STATE OF NEW JERSEY

In the Matter of David Funk, *et al.*, Second-Level Fire Supervisor	:	**FINAL ADMINISTRATIVE ACTION OF THE CIVIL SERVICE COMMISSION**
CSC Docket Nos. 2025-289, *et al.*	:	Examination Appeals

ISSUED: February 26, 2025 **(ABR)**

David Funk (PM2004F); Gregory Walczak and Mark Jenkins (PM2005F); Victor Velez (PM2000F); and James Clancy, Jr. and Jason Scott (PM1996F) appeal the written portion of the promotional examination for Second-Level Fire Supervisor (various jurisdictions). These appeals have been consolidated due to common issues presented by the appellants.

The written portion of the subject examination was administered on May 30, 2024, and consisted of 75 multiple choice questions. It is noted that during the test administration, candidates were provided with two booklets: Booklet A (Second-Level Fire Supervisor FastTest Supplemental Booklet) and Booklet B (2024 Second-Level Fire Supervisor Examination). Booklet A contained stimulus material and Booklet B contained the exam questions.

Questions 1 through 11 involve a fire reported in the middle of a strip mall where the candidate, as a second-level supervisor, will be the incident commander.

Question 3 states that the candidate orders crews to quickly check the exposures for extension. It then asks the candidate to identify which exposures should be entered first to check for extension, using which sized handline and where to check for extension first. The keyed response is option a, to enter exposures B and D with a 1 ¾ inch handline and check for extension in the cockloft. On appeal, Clancy avers that option b was the best response because the size of the hoseline should always be

equal to or greater than the original hoseline. He proffers that a 2 ½ inch hoseline is the correct size for a structure fire, the backup line should be a 2 ½ inch line and that the line in the keyed response was too small.

In reply, John Norman, *Fire Officer's Handbook of Tactics* 433 (5th ed. 2019) states to:

> [S]tretch handlines (generally, 1 ¾ in. are sufficient) into the exposed stores on either side, pull the ceilings, and examine the cockloft overhead. If heavy fire is found in the cockloft of the store immediately next to the fire store, do not enter; drop back at least two stores and check the cockloft again. Get ahead of the fire, and then start sweeping the cockloft with hose streams.

Option b is incorrect because it would have the candidate first check for extension in the walls, rather than the cockloft. Further, Clancy offers no support for his suggestion that a 1 ¾ inch hoseline would be insufficient. Accordingly, Clancy has failed to sustain his burden of proof and the keyed response to Question 3 is affirmed.

Question 7 references a National Fire Protection Association (NFPA) 704 placard having the number "1" in a diamond against a red background and asks what that concern that number denotes. The keyed response is option d, if pre-heated the material will ignite. On appeal, Velez argues that option c, that "[o]nce heat is applied, the material will burn freely," which he selected on the examination "appear[ed] to be the same[,] but worded differently."

In reply, the number "2" in the red diamond would correspond to option c. Materials with a label of "1" in the red diamond denote materials with a flashpoint above 200°F that must be pre-heated to burn, like olive oil.[1] Conversely "2" corresponds to materials with a flashpoint above 100°F, but not in excess of 200°F. These materials, such as diesel fuel oil,[2] differ from those labeled "1" in that they have a lower threshold for ignition and must be moderately heated or exposed to relatively high ambient temperature before ignition can occur. *See Fundamentals of Fire Fighter Skills and Hazardous Materials Response* 1087 (4th ed. 2019). Accordingly, Velez has failed to sustain his burden of proof and the keyed response to Question 7 is affirmed.

Question 8 states that the candidate is informed that one of the containers referenced in an earlier question has fallen off a pallet, broken, and leaked liquid into a pool on the floor which has caught fire. It then queries for the best method to extinguish the material. The keyed response is option a, to gently apply a fog pattern

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[1] *See Oils, Edible: Olive,* CAMEO Chemicals, *Nat'l Oceanic and Atmospheric Admin.*, https://cameochemicals.noaa.gov/chemical/18013 (last visited Jan. 27, 2025).

[2] *See Fuel Oil, [Diesel],* CAMEO Chemicals, *Nat'l Oceanic and Atmospheric Admin.*, https://cameochemicals.noaa.gov/chemical/11452 (last visited Jan. 27, 2025).

to the surface of the burning liquid. On appeal, Scott argues that option c, to apply a fog pattern to create steam and cool the liquid, and option a were similar in terms of fog nozzle usage.

In reply, Gregory G. Noll and Michael S. Hildebrand, *Hazardous Materials: Managing the Incident* 176 (4th ed. 2019) indicates that materials with the number 1 in the red diamond "must be preheated before ignition can occur. Water may cause frothing if it gets below the surface of the liquid and turns into steam. However, water fog gently applied to the surface will cause a frothing which will extinguish the fire." Thus, option b was the better choice because it would most directly accomplish the extinguishment objective.

Question 9 states that the candidate receives reports from interior crews of thick black smoke and asks what it indicates. The keyed response is option c, that the roof is on fire. On appeal, Scott and Jenkins maintain that option a, that empty pallets in the storage area are on fire, was the best response. In this regard, Scott avers that if roofing materials ignited on the roof, the smoke and fire from the ignited roof would be more likely to vent upward and outward, rather than into the building. Jenkins maintains that the roof could not be seen, making the keyed response incorrect and the obvious correct response that empty pallets were burning.

