Sandia National Laboratories

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Building Hazardous Material MAQ Evaluation

BUILDING:	**XXX**	**FULLY SPRINKLERED?**	☒ **YES** ☐ **NO**
		CONTROL AREAS?	☐ **YES** ☐ **NO (control area bounded by exterior walls)**
DATE:	April 2, 2014	**DATE OF PREVIOUS EVALUATION:**	May 17, 2012
EVALUATOR:	FPE Name	**BUILDING OCCUPANCY**	IBC – group B; NFPA 101 – General Purpose Industrial
FPA OWNER	FPE Assigned to Bldg		

GENERAL INFORMATION

This evaluation is based on the latest information available in the Chemical Information System (CIS). Some of the information contained in CIS may not be accurate, but this evaluation will indicate the overall hazardous material Maximum Allowable Quantity (MAQ) situation in the building. Use this information to author findings in the Building's Fire Protection Assessment.

This evaluation should be performed prior to the FPA field visit to alert the assessor to hazardous material MAQ problems for inspection.

The MAQ for storage will be used for the evaluation, since the aggregate quantity for use and storage shall not exceed the quantity listed for storage.

Total amounts in blue indicate that the quantity of hazardous materials do not exceed MAQs. Total amounts in red indicate a problem with the amounts of hazardous materials.

This building is not divided into control areas. Therefore, this analysis assumes the control area is bounded by the building's exterior walls.

CIS and the Explosive Inventory System (EIS) do not list radioactive materials, and neither the ICC codes nor NFPA 1 regulate radioactive materials.

SUMMARY MAQ ANALYSIS

The following hazardous material classifications are exceeded at this time;

Flammable Gas unless stored in an approved cabinet.
Pyrophoric Solids.
Unstable Reactive Class 3 Liquids.
Highly Toxic Solids.

FIRE FIGHTER WARNING PLACARD DESIGNATIONS BASED ON HAZARD CLASSIFICATION CATEGORIES (IFC)

TABLE F101.2
FIRE FIGHTER WARNING PLACARD DESIGNATIONS BASED ON HAZARD CLASSIFICATION CATEGORIES

HAZARD CATEGORY	DESIGNATION
Combustible liquid II	F2
Combustible liquid IIIA	F2
Combustible liquid IIIB	F1
Combustible dust	F4
Combustible fiber	F3
Cryogenic flammable	F4, H3
Cryogenic oxidizing	OX, H3
Explosive	R4
Flammable solid	F2
Flammable gas (gaseous)	F4
Flammable gas (liquefied)	F4
Flammable liquid IA	F4
Flammable liquid IB	F3
Flammable liquid IC	F3
Organic peroxide, UD	R4
Organic peroxide I	F4, R3
Organic peroxide II	F3, R3
Organic peroxide III	F2, R2
Organic peroxide IV	F1, R1
Organic peroxide V	Nonhazard
Oxidizing gas (gaseous)	OX
Oxidizing gas (liquefied)	OX
Oxidizer 4	OX
Oxidizer 3	OX
Oxidizer 2	OX
Pyrophoric gases	F4
Pyrophoric solids, liquids	F3
Unstable reactive 4D	R4
Unstable reactive 3D	R4
Unstable reactive 3N	R3
Unstable reactive 2	R2
Water reactive 3	W, R3
Water reactive 2	W, R2
Corrosive	H3, COR
Toxic	H3
Highly toxic	H4

F—Flammable category.
R—Reactive category.
H—Health category.
W—Special hazard: water reactive.
OX—Special hazard: oxidizing properties.
COR—Corrosive.
UD—Unclassified detonable material.
4D—Class 4 detonable material.
3D—Class 3 detonable material.
3N—Class 3 nondetonable material.

