

From: [INFOCNTR \(PHMSA\)](#)
To: [Baker, Yul \(PHMSA\)](#)
Cc: [Hazmat Interps](#)
Subject: FW: Clarification request on classification and Special Permit status for Stat-X aerosol generators - Interpretation Request
Date: Monday, September 29, 2025 16:43:37
Attachments:

Hi Yul,

Please see the below interpretation request and attached supporting documents.

Let us know if you need anything,

-Breanna

From: Valerii Ivanov IMPULSE STORM <fire@impulse-storm.com>
Sent: Sunday, September 28, 2025 10:50 AM
To: PHMSA Pipelinesafety <PHMSA.Pipelinesafety@dot.gov>
Subject: Clarification request on classification and Special Permit status for Stat-X aerosol generators

You don't often get email from fire@impulse-storm.com. [Learn why this is important](#)

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Dear Hazardous Materials Information Center,

My name is Valerii Ivanov, Independent Researcher (Impulse Storm Ltd., London). I am requesting an official clarification regarding the transportation classification of Stat-X aerosol fire suppression generators manufactured by Fireaway Inc.

1) Current base (default) classification

Could you please confirm the current base classification (UN number, Hazard Class/Division, Packing Group) that PHMSA recognizes for Stat-X aerosol generators? — Specifically, is the default classification UN0432, Division 1.4S (Articles, pyrotechnic)?

2) Scope and effect of DOT-SP 20600

Could you clarify the present status and scope of DOT-SP 20600 as it relates to Stat-X?

— Is it correct that DOT-SP 20600 authorizes shipment as UN3268, Class 9 (Safety Devices) only for transportation purposes, and does not change the product's underlying/base classification?

— May DOT-SP 20600 be cited for purposes outside transportation (e.g., product certification or marketing claims about non-pyrotechnic status), or is its effect strictly

limited to transport in commerce?

3) Consistency of SDS labeling

We have a 2025 Safety Data Sheet from Fireaway that lists UN3268, Class 9 for DOT/IMDG/IATA without reference to a Special Permit. Would PHMSA consider this presentation accurate under U.S. hazardous materials regulations, or should the SDS explicitly state that Class 9 applies only under DOT-SP 20600 while the base classification remains UN0432, 1.4S?

If helpful, I can provide copies of the documents I am referencing (SDS 2025; UK/EU type documentation; and public PHMSA materials). I would appreciate your written response for the record.

Thank you very much for your time and assistance.

Sincerely,
Valerii Ivanov
Independent Researcher
Impulse Storm Ltd.
70 Conduit Street, London W1S 2GF, UK



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ETC Report 2020040

Executive Summary

3/4/2020

Exclusion from Class 1 testing, under UN Model Regulations Section 2.1.3.6.4 was performed on the Stat-X 30E, Stat-X 500E, and Stat-X 2500E per the requirements of RFQ 693JK320Q0004. Exclusion from class 1 testing has several requirements that are assessed when a candidate (article) is activated:

- (a) No external surface shall have a temperature of more than 65 °C. A momentary spike in temperature up to 200 °C is acceptable
- (b) No rupture or fragmentation of the external casing or movement of the article or detached parts thereof of more than one meter in any direction;
- (c) No audible report exceeding 135 dB(C) peak at a distance of one meter
- (d) No flash or flame capable of igniting a material such as a sheet of 80 ± 10 g/m² paper in contact with the article
- (e) No production of smoke, fumes or dust in such quantities that the visibility in a one cubic meter chamber equipped with appropriately sized blow out panels is reduced more than 50% as measured by a calibrated light (lux) meter or radiometer located one meter from a constant light source located at the midpoint on opposite walls.

Table 1-3 shows the maximum values for 3 trials of each article and the criteria that was being assessed. Sound was measured in decibels, on two sound meters, 1 meter from the article both upwind and downwind. The smoke box test measured the percent of light that was able to shine through the smoke produced in the box (100% is full light and zero smoke, 0% is full smoke and zero light). Lastly, the temperature was measured with a k-type thermocouple with thermocouples placed on the side of the article and beneath the article, between vents to avoid collecting temperature of the gasses. It should be noted that displacement is simply put as <1-m. The pass/fail criteria in Section 2.1.3.6.4(b) is a 1-m displacement. Since the paper was often moved by the output gasses of the device, a precise measurement of the displacement was difficult to make, but in no trial did the articles move 1-m, all displacements were less than 20-cm.

Stat-X 30E

Table 1. Stat-X 30E Test Results

Trial	Sound (dB(c))	Displacement(m)	T (Side, °C)	T (Bottom, °C)	Light Trans (%)
1	100.5	<1	219.7	N/A	27%
2	102.4	<1	226.7	313.1	28%
3	101.6	<1	209.1	347.4	29%
Pass / Fail	Pass	Pass	Fail	Fail	Fail

Stat-X 500E

Table 2. Stat-X 500E Test Results

Trial	Sound (dB(c))	Displacement(m)	T (Side, °C)	T (Bottom, °C)	Light Trans (%)
1	108.8	<1	219.8	331.6	3%
2	110	<1	221.9	499.7**	1%
3	110.7	<1	212.1	300.1	2%
Pass / Fail	Pass	Pass	Fail	Fail	Fail

**Thermocouple may have malfunctioned here

Stat-X 2500E

Table 3. Stat-X 2500E Test Results

Trial	Sound (dB(c))	Displacement(m)	T (Side, °C)	T (Bottom, °C)	Light Trans (%)
1	118.4	<1	218.7	286	1%
2	119	<1	245.5	274.3	2%
3	121.2	<1	233.2	299.4	1%
Pass / Fail	Pass	Pass	Fail	Fail	Fail

During testing, no article moved more than 1 meter in any direction, and no article produced a sound greater than 135 decibels. However, the articles consistently produced temperatures on their surfaces greater than 200 °C, and during the smoke box test all articles produced enough smoke to reduce the amount of light able to pass through the smoke by greater than 50%. The paper underneath the articles was scorched and burned through, however, a flame was not visible during testing. The article is designed to deprive oxygen to a fire, therefore, if oxygen had been available the paper would certainly have burned with an open flame.

The articles, Stat-X 30E, Stat-X 500E, and Stat-X 2500E, all failed Exclusion from Class 1 testing due to: temperature and smoke produced. The author also believes that the article gets hot enough and produces hot enough gasses that it is capable of igniting a sheet of paper.

Thank you,



Graham Walsh, PhD
President
Explosives Test Center, LLC



Michael Gerber
Engineer
Explosives Test Center, LLC

RFQ 693JK320Q0004 – Final Report
ETC Report 2020040

Introduction and setup -

Fireway, Inc. produces a series of fire suppression generators that are, per the owner's manual, "suitable for use in normally occupied and unoccupied spaces." "They are intended to protect the following typical applications:

- Electrical cabinets and rooms
- Generator Rooms
- Glove Boxes
- Telecommunications Facilities
- Flammable Liquid Storage Areas
- Process Control Rooms
- Storage Vaults
- Marine Engine Rooms
- Gas Turbine Enclosure
- High Value Mobile Equipment
- Power Plants
- High Value Industrial Equipment Areas"

"The aerosol produced upon activation of a Stat-X generator suppresses fire by a combination of chemical and physical mechanisms similar to the Halons without negative effect on the environment."

A request for quote was written by PHMSA and awarded to ETC to perform Exclusion from Class 1 testing on three of the articles within the Stat-X series: Stat-X 30E, Stat-X 500E, and Stat-X 2500E. These 3 articles represent a small (Stat-X 30), medium (Stat-X 500), and large (Stat-X 2500) range of products. Figure 1 shows the representative articles that were subjected to Exclusion from Class 1 testing.



Figure 1: Stat-X 30 (left), Stat-X 500 (middle), Stat-X 2500 (Right)

An article may be excluded from Class 1 under UN Model Regulations Section 2.1.3.6.4 when three unpackaged articles, each individually activated by its own means of initiation or ignition or external means to function in the designed mode, meet the following test criteria:

- (a) No external surface shall have a temperature of more than 65 °C. A momentary spike in temperature up to 200 °C is acceptable
- (b) No rupture or fragmentation of the external casing or movement of the article or detached parts thereof of more than one meter in any direction
- (c) No audible report exceeding 135 dB(C) peak at a distance of one meter
- (d) No flash or flame capable of igniting a material such as a sheet of 80 ± 10 g/m² paper in contact with the article
- (e) No production of smoke, fumes or dust in such quantities that the visibility in a one cubic meter chamber equipped with appropriately sized blow out panels is reduced more than 50% as measured by a calibrated light (lux) meter or radiometer located one meter from a constant light source located at the midpoint on opposite walls.

As can be seen above, five criteria were measured during the testing of the Stat-X series: distance traveled of article, temperature of any surface, burning of the paper, sound produced, and the amount of smoke produced are all measured during the Exclusion from Class 1 testing. The tests require that each article be tested in triplicate. First the article is set on a white piece of paper and activated via an external electric source. Another test was run to evaluate smoke production, the article is placed in a specially designed 1-m³ box to measure the amount of smoke produced by the article. During the first 3 tests when the article is activated the following are measured:

External surface temperature: During testing, including the smoke box test, k-type thermocouples were placed on the sides of the article (about an inch from the bottom) and on the bottom of the article between vents so as not to collect the heat being produced by the expelled gasses. The data collected by the k-type thermocouples was recorded by a Q01544 multi-channel thermocouple collection device which could then be uploaded into an excel file for evaluation.

Sound produced in decibels (dB): There was no wind present on the day of testing, two different sound meters (NTi Audio XL2 Handheld Audio and Acoustic Analyzer with M4261 Microphone and Extech 407355 Noise Dosimeter) were set up on opposite sides of the article, each with the microphone set at 1-m from the article. The maximum decibel readings were recorded from each of the sound meters.



Figure 2: Basic Exclusion from Class 1 test setup, Stat-X 500E sample

Then during the 1-m³ smoke box test, the article is placed inside the box, with a light source on one side of the box through a window, and a lumen meter (light meter) (Cole-Parmer SK-98766-93 Traceable Light Meter) on the opposite side of the box in another window, the percent of light that passes from the light source to the lumen meter is able to be recorded. 100% means there is nothing inhibiting the light between the source and the meter, and 0% means there is no light reaching the meter from the light source. The light meter is tared after each test so that 100% light is always being read prior to testing.



Figure 3: Exclusion from Class 1 smoke box and test setup

Results from testing –

Stat-X 30E –

Stat-X 30E was the smallest article that was tested. During the Exclusion from Class 1 test, the article would jump when initiated at first and then would either fall on its side or stay upright as the smoke that is produced during normal function expelled from the bottom. In no tests did the article move more than 1-m in any direction, and in no tests did the article rupture or fragment in any fashion. Table 4, below, shows the maximum results of each trial that were obtained.

Table 4. Stat-X 30E Test Results

Trial	Sound (dB(c))	Displacement(m)	T (Side, °C)	T (Bottom, °C)	Light Trans (%)
1	100.5	<1	219.7	N/A	27%
2	102.4	<1	226.7	313.1	28%
3	101.6	<1	209.1	347.4	29%
Pass / Fail	Pass	Pass	Fail	Fail	Fail

As seen in Table 4, the Stat-X 30E did not produce a decibel greater than the maximum allowed 135 decibels in any of the three trial. The maximum decibel seen at 1-m from the article was 102.4 dB(C). Figure 4 below shows two of the readouts, one from each sound meter, for the Stat-X 30E Exclusion from Class 1 tests.

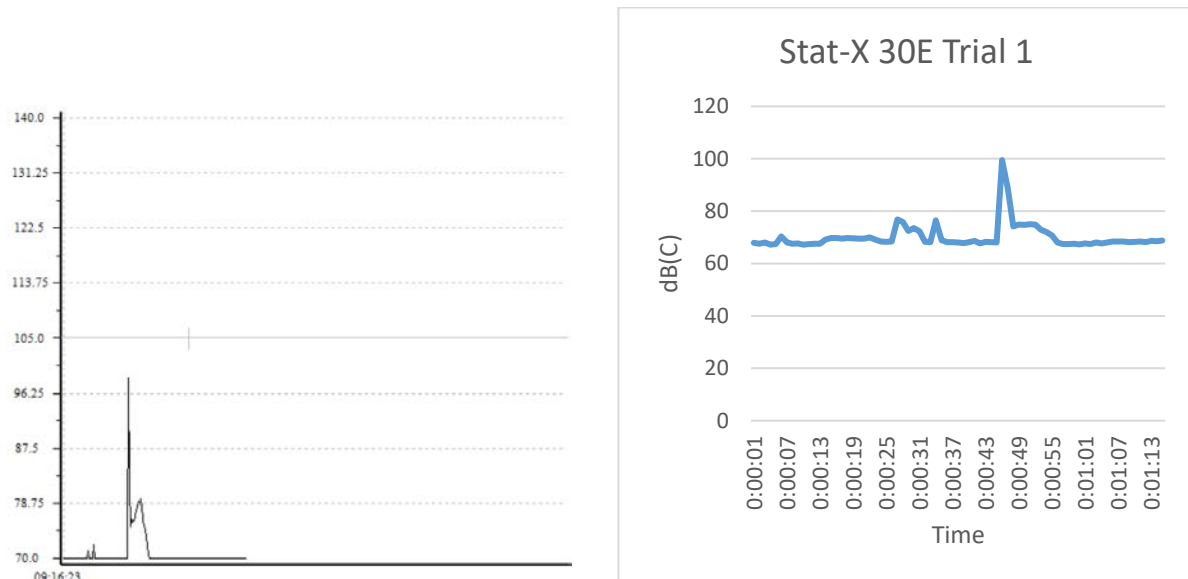


Figure 4: Sound meter test for Stat-X 30E, sound meter Extech 407355 Noise Dosimeter on the left and sound meter NTi Audio XL2 Handheld Audio and Acoustic Analyzer on the right

During testing, with the use of multiple thermocouples, some placed on the sides of the device, others placed on the bottom of the device between vents, it can be seen that in all trials a maximum temperature greater than 200 °C was observed. This falls above the allowed “momentary spike in temperature up to 200 °C”. Not only did the temperatures observed exceed 200 °C, the length of time above the allowable 65 °C was greater than “a momentary spike” as can be seen from the data below in Figure 5. The thermocouple on trial 1 located on the bottom (thermocouple 1) became disconnected and no data was collected.

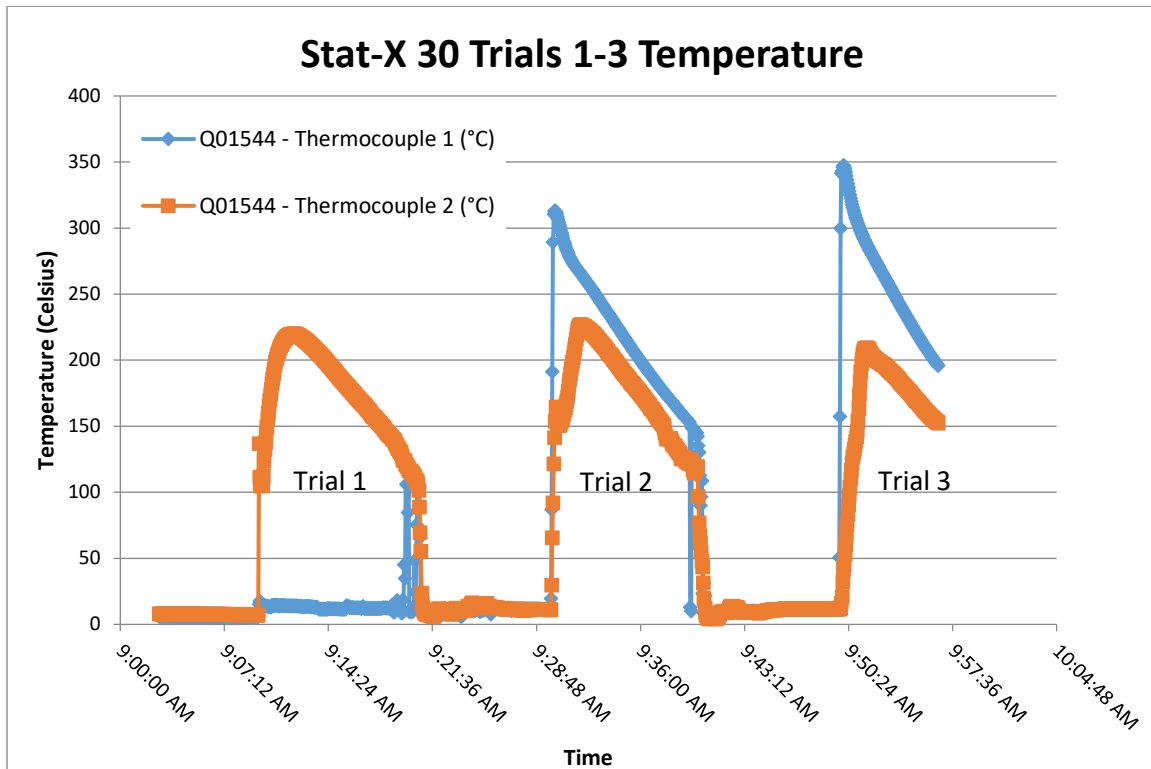


Figure 5: Stat-X 30E temperatures for trials 1 through 3, Thermocouple 1 was located on the bottom of the article, Thermocouple 2 was located on the side of the article.

