City of Los Angeles
Dept. of Water & Power

WATER STANDARDS: FUTURE CONERNS

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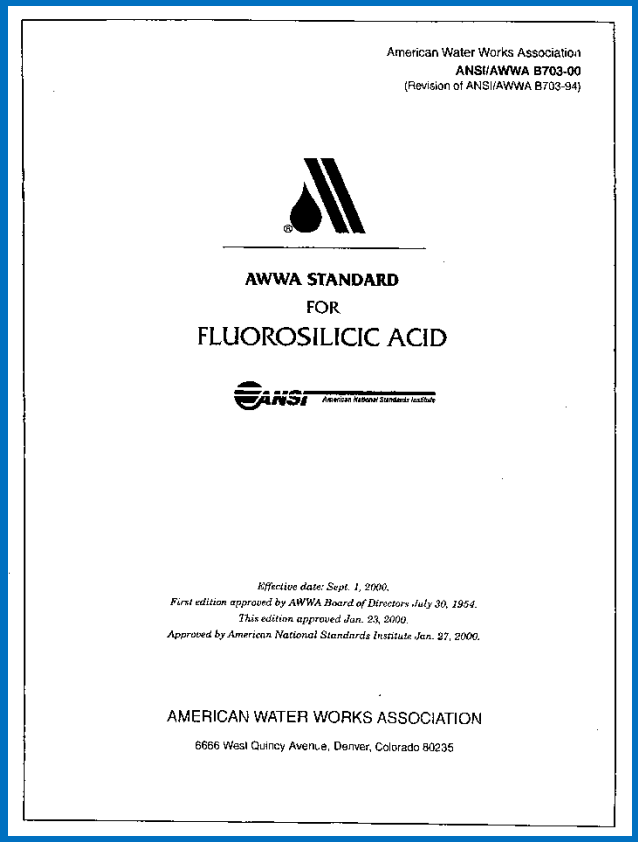
EXISTING & PAST WATER STANDARDS


American Water Works Association
ANSI/AWWA B703-00
(Revision of ANSI/AWWA B703-94)

AWWA STANDARD
FOR
FLUOROSILICIC ACID

ANSI American National Standards Institute

Effective date: Sept. 1, 2000.
First edition approved by AWWA Board of Directors July 30, 1954.
This edition approved Jan. 23, 2000.
Approved by American National Standards Institute Jan. 27, 2000.

AMERICAN WATER WORKS ASSOCIATION
6666 West Quincy Avenue, Denver, Colorado 80235

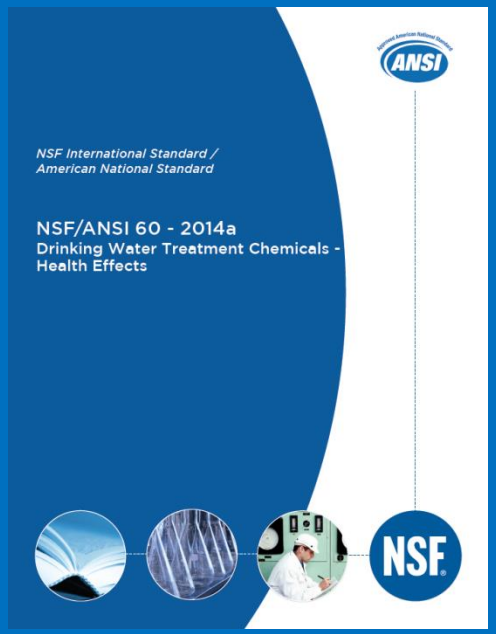
- American Water Works Assn. (AWWA): chemical and system component standards for function
- USEPA Registration Program for treatment chemicals and system components (1972-1990)
- National Sanitation Foundation (NSF): treatment chemicals and system component standards for purity

