

- Item 1:** **Letter from Commissioner Sandra D. Kennedy, Arizona Public Service Company**, dated 2 August 2019  
ACC Docket number E-01345A-19-0076, 5 pages
- Item 2:** **Letter to Commissioner Kennedy**, dated 12 July 2019, re the prior incident at Flagstaff, Arizona, and containing the Fire Department report on the earlier 2012 BESS fire,  
Arizona Docket Number APS16091A, 20 pages

**COMMISSIONERS**  
ROBERT "BOB" BURNS, Chairman  
BOYD DUNN  
SANDRA D. KENNEDY  
JUSTIN OLSON  
LEA MÁRQUEZ PETERSON



**SANDRA D. KENNEDY**

1200 W. Washington  
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**ARIZONA CORPORATION COMMISSION**

August 2, 2019

RE: IN THE MATTER OF THE COMMISSION'S INQUIRY OF ARIZONA PUBLIC SERVICE BATTERY INCIDENT AT THE MCMICKEN ENERGY STORAGE FACILITY PURSUANT TO ARIZONA ADMINISTRATIVE CODE R14-2-101. (DOCKET NO. E-01345A-19-0076)

Dear Commissioners, Staff, and Interested Parties:

After reviewing the reports and pertinent Material Safety Data Sheets (MSDS) about the 2019 battery fire at the APS McMicken Energy Storage Facility in Surprise and the 2012 battery fire at the APS Elden Substation facility in Flagstaff, what has become apparent is that utility scale lithium ion batteries using the chemistries in those types of lithium ion batteries are not prudent and create unacceptable risks, particularly those with chemistries that include compounds that can release hydrogen fluoride in the event of a fire and/or explosion. Other utility scale battery technologies or those with chemistries that do not have an associated risk of a release of hydrogen fluoride should be utilized.

In the matter of the November 26, 2012 APS Elden Substation (Flagstaff) facility fire, the Root Cause Analysis also identifies a near miss in May 2012 when a battery cell was severely discharged and the cell was continuously charged against the intended design of the Lithium Ion Battery Energy Storage System. There were no changes to the facility's control logic to address the issues nor was an evaluation performed by ElectroVaya, the designer and installer of the system. The event was not communicated to APS staff.

Also, the investigation determined inadequate electrical circuit protection and issues with the design of the temperature sensors within the modules.

There was also a June 2012 event that started when the HVAC cooling system tripped and caused multiple cells to overheat.

Two severely discharged cells in less than a year is considered a high rate of failure. But according to the Material Safety Data Sheet (MSDS) for that lithium ion battery at the Elden Substation, failed cells are "anticipated," and there were supposed to be safeguards built in to prevent an incident such as the fire.

The report highlights a serious concern with these types of lithium ion battery systems:

"Charging a severely discharged cell (to a voltage below 2.7V) can result in internal cell breakdown and damage to the neighboring cell (thermally)."

“The testing of a healthy cell to a lowered voltage well below its recommended range resulted in irreversible damage to the cell internals. The separator film (20 micrometer thick) was compromised at many locations, and in a couple locations it had undergone through-wall penetration. In addition, the thermal degradation resulted in out gassing and created internal pressure that resulted in hair line separation of the molding case at its edges. This will allow the release of hot gases to the outside atmosphere this in turn potentially affecting the neighboring cell.”

These gases can include hydrogen fluoride/hydrofluoric acid, which the lithium hexafluorophosphate can decompose into during a fire. Hydrogen fluoride is extremely poisonous.

The November 26, 2012 APS Elden Substation (Flagstaff) facility fire Root Cause Analysis report also warns of the dangers of a thermal runaway aided by electrical faults.

The MSDS for the battery involved in the November 26, 2012 APS Elden Substation facility fire notes that water should not be used to suppress a fire at such a battery facility, yet that was the original fire suppression used in the November 26, 2012 event. Instead of using water, there are fire suppression systems that use chemicals to suffocate the fire. This strategy would not seem at all viable for a very large facility incident, however. The Flagstaff Fire Department Report for the 2012 APS Elden Substation facility fire incident underscores the special hazards involved with the type lithium ion batteries used at that facility. It references fires with 10-15' flame lengths that grew into “flame lengths of 50-75’,” with the fire “appearing to be fed by flammable liquids coming from the cabinets.” The Flagstaff Fire Department Report for the 2012 incident also states concerns about “a serious risk of a large-scale explosion” and “the cabinets involved are full of lithium batteries that are extremely volatile if they come into contact with water.”

Knowing now how easily a fire and/or explosion can evidently occur at these types of relatively small (2 MW) lithium ion battery facilities, it appears that a similar fire event at a very large lithium ion battery facility (250 MW+) would have very severe and potentially catastrophic consequences, and that responders would have a very difficult time trying to handle such an incident.

To appropriately plan for such a catastrophic event, the large-scale lithium ion battery facility using the same chemistries as the APS Elden Substation (Flagstaff) facility fire and the McMicken facility would need to be built in isolation far from everything else, because an explosion could potentially level buildings at some distance from the battery facility site. The energy stored at a 2 MW battery facility is equivalent to 1.72 tons of TNT. The energy stored at a 250 MW battery facility is equivalent to 215 tons of TNT. Also, large amounts of hydrogen fluoride could be released and dispersed that would affect and harm the public at a substantial distance downwind. There would be concerns also about lingering hydrogen fluoride contamination in the affected areas.

Those responding to such an incident would have to wear fire-retardant and non-conducted impermeable full body coveralls with hood, nitrile gloves, impermeable boots, and full-face tight-fitting air purifying respirators equipped with combination cartridges for acid gas and particulates.

If such an incident were to occur during the months of extremely hot and humid weather in Arizona, there would be additional challenges and burdens put upon responders.

All of this points to unacceptable hazards and risks presented by the current utility scale lithium ion battery systems using chemistries that could release hydrogen fluoride in the event of a fire or explosion. The July 8/15, 2019 edition of Engineering News-Record, in an article titled, "Fire at Arizona Energy Storage Battery Bank Draws Scrutiny," George W. Crabtree, director of Argonne National Laboratory's Joint Center for Energy Storage Research states, "If you get the temperature of the Li-ion battery above 150 degrees Centigrade, a reaction takes place between the cathode and the electrolyte that doesn't require any oxygen from the air to proceed, and that reaction releases heat. The heat that's released heats up the battery further, and that makes the reaction go faster, and it's what they call a 'thermal runaway'. That has been the major problem with Li-ion batteries. It's very well known."

The article goes on to mention safer technologies such as a liquid flow battery that are easy to scale up linearly in terms of capacity.

There are other utility scale battery technologies that are available that are far more sustainable and do not have these risks. There are also other lithium ion batteries that utilize chemistries that do not carry the same risks as those involved in the Eldon Substation and McMicken incidents.

For example, MIT Professor Sadoway has published results of his new battery technology, using liquid metal. The battery, based on electrodes made of sodium and nickel chloride and using a new type of metal mesh membrane, could be used for grid-scale installations to make intermittent power sources such as wind and solar capable of delivering reliable baseload electricity. This type of battery has advantages that include cheap, abundant raw materials, very safe operational characteristics, and an ability to go through many charge-discharge cycles without degradation.

Zinc Air Batteries are a low-cost solution. Regenerative zinc air flow batteries efficiently store energy in the form of zinc particles and contain none of the traditional high-cost battery commodities found in lithium, vanadium, or cobalt. Conventional batteries have a fixed energy/power ratio, but zinc air batteries use a fuel tank system with flexible energy/power ratios and scalability. The storage capacity is directly tied to the size of the fuel tank and the quantity of recharged zinc fuel, making scalability a major advantage of the flow battery system. Additionally, the ability to charge and discharge simultaneously, and at different maximum charge or discharge rates, are advantages of zinc air flow batteries. Other types of standard and flow batteries like lithium-ion are limited to a maximum charge and discharge by the total number of cells, as there is no separation of the charge and discharge components.

The Nickel-Iron battery is another option and it resembles a lead-acid wet cell battery. They have three attractive properties:



- 1- They are almost immortal - they can last hundreds of years if they are maintained properly. Batteries that Edison built and installed in his early electric cars still work fine after refurbishing.
- 2- They are as environmentally benign as any battery ever created - the principle liquid electrolyte is not an acid, it is an alkaline, potassium hydroxide.
- 3- Ni-Fe batteries can be completely discharged, or, highly overcharged and not be damaged.

Magnesium batteries are also another option. Compared to conventional lithium-ion batteries, a magnesium battery has many advantages: When using magnesium as an anode material, energy density is increased and safety is enhanced. Magnesium is not toxic and is a very abundant mineral that is readily available. Compared to lithium, magnesium availability on earth is higher by a factor of 3000.

There are also energy storage technologies that do not utilize batteries at all.

There is a rapid technological change underway in how electric power is generated and provided to customers, especially as energy storage comes into its own. As large-scale investments are made, it would be prudent and advisable to invest in utility scale energy storage systems that are sustainable, less risky, and do not utilize chemistries that have a potential to release hydrogen fluoride in the event of a fire or explosion. Fortunately, there are many options that would work.

Please respond with your future plans regarding the use of Lithium Ion Batteries.

