FATALITY INVESTIGATION REPORT

Media Company Grip Falls Down Empty Elevator Shaft

SUMMARY

On the morning of July 27, 2020, a crew started filming a commercial at an unfinished nuclear power plant facility in Western Washington State. The facility was part of a site that had been turned into a multi-purpose business park with offices, training centers, and unfinished facilities that were leased out to be used as filming locations. This facility has been used by many film crews over the years due to its unique visual characteristics.

Shortly after 8:00 p.m., the crew began to wrap up filming for the day. When they returned to their hotel, they realized the grip from their crew was missing.

Two film crew members later discovered the grip at the bottom of an empty elevator shaft where he landed after having suffered an 86-foot fall.

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CONTRIBUTING FACTORS

- Facility hazards not assessed and communicated to workers by employer.
- Inadequate guard on the elevator shaft.
- Low light conditions.
- Not following the safety buddy or check-in system.
- No employer policies or training for crew regarding facility hazards.
- Fall hazards not communicated by facility managers.

RECOMMENDATIONS

Washington State Fatality Assessment and Control Evaluation (FACE) investigators concluded that to protect their workers and themselves from similar hazards film industry employers should:

- Conduct a site safety assessment (SSA) before working in any structures or environments.
- Enforce safe work practices to protect workers from hazards identified in an SSA.
- Develop policies prohibiting workers from entering structures or environments before approval to enter is granted and directions are given about what to do when hazards are encountered.
- Train workers to identify and avoid hazardous areas and follow procedures for safely responding to hazards.

In addition, FACE recommends that facility owners and managers identify the unique hazards at that location and communicate them to facility users through written references and walk around tours, whether the user has previously been on the site or not.
DEFINITIONS

APP         Accident Prevention Program
BCCSA       British Columbia Construction Safety Alliance
DOSH        Division of Occupational Safety and Health
L&I         Washington State Department of Labor & Industries
NIOSH       National Institute for Occupational Safety and Health
OSHA        Occupational Safety and Health Administration
PPE         Personal Protective Equipment
SHARP       Safety & Health Assessment & Research for Prevention Program
SSA         Site Safety Assessment
WA FACE     Washington State Fatality Assessment and Control Evaluation Program

WASHINGTON STATE FACE PROGRAM INFORMATION

The Washington State Fatality Assessment and Control (WA FACE) program is one of many workplace health and safety programs administered by the Washington State Department of Labor & Industries’ Safety & Health & Research for Prevention (SHARP) program. It is a research program designed to identify and study fatal occupational injuries. Under a cooperative agreement with the National Institute for Occupational Safety and Health (NIOSH grant# 5 U60OH008487), WA FACE collects information on occupational fatalities in WA State and targets specific types of fatalities for evaluation. WA FACE investigators evaluate information from multiple sources. Findings are summarized in narrative reports that include recommendations for preventing similar events in the future. These recommendations are distributed to employers, workers, and other organizations interested in promoting workplace safety. WA FACE does not determine fault or legal liability associated with a fatal incident. Names of employers, victims and/or witnesses are not included in written investigative reports or other databases to protect the confidentiality of those who voluntarily participate in the program.

Additional information regarding the WA FACE program can be obtained from:

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INTRODUCTION

In July of 2020, the Washington State Department of Labor & Industries’ (L&I) Division of Occupational Safety and Health (DOSH) notified the Washington State Fatality Assessment and Control Evaluation (WA FACE) Program of the fatality of a grip who worked for an advertising and marketing company.

Washington State FACE investigators interviewed the DOSH compliance officer who initially inspected the incident in lieu of the employer due to the employer’s choice not to participate. Documents reviewed during the course of this investigation included the DOSH inspection file, the worker’s death certificate, witness interviews, photos, diagrams, and police report.

EMPLOYER

The employer was an advertising and marketing company based outside of Washington State that opened in 2016. They created marketing and social media content for defense and security businesses. They employed photographers, cinematographers, and tactical advisors. The owner was a veteran of the Armed Forces of the United States and most employees were veterans. The employer had signed a one-week lease with the business park and was working with a crew of 20 employees to conduct a photo shoot for various projects. They had previously leased the site for filming.

WORKER INFORMATION

The worker, who was doing the job of a grip on the day of the incident, was 38 years old and worked part-time for the employer. This was the first time he had been at the site for filming. The shoot that day was scheduled from approximately 9 a.m. until 9 p.m. As a grip, he was responsible for moving, setting up, and using the generator and fog machine to create effects needed for the shots. He was also responsible for organizing, storing, and filing the images and media collected on the film shoot site. He had a bachelor’s degree in photography with approximately 10 years of experience in the field. He was also a veteran of the Armed Forces of the United States.

