

# OCEANFRONT FORENSIC ENGINEERING INC.

Forensic Science Specialists

## INVESTIGATION REPORT

<input type="checkbox"/> PRE-INVESTIGATION REPORT	OFE-CODE NO.: <u>OFE-Kahn-Astle-Garcia</u>
<input checked="" type="checkbox"/> INTERIM INVESTIGATION REPORT	REPORT NO.: <u>JM-02</u>
<input type="checkbox"/> FINAL INVESTIGATION REPORT	DATE: <u>24-March-2009</u>
<b><u>Law Firm: Michael A. Kahn</u></b>	PREPARED BY: <u>Jeff Matney</u>
<b>Case Name: <u>Maria Garcia (Case 03)</u></b>	CHECKED BY: <u>Jeff Matney</u>
	APPROVED BY::
	REQ. NO.: <u>Page 1 of 3</u>
<b>Plaintiff: <u>Maria Garcia</u></b> <u>Injured</u>	Expert Witness (OFE): <u>Jeff Matney</u>
<b>Defendant: <u>Best Western</u></b> <u>Location of Accident</u>	Law Firm: <u>Michael A. Kahn</u>
	Contact: <u>Mark C. Astle</u>
	Incident Location: <u>Best Western</u> <u>6141 Franklin Ave.</u> <u>Hollywood, Ca. 90028</u>
	INVESTIGATION DATE: <u>13-March-2009</u>
<b>1. STAGE OF INVESTIGATION STATUS</b>	Actual Accident Reconstruction was conducted with Plaintiff for Slip and Fall incident at Best Western Motel in Hollywood, California Phone (323) 464-5181
<input type="checkbox"/> PRE	
<input checked="" type="checkbox"/> INTERIM	
<input type="checkbox"/> FINAL	
<b>2. TYPE OF INVESTIGATION/ACTIVITY PERFORMED</b>	
<input type="checkbox"/> REVIEW DOCUMENTATION	
<input checked="" type="checkbox"/> INVESTIGATION	Conducted on 13-March-2009
<input checked="" type="checkbox"/> VISUAL	A visual inspection and Accident Reconstruction was conducted.
<input checked="" type="checkbox"/> PHOTOGRAPHS	Please see four sets of Photographs total of 16
<input checked="" type="checkbox"/> REPORT	JM-02
<input type="checkbox"/> TRIAL	
<input type="checkbox"/> LABORATORY WORK	
<input type="checkbox"/> DEPOSITION	
<b>3. NEXT VISIT SCHEDULE</b>	TBA
More details are shown on next pages	<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO

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**Objective:**

To perform an Accident Reconstruction with Client participation in the Coefficient of Friction (COF) dynamometer analysis as conducted at the Best Western Hotel located in Hollywood, California. Ms. Maria Garcia experienced a slip and fall incident outside her hotel room door which caused significant arm and elbow damage.

**Details of the Investigation:**

On February 24, 2008, slip and fall incident occurred at 6141 Franklin Ave. Hollywood, Ca. 90028 (address of The Best Western Hotel) when Ms. Maria Garcia was walking out of her hotel room (Room #219). At approximately 9:30 am. Ms. Garcia was exiting her room when she slipped on the wet floor directly outside her door. This slip caused Ms. Garcia to fall and fracture her right elbow in three places. According to Ms. Garcia, no wet floor or caution signs were visible in the area the accident occurred. Reportedly, there was significant rain fall on this day.

Forensic analyst, Jeff Matney with Oceanfront Engineering Inc. and assistant forensic analyst, Melanie Gropp, drove to the address listed above to take photographs of the premises and actual photographs of the slip and fall analytical study. Ms. Garcia participated in the accident reconstruction and her weight at the time of the incident was 162 pounds. Her current weight as of this investigation, March 13, 2009 was 155 pounds, a differential of 4%, which shall be factored into the COF equation.