Sincerely,



Arizona Public Service Company  
Docket No. E-01345A-19-0076  
Page 5

On this 2nd day of August, 2019, the foregoing document was filed with Docket Control as a Correspondence from Commissioner, and copies of the foregoing were mailed on behalf of Sandra D. Kennedy, Commissioner – A.C.C. to the following who have not consented to email service. On this date or as soon as possible thereafter, the Commission's eDocket program will automatically email a link to the foregoing to the following who have consented to email service.

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Arizona Public Service Company  
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Arizona Corporation Commission  
Director - Legal Division  
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Consented to Service by Email

B

Nanisha Ross  
Executive Assistant



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July 12, 2019

Arizona Corporation Commission

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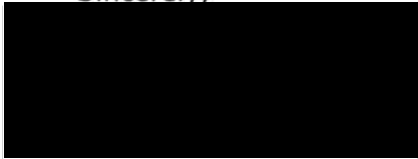
Commissioner Sandra D. Kennedy  
Arizona Corporation Commission  
1200 W. Washington Street  
Phoenix, AZ 85007

RE: In the Matter of the Commission's Inquiry of Arizona Public Service Battery Incident at the McMicken Energy Storage Facility Pursuant to Arizona Administrative Code R14-2-101  
Docket No. E-01345A-19-0076

Dear Commissioner Kennedy:

Pursuant to your May 1, 2019 request, Arizona Public Service Company (APS) filed the Flagstaff Fire Department Report for the 2012 event at the Eldin Substation on May 31, 2019. APS filed the report in our possession on May 31<sup>st</sup>, but we have since reached out to Flagstaff Fire Department to address a formatting issue. Attached to this letter as APS16091A is the new copy of the report from Flagstaff Fire Department.

Sincerely,



RR/eml  
Attachments

- c: Docket Control
- Chairman Robert Burns
- Commissioner Boyd Dunn
- Commissioner Justin Olson
- Commissioner Lea Márquez Peterson



<b>A</b>		MM DD YYYY	Delete <input type="checkbox"/>		NFIRS -1
03033 FDID *	AZ State *	11 26 Incident Date *	02 Station	12-0009424 Incident Number *	000 Exposure *
<b>B Location*</b>		<input type="checkbox"/> Check this box to indicate that the address for this incident is provided on the Wildland Fire Module in Section B "Alternative Location Specification". Use only for Wildland fires.			
<input type="checkbox"/> Street address <input checked="" type="checkbox"/> Intersection <input type="checkbox"/> In front of <input type="checkbox"/> Rear of <input type="checkbox"/> Adjacent to <input type="checkbox"/> Directions		Census Tract _____ - _____ Number/Milepost Prefix Street or Highway E CEDAR AVE APT./SUITE/ROOM City State Zip Code FLAGSTAFF AZ 86001 N GEMINI DR Cross street or directions, as applicable			
<b>C Incident Type *</b>		<b>E1 Date &amp; Times</b>		<b>E2 Shift &amp; Alarms</b>	
162 Outside equipment fire Incident Type		Midnight is 0000 Check boxes if dates are the same as Alarm Date. ALARM always required Alarm * 11 26 2012 17:23:28 ARRIVAL required, unless canceled or did not arrive <input checked="" type="checkbox"/> Arrival * 11 26 2012 17:28:29 CONTROLLED Optional, except for wildland fires <input type="checkbox"/> Controlled LAST UNIT CLEARED, required except for wildland fires <input checked="" type="checkbox"/> Last Unit Cleared 11 26 2012 19:18:12		Local Option C 01 02 Shift or Alarms District Platoon	
<b>D Aid Given or Received*</b>		<b>G1 Resources *</b>		<b>G2 Estimated Dollar Losses &amp; Values</b>	
1 <input type="checkbox"/> Mutual aid received 2 <input type="checkbox"/> Automatic aid recv. 3 <input type="checkbox"/> Mutual aid given 4 <input type="checkbox"/> Automatic aid given 5 <input type="checkbox"/> Other aid given N <input checked="" type="checkbox"/> None		<input checked="" type="checkbox"/> Check this box and skip this section if an Apparatus or Personnel form is used. Apparatus Personnel Suppression _____ 0004 EMS _____ Other 0007 0013 <input type="checkbox"/> Check box if resource counts include aid received resources.		LOSSES: Required for all fires if known. Optional for non fires. None Property \$ 001, 700, 000 Contents \$ _____, 000, 000 PRE-INCIDENT VALUE: Optional Property \$ 001, 700, 000 Contents \$ _____, 000, 000	
<b>F Actions Taken *</b>		<b>H1* Casualties</b>		<b>H3 Hazardous Materials Release</b>	
11 Extinguishment by fire Primary Action Taken (1) 75 Provide equipment Additional Action Taken (2) _____ Additional Action Taken (3)		None Deaths Injuries Fire Service _____ 001 Civilian _____ <b>H2 Detector</b> Required for Confined Fires. 1 <input type="checkbox"/> Detector alerted occupants 2 <input type="checkbox"/> Detector did not alert them U <input type="checkbox"/> Unknown		N <input type="checkbox"/> None 1 <input type="checkbox"/> Natural Gas: slow leak, no evacuation or HazMat actions 2 <input type="checkbox"/> Propane gas: <21 lb. tank (as in home BBQ grill) 3 <input type="checkbox"/> Gasoline: vehicle fuel tank or portable container 4 <input type="checkbox"/> Kerosene: fuel burning equipment or portable storage 5 <input type="checkbox"/> Diesel fuel/fuel oil: vehicle fuel tank or portable 6 <input type="checkbox"/> Household solvents: home/office spill, cleanup only 7 <input type="checkbox"/> Motor oil: from engine or portable container 8 <input type="checkbox"/> Paint: from paint cans totaling < 55 gallons 0 <input type="checkbox"/> Other: Special HazMat actions required or spill > 55gal., Please complete the HazMat form	
<b>Completed Modules</b>		<b>I Mixed Use Property</b>		<b>J Property Use*</b>	
<input checked="" type="checkbox"/> Fire-2 <input type="checkbox"/> Structure-3 <input type="checkbox"/> Civil Fire Cas.-4 <input checked="" type="checkbox"/> Fire Serv. Cas.-5 <input checked="" type="checkbox"/> EMS-6 <input checked="" type="checkbox"/> HazMat-7 <input type="checkbox"/> Wildland Fire-8 <input checked="" type="checkbox"/> Apparatus-9 <input checked="" type="checkbox"/> Personnel-10 <input checked="" type="checkbox"/> Arson-11		NN <input type="checkbox"/> Not Mixed 10 <input type="checkbox"/> Assembly use 20 <input type="checkbox"/> Education use 33 <input type="checkbox"/> Medical use 40 <input type="checkbox"/> Residential use 51 <input type="checkbox"/> Row of stores 53 <input type="checkbox"/> Enclosed mall 58 <input type="checkbox"/> Bus. & Residential 59 <input type="checkbox"/> Office use 60 <input checked="" type="checkbox"/> Industrial use 63 <input type="checkbox"/> Military use 65 <input type="checkbox"/> Farm use 00 <input type="checkbox"/> Other mixed use		Structures 131 <input type="checkbox"/> Church, place of worship 161 <input type="checkbox"/> Restaurant or cafeteria 162 <input type="checkbox"/> Bar/Tavern or nightclub 213 <input type="checkbox"/> Elementary school or kindergarten 215 <input type="checkbox"/> High school or junior high 241 <input type="checkbox"/> College, adult education 311 <input type="checkbox"/> Care facility for the aged 331 <input type="checkbox"/> Hospital Outside 124 <input type="checkbox"/> Playground or park 655 <input type="checkbox"/> Crops or orchard 669 <input type="checkbox"/> Forest (timberland) 807 <input type="checkbox"/> Outdoor storage area 919 <input type="checkbox"/> Dump or sanitary landfill 931 <input type="checkbox"/> Open land or field	
		341 <input type="checkbox"/> Clinic, clinic type infirmary 342 <input type="checkbox"/> Doctor/dentist office 361 <input type="checkbox"/> Prison or jail, not juvenile 419 <input type="checkbox"/> 1-or 2-family dwelling 429 <input type="checkbox"/> Multi-family dwelling 439 <input type="checkbox"/> Rooming/boarding house 449 <input type="checkbox"/> Commercial hotel or motel 459 <input type="checkbox"/> Residential, board and care 464 <input type="checkbox"/> Dormitory/barracks 519 <input type="checkbox"/> Food and beverage sales 936 <input type="checkbox"/> Vacant lot 938 <input type="checkbox"/> Graded/care for plot of land 946 <input type="checkbox"/> Lake, river, stream 951 <input type="checkbox"/> Railroad right of way 960 <input type="checkbox"/> Other street 961 <input type="checkbox"/> Highway/divided highway 962 <input type="checkbox"/> Residential street/driveway		539 <input type="checkbox"/> Household goods, sales, repairs 579 <input type="checkbox"/> Motor vehicle/boat sales/repair 571 <input type="checkbox"/> Gas or service station 599 <input type="checkbox"/> Business office 615 <input type="checkbox"/> Electric generating plant 629 <input type="checkbox"/> Laboratory/science lab 700 <input type="checkbox"/> Manufacturing plant 819 <input type="checkbox"/> Livestock/poultry storage (barn) 882 <input type="checkbox"/> Non-residential parking garage 891 <input type="checkbox"/> Warehouse 981 <input type="checkbox"/> Construction site 984 <input type="checkbox"/> Industrial plant yard Lookup and enter a Property Use code only if you have NOT checked a Property Use box: Property Use 642 Electrical distribution	

**K1 Person/Entity Involved**

Local Option

Business name (if applicable)

Area Code

Phone Number

Check This Box if same address as incident location. Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State Zip Code

More people involved? Check this box and attach Supplemental Forms (NFIRS-1S) as necessary

**K2 Owner**

Same as person involved? Then check this box and skip The rest of this section.