SAFETY and TRAINING PROGRAMS

The employer did not have a written safety program. Because the employer was engaged in business in Washington State and had employees, they were required to have a formal, written Accident Prevention Program (APP) that includes safety and health training programs that are effective in practice. According to interviews with crew members, the employer verbally communicated a few safety policies and practices in the pre-work meeting. These mainly involved the importance of keeping flashlights and headlamps with them and not wandering off alone, however, policies were not formally documented. Crew members were paired as “safety buddies” and instructed to stay together in the facility. The employer said that the facility managers conducted a safety walkthrough with them during their previous visit but not on this one.

EQUIPMENT

The grip was carrying a Honda EU 2000 generator and a fog machine during the filming work and when the incident occurred (see photos 1 and 2). The generator weighed 47 lbs. and the fog machine weighed approximately 13 lbs. for a combined weight of 60 lbs.
Photos 1 and 2: The left photo shows the generator and the photo on the right shows the fog machine the grip was carrying.

WEATHER

The incident happened in the evening around 8:45 p.m. The weather was dry and the temperature at that time was 59 degrees. The sun set at 8:51 p.m.²

INCIDENT SCENE

The worksite was an unfinished nuclear power plant facility within a large industrial business park located in Western Washington State. Due to the character of this site, it had been turned into a multi-purpose business park with offices, training centers, and filming locations. The facility had been used by many film crews over the years due to its unique cinematographic qualities. The particular building this crew was filming in was five stories high and was primarily exposed concrete, as the building had never been completed during the construction phase. The building had no general area or emergency electrical lighting. Lighting in the building, especially in internal structure areas, was available only from user supplied portable light sources or natural light coming in through wall and roof openings. In addition to this facility offering filming opportunities, it was also used as a training location for emergency response groups.

The grip was working with a crew on the fifth floor of the building on the evening of the incident (see diagram 1). The fifth floor had an atrium space with no roof that made it open to natural light. Adjacent to the atrium through a passageway was an interior area with a staircase and an elevator shaft. This interior area had a solid roof and no windows making it closed off from natural light other than the light coming through the passageway from the atrium (see photos 3 and 4). The incident time was estimated at 8:45 p.m., which was six minutes before sunset that evening. The amount of natural light would have been less than what is seen in the photos which were taken in the afternoon.
Photos 3 and 4: The left photo shows the fifth floor opening looking from the atrium with open roof into the interior room with the elevator shaft and stairwell. The elevator shaft was just inside to the right of the opening. The right photo is a view from the interior room out to the atrium. Note that photos were taken in the afternoon following the incident. The natural light would have been lower when the incident occurred at approximately 8:45 p.m. the previous evening.

Diagram 1: Floorplan of fifth floor of building showing area where incident occurred. Incident occurred in grey shaded interior room with no windows or light sources.
INVESTIGATION

On the morning of July 27, 2020, a crew of 20 workers set up and started filming a commercial at an unfinished nuclear power plant facility in Western Washington State at approximately 9 a.m. This was the first day of the planned week of shooting both video and still photos inside and around the facility. The crew was issued flashlights and headlamps and told to always have them within the facility due to areas with no or low light. They were also told to stay with their safety buddies. Some crew members reported being told about trip and fall hazards that may be present. None reported being warned about open elevator shaft hazards.

The crew planned to shoot primarily in one building within the park. The grip’s job was to move the equipment and set it up at shooting locations ahead of the rest of the crew. To do this, he sometimes had to work without his safety buddy. Near the end of the day, the grip was seen moving the equipment. The rest of the crew thought he was going to set up at the location for their final shoot. When they arrived at the location, the grip was not there. Crew members reported that it was not unusual he wasn’t there. They assumed he was packing the equipment in order to return to the hotel and there was another grip on site to do the job.

At approximately 8:15 p.m., the crew wrapped up work for the day and started to go back to their hotel. They had a list of riders designated for each vehicle. The riders in the grip’s vehicle assumed he was in another vehicle. Once everyone had arrived back at the hotel, they realized the grip was missing. Two crew members returned to the facility and met a representative there to see if they could find the grip. The crew members went up to the fifth floor of the building, which was the last place they recalled seeing him working.

When they arrived at the fifth floor of the building they noticed a plywood guard was on the ground in front of an open elevator shaft (see photo 5). The guard was balanced approximately 12 inches off the floor on the frame of a round opening that was added to allow air pressure to equalize between the elevator shaft and the room (see photo 6). The bottom right corner of the guard had a splintered edge that appeared to have happened recently (see photo 7).

