

ACCIDENT INVESTIGATION REPORT NARRATIVE

Permanent

Temporary

NOTIFICATION

On Thursday, July 8, 2004, at approximately 6:00 p.m., the Division of Occupational Safety and Health, Permanent Amusement Ride Unit, Anaheim District Office ("The Division") received a phone call from Disneyland Resort employee Betty Appleton, Director of Workers Compensation and Guest Claims, reporting that an accident had occurred on Thursday July 8, 2004, at approximately 5:05 p.m. The accident was reported to have occurred on an attraction known as the Big Thunder Mountain Railroad, located at Disneyland Resort, 1313 S. Harbor Blvd., Anaheim, California.

SUMMARY OF ACCIDENT

On July 8, 2004 at approximately 5:05 p.m., Big Thunder Mountain Railroad attraction was operating with guests on board. Train #1 was occupying the Main side of the station, and the Lead Erin Cadman advised Tower Cast Member James Nerrie that due to on-going station back-ups, the next train (Train #3) was to be removed. This train, which was operating with guests on board, was approaching the station and was in the approximate area of Dino Pond before Brake Zone 4 when the Tower Cast Member started to perform the procedure to remove a train from service. The Operating guide states that this procedure shall not be performed until the train to be removed has been diverted to and parked at the Spur side of the station. As a result of not following the procedure, Train #3 entered the Main side of the station instead of the Spur side and collided with Train #1, which was parked at the Main side of the station with guests on board. Following the accident, the three guests occupying Train #3 were transported to a local hospital and released later that evening. No guest occupying Train #1 reported any injuries at the time of the accident.

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1 transported to the hospital. At that time Mr. Tafazoli advised me to start the investigation of the 1
2 accident the following morning due to fact that the injuries that the patrons sustained were not 2
3 serious, and the fact that it was late in the evening. I then met with Rich Langhorst, Vice 3
4 President Maintenance and Engineering, Ms. Appleton, Elisa Martines, Disneyland Resort 4
5 Senior Counsel, and Mr. Gonser, and advised them that the Division would start the 5
6 investigation in the morning. I requested that they preserve the accident scene until then, 6
7 which they agreed to do. I also requested that they have the following documentation ready for 7
8 review in the morning: Operating Guidelines, training records for Cast Members on duty at the 8
9 time of accident, ride control print out, Cast Member statements, and first aid reports. I left 9
10 Disneyland at 8:30 PM. 10
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13 I arrived at Disneyland on Friday, July 9, 2004, at 7:00 AM where I was met by Mr. Gonser, 13
14 and escorted to a conference room where we were joined Ms. Appleton, Kurt Muller, Manager, 14
15 Safety and Quality Engineering, Randy Tamme, Senior Quality Engineer, David Milligan, 15
16 Manager, Safety Operations, and Bob Rambaud, Senior Safety Manager, all employees of 16
17 Disneyland. At this time, I reviewed the Cast Members statements and first aid reports. 17
18 After review of the statements, it appeared that the Tower Cast Member (Mr. Nerrie) did not 18
19 follow the procedures to remove a train from service. Also, that the Lead (Ms. Cadman) 19
20 requested to have the train (Train #3) removed and hit the Power Disconnect (a type of E- 20
21 Stop) when she realized the train was headed to the Main side of the station. 21
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23 I then proceeded to the Big Thunder Mountain attraction to examine Train #1 and Train #3. I 23
24 noticed that Train #3 had collided with Train #1 and that the third car of Train #3 had partially 24
25 derailed. At this time, it appeared that there were no broken parts and the impact appeared to 25
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1 be minor. I requested to have both trains #1 and #3 removed from the station area and put in 1
2 the maintenance shop for further inspection. I began to walk the track, and identified no 2
3 deficiencies. I then was escorted to a conference room where I conducted interviews with the 3
4 following Cast Members: Jennifer Legra, 1st Stager position at the time of the accident; Mr. 4
5 Nerrie, Tower position at the time of the accident; and Ms. Cadman, Lead position at the time 5
6 of the accident. The interviews confirmed that the Tower Cast Member (Mr. Nerrie) did not 6
7 follow the procedure for removing a train from service. Interviews also revealed that Mr. Nerrie 7
8 had just completed his training and it was his third day working the Tower position. He followed 8
9 the proper procedure for removing a train from service on July 4, 2004 with out any problems. 9
10 During the interview, it also was confirmed that the Lead (Ms. Cadman) did activate the Power 10
11 Disconnect (a type of E-Stop) prior to the two trains colliding. She hit the Power Disconnect 11
12 when she saw Train #3 approaching the Main side of the station. I went back to the Big 12
13 Thunder Railroad attraction, and with the help of the Operations Department we operated the 13
14 attraction and removed and added trains to see how the procedures worked. The intended 14
15 operation is as follows: when there are trains in both the Main and Spur stations, a train that 15
16 enters Block Zone 4 (BZ4) will automatically stop. If the operator wants to remove a train from 16
17 service, they would (1) dispatch the train from Spur station, (2) reset BZ4, thereby advancing 17
18 the BZ4 train into the empty Spur station, and then after the train comes to a stop, (3) place 18
19 the Spur station into Storage Mode in order to remove a train from service. I then proceeded to 19
20 a private room where I interviewed the injured patrons that were transported to and released 20
21 from the hospital. I spoke with Jeff [REDACTED] and Jordan [REDACTED], both of whom had been 21
22 on Train #3, transported to the hospital, and released. They both told me that the ride seemed 22
23 normal to them until their train collided with the train in front of them. They also told me that 23
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1 their train never stopped until the impact, although it did slow down prior to the collision. I left 1
2 Disneyland at 4:00 PM. 2