Local Option

Business name (if Applicable)

Area Code

Phone Number

Check this box if same address as incident location. Then skip the three duplicate address lines.

Mr., Ms., Mrs. First Name MI Last Name Suffix

Number Prefix Street or Highway Street Type Suffix

Post Office Box Apt./Suite/Room City

State Zip Code

**L Remarks**

Local Option

20121126172253USFIRE POSS AT ELECTRICAL YARD20121126172253USUNK FOR SURE ITS COMING FROM THERE20121126172253USFLAMES AND SMOKE VISIBLE20121126172255US\*\* LOI search completed at 11/26/12 17:22:5520121126172307USVISIBLE FROM CEDAR20121126172328US\*\* Recommended unit FQ2 for requirement TYPE 1R - PRIMARY (2.0 mi)20121126172328US\*\* Recommended unit FR2 for requirement RESCUE - PRIMARY (1.5 mi)20121126172328US\*\* Recommended unit FE5 for requirement TYPE 1 - BACKUP (2.4 mi)20121126172328US\*\* Recommended unit FE4 for requirement TYPE 1 - BACKUP (3.1 mi)20121126172328US\*\* Recommended unit FE1 for requirement TYPE 1 - BACKUP (3.7 mi)20121126172328US\*\* Recommended unit FB1 for requirement BATTALION - PRIMARY (2.0 mi)20121126172332USTONE OUT20121126172419USEAST OF CEDAR/FOREST AVE AREA20121126172754USNEAR MECHANICAL YARD20121126172808USPOSS BLDG ON FIRE IN THE ELECTRICAL YARD20121126172812USCALLERS REPORTING BUILDING AT ELECTRICAL YARD20121126172900USLARGE ELECTRICAL BC BACK UP IC CEDAR EAST SIDE OF STRUCTURE20121126172905USADV APS20121126173003USHEAVY BLK SMOKE20121126173028USHIGH FLAMEAS20121126173033USBC BACK REQ SENT20121126173040USTRANSFORMER ON FIRE20121126173102USCHIEF 3 ASSUMING BC BACK UP20121126173135USAPS ADV ETA 3020121126173228USTRANSFORMER IS ARCING20121126173436USAPS ADV MULTIPLE TRANSFORMERS MAIN TRANSFORMER FULLY INVOLVED20121126173645USNO OUTSTANDING SUSPS20121126173709USIC RELEASED FE1 AND FE4 TO COVER CITY

B-1 enroute to a report of a fire possibly involving electrical equipment in an enclosed yard at the top of Cedar hill. Enroute per dispatch there are multiple reports of active fire noted. B-1 on scene with a working electrical fire inside the Elden Substation involving some type of transformer/switching cabinet pushing 10-15' flame lengths on the

**L Authorization**

0613 Wilson, Mark R BC FB1 11 26 2012  
 Officer in charge ID Signature Position or rank Assignment Month Day Year

0613 Wilson, Mark R BC FB1 11 26 2012  
 Check Box if same as Officer in charge. Member making report ID Signature Position or rank Assignment Month Day Year

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Narrative

FDID \*

State \*

Incident Date \*

Station

Incident Number \*

Exposure \*

**Narrative:**

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B-1 enroute to a report of a fire possibly involving electrical equipment in an enclosed yard at the top of Cedar hill. Enroute per dispatch there are multiple reports of active fire noted. B-1 on scene with a working electrical fire inside the Elden Substation involving some type of transformer/switching cabinet pushing 10-15' flame lengths on the Eastern side of the cabinets. B-1 assumed IC (Cedar IC) on the Alpha side of the facility. B.C. backup requested to cover the city (covered by Chief 2). Dispatch advised to contact APS and notify them of a working fire inside their Elden Substation. Per dispatch APS has an ETA of 35 mins.

R-2 on scene along with E-5. R-2 sent to the Bravo side to check for extension into the surrounding forested area and for a 360 of the facility. E-5 assigned to take a line to the Bravo side to ensure the fire does not extend into the forested area, but told not to flow water anywhere within 50-75' of the fence housing the electrical substation. Q-2 staged near ICP for equipment and personnel. E-4 staged on a hydrant, and E-1 staged South.

FPD assigned to keep on-lookers out of the smoke column near the street due to it being hazardous. Per R-2 there is a 704 diamond on the gate showing a 232 no Water. Understanding is that there are specialized batteries (presumed to be inside a brown structure inside the substation) on sight that would cause this 704 placard ing.

Fire continued to grow as the arching increased and fire appeared to be fed by flammable liquids coming from the cabinets, with flame lengths 50-75'. E-1 (FF Sanders assigned to E-5) and E-4 released to the city due to increased call volume and nothing FFD is able to do until APS is on scene to identify source and secure power.

APS on scene (Sam Auzwald) and met up with R-2 personnel and advised he would go in and secure the power. APS member made access into the gate and drove his vehicle inside the substation area then walked to the Eastern side of the fire cabinets to secure power. R-2 sent in with a dry line and full PPE (on air) as a back up team for the APS member and

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advised if there is a problem to extricate the APS member without using water due to everything being energized. E-5 assigned to RIC duties at the gate entrance while APS liaison and R-2 were interior. Per APS they have the power secured and we are clear to put the fire out and cool the cabinets down for further damage assessment. APS E-5 assigned to make interior with R-2 (both crews in full PPE on air) and assist with fire control. Both E-5 crew (Winiecki, Callan, Sanders) and R-2 crew (Callander, Thomas) worked on the cabinet area to control the fire and begin cooling the equipment down so APS could assess the damage. B-2 (Chief 2) on scene, and two additional APS members (Bryan Dellinger, Shane Hrober) arrived on scene and made their way interior into the substation.

Pump 5 down to 1/4 of a tank and Q-2 assigned to supply E-5 and assume RIC functions at the gate. Per R-2 equipment is still very hot and he thinks they will need additional water beside Q-2's tank. WT-4 called for to come to the scene. Fire is visibly now out and some hot metal still visibly glowing.

APS Elden substation tech (Kenny Burdall) on scene and faced to face with IC asking why our membership is inside the substation and that they are at a location that is extremely dangerous with a serious risk of a large scale explosion. K. Burdall was advised S. Auzwald had secured power to the location being worked on and that we were given the go ahead from him to put the fire out and cool the cabinets down for damage assessment. Per K. Burdall the cabinets involved are full of lithium batteries that are extremely volatile if they come in contact with water.

B-1 immediately ordered all members of FFD, and APS out of the substation and called for a face to face at ICP to sort out the conflict of information being given by APS liaison members on scene. B-1 advised APS that we are here to simply support their needs and want to be clear on the plan of action since there are conflicting thoughts being given to IC. Updated information from the K. Burdall regarding the type of cabinet and internal lithium batteries crystallized the need to keep all FFD and APS members out of the area until morning due to the volatility of the equipment and situation as a result of the fire.

Chief 1 on scene and briefed of the situation. All units and equipment pulled from the scene without re-entering the substation.

While pulling equipment IC was advised by R-2 that a member off of E-5 (P. Sanders) was complaining of burning on the L side of his face and L eye after removing his SCBA mask near the truck. GMT called to the scene Alpha and Sanders treated by CEP Wiles from FFD on the scene. GMT arrived and transported injured FFD member to FMC for further follow up treatment. All units and equipment removed to 1000' from the substation and APS advised they will stay on sight until morning. All units released and B-1 avail enroute to FMC to check on Sanders condition.

