American National Standard

Approved June 8, 2018

Secretariat: ANSLG National Electrical Manufacturers Association

for Electric Lamps —

Procedures for Incandescent Lamp Sample Preparation and the Toxicity Characteristic Leaching Procedure —

An American National Standard implies a consensus of those substantially concerned with its scope and provisions. It is intended as a guide to aid the manufacturer, the consumer, and the general public. The existence of an American National Standard does not in any respect preclude anyone, whether he has approved the standard or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards. Users are cautioned to obtain the latest editions.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

American National Standard

Approval of an American National Standard requires verification by ANSI that the requirements for due process, consensus, and other criteria for approval have been met by the standards developer.

Consensus is established when, in the judgment of the ANSI Board of Standards Review, substantial agreement has been reached by directly and materially affected interests. Substantial agreement means much more than a simple majority, but not necessarily unanimity. Consensus requires that all views and objections be considered, and that a concerted effort be made toward their resolution.

The use of American National Standards is completely voluntary; their existence does not in any respect preclude anyone, whether he has approved the standards or not, from manufacturing, marketing, purchasing, or using products, processes, or procedures not conforming to the standards.

The American National Standards Institute does not develop standards and will in no circumstances give an interpretation of any American National Standard. Moreover, no person shall have the right or authority to issue an interpretation of an American National Standard in the name of the American National Standards Institute. Requests for interpretations should be addressed to the secretariat or sponsor whose name appears on the title page of this standard.

CAUTION NOTICE: This American National Standard may be revised or withdrawn at any time. The procedures of the American National Standards Institute require that action be taken periodically to reaffirm, revise, or withdraw this standard. Purchasers of American National Standards may receive current information on all standards by calling or writing the American National Standards Institute.

Printed and Distributed by

Information Handling Services/Global Engineering Documents 15 Inverness Way East, Englewood, CO 80112-5776 Under Contract with National Electrical Manufacturers Association

© 2018 American National Standard Lighting Group In Affiliation with National Electrical Manufacturers Association All rights reserved.

No part of this publication may be reproduced in any form, in an electronic retrieval system or otherwise, without prior written permission of the publisher.

Printed in the United States of America

(This language is not part of the American National Standard.)

This Standard is being maintained under the stabilized maintenance option. Proposals for modification or improvement of this Standard are welcome. They should be sent to the National Electrical ManufacturersAssociation, 1300 N 17th Street, Suite 900, Arlington, VA 22209 or sent via the NEMA website (<u>http://www.nema.org</u>).

Table of contents

Forewordiv			
1	Scope5		
2	Normative references		
3	Definitions		
4	General requirements		
5	Lamp preparation		
6	Leaching		
7	Filtration		
8	Storage of the leachate		
9	Vessel cleaning9		

Foreword (This foreword is not part of American National Standard/NEMA C78.LL 4-2003).

Suggestions for improvement of this standard should be submitted to the Secretariat C78, American National Standard Lighting Group of the National Electrical Manufacturers Association, 1300 North 17th Street, Suite 900, Rosslyn, VA 22209. This standard was processed and approved by Accredited Standards Committee (ASC) on Electric Lamps, C78. Committee approval of the standard does not necessarily imply that all committee members voted for that approval.

Much attention continues to be focused on the disposal of mercury containing lamps. The United States Environmental Protection Agency's Toxicity Characteristic Leaching Procedure (TCLP) is used at both the Federal level and by most states to determine whether or not spent incandescent lamps should be classified as hazardous waste. This Standard was developed by technical experts in the lamp industry to establish a uniform method of sample preparation for incandescent lamps. This document also specifies other important aspects related to the leaching process that are not specifically defined for lamps by the EPA SW-846, "Test Methods for Evaluating Solid Waste (Physical/Chemical Methods)," but that have been shown in practice to contribute to test variability, if not properly controlled.

Information concerning the approval of this standard is based on the documents listed in the table below:

Amendment / Change	CDV	RV
First Edition	78(1)/4084	78(1)/4085

At the time it approved this standard the ASC 78 Committee had the following members:

Al Rousseau, Chair, C78 Al Rousseau, Technical Coordinator Randolph N. Roy, Secretariat Ken Denton, Consulting Editor

Organization Represented: Advance Transformer Company	Name of Representative: Bob Erhardt
Edison Electric Institute	William Maguire (Delegate)
GE Lighting Systems	Selmar Dorsey (alt) Rebecca Lancaster
	Mike Owens (alt)
Holophane Lighting Co	Michael Tanner
Illuminating Engineering Society	Rita M. Harrold
InterTek Testing Services, Inc	David Ellis
Magnetek	William Brosius
National Electrical Manufacturers Association	William E. Buckson (Delegate)
	Fred Carpenter (alt Delegate)
OSRAM SYLVANIA	Peter Bleasby
	David Mullen
Philips Lighting Company	Al Rousseau
Underwriters Laboratories Inc.	David Belt

AMERICAN NATIONAL STANDARD

for Electric Lamps--

Procedures for Incandescent Lamp Sample Preparation and the Toxicity Characteristic Leaching Procedure

1 Scope

Procedures for preparation of incandescent lamps for Toxicity Characteristic Leaching Procedure (TCLP) are presented below. These procedures are intended to supplement the TCLP by supplying specific instructions for size reduction and for other critical procedures specific to the testing of incandescent lamps.

This Standard specifically covers common incandescent lamp types. Additional Standards have been prepared or are in preparation for fluorescent lamps, high intensity discharge lamps, and other types that require specific sample preparation instructions because of their design or construction.

The protocol that follows is grouped to include general requirements, lamp preparation, leaching, filtration, storage, and leaching vessel reuse.