During the smoke box testing all three trials of the Stat-X 30E produced enough smoke that it obscured more than 50% of the light able to be picked up by the light meter. The least amount of light that was picked up by the light meter in the three trials was 27%, on trial 1. This means that only 27% of the light that was initially available to the meter when the test first began, 100%, was visible after the smoke that the article produces was released. This is well below the 50% smoke obscurity allowable for Exclusion from Class 1 testing. Figure 6 below shows the data from trial 1 smoke box test.

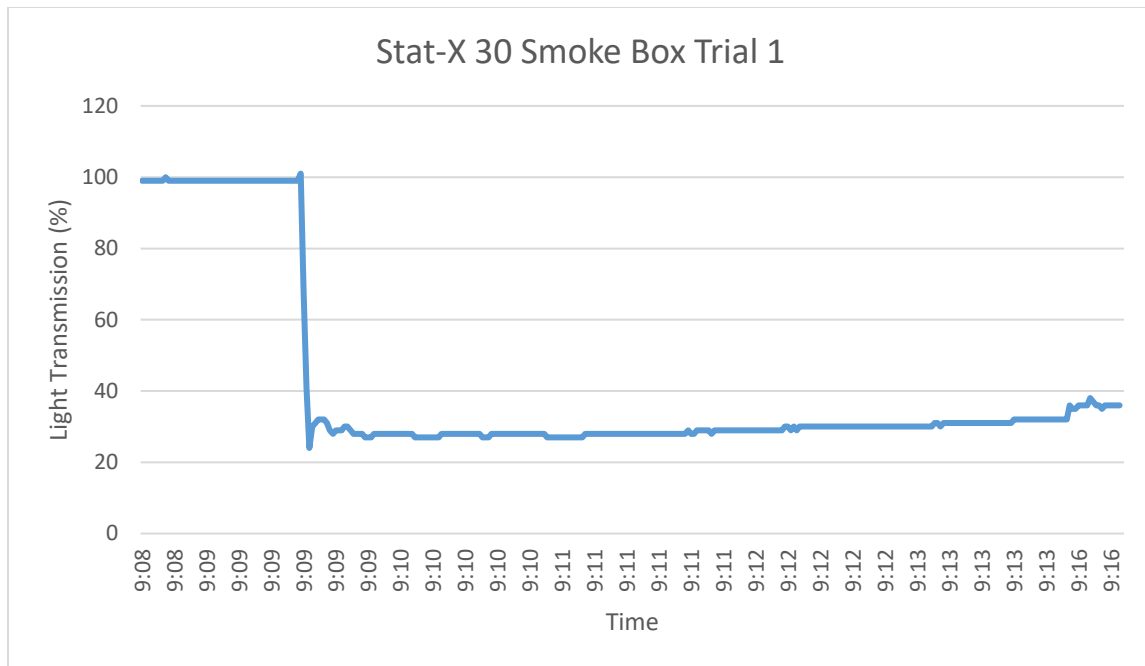


Figure 6: Stat-X 30 smoke box trial 1

From the collected data it can be concluded that the Stat-X 30E cannot be excluded from Class 1 due to the surface temperatures that exceeded 200 °C and due to the amount of smoke produced in the smoke box test, which exceeded 50% light obscured.

Stat-X 500E –

Stat-X 500E was the medium sized article that was tested. During the Exclusion from Class 1 test, the article would jump when initiated at first and then would either fall on its side or stay upright as the smoke that is produced during normal function expelled from the bottom. In no tests did the article move more than 1-m in any direction, and in no tests did the article rupture or fragment in any fashion. Table 5, below, shows the maximum results of each trial that were obtained.

Table 5. Stat-X 500E Test Results

Trial	Sound (dB(c))	Displacement(m)	T (Side, °C)	T (Bottom, °C)	Light Trans (%)
1	108.8	<1	219.8	331.6	3%
2	110	<1	221.9	499.7**	1%
3	110.7	<1	212.1	300.1	2%
Pass / Fail	Pass	Pass	Fail	Fail	Fail

**Thermocouple may have malfunctioned here

As seen in Table 5, the Stat-X 500E did not produce a decibel greater than the maximum allowed 135 decibels in any of the three trial. The maximum decibel seen at 1-m from the article was 110.7 dB(C). Figure 7 below shows two of the readouts, one from each sound meter, for the Stat-X 500E Exclusion from Class 1 tests.

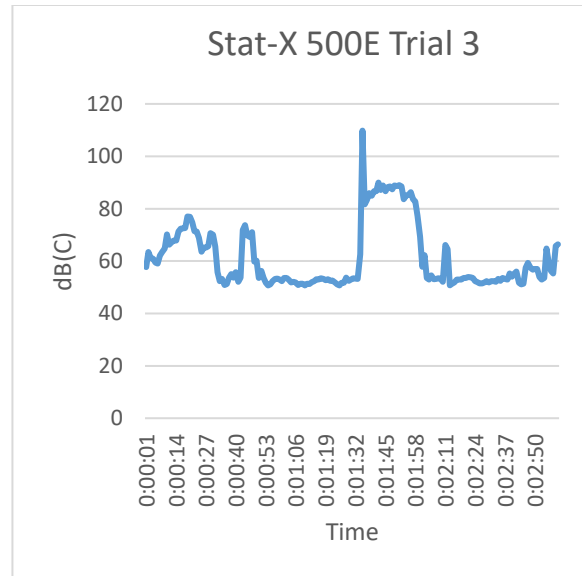
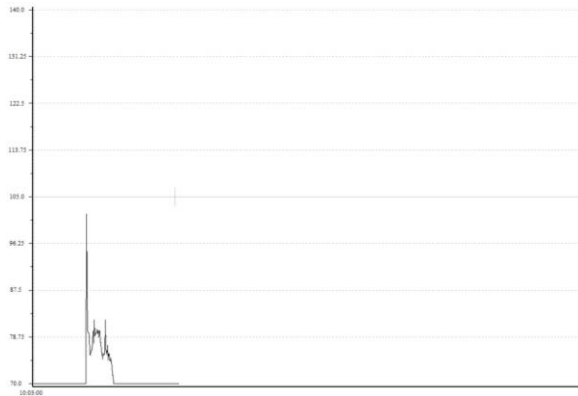


Figure 7: Sound meter test for Stat-X 500, sound meter Exttech 407355 Noise Dosimeter on the left and sound meter NTi Audio XL2 Handheld Audio and Acoustic Analyzer on the right

During testing, with the use of multiple thermocouples, some placed on the sides of the device, others placed on the bottom of the device between vents, it can be seen that in all trials a maximum temperature greater than 200 °C was observed. This falls above the allowed “momentary spike in temperature up to 200 °C”. Not only did the temperatures observed exceed 200 °C, the length of time above the allowable 65 °C was greater than “a momentary spike” as can be seen from the data below in Figure 8 and Figure 9. The maximum temperature on trial 1 below, 499.7°C, is questionable due to the malfunction of the thermocouple soon after collecting that data point, which can be seen in the chart below.

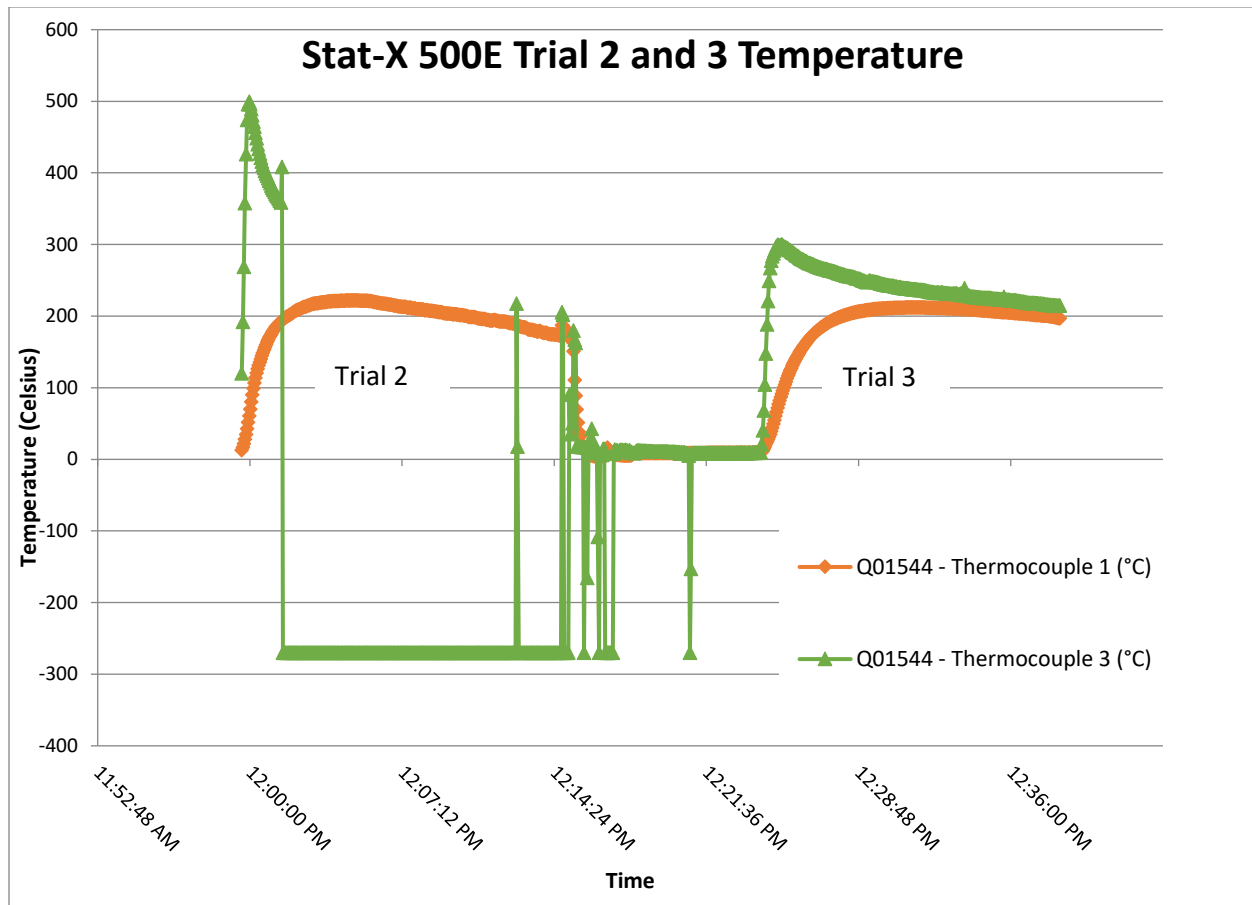


Figure 8: Stat-X 500E temperatures for trials 2 and 3, Thermocouple 1 was located on the bottom of the article, Thermocouple 3 was located on the side of the article. Trial 1 data only collected one thermocouple; this data can be found in the Appendix below.

During the smoke box testing all three trials of the Stat-X 500E produced enough smoke that it obscured more than 50% of the light able to be picked up by the light meter. The least amount of light that was picked up by the light meter in the three trials was 1%, on trial 2. This means that only 1% of the light that was initially available to the meter when the test first began, 100%, was visible after the smoke that the article produces was released. This is well below the 50% smoke obscurity allowable for Exclusion from Class 1 testing. Figure 9 below shows the data from trial 2 smoke box test.

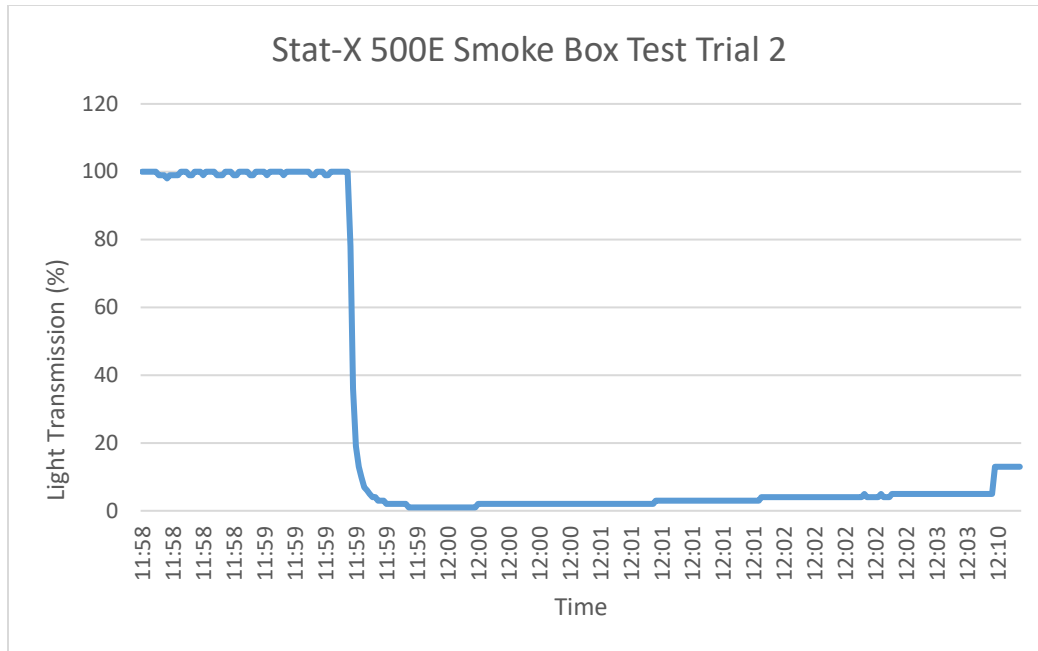


Figure 9: Stat-X 500 smoke box trial 2

From the collected data it can be concluded that the Stat-X 500E cannot be excluded from Class 1 due to the surface temperatures that exceeded 200 °C and due to the amount of smoke produced in the smoke box test, which exceeded 50% light obscured.

Stat-X 2500E –

Stat-X 2500E is the largest article that was tested. During the Exclusion from Class 1 test, the article would jump when initiated at first and then would either fall on its side or stay upright as the smoke that is produced during normal function expelled from the bottom. In no tests did the article move more than 1-m in any direction, and in no tests did the article rupture or fragment in any fashion. Table 6, below, shows the maximum results of each trial that were obtained.

Table 6. Stat-X 2500E Test Results

Trial	Sound (dB(c))	Displacement(m)	T (Side, °C)	T (Bottom, °C)	Light Trans (%)
1	118.4	<1	218.7	286	1%
2	119	<1	245.5	274.3	2%
3	121.2	<1	233.2	299.4	1%
Pass / Fail	Pass	Pass	Fail	Fail	Fail

As seen in Table 6, the Stat-X 2500E did not produce a decibel greater than the maximum allowed 135 decibels in any of the three trial. The maximum decibel seen at 1-m from the article was 121.2 dB(C). Figure 10 below shows two of the readouts, one from each sound meter, for the Stat-X 2500E Exclusion from Class 1 tests.

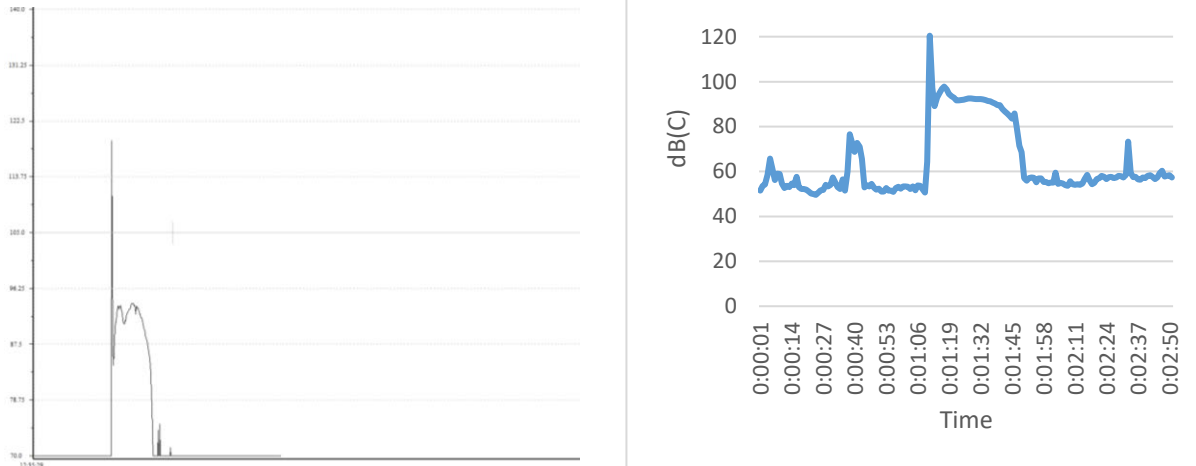


Figure 10: Sound meter test for Stat-X 2500E, sound meter Exttech 407355 Noise Dosimeter on the left and sound meter NTi Audio XL2 Handheld Audio and Acoustic Analyzer on the right

During testing, with the use of multiple thermocouples, some placed on the sides of the device, others placed on the bottom of the device between vents, it can be seen that in all trials a maximum temperature greater than 200 °C was observed. This falls above the allowed “momentary spike in temperature up to 200 °C”. Not only did the temperatures observed exceed 200 °C, the length of time above the allowable 65 °C was greater than “a momentary spike” as can be seen from the data below in Figures 11, 12, and 13.

