

TWU Local 556 Safety Team

Michael Massoni – Operational Safety Chair

*...The mission of the Unions Safety Team is to provide **Union Leadership** in all issues of health & safety; **Technical Counsel** to the TWU Executive Board; **Representation** to our Membership; **Stewardship** within our Company, Industry, its regulatory bodies and most importantly, **facilitate Effective Communications** between all...*

To: TWU Local 556, Executive Board

CC: Harry Lombardo; Cuyler Thompson; Erich Schwenk

Date: May 12th, 2014

Re: May 2014 EB Safety Team Report

Currently the Safety Team has the following open and/or resolved action items:

Aviation Safety Action Program (ASAP) – Reports Under ERC Review = **31**

ID	-	Event	Date	-	Status
----- Summary -----					
1924	4/13/2014	Sent to ERC for review			Flight Attendant Injury, Coffee Maker, Flight attendant burned by coffee maker that wasn't fixed due to 'strong start' program
1938	4/17/2014	Sent to ERC for review			Jumpseat, I landed on an aft jump seat due to turbulence.
1947	4/22/2014	Sent to ERC for review			Equipment, Crew emergency oxygen compartment sealed shut
1948	4/24/2014	Sent to ERC for review			Boarding, Ops Improperly Boarded
1949	4/23/2014	Sent to ERC for review			while serving I spilled drinks from my tray on a customer.
1950	4/24/2014	Sent to ERC for review			Unsecure Cabin, Landed in lavatory
1951	4/25/2014	Sent to ERC for review			Boarding, