

Fluoride Action Network

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November 6, 2015

Assistant Attorney General
United States Environmental and Natural Resources Division
DOJENRD
P.O. Box 7611
Washington, DC 20044-7611
Sent via: pubcomment-ees.enrd@usdoj.gov

**Re: United States v. Mosaic Fertilizer, LLC
Proposed Consent Decrees - D.J. Ref. No. 907108388**

Dear Assistant Attorney General,

The Fluoride Action Network (FAN), a non-profit dedicated to educating the public on fluoride's toxicity and water fluoridation, appreciates the opportunity to provide comments on the proposed Consent Decrees referenced above. Our comments are provided below. Hard copies of the Attachments are being sent to you by mail and should arrive on Monday, November 9.

A. EPA'S DOUBLE STANDARD ON PROTECTING THE ENVIRONMENT AND PUBLIC HEALTH FROM MOSAIC'S HAZARDOUS WASTE

1. FAN is dismayed at the Environmental Protection Agency's glaring double standard. While it has taken some steps to address the DIRECT impacts of Mosaic's hazardous waste on the local environment it continues to turn a blind eye on the INDIRECT impact of the use of this hazardous waste when it is deliberately added to the public water supply in water fluoridation programs.

B. NON-COMPLIANCE WITH THE NATIONAL ENVIRONMENTAL POLICY ACT (NEPA)

1. The proposed Consent Decrees circumvent the NEPA process because the Areawide Environmental Impact Statement (AEIS) for proposed expansion of phosphate mining in southern Florida was required to consider ALL of the cumulative impacts of existing and proposed phosphate mining. Despite this requirement and public comments regarding adverse impacts from fertilizers processed from mined phosphate ore and the hazardous industrial waste sold to municipalities throughout the U.S for fluoridation, the Final AEIS did not address those adverse impacts.

2. Addressing any of those impacts under the proposed Consent Decrees appears to be an attempt to substitute the proposed Consent Decrees for the Supplemental AEIS to address those impacts, as requested in public comments on the AEIS and the 60-day notice letters regarding those and other deficiencies of the AEIS. A copy of the revised 60-day notice letter is incorporated herein as Attachment 1, although the DOJ received a copy of the 60-day notice letters and all of the referenced attachments at the time they were submitted. **Therefore, the Consent Decrees are unlawful.**
3. The affected parties referenced in that 60-day notice letter include both organizational and individual members of FAN.

C. FAILURE TO IDENTIFY A LEAD FEDERAL AGENCY FOR FLUORIDATION USING INDUSTRIAL WASTE FROM MOSAIC AND OTHER INDUSTRIES

1. Members of FAN have made numerous requests of the U.S. Environmental Protection Agency (EPA), the Centers for Disease Control and Prevention (CDC) and others to determine the lead federal agency/entity for fluoridation of municipal water for the U.S. using hazardous industrial waste from Mosaic and other companies. To date, we have received no response identifying that lead federal agency/entity (Attachments 2,3).
2. The proposed (but unlawful) Consent Decrees do not address the problem of using hazardous industrial waste from Mosaic's phosphate fertilizer production and other companies for fluoridation of public water supplies in the U.S.

D. COMPLIANCE WITH THE RESOURCE CONSERVATION AND RECOVERY ACT (RCRA)

1. It's clear from the two (unlawful) Consent Decrees and their associated documents that Fluorosilicic Acid is a RCRA regulated hazardous waste based on several toxicity characteristics. One concern is that the Consent Decrees need to require the safe disposal, storage and treatment of 100% of Mosaic's Fluorosilicic Acid waste.
2. What EPA is not including or considering in the (unlawful) Consent Decrees is that Mosaic is allowed by EPA to sell its RCRA regulated Fluorosilicic Acid hazardous waste as a fluoridation chemical to U.S. cities. This liquid waste is added via dilution into public drinking water supplies of more than 200 million Americans without any regulatory oversight of this fluoridation process (Attachments 2,3), no accountability and a total agency failure to determine the potential for adverse health effects and environmental impacts from this massive improper disposal process. EPA allows this because it considers it to be "reuse" not "disposal" of a material that qualifies as hazardous waste. There is no scientific basis for the acceptance of this double standard. It represents a total disregard for the public interest for political reasons, namely the agency's acquiescence to supporting the outdated and misguided practice of water fluoridation.
3. The EPA's office of Water continues to turn a blind eye on the addition of Mosaic's hazardous waste (Fluorosilicic Acid) to the public drinking water knowing it frequently contains arsenic and sometimes radionuclides and lead. Intentional addition of these contaminants with MCLGs of zero to the public water supply, is fundamentally different

than if these contaminants were naturally present or unintentionally entered the public water.

