



UNITED STATES OF AMERICA
OCCUPATIONAL SAFETY AND HEALTH REVIEW COMMISSION
1924 Building – Room 2R90, 100 Alabama Street, S.W.
Atlanta, Georgia 30303-3104

Secretary of Labor,

Complainant

v.

SeaWorld of Florida, LLC,

Respondent.

OSHRC Docket No. **10-1705**

Appearances:

John A. Black, Esquire and Tremelle Howard-Fishburne, Esquire
Office of the Solicitor, U.S. Department of Labor, Atlanta, Georgia
For Complainant

Carla J. Gunnin Stone, Esquire
Constangy, Brooks & Smith, LLC, Atlanta, Georgia
For Respondent

Karen C. Dyer, Esquire and Jon L. Mills, Esquire
Boies, Schiller & Flexner, LLP, Orlando, Florida
For Intervenor

Before: Administrative Law Judge Ken S. Welsch

DECISION AND ORDER

SeaWorld of Florida, LLC, is a marine animal theme park in Orlando, Florida. Although it features several different species of animals, killer whales are SeaWorld's signature attraction. The killer whales perform in shows before audiences at Shamu Stadium.

On February 24, 2010, SeaWorld trainer Dawn Brancheau was interacting with Tilikum, a 29 year-old male killer whale, in a pool at Shamu Stadium. Ms. Brancheau reclined on a platform located just a few inches below the surface of the water. Tilikum was supposed to mimic her behavior by rolling over onto his back. Instead, Tilikum grabbed Ms. Brancheau and pulled her off the platform and into the pool. Ms. Brancheau died as a result of Tilikum's actions.

In response to media reports of Ms. Brancheau's death, Occupational Safety and Health Administration (OSHA) compliance officer Lara Padgett conducted an inspection of SeaWorld. Based on Ms. Padgett's inspection, the Secretary issued three citations to SeaWorld on August 23, 2010.

Citation No. 1 alleges a serious violation of 29 C. F. R. § 1910.23(d)(1), for failing to equip two stairways with standard stair railings on each side of the stairways. The Secretary proposed a penalty of \$ 5,000.00 for this item. Citation No. 2 alleges two instances of a willful violation of the general duty clause, § 5(a)(1) of the Occupational Safety and Health Act of 1970 (Act), 29 U. S. C. §§ 651-678, for exposing animal trainers to struck-by and drowning hazards when working with killer whales during performances. The Secretary proposed a penalty of \$ 70,000.00 for this item. At the hearing, the Secretary withdrew Citation No. 3, which alleged an other than serious violation of 29 C. F. R. § 1910.305(j)(2)(v), for failing to enclose outdoor electrical receptacles (Tr. 1232).

SeaWorld timely contested the citations. The court held a nine-day hearing in this matter in Sanford, Florida, from September 19 to 23, 2011, and from November 15 to 18, 2011. SeaWorld stipulates the Commission has jurisdiction over this proceeding under § 10(c) of the Act, and that it is a covered business under § 3(5) of the Act (Tr. 7). The Secretary and SeaWorld have each filed a post-hearing brief.¹

SeaWorld denies it violated § 1923(d)(1), cited in Citation No. 1. With respect to Citation No. 2, SeaWorld argues that the Secretary failed to establish the conditions at Orlando's Shamu Stadium created a recognized hazard to the trainers working with the killer whales during performances. SeaWorld also argues the Secretary failed to offer a feasible abatement for the alleged recognized hazard. In the event the court finds the Secretary established a violation of § 5(a)(1), SeaWorld contends that the violation was not willful.

For the reasons discussed below, the court affirms Item 1 of Citation No. 1, and assesses a penalty of \$ 5,000.00. The court affirms as serious Instances (a) and (b) of Item 1 of Citation No. 2,

¹ The court allowed a limited intervention on the part of Scott Brancheau, Marion Loverde, Charles Loverde, and Deborah Frogameni (respectively, husband, mother, brother, and sister of Dawn Brancheau) in the interest of protecting the surviving family's right to privacy. Specifically, the intervenors sought to prevent the public disclosure of certain videotapes and photographs showing the death of Dawn Brancheau and its aftermath. Counsel for the intervenors attended the hearing, but did not present evidence or examine witnesses. The intervenors have not filed a post-hearing brief.

and assesses a penalty of \$ 7,000.00.

Background

The first SeaWorld opened in 1964 in San Diego, California. Following its success, the original owners opened a second SeaWorld (since closed) in Aurora, Ohio. In 1973, they opened respondent's facility, Sea World of Florida, LLC, in Orlando, Florida. The owners sold the parks to Harcourt Brace Jovanovich (HBJ) in 1976. In 1988, HBJ opened Sea World of Texas in San Antonio, Texas. HBJ sold its parks in 1989 to Busch Entertainment Corporation, a division of Anheuser Busch. In 2009, the Blackstone Group bought Busch Entertainment Corporation and renamed it SeaWorld Parks & Entertainment. SeaWorld Parks and Entertainment is headquartered in Orlando, Florida (Tr. 570-571). The logo for all of SeaWorld's parks is a stylized killer whale.

Killer whales (*Orcinus orca*) are large aquatic mammals of the order Cetacea. Cetaceans are mammals well-suited to aquatic life, including whales, dolphins, and porpoises. Killer whales are found in all oceans of the world. They live in long-term social groups, called pods. Killer whales are highly intelligent and their social system is organized in a complex, female-dominant hierarchy. Killer whales are "apex predators," at the top of the food chain. They are called killer whales because they prey on other, larger whales, as well as other marine animals. Killer whales are not known to prey on humans in the wild (Exh. C-12; Tr. 843).

Kelly Flaherty Clark began working for SeaWorld of Ohio² in 1987 after graduating from Ohio State University with a degree in Animal Science (Tr. 134, 1509). Later she transferred to the Orlando park. At the time of the hearing, Ms. Flaherty Clark was the curator of animal training at SeaWorld (Tr. 33). As curator, Ms. Flaherty Clark oversees the trainers in four animal training programs: the Animal Ambassadors (made up of trainers who take trained animals to visit children in schools and hospitals, among other community appearances), the Sea Lion and Otter Stadium trainers, the Whale and Dolphin Stadium trainers, and the Shamu Stadium trainers (Tr. 34). Approximately 27 trainers work at SeaWorld (Tr. 38).

Shamu Stadium

Each SeaWorld park features a Shamu Stadium (Shamu was the name of the first killer whale

² In this Decision, the court will refer to respondent SeaWorld of Florida, LLC, as "SeaWorld." When referring to SeaWorld Parks & Entertainment or to one of the other SeaWorld parks, the court will use its full name.

acquired by SeaWorld of California) where the killer whales perform. Shamu Stadium is a large complex of pools, connected by gates, which house the killer whales. Some of the pools are open and visible to the general public, while others are enclosed and accessible only to SeaWorld personnel (Exh. C-2; Tr. 214). At the time of the hearing, SeaWorld was home to seven killer whales. (SeaWorld of California and SeaWorld of Texas each kept six killer whales. In addition, SeaWorld Parks & Entertainment had leased five killer whales to Loro Parque in Tenerife, Spain (in the Canary Islands), and one killer whale to MarineLand in Niagara Falls, Ontario, Canada.) (Tr. 38-39).

Tilikum has been at SeaWorld's Orlando park since 1992, and is one of its star attractions. The average adult killer whale at SeaWorld weighs approximately 6,000 pounds and is approximately 17 feet long. Tilikum weighs approximately 12,000 pounds and is approximately 22 feet long (Exh. C-7). He is approximately 8 feet tall (Tr. 600). Tilikum is the largest killer whale in the collection of SeaWorld Parks & Entertainment.

SeaWorld's Training of the Trainers

Newly-hired employees hoping to work with killer whales may wait years before achieving their goal. SeaWorld observes a strict hierarchy, under which employees must work their way up to a position where they are allowed to interact with a killer whale or whales. Ms. Flaherty Clark explained SeaWorld's training program:

When [prospective trainers] come to the stadium, the first thing we do is we teach people how to move about the stadium, we show them where our protocols are, and they are assigned a mentor from the very beginning, and the mentor is somebody who has been training killer whales for at least eight or nine years. . .

Before a trainer ever approaches a pool with a killer whale, they have learned a lot about behavior, they have learned about killer whale natural history, they have learned about how to walk about the area on the different surfaces that we have, they have learned about how you carry buckets, and that's all before approaching within ten feet of the pool.

(Tr. 85-86).

The mentor uses a check-off sheet to track the new trainer's progress. At this level the new trainer is referred to as an associate trainer. The mentor records the training documents read by the

associate trainer and constantly assesses the associate trainer's skill level. The associate trainers shadow various activity sessions. After eighteen months to two years, an associate trainer may advance to the trainer level, at which point he or she may experience the first close interaction with a killer whale (Tr. 87). Ms. Flaherty Clark defined a "close interaction" as "anywhere within five feet of the killer whale," and distinguished it from a "tactile interaction," during which a trainer may actually touch a killer whale (Tr. 88). Once a trainer advances to the senior trainer level, the senior trainer may have limited tactile interactions with designated killer whales. The highest non-management level in SeaWorld's hierarchy is senior trainer 1 (Exh. C-1, Section IX).

Ms. Flaherty Clark emphasized only more experienced trainers are allowed to proceed beyond a close interaction: "[T]he closer you're going to be getting to the killer whale, the more decisions you're going to be making with the killer whale, more training is poured into you. And, you won't be the person poolside making decisions, behavioral decisions with the killer whale until you've been interacting with killer whales for more than three years" (Tr. 88). Advances in trainer levels are approved by SeaWorld's behavior review committee. The committee reviews and approves individual trainers for different interactions with the animals, and also approves the animals for certain interactions (Tr. 299).

Any interaction a SeaWorld trainer has with a killer whale where the water is higher than knee-deep on the trainer is considered "waterwork." Waterwork often requires the trainer to be immersed in the pool with the killer whale. "Drywork," which is something of a misnomer, is any interaction a trainer has with a killer whale where the water is less than knee-deep on the trainer. During drywork a trainer may be completely out of the water, standing on the side of the pool. Drywork also includes interactions during which the trainer is on one of the slideout platforms located beneath the surface of the pool. Ms. Brancheau was engaged in drywork with Tilikum when she was lying down on the slideout, in several inches of water on February 24, 2010 (Tr. 124, 128).

SeaWorld's Training of the Killer Whales

The foundation of SeaWorld's training of the killer whales is operant conditioning. SeaWorld uses positive reinforcement to modify the killer whales' behavior, increasing the frequency of desirable behavior and decreasing the frequency of undesirable behavior (Tr. 128-129). Trainers reinforce desirable behavior by rewarding killer whales with food (fish, Jell-O, ice),

physical rubdowns, or other activities the trainers believe the whales enjoy.³ When a killer whale engages in an undesirable behavior, the trainer ignores the behavior. In operant conditioning terms, this neutral response is referred to as a “least reinforcing scenario” (LRS) (Tr. 402).

SeaWorld uses a technique called water desensitization, or de-sense, to acclimate the killer whales to the trainers’ presence in the pools with them. SeaWorld’s goal is to train killer whales to ignore trainers unless a trainer signals them to interact for a specific learned behavior. Ms. Flaherty Clark testified:

When we’re first introducing ourselves to the animals in the water, we first train them to ignore us, to completely ignore us. No matter how much activity is going on in the pool, concentrate on the trainer, the trainer has control of you, or on the behavior you have been asked to do. And one of those behaviors is a perimeter swim. . .

[W]e would start with a whale swimming past us and just ignoring us. We’re not in the water at all, or on the surface of the pool. We’re on a flat surface, and then we might go into ankle-deep water, and we would get a lot of reinforcement activity into them, not interacting with us, swimming past us.

And, as we progress, we’re in the water with them, and then we’re trying to swim with them, and then we’re trying to distract them, and they’re still maintaining that perimeter. Then we’re going out to the middle of the pool and maintaining that perimeter. So they’re desensitized and we continue.

(Tr. 126-127).

Not all killer whales are amenable to water desensitization. Prior to Ms. Brancheau’s death, management personnel in the SeaWorld parks had determined that trainers should not perform waterwork with certain killer whales. SeaWorld of California suspended waterwork with killer whales Kasatka and Orkid in 2006, following incidents in which they were aggressive towards trainers (Tr. 159).

³ The witnesses tried to avoid assigning emotions to the killer whales, or asserting that they knew what the whales were thinking in any given set of circumstances. Under SeaWorld’s behaviorist model, SeaWorld’s employees focus on behavior only. “[I]nternal states, thoughts, perceptions, emotions, all those things that are unobservable are not useful” (Exh. C-12, p. 5, *Report of D. A. Duffus, Ph.D.*) Nevertheless, witnesses often spoke of the killer whales enjoying certain activities or becoming frustrated in certain circumstances. Jeffrey Andrews, SeaWorld’s expert witness, stated, “Sometimes it’s okay to be anthropomorphic. We try our best to avoid being anthropomorphic for fear of scrutiny. . . . [T]here are more and more studies that are being done nowadays that are looking into the deeper emotions of animals” (Tr. 1656).

SeaWorld did not allow trainers to engage in waterwork with Tilikum, but it did attempt a modified water desensitization with him. Ms. Flaherty Clark explained that senior trainers were performing “limited exposure waterwork with Tilikum” under controlled circumstances:

We wanted rehearsal of Tilikum moving away from somebody in the water. We wanted a reinforcement history attached with leaving a person in the water because we understood the reinforcement history to be that he had had in his life two interactions where there was a person in the water with him. Neither one of those interactions turned out favorably. So, being responsible and safety conscious, we wanted to establish a reinforcement history with leaving a person. So, we asked Tilikum to come into a pool that is in a restricted area.

We raised the floor of the pool. We had the capability of raising the floor up to where he was incapable of swimming but capable of moving, and we had trainers point him away, we had trainers calling him away[.]

(Tr. 153). Despite these training sessions, SeaWorld did not consider Tilikum to be water desensitized (Tr. 173).

Although SeaWorld trains the killer whales to respond appropriately to the trainers’ signals, the company places the burden on the trainers to anticipate inappropriate responses. Ms. Flaherty Clark testified, “We put a lot of training into the individuals, we put a lot of training into them before they are ever going to have an interaction with the killer whales. My expectation is that they will be able to recognize any kind of precursor to an unwanted killer whale behavior” (Tr. 116).

A precursor is a behavior that indicates a predictable behavior will happen next (Tr. 142). Precursors that indicate killer whales may engage in aggressive behavior include putting their heads down, avoiding eye contact with their trainers, opening their eyes wider, vocalizing, opening their mouths towards another animal, turning sideways, pulling away from the trainer, arching their backs, slapping their tails or their pectoral flippers, and changing the pace or the rotation of their approaches (Tr. 145).

Killer Whale Activities

SeaWorld uses an acronym, “HELPRS,” to distinguish six discrete activities during which trainers interact with the killer whales. SeaWorld labels the six activities as:

- H--Husbandry
- E--Exercise

- L--Learning
- P--Play
- R--Relationship
- S—Show

(Tr. 390-391).

“Show” refers to show performances (the only one of the six activities that is at issue in this case). As SeaWorld’s HELPRS acronym indicates, the performances account for only a small portion of the daily interactions between the trainers and the killer whales. “Exercise” and “play” are self-explanatory. “Husbandry” includes feeding and medical care, such as daily tooth flushing and collecting of urine samples (trainers assist SeaWorld’s veterinarians in obtaining samples and performing procedures) (Exh. R-2, § V). “Learning” represents the training sessions, both for show and non-show behaviors, through the use of operant conditioning. “Relationship” indicates techniques used to strengthen the bond between the trainer and killer whale.

Jennifer Mairot is SeaWorld’s supervisor of animal training at Shamu Stadium (Tr. 1265). She testified the number of daily performances varies, but generally a killer whale will perform from two to seven shows a day. Each show lasts approximately 30 minutes (Tr. 1433). The time during which trainers are in contact with killer whales during performances ranges from one to three and a half hours each day. The trainers spend much more time during the day interacting with the killer whales during other activities.

Death of Dawn Brancheau

On February 24, 2010, SeaWorld trainers Dawn Brancheau, John (“Jay”) Topeleski, and Lynne Schaber were working with Tilikum during a performance in the G Pool called “Dine with Shamu.” Seating for “Dine with Shamu” is at the open-air Cove Restaurant, where customers can eat at tables while watching the performance (Tr. 217-218). The trainers would have the killer whale or whales perform certain behaviors, and afterward customers could go downstairs and photograph or film the whale or whales below the surface of the G Pool through an underwater window (the customers attending the “Dine with Shamu” show were not necessarily the same customers who photographed the whales afterwards downstairs, which was a separate event) (Tr. 743).

Ms. Brancheau, a senior trainer 1, walked into the G Pool on an underwater platform called a

slideout, which lay several inches (about ankle deep) below the water. Ms. Brancheau performed a behavior called a lay out mimic. She lay on her back, parallel to Tilikum, with her head near his head. Tilikum was supposed to mimic Ms. Brancheau and roll onto his back. Tilikum grabbed Brancheau and pulled her into the pool (Tr. 745).

SeaWorld repeatedly states in its post-hearing brief that Tilikum grabbed Ms. Brancheau by her ponytail. This was not established as a fact at the hearing, and it is in dispute. One witness, spotter John Topoleski, testified he saw Ms. Brancheau get up on her knees and put her hands to her ponytail: “She could not break free. She had both hands on her pony tail being pulled toward the water” (Tr. 745-746).

Another witness, however, testified Tilikum grabbed Ms. Brancheau by her arm and not her hair. Fredy Herrera was working as a security officer for SeaWorld during the Dine with Shamu show. Mr. Herrera testified he saw Tilikum grab Ms. Brancheau’s arm and pull her into the water (Tr. 247). On cross-examination, counsel for SeaWorld questioned Mr. Herrera’s observation. Mr. Herrera, who still worked for SeaWorld at the time of the hearing, stated, “From my angle, I saw her left arm go into the water as the whale started descending into the water. So, I’m not sure if he grabbed her arm or her hair, I don’t know, but I saw her arm do like a left hand signal going into the water” (Tr. 249). Mr. Herrera, a former police officer, provided a written statement to the Orlando Police Department within an hour of Ms. Brancheau’s death. In his statement, Mr. Herrera wrote that he observed Tilikum grab Ms. Brancheau’s arm and pull her into the water (Tr. 251-253).

Mr. Topoleski hit an alarm to alert other personnel of the emergency situation (Tr. 746). He also activated a call-back tone, which is an underwater signal SeaWorld uses in its training. SeaWorld trains the killer whales to swim to a certain area of the pool when they hear the tone. Tilikum did not respond to the call-back tone, nor did he respond to the trainers slapping the water, another technique SeaWorld uses to redirect the killer whales. Eventually SeaWorld trainers were able to coerce Tilikum into the smaller medical pool. Emergency personnel were then able to retrieve Ms. Brancheau’s body from the G Pool. She had sustained grievous injuries. Tilikum had kept Ms. Brancheau in the G Pool for approximately 45 minutes (Tr. 756).

At the hearing, SeaWorld’s employees repeatedly stated that Tilikum exhibited no precursors that indicated he might engage in aggressive behavior, and that Ms. Brancheau correctly followed all

of SeaWorld's protocols during her interaction with him. In response to Ms. Brancheau's death, SeaWorld Parks & Entertainment has suspended water interactions between its trainers and all of its killer whales, except for husbandry activities, in all of its SeaWorld parks (Tr. 78-80). SeaWorld continues to put on shows at Shamu Stadium featuring killer whales (Tr. 82-83).

DISCUSSION

Citation No. 1

The Secretary has the burden of establishing the employer violated the cited standard.

To prove a violation of an OSHA standard, the Secretary must show by a preponderance of the evidence that (1) the cited standard applies; (2) the employer failed to comply with the terms of the cited standard; (3) employees had access to the violative condition; and (4) the cited employer either knew or could have known with the exercise of reasonable diligence of the violative condition.

JPC Group Inc., 22 BNA OSHC 1859, 1861 (No. 05-1907, 2009).

Item 1: Alleged Serious Violation of § 1910.23(d)(1)(iii)

Citation No. 1 alleges SeaWorld violated § 1910.23(d)(1)(iii) in two instances:

29 CFR § 1910.23(d)(1)(iii): Flight(s) of stairs with 4 or more risers, less than 44 inches wide and having both sides open are not equipped with one standard stair railing on each side:

Instance a) Employees were exposed to a 10'3" fall hazard in that, a stairway railing system was not installed on the front side left bridge of the Believe stage in Shamu Stadium.

Instance b) Employees were exposed to a 10' 3" fall hazard in that, a stairway railing system was not installed on the front side right bridge of the Believe stage in Shamu Stadium.

Section 1910.23(d)(1)(iii) provides:

Every flight of stairs having four or more risers shall be equipped with standard stair railings or standard handrails as specified in paragraphs (d)(1)(i) through (v) of this section, the width of the stair to be measured clear of all obstruction except handrails:

...

(iii) On stairways less than 44 inches wide having both sides open, one stair railing on each side.

The A Pool at Shamu Stadium is shaped in a half-circle, with stadium seats located along the curved side and the Believe stage located along the straight edge. At each end of the Believe stage is a pool gate leading to the B Pool. Bridges with stairways on each side arch over the pool gates. Although there are stairway railings on the sides of the stairways closest to the stage, there are no railings on one side of each of the stairways facing the stadium seats. Exhibit C-10 is a set of four photographs showing the cited stairways.

Applicability of the Cited Standard

It is the Secretary's burden to show that the cited standard applies to the cited conditions. The cited standard is found in Subpart D (Walking-Working Surfaces) of OSHA's general industry standards. Section 1910.23 generally covers "Guarding floor and wall openings and holes," and §1910.23(d)(1)(iii) specifically addresses "Stairway railings and guards." The stairways on the bridges each have ten risers, are less than 44 inches wide, and are open on both sides.

SeaWorld argues the cited standard does not apply in this case:

In the walking-working surfaces proposed standard that was issued on May 24, 2010, there is an exception for entertainment stages with regards to guardrails. As stated in proposed section 1910.28(a)(1): "This section does not apply to: Fall hazards presented by the exposed perimeters of entertainment stages."

(SeaWorld's brief, pp. 49-50).

SeaWorld is referring to the *Walking-Working Surfaces and Personal Protective Equipment (Fall Protection Systems); Proposed Rule*, 75 Fed. Reg. 28861-29175 (May 24, 2010). This proposed rule is, as SeaWorld notes, proposed. It has not been enacted. The proposed exemption for entertainment stages is not currently available to employers. Furthermore, the Secretary proposed this rule on May 24, 2010, three months after OSHA began its inspection of SeaWorld.

SeaWorld's contention that the cited standard does not apply to the cited conditions is rejected. Section 1910.23(d)(1)(iii) applies to the stairways cited in Shamu Stadium.

Failure to Comply with the Terms of the Standard

The cited standard requires standard stair railings on the sides of stairways that have four or more risers and that are less than 44 inches wide. Exhibit C-10 shows that the cited stairways each have more than four risers. Ms. Padgett measured the stairways and found them to be less than 44

inches wide. The topmost unguarded steps were 10 feet, 3 inches, above the bridge platforms (Tr. 924). The required stair railings were missing on two of the stairways. The Secretary has established SeaWorld failed to comply with § 1910.23(d)(1)(iii).

Employee Access to Violative Condition

SeaWorld's employees used the stairways on a daily basis. The third photograph of Exhibit C-10 shows two employees ascending the left stairway of the right bridge during a Believe show. At the time of the hearing, Shana Groves was a senior animal trainer with SeaWorld (Tr. 669). Ms. Groves testified that trainers were required to carry buckets of fish, each weighing approximately 30 pounds, up and down the unguarded stairways (Tr. 681-682, 728).

The Secretary has established SeaWorld's employees had access to the unguarded stairways, and were exposed to the resulting fall hazards.

Employer Knowledge

The Secretary must establish SeaWorld had either actual or constructive knowledge of the unguarded stairways. The stairways are located on either side of the main stage in Shamu Stadium, where trainers and killer whales perform before public audiences on a daily basis. The stairways are in open view and are plainly visible to anyone in the stadium (Exh. C-10). At the time of the hearing, Jennifer Mairot was a supervisor of animal training at Shamu Stadium (Tr. 1265). Ms. Mairot worked with five other members of SeaWorld's management team in supervising the animal trainers (Tr. 1268). She testified that a supervisor was present on stage during every performance (Tr. 1278).

The Secretary has established numerous supervisory personnel had constructive knowledge that the cited stairways were missing stair railings. As supervisors, their knowledge is imputed to SeaWorld. *Dover Elevator Co.*, 16 BNA OSHC 1281, 1286 (No. 91-862, 1993) (“[W]hen a supervisory employer has actual or constructive knowledge of the violative conditions, that knowledge is imputed to the employer, and the Secretary satisfies [her] burden of proof without having to demonstrate any inadequacy or defect in the employer's safety program.”) SeaWorld knew the stairways were not equipped with the required stair railings.

Serious Classification

The Secretary has established SeaWorld committed a violation of § 1910.23(d)(1)(iii). She

classified this item as serious. Under § 17(k) of the Act, a violation is serious “if there is a substantial probability that death or serious physical harm could result from” the violative condition.

SeaWorld contends this violation should be classified as *de minimis*. It bases this argument on OSHA’s *Field Operations Manual (FOM)*, which provides in pertinent part:

De minimis conditions are those where an employer has implemented a measure different than one specified in a standard, that has no direct or immediate relationship to safety or health. Whenever de minimis conditions are found during an inspection, they shall be documented in the same manner as violations.

A. Criteria.

...

2. An employer complies with a proposed OSHA standard or amendment or a consensus standard rather than with the standard in effect at the time of the inspection and the employer’s action clearly provides equal or greater employee protection.

FOM, CPL 02-00.148, p. 4-36.

As previously discussed, OSHA has issued a proposed rule exempting entertainment stages from the requirement for guardrails. 75 Fed. Reg. 28861-29175 (May 24, 2010). SeaWorld argues the unguarded stairways on the Believe stage meet the criteria for *de minimis* classification. The court disagrees.

The *FOM* is an internal publication for OSHA personnel. It provides guidelines for compliance officers and other OSHA personnel for conducting inspections and recommending citations. It creates no binding authority and holds no precedent for the Commission. The *FOM* opens with a disclaimer which states, “No duties, rights, or benefits, substantive or procedural, are created or implied by this manual.” CPL 02-00.148. The *FOM*’s guidelines for issuing a *de minimis* violation have no influence on the court’s determination of the appropriate classification for this item.

Assuming the *FOM* did hold sway over the court’s determination, the conditions cited here do not meet the definition for *de minimis* conditions set out in the *FOM*. The *FOM* allows for a *de minimis* classification when the employer’s technical noncompliance with a standard “has no direct or immediate relationship to safety or health.” Here, the absence of the stair railings exposed employees to falls exceeding 10 feet. An examination of the second photograph of Exhibit C-10

shows that an employee falling from the highest step would land either on the hard bridge platform, on the smaller gate structure, or in the pool, possibly in the vicinity of one or more of the killer whales. Serious injuries (including broken bones) or death would likely result from such a fall (Tr. 924).

The Secretary appropriately classified the violation as serious. Item 1 of Citation No. 1 is affirmed.

Citation No. 2

Item 1: Alleged Willful Violation of § 5(a)(1)

The Secretary alleges SeaWorld committed a willful violation of the general duty clause, § 5(a)(1). Item 1 cites two instances of the violation. Instance (a) addresses hazards created when trainers engage in drywork during performances with Tilikum. Instance (b) addresses hazards created when trainers engage in waterwork and drywork during performances with all other killer whales kept at SeaWorld.

Item 1 of Citation No. 2, Instance (a) alleges:

At the Shamu Stadium pools, animal trainers working with Tilikum, a killer whale with known aggressive tendencies and who was involved in the 1991 death of a whale trainer at a marine park in Vancouver, British Columbia, were exposed to struck-by and drowning hazards in that they were allowed unprotected contact with Tilikum while conducting “drywork” performances on pool ledges, slideouts and platforms, on or about 2/24/2010.

Among other methods, one feasible and acceptable means of abatement would be to not allow animal trainers to have any contact with Tilikum unless they are protected by a physical barrier.

Item 1 of Citation No. 2, Instance (b) alleges:

At the Shamu Stadium pools, animal trainers working with killer whales other than Tilikum were exposed to struck-by and drowning hazards in that they were allowed to engage in “waterwork” and “drywork” performances with the killer whales without adequate protection, on or about 2/24/2010.

Among other methods, feasible and acceptable means of abatement would prohibit animal trainers from working with killer whales, including “waterwork” or “dry work,” unless the trainers are protected through the use of physical barriers or through the use of decking systems, oxygen supply systems or other engineering or administrative controls that provide the same or greater level of protection for the

trainers.

Performances

Instances (a) and (b) charge SeaWorld with violating § 5(a)(1) by permitting trainers to work in contact with killer whales during “performances.” In order to establish the cited violation for Instance (a), the Secretary must prove that Tilikum and Ms. Brancheau were interacting during a performance when he seized her on February 24, 2010.

The activity SeaWorld labels “show” is the activity the Secretary labels “performance” in the citation (at the hearing, witnesses sometimes used the term “show performance”). Ms. Flaherty Clark explained SeaWorld’s designation: “A show performance is a series of interactions with animals that are much like any other interactions with our animals. The difference between a show performance with our animals and any other interaction is there is an audience and there’s a sound system” (Tr. 40-41). SeaWorld contends there is no clear demarcation between a performance and other interactions with the killer whales. Ms. Flaherty Clark pointed out that the show performances are not markedly different from the non-show activities:

When it comes to interacting with our killer whales, a show performance is much like everything else that happens in the stadium. . . . [T]here isn’t any difference between the objective of the show and the objective of the other interactions we do. . . . We will make a plan before a show. The plan will have different components, different animals or different behaviors. What you would see in the show, however, will contribute to the training in the back. What happens in the back will contribute to the training in the show.

(Tr. 41-42).

Ms. Flaherty Clark downplayed the performance aspect of “Dine with Shamu”: “The ‘Dine with Shamu’ was more of a guest show. It was more of a—it doesn’t have the music soundtrack, it doesn’t have as many whales performing in it” (Tr. 111). Assuming Tilikum’s appearance during “Dine with Shamu” was a performance, Ms. Flaherty Clark considered it to be over at the time Tilikum grabbed Ms. Brancheau. She stated:

I would define the conclusion of the show as when the guests are thanked for coming in. Tilikum was still in the pool; Dawn was doing a fun relationship building interaction with him following a good performance in the show. So, she progressed from being on the side close to the dining guests, she progressed and went around to the other side of the pool and was still interacting with Tilikum. The performance of

“Dine with Shamu” performance for the guests was mostly ended.

(Tr. 110).

Mr. Topoleski worked as a spotter during show. He testified, “I was doing two duties. One was being a host for the “Dine with Shamu” show and also operating and monitoring Dawn and Lynne and, of course, the guests in the environment making sure that everything was as safe as it possibly could be” (Tr. 742-743). Mr. Topoleski used a microphone to narrate the events as the customers dined in the seating area, watching Tilikum and Ms. Brancheau interact.

The court determines that “Dine with Shamu” was a performance that was still in progress when Tilikum seized Ms. Brancheau and pulled her into the water on February 24, 2010. “Performance” indicates some sort of presentation before an audience. The customers for “Dine with Shamu” assembled at a designated time to watch Tilikum interact with SeaWorld’s trainers. They listened as Mr. Topoleski, acting as the host, spoke over a sound system during the interactions.

Exhibit C-4 is a video taken by a customer attending the “Dine with Shamu” show. It shows the trainers signaling and feeding Tilikum from the side of the pool. After Tilikum performs the signaled behaviors, audience members can be heard applauding and commenting. Mr. Topoleski encourages the audience members’ reactions. At approximately the 13:52 mark, Mr. Topoleski can be heard saying, “We hope you enjoyed the show. Please enjoy the rest of your day. Goodbye.” The video continues for another minute and 45 seconds (it appears there may be a couple of edits during that time). For the sake of the Brancheau family’s privacy interests, the video was edited to end immediately before Tilikum grabbed Ms. Brancheau. It is evident, however, that “Dine with Shamu” customers were still in attendance at that point, watching Ms. Brancheau interact with Tilikum and commenting on the activity. The camera operator panned to audience members standing in the restaurant area and watching Tilikum and Ms. Brancheau as Ms. Brancheau reclined on the slideout for the layout mimic behavior. Other guests (for a separate charge) were headed to the downstairs viewing area where they were permitted to take photos or videos of Tilikum while a trainer posed beside the window (Tr. 743). Although Mr. Topoleski had concluded his narration, Tilikum and the trainers were still before audience members, who were watching Ms. Brancheau attempting to interact with Tilikum for a lay out mimic. Tilikum and Ms. Brancheau were engaged in a

performance at that point.

The Experts

The Secretary and SeaWorld each presented an expert witness at the hearing. The Secretary's expert witness was Dr. David Duffus, an associate professor at the University of Victoria (Exh. C-13). He studies killer whales in their natural habitat. The court qualified Dr. Duffus as an expert in determining the predictability of behavior in killer whales (Tr. 822).

In its brief, SeaWorld argues the court should not have allowed Dr. Duffus to testify at the hearing. SeaWorld states, "Dr. Duffus had no experience observing trainer interaction with any animals much less killer whales in a zoo or aquarium setting, had never trained any animals much less killer whales, and had no experience whatsoever with the veterinary or husbandry procedures required for captive whales" (SeaWorld's Brief, p. 36). This is the same argument SeaWorld made earlier in its motion to exclude the testimony of Dr. Duffus, which the court denied. In its brief, SeaWorld asks the court to strike the testimony of Dr. Duffus. The court declines to do so. Dr. Duffus proved to be a credible, informative witness whose opinions assisted the court.

SeaWorld's expert witness was Jeffrey Andrews, associate curator of mammals at the San Diego Zoo. Mr. Andrews works primarily with elephants (Tr. 1593). From 1985 to 2001, Andrews worked as a trainer at SeaWorld (Tr. 1594). Mr. Andrews has a Bachelor's Degree from San Diego State University in the field of social sciences and a Master's Degree from George Mason University in the field of exotic animal collection management (Exh. R-6). The court qualified Mr. Andrews as an expert in operant conditioning, behaviors and training of killer whales, safely working around killer whales, and the feasibility of abatement methods offered by the Secretary for the alleged recognized hazard in this case (Tr. 1699-1700).

Elements of a § 5(a)(1) Violation

The elements of proof for a § 5(a)(1) violation differ from the elements of proof for a § 5(a)(2) OSHA standard violation.

Section 5(a)(1) of the Act mandates that each employer "furnish to each of his employees employment and a place of employment which are free from recognized hazards that are causing or are likely to cause death or serious physical harm to his employees." 29 U.S.C. § 654(a)(1). To establish a violation of the general duty clause, the Secretary must show that: (1) a condition or activity in the workplace presented a hazard; (2) the employer or its industry recognized the hazard; (3) the

hazard was likely to cause death or serious physical harm; and (4) a feasible means existed to eliminate or materially reduce the hazard. *Pegasus Tower*, 21 BNA OSHC 1190, 1191, 2005 CCH OSHD ¶ 32,861, p. 53,077 (No. 01-0547, 2005).

Erickson Air-Crane, Inc., (No. 07-0645, 2012).

The first and third of these four elements are established by the events of February 24, 2010: working in close contact with killer whales presents a hazard to trainers, and the hazard is likely to cause death or serious physical harm. The tragic death of trainer Dawn Brancheau, who was engaged in a drywork performance with Tilikum, is sufficient evidence to establish these elements.⁴

SeaWorld disputes that the hazard was “recognized,” either by itself or by its industry. The company also contends the Secretary failed to establish a feasible means exists to eliminate or materially reduce the hazard.

Recognized Hazard

The Secretary must establish that SeaWorld or its industry recognized the hazard presented when trainers are working in close contact during drywork or waterwork with killer whales during performances. The Secretary asserts SeaWorld itself, as well as the marine animal theme park industry, was aware of the hazard presented when trainers worked in close contact with (Instance (a)) Tilikum and (Instance (b)) other killer whales during performances.