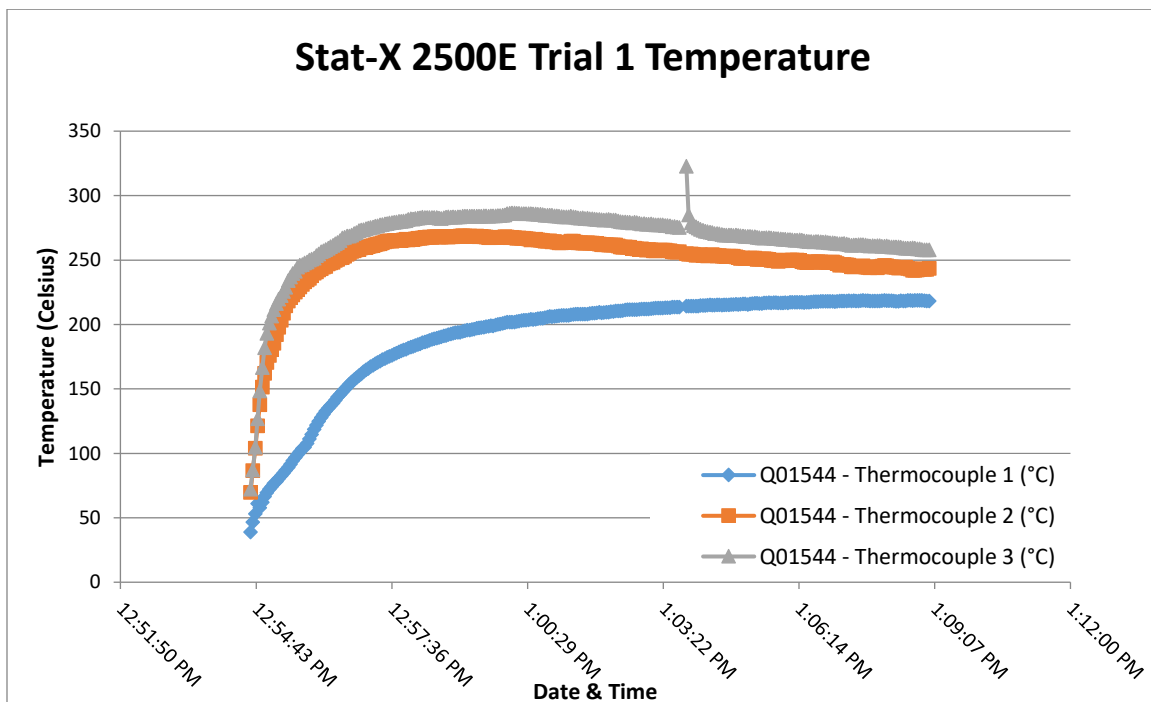


Figure 11: Stat-X 2500E temperatures for trial 1. Thermocouples 2 and 3 were located on the bottom of the article, Thermocouple 1 was located on the side of the article.

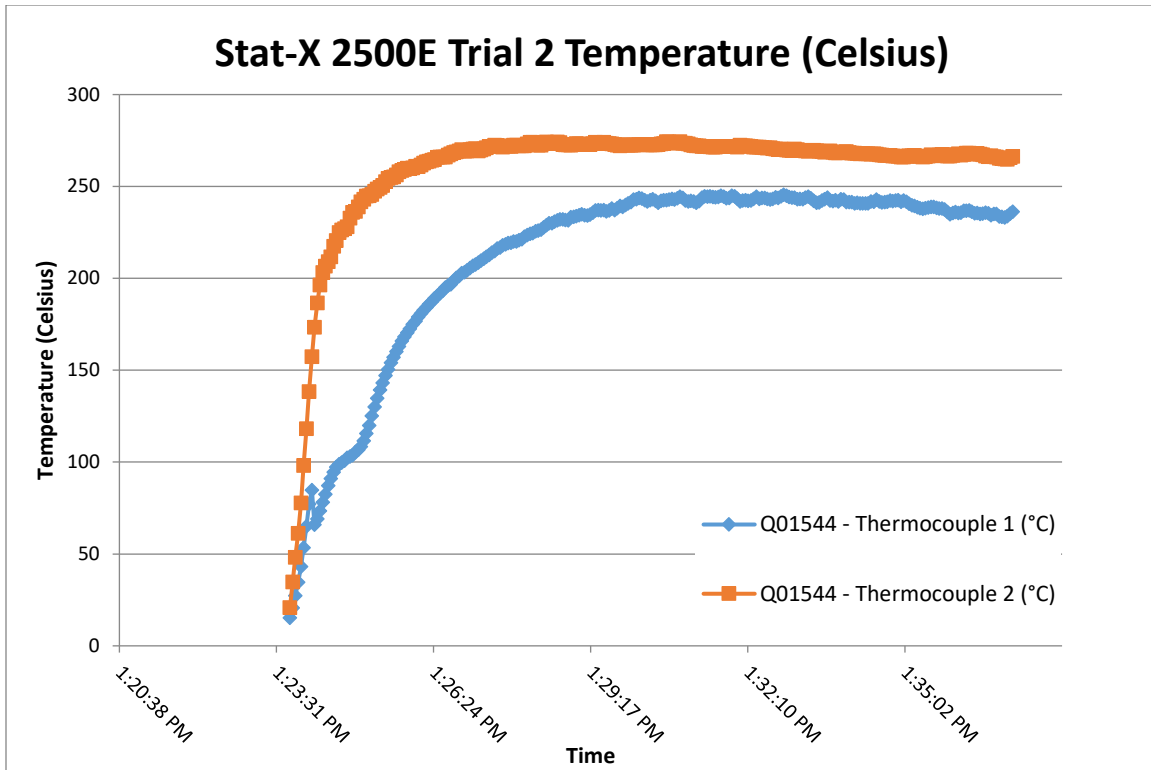


Figure 12: Stat-X 2500E temperatures for trial 2. Thermocouple 2 were located on the bottom of the article; Thermocouple 1 was located on the side of the article. Thermocouple 3 malfunctioned soon after initiation.

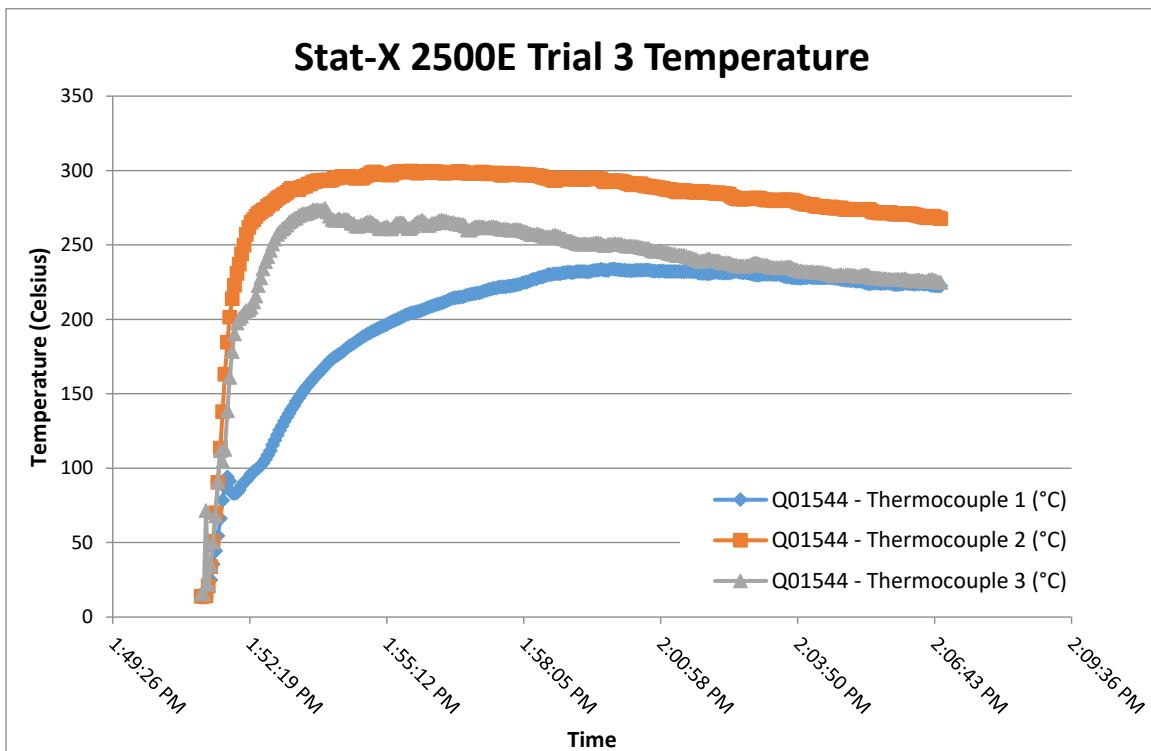


Figure 13: Stat-X 2500E temperatures for trial 3. Thermocouples 2 and 3 were located on the bottom of the article, Thermocouple 1 was located on the side of the article.

During the smoke box testing all three trials of the Stat-X 2500E produced enough smoke that it obscured more than 50% of the light able to be picked up by the light meter. The least amount of light that was picked up by the light meter in the three trials was 1%, on trial 1 and 3. This means that only 1% of the light that was initially available to the meter when the test first began, 100%, was visible after the smoke that the article produces was released. This is well below the 50% smoke obscurity allowable for Exclusion from Class 1 testing. Figure 14 below shows the data from trial 1 smoke box test.

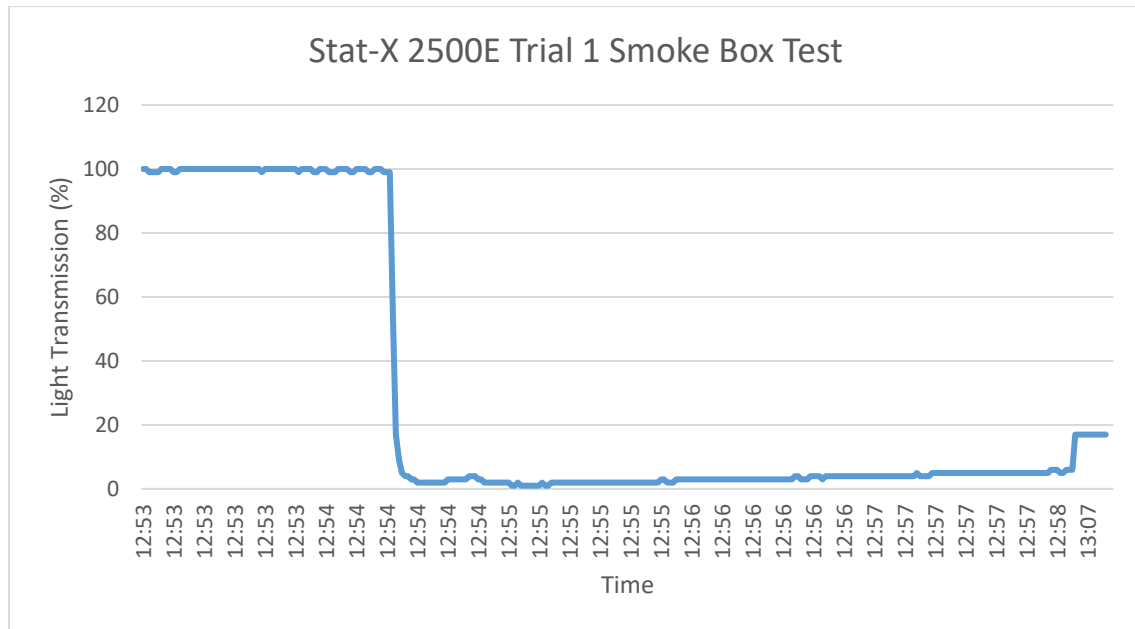


Figure 14: Stat-X 2500 smoke box trial 1

From the collected data it can be concluded that the Stat-X 2500E cannot be excluded from Class 1 due to the surface temperatures that exceeded 200 °C and due to the amount of smoke produced in the smoke box test, which exceeded 50% light obscured.

Photos from testing –



Picture 1: Stat-X 30E test setup



Picture 2: Stat-X 30E activated



Picture 3: Stat-X 30E post-test



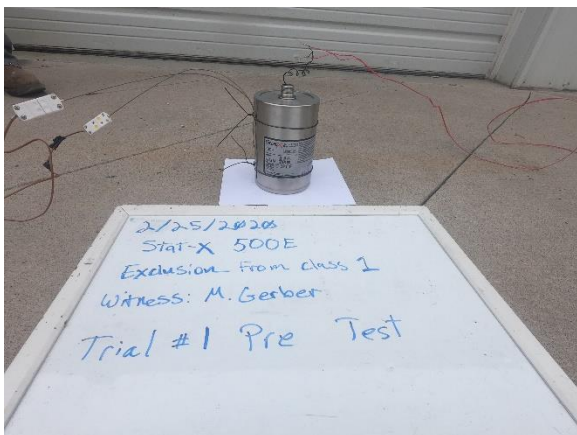
Picture 4: Stat-X 30E smoke box setup



Picture 5: Stat-X 30E smoke box after activation



Picture 6: Stat-X 30E smoke box post-test



Picture 7: Stat-X 500E pre-test



Picture 8: Stat-X 500E test, after activation



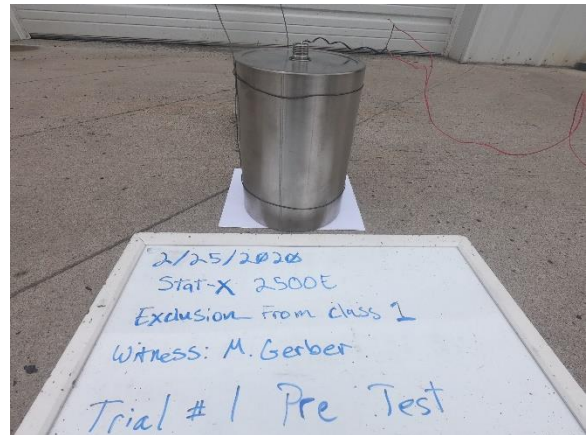
Picture 9: Stat-X 500E post-test



Picture 10: Stat-X 500E Smoke Box pre-Test



Picture 10: Stat-X 500E Smoke Box Activated



Picture 11: Stat-X 2500E pre-test



Picture 12: Stat-X 2500E test, activated



Picture 13: Stat-X 2500E post-test



Picture 14: Stat-X 2500E smoke box pre-test



Picture 15: Stat-X 2500E smoke box activated

Conclusion –

The Stat-X 30, 500, and 2500 should all be included in Class 1 based off the data obtained during the Exclusion from Class 1 testing. All three parts failed on the criteria of temperature, both the side of the device as well as the bottom of the device exceeded 200 °C for an extended period of time. All three parts also exceeded the allowable amount of smoke that can be produced by a device in the smoke box test. The 50% threshold allowable for the smoke box test was exceeded, all the way down to 1%.

Recommendation –

Since the devices are not excluded from Class 1, they must fall within Class 1. A safety device is defined as “articles which contain pyrotechnic substances or hazardous materials of other classes and are used in vehicles, vessels or aircraft to enhance safety to persons. Examples are: air bag inflators, air bag modules, seat-belt pretensioners and pyromechanical devices.” Vehicles are not listed in the owner’s manual for the Stat-X devices, however, that does not mean that the devices are not used in vehicles. If they were used in a vehicle, the smoke produced and the fact that the devices displace oxygen would create a suffocation hazard to the inhabitants of the vehicle. The heat produced by the device as well as the hot gasses that are ejected would be hazardous to the inhabitants of the vehicle as well. With further testing, such as the UN 6 (c): external fire test and the UN 6 (a): single-package test, a classification other than safety device could be sought. The UN 6 (a): single-package test could be particularly illuminating to see if these articles, when packaged near each other, are capable of igniting one another through temperature from donor to acceptor charge.

If you have any questions regarding this report, its contents, or how to proceed, please do not hesitate to call or email Graham Walsh (505.515.4430, gwalsh@explosivetestcenter.com) or Michael Gerber (505.550.1652, mgerber@explosivetestcenter.com).

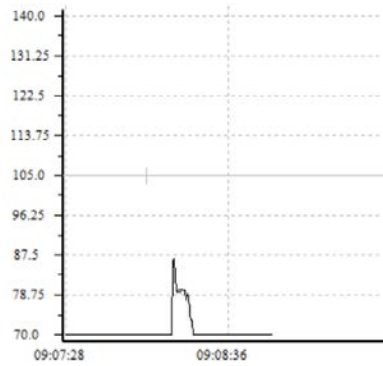
Graham Walsh, PhD
President
Explosives Test Center, LLC

Michael Gerber
Engineer
Explosives Test Center, LLC

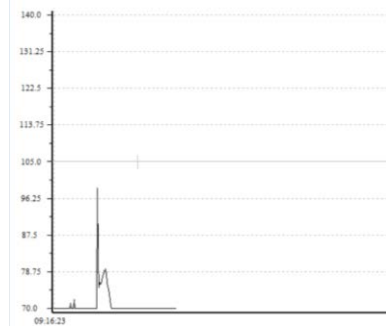
Appendixes –

Extech 407355 Noise Dosimeter

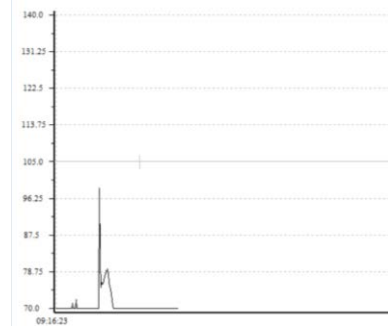
Stat-X 30E –



Trial 1



Trial 2

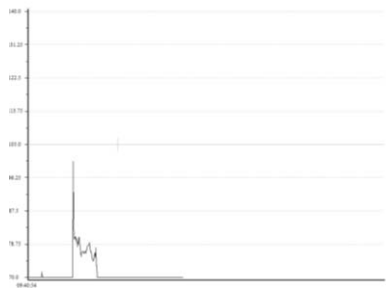


Trial 3

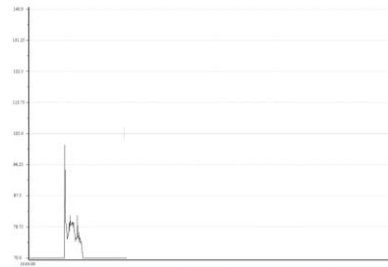
Stat-X 500E –



Trial 1

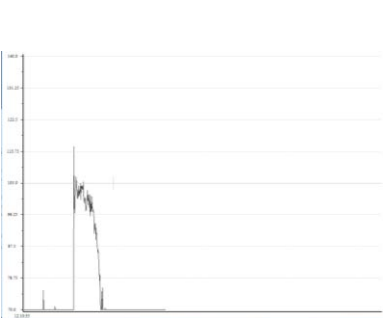


Trial 2

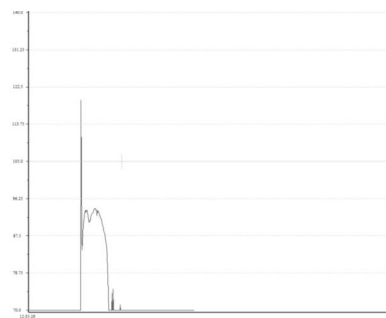


Trial 3

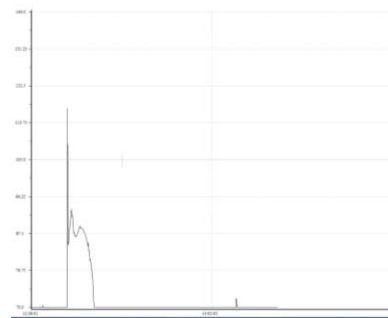
Stat-X 2500E –



Trial 1



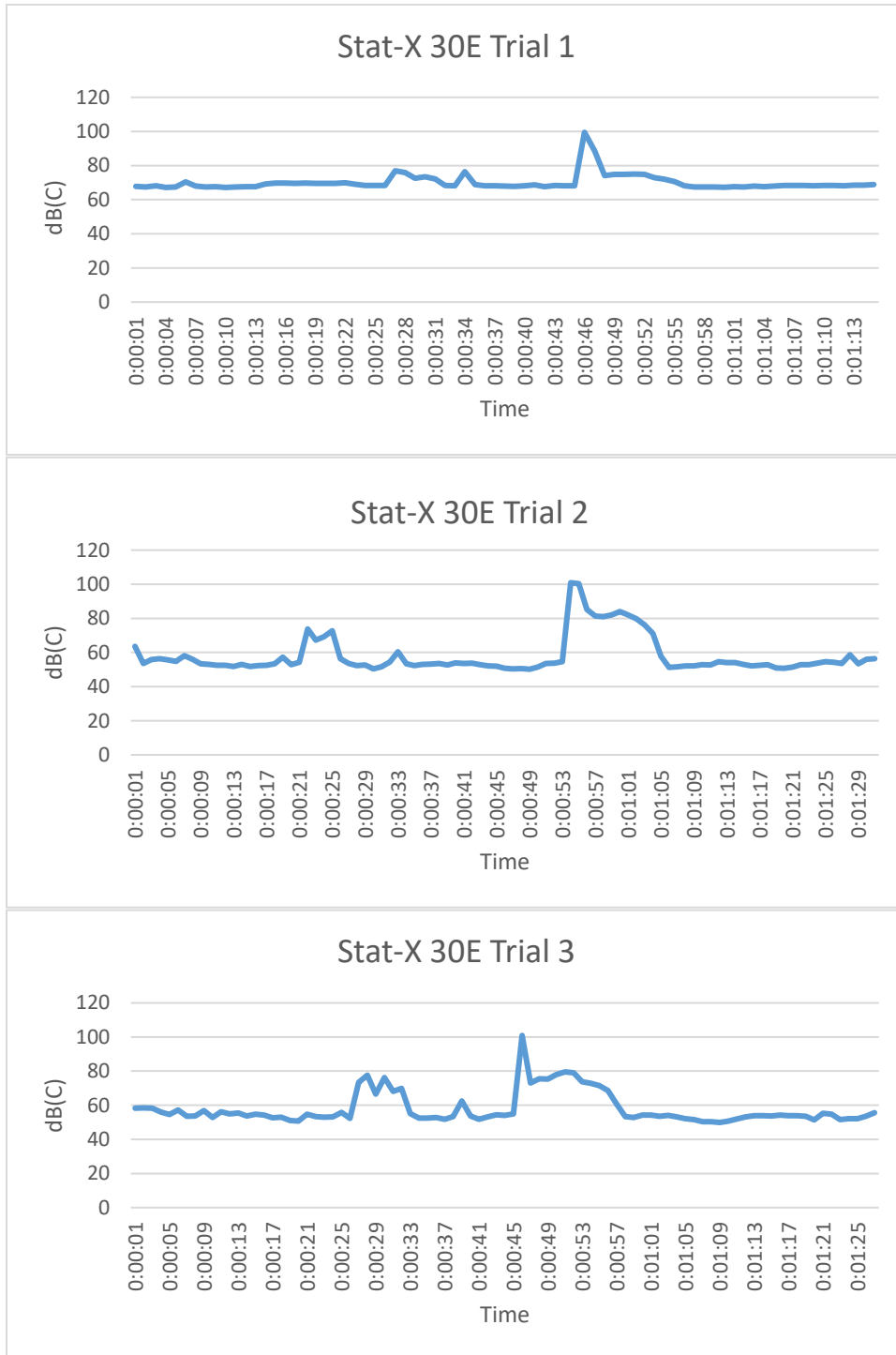
Trial 2



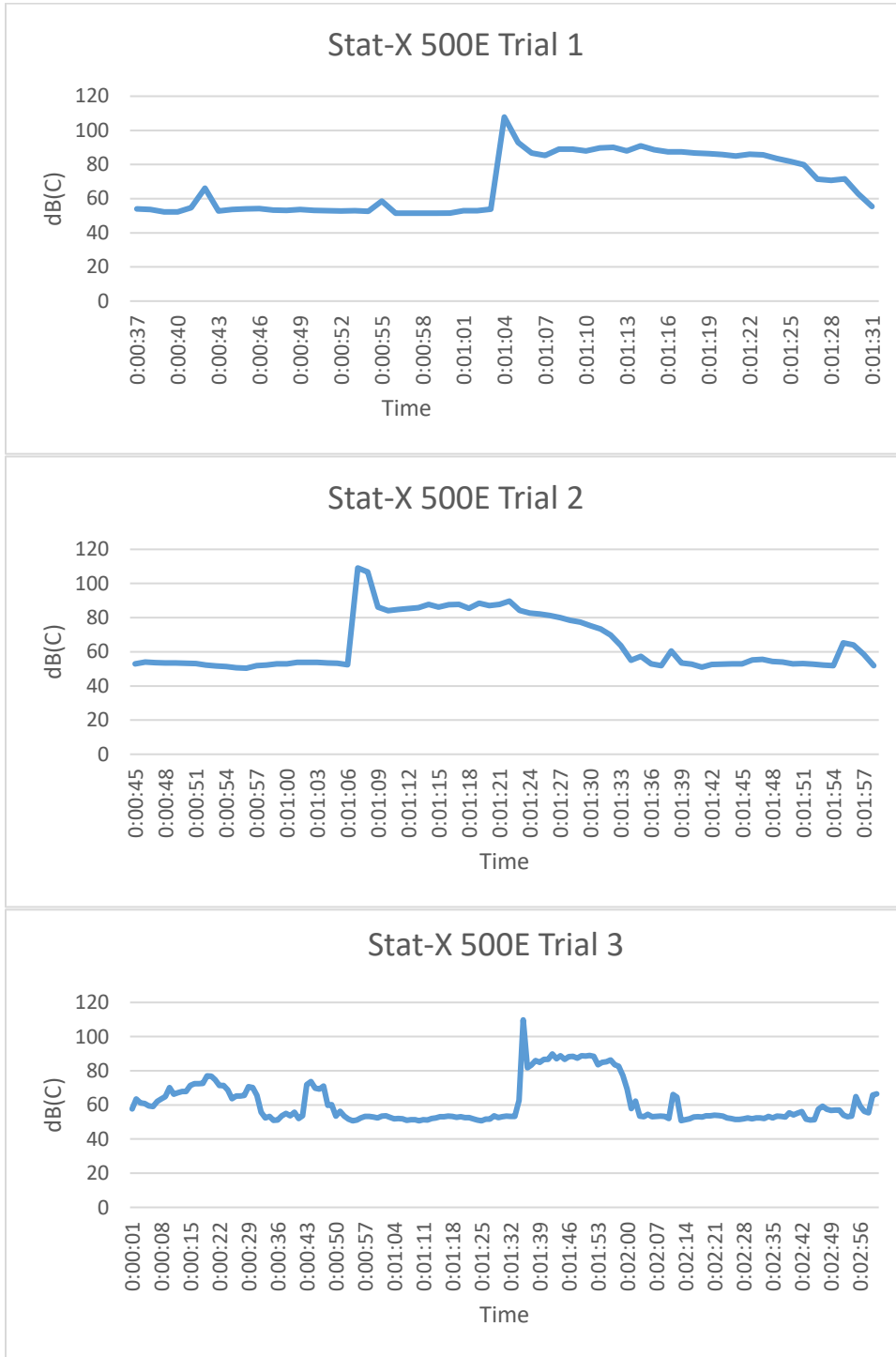
Trial 3

NTi Audio XL2 Handheld Audio and Acoustic Analyzer with M4261 Microphone –

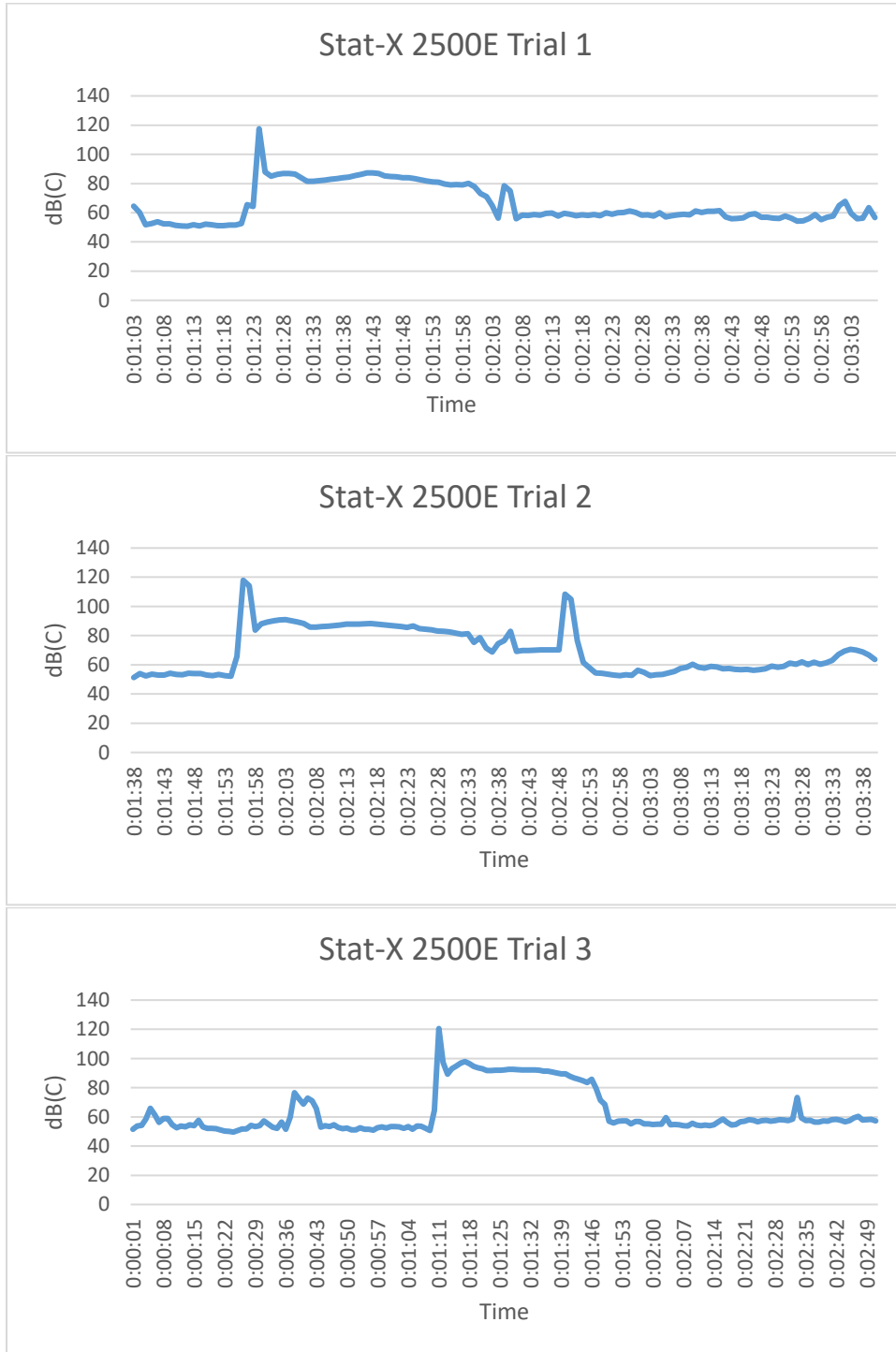
Stat-X 30E



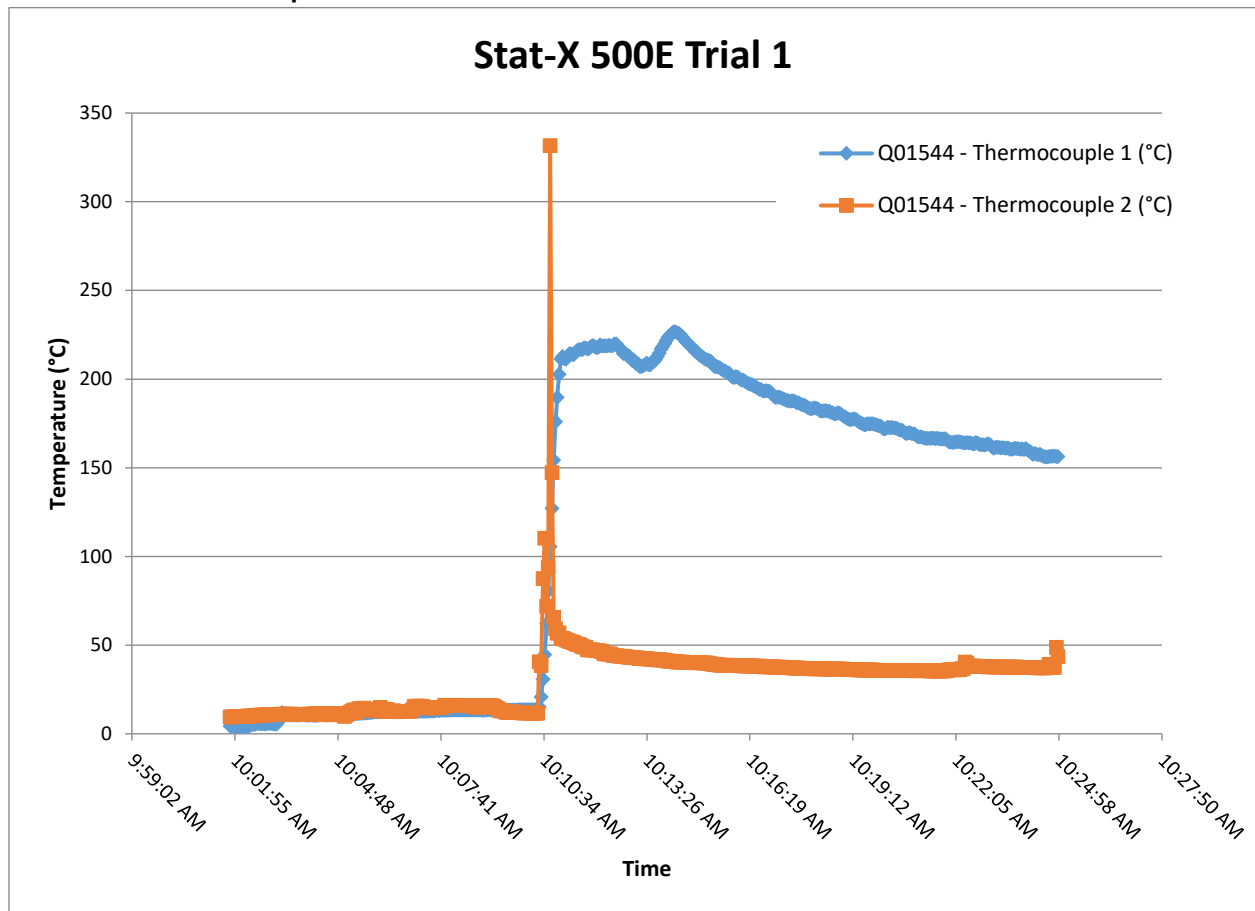
Stat-X 500E



Stat-X 2500E



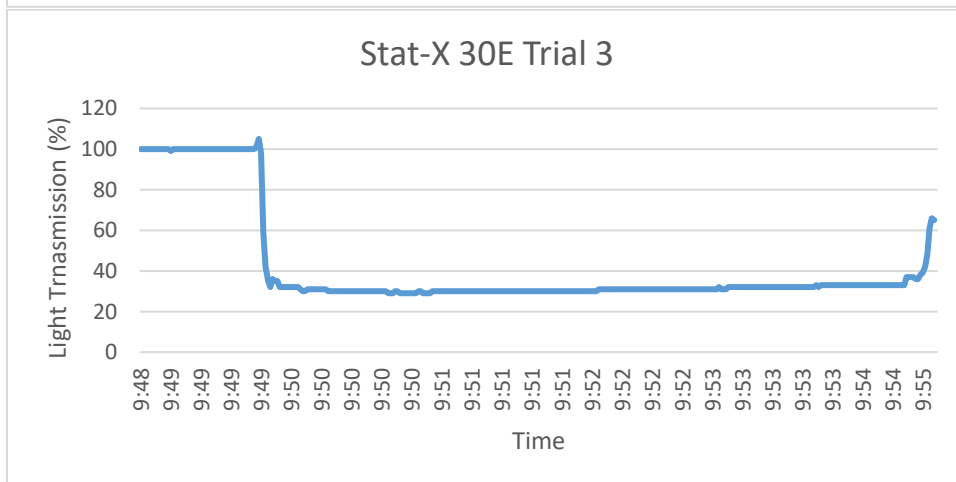
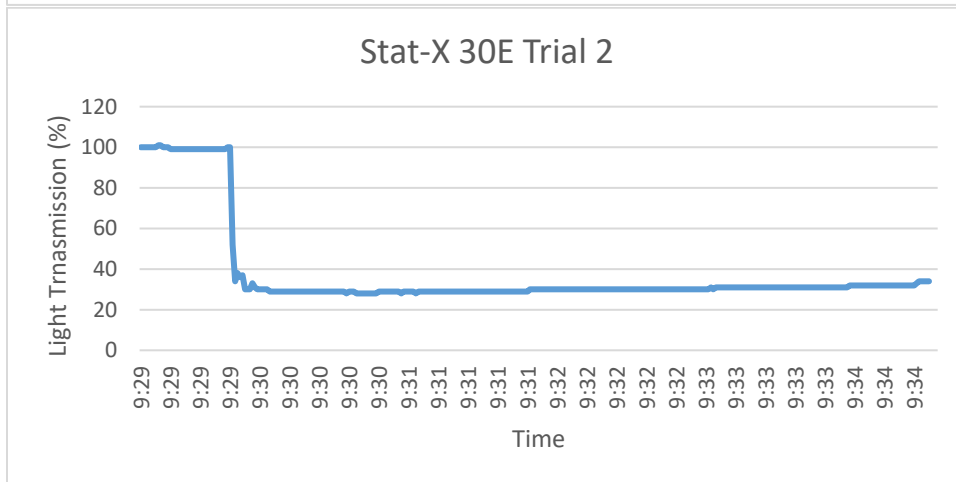
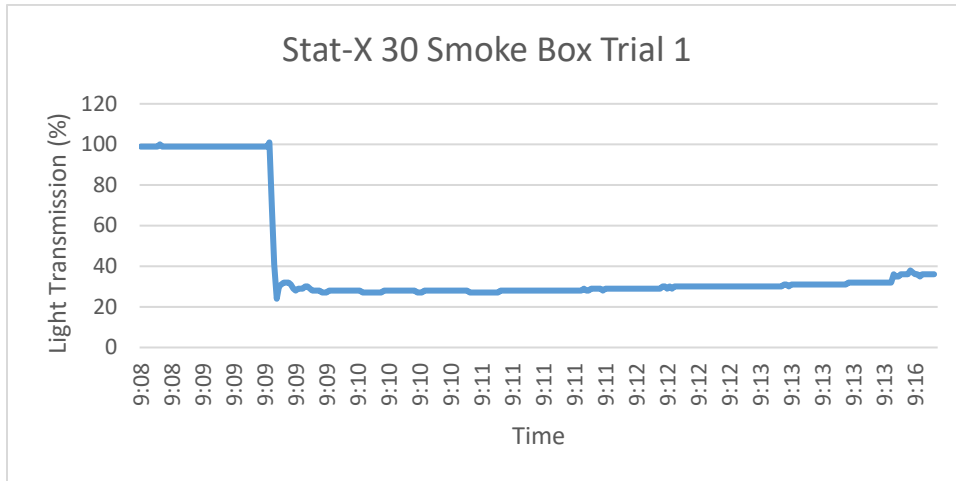
Stat-X 500E Trial 1 Temperature readout –



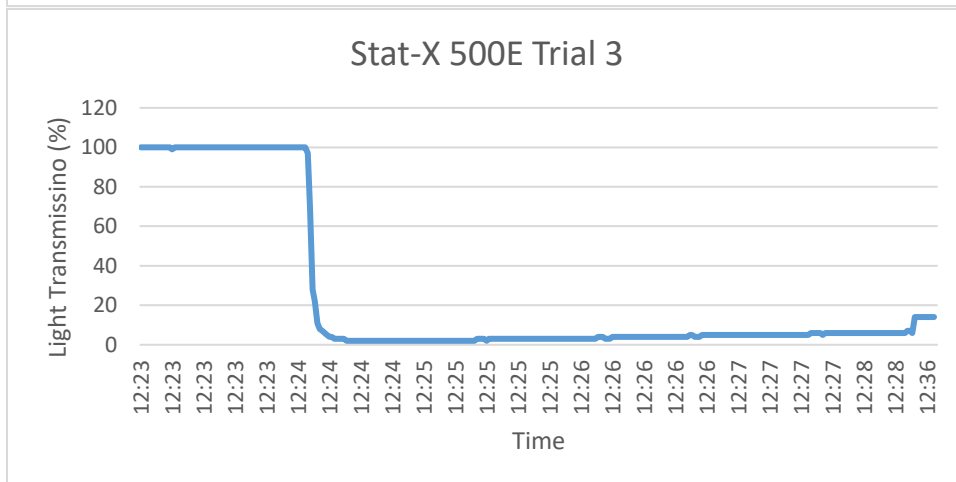
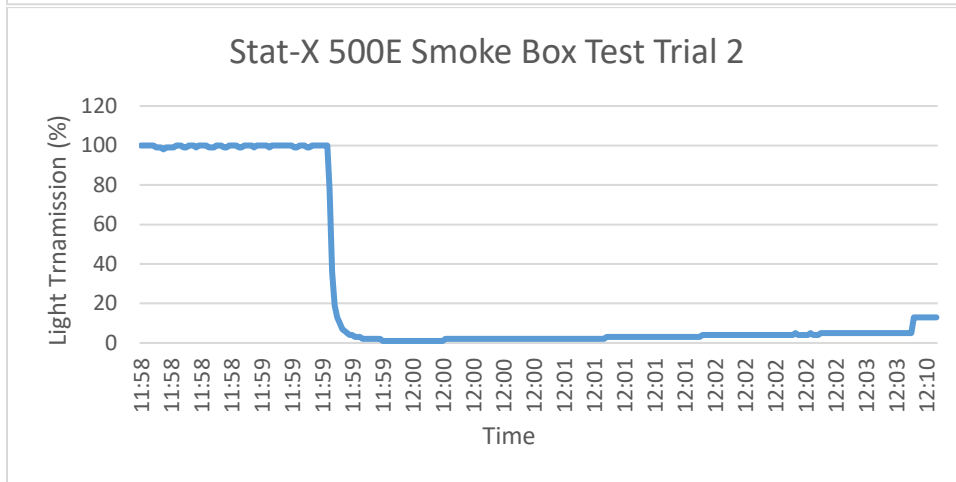
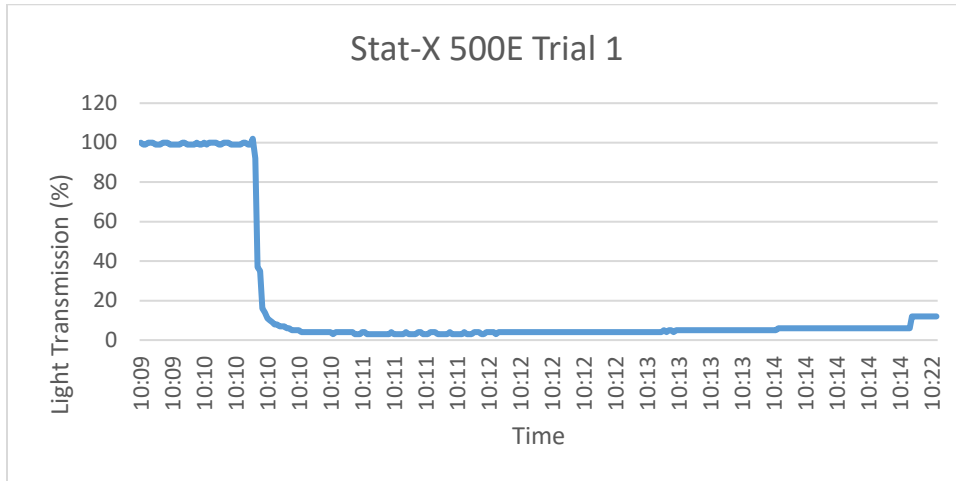
- Thermocouple 1 is placed on the side, Thermocouple 2 is placed on the bottom, as can be seen from the data, Thermocouple 1 experienced a malfunction soon after initiation.

Cole-Parmer SK-98766-93 Traceable Light Meter

Stat-X 30



Stat-X 500



Stat-X 2500



**BEFORE THE
UNITED STATES DEPARTMENT OF TRANSPORTATION
PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION**

In the Matter of:

**Fireaway, Inc.,
Appellant.**

**PHMSA Case No. 18-0009-SH-SO
PHMSA Case No. 18-0012-SH-SO
Docket No. PHMSA-2020-0058**

DECISION ON APPEAL

On June 25, 2020, the Chief Counsel of the Pipeline and Hazardous Materials Safety Administration (PHMSA) issued an Order to Fireaway, Inc. (Fireaway or Appellant) assessing a civil penalty in the amount of \$18,240 for four violations of the Hazardous Materials Regulations (HMR), 49 C.F.R. parts 171-180. The Order was issued after Fireaway and PHMSA were unable to come to an agreement following the issuance of the Notice of Probable Violation (Notice), which was issued on February 22, 2018. Fireaway filed a timely Appeal of the Order on July 10, 2020.

In the Order, which is incorporated by reference, the Chief Counsel found that Appellant committed four violations of the HMR, when:

1. Appellant offered for transportation a hazardous material UN 0432, Articles, pyrotechnic for technical purposes, 1.4S that was misclassified on the shipping paper and with incorrect markings, labels and placards as UN 3178, Flammable solid, inorganic, n.o.s., 4.1, PGIII, in violation of 49 C.F.R. §§ 171.2(a), (b), (c), (e), (i); 173.22(a)(1); 172.200; 172.300; 172.400; 172.500; and EX2008030382; and when
2. Appellant offered for transportation UN0432, Articles, pyrotechnic for technical purposes, 1.4S, in an amount requiring placarding, while having an incomplete security plan, in violation of 49 C.F.R. §§ 171.2(a), (b), (e); 172.800(b)(2); and 172.802; and when
3. Appellant offered for transportation (UN0485, Substance, explosives, n.o.s., 1.4G), while failing to comply with the terms of an explosive approval in violation of 49 C.F.R. §§ 171.2(a), (b), (c), (e), (i); 173.22(a)(1); and EX2006050092; and when

4. Appellant allowed employees to perform a function subject to the requirements of the HMR when the employees had not received hazardous materials general awareness, function-specific, safety, and security awareness training, in violation of 49 C.F.R. §§ 171.2(a), (b), (e); 172.702(a); 172.704(a)(1) – (4); and 172.704(c).

The Notice was issued on February 22, 2018, following two inspections of Fireaway locations.¹ The first inspection occurred on September 21, 2017 at Fireaway's Minnetonka, MN facility, and the second inspection occurred on November 14-15, 2017 at Fireaway's Minden, LA facility. The Notice provided a \$4,550 reduction from the baseline penalties for documented corrective actions. In response to the Notice, Fireaway submitted various letters raising various defenses to PHMSA while the two parties were attempting to settle the case. The Notice proposed and the Order assessed the following civil penalties:

Violation No. 1: \$9,600;
Violation No. 2: \$2,240;
Violation No. 3: \$3,200; and
Violation No. 4: 3,200.

Background

The record in this case demonstrates that the proper classification of the “Stat-X Aerosol Generators” has been in dispute various times over the last decade or so. Documents attached as exhibits to both the Investigation Report and Fireaway submissions during the course of this enforcement action establish that in 2006, PHMSA classified the generators as Division 1.4S, “Articles Pyrotechnic, UN0432.”² This classification, also known as an “Approval,” was consistent with a Canadian Competent Authority letter. Sometime in 2008, Fireaway requested that PHMSA reclassify its generators from 1.4S to 4.1.³ PHMSA issued a September 5, 2008 Approval that changed the classification of the generators as Flammable solid, inorganic, n.o.s., UN3178, 4.1.

In April 2010, PHMSA required additional testing of the generators at a testing lab. Based on the lab test results, PHMSA issued a “Show Cause” letter to Fireaway in May 2010 that included the lab test report. The lab test report concluded that, “based on all test data and considerations for safety and potential hazards, it is recommended that all Stat-X Aerosol Generators tested for this evaluation should not be excluded from Class 1. All models are properly classed into Division 1 and Articles, pyrotechnic for technical purposes, UN0423, 1.4S, PGII.”⁴ PHMSA provided Fireaway with the opportunity to respond to the lab test report, and Fireaway responded

¹ Inspection Report Nos. 17129098 and 17129118

² Inspection Report No. 17129098, Exhibit 9.

³ *Id.*, Exhibit 7. “Classification of Explosives,” September 5, 2008. (“Based on a request by Fireaway LLC, 11503 K-Tel Drive Minnetonka, MN the following items are classed in accordance with Section 173.56, . . .” This document classified the Stat-X Aerosol Generators as Flammable solid, inorganic, n.o.s., UN3178, 4.1.) These classification documents are referred to by PHMSA and Fireaway as “approvals.”

⁴ *Id.* Exhibit 10, page 16.

contesting the proposed reclassification.⁵ Nonetheless, in July 2010 PHMSA issued a revised Approval reverting the classification to Division 1.4S, “Articles Pyrotechnic, UN0432. During a September 2017 inspection at Fireaway’s Minnetonka, MN facility, PHMSA Investigators documented shipments offered by Fireaway wherein the Stat-X Aerosol Generators were classified, marked, labeled, and placarded as UN3178, Flammable Solid inorganic, n.o.s., 4.1 PGIII. This inspection prompted another inspection at Fireaway’s Minden, LA facility in November 2017. The Notice, issued in February 2018, proposed findings of violations based on evidence gathered during both inspections.

Appeal

On July 10, 2020, Fireaway submitted a timely appeal (Appeal) of the Order.

Finding of Violation 1

Fireaway contends that it offered shipments of “Stat-X Aerosol Generators,” for transportation with incorrect shipping papers, markings, labels and packaging, because Fireaway did not receive notice that PHMSA revised the hazmat classification applicable to the generators. Fireaway stated that it “truly believed that they were operating in compliance with the HMR.”⁶ In its Appeal, Fireaway argues that meetings with PHMSA executives, requested by Fireaway in response to PHMSA’s “Show Cause” proposing reclassification, gave Fireaway the impression that no final action had been taken. The Appeal contends, “it was made clear [in the meeting] that it was the shipper’s responsibility to properly classify their product indicating that Fireaway, Inc. could determine the most appropriate classification.”⁷

Prior to Fireaway’s Appeal, during settlement discussions with PHMSA, Fireaway raised similar arguments to contest the proposed violation. However, during settlement discussions, Fireaway posited an additional reason why PHMSA was at fault for Fireaway not being informed about the revised classification/Approval (“revised Approval”) of “Stat-X Aerosol Generators.” Fireaway claimed that it never received the revised Approval because PHMSA mailed the document to an outdated address.⁸ In order to evaluate Fireaway’s claims, it is necessary to review the timeline of the relevant correspondence and interactions between the parties that are documented in the record.⁹

- 9/5/2008 – PHMSA “Classification of Explosives” (i.e. “2008 Approval”) (First Revision)
 - o addressed to 11503 K-Tel Drive

⁵ Supplemental Corrective Action Response After Informal Conference, July 25, 2018, Attachments: page 7. Letter dated July 9, 2010.

⁶ Appeal at 3.

⁷ *Id.* at 2.

⁸ “Supplemental Corrective Action Response After Informal Conference.” During the summer of 2010, Fireaway apparently changed its address from to 11503 K-Tel Drive Hopkins, MN to 5852 Baker Road Minnetonka, MN. In this submission, Fireaway submitted a copy of its 7/9/2010 with a red box appearing in the bottom left corner of the page that reads, “New Mailing Address in Fireaway LLC Letterhead.”