M. Wilson



<b>A</b>		MM DD YYYY 11 26 2012	Station 02	Incident Number 12-0009424	Exposure 000	<input type="checkbox"/> Delete <input checked="" type="checkbox"/> Change <input type="checkbox"/> No Activity	NFIRS -2 Fire
FDID * 03033		State * AZ	Incident Date *	Station	Incident Number *	Exposure *	
<b>B Property Details</b>			<b>C On-Site Materials</b> <input type="checkbox"/> None <small>Complete if there were any significant amounts of commercial, industrial, energy or agricultural products or materials on the Property, whether or not they became involved</small>				
<b>B1</b> <input checked="" type="checkbox"/> Not Residential <small>Estimated Number of residential living units in building of origin whether or not all units became involved</small> [ ]			Enter up to three codes. Check one or more boxes for each code entered. <b>510</b> <b>Flammables,</b> <small>On-site material (1)</small>				
<b>B2</b> <input checked="" type="checkbox"/> Buildings not involved <small>Number of buildings involved</small> [ ]			[ ] [ ] <small>On-site material (2)</small>				
<b>B3</b> <input type="checkbox"/> None <small>Acres burned (outside fires)</small> <input type="checkbox"/> Less than one acre			[ ] [ ] <small>On-site material (3)</small>				
<b>D Ignition</b>			<b>E1 Cause of Ignition</b>			<b>E3 Human Factors Contributing To Ignition</b>	
<b>D1</b> 63 Switchgear area, <small>Area of fire origin *</small>			<input type="checkbox"/> Check box if this is an exposure report. Skip to section G			Check all applicable boxes	
<b>D2</b> 13 Electrical arcing <small>Heat source *</small>			1 <input type="checkbox"/> Intentional 2 <input type="checkbox"/> Unintentional 3 <input type="checkbox"/> Failure of equipment or heat source 4 <input type="checkbox"/> Act of nature 5 <input checked="" type="checkbox"/> Cause under investigation U <input type="checkbox"/> Cause undetermined after investigation			1 <input type="checkbox"/> Asleep <input checked="" type="checkbox"/> None 2 <input type="checkbox"/> Possibly impaired by alcohol or drugs 3 <input type="checkbox"/> Unattended person 4 <input type="checkbox"/> Possibly mental disabled 5 <input type="checkbox"/> Physically Disabled 6 <input type="checkbox"/> Multiple persons involved	
<b>D3</b> UU Undetermined <small>Item first ignited *</small> 1 <input type="checkbox"/> Check Box if fire spread was confined to object of origin			<b>E2 Factors Contributing To Ignition</b>			7 <input type="checkbox"/> Age was a factor <small>Estimated age of person involved</small> [ ]	
<b>D4</b> [ ] [ ] <small>Type of material first ignited</small> <small>Required only if item first ignited code is 00 or &lt;70</small>			NN None <input checked="" type="checkbox"/> <small>Factor Contributing To Ignition (1)</small>			1 <input type="checkbox"/> Male 2 <input type="checkbox"/> Female	
<b>F1 Equipment Involved In Ignition</b>			<b>F2 Equipment Power</b>		<b>G Fire Suppression Factors</b>		
<input type="checkbox"/> None if Equipment was not involved, Skip to Section G Equipment Involved [ ]			[ ] [ ] <small>Equipment Power Source</small>		Enter up to three codes. <input type="checkbox"/> None		
Brand [ ] Model [ ] Serial # [ ] Year [ ]			<b>F3 Equipment Portability</b> 1 <input type="checkbox"/> Portable 2 <input type="checkbox"/> Stationary <small>Portable equipment normally can be moved by one person, is designed to be use in multiple locations, and requires no tools to install.</small>		[ ] [ ] <small>Fire suppression factor (1)</small> [ ] [ ] <small>Fire suppression factor (2)</small> [ ] [ ] <small>Fire suppression factor (3)</small>		
<b>H1 Mobile Property Involved</b>			<b>H2 Mobile Property Type &amp; Make</b>			<b>Local Use</b>	
<input type="checkbox"/> None 1 <input type="checkbox"/> Not involved in ignition, but burned 2 <input type="checkbox"/> Involved in ignition, but did not burn 3 <input type="checkbox"/> Involved in ignition and burned			[ ] [ ] <small>Mobile property type</small> [ ] [ ] <small>Mobile property make</small>			<input type="checkbox"/> Pre-Fire Plan Available <small>Some of the information presented in this report may be based upon reports from other Agencies</small> <input type="checkbox"/> Arson report attached <input type="checkbox"/> Police report attached <input type="checkbox"/> Coroner report attached <input type="checkbox"/> Other reports attached	
[ ] [ ] <small>Mobile property model</small> <small>Year</small>			[ ] [ ] [ ] [ ] <small>License Plate Number</small> <small>State</small> <small>VIN Number</small>				



<b>A</b> FDID <u>03033</u> * State <u>AZ</u> * Incident Date <u>11</u> <u>26</u> <u>2012</u> Station <u>02</u> Incident Number <u>12-0009424</u> * Exposure <u>000</u> * <input type="checkbox"/> Delete <input checked="" type="checkbox"/> Change NFIRS - 5 Fire Service Casualty									
<b>B Injured Person</b> Identification Number <u>Paul</u> <u>Sanders</u> <small>First Name MI Last Name Suffix</small>							<b>C Casualty * Number</b> <u>1</u> <small>Casualty Number</small>		
<b>D Age or Date of Birth *</b> Age <u>24</u> <b>OR</b> Date Of Birth <u>  </u> <u>  </u> <u>  </u> <small>In years Month Day Year</small>				<b>E Date &amp; Time of Injury</b> <small>Midnight is 0000</small> Date of Injury <u>11</u> <u>26</u> <u>2012</u> Time of Injury <u>19:00:00</u> <small>Month Day Year Hour Minutes</small>			<b>F Responses</b> <u>0</u> <small>Number of prior responses during past 24 hours</small>		
<b>G1 Usual Assignment</b> 1 <input type="checkbox"/> Suppression 2 <input type="checkbox"/> EMS 3 <input type="checkbox"/> Prevention 4 <input type="checkbox"/> Training 5 <input type="checkbox"/> Maintenance 6 <input type="checkbox"/> Communications 7 <input type="checkbox"/> Administration 8 <input type="checkbox"/> Fire investigation 0 <input type="checkbox"/> Other		<b>G2 Physical Condition Just Prior To Injury</b> 1 <input type="checkbox"/> Rested      0 <input type="checkbox"/> Other 2 <input type="checkbox"/> Fatigued    U <input type="checkbox"/> Undetermined 4 <input type="checkbox"/> ILL or Injured			<b>G4 Taken To</b> 1 <input type="checkbox"/> Hospital 4 <input type="checkbox"/> Doctor's office 5 <input type="checkbox"/> Morgue/funeral home 6 <input type="checkbox"/> Residence 7 <input type="checkbox"/> Station or quarters 0 <input type="checkbox"/> Other N <input type="checkbox"/> Not transported				
<b>G3 Severity</b> 1 <input type="checkbox"/> Report only, including exposure 2 <input type="checkbox"/> First aid only 3 <input checked="" type="checkbox"/> Treated by physician (no lost time) 4 <input type="checkbox"/> Moderate (lost time) 5 <input type="checkbox"/> Severe (lost time) 6 <input type="checkbox"/> Life threatening (lost time) 7 <input type="checkbox"/> Death		<b>G5 Activity at Time of Injury</b> <u>  </u> <u>  </u> <small>Activity at time of injury</small>							
<b>H1 Primary Apparent Symptom</b> <u>14</u> <u>Burn: chemical</u> <small>Primary apparent symptom</small>			<b>I1 Cause of Firefighter Injury</b> <u>4</u> <u>Exposure to hazard</u> <small>Cause of Injury</small>			<b>I3 Object Involved in Injury</b> <input type="checkbox"/> None			
<b>H2 Primary Area of Body Injured</b> <u>12</u> <u>Eye</u> <small>Primary injured body part or area</small>			<b>I2 Factor Contributing to Injury</b> <u>  </u> <u>  </u> <small>Contributing Factor</small>			<u>00</u> <u>Object</u> <small>Object involved in injury</small>			
<b>J1 Where Injury Occurred</b> 1 <input type="checkbox"/> Enroute to FD Location 2 <input type="checkbox"/> At FD location 3 <input type="checkbox"/> Enroute to incident scene 4 <input type="checkbox"/> Enroute to medical facility 5 <input type="checkbox"/> At scene in structure 6 <input checked="" type="checkbox"/> At scene outside 7 <input type="checkbox"/> At medical facility 8 <input type="checkbox"/> Returning from incident 9 <input type="checkbox"/> Returning from med facility 0 <input type="checkbox"/> Other		<b>J3 Specific Location</b> <small>Complete as Applicable</small> 65 <input type="checkbox"/> In aircraft 64 <input type="checkbox"/> In boat or ship or barge 63 <input type="checkbox"/> In rail vehicle 61 <input type="checkbox"/> In motor vehicle 54 <input type="checkbox"/> In sewer 53 <input type="checkbox"/> In tunnel 49 <input type="checkbox"/> In structure 45 <input type="checkbox"/> In attic 36 <input type="checkbox"/> In water 35 <input type="checkbox"/> In well 34 <input type="checkbox"/> In ravine 33 <input type="checkbox"/> In quarry or mine 32 <input type="checkbox"/> In ditch or trench 31 <input type="checkbox"/> In open pit 28 <input type="checkbox"/> On steep grade 27 <input type="checkbox"/> On fire escape/outside stairs 26 <input type="checkbox"/> On vertical surface or ledge 25 <input type="checkbox"/> On ground ladder 24 <input type="checkbox"/> On aerial ladder or in basket 23 <input type="checkbox"/> On roof 22 <input type="checkbox"/> Outside at grade 00 <input type="checkbox"/> Other			<b>J4 Vehicle Type</b> <small>Complete ONLY if Specific Location code is &gt;60</small> 1 <input type="checkbox"/> Suppression vehicle 2 <input type="checkbox"/> EMS vehicle 3 <input type="checkbox"/> Other FD vehicle 4 <input type="checkbox"/> Non-FD vehicle				
<b>J2 Story Where Injury Occurred</b> Check this box and enter the story if the injury occurred inside or on a structure <input type="checkbox"/> <u>  </u> <input type="checkbox"/> Below grade <small>Story of Injury</small> 2 <input checked="" type="checkbox"/> Injury occurred outside		<b>Remarks</b> The IC had called everyone on scene to the ICP for a briefing. While at the ICP FF Sanders removed his SCBA mask while still wearing his SFPC gloves. Immediately upon removing his mask FF Sanders said he felt a severe burning in his left eye and on the left side of his face. After leaving the briefing I noticed FF Sanders was suffering from some discomfort. When I asked him what was wrong he told me about the burning sensation in the eye and on his face. I immediately took FF Sanders to Q2 crew on scene If protective equipment failed and was a factor in this injury, please complete the other side of this form.							