At the hearing, SeaWorld attempted to distance itself from the other SeaWorld parks and from Loro Parque, noting that it is a separate corporate entity. In this way SeaWorld hoped to minimize evidence that working closely with killer whales is a recognized hazard, since many of the aggressive interactions between killer whales and trainers occurred at other parks, and the most recent trainer death occurred at Loro Parque. The record establishes, however, that the operations of all of the parks are intertwined. Management personnel at the parks are in constant communication

⁴ SeaWorld argues in its post-hearing brief that working in close contact with killer whales does not, in fact, present a hazard to trainers. SeaWorld conflates the elements of “hazard” and “recognized hazard,” arguing that its historically low incidence of deaths and injuries demonstrates the chance of a hazardous interaction is minimal. SeaWorld also argues that there is no recognized hazard because “the risk of drowned or struck by injuries when interacting with killer whales *in accordance with the protocols* is so minimal as to be improbable and a far cry from a hazard” (SeaWorld’s brief, p. 23, emphasis added). SeaWorld’s argument is not that close contact with a killer whale is not a hazard, but that the company’s safety training and its operant conditioning program materially reduce the hazard to which its trainers are exposed when working with the killer whales. This argument will be addressed under the section of this decision dealing with the element of feasible abatement.

with each other (Exh. C-6). SeaWorld Parks & Entertainment is the parent company of the three SeaWorld parks, and it was instrumental in helping Loro Parque establish its killer whale program. Charles Tompkins, the corporate curator for zoological operations for SeaWorld Parks & Entertainment, oversees all three SeaWorld parks. He testified, “Our goal is to be very consistent from park to park. So we don’t work individually. Kelly [Flaherty Clark] doesn’t make her own mandates and decisions without really discussing it with the corporate group and all of the parks” (Tr. 580).

In this case, there is essentially no distinction between SeaWorld and the industry at large. As SeaWorld acknowledges in its brief, it is “the world leader in the caring for, display and showing for entertainment purposes” killer whales and other marine animals (SeaWorld’s brief, p. 15). Parks showcasing trained killer whales are few, and the people who work in these parks comprise a small, tightly-knit community. Management personnel at the parks buy and lease killer whales from each other and engage in frequent communication regarding interactions with killer whales. SeaWorld sets the industry standard for working with killer whales. For the purposes of establishing a recognized hazard, SeaWorld and the marine animal theme park industry are essentially the same.

To establish a recognized hazard, the Secretary primarily relied on evidence in three areas: (1) the three previous human deaths involving killer whales, (2) SeaWorld’s written training manuals and safety lectures, and (3) SeaWorld’s incident reports (Exh. C-6).

(1) Previous Deaths Involving Killer Whales

February 1991: K. B.⁵

K. B. was a 20-year old part-time trainer at Sealand of the Pacific. Sealand was a marine park (since closed) in Victoria, British Columbia, Canada, that housed killer whales. They were kept in a sea pen, which was separated by a gate from the Pacific Ocean. In 1991, Dr. Duffus, the Secretary’s expert, served on the coroner’s jury in British Columbia investigating the death of K. B. In the report Dr. Duffus prepared for the Secretary in this case, he states:

On February 20, 1991, after a midday feeding/show, a trainer slipped on the pool edge and fell into the pool. One or more of the whales pulled the trainer away from

⁵ To protect the personal and familial privacy interests of people killed or injured by killer whales, the court will use the initials of the deceased or injured people in this decision. The exception is Dawn Brancheau, whose death gave rise to this proceeding. Counsel represented her family at the hearing to ensure her family’s privacy interests were protected.

the pool edge, witnesses were unsure of which whale it was initially. Tilikum took control of the trainer, and for a period of time repeatedly submerged the person, holding her by the thigh. Attempts to control the whales using distraction and control cues failed, as did attempts to throw life rings, lines, and use boat hooks. And attending police officer testified that he thought of shooting the whale with his service revolver, but was talked out of that by the Sealand staff. Witnesses were unsure of how long she was conscious, it could have been between 10 minutes and an hour, her body was not recovered for 1.75 hours.

(Exh. C-12, p. 11).

K. B.'s death is the first recorded human death caused by a killer whale (Tr. 783). In 1992, SeaWorld bought Tilikum and transported him to its park in Orlando, Florida (Tr. 94).

July 1999: D. D.

On the morning of July 6, 1999, a SeaWorld employee discovered a dead man draped across Tilikum's back when the employee reported to work. The man, later identified as D. D., had apparently hidden from security personnel when the park closed the day before. Sometime during the night, D. D. had entered Tilikum's pool. D. D.'s cause of death was listed as hypothermia. It is undetermined why D. D. entered Tilikum's pool and what role, if any, Tilikum played in his death (Tr. 122-123).

December 2009: A. M.

Loro Parque is a marine park in Tenerife, Spain, in the Canary Islands. SeaWorld Parks & Entertainment does not own or operate Loro Parque, but it does have a close relationship with the park. By December 2009, SeaWorld had leased five killer whales to Loro Parque. In addition, SeaWorld Parks & Entertainment sent several of its personnel, including SeaWorld of California's supervisor of animal training, Brian Rokeach, to Loro Parque to demonstrate its use of operant conditioning and to help implement its training program.

On December 24, 2009, exactly two months before Tilikum killed Dawn Brancheau, Loro Parque trainer A. M. was working with Keto, a killer whale owned by SeaWorld Parks & Entertainment. During a training session, Keto pulled A. M. under water and then rammed him in his chest. A. M. died of massive internal bleeding (Tr. 408). A SeaWorld employee described the event in an incident report. After Keto failed to perform a number of behaviors correctly, A. M. and Keto were floating on the surface of the pool:

Keto came up with [A. M.] and appeared calm but did appear to position himself between [A. M.] and the stage. [A. M.] waited for calmness from Keto and asked for a stage call (underwater tone). Keto responded and was received at stage by Brian. . . . Brian instructed [A. M.] to swim out (toward the slideover). When [A. M.] commenced swimming (sculling) Keto began leaning toward him. Brian attempted another hand target but Keto left control and engaged [A. M.] by pushing him to the bottom with his rostrum. Brian observed the intensity of the situation and decided to initiate a hand slap. Keto did not respond. Brian tapped the bucket, then hand slapped again. It appeared Keto responded, came to the surface for a breath. The alarm was sounded. Keto immediately after taking a breath returned to [A. M.] and then resurfaced near stage with [A. M.] on his rostrum and with his mouth closed.

(Exh. C-6, p. 2725).

Keto released A. M., who sank to the bottom of the pool. Mr. Rokeach and the Loro Parque trainers were eventually able to get Keto to enter another pool, where Keto could be isolated while A. M.'s body was recovered. While the gate was closing Keto began to play with it, keeping it open. After trainers released a net into the pool, Keto allowed the gate to close. Mr. Rokeach entered the stage pool and retrieved A. M.'s body from the bottom.

SeaWorld Parks & Entertainment temporarily suspended waterwork in all of its parks immediately following A.M.'s death, then resumed waterwork shortly afterwards. Loro Parque ceased (apparently permanently) all waterwork with killer whales (Tr. 563-564).

(2) *Training Manuals and the "Tili Talk"*

Training Manuals

SeaWorld maintains several training manuals and requires each of its trainers to read and study them. SeaWorld requires the trainers to sign the signature pages of the manuals. These pages contain waiver-like language by which SeaWorld acknowledges the risks presented when working with killer whales.

One of its manuals provides standard operating procedures and is called the *Animal Training SOP* (Exh. C-1). The last page of the manual is a signature page. Above the signature line the document states in pertinent part:

I understand that it is my responsibility to begin and end all trainer/animal interactions in a safe manner. I realize there are inherent risks in performing my job description and I agree to communicate to my Supervisor if I become uncomfortable with or am unable to take the calculated risks. I understand that if the management of

the Animal Training Department is not comfortable with my abilities to interact with these animals in a safe manner that I may be taken off interactions with some animals, or asked not to perform certain behaviors until I can demonstrate that I understand and apply safe behavior and techniques.

(Exh. C-1. P. 150).

SeaWorld also requires its trainers to read a document entitled, *Shamu Stadium Area Manual* (Exh. R-2.) Its introduction states:

Work required of crew members of the Animal Training team is potentially dangerous. The animals we interact with are not domesticated; most are large and powerful. While the potential for serious physical injuries exists, if trainers maintain top physical condition, and adhere to safety and departmental procedures, the potential for injury is dramatically reduced.

Tilikum Training

The first page of text of SeaWorld's *Animal Training SOP* states: "Throughout this entire document, any mention of killer whales implies all whales except for Tilikum. Any regulations or protocols related to Tilikum are within Section XI" (Exh. C-1, p. 4). Section XI consists of nine pages of detailed procedures and restrictions that relate only to Tilikum.

SeaWorld provides its employees with a document entitled *Shamu Stadium Orientation Checklist* (Exh. C-5). Under "Day One Information," the document lists five different topics relating to emergency sirens, gate codes, wetsuits, etc. At the top of the list is "Discuss Tilikum Safety Protocol" (Exh. C-5, p.1).

Lynne Schaber is a Senior Trainer 1 at SeaWorld, where she began working in 2002. Ms. Schaber testified that when SeaWorld employees start work at Shamu Stadium, they are given what is known as the "Tili Talk": "A member of management would speak to you in regards to Tilikum, talking about his history of trainers working with him in the water, and you need to be aware of where he is in the Shamu Stadium area, which pool he's in, you need to be safe and so forth" (Tr. 261).

Ms. Schaber stated employees are informed of the human deaths that involved Tilikum, and are told that "if you found yourself in the pool with Tilikum, you might not survive" (Tr. 262). The Tili Talk warns employees that Tilikum "displayed behavior which he did not return objects in the

pool quickly” (Tr. 273). It was understood that this behavior included human beings (Tr. 274).

Even before Ms. Brancheau’s death, SeaWorld’s trainers had never engaged in waterwork with Tilikum. Tilikum was not raised in captivity, as were most of SeaWorld’s killer whales, but had been captured in the wild and brought first to Sealand in Canada. Tilikum was approximately eleven years old when he arrived at SeaWorld and, as Ms. Flaherty Clark stated, “he had never had successful water interactions with human beings” (Tr. 59). She testified, “[W]ith Tilikum, there was no question due to his size and his history that we weren’t going to be doing waterwork with him” (Tr. 160).

Jennifer Mairot stated Tilikum remained a drywork whale because “he didn’t know an appropriate response to trainers in the water” (Tr. 1390). Tilikum had a dedicated team of trainers and spotters who interacted with him. Only the most experienced trainers were allowed to work with Tilikum.

(3) Incident Reports

SeaWorld acknowledges that when trainers at the original park in San Diego began working with killer whales in the 1960s, their training methods were not fully successful. In the early years, trainers sustained injuries with some frequency while working in close contact with killer whales.

In 1987, an incident occurred during a performance in the San Diego park that caused all the SeaWorld parks to reconsider their training methods. Ms. Flaherty Clark described the incident: “[Trainer J. S.] was performing a behavior in a show. Another trainer sent—he was performing a behavior riding on a whale in a show. Another trainer sent another whale on an aerial behavior, and the whale jumped in the path of [J. S.], and so [he] had an injury as a result” (Tr. 1505). In fact, the second whale landed on the back of the whale on which J. S. was riding, crushing J. S. between the two whales. J. S. sustained serious injuries. All of the SeaWorld parks ceased waterwork with their killer whales for six months. The SeaWorld parks “took a step back” and reevaluated their training program (Tr. 1510). Eventually the SeaWorld parks instituted positive reinforcement operant conditioning as its training protocol.

One tool SeaWorld implemented to improve its program is the documentation of incidents when a killer whale engages in an undesirable behavior. In 1988, as a result of the J. S. incident, the SeaWorld parks started issuing incident reports detailing the circumstances when a killer whale did

not interact predictably with a trainer or trainers, or with other killer whales. The incident reports would then be circulated among the various parks, and management personnel and trainers would have the opportunity to comment on the incident.

Ms. Flaherty Clark explained the use of incident reports:

An incident report is a document that very carefully outlines a sequence of events. We talk about all the behavior that led up to the event itself, we talk about the environment, we talk about the trainer's history with that animal, we talk about the last interaction with the trainer, we talk about the incident itself.

We break it down into every single behavior around the incident. Was the response correct to the signal or incorrect? How did you reinforce? How did you not reinforce?