In reply, Glenn P. Corbett and Francis L. Brannigan, *Building Construction for the Fire Service* 305 (6th ed. 2021), states, in pertinent part:

> When a fire occurs below a combustible metal deck roof, the metal deck heats up.
>
> * * *
>
> The gas cannot escape through the roofing materials, so it forces itself down through the joists in the deck. When the gas mixes with the air below, it ignites from the fire below.
>
> Such a gas fire rolls along under the roof, heating additional roof areas, which generates more gaseous fuel. Almost unbelievable amounts of thick black smoke are generated.

It further describes a 1990 nursing home fire as follows:

> The building had a combustible metal deck roof. Extremely thick black smoke, typical of a metal deck roof fire, drove the staff from the west wing.
>
> *Id.* at 306.

Thus, the thick black smoke described in Question 9 was consistent with a roof fire. Conversely, the empty pallets described in option a would be considered a Class A material.[3] Norman, *supra* at 515, states that Class A materials will produce gray to light brown smoke when oxygen is present and that if limited oxygen is available, there will be large amounts of dark gray or yellow gray smoke generated. Therefore, the keyed response to Question 9 is affirmed.

Question 10 states that due to thick black smoke reported inside and an indication that the roof is on fire, the candidate determines that it is not safe for their crews to remain inside and to sound an evacuation signal. It then asks how long the evacuation signal should last for in total. The keyed response is option d, 50 seconds. On the examination Scott selected option a, 10 seconds. On appeal, Scott argues that Norman, *supra*, states that "the evacuation signal shall consists [sic] of relating shorts [sic] blasts of an air horn for a period with [sic] no longer than 10 seconds."[4] On appeal, Jenkins acknowledges that the time from start to finish would be 50 seconds, but argues that the wording of the question suggested that option c, 30 seconds, was the correct response, as the cumulative length of the three 10-second blasts.

In reply, as set forth in the New Jersey Rules for Fire Service Incident Management System, an "evacuation signal shall consist of repeated short blasts of an air horn for a period no longer than 10 seconds, followed by 10 seconds of silence. This sequence of repeated short air horn blasts for 10 seconds followed by a 10-second period of silence shall be done three times; *the total evacuation signal, including periods of silence, shall last 50 seconds*." *See N.J.A.C.* 5:75-2.7(b) (emphasis added). Accordingly, Scott's and Jenkins' arguments must be rejected and the keyed response to Question 10 must be affirmed.

Question 11 asks what the best location is for sounding the evacuation signal from Question 10. The keyed response is option b, an apparatus away from the command post. On appeal, Jenkins maintains that the keyed response is incorrect because when sounding the evacuation signal, all trucks on the fire ground should sound the alarm.

In response, *N.J.A.C.* 5:75-2.7(b)1 states that "[t]o reduce the possibility of missing radio messages while the evacuation signal is sounding, incident commanders shall

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[3] Norman, *supra* at 30, states that common Class A materials include ordinary combustibles like wood and paper.

[4] Scott does not cite the page from Norman, *supra*, that he ostensibly pulled this quote from.

designate apparatus away from the command post as the signal sounder." Accordingly, Jenkins' argument is without merit and the keyed response to Question 11 is affirmed.

The scenario presented for Questions 12 through 22 involves a fire at a split-level residential property where the candidate, a second-level fire supervisor, will be the incident commander. The upper level of the house has vinyl siding, while the rest of the house is covered by brick veneer. Photo voltaic (PV) (solar) panels are installed on Side A of the roof. There are entrances on Side A, Side C and near the C/D corner.

Upon arrival, the candidate is greeted by the homeowner, who tells the candidate that an accident with a downstairs chimney caused a chimney fire and fire damage to the entertainment area. The candidate sees smoke venting from the lower level Side C windows and the chimney, as well as flames coming from the top of the chimney.

Question 13 asks, based on the scenario description, what the candidate knows about the properties of the fire. The keyed response is option c, that the fire is extremely hot in temperature. On appeal, Scott argues that option a, that the fire has begun to extend into the void spaces, was the best response.

In reply, International Association of Fire Chiefs and National Fire Protection, *Fundamentals of Fire Fighter Skills and Hazardous Materials Response, supra* at 678, states that:

> Older chimneys were made from brick and mortar or clay tiles which often deteriorate over time
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> * * *
>
> Creosote is a by-product of burning wood, and it coats the inside of the chimney and builds up over time. Creosote is highly combustible, and many chimney fires are caused by the lack of maintenance and cleaning. Chimney fires involving creosote are often extremely hot and can cause flames to shoot out of the top of the chimney.
>
> When responding to a reported chimney fire, look for smoke or flames coming from the top of the chimney. If fire fighters see smoke coming from the eaves or attic vents, they should suspect that the fire has extended into the void spaces or into the attic itself.

Here, because there was no indication that smoke was coming from the eaves or attic vents, option a was incorrect. Conversely, the presence of flames coming out of the chimney suggests that it is a chimney fire involving creosote and generating high heat and flames. Accordingly, Scott has failed to sustain his burden of proof and his appeal of this test item is denied.