The shoes Ms. Garcia was wearing at the time of the accident are Coach Slipper Shoes with a gum rubber sole. The Coach Shoe flat, rubber sole provided maximum area of contact to the ground. As Ms. Garcia was walking out of her room and her rubber shoe sole contacted the hotel flooring with the force keeping her foot in place. This is known as Static Friction (The force between two objects that are not moving). This force can be measured as a value called the coefficient of friction. This value describes the ratio of force between two objects and the force pressing them together. According to the OSHA, Director of Enforcement Programs, Mr. Richard Fairfax advises based on scientific studies at the University of Michigan, a reasonable slip resistance would have a coefficient of friction (COF) of 0.5 minimum value. Any value found to be below 0.5 would have an unreasonable slip resistance based on COF analysis.

**"The Occupational Safety and Health Administration recommends that walking surfaces have a static coefficient of friction of 0.5." Please refer to: *"Work Surface Friction: Definitions, Laboratory and Field Measurements, and a Comprehensive Bibliography,"***

With this OSHA guideline in mind, the following analysis was conducted to prove that the walk surface outside Maria Garcia's hotel room did in fact provide a means of coefficient friction loss and subsequent slip and fall incident. Maria Garcia, Plaintiff, was used for demonstrating the accident reconstruction utilizing a calibrated dynamometer, Model Intercomp-SC200, Digital Scale with serial number: 1119CA08991. This device is due for re-calibration on 11/19/2009 and is in excellent working condition. Upon each analytical test performed, the dynamometer was zeroed out for consistency of measurement. Just outside the hotel room door, the Plaintiff was rigged with a dynamometer attached at the ankles. This Forensic Analyst applied a consistent pulling force until the instant that one shoe engaged initial slippage. A dynamometer was utilized to measure foot pounds of force and was recorded 10 times on a dry surface flooring and 10 times on a wet surface flooring as simulated during the rain soaked floor, slip and fall incident of February 24, 2008. The following results were measured to arrive at estimated COF values.

<u>Tile Floor Dry</u>	<u>Tile Floor Wet</u>	<u>COF Dry</u>	<u>COF Wet</u>	<u>Results</u>
39 foot/pounds	35 foot/pounds	.25	.23	Failed OSHA
37	34	.24	.22	Failed OSHA
37	33	.24	.21	Failed OSHA
38	37	.25	.24	Failed OSHA
34	35	.22	.23	Failed OSHA
34	34	.22	.24	Failed OSHA
35	34	.23	.22	Failed OSHA
41	37	.26	.24	Failed OSHA
36	37	.23	.24	Failed OSHA
40	38	.26	.25	Failed OSHA
<b>Mean</b>	<b>Mean</b>	<b>Mean</b>	<b>Mean</b>	
<b>Average</b>	<b>Average</b>	<b>Average</b>	<b>Average</b>	
<b>37.1 ft/lbs</b>	<b>35.4 ft/lbs</b>	<b>2.4 COF</b>	<b>2.3 COF</b>	<b>Failed OSHA</b>

**Final Summary:**

It is in the opinion of this Forensic Analyst that the lack of caution and/or wet floor signs in the area of the accident and the coefficient of friction instability, highly contributed to the slip and fall incident experienced by Maria Garcia. Due to the lubrication of water on the flooring, the normal frictional coefficient of Maria Garcia shoes was reduced to the point of premature slippage. The very low, coefficient of friction exhibited from the analytical study performed on the existing hotel flooring also contributed to the incident and does not comply with the recommended guidelines by OSHA. Guidelines from OSHA is a maximum coefficient of friction of 0.50 and the mean average dry and wet was substantially lower than the OSHA standard by half the recommended value. Including the reduction in current weight of Ms. Garcia, the Coefficient of Friction remains significantly lower than the OSHA recommended flooring for businesses.

*Jeff Matney*  
**Oceanfront Forensic Engineering Inc.**  
**Forensic Analyst**

**Attachments: 4 Sets of Digital Photographs**