Then we do paragraph forms. This is what happened during the event. Then, there's a review by the supervisor and the curator on premises at the park. Then, it is circulated to the other parks. Everybody gives their review.

(Tr. 184).

Between 1988 and 2009, SeaWorld generated 100 incident reports, twelve of which documented injuries (or, in A. M.'s case, death) to trainers. Not every event of undesirable behavior by a killer whale resulted in an incident report. Chuck Tompkins is the corporate curator for zoological operations for SeaWorld Parks & Entertainment (Tr. 352). He acknowledged that SeaWorld failed to document several known events of undesirable behavior by killer whales when working with trainers: "[W]e missed a few" (Tr. 457).

SeaWorld did not issue an incident report for the death of D. D., the man who stayed in the Orlando park after hours and was found dead in Tilikum's pool. SeaWorld made this decision because no one witnessed his death. The details usually included in an incident report were unknown in the case of D. D. Although it did not issue an incident report for the death of D. D., SeaWorld ceased performing gastric intubations on Tilikum after D. D.'s death "as a precautionary measure" (Tr. 185). SeaWorld did not document Dawn Brancheau's death with an incident report.

The injuries to trainers documented in the incident reports include: R. S. (rammed in stomach by Orkid in 1998 at SeaWorld of California); T. T. (pulled into pool by Orkid in 2002 at SeaWorld of California); S. D. (struck in ribs and back by Taku in 2005 SeaWorld of Florida); B. R.

(pulled underwater by Orkid in 2006 at SeaWorld of California); and K. P. (pulled underwater by Kasatka in 2006 at SeaWorld of California) (Exh. C-6).

The incident with K. P. and Kasatka on November 29, 2006, prompted a visit from Cal-OSHA. SeaWorld of California's incident report states:

After a period of time at the surface, Kasatka took [K. P.] down to the bottom of the pool by his foot where she remained with him for just over 1 minute. Tucker and Matt continued to monitor Kasatka and [K. P.] from the stage. For the next 20-30 seconds, there were intermittent hand slaps. After not surfacing for approximately 30 seconds and not responding to any stage calls or emergency call backs, the decision was made to deploy the net from its slide-out location. . . . During this time, Kasatka had let go of [K. P.'s] foot for a brief period of time then repositioned herself under him in what looked to be an attempt to grab his foot again. After about 20 seconds, Kasatka successfully grabbed [K. P.'s] foot again, took him to the bottom of the pool, laid on him for a moment and continued to hold [K. P.] under water.

(Exh. C-6; p. 1374).

Kasatka eventually let K. P. go. K. P. swam to the side of the pool and exited. SeaWorld of California suspended waterwork with Kasatka after this incident (Tr. 1042)

At the hearing the Secretary showed a video recording of the incident (Exh. C-9). The video is chilling. Approximately 8 minutes elapse from the time Kasatka grabs K. P.'s foot until she lets him go. A lot of that time is spent underwater. When Kasatka allows K. P. to surface, K. P. is noticeably shaken but he remains remarkably poised and free of panic. He calmly pats Kasatka as he gulps for air. Kasatka pulls him underwater several times, once taking him to the bottom of the pool, where they linger for a very long time. When Kasatka finally allows K. P. to go free, he swims rapidly to the side of the pool. As he does so, Kasatka turns and swims after him. Another trainer helps to pull K. P. away from the side of the pool and the advancing Kasatka. K. P. sustained puncture wounds to both feet and a broken metatarsal in his left foot (Exh. R-3).

*Instance (a): The Secretary Has Established a Recognized Hazard
Exists to Trainers Working with Tilikum*

The Secretary has established that SeaWorld recognized the hazard created when its trainers worked in close contact with Tilikum during drywork performances. Recognition of the hazard is

shown by Tilikum's history with K. B.⁶ and the safety training SeaWorld has implemented that is specific to Tilikum. SeaWorld has restricted Tilikum to drywork since he arrived at its park. Even then only the most senior trainers were allowed to interact with him. The special treatment SeaWorld accords Tilikum demonstrates the company's recognition that he is a dangerous animal who presents a hazard to trainers.

Evidence of this recognition is abundant in the record. The first day an associate trainer arrives at Shamu Stadium, he or she is greeted with the "Tili Talk." Tilikum has an entire chapter dedicated to him in SeaWorld's *Animal Training SOP*. Senior trainers who are permitted to work with the other killer whales are prohibited from working with Tilikum. When asked if she interacted differently with Tilikum than with the other killer whales, Ms. Schaber replied, "I had more of a heightened sense of awareness to be extra observant while I was working with him. . . I would have a very heightened sense of awareness while I worked with him just to be extra cautious" (Tr. 330-331).

Ms. Flaherty Clark acknowledged SeaWorld perceives Tilikum as a greater threat to trainers than the other killer whales. She testified:

Tilikum has always had his own set of protocols. Tilikum came to us from another facility. Basically, that facility reached out to us and said, "We think you are the right place to manage this killer whale."

He came to us with a different behavioral history than any of our other whales, and from the moment he arrived at SeaWorld, only the most experienced trainers interacted with that whale, and he had his own set of protocols.

So, when you're talking to me about a trainer who has just arrived at the stadium, I can tell you if I'm teaching that trainer, I would be sure to include that they are not to interact with Tilikum from anywhere unless they have a qualified person with them. And, when they would interact with Tilikum, it would be from what I would call a very safe distance. They would either be behind a six-foot panel of glass, or they would be five feet away from his pool at the time. That would be ten feet today.

⁶ The death of D. D. is not a factor in assessing Tilikum's history. There were no witnesses to D. D.'s entry into the pool. D. D. may have entered the pool to emulate trainers he had observed during a Shamu Stadium performance, he may have been suicidal, or he may have had some other motive in entering the pool with Tilikum. There is not enough evidence to conclude from this event that Tilikum contributed to D. D.'s death. The court notes, however, that to date, killer whales have been implicated in four known human deaths worldwide. Tilikum was in the pool with the decedents for three of these deaths.

(Tr. 92).

The Secretary has established that working in close contact with Tilikum during drywork performances created a recognized hazard for trainers.

*Instance (b): The Secretary Has Established a Recognized Hazard
Exists to Trainers Working with Other Killer Whales*

SeaWorld contends that working in close contact with killer whales does not present a recognized hazard to its trainers. The company cites *Megawest Financial Inc.*, 17 BNA OSHC 1337 (No. 93-2879, 1995), in support of its position. *Megawest* is an unreviewed ALJ decision with no precedential value for the Commission. In that case, Judge Spies vacated a § 5(a)(1) citation where the alleged recognized hazard was workplace violence inflicted on apartment complex management personnel by tenants of the apartment complex. In vacating the citation, Judge Spies states:

In the past, employers have been required to reduce hazards they could anticipate and reduce or eliminate. The problem with predicting workplace violence is the unpredictability of human behavior. In this case, the Secretary is asking *Megawest* to predict the criminal behavior of non-employees. Additionally, the anger and frustration that drives a resident to become violent may be fueled by a variety of factors.

Id. at 1341.

SeaWorld claims the actions of its killer whales are analogous to the criminal behavior of the non-employee tenants. The company argues animal behavior, like human behavior, cannot always be controlled, and contends the Secretary should be held to a higher standard of proof for a recognized hazard under these circumstances.

The court disagrees. Unlike the apartment tenants in *Megawest*, the killer whales are in the continual custody of the employer. By their nature as aquatic animals the killer whales are confined to the pools, an environment over which SeaWorld can control access. Unlike the employees in *Megawest* who were subject to irate tenants showing up unannounced and with undetermined intentions, SeaWorld knew in advance when its employees were scheduled to interact with the killer whales. The trainers always initiated contact with the killer whales, and could anticipate that each time there would be a risk of injury or death.

SeaWorld's analogy of the unpredictability of non-employee human behavior in *Megawest* to the unpredictability of the behavior of its killer whales is at odds with its own position touting

operant conditioning. SeaWorld places absolute faith in its operant conditioning program. Management personnel are convinced that operant conditioning, correctly applied by its trainers, results in predictable, desirable behavior by the killer whales. Mr. Tompkins estimated that through its use of operant conditioning, SeaWorld can predict its killer whales' behavior with more than 98 percent accuracy, or, as Mr. Tompkins phrased it, "a tick away from being 100 percent" (Tr. 369-370). This predictability, SeaWorld argues, virtually eliminates the risk of injury to its trainers working with killer whales during performances, so that there is no recognized hazard.

SeaWorld's estimate of 98 plus percent predictability is not based on rigorously evaluated scientific data. Mr. Tompkins arrived at this percentage by multiplying the average number of whales in all of the SeaWorld parks from 1998 to 2009 (20) times the estimated number of sessions per day (10) times 365 days times 22 years. Mr. Tompkins equated an interaction with a session, stating, "[A]ny time we step up and interact with a whale, that's considered a session. If you step up and separate an animal to the back pool, that could be a session. If you step up and do a 20-minute show with an animal, that could be a session" (Tr. 626). The total number of killer whale interactions Mr. Tompkins arrived at by this calculation was 1.6 million. Based on the reported number of injuries (12)⁷ during this same time period, Mr. Tompkins determined the predictability rate for its killer whales at upwards of 98 percent (Tr. 625-627).

The court finds SeaWorld's metric of averaged daily killer whale interactions to be of dubious value. As noted previously, SeaWorld uses the acronym HELPRS to distinguish the six different activities in which the killer whales engage. Under Mr. Tomkins calculation, no distinction is made among the various activities. It is not clear what percentage of the interactions involves waterwork and what percentage involves drywork. Mr. Tompkins does not differentiate between a close interaction, which Ms. Flaherty Clark defines as within 5 feet, and a tactile interaction. The calculation counts all sessions equally despite the wide range in the duration of the sessions. This would affect the time during which trainers are exposed to the hazard. Mr. Tompkins's averaging method is also suspect. Ms. Mairot testified the number of daily performances a killer whale

⁷ Mr. Tompkins conceded that not all injuries that occurred during the stated time period were the subject of incident reports (Tr. 448, 451-457). Furthermore, the twelve injuries Mr. Tompkins chose to cite exclude, among other incidents, serious injuries sustained by another Loro Parque trainer in 2007, the death of A. M. in 2009, and the death of Ms. Brancheau in 2010 (Tr. 385-386, 515-516).

performs can range from two to seven shows a day (Tr. 1433). Mr. Tompkins did not state how many average daily performances he included in his calculation.

Mr. Tompkins's calculation also defines risk only in terms of serious injuries sustained. For many of the incident reports, the trainer involved did not actually sustain an injury, but was involved in a "close call." In many of the incidents, the killer whale went off script and would not perform the conditioned behavior. As Ms. Flaherty Clark conceded, sometimes killer whales do what they want to do (Tr. 195). While SeaWorld's employees at the hearing declined to label any of the killer whales' undesirable behavior "aggressive," the incident reports document behavior (such as exploratory "mouthing") that could have resulted in injuries to the trainers.⁸

Mr. Tompkins's calculation also fails to factor in the possibility of underreporting on the part of the trainers. Incidents are self-reported. SeaWorld's training manuals do not provide a procedure for determining when to report an incident. Documentation is apparently left to the discretion of the trainer involved in the incident.

Overall, Mr. Tompkins's calculation of a 98 percent predictability rate is based on questionable data. His factors were arrived at through guesswork and averaging. No attempt was made to conduct an evaluative survey of daily interactions. The court finds this calculation to be unreliable and accords it no weight.

SeaWorld's contention that it was unaware working with killer whales presents a recognized hazard is difficult to reconcile with numerous comments made over the years by SeaWorld management personnel, including corporate curators of animal training Thad Lacinak and Mr. Tompkins. These comments were documented and circulated among all of the SeaWorld parks:

- "As our collection of male killer whales age, we have seen an onset of inconsistency that appears to increase as the whales approach adolescence. Is there a time where we start to

⁸ SeaWorld's employees went to great lengths at the hearing to avoid labeling any behavior by the killer whales as "aggressive." Instead, they chose to say the killer whales were exploring, or curious, or frustrated when they engaged in undesirable behavior. This reluctance to label killer whales as aggressive extended to Tilikum's killing of Ms. Brancheau. Ms. Flaherty Clark stated, "I would classify Tilikum's behavior as undesirable on the 24th, the act of Dawn entering the water. I would not classify it as aggressive" (Tr. 168). Mr. Tompkins agreed: "I personally don't believe that was an aggressive act" (Tr. 469).

If Tilikum's killing of Dawn Brancheau was not an aggressive act, perhaps classification of the killer whale's behavior is irrelevant. Whatever the motivation ascribed to a killer whale, any unpredictable behavior has the potential of causing death or serious injury to a trainer working in close contact with the whale.

limit killer whale waterwork with males of this age range so that we prevent the rehearsal of aggressive events?” (December 24, 2009).

- “I think there will be certain killer whales in our company that should be worked as protective contact animals during certain periods of their life. Obviously we have experience with Taima and Tilikum under this protective contact system and we now know if given enough time these whales can change their behavior and become less of a safety issue.” (April 10, 2007).
- [This comment was in response to an incident at SeaWorld of Texas where the killer whale Kyuquot injured trainer S. A. during a show performance.] “I don’t know if we need to add any more sounds or stimulus to the environment when we have an incorrect environment. This makes me nervous. . . . Let’s face it, in these types of incidents, I don’t recall any whale responding to any hand slap, food bucket, or any other distraction we tried to implement.” (August 4, 2004).
- “Obviously the trainer broke one of the basic rules of the animal training department—interaction with an animal without a spotter. This is a perfect example of how our animals can take advantage of any uncontrolled environment. . . . As evident by this episode, our whales should never be viewed as routine, nor predictable.” (August 2, 2002).
- “This incident [exhibiting aggressive behavior toward a trainer during a show performance] has been reviewed with all Shamu team members. To be honest, it’s great to be able to show people that our killer whales do have the potential of getting nasty. I think we opened some eyes and some minds to more proactive training and observation to prevent further aggression with Taima or any other killer whale. Fortunately, no one was hurt or even touched. This has been a great learning opportunity for our Shamu staff at [the trainer’s] expense” (July 1, 2002).
- “[T]aking control and pointing the whale away can sometimes cause more aggression. All the parks’ Shamu staffs should review this incident and discuss. New staff and trainers that have never experienced aggression can learn a lot from this incident. Never get too comfortable while working with killer whales.” (January 20, 1998).

- “I agree with the comments from the curators and the plan of action. As always, please share with all Shamu trainers. All of our people need to learn from this. Never take your eyes off your animal!” (December 10, 1997).
- “[W]e suggest an increase in the number of stage calls rehearsed during waterwork sessions, as this is the most important behavior for an animal to respond to in a waterwork situation. Unless an animal is consistent with stage calls in a variety of situations, we believe it is unsafe to perform waterwork with that animal.” (September 21, 1997).
- “Animals with aggressive tendencies should only be worked by experienced trainers. It doesn’t seem worth the risk to allow newer trainers to ‘work’ Kalina or allow Kalina to rehearse any more aggressive acts.” (June 4, 1996).
- “This incident is an example of how our trainers can get too comfortable working with certain whales.” (February 16, 1996).
- “Even though [the trainer] was successful in getting out of the water, I always question attempts to ‘work’ an animal through a ‘bad attitude.’ I have seen successful attempts, but more often than not, these attempts fail. Why allow an animal more opportunities to rehearse aggression?” (February 5, 1996)
- “The largest trainer error in this incident was remaining in the water after the incident and attempting to continue waterwork. This could easily have resulted in additional and more intensive aggression.” (October 30, 1995).
- “The bottom line to this incident is that [the trainer] put himself in a very compromising situation by not terminating waterwork after being mouthed by Taima. I especially find it hard to understand his choice of behaviors after the callback tone (foot push). He is very lucky that further aggression was not exhibited by Taima. [The trainer] should have terminated the waterwork. Please make sure this is shared by killer whale staffs and emphasize to everyone that a more common sense approach should be taken in dealing with waterwork and killer whales.” (October 19, 1995).
- “I am still very confused that mistakes like this can be made by our senior trainers. We are very lucky that it happened with this whale, another may not have been so forgiving.
WHENEVER THERE IS ANY CONFUSION OR PROBLEM YOU DO NOT ENTER THE

WATER. This is a good example of the trainers being too comfortable with their whales and their environment.” (February 10, 1995, emphasis in original).

(Exh. C-6).

This is just a sampling of the written comments circulated among the SeaWorld parks in the fifteen years prior to Ms. Brancheau’s death. These comments were made by management personnel who instituted corporate-wide protocols and safety procedures. Despite these comments, SeaWorld insists it did not recognize the hazard posed by working in close contact with killer whales. The court finds this implausible. No reasonable person reading these comments would conclude that SeaWorld was unaware that working in close contact with killer whales during performances creates a hazard for its trainers.

Whether the trainers were fully immersed and swimming with the killer whales for a waterwork show performance, or standing poolside or on a slideout for a drywork show performance, SeaWorld knew its trainers were at risk for being struck or drowned by a killer whale. The Secretary has established that SeaWorld knew working in close contact with killer whales was a recognized hazard.

Feasible Abatement

“The Secretary has the burden of proving all elements of a 5(a)(1) violation including the existence of a feasible means of materially reducing or eliminating the likelihood of death or serious physical harm to employees.” *Cerro Metal Products Division, Marmon Group, Inc.*, 12 BNA OSHC 1821, 1822 (No. 78-5159, 1986).

Instance (a): The Secretary Has Established Feasible Abatement for Trainers Working with Tilikum

For Instance (a) of Item 1 of Citation No. 2, the Secretary states, “[O]ne feasible and acceptable means of abatement would be to not allow animal trainers to have any contact with Tilikum unless they are protected by a physical barrier.”

Leslie Grove is the area director for OSHA’s Tampa area office (Tr. 917). The citations in this case were issued under his signature. Mr. Grove testified SeaWorld could protect its trainers during drywork with Tilikum by installing “[s]ome type of physical barrier, a wall, a guardrail or

something that prevents the contact between them and Tilikum” (Tr. 931). Mr. Grove considers maintaining a minimum distance between the killer whales and the trainers the equivalent of a physical barrier (Tr. 935).

Dr. Duffus agreed that maintaining a minimum distance from Tilikum eliminates the hazard. He testified, “[I]f you put yourself in close enough proximity to Tilikum . . . he could pull you into the water. . . . Under normal conditions, a killer whale can rise out of the water and seize prey or any item off the side to a certain extent. . . . [I]f you were perhaps 5 to 8 feet away, there would be absolutely no opportunity with that intervening space of dry land” (Tr. 905).

At the time of the hearing, SeaWorld had implemented both physical and distance barriers between Tilikum and its trainers. Tilikum had returned to performing in shows. During his performances in the A pool, trainers are not permitted on the Believe stage. The trainers are “actually down below behind the Plexiglas barrier. So, they’re not in an area where they could be contacted by Tilikum” (Tr. 931). Ms. Flaherty Clark testified trainers now maintain a 10-foot distance from Tilikum (Tr. 92).

The Secretary has established a feasible means of abatement exists to eliminate the recognized hazard to trainers while engaging in drywork with Tilikum during performances. At the time of the hearing, SeaWorld had implemented the means of abatement recommended by the Secretary. The Secretary has established that SeaWorld committed a violation of § 5(a)(1) with regard to Instance (a).

*Instance (b): The Secretary Has Established Feasible
Abatement for Trainers working with Other Killer Whales*

Under Instance (b) of Item 1 of Citation No. 2, the Secretary states, “[F]easible and acceptable means of abatement would prohibit animal trainers from working with killer whales, including ‘waterwork’ and ‘drywork,’ unless the trainers are protected through the use of physical barriers or through the use of decking systems, oxygen supply systems or other engineering or administrative controls that provide the same or a greater level of protection for the trainers.” Mr. Grove testified that “decking systems” refers to the floor raising mechanism SeaWorld has in some pools. As Ms. Flaherty Clark explained, the killer whales cannot swim when the pool floor is raised to a certain height. Raising the floor would immobilize the killer whale, allowing emergency

response personnel to retrieve the injured trainer more quickly. The reference to oxygen supply systems is based on a discussion the compliance officer had with SeaWorld personnel, who stated the company was working on such systems (Tr. 962).

SeaWorld rejects the Secretary's recommendation for installing physical barriers or requiring a minimum distance between its trainers and its killer whales for waterwork and drywork performances. SeaWorld does not argue that it is not feasible to install barriers or implement a minimum distance. Rather, SeaWorld considers the extensive safety training of its trainers and the operant conditioning of its killer whales to be an adequate means of abatement that materially reduces the hazard the killer whales present to the trainers. Operant conditioning materially reduces the hazard, SeaWorld contends, by training the killer whales to act predictably during interactions with its trainers. In a case such as this, where the employer claims its safety program materially reduces the recognized hazard, it is the Secretary's burden to show the safety program is inadequate. *Cerro Metal, Id.* at 1823.

Adequacy of SeaWorld's Operant Conditioning Program

It is an article of faith for SeaWorld that operant conditioning eliminates the possibility of unpredictable behavior on the part of its killer whales. Mr. Tompkins stated that "999.999 percent of the time, we know what happened [to cause an incident], and we're able to prevent it from occurring again" (Tr. 515).

The standard form for the company's incident report includes the following question, for which the reporting curator is supposed to circle "yes" or "no":

ORIGINATING PARK CURATOR COMMENTS

Did the Act(s) of the employee contribute to this accident? YES NO

(Exh. C-6).

On an incident report from 1998, SeaWorld supervisors Jeff Andrews, Curtis Lehman and Mike Scarpuzzi signed off on comments issued by Sea World of California. One of the California commenters complains about the continued use of the question: "I am having a hard time understanding how the acts of the employees do not contribute to this incident. Since we condition all aspects of the behavior and the behavior broke down then we do contribute to the incident. I also

seem to remember that we discussed this and said that since the answer is always yes that we would drop this from future incident reports and just assume it as such” (Exh. C-6, p. 637).

It is a telling remark. SeaWorld believes it “condition[s] all aspects of behavior.” All behavior is thus predictable. If an undesirable behavior occurs, it is because the trainer missed a known precursor. Ergo, the trainer is always at fault for the killer whale’s undesirable behavior. In this closed system, any injuries sustained by a trainer will always be traceable to human error. It is not the operant conditioning program that is inadequate; it is the performance of the trainer that is flawed.

An example of this mindset is seen in SeaWorld’s continued reliance on recall signals meant to distract the killer whales from undesirable behavior. Ms. Flaherty Clark explained this technique for protecting its trainers:

We have a signal that means “come to me.” It’s either a slap on the surface of the water, and we rehearse that constantly with the whales. It’s probably the most highly reinforced behavior that we have.

The shows are an opportunity for us to rehearse that behavior. If an animal trainer finds himself in a situation that is not going so well, there’s a lot of communication between the animal trainer and the spotter trainer. They might ask the spotter trainer for a call back slap on the surface of the water. The fact that the animal had been conditioned and there’s such a lengthy reinforcement history with that slap on the water, meaning “come here,” it’s rehearsed and rehearsed and rehearsed in situations that are not tenuous at all to situations that we plan for more things going on in the environment as well as situations that we’re talking about the animal trainer might find themselves in.

So, the constant rehearsal of this behavior, “come away from the trainer and come to me,” contributes to a positive outcome.

(Tr. 119-120).

Trainers used recall slaps and recall tones during the incidents involving the deaths of Dawn Brancheau and A. M., and the aggressive interactions between killer whales and K. P. and S. A. In none of those incidents did the killer whales respond to the recall signals with the desired behavior of swimming toward the spotter (Tr. 191-192). Following Kyuqhot’s aggressive interaction with S. A., a SeaWorld manager wrote, “Let’s face it, in these types of incidents, I don’t recall any whale responding to any hand slap, food bucket, or any other distraction we tried to implement” (Exh. C-6).

Dr. Duffus, writing about Ms. Brancheau's death, stated, "[T]he spotter watched the whale seize Ms. Brancheau and proceeded, as per procedure, to hit an alarm and try to distract the whale, all of which was to no avail (Exh. C-12, p.12). When asked about the efficacy of using recall signals to refocus the killer whales, Mr. Rokeach responded, "I'm sorry, there hasn't been a lot of success in that specific scenario" (Tr. 1221).

