File Ex643 Project 05NK21413 Project 06NK07102 Project 05NK31378 Project 06NK21906 Project 07NK02539 Project 06NK25809 Project 06NK27869 Project 07NK05434 Project 07NK05431 Project 07NK05106 Project 07NK15244 Project 07CA49282 Project 08CA02352 Project 08CA08185 Project 07NK19913 Project 08CA15793

Issued: January 13, 2006 Revised: April 15, 2008

REPORT

on

Automatic Sprinklers

The Viking Corporation Hastings, MI

Copyright © 2006 Underwriters Laboratories Inc.

Underwriters Laboratories Inc. authorizes the above named company to reproduce this Report provided it is reproduced in its entirety.

File EX643 Page G1 Issued: 2006-01-13

Revised: 2008-04-03

GENERAL

### INTRODUCTION:

This Report describes the investigation of automatic sprinklers intended to be installed in accordance with the National Fire Protection Association Standard For The Installation of Sprinkler Systems, NFPA 13.

### OBJECT:

The object of this investigation was to determine compliance of the automatic sprinklers with the Standard For Automatic Sprinklers For Fire Protection Service, UL 199 and the Standard for Automatic Sprinkler for Fire Protection Service, ULC/ORD C199-03.

## PLAN:

The investigation of the automatic sprinklers consisted of conducting a product conformance evaluation and performance testing as described in UL 199,  $11^{\rm th}$  Edition and C199-03,  $2^{\rm nd}$  Edition.

Issued: 2006-01-13 Revised: 2008-03-27

## DESCRIPTION

# PRODUCT COVERED:

Automatic Sprinklers of the glass bulb type of the following types and temperature ratings.

	Model	Description	Remarks
USL, CNL,	VK461+	Concealed Pendent 2.8 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK462+	Concealed Pendent 5.6 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK463	Concealed Pendent 5.6 K-factor, quick response high pressure sprinkler for a maximum pressure of 250 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK464	Concealed Pendent 8.0 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK465+	Concealed Pendent 4.2 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL	VK632	Standard orifice, 5.6K, extended coverage light hazard concealed pendent for a maximum pressure of 175 psig.	Rated 135,155,175, 200°F with 135 and 165°F coverplates
USL, CNL	VK634	Large orifice, 8.0K, extended coverage light hazard concealed pendent for a maximum pressure of 175 psig.	Rated 135,155,175, 200°F with 135 and 165°F coverplates

<sup>+ -</sup> May utilize a 1 in. adjustable feature with 1 in. male or female threads.

Issued: 2006-01-13 Revised: 2008-04-03

#### CONSTRUCTION DETAILS:

The devices have been examined and found to comply with the Standard For Automatic Sprinklers in effect as of the date of this Report.

The devices forming the subject of this Procedure are automatic sprinklers of the quick response glass bulb type consisting of a brass frame, deflector, deflector button, pin arms, pip cap assembly, Teflon coated Belleville spring water seal, yoke, component recognized glass bulb, stainless steel compression screws, and a cover plate assembly.

\*

The chart below illustrates the decorative type of paints/finishes to be utilized on the coverplates. The application process for these paint types is to be performed by the Viking Corp.

Paint Type	Maximum Thickness, Mils (in.)	Paint Color
Acrylic Latex	1.5 (0.0015)	Any
Lacquer	2.0 (0.002)	Any
Enamel	2.0 (0.002)	Any
Alkyd Enamel	3.0 (0.003)	Any
Latex	4.0 (0.004)	Any
Urethane	4.0 (0.004)	Any
Catalyzed Epoxy	5.0 (0.005)	Any
Acrylic	5.0 (0.005)	Any

### USE:

The products covered by this Report are for use in accordance with the National Fire Protection Association Standard For The Installation of Sprinkler Systems, NFPA 13, and the manufacturer's installation instructions.

### CONCLUSION

Samples of the product covered by this Report have been found to comply with the requirements covering the class and the products are judged to be eligible for Listing and Follow-Up Service. The manufacturer is authorized to use the Laboratories' Mark on such products which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products which properly bear the Laboratories' Mark are considered as Listed by Underwriters Laboratories Inc.

Report by:

Reviewed by:

Steven J. Wisniewski Engineering Associate Lead Michael G. McCormick Engineering Associate Lead