Question 14 asks what the greatest concern is with vinyl siding. The keyed response is option b, that it can melt and drip down on firefighters. On appeal, Clancy argues that option c, that it is an inhalation hazard, was the best response. In this regard, Clancy contends that personal protective equipment (PPE) would protect members from the melting vinyl. Conversely, Clancy contends that the fumes from the siding would pose a greater risk to bystanders, firefighters and first responders who have not donned an appropriate self-contained breathing apparatus (SCBA).

In reply, as noted in Corbett and Brannigan, *supra* at 222*,* vinyl siding "is a thermoplastic that will deform (droop), burn, and drip under attack from a fire." Fumes would be a greater concern with asbestos cement shingles, which can cause "possible inhalation hazards." *Ibid.* As such, Clancy has failed to sustain his burden of proof and the keyed response of option c is affirmed.

Question 15 asks for the best way to handle the safety concerns regarding the solar panels. The keyed response is option c, to ensure crews avoid the main entrance on Side A. On appeal, Jenkins argues that option d, wait until a utility company technician arrives on scene, was the best response. In this regard, he avers that going in the front door would be safe since the panels are on the roof and that the utility company would be best suited to control the panels.

In reply, *Fundamentals of Fire Fighter Skills and Hazardous Materials Response, supra* at 678, states that the "hazards related to PV systems include fall and collapse hazards associated with solar roof panels. During fire conditions it is important to stay away from the roof line underneath the solar roof panels. Roof panels may become dislodged from the roof and slide off, posing a dangerous fall hazard." Clearly, this supports the keyed response. Conversely, option c is incorrect as waiting for a utility company technician to arrive could significantly delay firefighting operations. Accordingly, the keyed response is correct and Jenkins has failed to sustain his burden of proof with respect to Question 15.

Question 19 indicates that the candidate's crew has confined the fire to the chimney and asks for the best method to extinguish the fire in the chimney. The keyed response is option d, a dry-chemical extinguisher. On appeal, Velez argues that option b, a 1 ¾-inch hoseline with a straight nozzle, was the best response, "as there is smoke on the lower level fire, fire from the chimney, and fire could possibly extend to the attic from the chimney if it['s] damaged, [and] bricks c[ould] crack under heavy fire."

In reply, *Fundamentals of Fire Fighter Skills and Hazardous Materials Response, supra* at 678, states that:

> When responding to a reported chimney fire, look for smoke or flames coming from the top of the chimney.

* * *

> Avoid using water to extinguish the fire unless it is necessary because the water may crack or damage the hot flu[e]. Dry-chemical extinguishers are commonly used to extinguish chimney fires. Remember that fire moves up from the source, so it is important to extinguish the fire in the firebox, as well as in the chimney. While wearing full PPE and SCBA, discharge the extinguisher into the firebox and up into the chimney.

As such, option b would be incorrect because of the risk that water may crack or damage the hot flue and the keyed response is the best response. Accordingly, Velez has failed to sustain his burden of proof and his appeal of Question 19 is denied.

Question 20 provides that a firefighter who recently entered on-scene rehab is shivering uncontrollably, mumbling and complaining about being cold. It then asks what should be done to control their symptoms while waiting for emergency medical services (EMS) to arrive. The keyed response is option c, to give the firefighter "a warm, high-calorie drink." On appeal, Clancy, Scott and Velez argue that option a, to use small chemical heat packs to help rewarm the firefighter is the best response. Clancy specifically argues that given the firefighter's condition, only a paramedic would have the necessary skill set to give the firefighter appropriate medical attention and fluids. Scott avers[5] that hot packs are more common and would be more practical than warm drinks. Moreover, Scott maintains that the New Jersey Statewide Incident Rehabilitation Guidelines state to "place very warm objects, such as hot packs or water bottles on the victim's head, neck chest, and groin. Arms and legs should be warmed last." Velez contends that "[t]he incident/scenario does not state if a rehab unit/bus is on scene, therefore the fire fighter is given what is usually [sic] available to warm him up.

In reply, Alton Thygerson, Steven M. Thygerson, and Justin S. Thygerson, *Advanced First Aid, CPR, and AED* 323 (8th ed. 2022) states that the following are signs of mild hypothermia: "vigorous, uncontrollable shivering, awake and alert, complains of feeling cold—painful hands and feet, can answer questions intelligently, the 'umbles' beginning to appear: grumbles, mumbles, fumbles, stumbles, tumbles." To address mild hypothermia, it advises in part, to give the patient "high-calorie (sugary) nonalcoholic and noncaffeinated food or drinks." *Ibid.* It further indicates that "[l]iquids and food may be warmed but should not be hot enough to burn the person's mouth or hands. *Ibid.* While applying heat using large electric pads, electric

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[5] Scott mistakenly asserts that the keyed response to Question 20 was "warm drink with protein." Scott presents that the New Jersey Statewide Incident Rehabilitation Guidelines "mention a warm drink[,] but does not include a warm drink with protein." However, as noted above, the keyed response was "a warm, *high-calorie drink*" (emphasis added).

blankets or warm water bottles is also recommended, the use of small chemical heat pads, as presented in option a, is not. *See ibid.* Specifically, Thygerson, *et al.*, *supra,* states "DO NOT use small chemical heat packs for rewarming. These packs (e[.]g[.], used for hand and foot warming) do not provide sufficient heat to affect core body temperature. They can cause burns." *Ibid* (emphasis in original). Accordingly, there is ample support for the key and that Clancy, Scott and Velez have failed to sustain their burdens of proof with respect to Question 20.