⁹ It is important to note that these documents first appeared in the Investigation Reports and in Fireaway’s Response to the Notice, such that both parties have had ample opportunity to add to the record.

- o Classed Stat-X Aerosol Generators as UN3178, Flammable Solid inorganic, n.o.s., 4.1, PGIII
- 5/19/2010 –PHMSA “Show Cause” letter to Fireaway
 - o Addressed to 11503 K-Tel Drive
 - o Proposed amending the 2008 Approval for these devices to “Articles, pyrotechnic for technical purposes, UN0432 Division 1.4S.”
 - o PHMSA attached the lab test report upon which the proposed reclassification was based.
- 7/9/2010 – Fireaway response to PHMSA “Show Cause” (establishing that Fireaway received PHMSA’s 5/19/10 “Show Cause.”)
 - o Fireaway contests proposed revision
 - o Fireaway does not mention changed address in the body of letter
 - o “5852 Baker Road” address printed on bottom line of last page of company letterhead of Fireaway response
- 7/29/2010 – Classification of Explosives (Second Revision) (i.e. “revised Approval”)
 - o Addressed to 11503 K-Tel Drive
 - o Announces changed classification of Stat-X Generators to UN0432 1.4S
- Undated – PHMSA letter to Fireaway (date stamp may only appear on signed original)
 - o Addressed to 11503 K-Tel Drive
 - o Acknowledged Fireaway’s 6/16/2010 and 7/9/2010 responses to PHMSA’s 5/19/2010 “Show Cause.” Confirms reclassification to UN0432 1.4S. “Your request to reclassify these Aerosol Generators has been denied.”
- 12/2010 – (according to Fireaway) DOT HQ meeting with PHMSA Associate Administrator Dr. El-Sibaie
 - o Fireaway states in a notarized affidavit included in its Response to the NOPV, “At the meeting we advised that we had never received any 1.4S reclassification letter from DOT and presented our rationale as to why the 4.1 classification was appropriate. I also advised that since we had never received the 1.4S classification letter from DOT and that we were aware that the internal reviews with the DOT supported the 4.1 classification we intended to continue to protest the matter and proceed under the 4.1 classification which was the only ruling we had ever physically received.”
- 9/1/2011 – PHMSA site inspection of Fireaway at MN facility
 - o Fireaway states in its Appeal “At no time throughout the course of that audit was Fireaway notified or made aware that the Stat-X generators, Models 30 through 2500 should be shipped as anything other than UN3178, Flammable inorganic solids, n.o.s., 4.1, PGIII. In fact, there were no violations identified as a result of the inspection.”
- 3/4/2014 – FAA Hazardous Materials Specialist site inspection at MN facility
 - o No violations were identified as a result of the inspection.
- 9/21/2017 – PHMSA site inspection of Fireaway MN facility

- o PHMSA informs Fireaway of probable violation of failure to properly classify, mark, label and placard the Stat-X aerosol generator because the products were not shipped in compliance with revised classification.
- October 3, 2017 – Fireaway files Emergency Petition for Special Permit
- November 14-15, 2017 – PHMSA site inspection Fireaway Minden, LA facility
- February 22, 2018 – PHMSA issues the Notice to Fireaway that combines the proposed violations discovered during the MN and LA site inspections.
- Next (original issuance date not specified) PHMSA issues DOT SP-20600 that authorizes Fireaway to classify Stat-X aerosol generators as UN3268, Safety Device, Class 9. Current version DOT SP-20600 (Fourth Revision) was issued July 3, 2019 and expires April 2022.

First, I will address the argument Fireaway’s raised during settlement discussions that it never received the revised Approval due to PHMSA’s mailing error. Fireaway argued its new address appeared in its response to PHMSA’s “Show Cause,” but PHMSA mailed the revised Approval to Fireaway’s previous address, resulting in Fireaway never receiving it. In examining Fireaway’s response to the “Show Cause,” Fireaway did not request that PHMSA send future correspondence to a new address. The new address simply appeared on the bottom line of last page of the response. Furthermore, there is no document in the record where Fireaway made such a request.

Fireaway’s response to the 5/19/10 “Show Cause” establishes that Fireaway received the document. Two months and ten days later, PHMSA mailed the revised Approval to the same address, but Fireaway states it never received the document because PHMSA sent it to the “wrong address.”¹⁰ If Fireaway moved locations, given Fireaway’s knowledge of the important, ongoing dialogue with PHMSA regarding the proposed reclassification of the “Stat-X Aerosol Generators,” Fireaway had a duty to explicitly inform PHMSA of its change of address. Furthermore, the use of an address forwarding service, especially less than three months after having received important communication to that address, is customary for businesses and regulated entities that change addresses. Given that Fireaway has provided no evidence that it took steps to ensure ongoing communication with PHMSA, I find no rationale for excusing Fireaway from compliance with the revised Approval due to PHMSA’s use of the incorrect mailing address it had on record.

Next, as referenced above, Fireaway argues that during discussions about the proposed reclassification described in the “Show Cause,” PHMSA executives did not inform Fireaway that the reclassification had already taken place. While not providing specific meeting or discussion dates, Fireaway makes the following series of statements regarding this finding of violation in the Appeal.

¹⁰ “Supplement Corrective Action After Informal Conference” July 25, 2018. In support of its argument that it did not receive notice of the classification change, Fireaway provided a copy of the revised Approval. Fireaway marked up the document by highlighting the address PHMSA addressed the revised Approval to, 11503 K-Tel Drive. In red lettering added to the margin of the document, Fireaway writes, “Wrong address. Should be 5852 Baker Road, Minnetonka, MN. If mailed to Hopkins address Fireaway would never have received this letter.”

Additionally, it was made clear that it is the shipper's responsibility to properly classify their product indicating that Fireaway, Inc. could determine the most appropriate classification. . . Based on the conversation, Fireaway concluded that they could continue to ship their device as UN 3178, Flammable solid, inorganic, n.o.s., 4.1 until the matter was resolved internally within PHMSA. . . PHMSA leadership assured Fireaway that they were in compliance in December 2010 . . .

Neither party provided documentation from PHMSA, preceding or following the discussions to substantiate the above-described PHMSA assurances. However, Fireaway provided a notarized affidavit of Marc Gross, who was President of Fireaway at the time of the discussions. The affidavit is dated October 27, 2017, which is after the PHMSA inspection and after Marc Gross had left his position as Fireaway President.

At this point, nearly ten years following the reported meetings, when no contemporaneous documentation appears in the record, there is no reliable way to assess whether Fireaway's impressions from the reported meeting were supported by PHMSA statements. However, Fireaway's claim that PHMSA informed Fireaway that "Fireaway could determine the most appropriate classification" is directly contradicted by PHMSA's 5/19/10 "Show Cause" letter, which was signed by the director of the Approvals and Permits Division on behalf of the Associate Administrator for Hazardous Materials Safety. The "Show Cause" states, "[w]e are currently considering modifying EX2008030382 to the description, 'Articles, pyrotechnic for technical purposes, UN0432, 1.4S. on the basis of the testing carried out by SMS . . . you have 30 days from receipt of this letter to submit a written response . . . and show cause why the proposed action should not be taken.'" ¹¹

In terms of written correspondence, PHMSA was clear in communicating 1) on 5/19/10 it was considering reclassifying the Aerosol Generators and it provided the technical analysis that supported the reclassification, 2) on 7/29/10 it did in fact announce reclassification with the issuance of the "revised Approval," and 3) in a subsequent, undated letter it stated, "[y]our request to reclassify these Aerosol Generators (from the UN0432, 1.4S classification) has been denied." ¹² (emphasis added). For the above reasons, any statements during the 2010 meetings between the parties do not excuse Fireaway's failure to comply with the 7/29/10 reclassification.

Fireaway also points out that DOT performed inspections subsequent to the reclassification and the PHMSA meetings discussed above. PHMSA and FAA performed hazmat inspections, on September 1, 2011 and March 4, 2014, respectively. Fireaway accurately points out that no violations were alleged as a result of these inspections. There is no information in the record about the focus of these inspections or what shipments the investigators encountered, but it is possible that the violations were overlooked. Discovery of these violations earlier would have been preferable, but no findings of violation cannot be construed as a guarantee of full compliance.

¹¹ Investigation Report No. 17129098.

¹² *Id.*

For these reasons, I affirm the Order's finding that Fireaway offered a hazardous material for transportation, Articles, pyrotechnic of technical purposes, UN 0432, 1.4S, PGII that was misclassified on the shipping paper and with incorrect markings, labels and placards as UN 3178, Flammable solid, inorganic, n.o.s., 4.1, PGIII, in violation of 49 C.F.R. §§ 171.2(a), (b), (c), (e), (i); 173.22(a)(1); 172.200; 172.300; 172.400; 172.500; and EX2008030382.

Finding of Violation 2

Fireaway disagrees with the finding of violation for having an incomplete security plan. Fireaway argues that the PHMSA investigator merely "suggested improvements that could be made to the plan, . . . and the Exit briefing did not indicate a violation of the security plan but nevertheless Fireaway took the investigators recommendations into account and submitted a revised security plan."¹³ Also, Fireaway argued in its Appeal that the finding of violation is inappropriate because Fireaway does not own any motor vehicles used for transporting hazardous materials.

An examination of the Inspection Report 17129089 is necessary to assess the arguments Fireaway raises. A review of Exhibit 14 of the Inspection Report, the Hazmat Security Inspection Report, which is dated the same date as the first inspection (9/21/2017) reveals that "No" is checked for each of the following questions that guide the investigator in reviewing the security plan.

13. Does the plan include security duties for each position or department that is responsible for implementing the plan or a portion of the plan and the process of notifying employees when specific elements of the security plan must be implement?

16. Does the in-depth training program include the following?

- b. Organizational security structure?*
- c. Specify security objectives?*
- d. Specific security duties?*
- e. Employee specific responsibilities?*
- f. Action to take in the event of a security breach?*

18. Is the security plan reviewed at least annually and revised and/or updated as necessary?

As demonstrated in the Hazmat Security Inspection Report, the "No" answers to questions about the sufficiency of the security plan establish that the investigator made concrete factual observations to support an allegation of violation. It is not accurate to characterize the "No" answers as "suggested improvements," "recommendations," or not indicative of a violation. Furthermore, Fireaway is mistaken when it says that the Exit briefing did not indicate a violation of the security plan. In fact, the "Probable Violation" section of the Exit Briefing clearly lists "§ 172.802 Incomplete security plan or incomplete adherence." For the "explanation" section of the Probable Violation, the PHMSA investigator noted, "one or more items missing from security

¹³ Appeal at 3-4.

plan.” Accordingly, the Notice cited these deficiencies as a Probable Violation, and the Order made a finding of violation.

With respect to Fireaway’s statement that it does not own vehicles used for hazmat transportation, Fireaway did not explain why or how this fact affects its duty to prepare and maintain a compliant security plan. The duty to maintain a security plan attaches when a person offers for transportation in commerce a quantity of Division 1.4, 1.5, or 1.6 material requiring placarding in accordance with Subpart I and Subpart F of Part 172. Fireaway offered UN0432, Articles, pyrotechnic, 1.4S, in an amount requiring placarding. The questions that the PHMSA investigator answered “No” to in the Hazmat Security Inspection Report did not involve the ownership or use of motor vehicles used for transporting hazardous materials. For these reasons, I affirm the Order’s finding that Fireaway offered for transportation (UN0432, Articles, pyrotechnic, 1.4S), in an amount requiring placarding, while having an incomplete security plan, in violation of 49 C.F.R. §§ 171.2(a), (b), (e), 172.800(b)(2), and 172.802.

Finding of Violation 3

Fireaway does not dispute the finding of violation for failing to comply with the packaging instructions from a factual or legal standpoint. In fact, the Appeal states, “We applaud the inspector for his knowledge and thorough evaluation which uncovered the discrepancy . . . that the packaging currently used was not consistent with the EX Approval.”¹⁴ However, Fireaway also states that PHMSA failed to ensure that the packaging required in the Approvals was consistent with packaging utilized by the third-party certification agency TEN-E. Fireaway contends that that failure “led in part to the alleged violation.”¹⁵ Next, Fireaway argues that “the text stated in the Approvals was confusing and easily misconstrued.”¹⁶ Finally, Fireaway argues that “[d]uring discussions with PHMSA’s Office of Approvals and Permits in 2017, it was agreed that the packaging method used by Fireaway provided an equivalent or higher level of safety.”¹⁷

First, with respect to Fireaway’s claim that, the packaging description in the EX Approvals was inconsistent with the third-party test report, it is important to note that PHMSA approvals, not the laboratory test reports, authorize transportation of explosive hazardous materials. The third-party certification agency conducts testing and completes the report, which is submitted to PHMSA. Then PHMSA conducts a technical review of the lab report. There is no prohibition against PHMSA modifying packaging instructions to increase safety or facilitate transportation. In the “Classification of Explosives” documents (i.e. “Approvals”) at issue, PHMSA clearly included a Notes section to specify packaging. Fireaway was bound to comply with the packaging prescribed in the Approvals, not the packaging described in the third-party laboratory test report.

Next, I assess Fireaway’s argument that the Notes describing the packing requirements in the Approvals were confusing and easily misconstrued. I review the language in the Approvals with

¹⁴ Appeal at 4.

¹⁵ *Id.*

¹⁶ Appeal at 5.

¹⁷ Appeal at 5.

the Reference Numbers: EX2006050085 – EX2006050092. Each is dated either 11/21/2014 or 1/08/2015. The “Notes” specifying packaging instructions are identical in each Approval except that more inner packagings are allowed for smaller sized Fireaway Pellets. The “Notes” state in each Approval:

The following packaging method is assigned:

Inner Packaging – Tubes, plastic, each containing one pellet of explosive substance.

Outer packaging – UN 4G fiberboard box, each containing not more than 8 to 175 [depending on size of Fireaway Pellet] inner packagings.

As described in the Inspection Report, the Notice, and the Order, Fireaway used packaging that differed from what is described above. Fireaway’s inner packagings were “fiberboard tubes, not plastic tubes, and each tube had two (2) pellets each enclosed in a red zip lock bag.”¹⁸ Fireaway did not specify what part of the “Notes” it found confusing and easily misconstrued. I find the Notes instructions to be simple and clear, and I confirm that Fireaway’s packaging did not comply with the “Notes.” I do not find any basis for the argument that the Approvals documents were confusing in a way that excuses noncompliance.

Lastly, Fireaway’s contention that PHMSA officials agreed, in a discussion following the 11/14/17 inspection, that the packaging method used by Fireaway provided an equivalent or higher level of safety, is not relevant to whether a violation of the Approval occurred. One purpose of an approval is to specify packaging that mitigates the risks posed by the hazardous material. If an approval holder offers the hazardous material in different packaging, even if the holder believes the different packaging is superior, the alternative packaging is not compliant with the approval. In any event, it is important to note that Fireaway included two pellets of explosive material in the inner packaging under its incorrect packaging, but the applicable Approval Notes only allowed one pellet. In support of its claim that its packaging was acceptable, Fireaway points to the fact that PHMSA updated the relevant Approvals’ Notes in response to Fireaway’s request following the inspection. This update to the Approval allowed use of the originally-prescribed packaging, and it authorized a new packaging that allowed more explosive pellets in the inner package. However, the newly authorized packaging configuration imposed *greater* limitations on the number of inner packages containing explosive pellets that could be placed in each outer packaging fiberboard box. That is, the update accounted for the risk posed by more explosive pellets in the inner package. Therefore, without any documentation of such assurance from PHMSA, Fireaway’s claim that the packaging it used provided an equivalent or higher level of safety is not established.

If Fireaway disagreed with the Approvals as issued, it had the right to request that the Associate Administrator reconsider any part of the Approval, per 49 C.F.R. § 107.715. Given that Fireaway did not avail itself of this recourse, it was bound by the terms of the Approvals as issued. The fact that Fireaway requested and received a modification shortly after the inspection is evidence of corrective action, not that no violation occurred. For these reasons, I affirm the Order’s finding that Fireaway offered for transportation (UN0485, Substance, explosives, n.o.s., 1.4G), while failing to comply with the terms of an explosive approval in violation of 49 C.F.R. §§ 171.2(a), (b), (c), (e), (i), 173.22(a)(1), and EX2006050092.

¹⁸ Inspection Report No. 17129118, Exhibit 5.

Finding of Violation 4

Fireaway did not dispute the factual or legal basis for this Finding. Accordingly, I affirm the finding in the Order that Fireaway allowed employees to perform a function subject to the requirements of the HMR when the employees had not received hazardous materials general awareness, function-specific, safety, and security awareness training, in violation of 49 C.F.R. §§ 171.2(a), (b), (e), 172.702(a), 172.704(a)(1) – (4), 172.704(c).

Findings

As described above, I affirm the Findings of Violation set forth in the Order.