NFIRS-5 Revision 8/18/99



<b>A</b>		MM DD YYYY									NFIRS - 7 HazMat		
FDID *	State *	Incident Date *	Station	Incident Number *	Exposure *	Haz No *	<input type="checkbox"/> Delete	<input checked="" type="checkbox"/> Change					
03033	AZ	11 26 2012	02	12-0009424	000	1							
<b>B HazMat ID</b>			UN Number			DOT Hazard Classification			CAS Registration Number			Chemical * Name	
3480 91												Lithium Ion Polymer Cell	
<b>C1 Container Type</b>		<b>C2 Estimated Container Capacity</b>			<b>D1 Estimated Amount Released</b>			<b>E1 Physical State When Released</b>					
24 Container Type		Capacity: by volume or weight			Amount released: by volume or weight			1 <input type="checkbox"/> Solid 2 <input type="checkbox"/> Liquid 3 <input type="checkbox"/> Gas U <input type="checkbox"/> Undetermined					
More hazardous Materials? Use additional sheets.		<b>C3 Units: Capacity</b>			<b>D2 Units: Released</b>			<b>E2 Released Into</b>					
		Check one box VOLUME WEIGHT 11 <input type="checkbox"/> Ounces 21 <input type="checkbox"/> Ounces 12 <input type="checkbox"/> Gallons 22 <input type="checkbox"/> Pounds 13 <input type="checkbox"/> Barrels: 42 gal. 23 <input type="checkbox"/> Grams 14 <input type="checkbox"/> Liters 24 <input type="checkbox"/> Kilograms 15 <input type="checkbox"/> Cubic feet 16 <input type="checkbox"/> Cubic meters			Check one box VOLUME WEIGHT 11 <input type="checkbox"/> Ounces 21 <input type="checkbox"/> Ounces 12 <input checked="" type="checkbox"/> Gallons 22 <input type="checkbox"/> Pounds 13 <input type="checkbox"/> Barrels: 42 gal. 23 <input type="checkbox"/> Grams 14 <input type="checkbox"/> Liters 24 <input type="checkbox"/> Kilograms 15 <input type="checkbox"/> Cubic feet 16 <input type="checkbox"/> Cubic meters								
Complete the remainder of this form only for the first hazardous material involved in this incident.		<b>F2 Population Density</b>			<b>G2 Area Evacuated</b>			<b>H HazMat Actions Taken</b>					
		1 <input type="checkbox"/> Urban 2 <input type="checkbox"/> Suburban 3 <input type="checkbox"/> Rural			<input checked="" type="checkbox"/> None 1 <input checked="" type="checkbox"/> Square Feet 2 <input type="checkbox"/> Blocks 3 <input type="checkbox"/> Square miles			Enter up to three actions taken Primary Action Taken (1) Additional Action Taken (2) Additional Action Taken (3)					
<b>F1 Released From:</b>		<b>G1 Area Affected</b>			<b>G3 Estimated Number of People Evacuated</b>			<b>I If fire or explosion is involved with a release, which occurred first?</b>					
Check all applicable boxes <input type="checkbox"/> Below grade 1 <input checked="" type="checkbox"/> Inside/on structure 2 <input type="checkbox"/> Outside of structure		1 <input type="checkbox"/> Square Feet 2 <input type="checkbox"/> Blocks 3 <input type="checkbox"/> Square miles			Enter Measurement <input type="checkbox"/> None								
<b>J Cause Of Release *</b>		<b>K Factors Contributing to Release</b>			<b>L Factors Affecting Mitigation</b>								
1 <input type="checkbox"/> Intentional 2 <input type="checkbox"/> Unintentional release 3 <input checked="" type="checkbox"/> Container/containment failure 4 <input type="checkbox"/> Act of nature 5 <input type="checkbox"/> Cause under investigation U <input type="checkbox"/> Cause undetermined after investigation		Enter up to three contributing factors UU Undetermined Factor Contributing To Release (1) Factor Contributing To Release (2) Factor Contributing To Release (3)			Enter up to three factors or impediments that affected the mitigation of the incident Factor or impediment (1) Factor or impediment (2) Factor or impediment (3)								
<b>M Equipment Involved In Release</b>			<b>N Mobile Property Involved In Release</b>			<b>O HazMat Disposition*</b>							
<input type="checkbox"/> None Equipment involved in release Brand Model Serial Number Year			<input type="checkbox"/> None Mobile property type Mobile property make Mobile property model Year License Plate Number State DOT Number/ ICC Number			1 <input type="checkbox"/> Completed by fire service only 2 <input type="checkbox"/> Completed w/ fire service present 3 <input type="checkbox"/> Released to local agency 4 <input type="checkbox"/> Released to county agency 5 <input type="checkbox"/> Released to state agency 6 <input type="checkbox"/> Released to federal agency 7 <input type="checkbox"/> Released to a private agency 8 <input checked="" type="checkbox"/> Released to property owner or manager							
						<b>O HazMat Civilian Casualties</b>							
						Deaths Injuries <input type="checkbox"/> <input type="checkbox"/>							

03033

FDID \*

AZ

State \*

11

26

Incident Date \*

2012

02

Station

12-0009424

Incident Number \*

0

Exposure \*

Hazmat  
Narrative

**Hazardous Materials Narrative:**

Lithium Ion Polymer Cells were on fire in an APS substation. We were originally unaware of the product burning. MSDS on file was a different chemical. Chemical was Lithium Aluminum Hydroxide. APS gave us a copy of the MSDS from manufacture the next morning (11/27/12)

Callander-HMT-Tech

**A** FDID \* 03033 State \* AZ Incident Date \* MM 11 DD 26 YYYY 2012 Station 02 Incident Number \* 12-0009424 Exposure \* 000  Delete  Change **NFIRS - 9 Apparatus or Resources**

B Apparatus or * Resource	Date and Times					Sent <input checked="" type="checkbox"/>	Number of * People	Use <small>Check ONE box for each apparatus to indicate its main use at the incident.</small>	Actions Taken	
	<small>Check if same as alarm date</small>									
	Month	Day	Year	Hour	Min					
1 ID <u>FB1</u> Type <u>92</u>	Dispatch <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:23</u>	<input checked="" type="checkbox"/>	<u>1</u>	<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:28</u>			<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>19:15</u>			<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
2 ID <u>FE1</u> Type <u>11</u>	Dispatch <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:23</u>	<input checked="" type="checkbox"/>	<u>4</u>	<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:30</u>			<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:42</u>			<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
3 ID <u>FE4</u> Type <u>11</u>	Dispatch <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:23</u>	<input checked="" type="checkbox"/>	<u>2</u>	<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:31</u>			<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:44</u>			<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
4 ID <u>FE5</u> Type <u>11</u>	Dispatch <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:23</u>	<input checked="" type="checkbox"/>	<u>3</u>	<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:28</u>			<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>19:03</u>			<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
5 ID <u>FQ2</u> Type <u>13</u>	Dispatch <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:23</u>	<input checked="" type="checkbox"/>	<u>4</u>	<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:30</u>			<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>19:15</u>			<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
6 ID <u>FR2</u> Type <u>71</u>	Dispatch <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:23</u>	<input checked="" type="checkbox"/>	<u>2</u>	<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>17:39</u>			<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>19:18</u>			<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
7 ID <u>FWT4</u> Type <u>24</u>	Dispatch <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>18:20</u>	<input checked="" type="checkbox"/>	<u>1</u>	<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input type="checkbox"/>							<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input checked="" type="checkbox"/>	<u>11</u>	<u>26</u>	<u>2012</u>	<u>18:45</u>			<input checked="" type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
8 ID <u>    </u> Type <u>    </u>	Dispatch <input type="checkbox"/>					<input type="checkbox"/>		<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input type="checkbox"/>							<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input type="checkbox"/>							<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>
9 ID <u>    </u> Type <u>    </u>	Dispatch <input type="checkbox"/>					<input type="checkbox"/>		<input type="checkbox"/> Suppression	<input type="checkbox"/>	<input type="checkbox"/>
	Arrival <input type="checkbox"/>							<input type="checkbox"/> EMS	<input type="checkbox"/>	<input type="checkbox"/>
	Clear <input type="checkbox"/>							<input type="checkbox"/> Other	<input type="checkbox"/>	<input type="checkbox"/>

**Type of Apparatus or Resources**

**Ground Fire Suppression**

- 11 Engine
- 12 Truck or aerial
- 13 Quint
- 14 Tanker & pumper combination
- 16 Brush truck
- 17 ARF (Aircraft Rescue and Firefighting)
- 10 Ground fire suppression, other

**Heavy Ground Equipment**

- 21 Dozer or plow
- 22 Tractor
- 24 Tanker or tender
- 20 Heavy equipment, other

**Aircraft**

- 41 Aircraft: fixed wing tanker
- 42 Helitanker
- 43 Helicopter
- 40 Aircraft, other

**Marine Equipment**

- 51 Fire boat with pump
- 52 Boat, no pump
- 50 Marine apparatus, other

**Support Equipment**

- 61 Breathing apparatus support
- 62 Light and air unit
- 60 Support apparatus, other

**Medical & Rescue**

- 71 Rescue unit
- 72 Urban Search & rescue unit
- 73 High angle rescue unit
- 75 BLS unit
- 76 ALS unit
- 70 Medical and rescue unit, other