4. According to the International Agency for Research on Cancer (Attachment 4):

Arsenic is listed Class 1: *Carcinogenic to humans*

Radionuclides are listed Class 1: *Carcinogenic to humans*

Lead is listed Class 2B: *Possibly carcinogenic to humans*

5. It is inherently wrong to purposefully allow the addition of carcinogens to public drinking water. The EPA itself acknowledges that there is no safe level for a human carcinogen and sets an MCLG (Maximum Contaminant Level Goal) of zero for such substances. The Supplemental AEIS process should address this issue.

E. FLUORIDE'S NEUROTOXICITY.

1. We are concerned that Mosaic's workers have the potential for adverse consequences from the "fluoride vapors" mentioned in the Consent Decree documents. Specifically, we are concerned about fluoride's effects on cognitive function. According to the 2006 report by the National Research Council of the National Academies (NRC) on the toxicology of fluoride (Reference 1): "it is apparent that fluorides have the ability to interfere with the functions of the brain (page 222)." FAN has listed over 200 publications on fluoride and the brain published since the NRC report (Reference 2). Of these publications, 124 are animal studies, 60 are human studies (including 45 studies reporting an association of lowered IQ in children with exposure to fluoride), 12 are cell studies, and 10 are reviews.
2. The first time concern was raised on fluoride's ability to affect cognitive function was noted in a declassified 1944 memo, written by Dr. Harold Hodge, head of the project to study fluoride toxicity for the Manhattan Project (Reference 3, page 66). Hodge requested funding for a study to perform "animal experiments to measure the central-nervous-system effects of fluoride." The proposal stated,

"Clinical evidence suggests that uranium hexafluoride may have a rather marked central nervous system effect ... It seems most likely that the F [code for fluoride] component rather than the T [code for uranium] is the causative factor," states the memo (Reference 3, page 27).

F. FLUORIDE'S MANY OTHER TOXIC EFFECTS

1. FAN has provided citations and discussion on fluoride's impacts on many other tissues (see <http://fluoridealert.org/issues/health/>).
2. Fluoride's wide range of impacts on a whole range of tissues is not unexpected considering its ability to strike at the very heart of biochemistry. It inhibits many enzymes; in conjunction with aluminum it switches on G-proteins, which mediate the transmission of messages across membranes throughout the body. There may be other places where the similarity in size and shape of the aluminum tetrafluoride complex and

the phosphate ion may have serious consequences for biochemical function. For a review of the mechanism of fluoride's toxic actions see Barbier et al., 2010 (Attachment 5).

3. FAN is particularly concerned by the fact that fluoride accumulates in the bone over a whole lifetime. Its estimated half-life is approximately 20 years (NRC, 2006). Approximately 50% of the fluoride one is exposed to each day, via ingestion and inhalation, is stored in the bone. This accumulation increases for individuals with impaired kidney function. Early symptoms of fluoride's poisoning of the bone are identical to arthritis and lifelong accumulation may make the bones more brittle and prone to fracture.

4. FAN is also concerned about fluoride's impact on the kidney because this organ excretes about 50% of the daily intake of fluoride and thus is highly exposed to this toxic substance on a daily basis.

5. The National Research Council in its 2006 review devoted a whole chapter to fluoride's ability to disrupt hormonal systems, particularly the thyroid gland. It was this report that labeled fluoride an endocrine disruptor. In 2015 a report was published in the UK (Attachment 6, Peckham et al.) indicating an association between the levels of fluoride in drinking water and the prevalence of hypothyroidism among over 98% of the general Practices surveyed.

G. AS THE CONSENT DECREES ARE UNLAWFUL THE FOLLOWING CORRECTIONS TO THE DEFICIENCIES THEREIN SHOULD BE INCORPORATED INTO THE SUPPLEMENTAL AEIS PROCESS AND AS REQUIREMENTS/CONDITIONS FOR ALL FEDERAL PERMITS RELATED TO ALL ASPECTS OF PHOSPHATE MINING, INCLUDING FERTILIZER PROCESSING AND INCLUDED IN CONSENT DECREES

1. IT SHOULD BE REQUIRED that all Mosaic workers be tested for cognitive function and dental problems (e.g., Mosaic workers in the fertilizer plants are losing their teeth). Included with this testing would be blood and urine tests, on a six-month basis, for all Mosaic workers and contracted workers. These levels, for each worker, need to be documented and available to each and every worker on the Mosaic sites, as well as to the public. It would be up to the worker to decide if he/she wants to remain anonymous and only have his/her age, sex, and Mosaic site where he/she worked listed in the document.

2. IT SHOULD BE REQUIRED that Mosaic provide a list of every contaminant of concern, and the levels reported for each in soil, water and air, and the date that they were recorded, at each of the Mosaic locations. This information should be available in all documents related to Mosaic with easy online access for the public.

3. IT SHOULD BE REQUIRED that MOSAIC be expressly forbidden to sell Fluorosilicic Acid, or any other chemical manufactured at their site(s), for any purpose connected with the fluoridation of drinking water.