Sprinklered Building IBC Group B; NFPA 1 General Purpose Industrial							
Material	**Class**	**Not Stored in Cabinets**			**Stored in Cabinets**		
		Solid (lbs)	**Liquid (gal)**	**Gas (ft^3)**	**Solid (lbs)**	**Liquid (gal)**	**Gas (ft^3)**
Combustible Liquid	II **X gallons**		240 gallons			480 gallons	
	IIIA **X gallons**		660 gallons			1,320 gallons	
	IIIB **Unlimited**		Unlimited			Unlimited	
Combustible Dust							
Flammable Gas	Gaseous **XXX ft^3**			2,000 ft^3			4,000 ft^3
	Liquefied **X lbs**		300 lbs (IFC) 60 gallons (NFPA)			600 lbs (IFC) 120 gallons (NFPA)	
	Liquefied Petroleum **X lbs**		(IFC 3809.10) 300 lbs NFPA 58 Table 8.3.1(B) 600 lbs			(IFC3809.10) 300 lbs NFPA 58 Table 8.3.1(B) 600 lbs	
Flammable liquid	IA **X gallons**		60 gallons			120 gallons	
	IB & IC **X gallons**		240 gallons			480 gallons	
Flammable Liquid Combination	IA, IB, & IC **X gallons**		240 gallons (not more than MAQ for IA, IB, or IC)			480 gallons (not more than MAQ for IA, IB, or IC)	
Flammable Solid	**X lbs**	250 lbs			500 lbs		
Organic Peroxide	UD	1 lb	0.1 gallon		2 lb	0.2 gallon	
	I	10 lbs	1 gallon		20 lbs	2 galons	
	II	100 lbs **X lb**	10 gallons **X gallon**		200 lbs	20 gallons	
	III	250 lbs	25 gallons		500 lbs	50 gallons	
	IV	NL **X lbs**	NL		NL	NL	
	V	NL	NL		NL	NL	

Oxidizer *200 lbs or 20 gal allowed for maint. or operation or sanitation of eqmt.	4	1 lb **X lb**	0.1 gallon		2 lbs	0.2 gallon	
	3*	20 lbs **X lb**	2 gallons **X gallons**		40 lbs	4 gallons	
	2	500 lbs **X lbs**	50 gallons **X gallons**		1,000 lbs	100 gallons	
	1	NL **X lbs**	NL **X gallons**		NL	NL	
Oxidizing Gas	Gaseous	**XXX ft^3**		3,000 ft^3			6,000 ft^3
	Liquefied		30 lbs (IFC) 60 gallons (NFPA)			60 lbs (IFC) 120 gallons (NFPA)	
Pyrophoric		4 lbs **X lbs**	0.4 gallons **X gallons**	50 ft^3	8 lbs	0.8 gallons	100 ft^3
Unstable Reactive	4	1 lb **X lb**	0.1 gallon	10 ft^3	2 lbs	0.2 gallon	20 ft^3
	3	10 lbs **X lbs**	1 gallon **X gallons**	100 ft^3	20 lbs	2 gallons	200 ft^3
	2	100 lbs **X lbs**	10 gallons **X gallons**	500 ft^3 (IFC) 1,500 ft^3 (NFPA)	200 lbs	20 gallons	1,000 ft^3 3,000 ft^3 (NFPA)
	1	NL **X lbs**	NL **X gallons**	NL	NL	NL	NL
Water Reactive	3	10 lbs **X lbs**	1 gallon **X gallon**		20 lbs	2 gallons	
	2	100 lbs **X lbs**	10 gallons **X gallons**		200 lbs	20 gallons	
	1	NL **X lbs**	NL **X gallons**		NL	NL	
Corrosives		10,000 lbs **X lbs**	1,000 gallons **X gallons**	Gas 1,620 ft^3 **XX ft^3** Liq 300 lbs	20,000 lbs	2,000 gallons	Gas 3,240 ft^3 Liq 600 lbs
Highly Toxics		20 lbs **XX lbs**	2 gallons **X gallon**	Gas 40 ft^3 Liq 8 lbs	40 lbs	4 gallons	Gas 40 ft^3 Liq 8 lbs
Toxics		1,000 lbs **X lbs**	100 gallons **X gallons**	Gas 1,620 ft^3 **XXX ft^3** Liq 300 lbs	2,000 lbs	200 gallons	Gas 3,240 ft^3 Liq 600 lbs

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