More Apparatus?  
Use Additional  
Sheets

**Other**

- 91 Mobile command post
- 92 Chief officer car
- 93 HazMat unit
- 94 Type 1 hand crew
- 95 Type 2 hand crew
- 99 Privately owned vehicle
- 00 Other apparatus/resource
- NN None
- UU Undetermined



<b>A</b>	FDID * <u>03033</u>	State * <u>AZ</u>	MM <u>11</u> DD <u>26</u> YYYY <u>2012</u>	Station <u>02</u>	Incident Number * <u>12-0009424</u>	Exposure * <u>000</u>	<input type="checkbox"/> Delete	<b>NFIRS - 10 Personnel</b>
<b>B Apparatus or Resource</b> <small>Use codes listed below</small>		<b>Date and Times</b> <small>Check if same as alarm date</small>			<b>Sent</b> <input checked="" type="checkbox"/>	<b>Number of People</b> <u>1</u>	<b>Use</b> <small>Check ONE box for each apparatus to indicate its main use at the incident.</small>	<b>Actions Taken</b> <small>List up to 4 actions for each apparatus and each personnel.</small>
<u>1</u>	ID <u>FE1</u>	Dispatch <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:23</u>	Arrival <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:28</u>	Clear <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>19:15</u>	Sent <input checked="" type="checkbox"/>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<input type="checkbox"/> <input type="checkbox"/>	
<b>Personnel ID</b>	<b>Name</b>	<b>Rank or Grade</b>	<b>Attend</b> <input checked="" type="checkbox"/>	<b>Action Taken</b>	<b>Action Taken</b>	<b>Action Taken</b>	<b>Action Taken</b>	
0613	Wilson, Mark	BC	X					
<u>2</u>	ID <u>FE1</u>	Dispatch <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:23</u>	Arrival <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:30</u>	Clear <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:42</u>	Sent <input checked="" type="checkbox"/>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<input type="checkbox"/> <input type="checkbox"/>	
<b>Personnel ID</b>	<b>Name</b>	<b>Rank or Grade</b>	<b>Attend</b> <input checked="" type="checkbox"/>	<b>Action Taken</b>	<b>Action Taken</b>	<b>Action Taken</b>	<b>Action Taken</b>	
0416 0452 0477 0488	Ondrejch, David Cashatt, Keith Crane, Josh Sanders, Paul	CPT CPT FF FF	X X X X					
<u>3</u>	ID <u>FE4</u>	Dispatch <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:23</u>	Arrival <input type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:31</u>	Clear <input checked="" type="checkbox"/> <u>11</u> <u>26</u> <u>2012</u> <u>17:44</u>	Sent <input checked="" type="checkbox"/>	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other	<input type="checkbox"/> <input type="checkbox"/>	
<b>Personnel ID</b>	<b>Name</b>	<b>Rank or Grade</b>	<b>Attend</b> <input checked="" type="checkbox"/>	<b>Action Taken</b>	<b>Action Taken</b>	<b>Action Taken</b>	<b>Action Taken</b>	
0465 0468	Denham, Kyle Chavez, Daniel	CPT FF	X X					

<b>A</b>		MM DD YYYY																	NFIRS - 10 Personnel	
FDID * 03033		State * AZ	Incident Date * 11 26 2012		Station 02	Incident Number * 12-0009424		Exposure * 000		<input type="checkbox"/> Delete		<input checked="" type="checkbox"/> Change								
<b>B Apparatus or Resource</b>		<b>Date and Times</b>				<b>Sent</b>		<b>Number of People</b>		<b>Use</b>		<b>Actions Taken</b>								
Use codes listed below		Check if same as alarm date				<input checked="" type="checkbox"/>				Check ONE box for each apparatus to indicate its main use at the incident.		List up to 4 actions for each apparatus and each personnel.								
		Month Day Year Hours/mins																		
1 ID FE5		Dispatch <input checked="" type="checkbox"/> 11 26 2012 17:23				Sent <input checked="" type="checkbox"/>		3		<input type="checkbox"/> Suppression										
Type 11		Arrival <input checked="" type="checkbox"/> 11 26 2012 17:28				<input checked="" type="checkbox"/>				<input type="checkbox"/> EMS										
		Clear <input checked="" type="checkbox"/> 11 26 2012 19:03								<input checked="" type="checkbox"/> Other										
<b>Personnel ID</b>		<b>Name</b>			<b>Rank or Grade</b>		<b>Attend</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>					
0214		Winiecki, Steven			CPT		X													
0421		Singer, Mitchell			ENG		X													
0486		Callan, Tanner			FF		X													
2 ID FQ2		Dispatch <input checked="" type="checkbox"/> 11 26 2012 17:23				Sent <input checked="" type="checkbox"/>		4		<input type="checkbox"/> Suppression										
Type 13		Arrival <input checked="" type="checkbox"/> 11 26 2012 17:30				<input checked="" type="checkbox"/>				<input type="checkbox"/> EMS										
		Clear <input checked="" type="checkbox"/> 11 26 2012 19:15								<input checked="" type="checkbox"/> Other										
<b>Personnel ID</b>		<b>Name</b>			<b>Rank or Grade</b>		<b>Attend</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>					
0459		Howell, Matt			ENG		X													
0464		Felts, Michael			ENG		X													
0474		Wiles, Kevin			CPT		X													
0606		Turner, Matthew			CPT		X													
3 ID FR2		Dispatch <input checked="" type="checkbox"/> 11 26 2012 17:23				Sent <input checked="" type="checkbox"/>		2		<input type="checkbox"/> Suppression										
Type 71		Arrival <input checked="" type="checkbox"/> 11 26 2012 17:39				<input checked="" type="checkbox"/>				<input type="checkbox"/> EMS										
		Clear <input checked="" type="checkbox"/> 11 26 2012 19:18								<input checked="" type="checkbox"/> Other										
<b>Personnel ID</b>		<b>Name</b>			<b>Rank or Grade</b>		<b>Attend</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>		<b>Action Taken</b>					
0740		Thomas, Chris			ENG		X													
0742		Callander, Earl			CPT		X													

<b>A</b>		MM DD YYYY									NFIRS - 10 Personnel	
FDID * 03033		State * AZ	Incident Date * 11 26 2012		Station 02	Incident Number * 12-0009424		Exposure * 000		<input type="checkbox"/> Delete <input checked="" type="checkbox"/> Change		
<b>B Apparatus or Resource *</b>		<b>Date and Times</b> Check if same as alarm date			Sent	Number of * People	<b>Use</b> Check ONE box for each apparatus to indicate its main use at the incident.		<b>Actions Taken</b> List up to 4 actions for each apparatus and each personnel.			
Use codes listed below		Month Day Year Hours/mins			<input checked="" type="checkbox"/>							
1 ID FWT4 Type 24		Dispatch <input checked="" type="checkbox"/>	11	26	2012	18:20	Sent <input checked="" type="checkbox"/>	1	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input checked="" type="checkbox"/> Other		[ ] [ ] [ ] [ ]	
Arrival <input type="checkbox"/>		Clear <input checked="" type="checkbox"/>			11	26	2012	18:45				
Personnel ID	Name	Rank or Grade	Attend <input checked="" type="checkbox"/>	Action Taken	Action Taken	Action Taken	Action Taken					
0407	Dobbs, Todd	ENG	X									
2 ID [ ] Type [ ]		Dispatch <input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]	Sent <input type="checkbox"/>	[ ]	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other		[ ] [ ] [ ] [ ]	
Personnel ID	Name	Rank or Grade	Attend <input type="checkbox"/>	Action Taken	Action Taken	Action Taken	Action Taken					
			[ ]									
			[ ]									
			[ ]									
			[ ]									
			[ ]									
			[ ]									
3 ID [ ] Type [ ]		Dispatch <input type="checkbox"/>	[ ]	[ ]	[ ]	[ ]	Sent <input type="checkbox"/>	[ ]	<input type="checkbox"/> Suppression <input type="checkbox"/> EMS <input type="checkbox"/> Other		[ ] [ ] [ ] [ ]	
Personnel ID	Name	Rank or Grade	Attend <input type="checkbox"/>	Action Taken	Action Taken	Action Taken	Action Taken					
			[ ]									
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			[ ]									

03033

FDID

AZ

State

11

26

Incident Date

2012

02

Station

12-0009424

Incident Number

000

Exposure

Responding  
Units/Personnel

Unit	Notify Time	Enroute Time	Arrival Time	Cleared Time
FBI Battalion 1	17:23:34	17:25:04	17:28:29	19:15:55

Staff ID\Staff Name	Activity	Rank	Position	Role
0613 Wilson, Mark R	Fire	Battalion C		

Unit Narrative

B-1 enroute to a report of a fire possibly involving electrical equipment in an enclosed yard at the top of Cedar hill. Enroute per dispatch there are multiple reports of active fire noted. B-1 on scene with a working electrical fire inside the Elden Substation involving some type of transformer/switching cabinet pushing 10-15' flame lengths on the Eastern side of the cabinets. B-1 assumed IC (Cedar IC) on the Alpha side of the facility. B.C. backup requested to cover the city (covered by Chief 2). Dispatch advised to contact APS and notify them of a working fire inside their Elden Substation. Per dispatch APS has an ETA of 35 mins.

R-2 on scene along with E-5. R-2 sent to the Bravo side to check for extension into the surrounding forested area and for a 360 of the facility. E-5 assigned to take a line to the Bravo side to ensure the fire does not extend into the forested area, but told not to flow water anywhere within 50-75' of the fence housing the electrical substation. Q-2 staged near ICP for equipment and personnel. E-4 staged on a hydrant, and E-1 staged South.