Civil Penalties

Fireaway argues that the Order imposed “extreme punitive civil penalties” with the assessment of the civil penalty of \$18,240. In enforcement actions, PHMSA utilizes the “Guidelines for Civil Penalties” in Appendix A to Subpart D to Part 107 to calculate civil penalties. Due to the vast diversity of hazmat transportation, it would be impossible for the Guidelines to anticipate every possible violation or fact pattern. However, the Guidelines are drafted with consideration of the danger posed to the traveling public from hazardous materials in transportation and the small businesses that operate within the hazardous materials transportation sector. The Guidelines have undergone notice and comment prior to publication.¹⁹ For each listed violation, the Guidelines set out a suggested civil penalty or civil penalty range. The amount often differs based on the packing group, which relates to the risk the package could pose. Furthermore, the Guidelines make clear that PHMSA retains wide discretion in assessing civil penalties. The following relevant excerpts are set forth below for Fireaway’s improved understanding:

Penalty Increases for Multiple Counts

A main objective of PHMSA's enforcement program is to obtain compliance with the HMR and the correction of violations which, in many cases, have been part of a company's regular course of business. As such, there may be multiple instances of the same violation. Examples include a company shipping various hazardous materials in the same unauthorized packaging, shipping the same hazardous material in more than one type of unauthorized packaging, shipping hazardous materials in one or more packagings with the same marking errors, or using shipping papers with multiple errors.

PHMSA generally will treat multiple occurrences that violate a single regulatory provision as separate violations and assess the

¹⁹ 78 FR 60726-01, 2013.

applicable baseline penalty for each distinct occurrence of the violation. PHMSA will generally consider multiple shipments or, in the case of package testers, multiple package designs, to be multiple occurrences; and each shipment or package design may constitute a separate violation.

PHMSA, however, will exercise its discretion in each case to determine the appropriateness of combining into a single violation what could otherwise be alleged as separate violations and applying a single penalty for multiple counts or days of a violation, increased by 25 percent for each additional instance, as directed by 49 U.S.C. 5123(c). For example, PHMSA may treat a single shipment containing three items or packages that violate the same regulatory provision as a single violation and apply a single baseline penalty with a 50 percent increase for the two additional items or packages; and PHMSA may treat minor variations in a package design for a package tester as a single violation and apply a single baseline penalty with a 25 percent increase for each additional variation in design.

Corrective Action

PHMSA may lower a proposed penalty when a respondent's documented corrective action has fixed an alleged violation. Corrective action should demonstrate not only that the specific deficiency is corrected but also that any systemic corrections have been addressed to prevent recurrence of the violation.

The two primary factors that determine the reduction amount are the extent and timing of the corrective action. In other words, PHMSA will determine the amount of mitigation based on how much corrective action a respondent completes and how soon after the exit briefing it performs corrective action. Comprehensive systemic action to prevent future violations may warrant greater mitigation than actions that simply target violations identified during the inspection. Actions taken immediately (within the 30 calendar day period that respondents have to respond to an exit briefing, or upon approval of Field Operations) may warrant greater mitigation than actions that are not taken promptly.

PHMSA may consider a respondent's corrective action to assess mitigation at various stages in the enforcement process, including: (1) After an inspection and before an NOPV is issued; (2) on receipt of an NOPV; or (3) after receipt of an NOPV. In order to reduce a civil penalty for corrective action, PHMSA must receive satisfactory documentation that demonstrates the corrective action

was completed. If a corrective action is of a type that cannot be documented (e.g., no longer using a particular packaging), then a respondent may provide a signed affidavit describing the action it took. The affidavit must begin with the affirmative oath "I hereby affirm under the penalties of perjury that the below statements are true and correct to the best of my knowledge, information and belief," in accordance with 28 U.S.C. 1746.

Generally, corrective action credit may not exceed 25 percent. Mitigation is applied to individual violations and fact patterns but should not be considered to be automatic reduction. Thus, in a case with two violations, if corrective action for the first violation is more extensive than for the second, the penalty for the first will be mitigated more than that for the second. If a respondent has previously committed the same violation, however, as determined in a finally-adjudicated civil, criminal, or administrative enforcement case or a ticket, PHMSA will not apply any reduction for corrective action.

In determining the appropriate civil penalty reduction, PHMSA will consider the extent to which the respondent corrected the violation and any risks or harms it created, the respondent's actions to prevent the violation from recurring, improvements to overall company practices to address a widespread compliance issue, and how quickly the corrective action was performed. In general, PHMSA will apply the following reductions for corrective action, subject to the facts and circumstances of individual cases and respondents. If a respondent has given full documentation of timely corrective action and PHMSA does not believe that anything else can be done to correct the violation or improve overall company practices, we will generally reduce the civil penalty by no more than 25 percent.

Fireaway also argued that the penalty assessed in the Order was "punitive" because it was higher than a compromise penalty offer proposed by PHMSA to settle the case that Fireaway rejected. In drafting an Order, the Chief Counsel must consider the respondent's written explanations, information, and arguments in preparing the Order.²⁰ Settlement amount negotiations are between the PHMSA attorney assigned to attempt to settle the case and the party.

Civil Penalty for Violation 1

The Notice proposed a baseline penalty of \$12,000 and provided \$2,400 corrective action credit for a \$9,600 proposed penalty. The Order affirmed the penalty proposed in the Notice. The civil penalty for this violation is consistent with the Guidelines. Violation 1 finds that Fireaway

²⁰ 49 C.F.R. § 107.317.

offered a hazardous material for transportation, Articles, pyrotechnic of technical purposes, UN 0432, 1.4S, PGII that was misclassified on the shipping paper and with incorrect markings, labels and placards as UN 3178, Flammable solid, inorganic, n.o.s., 4.1, PGIII, in violation of 49 C.F.R. §§ 171.2(a), (b), (c), (e), (i); 173.22(a)(1); 172.200; 172.300; 172.400; 172.500; and EX2008030382. The following are the Guidelines' recommendations or range recommendation for *one violation* of the following relevant provisions for a Packing Group III material.

- Use of an approval after the approval has been terminated – \$5,000 - \$25,000
- Failure to comply with a provision of an approval that relates to safety – \$4,000 and up
- Offering for transportation a hazardous material that is misclassified on the shipping paper, markings, labels, and placards – \$8,000
- Package Marking Requirements – Cumulative Violations
 - o Package Marking Requirements – \$3,000
 - o Using an incorrect ID number that changes response information – \$3,700
 - o Using an incorrect hazard class – \$3,700

This violation involved the use of a “Classification of Explosives” (i.e. approval) that had been revised (i.e. terminated). This improper use resulted in numerous shipments that were incorrectly identified in shipping papers and with incorrect packaging, markings, and labels. In light of the Guidelines, the civil penalty proposed in Notice is conservatively within an appropriate range. I note that there is no indication that PHMSA increased the civil penalty for multiple counts, given the multiple shipments documented in the shipping papers in the Investigation Report, which could have increased the civil penalty significantly. Furthermore, it appears that the corrective action credit was properly calculated in the Notice.

The Appeal argued that Fireaway “truly believed it was operating in compliance with the HMR” and that PHMSA had agreed that their product serves a public need.²¹ I do not dispute either contention. In fact, most entities operate in good faith and provide products that serve a public need. The Guidelines are drafted with the understanding that many entities subject to the HMR are small businesses. These entities are nonetheless subject to enforcement actions when violations are discovered, as described in the Hazardous Materials Safety Act and the HMR.²² Absent evidence of financial jeopardy, the Guidelines do not indicate reductions for these factors. I find that the civil penalty for Violation 1 proposed in the Notice and assessed in the Order is consistent with the Guidelines.

Civil Penalty for Violation 2

The Notice proposed a baseline penalty of \$2,800 and provided \$560 corrective action credit for a \$2,240 proposed penalty. The Order affirmed the penalty proposed in the Notice. The civil penalty for this violation is consistent with the Guidelines. Violation 2 finds that Fireaway offered for transportation hazardous materials classified by PHMSA as UN0432, Articles, pyrotechnic, 1.4S in an amount requiring placarding, while having an incomplete security plan, in violation of 49 C.F.R. §§ 171.2(a), (b), (e), 172.800(b)(2), and 172.802. The following are the Guideline's recommendations relevant to a Packing Group III material.

²¹ Appeal at 3.

²² 49 U.S.C. § 5121; 49 C.F.R. § 107.305.

- Failure to develop a security plan; failure to adhere to security plan – \$3,700
- Incomplete security plan or incomplete adherence (one or more of four required elements missing) – One-quarter (25 percent) of above for each element.
- Failure to update a security plan to reflect changing circumstances – One-third (33 percent) of baseline for no plan

The Appeal argued that the civil penalty was not appropriate because Fireaway submitted a revised security plan to PHMSA within a week, and the changes needed were minor. I do not dispute either argument. Given that the plan was missing elements, and the Company failed to update the plan, the baseline penalty was reasonable. It also appears that the civil penalty was calculated to provide the appropriate credit for corrective action. I find that the civil penalty for Violation 2 proposed in the Notice and assessed in the Order is reasonable consistent with the Guidelines.

Civil Penalty for Violation 3

The Notice proposed a baseline penalty of \$4,000 and provided \$800 corrective action credit for a \$3,200 proposed penalty. The Order affirmed the penalty proposed in the Notice. The civil penalty for this violation is consistent with the Guidelines. Violation 3 finds that Fireaway offered for transportation the hazardous materials, UN0485, Substance, explosives, n.o.s., 1.4G, while failing to comply with the terms of an explosive approval in violation of 49 C.F.R. §§ 171.2(a), (b), (c), (e), (i), 173.22(a)(1), and EX2006050092. The following is the Guideline's recommendation relevant to a Packing Group III material.

- Failure to comply with a provision of an approval that relates to safety – \$4,000 and up

Given that the shipments offered by Fireaway did not comply with the packaging instructions required in the Approvals, the baseline penalty was reasonable. I note that there is no indication that PHMSA increased the civil penalty for multiple counts, despite the multiple shipments documented in the shipping papers included in the Investigation Report, which could have increased the civil penalty significantly. Furthermore, it appears that the corrective action credit was properly calculated in the Notice.

The Appeal argued that the penalty for this Violation is not appropriate and cited the same arguments as it raised in defense of the finding of violation.²³ I find that the civil penalty for Violation 3 proposed in the Notice and assessed in the Order is reasonable consistent with the Guidelines.

Civil Penalty for Violation 4

The Notice proposed a baseline penalty of \$4,000 and provided \$800 corrective action credit for a \$3,200 proposed penalty. The Order affirmed the penalty proposed in the Notice. The civil penalty for this violation is consistent with the Guidelines. Violation 4 finds that Fireaway

²³ Appeal at 5.

allowed employees to perform a function subject to the requirements of the HMR when the employees had not received hazardous materials general awareness, function-specific, safety, and security awareness training, in violation of 49 C.F.R. §§ 171.2(a), (b), (e), 172.702(a), 172.704(a)(1) – (4), 172.704(c). The following are the Guidelines’ recommendations relevant to a Packing Group III material.

- Failure to provide initial training to hazmat employees (general awareness, function-specific, safety, and security awareness training): 172.702. 10 hazmat employees of fewer -- \$1,000 for each area.

Given that Fireaway could not produce hazardous materials training records for a hazmat employee and that Fireaway stated that the hazmat employee had not received any hazardous materials training, the baseline penalty was reasonable. Furthermore, it appears that the corrective action credit was properly calculated in the Notice.

Fireaway argued that this civil penalty was unfair because training violations are typically addressed by the issuance of a ticket. Fireaway then provided examples of lower civil penalties assessed in various tickets. The civil penalties issued in tickets are not relevant to this case given that a Notice of Probable Violation was issued. PHMSA decides whether to proceed with a ticket or a Notice based on the potential impact to safety. Tickets are generally reserved for minor or administrative violations that do not affect safety concerns. The training violation is included in this case that involves the misclassification of a 1.4 explosive material and/or reliance on an expired approval. Misclassification of explosive material, including improper packaging and communication, certainly has the potential to affect safety and would generally not be appropriate for a ticket. I find that the civil penalty for Violation 4 proposed in the Notice and assessed in the Order is reasonable consistent with the Guidelines.

Lastly, Fireaway argues that the civil penalties assessed in the Order are not consistent with the Memorandum for Secretarial Officers and Heads of Operating Administrations dated February 15, 2019 (“Memorandum”). I agree that the Memorandum applies to this enforcement proceeding, including this Decision on Appeal. The Memorandum requires, in part, that:

It is the policy of the Department to provide affected parties appropriate due process in all enforcement actions. In the course of such actions and proceedings, the Department's conduct must be fair and free of bias and should conclude with a well-documented decision as to violations alleged and any violations found to have been committed, the penalties or corrective actions to be imposed for such violations, and the steps needed to ensure future compliance. It is in the public interest and fundamental to good government that the Department carry out its enforcement responsibilities in a fair and just manner.

Specifically, the Appeal argues that the civil penalties PHMSA assessed do not, as required in the Memorandum, “reflect due regard for fairness, the scale of the violation, the violators knowledge and intent, and any mitigating factors (such as whether the violator is a small business).”

Fireaway also argues that the civil penalties proposed in the Notice and assessed in the Order do not properly reflect the assessment considerations in 49 C.F.R. § 107.331. That provision states,

After finding a knowing violation under this subpart, the Office of Chief Counsel assesses a civil penalty taking the following into account:

- (a) The nature and circumstances of the violation;*
- (b) The extent and gravity of the violation;*
- (c) The degree of the respondent's culpability;*
- (d) The respondent's prior violations;*
- (e) The respondent's ability to pay;*
- (f) The effect on the respondent's ability to continue in business; and*
- (g) Such other matters as justice may require.*

I disagree with Fireaway's arguments that the Order does not comply with the Memorandum or the Assessment Considerations. The Order makes well-reasoned and well-supported findings of violation that rely on and properly cite the relevant evidence, regulations, and statutory provisions. I find no evidence or indication of unfairness, failure to follow due process, or bias. The outcome of the Order is not at odds with the scale of the violation, the violators knowledge and intent, or any mitigating factors. Furthermore, this enforcement action does not rely on any expansive interpretation of the governing statutes or regulations.

The Notice specifically cited § 107.331 in proposing the civil penalties, and the above analysis demonstrated that the civil penalties as assessed in the Order are consistent with the amounts recommended in the Guidelines. The Guidelines are utilized in enforcement cases to best ensure fair and consistent assessment of civil penalties. Furthermore, the Guidelines reflect PHMSA's mission and mindfulness of the small businesses subject to the HMR. As mentioned above, PHMSA declined to increase the civil penalties as recommended or allowed in the Guidelines for multiple counts of the violations. I also found that PHMSA provided corrective action credit as directed in the Guidelines. Fireaway was offered the opportunity but declined to provide financial documentation to support a claim that the civil penalty could have an effect on its ability to continue in business. Furthermore, as documented by the voluminous record laid out above in Violation 1, PHMSA has provided Fireaway with ample due process and opportunities to respond, beginning with its responses to the Exit Briefings it signed and concluding with the filing of its Appeal. Each document has thoroughly explained the basis and reasoning for the allegations and civil penalties. The civil penalty assessed in this case is consistent with cases involving similar violations. For these reasons, I disagree with Fireaway's arguments that the Order violated the Memorandum or the Assessment Considerations in 49 C.F.R. § 107.331.

For the reasons above, I find no legal or factual basis to reduce the civil penalty of **\$18,240** assessed in the Order. Fireaway may pay the civil penalty over the course of **12 months with 12 monthly payments of \$1,520.00**.

Final Administrative Action

This Decision on Appeal constitutes the final administrative action in this proceeding.

23 Oct 2020
Date

Howard W. McMillan
Howard W. McMillan
Chief Safety Officer

CERTIFIED MAIL – RETURN RECEIPT REQUESTED

Addendum A (Decision on Appeal)

Payment Information

Appellant must pay a total civil penalty of \$18,240. Fireaway must pay the civil penalty in one lump sum or may pay the civil penalty over the course of 12 months with 12 monthly payments of \$1,520.00.

Due date

If Appellant opts to utilize the payment plan, Appellant must pay the first \$1,520 installment of the civil penalty installment plan within 30 days of the date of this Decision on Appeal. Respondent must pay a further \$1,520 installment each 30 days thereafter until the total civil penalty has been paid. If Respondent defaults on any payment of this payment schedule, the entire amount of the remaining civil penalty shall, without further notice, become immediately due and payable as of the date that the first installment is due.

Payment Method

Appellant must pay the civil penalty by wire transfer.

Interest and Administrative Charges

If Appellant pays the civil penalty in accordance with the payment plan, no interest will be Appellant. If Respondent does not pay by that date, the FAA's Financial Operations Division will start collection activities and may assess interest, a late-payment penalty, and administrative charges under 31 U.S.C. § 3717, 31 C.F.R. § 901.9, and 49 C.F.R. § 89.23.

The rate of interest is determined under the above authorities. Interest accrues from the date of this Order. A late-payment penalty of six percent (6%) per year applies to any portion of the debt that is more than 90 days past due. The late-payment penalty is calculated from the date Respondent receives the Order.

Treasury Department Collection

FAA's Financial Operations Division may also refer this debt and associated charges to the U.S. Department of Treasury for collection. The Department of the Treasury may offset these amounts against any payment due Respondent (31 C.F.R. § 901.3).

Under the Debt Collection Act (see 31 U.S.C. § 3716(a)), a debtor has certain procedural rights prior to an offset. You, as the debtor, have the right to be notified of: (1) the nature and amount of the debt; (2) the agency's intention to collect the debt by offset; (3) the right to inspect and copy the agency records pertaining to the debt; (4) the right to request a review within the agency of the indebtedness and (5) the right to enter into a written

Addendum A (Decision on Appeal)

agreement with the agency to repay the debt. This Order constitutes written notification of these procedural rights.

