-0.

²⁵ US Food and Drug Administration, *Mercury Levels in Commercial Fish and Shellfish*. (February 2006). Available <http://www.cfsan.fda.gov/~frf/sea-mehg.html>.

²⁶ Joanna Burger and Michael Gochfeld, *Mercury in canned tuna: white versus light and temporal variation* *Environmental Research* 96:239-249 (2004). Available at <http://lifesci.rutgers.edu/~Burger/>.

²⁷ Id.

Other Canned Seafood Alternatives In addition to the canned fish discussed above, there are many other kinds of canned seafood that could be offered as an alternative to canned tuna and which would carry a much lower risk of mercury exposure by mothers who consumed those optional seafood. For example, canned seafood can include shellfish, such as oysters, clams, crab, or shrimp. However, the Omega-3 fatty acid levels of these types of seafood may be lower than other options listed above.

With clearly superior canned fish alternatives available, the USDA should not let states opt out of providing canned fish options. Mothers, not state officials, should be ones who decide which fish are culturally appropriate and healthiest to consume while exclusively breastfeeding. The costs can be equal to or less than canned tuna alone so not only do alternative canned fish make sense from a public health nutrition standpoint, but also from an economic standpoint.

3. THE USDA MUST REQUIRE EDUCATION ABOUT THE RISKS OF MERCURY IN SEAFOOD AND THE BENEFITS OF LOW-MERCURY FISH CHOICES

Many consumers are confused about the benefits of low-mercury fish and the risks of high-mercury canned tuna. To clarify the canned fish information and to further the objectives of the USDA food programs, the USDA must institute regular education programs for mothers who participate in the WIC program and who consume canned fish. The FDA estimated that between 30 and 50 percent of all women were not aware of the risks of mercury exposure from high-mercury fish like tuna. A study in Wisconsin of pregnant mothers participating in WIC found that 74 percent of fish consumed by mothers was canned tuna (average of three meals per month), but two-thirds of the women did not know that predatory fish like tuna were high mercury.²⁹

Furthermore, consumers see advertising from the tuna companies touting the benefits of tuna, which further confuses consumers about the FDA and EPA mercury-in-fish advisories. Up to half of the women in the WIC program may not be able to make informed decisions about which fish are safest or to weigh the alternatives. Therefore, mandatory seafood education programs must accompany any program to distribute canned fish.

A study in 2005 found that only 13 percent of people surveyed had heard about the FDA warnings for about high-mercury fish.³⁰

In the case of canned tuna, only 53 percent of those surveyed knew about the risks of canned tuna consumption.³¹

Overall, the objectives of WIC could be better served if participants were better educated about the benefits and risks of fish consumption that would enable mothers to make informed decisions based on both preferences and reasonable precaution against unnecessary mercury exposure.

²⁸ Id.

²⁹ Gemma Giori et al., *Fish Consumption and Advisory Awareness Among Expectant Women*, *Wisconsin Medical Journal*, 105(2):41-4 (March 2006).

³⁰ Joanna Burger, *Fishing, fish consumption, and knowledge about advisories in college students and others in central New Jersey*, *Environmental Research*, 98:268-275 (June 2005).

³¹ Id.

Women receiving WIC should be educated about eliminating or limiting canned tuna consumption before choosing amongst the canned fish alternatives.

CONCLUSION

Got Mercury and MPP and our supporters who have submitted comments respectfully urge the USDA to eliminate canned tuna from the WIC program, to require states to offer alternative canned fish options, and to educate women in the WIC program adequately about mercury in seafood.

Sincerely,



Todd Steiner, Executive Director, Turtle Island Restoration Network

and



Michael Bender, Director, Mercury Policy Project

Endnotes:

