

EAST BAY MUNICIPAL UTILITY DISTRICT
Office of the General Counsel

DATE: March 6, 2008

MEMO TO: Richard Sykes, Manager of Maintenance and Construction

FROM: Joel Freid, Attorney

SUBJECT Acid Wash and Surface Coatings Do Not Make Otherwise Non-Compliant
Faucets Comply with A.B. 1953's Lead-Free Requirements

QUESTION

Q: Is the use of “coatings” or an “acid wash” a permissible technique for modifying fittings or fixtures that are intended to convey water for human consumption and thereby comply with the provisions of Chapter 853, Statutes of 2006 (A.B. 1953 (Chan): Lead Plumbing)?

ANSWER

A: No, the statute is explicit in its wording that the sole method for compliance with California law, as of January 1, 2010, for such fittings and fixtures is to reduce the “lead content of the components” to comply with the lead content standard of 0.25%, using the specific formula set forth in the statute.

DISCUSSION

Assembly Bill 1953 in Chapter 853, statutes of 2006, reduced the California lead content standard for plumbing fittings and fixtures that convey or dispense water for human consumption from 4% to 0.25%. To do this, the statute defined “lead free” plumbing fittings and fixtures as those that contain lead at a concentration of “not more than a weighted average of 0.25 percent,” and specified that the **percentage of lead content within each component** of a fitting or fixture shall be evaluated to meet this standard.

A.B. 1953, Chapter 853, statutes of 2006, was codified as follows into the California Health & Safety Code, Section 116875(e) to become operative on January 1, 2010:

*For the purposes of this section, “lead free” means not more than 0.2 percent lead when used with respect to solder and flux and not more than a weighted average of 0.25 percent when used with respect to the wetted surfaces of pipes and pipe fittings, plumbing fittings, and fixtures. The weighted average lead content of a pipe and pipe fitting, plumbing fitting, and fixture shall be calculated by using the following formula: **The percentage of lead content within each component that comes into contact with water** shall be multiplied by the percent*

of the total wetted surface area of the entire pipe and pipe fitting, plumbing fitting, or fixture represented in each component containing lead. These percentages shall be added and the sum shall constitute the weighted average lead content of the pipe and pipe fitting, plumbing fitting, or fixture. [emphasis added]

Under this statute, the critical language is “percentage of **lead content within each component** that comes into contact with water.” The statute specifies that the lead content **within the component** is the value that is used for determining compliance, **not** the lead content on the surface of the component. If the Legislature had intended to approve methods other than the lead content analysis, the Legislature would have so stated.

The Legislature thoroughly vetted and agreed upon the lead **content** standard as the appropriate means to reduce lead exposure from drinking water. Their evaluation focused on the use of non-lead brasses and other non-leaded materials to replace leaded brasses as a means to comply with the content standard. At no time did the Legislature consider the use of treatments such as acid washes or coatings as alternatives to the content standard that is in statute today. Similarly, the statutory language makes no provision for compliance with the new standard, other than by meeting the allowable percentage of lead within the plumbing component.

The use of an acid wash does not materially change the percentage of lead within the component. Merely removing the surface layer on a metal component does not affect compliance with the statute unless the procedure demonstrably reduces the percentage of lead content **within the component** to less than the statutory requirement of 0.25 percent. Therefore the use of an acid wash does not meet the requirements of the statute. The **lead content within each component** contacting water must be evaluated to determine compliance with the statutory requirement of 0.25 percent lead.

Simply performing a procedure, such as an acid wash, cannot achieve compliance with the **content-based standard** of the California statute. The lead content itself is regulated, and the resulting lead concentration of the metal must be measured in order to determine compliance.

The use of a surface coating similarly fails to change the percentage of lead within the component, as required by statute. Merely adding a surface coating does not affect compliance with the statute because the percentage of lead content **within the component** would be unchanged, and would not address the statutory requirement of 0.25 percent. Therefore the use of a surface coating does not meet the requirements of the statute. Coating on the surface of a component wears off over time, particularly when the coating contacts water. Mere surface coating is not itself a component of a pipe, fitting, faucet, or fixture, but instead just a temporary, degradable covering on a component. It is the **lead content within each component** itself that must be evaluated to determine compliance with the statutory requirement of 0.25 percent lead.

Regardless of whether a manufacturer opts to dip plumbing in an acid or apply a surface coating, the lead content standard for the underlying materials must be met. The statute is completely unambiguous on this point.

The statute expressly precludes the use of non-lead free components after January 1, 2010. The use of leaded materials that do not comply with the 0.25% content standard is not permitted after January 1, 2010. Applying a temporary barrier or fix such as an “acid wash” or other surface coating or wash, to leaded components such that leaded components could continue to be used would be in clear violation of the statute.

A manufacturer may still choose to use acid washing or surface coating. However, the statutory lead content standard for the underlying metal must still be met. Acid washing and coatings are not expressly identified in statute as methods for compliance with, or substitutes for, meeting the 0.25% lead standard. At no time did the Legislature consider the continued use of high lead materials that are shielded with a temporary barrier, such as an acid wash or coating, as a means to comply with the lead content standard.

The use of coatings and acid washes was intentionally not included in California’s statute. The intent of the statute is to eliminate the risk of lead exposure from drinking water by eliminating the presence of lead in any component that might come into contact with potable water. There is no evidence to demonstrate that the use of washes or coatings will effectively and reliably reduce the risk of lead exposure over the lifetime of the product. Only the actual **elimination of lead** from the components of plumbing fixtures and fittings will reliably and permanently reduce the risk of lead exposure.

There is no precedent for using acid washing or coatings in lieu of meeting a **lead content standard**. A lead content standard of 0.2% lead for solder and flux has been in statute for over 20 years. At no time has the use of coatings or acid washing in lieu of complying with the content standard for solder and flux been permitted under statute.

JF/vjv

cc: Rande B. Kanouse, Special Assistant