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4 I arrived back at Disneyland to continue the Division inspection on Monday, July 12, 2004 at 4
5 10:00 AM, where I was met by Mr. Muller and escorted to a private office to review the 5
6 following documentation: Operating Guideline, Cast Member training records, ride control print 6
7 out, maintenance records, and map of the station. After review of the documentation, I 7
8 concluded that all Cast Members working the attraction at the time of the accident were trained 8
9 in accordance with the Operating Guidelines, and the Operating Guidelines were clear on the 9
10 procedures to remove a train from service. I left Disneyland at 4:00 PM. 10
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12 I arrived back at Disneyland on Tuesday, July 13, 2004 at 8:00 AM and was met by Mr. Muller. 12
13 I proceeded to the Big Thunder Mountain Railroad attraction where we simulated what 13
14 happened on July 8, 2004. We (Disneyland and the Division) identified three potential 14
15 scenarios and outcomes (with a train in both the Main and Spur station, and a train in BZ4) 15
16 that we were going to evaluate at the attraction: (A) if the Operators follow the intended 16
17 operation, there are no unusual consequences, (B) if the Operator selects Storage mode after 17
18 the train begins to advance from Block Zone 4 but before the train is close to Track Switch #3, 18
19 and Track Switch #3 automatically moves to the occupied Main Station, (C) If the Operator 19
20 selects Storage Mode at any other time, there are no unusual consequences. In regards to 20
21 scenario (B) five unique and rare conditions must take place: (1) a station backup has 21
22 occurred at BZ4, (2) an Operator desires to remove a train from service, (3) the Spur train is 22
23 dispatched, (4) the Operator resets the train at BZ4, (5) the Operator incorrectly selects 23
24 Storage Mode before the train at BZ4 advances to a point near Track Switch #3. 24
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1 All three potential scenarios were tested and verified. I concluded that what had happened on 1
2 July, 8, 2004 at approximately 5:05 PM was in fact scenario (B). Disneyland has enhanced the 2
3 ride control system to prevent a train from entering an occupied station in the event that a 3
4 operator fails to follow procedures (as described in Scenario B). The changes to the ride 4
5 control system were tested and verified at this time. Next, I proceeded to the Big Thunder 5
6 Maintenance shop where I inspected Train #1 and Train #3. At the conclusion of the inspection 6
7 of the two trains, I concluded that both trains were in good working order and no issues were 7
8 noted. I left Disneyland at 2:00 PM. 8
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10 I arrived back at Disneyland on Tuesday, July 20, 2004 and was met by Mr. Muller. The 10
11 purpose of this visit was to interview Mr. Nerrie (Tower Position) the second time to verify the 11
12 sequence of events leading up to the accident on July, 8, 2004. After this interview, I 12
13 determined that Mr. Nerrie's actions in the Tower were consistent with the previously 13
14 described scenario, (B). 14

15 I returned to Disneyland on Thursday, July 22, 2004 and was met by Mr. Muller. The 15
16 purpose of this visit was to interview Ms. Cadman (Lead Position) a second time to verify the 16
17 sequence of events leading up to the accident on July, 8, 2004. After this interview I 17
18 determined that what Ms. Cadman did in the Tower was consistent with the previously 18
19 described scenario, (B). 19
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21 On Monday, August 16, 2004 I was faxed over a copy the Anaheim Police Department 21
22 incident report. At this time I reviewed the report. 22
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CONCLUSION

The Division has completed its investigation of the Big Thunder Mountain Railroad attraction.

As a result of its investigation the Division has drawn the following conclusions:

1. The Tower Cast Member (Mr. Nerrie) failed to follow the procedure for removing a train from service.

2. The Big Thunder Mountain Railroad attraction ride control system allowed a train to enter an occupied side of the station, while the attraction was operating with patrons on board.

3. The remaining Cast Members working on the attraction Big Thunder Mountain Railroad at the time of accident performed there specific job responsibilities correctly as outlined in the Operating Guidelines.

CORRECTIVE ACTION SPECIFICATIONS

The following are the corrective actions that shall be taken as a result of this investigation. In addition to complying with the corrective actions listed below, the Owner/Operator shall complete an inspection conducted by the Division of Occupational Safety and Health before the Big Thunder Mountain Railroad attraction is placed back into operation:

A. The Owner/operator shall retrain Cast Member Mr. Nerrie on the Big Thunder Mountain Railroad attraction Tower Position. This retraining shall take place prior to Mr. Nerrie working on the attraction. **CCR SECTION 3195.7(a) Complied on August 17, 2004**

B. The Owner/Operator shall evaluate the Ride Control System and Operator Interfaces, and enhance the Ride Control System and/or adopt operator procedures to assure that while carrying passengers, independent passenger carrying units do no enter occupied block zones. **CCR SECTION 3195.9(D)1A**

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1 C. The Owner/Operator shall, during independent passenger carrying unit removal, assure 1
2 that the independent passenger carrying unit being removed can not enter an occupied side of 2
3 the station. **CCR SECTION 3195.9(D)1A** 3
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