4. IT SHOULD BE REQUIRED that all documents and data on the levels of contaminants should NOT be destroyed at the discretion of Mosaic, or any future owner, but should

instead be available for public review for the next one hundred years in a public location (such as a library) close to each of the sites included in the Consent Decrees, with funds allocated for the safekeeping of these documents.

5. IT SHOULD BE REQUIRED that Mosaic's obligations to their employees in both Louisiana and Florida should be specified in clear layman's language in the event that they (and possibly their children), suffer ill health, bodily injury, or death, as a consequence of their employment.

6. IT SHOULD BE REQUIRED that Mosaic inform all their employees, at six-month intervals, of the risks they (and their future offspring) are subjected to.

7. IT SHOULD BE REQUIRED that any worker's cancer, other disease, or death, be memorialized in a document that will be available to the public. For matters of privacy, the worker should have the right to say whether he/she wants to be listed by name or simply by age, sex, and the name of the Mosaic site where employed.

8. IT SHOULD BE REQUIRED that a local "witness for the public", designated by the Fluoride Action Network, be allowed access to each of Mosaic's sites whenever state or federal officials tour Mosaic's sites.

9. IT SHOULD BE REQUIRED that Mosaic workers from communities of color be warned that they are especially vulnerable to fluoride's toxic effects. These vulnerabilities are carefully documented in a long report that FAN recently submitted to the Interagency Working Group on Environmental Justice (Attachment 7).

Sincerely,

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ATTACHMENTS: Hard-copies sent via mail.

- 1. Revised AEIS 60-day Notice Letter, May 29, 2014
<http://fluoridealert.org/wp-content/uploads/reiner.mosaic.60-day-notice.2014.pdf>
- 2. Letter from Wanda K. Jones, DrPH, Principal Deputy Assistant Secretary of Health, Department of Health and Human Services, Washington D.C., to Ms. McElhenny, November 21, 2014. http://fluoridealert.org/wp-content/uploads/jones.hhs_nov-2014.pdf

Excerpt: "... FDA has determined that Congress did not intend for FDA to regulate the addition of fluoride to public drinking water for dental caries prevention as a drug under FD&C Act. Instead, Congress intended that the U.S. Environmental Protection Agency (EPA) regulate fluoride in public drinking water as a potential contaminant under the Safe Drinking Water Act of 1974 (SDWA), Public Law No. 93-523, 88 Stat. 1660 (codified as amended at 42 U.S.C. 300f et seq.) to protect against adverse health effects, and that within the limits thus set by EPA, state and local governments be permitted, but not required, to fluoridate public drinking water to help dental caries"

- 3. Letter from Steven M. Neugeboren, Associate General Council, Water Law Office, Office of General Counsel, Environmental Protection Agency, Washington D.C., to Gerald Steel, PE, Olympia, WA. February 14, 2013. http://fluoridealert.org/wp-content/uploads/neugeboren.epa_.feb-2013.pdf

Excerpt: "EPA does not have responsibility for substances added to water solely for preventative health care purposes..."

- 4. International Agency for Research on Cancer, Lists of Classifications: http://monographs.iarc.fr/ENG/Classification/latest_classif.php
Definitions of Classifications: <http://monographs.iarc.fr/ENG/Classification/index.php>
- 5. Barbier O, Arreola-Mendoza L, Del Razo LM. 2010. Molecular mechanisms of fluoride toxicity. *Chemico-Biological Interactions*, Nov5;188(2):319-33.
Abstract: <http://fluoridealert.org/studytracker/15328/>
- 6. Peckham S, Lowery D, Spencer S. 2015. Are fluoride levels in drinking water associated with hypothyroidism prevalence in England? A large observational study of GP practice data and fluoride levels in drinking water. *Journal of Community Health & Epidemiology*, February 24. <http://fluoridealert.org/studytracker/21277/>
- 7. Water Fluoridation and Environmental Justice. A report prepared by the Fluoride Action Network and submitted to the Environmental Justice Interagency Working Committee, September 15, 2015. <http://fluoridealert.org/wp-content/uploads/ej-report-9-25-15.pdf>

REFERENCES

1. NRC (National Research Council of the National Academies). 2006. Fluoride in Drinking Water: A Scientific Review of EPA's Standards. National Academies Press. Washington DC. <http://www.nap.edu/catalog/11571/fluoride-in-drinking-water-a-scientific-review-of-epas-standards>

Note: It is easiest to view (and search) this long document online.

2. Over 200 studies on fluoride and the brain published since 2006. Compiled by the Fluoride Action Network. http://fluoridealert.org/studytracker/?effect=brain-2&sub=&type=&start_year=2006&end_year=2015&show=10&fulltext=&fantranslation=

Note: It is easiest to view these studies online.

3. Bryson C. 2004. *The Fluoride Deception*. Seven Stories Press.

Note: This is a book. If the DOJ or EPA office requires a copy we will be happy to send it