Question 22 asks for the first action to take when overhauling and opening up a couch on the first floor. The keyed response is option d, to remove the couch from the house. On appeal, Clancy and Jenkins argue that option b, to open up the couch to check for hidden fire, was the best response. Scott and Walczak argue that option c, to use a charged hose line to thoroughly soak the couch, was the best response.

In reply, multiple sources support the keyed response. For example, *Fundamentals of Fire Fighter Skills and Hazardous Materials Response, supra* at 760, states to "[r]emove materials prone to smoldering, such as mattresses and cushioned furniture, from the building and thoroughly soak them outside." Further, Norman, *supra* at 184, states:

> Items such as mattresses and couches should usually be removed to the outdoors for overhauling. This eliminates a large source of smoke from the fire area and safeguards the premises from reignition if the job isn't as thorough as it should be. It is very difficult to ensure complete extinguishment in mattresses and stuffed furniture. Fire burrows deep within and, often without even a wisp of smoke showing, can remain hidden for hours, only to break out later. It takes a lot of opening up and a good deal of water to make sure that the fire has been completely extinguished.

Accordingly, options b and c were not the best responses, as they were actions that should occur after the keyed response. Therefore, Clancy, Jenkins, Scott and Walczak have failed to sustain their burdens of proof and their appeals of Question 22 are denied.

Question 23 through 33 involve a fire reported at an apartment building where the candidate, a second-level fire supervisor, will be the incident commander.

Question 32 asks candidates to complete the following statement: as the firefighters evacuate the building, they should _____. The keyed response is option b, inform other personnel about the evacuation. On appeal, Jenkins argues that the best response was option c, to acknowledge the evacuation order on the radio. In this regard, Jenkins avers that the evacuation order should be acknowledged like all orders so that the command post knows everyone is out.

In response, *N.J.A.C.* 5:75-2.7(e) states:

> Upon being alerted to an emergency evacuation signal, all personnel shall evacuate the hazardous area to an area of obvious safety. As all personnel evacuate, they shall warn others in the event they have not been alerted by the signal. During an emergency evacuation, it may be necessary to abandon equipment in order to evacuate the hazardous area quickly and safely. Firefighters should retain any equipment needed to insure personal firefighter safety during the evacuation, that is, self-contained breathing apparatus (SCBA), personal protective equipment (PPE), etc.

Thus, there is ample support for the keyed response. Conversely, option c was not the correct response because firefighters should not overwhelm the radio channel with everyone acknowledging the evacuation order. In this regard, New Jersey Division of Fire Safety, *Model Fire Department Incident Management Standard Operating Guides - Booklet 9* at 28 (2011) presents that communication systems tend to be one of the first and most common failures at emergency incidents. It adds:

> In order to reduce the volume of radio traffic all units shall respect the five reasons to communicate. All communications should be face-to-face whenever possible. Units should only use the radio for the following:
>
> 1) Additional resources are required
> 2) The assignment is completed
> 3) You are unable to complete an assignment
> 4) An immediate safety hazard exists
> 5) If you have information that has a direct bearing on the incident

Accordingly, Jenkins has failed to sustain his burden of proof and the keyed response to Question 32 is affirmed.

Questions 34 through 44 involve the response to a reported fire at a townhouse under construction in a new development where the candidate will be the incident commander throughout the incident. The new development features several rows of new townhouses of wood-frame construction with brick veneer and vinyl siding. The involved unit is a townhouse that is located on the bottom two floors of an end unit, with another unit located on the top two floors above it. The exterior of the row of townhouses is almost complete, with construction focusing on the interior partitions of the townhouses and Side C exterior. There are two fire hydrants in the area. The construction foreman warns the candidate that that there are currently open spaces on the Side C wall for the 2nd floor deck, Side C windows, and garage doors. He also informs the candidate that the sprinklers are not functional, but a temporary standpipe system is installed.

Question 35 asks the candidate what their greatest concern is at this incident. The keyed response is option d, structural stability. On appeal, Jenkins argues that the best response was option b, conflagration. Specifically, he notes that Norman, *supra* at 427, states that the open-framed stage is the most dangerous stage of construction in terms of conflagration risk.

In reply, at the outset, Jenkins misreads Norman, *supra* at 427, as comparing the risk of conflagration relative to other hazards like collapse. In reality, it is comparing the risk of conflagration at the open-framed stage of construction, compared to the risk of conflagration during other phases of construction. Conversely, several passages from Glenn P. Corbett and Francis L. Brannigan, *Building Construction for the Fire Service* (6th ed. 2021), support the keyed response. Specifically, *id.* at 66 advises:

> [A] fire during the early construction framing stage if a wood-frame building (and before wallboard has been installed) will destroy the entire structure within minute. These fires present a significant conflagration hazard—due to firebrand production and radiant heat—in which the fire can spread to other similar structures as well as occupied buildings
>
> * * *
>
> Collapse at a construction site is always a possibility; even without fire.