Photos 5, 6, and 7: The left photo shows elevator shaft with plywood guard down. The center photo shows the plywood guard resting on the round opening frame built into the guard. The right photo shows bottom right corner of guard with area that appears to have been recently splintered.
One of the crew members walked over to the elevator shaft, looked down inside, and noticed the yellow extension cord and red generator the grip had been using earlier that day. The two crew members then walked down the stairs to the bottom floor elevator landing. One crew member pried the guard from the front of the shaft and observed the grip on his back and unresponsive having apparently suffered a catastrophic fall of 86 feet. At approximately 9:45 p.m. one crew member started life saving measures while the other called for emergency responders. First responders including the local sheriff’s department and the coroner arrived on site. The coroner pronounced him dead at the scene.

There were no witnesses to this incident. The grip was not wearing a headlamp and did not have a flashlight when he was found. Other crew members confirmed that the grip had not been using a headlamp prior to the incident. His headlamp was later found in his hotel room. He was seen carrying the generator and fog machine that had been used in a previous location as he entered into the enclosed room from the atrium area. Several of the crew commented that they did not think anyone would enter the room with the open elevator shaft due to the lack of light. Evidence at the scene provides insight into what might have occurred (see diagram 2).

Diagram 2: Shows the probable path the grip took into the dark interior room.

There are a multiple scenarios about how the grip fell. Either the guard was already down or he removed it. Then he either tripped on the guard and fell or did not realize it was an elevator shaft and stepped in and fell.

Either the guard was already down or the grip removed it from the shaft opening. None of the crew reported seeing or entering the area with the elevator shaft prior to the incident so the position of the guard prior to the incident was unknown. It is likely that the guard was already down because the light was so low it would have been difficult for the grip to see well enough without a headlamp or flashlight to remove it. The guard may have been knocked down by the pressure differential between the elevator shaft and interior room or may have been taken down by other facility users. The guard did have a round opening intended to allow air to flow and pressure to equalize between the shaft and the room. The guard was not permanently affixed to the wall surrounding the shaft but had a plank leaning against it to keep it in place (see photo 8).
The grip’s equipment was found at the bottom of the shaft. This indicates he was likely carrying it when he fell. The lower edge of the guard appears to have been recently splintered which also provides evidence that the grip may have stepped on or gotten snagged on the edge of the guard causing him to trip or lose his balance. On the other hand, the grip may not have recognized the opening beyond the guard was an elevator shaft and stepped into the shaft and fell.

Light measurements were taken inside the room where the incident occurred on the day following the incident. The measurements were taken at a height of 60 inches (5 feet) to simulate the viewing height of an average person and at multiple distances (0, 11, and 22 feet) from the guard. All measurements detected 0 foot-candles (fc) of light. The required minimal acceptable average lighting level to safely conduct tasks in an indoor area is 10 foot-candles. Employers must provide adequate lighting for workers to be able to see nearby objects that may be hazards if general lighting is unavailable.\textsuperscript{3}

\textbf{CAUSE OF DEATH}

According to the coroner’s report, the cause of death was “blunt force trauma to the trunk and head”.

\textbf{CONTRIBUTING FACTORS}

Occupational injuries and fatalities are often the result of one or more contributing factors or key events in a larger sequence of events that ultimately result in the injury or fatality. Washington FACE investigators identified the following as key contributing factors in this incident:

- Facility hazards not assessed and communicated to workers by employer.
- Inadequate guard on the elevator shaft.
- Low light conditions.
- Not following the safety buddy or check-in system.
- No employer policies or training for crew regarding facility hazards.
- Fall hazards not communicated by facility managers.
RECOMMENDATIONS

**Recommendation: Conduct a site safety assessment (SSA) before working in any structures or environments.**

**Discussion:** Employers should conduct an SSA prior to anyone entering to do work to ensure that all structures or environments are assessed and as free of hazards as possible. An SSA is a risk assessment applied to a work environment. It is designed to identify and document any health and safety hazards that may exist at a workplace, along with corrective and protective measures. An SSA is especially important in facilities with low light, no signage, and unknown hazards; when workers will be working alone; and when workers are unfamiliar with or have never been in the facility.