FPD assigned to keep on-lookers out of the smoke column near the street due to it being hazardous. Per R-2 there is a 704 diamond on the gate showing a 232 no Water. Understanding is that there are specialized batteries (presumed to be inside a brown structure inside the substation) on sight that would cause this 704 placarding.

Fire continued to grow as the arching increased and fire appeared to be fed by flammable liquids coming from the cabinets, with flame lengths 50-75'. E-1 (FF Sanders assigned to E-5) and E-4 released to the city due to increased call volume and nothing FFD is able to do until APS is on scene to identify source and secure power.

APS on scene (Sam Auzwald) and met up with R-2 personnel and advised he would go in and secure the power. APS member made access into the gate and drove his vehicle inside the substation area then walked to the Eastern side of the fire cabinets to secure power. R-2 sent in with a dry line and full PPE (on air) as a back up team for the APS member and advised if there is a problem to extricate the APS member without using water due to everything being energized. E-5 assigned to RIC duties at the gate entrance while APS liaison and R-2 were interior. Per APS they have the power secured and we are clear to put the fire out and cool the cabinets down for further damage assessment. APS E-5 assigned to make interior with R-2 (both crews in full PPE on air) and assist with fire control. Both E-5 crew (Winiecki, Callan, Sanders) and R-2 crew (Callander, Thomas) worked on the cabinet area to control the fire and begin cooling the equipment down so APS could assess the damage. B-2 (Chief 2) on scene, and two additional APS members (Bryan Dellinger, Shane Hrober) arrived on scene and made their way interior into the substation.

Pump 5 down to 1/4 of a tank and Q-2 assigned to supply E-5 and assume RIC functions at the gate. Per R-2 equipment is still very hot and he thinks they will need additional water beside Q-2's tank. WT-4 called for to come to the scene. Fire is visibly now out and some hot metal still visibly glowing.

APS Elden substation tech (Kenny Burdall) on scene and faced to face with IC asking why our membership is inside the substation and that they are at a location that is extremely dangerous with a serious risk of a large scale explosion. K. Burdall was advised S. Auzwald had secured power to the location being worked on and that we were given the go

ahead from him to put the fire out and cool the cabinets down for damage assessment. Per K. Burdall the cabinets involved are full of lithium batteries that are extremely volatile if they come in contact with water.

B-1 immediately ordered all members of FFD, and APS out of the substation and called for a face to face at ICP to sort out the conflict of information being given by APS liaison members on scene. B-1 advised APS that we are here to simply support their needs and want to be clear on the plan of action since there are conflicting thoughts being given to IC. Updated information from the K. Burdall regarding the type of cabinet and internal lithium batteries crystallized the need to keep all FFD and APS members out of the area until morning due to the volatility of the equipment and situation as a result of the fire.

Chief 1 on scene and briefed of the situation. All units and equipment pulled from the scene without re-entering the substation.

While pulling equipment IC was advised by R-2 that a member off of E-5 (P. Sanders) was complaining of burning on the L side of his face and L eye after removing his SCBA mask near the truck. GMT called to the scene Alpha and Sanders treated by CEP Wiles from FFD on the scene. GMT arrived and transported injured FFD member to FMC for further follow up treatment. All units and equipment removed to 1000' from the substation and APS advised they will stay on sight until morning. All units released and B-1 avail enroute to FMC to check on Sanders condition.

M. Wilson

FE1 FFD Engine #1 17:23:33 17:24:18 17:30:39 17:42:18

Staff ID\Staff Name	Activity	Rank	Position	Role
0416 Ondrejch, David A	Fire	Captain		
0452 Cashatt, Keith	Fire	Captain		
0477 Crane, Josh	Fire	Fire Fighte		
0488 Sanders, Paul	Fire	Fire Fighte		

Unit Narrative

E1 cancelled from staging. Ondrejch. FF Sanders reassigned to FE5 E1 available with 3.

FE4 FFD Engine #4 17:23:29 17:24:15 17:31:26 17:44:49

Staff ID\Staff Name	Activity	Rank	Position	Role
0465 Denham, Kyle J	Fire	Captain		
0468 Chavez, Daniel	Fire	Fire Fighte		

Unit Narrative

FE4 responded to the scene code III. When on scene FE4 staged on a hydrant. FE4 was released by the IC and told to go to station 2 to assist covering the cities other calls.

FE4 responded back to the scene later on in the incident when informed by the IC to bring WT4. Both units were cancelled by the IC when approaching the scene.

Engineer Todd Dobbs was on FE4 until the WT was called for. Engineer Dobbs drove WT4 and acting engineer Chavez drove FE4.



03033

FOID

AZ

State

11

26

Incident Date

2012

02

Station

12-0009424

Incident Number

000

Exposure

Responding  
Units/Personnel

Unit	Notify Time	Enroute Time	Arrival Time	Cleared Time
FE5 FFD Engine #5	17:23:30	17:25:12	17:28:52	19:03:29

Staff ID\Staff Name	Activity	Rank	Position	Role
0214 Winiecki, Steven V	Fire	Captain		
0421 Singer, Mitchell W	Fire	Engineer		
0486 Callan, Tanner	Fire	Fire Fighte		

## Unit Narrative

E5 arrive on scene along with R2 and B1. B1 assumed IC and had E5 pull a hose line outside of the north side fence with an assignment of protecting the trees and grass from fire spread. E5 pulled a 1 3/4 inch pre connected line and added 100 feet of additional 1 3/4 inch hose from our high rise pack. E5 crew waited with the charged line about 100 feet from the burning electrical equipment. After several minutes FF P. Sanders was assigned to E5 crew to assist with on scene operations. APS representative arrived about 30 minutes into the incident, and escorted by R2 crew, made entry into the facility and secured the power to the equipment. At that point the APS rep gave crews the all clear to apply water to the burning equipment. I had FF Callen verify the equipment was safe by applying a short burst of a straight stream from about 50 ft away. When there was no arcing or evidence of other hazard, we applied to more short bursts and then moved our hose line around through the main gate along with a second line R2 had pulled of E5. We placed FF Callen on one nozzle and FF Sanders on the other and began fire attack. Once the main body of fire was knocked down E5 was almost out of tank water. While pump 5 was switching hose lines connections to Q2, E5 & R2 crews prepared to start overhaul. At that time IC called for all crews to leave the area immediately and report to the Command Post. E5 and R2 crews reported to the CP, along with other crews on scene. The IC informed all personnel that another APS representative who had just arrived on scene had told him to withdraw all crews because there was a possibility of an explosion due to the Lithium contained in the batteries. While at the briefing with the IC, FF Sanders removed his SCBA mask. Almost immediately he noticed a severe burning sensation in his left eye and on the left side of his face. I took FF Sanders over to Q2 crew and had then begin a decon by flushing his eye and face with water, and the saline solution. After a few minutes when the flushing was not relieving the pain, I reported the problem to the IC and requested GMT for transport to FMC. Per IC's orders, E5 then removed all hose lines and equipment from the compound and returned to service. (See further information on FF Sanders injury and treatment in additional reports).

Winiecki/214

FQ2 FFD Quint #2	17:23:28	17:24:31	17:30:36	19:15:25
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Staff ID\Staff Name	Activity	Rank	Position	Role
0459 Howell, Matt	Fire	Engineer		
0464 Felts, Michael J	Fire	Engineer		
0474 Wiles, Kevin	Fire	Captain		
0606 Turner, Matthew Aaron	Fire	Captain		

## Unit Narrative

Q-2 arrived and staged at a distance. When F/A began Howell and Felts were assigned to get E-5 water. Turner and Wiles were RIC 2 at the gate.

Q-2 crew and FF Wiles helped with the injury. See EMS report for further

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03033 FDID	AZ State	11 Incident Date	26 Incident Date	2012 Incident Date	02 Station	12-0009424 Incident Number	000 Exposure	Responding Units/Personnel
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Unit	Notify Time	Enroute Time	Arrival Time	Cleared Time
FR2 FFD Rescue #2	17:23:29	17:24:43	17:39:00	19:18:12

Staff ID\Staff Name	Activity	Rank	Position	Role
0740 Thomas, Chris	Fire	Engineer		
0742 Callander, Earl	Fire	Captain		

**Unit Narrative**

R2 dispatched as part of a structure assignment. O/A R2 assigned to walk around and recon. R2 found what appeared to be a transformer heavily involved in corner of APS substation. Main gate into facility was chained and locked. R2 pulled a 2nd 1 3/4" preconnect to front gate and left it dry. 704 diamond on front gate. R2 ordered to wait for APS arrival. APS RP arrived to front gate. We advised him that we had not taken any offensive actions. He stated he would cut the power and we could put it out. He proceeded to drive into substation. We placed a dry line in between him and fire. We remained on air in full PPE while he worked. When done he stated the power was cut and we could proceed to extinguish the fire. We then confirmed that there was no power to equipment burning and we could extinguish it. We also confirmed that there was still power to the rest of the substation. He backed up his truck and we charged our line. We then extinguished the bulk of the fire along with E5. While we were getting ready to overhaul the fire we were ordered to back out and come to ICP and bring the APS rep with us. There were 2 APS reps inside the substation area, near where they originally cut the power. We advised them and met at ICP. We were then advised to get our units in service and the scene was being turned over to APS.

