APPENDIX 1

NFPA 400 *Hazardous Materials Code* (2010 Edition); NFPA 430 *Code for the Storage of Solid and Liquid Oxidizers* (2004 Ed). Copyright protected, NFPA, One Batterymarch Park, Quincy, MA.

= SOLID OXIDIZERS INCLUDED IN TEST PLAN
= LIQUID OXIDIZER INCLUDED IN TEST PLAN

Annex G Oxidizers
This annex is not a part of the requirements of this NFPA document but is included for informational purposes only.

G.1 Typical Oxidizers

G1.1 General. Unless concentration is specified, undiluted material is referenced. The lists of oxidizers in G.1..2 through G.1.5 are provided to clarify how the committee has classified typical oxidizers. The lists are not all-inclusive and are amended to reflect typical oxidizers used.

G.1.2 Class 1 Oxidizers. The following are typical Class 1 oxidizers:
(1) All inorganic nitrates (unless otherwise classified)—(Barium nitrate, sodium nitrate)
(2) All inorganic nitrites (unless otherwise classified)
(3) Ammonium persulfate
(4) Barium peroxide
(5) Calcium hypochlorite (nominal 80%, maximum 81%) blended with magnesium sulfate heptahydrate (nominal 20%, minimum 19%) having an available chlorine of less than or equal to 66% and a total water content of at least 17%.
(6) Calcium peroxide
(7) Hydrogen peroxide solutions (greater than 8 percent up to 27.5 percent)
(8) Lead dioxide
(9) Lithium hypochlorite (39 percent or less available chlorine)
(10) Lithium peroxide
(11) Magnesium peroxide
(12) Manganese dioxide
(13) Nitric acid (40 percent concentration or less)
(14) Perchloric acid solutions (less than 50 percent by weight)
(15) Potassium dichromate
(16) Potassium percarbonate
(17) Potassium persulfate
(18) Sodium carbonate peroxide
(19) Sodium dichloro-s-triazinetrione dihydrate (sodium dicholorisocyanurate dihydrate)
(20) Sodium dichromate
(21) Sodium perborate (anhydrous)
(22) Sodium perborate monohydrate
(23) Sodium perborate tetrahydrate
(24) Sodium percarbonate
(25) Sodium persulfate
(26) Strontium peroxide
(27) Trichloro-s-triazinetrione [trichloroisocyanuric acid TCCA; trichlor), all physical forms]
(28) Zinc peroxide

G.1.3 Class 2 Oxidizers. The following are typical Class 2 oxidizers:
(1) Barium bromate
(2) Barium chlorate

(3) Barium hypochlorite
(4) Barium perchlorate
(5) Barium permanganate
(6) 1-Bromo-3-chloro-5,5-dimethylhydantoin (BCDMH)
(7) Calcium chlorate
(8) Calcium chlorite
(9) Calcium hypochlorite (50% or less by weight unless covered in other formulations in Section G.1)
(10) Calcium perchlorate
(11) Calcium permanganate
(12) Chromium trioxide (chromic acid)
(13) Copper chlorate
(14) Halane (1,3-dichloro-5,5-dimethylhydantoin)
(15) Hydrogen peroxide (greater than 27.5 percent up to 52 percent)
(16) Lead perchlorate
(17) Lithium chlorate
(18) Lithium hypochlorite (more than 39 percent available chlorine)
(19) Lithium perchlorate
(20) Magnesium bromate
(21) Magnesium chlorate
(22) Magnesium perchlorate
(23) Mercurous chlorate
(24) Nitric acid (more than 40 percent but less than 86 percent)
(25) Nitrogen tetroxide
(26) Perchloric acid solutions (more than 50 percent but less than 60 percent)
(27) Potassium perchlorate
(28) Potassium permanganate
(29) Potassium peroxide
(30) Potassium superoxide
(31) Silver peroxide
(32) Sodium chlorite (40 percent or less by weight)
(33) Sodium perchlorate
(34) Sodium perchlorate monohydrate
(35) Sodium permanganate
(36) Sodium peroxide
(37) Strontium chlorate
(38) Strontium perchlorate
(39) Thallium chlorate
(40) Urea hydrogen peroxide
(41) Zinc bromate
(42) Zinc chlorate
(43) Zinc permanganate

G.1.4 Class 3 Oxidizers. The following are typical Class 3 oxidizers:
(1) Ammonium dichromate
(2) Calcium hypochlorite (over 50% by weight unless covered in other formulations in Section G.1)
(3) Chloric acid (10 percent maximum concentration)
(4) Hydrogen peroxide solutions (greater than 52 percent up to 91 percent)
(5) Mono-(trichloro)-tetra-(monopotassium dichloro)-pentas-triazinetrione
(6) Nitric acid, fuming (more than 86 percent concentration)
(7) Perchloric acid solutions (60 percent to 72 percent by weight)
(8) Potassium bromate
(9) Potassium chlorate
(10) Potassium dichloro-s-triazinetrione (potassium dichloroisocyanurate)
(11) Sodium bromate

(12) Sodium chlorate
(13) Sodium chlorite (over 40 percent by weight)
(14) Sodium dichloro-s-triazinetrione anhydrous (sodium dichloroisocyanurate anhydrous)

G.1.5 Class 4 Oxidizers. The following are typical Class 4 oxidizers:
(1) Ammonium perchlorate (particle size greater than 15 microns)
(2) Ammonium permanganate
(3) Guanidine nitrate
(4) Hydrogen peroxide solutions (greater than 91 percent)
(5) Tetranitromethane

Ammonium perchlorate less than 15 microns is classified as an explosive and, as such, is not covered by this code. *(See* NFPA 495, *Explosive Materials Code.)*