Despite the repeated failures of the recall signals, SeaWorld continued to rely on them to protect its employees. Ms. Flaherty Clark blames the lack of success for recall signals on the trainers: "Human nature has put some trainers in situations where they slapped the water inappropriately" (Tr. 192). This is a typical response of SeaWorld to incidents where the killer whales fail to act in a predictable manner. Because it is not part of SeaWorld's corporate culture to acknowledge unpredictable behavior by its killer whales, it must necessarily find that its trainers are implementing the program incorrectly.

The incident reports provide an insight into SeaWorld's approach. Upper management dissects each incident second by second, and then critiques the choices made by the trainers as the incident unfolded. Trainers are expected to decipher precursors and then choose the appropriate response with split-second timing, keeping in mind that they are performing in front of an audience. If the animal engages in undesirable behavior, it will be attributed to mistakes the trainer made. SeaWorld's witnesses blamed A. M. for Keto's unpredictable behavior that led to A. M.'s death in Loro Parque (Tr. 413, 1348-1349).

SeaWorld's reliance on its trainers to recognize precursors and prevent unpredictable behavior by the killer whales runs counter to the requirements of the Act. "The duty to comply with section 5(a)(1), however, rests with the employer. An employer cannot shift this responsibility to its employees by relying on them to, in effect, determine whether the conditions under which they are working are unsafe." *Armstrong Cork Company*, 8 BNA OSHC 1070, 1074 (No. 76-2777, 1980).

The pressure on the trainers is increased by the expectation that they will continue with the show performance regardless of the precursors demonstrated by the killer whales. Although SeaWorld's official stance is that trainers have the option to end a show if they feel uncomfortable with the situation, the reality is SeaWorld discourages such action.

On June 12, 1999, K. P. and another trainer ended a show early due to Kasatka's undesirable

behavior. K. P. was engaged in waterwork with Kasatka during a show performance. Kasatka ignored K. P.'s signals and began swimming rapidly around the perimeter of the pool. She surfaced between K. P. and the stage, then looped under him and attempted to grab his feet and hands, then looped under him again. K.P reported:

As she came up at me I put my hands on her rostrum and lower jaw to keep my body out of her mouth. Kasatka lifted me approximately two feet up and out of the water toward the stage. I reached out with my right hand to feel where the stage was so that I would not hit it. I felt the stage and placed my right arm on it. She tried one more time with her mouth to grab my left hand and as she started to swim away from me I used my feet to push off of the side of her body. Simultaneously, Robbin reached for my arm and pulled me onto the stage.

Robbin then asked me if I was OK. I said that I was. Robbin then addressed the audience and explained what had happened and decided to end the show at that time. Kasatka continued to swim around the pool.

(Exh. C-6, p. 684).

Michael Scarpuzzi, vice-president of animal training for SeaWorld of California, wrote a strongly worded two page critique of the trainers' actions. Among other criticisms, Scarpuzzi writes:

Thirdly, the show did not need to be cut short. This brought unnecessary attention to the incorrect behavior and placed the control of the show to the whale. We have reiterated our existing policy to utilize any and all resources before canceling a show.

(Exh. C-6, p. 686; emphasis in original). Kasatka is the same whale that almost drowned K. P. in the 2006 incident, under similar circumstances.

SeaWorld holds trainers to a near-impossible standard set by upper management, who engage in a form of Monday morning quarterbacking. As a commenter acknowledges in an August 2002 incident report, "Hindsight is always 20/20" (Exh. C-6). Any trainer unfortunate enough to have to file an incident report is subject to second-guessing by his or her superiors, who will always find the trainer did something wrong, otherwise there would be no incident report.

Mr. Andrews, SeaWorld's expert, followed the corporate line even in evaluating Tilikum's actions that led to Ms. Brancheau's death. Despite SeaWorld's repeated assertions that Ms. Brancheau followed all protocols correctly and did not miss any precursors, Mr. Andrews ultimately

placed responsibility for her own death on Ms. Brancheau. In the report Mr. Andrews prepared for this proceeding, he writes:

In my professional opinion, two circumstances led to Ms. Brancheau's death. First, her hair was long, loose, and flowing out on the surface of the water and drifted into contact with Tilikum's rostrum and mouth. The sensation of the floating hair was something with which he was not familiar and, not having hands, he grasped the hair with his mouth in what was likely a curious manner. Second, his curiosity with the hair led him to pull the hair out away from the pool ledge and Ms. Brancheau's body was pulled out along with her hair. Once she was in the water, Tilikum had a new object with which to play. From the moment he pulled her into the water until she drowned, Tilikum was never aggressive towards her. . . . The only thing that led to this event was a mistake made by Ms. Brancheau in allowing her long hair to float out into an area that Tilikum could grab in his curiosity.

(Exh. C-15, p.6).

Mr. Andrews testified he made the assumption that Tilikum grabbed Ms. Brancheau by the hair based on comments made to him by Mr. Tompkins, who did not witness the event. Mr. Andrews did not speak with eyewitnesses, he did not review the investigation file of the Sheriff's Department, and he did not read the autopsy report (Tr. 1674, 1886-1887). He accepted without question that Tilikum grabbed Ms. Brancheau by the hair (and not by the arm, as eyewitness Fredy Herrera testified).

This scenario fits within SeaWorld's narrative that its killer whales are always predictable and all of their behaviors have identifiable precursors. Mr. Andrews followed the philosophy of SeaWorld that its trainers' deaths and injuries are due to mistakes made by the trainers.

Mr. Andrews, based on no factual information, theorizes Tilikum grew curious at the unfamiliar sensation of Ms. Brancheau's hair, and grasped it with his mouth. Under cross-examination, Mr. Andrews admitted he did not, in fact, know whether or not Tilikum was familiar with floating hair (Tr. 1890). Ms. Flaherty Clark's testimony directly contradicted Mr. Andrews's opinion. She testified that Tilikum had been exposed to long hair ever since his arrival at SeaWorld in 1992:

Q. And, the way you desensitized Tilikum as to ponytails was for trainers to interact with Tilikum while the trainer had her ponytail loose, right?

Ms. Flaherty Clark: Tilikum has interacted with trainers with ponytails loose

since his arrival at SeaWorld. So, for 19 years, he's had daily exposure to varying lengths of hair very close to him.

Q. So, by desensitization, the process is just going on and interacting next to him with your hair not secured, right?

Ms. Flaherty Clark: You're absolutely correct. Desensitization, you have just defined it. Exposure to and the desensitization—exposure to a stimulus and a desensitization thereof.

Q. So, it's not like, for example, SeaWorld would dangle a wig or hair near Tilikum and desensitize him that way to not grab hair or a wig, right? That's not what desensitization is?

Ms. Flaherty Clark: For 19 years, Tilikum was exposed to ponytails dangling near him, ponytails of varying length, ponytails of varying color, wet ponytails, dry ponytails, thick ponytails, thin ponytails, he was desensitized to ponytails. . . . Tilikum had been desensitized to ponytails. He never responded, he never reached toward a ponytail, he never backed his head away from a ponytail, he never noticed a ponytail, the ponytail never interrupted his course of behavior.

(Tr. 1554-1557).

The court credits Ms. Flaherty Clark's testimony that Tilikum was desensitized to ponytails. She is SeaWorld's curator of animal training. She has worked with Tilikum and is familiar with his training and history. The court determines Mr. Andrews's opinion that Tilikum grabbed Ms. Brancheau by the hair out of curiosity because he was unfamiliar with it is speculative and has no basis in fact. The court accords it no weight.

Mr. Andrews concludes his report by stating, "My expert opinion is that SeaWorld can safely allow trainers to closely interact with killer whales, including waterwork, with the administrative and engineering controls that existed prior to February 24, 2010" (Exh. C-15, p. 10). As noted in the section addressing the recognized hazard, SeaWorld's own incident reports demonstrate that its safety program, either due to misplaced faith in operant conditioning or due to human error in implementing operant conditioning, exposes its trainers to the risks of death or serious physical injury.

Dr. Duffus, the Secretary's expert, has no experience with training killer whales. Unlike SeaWorld personnel, however, he has spent his professional life observing killer whales in their

natural habitat. In his report, Dr. Duffus writes that the behaviors of the killer whales described in the incident reports were familiar to him:

Tilikum actively killed the trainer [K. B.] in a manner not dissimilar to the way they kill seals in local waters. . . . Tilikum's aggression is consistent with predatory behavior, seizing prey from shore, holding prey underwater, shaking prey items are all commonly encountered in wild whales. The description of the Brancheau death exemplifies the same behavior I have seen in probably 100 foraging encounters in the wild with killer whales. It is also consistent with Tilikum's behavior in the drowning death of [K. B.]. . . . The death of [A. M.] in Loro Parque was also a training situation where a killer whale from SeaWorld's complement of animals killed a trainer. And, see for example the report of the case of [S. A.] and the whale Kyuquot of July 23, 2004, that made spectacular news footage. The whale refused to undertake show behaviors, instead jumping on top of their target. Here again the whale refused control by audible signal and hand slaps.

(Exh. C-12, pp. 6, 14).

Dr. Duffus testified that he considered these behaviors to be aggressive. “[A]ggression is a natural component of predatory behavior. . . . Aggression is the fast movement, the seizing of prey or other items, I guess” (Tr. 852). “Killer whales have thrived on their predatory behavior for thousands of years. It is only since the mid-1960s that humans have attempted to domesticate them” (Exh. C-12, p. 15).

Dr. Duffus stated, “[T]he training program that SeaWorld uses is influential. It does work. My point is that it does not work all the time” (Tr. 911). The court agrees with Dr. Duffus. SeaWorld's training program is highly detailed, well-communicated, and intensive. Yet it cannot remove the element of unpredictability inherent in working with killer whales. SeaWorld's safety program must not just reduce, but *materially* reduce, the recognized hazard. “Materially” means “To a significant extent or degree; importantly.” Two killer whales trained under SeaWorld's operant conditioning program killed two trainers two months apart. Under these circumstances it cannot be said that SeaWorld's training program has reduced the recognized hazard to a significant degree. It clearly did not eliminate the recognized hazard. The Secretary has established SeaWorld's safety training program, both for killer whales and for its trainers, is inadequate as a means of feasible abatement.

Feasibility of the Secretary's Proposed Abatement

As with Tilikum, the Secretary proposes that for performances, SeaWorld either install physical barriers between its trainers and killer whales, or require its trainers to maintain a minimum distance from the killer whales. This proposed abatement is technologically feasible; SeaWorld has been using it since February 24, 2010. SeaWorld has banned waterwork with its killer whales during performances, and trainers perform drywork from behind barriers.

The proposed abatement is also economically feasible. SeaWorld did not argue that performing drywork from behind barriers or banning trainers from waterwork during performances affected it economically. SeaWorld's killer whales, including Tilikum, have continued to perform in shows at Shamu Stadium without the presence of trainers in the water with them. Trainers perform drywork from behind barriers or at a minimum distance. There was no evidence adduced that the elimination of waterwork or the implementation of barriers for drywork has had a negative impact on SeaWorld's profits.

It is clear from this proceeding and from the testimony of SeaWorld's employees that SeaWorld would prefer to have its trainers engage in waterwork again during killer whale performances. The trainers each came across as intelligent, caring people, devoted to a calling of working with killer whales. The court asked Ms. Flaherty Clark why SeaWorld placed so much value on performing waterwork with killer whales. She testified that trainers see themselves as both caretakers of the animals and as entertainers, but that entertaining is a secondary role. She explained that people who attend the Shamu Stadium shows are deeply affected by the spectacle of humans interacting with killer whales:

[People] see killer whales interacting with human beings in a watery environment and they are affected. I believe—and this is my opinion—that they are affected to the point that that changes them. It's my opinion, and I have volumes of letters and cards. And, as much media attention that this event has promoted, I've gotten a lot of letters and cards by people who were affected by what we do. They're affected and I'm equating that with being educated. Now, I'm not saying you're changed as a person.

So, you're inspired, perhaps you're going to learn more, perhaps you're going to have other experiences in the park that you're going to look at a little differently.

(Tr. 1581-1582).

Ms. Flaherty Clark was a credible, sincere witness. She believes passionately in SeaWorld's mission to educate and inspire people about marine animals. Her justification for continuing waterwork, however, must be measured against the risk incurred by allowing trainers to interact closely with killer whales. Are the emotions inspired by the grandeur of humans interacting with killer whales worth the dangers created by the interactions?