Further, *id.* at 71 notes that "[w]hen wood burns it loses structural strength and integrity" and *id.* at 78 reminds readers that "new construction buildings are in the process of being built. Material is curing, being propped up, or temporarily suspended in place. Structural members are not completely installed. The danger of collapse is greatly amplified because of the lack of stable, permanent structure." Option b is incorrect, as conflagration is less of an issue because the fire building is past the early framing stages and the wallboard has been installed. Accordingly, the keyed response to Question 35 is affirmed and Jenkins' appeal of this question is denied.

Question 39 asks what the maximum time the candidate can expect to pass before the structural elements of the fire building burn through. The keyed response is option c, 45 minutes. On appeal, Jenkins argues that option a, 15 minutes, was the correct response. In this regard, Jenkins presents that a wood truss would fail between 10 and 15 minutes and maintains that the burn time is unknown.

In reply, Jenkins' incorrectly focuses on structural failure rather than the burn through time that Question 39 specifically asks for. Norman, *supra* at 549, states that "wooden structural elements burn through at a rate of about 1 in. for every 45 minutes of open-burning time. If fire can attack two sides of a joists, for example, the

standard 1 ½-in.-wide (2x8) joist will burn completely through in less than 45 minutes and will have lost its load-carrying ability long before then." Thus, while Jenkins is correct that structural failure for a wood truss would occur in less than 45 minutes, because the question asked for the maximum amount of burn through time, there was ample support for the keyed response and Jenkins has failed to sustain his burden of proof with respect to this question.

Question 40 presents that the fire has begun to spread to the third floor. It then asks what the best appliance is to put out the fire. The keyed response is option b, an elevated platform. On appeal, Scott argues that option a, an aerial master stream, was the best response. In this regard, Scott asserts that although Norman *supra* at 482, states that a platform stream is the superior choice compared to a straight stick stream, because the keyed response did not mention a "stream," while option a did, option a was the best response.

In reply, it is observed that Question 40 asked for the best appliance, rather than the best stream option. Two of the sources from the suggested reading list in the examination orientation guide support the conclusion that the keyed response of an elevated platform was the best option. Specifically, Norman, *supra* at 482, states:

> Even as the openings permit the spread of fire, they also allow for rapid, nearly effortless ventilation, and the lack of partitions allows a hose stream to sweep an area for its full range. The stream of choice, where the fire is within reach, is the elevating platform. From outside the structure, it can deliver a high-volume, long-reach stream that should knock down an entire floor area. Properly applied, a 2-in. solid tip will discharge more than 1,100 gpm over a 100-ft-deep floor.

Further, Corbett and Brannigan, *supra* at 78, presents that:

> One of the most critical features is the standpipe. If the standpipe installation does not keep up with the height of the new construction, you will have to establish your own water supply to upper floors if a fire occurs. That will require a long hose lay or an elevated platform at a window.

With these sources, it is understood that an actual hose would still be needed with the elevated platform. Accordingly, the keyed response of the elevated platform was the best response and option a was not the best option. Therefore, Scott's appeal of Question 40 is denied.

Question 41 asks before operating the aerial platform, what safety action must be taken first. The keyed response is option a, to clear all personnel from the ground opposite the hoseline. On appeal, Jenkins argues that option d, to conduct a personnel

accountability report (PAR), was the best response, because of the importance of knowing firefighters' locations.

In reply, Norman, *supra* at 482, advises that with the aerial platform, "[t]he first activity should be to clear all personnel from areas in the streets below on the sides opposite the nozzle. With no substantial side walls in place to restrain them, the large hose streams can send tons of debris showering down on surrounding areas." Conversely, New Jersey Division of Fire Safety, *New Jersey Personnel Accountability System (NJPAS) - Booklet 10* at 3 (2014) does not indicate that this scenario would be one for which a PAR should be called. Accordingly, the keyed response is correct and Jenkins' appeal of Question 41 is denied.

Question 42 asks for the best method to extinguish the fire while operating the elevated platform. The keyed response is option b, to cut the fire off on the third floor, allowing water runoff to check extensions, and then put out the fire on the second floor. On appeal, Jenkins argues that the best response was option a, to focus on putting out the fire on the second floor, relying on rising steam to aid in extinguishing the fire spreading to the third floor. In this regard, he maintains that water could not "hit [the] fire if [the] roof [is] on [the] building."

In reply, Norman, *supra* at 482-83, states:

> Normally when a fire has hold of more than one floor and a platform stream is to be used, it should begin hitting the lowest floor first and progress upward. This works well in a finished structure. The steam produced on the lower floor will rise and may aid extinguishment above. In addition, upward extension is relatively slow due to the firestopping of vertical openings. Neither statement is true of a wide-open building. The vertical spread of fire may be so rapid that, if the lower floor is attacked first, the fire will race right past the reach of the stream before it can be brought to bear on the upper floors. In the wide-open condition found in these structures, the extinguishing effect of steam is nonexistent. Cut the fire off. The stream runoff will pour down the myriad vertical openings, checking extension. You may then bring the stream down into position to attack the lower floors.

Here, because of the open spaces in the Side C wall, there is the potential for a rapid vertical spread of the fire and the extinguishing effect of steam may be nonexistent. As such, per Norman, *supra*, the keyed response is the correct response and Jenkins has failed to sustain his burden of proof with respect to Question 42.

Question 43 states that one of the crews working on Side C transmits a progress report to the candidate, but the transmission breaks. It then queries what the most likely reason is for this condition. The keyed response is option d, poor

reception due to the crew's radio being held incorrectly. On appeal, Jenkins and Funk argue that the best response was option a, "your radio having low battery." Jenkins maintains this is so because "a low battery will cause the radio to go in and out[,] causing the message to break up." Funk contends that a prior examination had low battery as the keyed response to a similar question.

In reply, a review of Question 43 on appeal confirms that the keyed was the best option. In this regard, it is noted that *Fundamentals of Fire Fighter Skills and Hazardous Materials Response, supra* at 149, states that if a portable radio is held "perpendicular to the ground with the antenna pointing toward the sky, you will get better transmission and reception. Range and transmission quality also improve if you remove the radio from the radio pocket or belt clip before you use it." Conversely, the fact pattern does not indicate the candidate is having issues receiving transmissions from other crews and Jenkins does not cite any source to support his contention that a low battery is more likely to be an issue than the radio being held incorrectly. As to Funk's arguments, while Funk is correct that a question on the 2021 examination had low battery as the keyed response to a question about a primary search crew's radio breaking up in transmission, a key reason why low battery was considered the best response to that prior question was that the other options were wrong, including an inaccurate statement that the radio being held perpendicular was causing poor reception. Thus, the fact that low battery was the correct response to the 2021 examination question cited by Funk does not mean that the keyed response was an inferior option here. Accordingly, Jenkins and Funk have failed to sustain their burdens of proof and their challenges of Question 43 are denied.

Questions 45 through 55 involve a 5:30 a.m. response to a reported alarm activation at a bakery, a single-story taxpayer in the middle of a block of stores, where the candidate, a second-level fire supervisor, will be the incident commander throughout the incident. The interior of the bakery has a high, tin ceiling. There is a suspended sign for the bakery hanging near the entrance on Side A. Upon arrival, the candidate is met by the bakery owner, who states that when she arrived to start her day, she saw smoke building up inside of the store and heard the fire alarm going off. She adds that there should not be anyone inside of the building at this hour, and that when she left last night, there was no indication of a potential fire. The owner also claims to have seen something glowing from inside the kitchen, but has not been inside of the bakery yet.

Question 48 asks what the greatest concern is with the sign on Side A. The keyed response is option a, wall collapse. On appeal, Scott argues that the best response was option c, cable failure, citing *Norman, supra*.

In reply, Corbett and Brannigan, *supra* at 262, states:

> Some walls carry an eccentric load, such as from a projecting sign. This load must be counterbalanced, usually by tying the wall to the interior

> structure. A large abandoned garage with masonry walls and a wood truss roof had a projecting sign; the wall was tied to the roof trusses. The trusses and the roof burned. There were no contents. When the trusses weakened, the sign pulled the wall down . . . The collapse was not anticipated.

The passage goes on to discuss the example of a theater marquee, stating that:

> Eccentric loads like [theater marquees] rely on the cables to carry a large amount of the weight of the sign. Failure of the cables would allow the sign to collapse to the ground.
>
> *Id.* at 263.

Thus, based upon the foregoing, the keyed response was the best response, as a wall collapse would be the most severe consequence that could result from the sign falling. Accordingly, Scott has failed to sustain his burden of proof with respect to Question 48.

Question 55 presents that the candidate has ordered the ladder crew to pull the ceiling to check for fire extension. It then asks the candidate to identify the best method for pulling this ceiling. The keyed response is option c, a Halligan hook to pull each sheet back at the seams. On appeal, Clancy argues that option b, a pike pole to poke through and pull the ceiling down, was the best response because the longer pike pole would allow for safer and more efficient overhaul.

In response, Norman, *supra* at 185-86 states:

> A particularly difficult ceiling to pull is the tin ceiling . . . it provides a great deal of resistance to pull. The sheet metal also resists conventional hooks and pike poles when attempting to poke through it. The most effective method of opening such ceilings is to begin at a seam between the sheets or other openings, such as at a light fixture or around a pipe and then to pull back along the length of each sheet . . . The Halligan hook has proved to be the most efficient tool for this purpose, with its uniquely shaped head allowing you to get a purchase at the edges or seams. At top-floor fires, it is usually easier to push down tin ceilings from the roof than it is to pull from below.

Based upon the foregoing, there is ample support for the keyed response to Question 55 and Clancy's appeal of this question is denied.

Questions 56 through 65 address a reported fire at a 2 ½ story, single family residential property where the candidate, a second-level fire supervisor, will be the

incident commander throughout the incident. The house sits on a slope, with a finished below-grade area under the house that has more than half its height above grade. The below grade area contains an entertainment room, bathroom, laundry room, and an exercise room, and is accessible via a 2-car garage on Side B and interior stairs. The prompt advises that the candidate can see smoke rising from the garage doors on Side B.

Question 59 indicates that as the crew makes entry into the garage, they see a car that is fully involved. It then asks the candidate to identify the greatest concern. The keyed response is option b, that fire can easily flashover in a garage. On appeal, Walczak argues that option c, that the car fuel tank's potential for rupture was the best response, based upon Norman, *supra* at 366, which he avers cites a need to watch for fuel tank rupture in below-grade garages and does not mention the higher risk of flashovers.