Callander

FWT4 FFD Water Tender #4	18:20:52	18:31:06	18:45:02
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Staff ID\Staff Name	Activity	Rank	Position	Role
0407 Dobbs, Todd W	Fire	Engineer		

**Unit Narrative**

WT4 responded code I to the scene. WT4 was cancelled by the IC when approaching the scene.

03033 FDID *	AZ State *	MM DD YYYY 11 26 2012 Incident Date *	02 Station	12-0009424 Incident Number *	000 Exposure *	Responding Personnel
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Staff ID\Staff Name	Unit	Activity	Position	Rank	PayScl	Hrs	HrsPd	Pts
0613 Wilson, Mark R	FB1	100 Fire		BC		1.87	0.00	0.00
0416 Ondrejch, David A	FE1	100 Fire		CPT		1.87	0.00	0.00
0452 Cashatt, Keith	FE1	100 Fire		CPT		1.87	0.00	0.00
0477 Crane, Josh	FE1	100 Fire		FF		1.87	0.00	0.00
0488 Sanders, Paul	FE1	100 Fire		FF		1.87	0.00	0.00
0465 Denham, Kyle J	FE4	100 Fire		CPT		0.36	0.00	0.00
0468 Chavez, Daniel	FE4	100 Fire		FF		0.36	0.00	0.00
0214 Winiecki, Steven V	FE5	100 Fire		CPT		1.67	0.00	0.00
0421 Singer, Mitchell W	FE5	100 Fire		ENG		1.67	0.00	0.00
0486 Callan, Tanner	FE5	100 Fire		FF		1.67	0.00	0.00
0459 Howell, Matt	FQ2	100 Fire		ENG		1.87	0.00	0.00
0464 Felts, Michael J	FQ2	100 Fire		ENG		1.87	0.00	0.00
0474 Wiles, Kevin	FQ2	100 Fire		CPT		1.87	0.00	0.00
0606 Turner, Matthew	FQ2	100 Fire		CPT		1.87	0.00	0.00
0740 Thomas, Chris	FR2	100 Fire		ENG		1.91	0.00	0.00
0742 Callander, Earl	FR2	100 Fire		CPT		1.91	0.00	0.00
0407 Dobbs, Todd W	FWT4	100 Fire		ENG		0.40	0.00	0.00

Total Participants: 17

Total Personnel Hours: 26.78

An 'X' next to the unit denotes driver.

MM DD YYYY		NFIRS - 11 <b>Arson</b>
A	FDID <b>03033</b> *	State <b>AZ</b> *
	Incident Date <b>11/26/2012</b> *	Station <b>02</b>
	Incident Number <b>12-0009424</b> *	Exposure <b>000</b> *
<b>B Agency Referred To</b> <input type="checkbox"/> None Street Address _____ Their Case Number _____ Agency Name _____ City _____ Their ORI _____ Agency Phone Number _____ State _____ Zip Code _____ Their Federal Identifier (FID) _____ Their FDID _____		<b>C Case Status</b> 1 <input type="checkbox"/> Investigation open      4 <input type="checkbox"/> Closed with arrest 2 <input type="checkbox"/> Investigation closed      5 <input type="checkbox"/> Closed with exceptional clearance 3 <input type="checkbox"/> Investigation inactive
<b>E Suspected Motivation Factors</b> Check up to three factors 11 <input type="checkbox"/> Extortion      22 <input type="checkbox"/> Hate crime      42 <input type="checkbox"/> Vanity/recognition      54 <input type="checkbox"/> Burglary 12 <input type="checkbox"/> Labor unrest      23 <input type="checkbox"/> Institutional      43 <input type="checkbox"/> Thrills      61 <input type="checkbox"/> Homicide concealment 13 <input type="checkbox"/> Insurance fraud      24 <input type="checkbox"/> Societal      44 <input type="checkbox"/> Attention/sympathy      62 <input type="checkbox"/> Burglary concealment 14 <input type="checkbox"/> Intimidation      31 <input type="checkbox"/> Protest      45 <input type="checkbox"/> Sexual excitement      63 <input type="checkbox"/> Auto theft concealment 15 <input type="checkbox"/> Void contract/lease      32 <input type="checkbox"/> Civil unrest      51 <input type="checkbox"/> Homicide      64 <input type="checkbox"/> Destroy records/evidence 21 <input type="checkbox"/> Personal      41 <input type="checkbox"/> Fireplay/curiosity      52 <input type="checkbox"/> Suicide      00 <input type="checkbox"/> Other motivation 53 <input type="checkbox"/> Domestic violence      UU <input type="checkbox"/> Unknown motivation		<b>D Availability of Material First Ignited</b> 1 <input type="checkbox"/> Transport to scene 2 <input type="checkbox"/> Available at scene U <input type="checkbox"/> Unknown
<b>F Apparent Group Involvement</b> Check up to three factors 1 <input type="checkbox"/> Terrorist group 2 <input type="checkbox"/> Gang 3 <input type="checkbox"/> Anti-government group 4 <input type="checkbox"/> Outlaw motorcycle organization 5 <input type="checkbox"/> Organized crime 6 <input type="checkbox"/> Racial/ethnic hate group 7 <input type="checkbox"/> Religious hate group 8 <input type="checkbox"/> Sexual preference hate group 0 <input type="checkbox"/> Other group N <input type="checkbox"/> No Group involvement, acted alone U <input type="checkbox"/> Unknown		<b>H Incendiary Devices</b> Select one from each category CONTAINER      NN <input type="checkbox"/> None 11 <input type="checkbox"/> Bottle (Glass)      14 <input type="checkbox"/> Pressurized Container      17 <input type="checkbox"/> Box 12 <input type="checkbox"/> Bottle (Plastic)      15 <input type="checkbox"/> Can      00 <input type="checkbox"/> Other Container 13 <input type="checkbox"/> Jug      16 <input type="checkbox"/> Gasoline or fuel can      UU <input type="checkbox"/> Unknown IGNITION/DELAY DEVICE      NN <input type="checkbox"/> None 11 <input type="checkbox"/> Wick or Fuse      17 <input type="checkbox"/> Road flare/fuse 12 <input type="checkbox"/> Candle      18 <input type="checkbox"/> Chemical Component 13 <input type="checkbox"/> Cigarette & Matchbook      19 <input type="checkbox"/> Trailer/Streamer 14 <input type="checkbox"/> Electronic Component      20 <input type="checkbox"/> Open flame source 15 <input type="checkbox"/> Mechanical Device      00 <input type="checkbox"/> Other delay device 16 <input type="checkbox"/> Remote Control      UU <input type="checkbox"/> Unknown FUEL      NN <input type="checkbox"/> None 11 <input type="checkbox"/> Ordinary Combustibles      16 <input type="checkbox"/> Pyrotechnic material 12 <input type="checkbox"/> Flammable gas      17 <input type="checkbox"/> Explosive material 14 <input type="checkbox"/> Ignitable liquid      00 <input type="checkbox"/> Other material 15 <input type="checkbox"/> Ignitable solid      UU <input type="checkbox"/> Unknown
<b>G1 Entry Method</b> _____ Entry Method		<b>K Initial Observations</b> Check all that apply 1 <input type="checkbox"/> Windows ajar      5 <input type="checkbox"/> Fire department forced entry 2 <input type="checkbox"/> Doors ajar      6 <input type="checkbox"/> Forced entry prior to FD arrival 3 <input type="checkbox"/> Doors locked      7 <input type="checkbox"/> Security system activated 4 <input type="checkbox"/> Doors unlocked      8 <input type="checkbox"/> Security present, (didn't activate)
<b>G2 Extent of Fire Involvement on Arrival</b> _____ Extent of Fire Involvement		<b>L Laboratory Used</b> Check all that apply 1 <input type="checkbox"/> Local      3 <input type="checkbox"/> ATF      5 <input type="checkbox"/> Other      6 <input type="checkbox"/> Private 2 <input type="checkbox"/> State      4 <input type="checkbox"/> FBI      Federal      N <input type="checkbox"/> None NFIRS-11 Revision 11/17/98
<b>I Other Investigative Information</b> Check all that apply 1 <input type="checkbox"/> Code violations 2 <input type="checkbox"/> Structure for sale 3 <input type="checkbox"/> Structure vacant 4 <input type="checkbox"/> Other crimes involved 5 <input type="checkbox"/> Illicit drug activity 6 <input type="checkbox"/> Change in insurance 7 <input type="checkbox"/> Financial problem 8 <input type="checkbox"/> Criminal/Civil actions pending		<b>J Property Ownership</b> 1 <input type="checkbox"/> Private 2 <input type="checkbox"/> City, town, village, local 3 <input type="checkbox"/> County or parish 4 <input type="checkbox"/> State or province 5 <input type="checkbox"/> Federal 6 <input type="checkbox"/> Foreign 7 <input type="checkbox"/> Military 0 <input type="checkbox"/> Other

MM DD YYYY

03033  
FDID \*

AZ  
State \*

11 26 2012  
Incident Date \*

02  
Station

12-0009424  
Incident Number \*

0  
Exposure \*

Arson  
Narrative

**Arson Narrative:**

On 11/26/12 at approx 1723hrs a fire occurred at the Cedar & Gemini electrical sub-station resulting in approx. \$ 1.700.000 in damage to the electrical equipment. A.P.S was on the scene and the manufacture of the equipment were flying in from Canada on 11/27/12 to determine the cause. Photo's were taken. Scene was left with A.P.S.