- 1 Department of Agriculture, Food and Nutrition Service, Special Supplemental Nutrition Program for Women, Infants and Children (WIC): Revisions in the WIC Food Packages; Proposed Rule, 7 Fed. Reg. 246 (Aug. 7, 2006). Available at <http://www.fns.usda.gov/wic/regspublished/foodpackagesrevisions-proposedrulepdf.pdf>.
- 2 Id.
- 3 National Marine Fisheries Service, *Fisheries of the United States, 2004*, (November 2005). Available at <http://www.st.nmfs.gov/st1/fus/fus04/index.html>.
- 4 Sam Roe and Michael Hawthorne, *How safe is tuna? Federal regulators and the tuna industry fail to warn consumers about the true health hazards of an American favorite*. Chicago Tribune (December 13, 2005). Available at <http://www.chicagotribune.com/news/specials/chi-0512130114dec13.1.2739672.story>.
- 5 Id.
- 6 US Food and Drug Administration, *Mercury Levels in Commercial Fish and Shellfish*. (February 2006). Available at <http://www.cfsan.fda.gov/~frf/sea-mehg.html>.
- 7 Summary of data collected and available at <http://www.gotmercury.org>.
- 8 Id. Combined results from Los Angeles, San Diego, and Chicago.
- 9 Id.
- 10 Consumer Reports, *Mercury in tuna: New safety concerns*. (July 2006). Available at http://www.consumerreports.org/cro/food/tuna-safety/overview/0607_tuna_ov.htm.
- 11 Id.
- 12 United State General Accounting Office, *Food Safety: FDA's Imported Seafood Safety Program Shows Some Progress, but Further Improvements Are Needed*. (2004).
- 13 Id.
- 14 Sam Roe and Michael Hawthorne, *FDA tests show risk in tuna: U.S. agency finds high mercury levels in some cans and in samples of Chilean sea bass*. Chicago Tribune (January 27, 2006). Available at <http://www.chicagotribune.com/news/nationworld/chi-0601270193jan27.1.4214945.story?page=1&coll=chi-newsnationworld-hed>.
- 15 Karolin Björnberg et al., *Transport of Methylmercury and Inorganic Mercury to the Fetus and Breast-Fed Infant*, *Environmental Health Perspectives*, 113(10): 1381–1385 (October 2005). See also H. Drexler and K.H. Schaller *The Mercury Concentration in Breast Milk Resulting from Amalgam Fillings and Dietary Habits*. *Environmental Research*, 77(2):124–129(6). (May 1998).
- 16 Id.
- 17 Mineshi Sakamoto et al., *Maternal and fetal mercury and n-3 polyunsaturated fatty acids as a risk and benefit of fish consumption to fetus*. *Environmental Science Technology*, 38:3860–3863 (November 2004).
- 18 Fei Xue et al., *Maternal Fish Consumption, Mercury Levels and Risk of Preterm Delivery*, *Environmental Health Perspectives* (September 2006). Available at <http://www.ehponline.org/docs/2006/9329/abstract.html>.
- 19 McDowell, M. et al., *Hair Mercury Levels in U.S. Children and Women of Childbearing Age: Reference Range Data from NHANES 1999–2000*, *Environmental Health Perspectives* (August 2004). Available at <http://www.ehponline.org/members/2004/7046/7046.html>.
- 20 Id.
- 21 Jane Hightower et al., *Blood Mercury Reporting in NHANES: Identifying Asian, Pacific Islander, Native American, and Multiracial Groups*, *Environmental Health Perspectives* 114: 173–175 (2006). Available at <http://www.ehponline.org/members/2005/8464/8464.html>.
- 22 Dan R. Laks, *Assessment of chronic mercury exposure within the U.S. population, National Health and Nutrition Examination Survey, 1999–2006*, *BioMetals*, ahead of print, 2009. doi: 10.1007/s10534-009-9261-0
- 23 US Food and Drug Administration, *Mercury Levels in Commercial Fish and Shellfish*. (February 2006). Available at <http://www.cfsan.fda.gov/~frf/sea-mehg.html>.
- 24 US Food and Drug Administration, *Mercury Levels in Commercial Fish and Shellfish*. (February 2006). Available at <http://www.cfsan.fda.gov/~frf/sea-mehg.html>.
- 25 Joanna Burger and Michael Gochfeld, *Mercury in canned tuna: white versus light and temporal variation*, *Environmental Research* 96:239–249 (2004). Available at <http://lifesci.rutgers.edu/~Burger/>.
- 26 Id.
- 27 Gemma Gliori et al., *Fish Consumption and Advisory Awareness Among Expectant Women*, *Wisconsin Medical Journal*, 105(2):41–4 (March 2006).
- 28 Joanna Burger, *Fishing, fish consumption, and knowledge about advisories in college students and others in central New Jersey*, *Environmental Research*, 98:268–275 (June 2005).
- 29 Id.