NSF/ANSI Standard 60

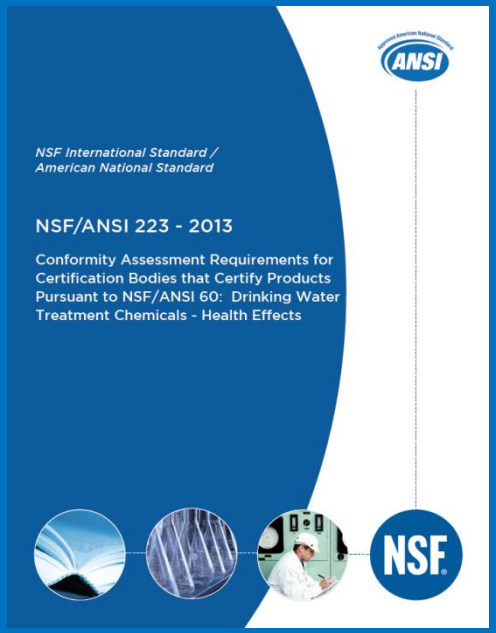
Drinking Water Treatment Chemicals

– Health Effects

- Developed to ensure treatment chemicals do not add unsafe levels of chemical contaminants to drinking water.
  - Requires un-announced inspections
  - Chemical is safe at its maximum use level.
  - Contaminants associated with the chemical are below maximum allowable levels.
  - Also has requirements for good manufacturing practices, which now include Product Security (Tamper-Evident Packaging).



NSF/ANSI Standard 223



- Conformity Assessment Standard
  - Rules for certification organizations that are certifying chemicals to NSF/ANSI 60.
  - Minimum annual requirements for facility inspections.
  - Minimum annual requirements for testing of chemicals.
  - Additional requirements for producers located in countries with significant corruption.

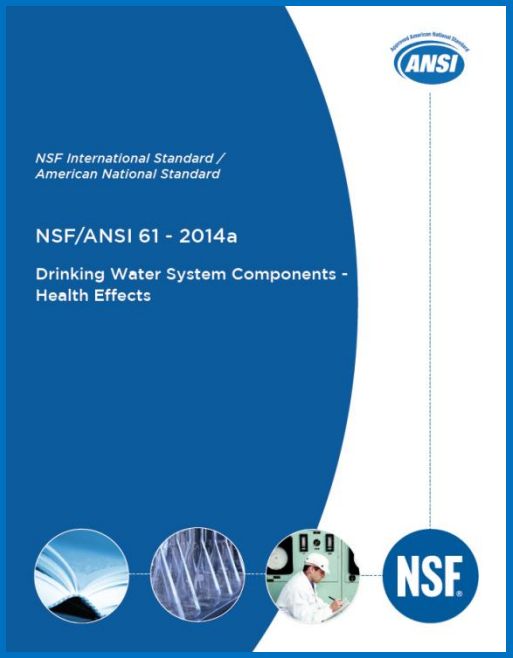
TRANSPARANCY INTERNATIOAL

CORRUPTION PERCEPTIONS INDEX

NSF/ANSI Standard 61

Drinking Water System Components

– Health Effects

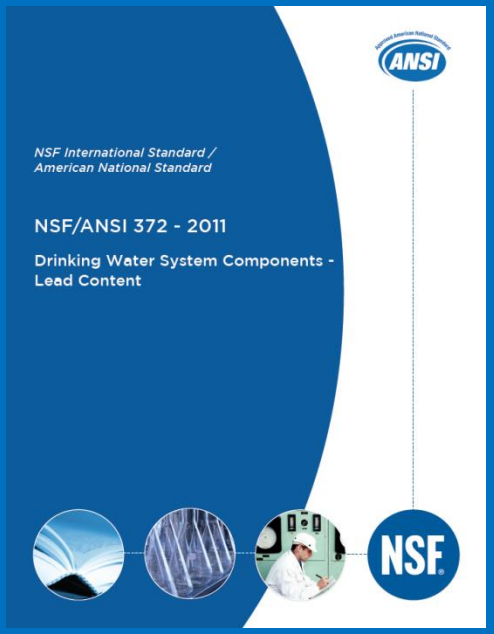


- Covers health effects of materials in contact with water from source water extraction to faucets in buildings.
- Involves un-announced inspections
- Evaluates the amount of any chemical contaminant added from a product to drinking water against health based criteria.

NSF/ANSI Standard 372

Drinking Water System Components

– lead content



- Evaluates the lead content of products that convey or dispense drinking water.
- Involves un-announced inspections
- Developed in 2010 for “lead free” requirements in California. Weighted average of 0.25%.
- Replaced the 8% limit in US SDWA in 2014.