An SSA should be conducted by a trained and qualified person. The trained person should document the results of the SSA in a form. Instructions on how to conduct an SSA and a form are available from the British Columbia Construction Safety Alliance (BCCSA). See [www.ssaform.com/about_site_safety_assessments.php](http://www.ssaform.com/about_site_safety_assessments.php) and APPENDIX A for a copy of the form. It guides users to identify and describe common hazards such as slips/trips/falls and how to best eliminate or control them. Results of the SSA should be communicated to all people on site, not just those doing the work.

A joint facility-employer-crew SSA would have identified the fallen guard and the need to secure it to eliminate that hazard. The need for an SSA is supported by the Washington Administrative Code (WAC), which states that employers must prohibit employees from entering, or being in, any workplace that is not safe.

**Recommendation: Enforce safe work practices to protect workers from hazards identified in an SSA.**

**Discussion:** During a previous film project, the employer and facility managers had conducted an SSA walkthrough of the facility with the crew and identified many of the hazards that the crew might encounter during filming while on site. An SSA walkthrough was not done prior to this project even though some crew members, including the grip who fell, were not the same as those on the first project. The employer did implement safe work practices in response to hazards that were identified during the first visit, but the practices were not fully enforced.

The employer should have enforced the use of flashlights and headlamps for working in low light areas of the facility. The need to wear headlamps was mentioned by the employer at the morning briefing and according to crew interviews, the employer provided headlamps for all workers. The grip did not have a flashlight or headlamp with him at the time of the fall. This may have been remedied if the employer had designated a staff member to monitor and enforce the use of flashlights and headlamps by the crew.

The employer should also have enforced the safety buddy system in a way that required buddies to stay together. The practice of one grip moving ahead of the crew in order to set up a shot and save time undermined the safety buddy system. The employer should have enforced that the grips and other workers prioritize the buddy system over getting more shots completed. Other workers reported seeing the grip proceed to the next location alone. This should have prompted the crew to stop the grip and ensure he follow the buddy system.

Another practice the employer should have enforced is the crew check-in system. The employer implemented a vehicle sign-up system but it was not monitored or enforced. The vehicle the grip was assigned to returned to the hotel without him. It was not until after the crew returned that they noticed the grip was not at the hotel. Had the sign-up system been enforced, a search and rescue effort could have been started before the crew left the facility.
Recommendation: Develop policies prohibiting workers from entering structures or environments before approval to enter is granted and directions are given about what to do when hazards are encountered.

Discussion: This employer and those who do similar work in facilities should develop written policies that prohibit workers from entering unfamiliar and potentially hazardous structures and environments. Workers should be prohibited from entering until the employer and the crew are made aware of the hazards, how to avoid those hazards, and permission to enter is granted by the employer.

During the morning briefing to the crew, the employer verbally emphasized the hazards of the low light conditions in the facility but had no APP or specific personal protective equipment (PPE) policies in place. The employer should have had a policy prohibiting workers from entering areas of the facility with low or no light. The employer also should have had a policy for workers not to enter structures or environments without the appropriate PPE.

In this incident, if the employer had policies directing workers not to enter low light or unfamiliar areas, it should have reminded the grip not to enter the dark room and to avoid the elevator shaft. Policies should have also included how and when to report identified hazards to the employer and other workers.

Recommendation: Train workers to identify and avoid hazardous areas and follow procedures for safely responding to hazards.

Discussion: After policies are developed, employers should train workers on those policies and the specific procedures they should follow in real-life situations. Simply informing workers that policies exist is not always effective at keeping them safe. Some training techniques that work well for identifying hazards include safety training videos, real-life injured worker stories, and spot the hazard and role-playing scenarios. These techniques work well in group settings, especially among crews who work together.

After workers are acquainted with policies and have undergone training, it is important for employers to regularly reinforce policies. Reinforcement can be done in refresher trainings and is especially important before sending workers into an unfamiliar and potentially hazardous environment for the first time.

The grip either did not see the guard because it was dark and tripped and fell into the shaft or he removed the guard from the opening and was attempting to investigate the shaft and fell. Situations such as these should have been anticipated by the employer and strictly prohibited by policy and supported with training. The policy and training should have been to avoid the guard if it were already down and not to interfere with it if it were still in place. This policy is supported by the Washington Administrative Code (WAC), which states that employees must not interfere with the use of any safeguard in the workplace.5

In addition, FACE recommends that facility owners and managers identify the unique hazards at their location and communicate them to facility users through written references and walk around tours, whether the user has previously been on the site or not.

The lease agreement included a written waiver of liability. The waiver contains a section that describes general site dangers and releases the owner from the responsibility of all risks inherent when filming on the site. It further states that the site was not constructed for public or recreational use and may have tripping hazards, falling objects, limited visibility, and other hazards.