In reply, Norman, *supra* at 366, states:

> Cellar and basement garages pose all the dangers of other below-grade fires, plus the additional hazards of motor vehicle storage, fuels, and hazardous chemicals. Being below grade means that the heavier-than-air fuel vapors tend to pool in the structure, looking for sources of ignition. Knock down fires in these areas with a large hose stream from as far away and above grade as possible, and watch for fuel vapor accumulation if a tank ruptures.

It further provides:

> Basement garages present additional hazards associated with the storage of motor vehicles . . . Firefighters encountering a heavily involved vehicle in a below-grade area must remember that the vapors of virtually all motor vehicle fuels are heavier than air, and thus should avoid placing themselves in a low-level pit until after the risk of tank rupture and ignition has been reduced substantially by knocking down the fire from a safe location. Stretch two hoselines to this location and a third line to the first floor."

Here, the Division of Test Development, Analytics and Administration (TDAA) states that as set forth in the narrative, the garage itself was at grade. Thus, it was not considered a basement garage where pooling fuel vapors would be a significant concern. TDAA further observes that because there was no car accident and no damage to the car other than the impinging fire, the danger of the fuel tank rupturing in such a garage is also lessened. Conversely, TDAA advises that the SMEs indicated that flashover would be a significant risk. Based upon the foregoing, the Commission agrees that the keyed response was the best response and finds that Walczak has failed to sustain his burden of proof.

Question 61 asks that while breaking the driver's window and releasing the locking mechanism to rescue an unresponsive adult sitting in the driver's seat of the uninvolved, locked, and running car, what is the best method for protecting the rescue crew. The keyed response is option b, to use a fog nozzle in the garage. On appeal, Jenkins and Walczak argue that the best response was option a, to apply foam operations to the garage. In this regard, Jenkins asserts that a foam blanket would offer better protection than a fog for the type of fire presented in this question. Walczak maintains that Norman, *supra* at 374, indicates that fog streams should be "avoided at all costs" in vent-limited areas and refers to the amount of steam that will be generated. Walczak avers that since there is an unprotected patient who would be steamed alive with a fog pattern, foam application would be the best choice, particularly as it would provide a blanket of protection on the ground in the event of a fuel tank rupture.

In reply, TDAA presents that a panel of SMEs identified the keyed response as the best response to Question 61. In this regard, *Fundamentals of Fire Fighter Skills and Hazardous Materials Response, supra* at 679, provides:

> If a victim is visible in the vehicle, immediate rescue is the priority if it is safe to approach the vehicle. All fire fighters must wear full [personal protective equipment] and [self-contained breathing apparatuses] during this operation. One or more fire fighters should attempt to rapidly remove the victim from the vehicle while another firefighter provides protection with a fog stream.

Conversely, the passage from Norman, *supra*, cited by the appellant refers to cellar fires. Cellars differ from the basement garage involved in Question 61 in several key respects. In particular, cellars are areas with extremely limited ventilation, having more than half of their height below grade, very small or non-existent windows and limited accessibility. Since the subject scenario involves a basement garage with more than half of its height above grade and capable of having an entire wall open (i.e., the garage door) the garage in the scenario is not considered one with extremely limited ventilation. Further, the use of a fog stream to keep the fire away from the car would help to protect both rescuers and the occupant and it would be able to absorb a greater amount of heat when penetrating the flame zone. The SMEs agreed that foam operations would not protect the rescuers and victims as effectively. Accordingly, based upon the foregoing, Jenkins and Walczak have failed to sustain their burdens of proof with respect to Question 61 and the keyed response is affirmed.

Question 64 asks what the best action to take is before overhauling the car. The keyed response is option c, to allow steam and smoke to dissipate. On appeal, Clancy and Jenkins argue that option d, to remove the car from the garage, was the best response. In this regard, Clancy contends that the keyed response conflicts with Question 22, which indicated that the first action to take when overhauling and

opening up a couch from a residential fire was to remove the couch from the house. Jenkins maintains that removing the car from the garage was the safest move.

In reply, *Fundamentals of Fire Fighter Skills and Hazardous Materials Response, supra* at 687 advises that with the overhaul of vehicle fires, "[a]fter all visible fire has been knocked down, allow a few minutes for the steam and smoke to dissipate before starting overhaul. This delay will allow visibility to improve so that overhaul can be completed safely." TDAA draws a distinction from Question 22, presenting that even if the car was to be removed during overhaul, the crew would still be expected to allow steam and smoke to dissipate, as it would be hard to see the car in the garage and safely remove it before this occurs. Further, removing the car first could also affect the fire investigation. Based upon the foregoing, the keyed response was the best response to Question 64 and it finds that Clancy and Jenkins have failed to sustain their burdens of proof with respect to this question.

Questions 66 through 75 present a scenario involving a response to a fire alarm at a library, where the candidate, the second-level supervisor of the first arriving engine company, will be the incident commander until Battalion 2 arrives. The lower floor of the library is 8 feet tall and completely below-grade.