THE JUNGLE

by Upton Sinclair (1906)

"This is no fairy story and no joke; the meat will be shoveled into carts and the man who did the shoveling will not trouble to lift out a rat, even when he saw one."

Brown, R., Cornwell, D., & Macphee, M., *Trace Contaminants in Water Treatment Chemicals: Sources and Fate*, Journal AWWA 96:12; 111-125, December 2004.

US & FOREIGN GALVANIZED PIPE

- Primarily produced in US mills until the early 1960s
- Steam-blown Zn coating at correct temperatures with standard or excess coating weights, and relatively low contaminants
- Large Korean/Japanese/Taiwanese penetration of west coast markets by mid-1960s
- Air-blown Zn coating; well below standard coating weight
- ASTM A120 certified; inspections announced in advance; proper operations during audits
- Asian galvanized failed in 6-10 years vs. 10-20 years
- Studies in late 1970s established inadequate coating weights, absence of multiple galvanizing layers, coating contamination, & poor metal adhesion from recovered failed pipe
- A boon for US copper tube producers (some now in Mexico)

RC2: LEAD IN CHILDRENS TOYS

- Thomas-the-Tank-Engine and other popular children's toys had lead above the legal limit
- Originally low-lead, but initial testing regime relaxed along with pressure to reduce prices, and lead paint introduced later
- May 2007: recall; RC2 establishes "Multi-Check Safety System"
- Sept 2007: 2nd recall; "Multi-Check Safety System" ineffective
- RC2 removed from future toy production
- Aug 2008: US CPSC reduced allowed lead in toys from 0.06% to 0.009% by weight; mandatory testing of children's products, and criminal penalties that include jail time & fines of $15 M

MEAT CONAMINATION AT OSI SUBSIDARY IN CHINA

OSI Group founded as Otto & Sons in Chicago in 1909

First supplier of fresh meat to McDonalds in 1955

Sheldon Lavin (current owner) started as consultant in 1970s, later full time at McDonald's request; took control in 1980s

Largest supplier of protein to McDonalds in the world

Forbes listed OSI as 62nd largest private corporation in 2013

Has 60 facilities in 16 countries; $6 Billion annual revenue

Began China operations in 1992; now has 10 plants there

Keeps a low profile: "The largest company you never heard of."

Regular, third-party audits of foreign facility operations

EVENTS AT SHANGHAI HUSI

OSI employees shown on Shanghai TV re-labeling expired meat, handling meat with bare hands, & picking up meat from the floor

Hamburgers unavailable for in Beijing for several weeks

KFC, Papa Johns, Burger King, & Pizza Hut cut ties with OSI in Asia; McDonald's shifted production to newer OSI plant in Henan

Shanghai Husi shut down in July 2014; remains shutdown

OSI vegetable plant ceded ops to CA-based Golden State Foods

Six OSI employees arrested in Shanghai for selling expired meat

Japan McDonald's stopped importing chicken from OSI in China

OSI Group in China lost $1 Billion last year

OSI laid off 340 employees at Shanghai Husi

CAUSES & REMEDIES

Clearly a food quality problem existed; no documented illness or contamination has yet been reported

OSI managers did not visit plant often; did not speak Chinese

OSI did not audit enough to ensure US standards were followed

Third-party audit did not reveal problems at Shanghai Husi plant

OSI to re-centralize China operations under global management

OSI launches “Asia QC Center” in Shanghai for 3 years ($1.6 M)

Translate all documents into English & Chinese; add cameras

McDonald’s to increase audits (half will be unannounced) at all suppliers in China; staff will accompany auditors

Chinese government approved changes in their Food Safety Law in April 2015; new rules become effective on Oct. 1st

FUTURE CONCERNS

Many trust-based business practices are proving ineffective

Announced inspections should be a thing of the past

Currently, hard to document raw materials suppliers

Many “suppliers” are brokers and materials’ sources shift often

As developing countries search for cheaper raw materials, sources may move to countries with even lower standards

Auditors in countries with substantial corruption should be closely overseen

Language and cultural differences, already problematic, will become even more difficult to manage well

Treatment chemicals and system component contamination potential, greatly reduced in recent decades, may increase

“If controls are relaxed, they will cheat.”


The End