INSTRUCTIONS FOR ELECTRONIC FUNDS TRANSFER TO
PIPELINE AND HAZARDOUS MATERIALS SAFETY
ADMINISTRATION,
U.S. DEPARTMENT OF TRANSPORTATION

1. <u>RECEIVER'S ABA NO.</u> 021030004	2. <u>TYPE SUBTYPE</u> (provided by sending bank)
3. <u>SENDING BANK ARB NO.</u> (provided by sending bank)	4. <u>SENDING BANK REF NO.</u> (provided by sending bank)
5. <u>AMOUNT</u>	6. <u>SENDING BANK NAME</u> (provided by sending bank)
7. <u>RECEIVER NAME:</u> TREAS NYC	8. <u>PRODUCT CODE</u> (Normally CTR, or sending bank)
9. <u>BENEFICIAL (BNF) - AGENCY</u> <u>LOCATION CODE</u> BNF=/AC-69140001	10. <u>REASONS FOR PAYMENT</u> <i>Example:</i> PHMSA Payment for Case #/Ticket

INSTRUCTIONS: You, as sender of the wire transfer, must provide the sending bank with the information for Block (1), (5), (7), (9), and (10). The information provided in blocks (1), (7), and (9) are constant and remain the same for all wire transfers to the Pipeline and Hazardous Materials Safety Administration, Department of Transportation

Addendum A (Decision on Appeal)

Block #1 - RECEIVER ABA NO. - "021030004". Ensure the sending bank enters this nine digit identification number; it represents the routing symbol for the U.S. Treasury at the Federal Reserve Bank in New York.

Block #5 - AMOUNT - You as the sender provide the amount of the transfer. Please be sure the transfer amount is punctuated with commas and a decimal point. **EXAMPLE:**
\$10,000.00

Block #7 - RECEIVER NAME- "TREAS NYC." Ensure the sending bank enters this abbreviation, which must be used for all wire transfer to the Treasury Department.

Block #9 - BENEFICIAL - AGENCY LOCATION CODE - "BNF=/AC-69140001" Ensure the sending bank enters this information. This is the Agency Location Code for Pipeline and Hazardous Materials Safety Administration, Department of Transportation

Block #10 - REASON FOR PAYMENT - "AC-Payment for PHMSA Case#" To ensure your wire transfer is credited properly, enter the case number/ticket number or Pipeline Assessment number."

Note: - A wire transfer must comply with the format and instructions or the Department cannot accept the wire transfer. You, as the sender, can assist this process by notifying, at the time you send the wire transfer, the

Addendum A (Decision on Appeal)

General Accounting Division at (405) 954-9309.

CERTIFICATE OF SERVICE

This is to certify that on Nov. 24, 2020 the undersigned served in the following manner the designated copies of this Decision on Appeal with attached addendum to each party listed below:

Robert Chauvin, CEO
Fireaway, Inc.
5852 Baker Road
Minnetonka, MN 55345-5903

Original Decision
Certified Mail – Return Receipt

Robert Richard, President
Hazmat Safety Consulting, LLC
1610 E Main St.
Waxahachie, TX 75165

One Copy (with enclosures)
Certified Mail – Return Receipt

Edward Rastetter
Investigator, Eastern Region
Office of Hazardous Materials Safety
840 Bear Tavern Rd., Suite. 300
West Trenton, NJ 08628

One Copy (without enclosures)
Electronic Mail

John Heneghan
Director, Eastern Region
Office of Hazardous Materials Safety
840 Bear Tavern Rd., Suite. 300
West Trenton, NJ 08628

Electronic Mail

U.S. DOT Dockets, M-30
U.S. Department of Transportation
West Building Ground Floor, Room W12-14
1200 New Jersey Ave., SE
Washington D.C. 20590

One Copy
Personal Delivery

Adam Horsley, Attorney
Office of Chief Counsel

One Copy (without enclosures)
Electronic Mail

Vince Lopez, Attorney
Office of Chief Counsel

One Copy (without enclosures)



Lloyd Scott

Stat-X Condensed Aerosol Generators - Models 15 to 2500.

Revision date: 08/22/2025

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1. Identification

Product identifier

Stat-X Condensed Aerosol Generators - Models 15 to 2500.

Recommended use of the chemical and restrictions on use

Use of the substance/mixture

Fire Protection

Details of the supplier of the safety data sheet

Company name: Fireaway Inc.
Street: 5852 Baker Road
Place: USA-MN 55345 Minnetonka
Telephone: +1 (952) 935-9745
Contact person: Jason Fuglsby

Telefax: +1 (952) 935-9757
Telephone: +1 (952) 847-4661

E-mail: technical@statx.com
Internet: www.statx.com

Emergency phone number: +1-352-323-3500

2. Hazard(s) identification

Classification of the chemical

29 CFR Part 1910.1200

Oxidizing solids: Ox. Sol. 3
Respiratory or skin sensitization: Skin Sens. 1

Label elements

29 CFR Part 1910.1200

Signal word: Warning

Pictograms:



Hazard statements

May intensify fire; oxidizer
May cause an allergic skin reaction

Precautionary statements

Keep away from heat/sparks/open flames/hot surfaces. - No smoking.
Keep/Store away from clothing/combustible materials.
Take any precaution to avoid mixing with combustibles.
Avoid breathing dust/fume/gas/mist/vapors/spray.
Contaminated work clothing must not be allowed out of the workplace.
Wear protective gloves/protective clothing/eye protection/face protection.
If on skin: Wash with plenty of water.
Specific treatment (see Precautionary statements on this label).
If skin irritation or rash occurs: Get medical advice/attention.
Wash contaminated clothing before reuse.
In case of fire: Use water to extinguish.
Dispose of contents/container to an appropriate recycling or disposal facility.

Hazards not otherwise classified

No information available.

Stat-X Condensed Aerosol Generators - Models 15 to 2500.

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3. Composition/information on ingredients**Mixtures****Chemical characterization**

Homogenous mixture of the components listed below.

The components are pressed into a solid, aerosol-forming composite pellet.

Relevant ingredients

CAS No	Components	Quantity
7757-79-1	Potassium nitrate	75 %
461-58-5	Cyanguanidine	16.5 %
9003-35-4	Phenol-formaldehyde resin	8.5 %

4. First-aid measures**Description of first aid measures****After inhalation**

Provide fresh air. When in doubt or if symptoms are observed, get medical advice.

After contact with skin

After contact with skin, wash immediately with plenty of water and soap. Take off immediately all contaminated clothing and wash it before reuse. Medical treatment necessary.

After contact with eyes

After contact with the eyes, rinse with water with the eyelids open for a sufficient length of time, then consult an ophthalmologist immediately.

After ingestion

Rinse mouth immediately and drink 1 glass of water.

Most important symptoms and effects, both acute and delayed

No information available.

Indication of any immediate medical attention and special treatment needed

Treat symptomatically.

5. Fire-fighting measures**Extinguishing media****Suitable extinguishing media**

Co-ordinate fire-fighting measures to the fire surroundings.

When Stat-X is ignited, a fire extinguishing aerosol is created.

Water can also be used for extinguishing.

Specific hazards arising from the chemical

None known.

Special protective equipment and precautions for fire-fighters

Wear a self-contained breathing apparatus and chemical protective clothing. Full protection suit.

Additional information

Suppress gases/vapors/mists with water spray jet. Collect contaminated fire extinguishing water separately. Do not allow entering drains or surface water.

6. Accidental release measures**Personal precautions, protective equipment and emergency procedures****General advice**

Provide adequate ventilation. Avoid dust formation. Do not breathe dust. Avoid contact with skin, eyes and

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clothes. Use personal protection equipment.

Environmental precautions

Do not allow to enter into surface water or drains.

Methods and material for containment and cleaning up

For cleaning up

Take up mechanically. Treat the recovered material as prescribed in the section on waste disposal.

Other information

If these devices are spilled, they can be safely retrieved by hand and should be inspected for damage before repackaging. Suspicious or damaged items should be marked and properly destroyed.

Reference to other sections

Safe handling: see section 7

Personal protection equipment (PPE): see section 8

Disposal: see section 13

7. Handling and storage

Precautions for safe handling

Advice on safe handling

If handled uncovered, arrangements with local exhaust ventilation have to be used. Avoid dust formation. Do not breathe dust.

Advice on protection against fire and explosion

Keep away from sources of ignition - No smoking.

Advice on general occupational hygiene

Remove contaminated, saturated clothing immediately. Draw up and observe skin protection programme. Wash hands and face before breaks and after work and take a shower if necessary. When using do not eat, drink, smoke, sniff.

Conditions for safe storage, including any incompatibilities

Requirements for storage rooms and vessels

Keep container tightly closed. Provide adequate ventilation as well as local exhaustion at critical locations. Keep cool. Keep away from heat, hot surfaces, sparks, open flames and other ignition sources. No smoking.

Hints on joint storage

Keep away from clothing and other combustible materials.

Further information on storage conditions

Do not expose to temperatures > 65°C / 149°F for long periods

8. Exposure controls/personal protection

Control parameters

Additional advice on limit values

To date, no national critical limit values exist.

Exposure controls



Appropriate engineering controls

If handled uncovered, arrangements with local exhaust ventilation should be used if possible. Do not breathe dust.

Individual protection measures, such as personal protective equipment

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Eye/face protection

Suitable eye protection: goggles.

Hand protection

When handling with chemical substances, protective gloves must be worn with the CE-label including the four control digits. The quality of the protective gloves resistant to chemicals must be chosen as a function of the specific working place concentration and quantity of hazardous substances.

Skin protection

Use of protective clothing.

Respiratory protection

In case of inadequate ventilation wear respiratory protection.

9. Physical and chemical properties

Information on basic physical and chemical properties

Physical state:	solid
Color:	beige-white (Stainless Steel Cylinder housing)
Odor:	Odorless
Melting point/freezing point:	not determined
Boiling point or initial boiling point and boiling range:	not determined
Flammability:	not determined
Lower explosion limits:	not determined
Upper explosion limits:	not determined
Flash point:	not applicable
Auto-ignition temperature:	not determined
Decomposition temperature:	not determined
pH-Value:	not determined
Viscosity / kinematic:	not applicable
Solubility in other solvents	
not determined	
Partition coefficient n-octanol/water:	not determined
Vapor pressure:	not determined
Density:	not determined
Relative vapour density:	not determined
Particle characteristics:	not determined

Other information

Information with regard to physical hazard classes

Explosive properties

The product is not designed to have an explosive effect.

Self-ignition temperature

Solid:

300 °C / 572 °F

Oxidizing properties

The product contains an oxidizer.

10. Stability and reactivity

Reactivity

Oxidizing.

Chemical stability

Stability:

Stable

The product is stable under storage at normal ambient temperatures.

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Possibility of hazardous reactions

Hazardous reactions: May occur
No hazardous reaction when handled and stored according to provisions.

Conditions to avoid

Temperatures > 54°C / 129.2°F
The devices are packaged in such a way that the items are protected from electrical current and shock.

Incompatible materials

Keep away from clothing and other combustible materials.

Hazardous decomposition products

Resulting from the use of the product: Oxygen.

11. Toxicological information

Information on toxicological effects

Acute toxicity

Based on available data, the classification criteria are not met.

ATEmix calculated

ATE (oral) > 2000 mg/kg; ATE (dermal) > 2000 mg/kg; ATE (inhalation vapour) > 20 mg/l; ATE (inhalation dust/mist) > 5 mg/l

CAS No	Components				
	Exposure route	Dose	Species	Source	Method
7757-79-1	Potassium nitrate				
	oral	LD50 3750 mg/kg	Rat		

Irritation and corrosivity

Skin corrosion/irritation: Based on available data, the classification criteria are not met.
Serious eye damage/eye irritation: Based on available data, the classification criteria are not met.

Sensitizing effects

May cause an allergic skin reaction (Phenol-formaldehyde resin)

Carcinogenic/mutagenic/toxic effects for reproduction

Germ cell mutagenicity: Based on available data, the classification criteria are not met.
Carcinogenicity: Based on available data, the classification criteria are not met.
Reproductive toxicity: Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - single exposure

Based on available data, the classification criteria are not met.

Specific target organ toxicity (STOT) - repeated exposure

Based on available data, the classification criteria are not met.

Carcinogenicity (OSHA): No ingredient of this mixture is listed.

Carcinogenicity (IARC): No ingredient of this mixture is listed.

Carcinogenicity (NTP): No ingredient of this mixture is listed.

Aspiration hazard

Based on available data, the classification criteria are not met.

Information on other hazards

Endocrine disrupting properties

see section 12

12. Ecological information

Persistence and degradability

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The product has not been tested.

Bioaccumulative potential

The product has not been tested.

Mobility in soil

The product has not been tested.

Endocrine disrupting properties

This product does not contain a substance that has endocrine disrupting properties with respect to non-target organisms as no components meets the criteria.

Other adverse effects

No information available.

Further information

Avoid release to the environment.

13. Disposal considerations

Waste treatment methods

Disposal recommendations

Do not allow to enter into surface water or drains. Dispose of waste according to applicable legislation.

Contaminated packaging

Wash with plenty of water. Completely emptied packages can be recycled.

14. Transport information

U.S. DOT 49 CFR 172.101

UN number or ID number:

UN 3268

Proper shipping name:

SAFETY DEVICES

Transport hazard class(es):

9

Hazard label:

9



Marine transport (IMDG)

UN number or ID number:

UN 3268

UN proper shipping name:

SAFETY DEVICES

Transport hazard class(es):

9

Packing group:

-

Hazard label:

9



Special Provisions:

280 289

Limited quantity:

0

Excepted quantity:

E0

EmS:

F-B, S-X

Air transport (ICAO-TI/IATA-DGR)

UN number or ID number:

UN 3268

UN proper shipping name:

SAFETY DEVICES

Transport hazard class(es):

9

Packing group:

-

Hazard label:

9

Stat-X Condensed Aerosol Generators - Models 15 to 2500.

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Special Provisions:	A32 A115 A119	
Limited quantity Passenger:	Forbidden	
Passenger LQ:	Forbidden	
Excepted quantity:	E0	
IATA-packing instructions - Passenger:		961
IATA-max. quantity - Passenger:		25 kg
IATA-packing instructions - Cargo:		961
IATA-max. quantity - Cargo:		100 kg

Environmental hazards

ENVIRONMENTALLY HAZARDOUS: No

Special precautions for user

No information available.

Transport in bulk according to Annex II of MARPOL 73/78 and the IBC Code

not applicable

15. Regulatory information

U.S. Regulations

National Inventory TSCA

TSCA listed.

National regulatory information

RA Section 311/312 Hazards:

Potassium nitrate (7757-79-1): Fire hazard

Phenol-formaldehyde resin (9003-35-4): Immediate (acute) health hazard

State Regulations

Safe Drinking Water and Toxic Enforcement Act of 1986 (Proposition 65, State of California)

This product can not expose you to chemicals known to the State of California to cause cancer, birth defects or other reproductive harm.

16. Other information

Hazardous Materials Identification System (HMIS)

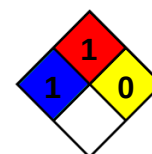
Health:	1
Flammability:	1
Physical Hazard:	0
Personal Protection:	B

NFPA Hazard Ratings

Health:	1
Flammability:	1
Reactivity:	0
Unique Hazard:	

Changes

Revision date:	08/22/2025
Revision No:	11
complete revision	



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Abbreviations and acronyms

CLP: Classification, labelling and Packaging
REACH: Registration, Evaluation and Authorization of Chemicals
GHS: Globally Harmonised System of Classification, Labelling and Packaging of Chemicals
UN: United Nations
CAS: Chemical Abstracts Service
DNEL: Derived No Effect Level
DMEL: Derived Minimal Effect Level
PNEC: Predicted No Effect Concentration
ATE: Acute toxicity estimate
LC50: Lethal concentration, 50%
LD50: Lethal dose, 50%
LL50: Lethal loading, 50%
EL50: Effect loading, 50%
EC50: Effective Concentration 50%
ErC50: Effective Concentration 50%, growth rate
NOEC: No Observed Effect Concentration
BCF: Bio-concentration factor
PBT: persistent, bioaccumulative, toxic
vPvB: very persistent, very bioaccumulative
ADR: Accord européen sur le transport des marchandises dangereuses par Route
(European Agreement concerning the International Carriage of Dangerous Goods by Road)
RID: Regulations concerning the international carriage of dangerous goods by rail
ADN: European Agreement concerning the International Carriage of Dangerous Goods by Inland Waterways
(Accord européen relatif au transport international des marchandises dangereuses par voies de navigation
intérieures)
IMDG: International Maritime Code for Dangerous Goods
EmS: Emergency Schedules
MFAG: Medical First Aid Guide
IATA: International Air Transport Association
ICAO: International Civil Aviation Organization
MARPOL: International Convention for the Prevention of Marine Pollution from Ships
IBC: Intermediate Bulk Container
SVHC: Substance of Very High Concern
For abbreviations and acronyms, see: ECHA Guidance on information requirements and chemical safety
assessment, chapter R.20 (Table of terms and abbreviations).

Other data

The information is based on the present level of our knowledge. It does not, however, give assurance of product properties and establishes no contract legal rights. The receiver of our product is singularly responsible for adhering to existing laws and regulations.