Question 67 asks what the lower floor of the building will be called at this incident. The keyed response is option c, the cellar division. On appeal, Jenkins argues that option d, basement division, was the correct response because a basement has at least 50 percent of its area below and the photo indicates that was the case with the library building.

In reply, Norman, *supra* at 349, states that a "basement is an area that has at least 50% of its height above the adjacent grade. A cellar is an area that has more than 50% of its height below the adjacent grade." Here, because the prompt clearly indicated that the entirety of the lower floor was below grade, the keyed response of "cellar division" was the correct term. Accordingly, Jenkins' appeal of Question 67 is denied.

Question 70 presents that the candidate has just finished giving dispatch their first progress report at the 10-minute mark. It then asks if dispatch does not hear from the candidate when the next progress report is due, what is the maximum amount of time that dispatch will wait before requesting the next progress report. The keyed response is option d, 15 minutes. Jenkins selected option c, 10 minutes. On appeal, he presents that pursuant to the New Jersey Fire Incident Management System, a progress report must be given every 10 to 15 minutes.

In reply, as alluded to by Jenkins, New Jersey Division of Fire Safety, *Model Fire Department Incident Management Standard Operating Guides - Booklet 9* at 30 (Dec. 2023) states that "[a] progress report should be given from the emergency scene

to Dispatch at least every ten to fifteen minutes. This report shall include the current situation and status. Dispatch should request a progress report if no updates have been given within fifteen minutes" Here, since Question 70 asked for the *maximum* amount of time dispatch will wait before the next progress report, the keyed response was correct and Jenkins' appeal of Question 70 is without merit.

Question 71 indicates that the fire has begun to spread into the main floor and that the candidate has ordered the ladder crew to perform vertical ventilation over the fire. As the crew steps onto the roof, they report that it feels springy. It then asks whether it is safe to ventilate this roof. The keyed response is option b, yes, that it is a sign of an inverted roof, which will remain stable under fire conditions. On appeal, Jenkins argues that option c, that the firefighters should not ventilate the roof and should vacate it as a sign of imminent roof collapse, was the correct response.

In response, Norman, *supra* at 254-55 states that it is normal for an inverted roof to have a very definite springy feel, that it should not be taken as a sign of impeding failure, that an "inverted roof is relatively stable under fire conditions, for while it is supported on lightweight frameworks (2 x 4s), the frame is designed so that each portion rests directly on a support leading to the main joists at the ceiling level" and that "[c]utting an inverted roof should proceed in the same way as cutting a standard roof." Thus, there is ample support for the keyed response to Question 71 and Jenkins has failed to sustain his burden of proof with respect to this question.

Question 72 advises that Battalion 2 has arrived on scene and that the candidate is transferring command. It then asks which listed piece of information will not be included in the candidate's situation and status reports. The keyed response is option d, conditions upon the candidate's arrival. On appeal, Jenkins argues that option a, "command or staff assignments," was the best response, as he maintains that conditions on arrival should be shared.

In reply, *Model Fire Department Incident Management Standard Operating Guides - Booklet 9* at 7 states that situation and status reports must include the following items: an overview of the situation; a description of the strategy and of the tactics employed to carry it out; assignments of resources on scene including command or staff assignments; suggested courses of action and contingency plans; major safety concerns; and a joint review of the ICS 201 form, where applicable. Since option a was not among the listed items from that source and Jenkins does not provide support for his contention, he has failed to sustain his burden of proof and the keyed response to Question 72 is affirmed.

Question 73 states that when the candidate rejoins their crew, the candidate is sent into the building with a thermal imaging camera (TIC) to check for fire extension into the main floor. It then asks for the best way to check for extension. The keyed response is option c, to point the TIC at the ceiling and to sweep the camera

side to side along the ceiling level. On appeal, Jenkins argues that option a, to hold the TIC eye level and sweep the camera up the wall from the bottom to top, was the best response, while Velez avers that option d, to hold the TIC at eye level and to sweep the camera side to side along the wall, was the best answer. Specifically, Jenkins proffers that because the fire was below, it was best to start low and work upwards, checking for heat. Velez contends that the TIC would be used to sweep the entire area, ceilings and walls, not just the ceiling, and that because the scenario involves a library with fire that could spread to books, it is better to sweep the entire area.

In response, Norman, *supra* at 273, advises that it is good to get into the habit of performing a "Z-pattern sweep, directing the camera from side to side along the ceiling level, looking for signs of fire traveling overhead, then dropping down to eye level and again sweeping from side to side looking for landmarks such as doors and windows and large pieces of furniture that may be visible" and then to finally "continue down to sweep side to side along the floor and lower levels, which is where the victims are most likely located." Thus, options a and d were incorrect and the keyed response was the best response.

CONCLUSION

A thorough review of the appellants' submissions and the test materials reveals that the appellants' examination scores are amply supported by the record, and the appellants have failed to meet the burden of proof in this matter.

ORDER

Therefore, it is ordered that these appeals be denied.

This is the final administrative determination in this matter. Any further review should be pursued in a judicial forum.

DECISION RENDERED BY THE
CIVIL SERVICE COMMISSION ON
THE 26TH DAY OF FEBRUARY, 2025

Allison Chris Myers

_____

Allison Chris Myers
Chairperson
Civil Service Commission

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