Despite the waiver, facility owners and managers should play an active role in communicating and demonstrating the known general and specific hazards to users and monitoring for any new hazards that may arise. The facility manager stated that they were not aware that the elevator shaft guard was down. The downed guard may have been noticed and
replaced had the managers done a safety walkthrough with the employer and crew at the beginning of the day. In addition, the manager should have verbally emphasized to the employer and crew that some interior areas of the facility are dark even during daylight hours and that hazards such as open shafts and stairwells may be present.
APPENDIX A. Site Safety Assessment (SSA) Form

### SITE SAFETY ASSESSMENT

**Job Name:**

**Address:**

**Year Built:**

**Risk Classifications**

<table>
<thead>
<tr>
<th>Low (Green)</th>
<th>Moderate (Yellow)</th>
<th>High (Red)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Communicate to workers</td>
<td>Eliminate the hazard</td>
<td>Isolate/safe guard hazard</td>
</tr>
<tr>
<td>Safe work procedures</td>
<td>Personal protective equip.</td>
<td></td>
</tr>
</tbody>
</table>

**Controls Required**

| Boxes should be filled in by RISK CLASSIFICATION and then CONTROL NUMBER(4) by Example: M 2 |
|-------------------------------|-------------------------------|
| Holes in floor | Work above 25' | Low lighting | Site cluttered | Loose step covering |
| Railing missing | Ladders | Roof lighting | Site cluttered |
| Work above 10' | Stairway | Loose step covering | Watch your step.|

**Slip/Trip/Fall Hazard**

**Physical Hazard**

| Structure unsafe | Prying debris | Razor knife | Animal related |
| Floor unsafe | Sharp objects | Forceful pushing | Traffic |
| Ceiling unsafe | Ventilation | Awkward lifting | Extreme heat/cold |
| Falling object | Power tools | Heavy lifting |

**Mechanical Hazard**

| Crushing/cutting | Mobile equipment | Overhead lines |
| Crushing/failing | Pressure lines | Overhead wires |
| Falling objects | Underground electrical lines | Concealed wires |

**Electrical Hazard**

| Exposed electrical panels | Exposed/bare wires | Overhead lines |
| Underground wires/conduits | Water/wet areas | Overhead wires |
| Energized equipment | Pilot lights | Concealed wires |

**Chemical Hazard**

| Flammables | Cleaning products | Hazardous gases |
| Acids | Hazardous Atmosphere | Unidentified chemicals |
| Alkalies | Smoke/fire | Non-combustible |
| Natural gas/oil | Volatile organic compounds (VOCs) |

**Hazardous Materials**

| Asbestos | Mold/Fungi | PCB's |
| Lead | Mercury | CFC's |
| Toluene | Animal droppings | Radioactive materials |
| Silica | Waste | Haz Mat Survey Conducted? |

**Confined Space Hazard**

- **Yes**
- **No**

- **Does the space have limited or restricted means for entry or exit that may complicate emergency response service?**
- **Is the space enclosed or partially enclosed?**
- **Is the space large enough and configured in such a way that a person could enter to perform work?**
- **Is the space not designed or not intended for continuous human occupancy?**

**Check Box Of Required Personal Protective Equipment On This Site**

- **Yes**
- **No**

**Site Safety Assessment Meeting - Safety Hazard Discussion**

**PRINT NAMES OF ATTENDEES**

- **Date:**
- **Time:** AM / PM

**Form completed by:**

- **Date:**
- **Time:** AM / PM

**Form reviewed by:**

- **Date:**
- **Time:** AM / PM
REFERENCES

1. Accident Prevention Program
2. Weather Underground
   www.wunderground.com/history/daily/us/wa/seatac/KSEA/date/2020-6-27
3. Safety and Health Core Rules: Provide and maintain adequate lighting, WAC 296-800-21005
   www.app.leg.wa.gov/wac/default.aspx?cite=296-800-21005
4. Employer responsibilities: Safe workplace, WAC 296-800-11015
   www.apps.leg.wa.gov/wac/default.aspx?cite=296-800-11015
5. Safety and Health Core Rules: Employee responsibilities, WAC 296-800-12005
   www.app.leg.wa.gov/wac/default.aspx?cite=296-800-12005

INVESTIGATOR INFORMATION

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Paul Karolczyk has a PhD from Louisiana State University. He is a Safety and Health Specialist with the WA FACE Program.

ACKNOWLEDGMENTS

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- Federal FACE Program management (NIOSH)
- Safety & Health Assessment & Research for Prevention (SHARP)

DISCLAIMER

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