Prohibiting waterwork and using physical barriers and minimum distances eliminate the trainers' exposure to the recognized hazard of working with killer whales. Proximity to the killer whales is the factor that determines the risk to the trainers. Dr. Duffus stated, "The fundamental fact with captivity is the proximity. . . . The fact of the matter is simple proximity. . . If you're close to a killer whale, they can potentially inflict harm" (Tr. 851).

Killer whales are not known to attack humans in the wild. There are no known cases of killer whales killing humans in the wild. The four known human deaths caused by killer whales occurred when humans entered pools occupied by captive whales. As far as the court can tell, all known injuries to humans have occurred from interactions with killer whales in pools. Once a trainer is in the water with a killer whale that chooses to engage in undesirable behavior, the trainer is at the whale's mercy. All of the emergency procedures, nets, underwater signals, and hand slaps are useless if the whale chooses to ignore them, as happened in the deaths of A. M. and Dawn Brancheau.

In his report, Dr. Duffus considers the consequences of being in the water with a killer whale that chooses to ignore its operant conditioning. Dr. Duffus sat on the coroner's jury that investigated K. B.'s death, and he reviewed the medical examiner's report in Ms. Brancheau's death. He writes, "It is not simply death and injury. In the two cases where Tilikum has killed trainers, their deaths were not instant. To be repeatedly held underwater, grasped in the mouth of a rapidly swimming killer whale and to be pursued under and at the surface of the water, all at the time knowing your death is the likely outcome is an unimaginable event. It is not whales playing, or an accident, it is a large carnivorous predator undertaking what thousands of generations of natural selection prepared it for" (Exh. C-12, p. 15).

The court finds the Secretary established a feasible means to eliminate the recognized hazard with regard to Instance (b). The Secretary has proven SeaWorld violated § 5(a)(1). Item 1 of

Citation No. 2 is affirmed.

Fair Notice

SeaWorld contends it lacked fair notice of what the Act required it to do in order to abate the recognized hazard to its trainers. SeaWorld cites *Miami Industries, Inc.*, 15 BNA OSHC 1258 (No. 88-671, 1991), *aff'd in part* 15 BNA at 2025 (6th Cir. 1992). In that case, the Secretary cited the employer for a machine guarding violation. The employer argued that it had relied on the representation of an OSHA compliance officer who, ten years prior to the instant citation, specifically approved the guards the employer was using on the machine. The Review Commission vacated the citation item, finding the compliance officer misled the employer into believing the Secretary considered its guarding device to be sufficient.

SeaWorld argues that it similarly lacked fair notice in the instant case. It bases this argument on the investigation conducted by Cal OSHA in response to the 2006 incident in which Kasatka grabbed K. P. by his foot and held him underwater. Because Cal OSHA ultimately did not cite SeaWorld of California for this incident, SeaWorld contends it lacked fair notice it was required to prevent close contact between its trainers and its killer whales during performances.

In the “Information Memorandum” issued by Cal OSHA, the agency notes that SeaWorld of California relied on training to prevent aggression by killer whales towards its trainers. It states the training was “not entirely effective at stopping the unwanted behaviors of the killer whale during this attack.” The “Information Memorandum” concludes, “Short of eliminating all of the water interactions with the killer whales, there is no guarantee that the employees can be kept safe from an attack by a killer whale once they get in the water with the animal” (Exh. R-3).

Cal OSHA issued a “Notice of No Accident-Related Violation After Investigation,” in which it states, “It has been determined that no standard, rule, order or regulation set forth in Title 8, California Code of Regulations, and Division 5 of the California Labor Code, has been violated in connection with the above described industrial accident and /or occupational illness” (Exh. R-3). SeaWorld contends it relied on Cal OSHA’s decision not to cite it for the K. P. incident when deciding to continue waterwork with its killer whales.

SeaWorld’s fair notice argument is rejected. California is a state-plan state; SeaWorld of Florida is under the jurisdiction of Federal OSHA. SeaWorld of Florida cannot rely on the exercise

of prosecutorial discretion by a California agency regulating a California corporation when evaluating its own safety program. Cal OSHA found a hazard in the San Diego case, but determined no California standard or regulation applied. In the present case, the Secretary cited SeaWorld under its general duty clause.

Furthermore, SeaWorld had acquired additional information regarding the hazards of working with killer whales by February 24, 2010. At that point SeaWorld had thoroughly investigated and reviewed both the K. P. incident that was the subject of Cal OSHA's investigation, and A. M.'s death in Loro Parque two months earlier. The SeaWorld parks had circulated the incident reports and commented on them. These additional incidents put SeaWorld on notice that its operant conditioning program was not working sufficiently to protect its trainers during waterwork with the killer whales.

Willful Classification

The Secretary classifies the violation of Item 1 of Citation No. 2 as willful.

A willful violation is one "committed with intentional, knowing or voluntary disregard for the requirements of the Act, or with plain indifference to employee safety." *Falcon Steel Co.*, 16 BNA OSHC 1179, 1181, 1993-95 CCH OSHA ¶30,059, p. 41, 330 (No. 89-2883, 1993) (consolidated); *A.P. O'Horo Co.*, 14 BNA OSHC 2004, 2012, 1991-93 C.H. OSHA ¶ 29,223, p. 39,133 (No. 85-0369, 1991). A showing of evil or malicious intent is not necessary to establish willfulness. *Anderson Excavating and Wrecking Co.*, 17 BNA OSHC 1890, 1891, n.3, 1995-97 C.H. OSHA ¶ 31,228, p. 43,788, n.3 (No. 92-3684, 1997), *aff'd* 131 F.3d 1254 (8th Cir. 1997). A willful violation is differentiated from a nonwillful violation by an employer's heightened awareness of the illegality of the conduct or conditions and by a state of mind, *i.e.*, conscious disregard or plain indifference for the safety and health of employees. *General Motors Corp., Electro-Motive Div.*, 14 BNA OSHC 2064, 2068, 1991-93 C.H. OSHA ¶ 29,240, p. 39,168 (No. 82-630, 1991)(consolidated).

A.E. Staley Manufacturing Co., 19 BNA OSHC 1199, 1202 (Nos. 91-0637 & 91-0638, 2000).

Intentional, Knowing, or Voluntary Disregard for the Requirements of the Act

The Secretary failed to establish SeaWorld disregarded the requirements of the Act. OSHA has no specific standard that regulates employees working in close contact with killer whales. The original SeaWorld in San Diego predates the Act. No evidence was adduced that shows SeaWorld had a heightened awareness of the illegality of its conduct.

Plain Indifference to Employee Safety

The Secretary has also failed to establish SeaWorld manifested plain indifference to employee safety. On the contrary, the record demonstrates SeaWorld constantly emphasized safety training and was continuously refining its safety program. SeaWorld requires its trainers to participate in an intensive, multi-year program under close supervision before they are allowed close contact with the killer whales. SeaWorld requires its trainers to maintain peak physical condition. It administers physical fitness tests four times a year (Tr. 646-647). SeaWorld installed underwater video cameras in every back area to monitor the killer whales' activity (Tr. 642). The company has implemented emergency response protocols (ERPs) (Exh. C-1; Tr. 120). SeaWorld's trainers practice the ERPs during monthly drills (Tr. 120, 609). SeaWorld's safety training is highly detailed and thorough. It is a safety-conscious employer.

The court determines the Secretary's classification of willfulness is not appropriate for SeaWorld's violation of § 5(a)(1). The court reclassifies the violation as serious.

Ruling Limited to Show Performances

The court's order affirming Item 1 of Citation No. 2 for a violation of § 5(a)(1) is limited to close contact between trainers and killer whales during performances only. Other activities during which trainers are in close contact with killer whales are not affected by this ruling.

Dr. Christopher Dold is SeaWorld Parks & Entertainment's vice-president of veterinarian services (Tr. 1708). He testified regarding SeaWorld's extensive health program for its killer whales. SeaWorld performs a comprehensive health assessment every month on each killer whale. It also performs daily procedures, such as tooth flushing. Trainers assist the veterinarians during each interaction. Standard procedures include taking specimens of blood, urine, feces, and sperm; performing dental exams; performing blow hole cultures; performing gastric intubations; and preparing female killer whales for artificial insemination (Tr. 1717-1736).

As the custodian of its killer whales, SeaWorld has an ethical duty to provide health and medical care to them. Unlike show performances, which can successfully continue without close contact between the killer whales and the trainers, SeaWorld's husbandry activities require a certain amount of contact between the trainers and the killer whales.

Penalty Determination

The Commission is the final arbiter of penalties in all contested cases. “In assessing penalties, section 17(j) of the OSH Act, 29 U. S. C. § 666(j), requires the Commission to give due consideration to the gravity of the violation and the employer’s size, history of violation, and good faith.” *Burkes Mechanical Inc.*, 21 BNA OSHC 2136, 2142 (No. 04-0475, 2007). “Gravity is a principal factor in a penalty determination and is based on the number of employees exposed, duration of exposure, likelihood of injury, and precautions taken against injury.” *Siemens Energy and Automation, Inc.*, 20 BNA OSHC 2196, 2201 (No. 00-1052, 2005).

At the time of the OSHA inspection, SeaWorld employed approximately 2,000 employees (Tr. 925-926). OSHA had not previously inspected SeaWorld at its Orlando park. SeaWorld demonstrated good faith throughout this proceeding.

Item 1 of Citation No., § 1910.23(d)(1)(iii): The gravity of the violation is high. Employees were required to go up and down the stairways on a regular basis while carrying up to 60 pounds of fish. If an employee slipped or stumbled, the employee did not have a stair railing to prevent a fall over the edge of the stairway. If the employee avoided landing in the water, he or she was at risk for serious injuries, including broken bones. Landing in the water could potentially expose the employee to a greater risk. In 1991 at Sealand of the Pacific, trainer K. B. slipped and fell into a sea pen in which three killer whales, including Tilikum, were kept. The killer whales prevented her from exiting the pool, resulting in her eventual death (Tr. 596).

The court determines the Secretary’s proposed penalty of \$ 5,000.00 is appropriate.

Item 1 of Citation No. 2, § 5(a)(1): The gravity of this violation is very high. Trainers were required to work in close contact with killer whales during performances. The killer whales sometimes engage in unpredictable behavior, including seizing trainers with their mouths, holding the trainers under water, and ramming the trainers while in the water. SeaWorld’s operant conditioning program places an unrealistic burden on trainers to recognize precursors and react appropriately to forestall undesirable behavior.

The hazard to which the trainers are exposed when working with killer whales is exacerbated by the environment. If people trained in emergency rescue are present when a person is seriously injured by a land animal, they likely will be able to quickly isolate the injured person from the animal

and provide emergency medical care. Such is not the case with killer whales. In the reported cases where killer whales seized trainers during waterwork or pulled trainers into the water during drywork, the injured or deceased trainer was not recovered until the killer whale decided to release the trainer. Even if the injuries inflicted by the killer whale are not fatal, the trainer may drown before the whale chooses to release him or her. As Dr. Duffus writes, “[T]he aquatic environment that the whales inhabit adds to the risk for humans as any short delay in reaching the water’s surface can be fatal” (Exh. C-12, p. 16).

The court determines a penalty of \$ 7,000.00 is appropriate.

FINDINGS OF FACT AND CONCLUSIONS OF LAW

The foregoing decision constitutes the findings of fact and conclusions of law in accordance with Rule 52(a) of the Federal Rules of Civil Procedure.

ORDER

Based upon the foregoing decision, it is ORDERED that:

1. Item 1 of Citation No. 1, alleging a serious violation of 29 C. F. R. § 1910.23(d)(1)(iii), is affirmed, and a penalty of \$ 5,000.00 is assessed;
2. Item 1 of Citation No. 2, alleging a willful violation of § 5(a)(1) of the Act, is affirmed as serious, and a penalty of \$ 7,000.00 is assessed; and
3. Item 1 of Citation No. 3, alleging an other than serious violation of 29 C. F. R. § 1910.305(j)(2)(v), was withdrawn by the Secretary. Item 1 is vacated and no penalty is assessed.

/S/ KEN S. WELSCH

KEN S. WELSCH
Administrative Law Judge

Date: June 11, 2011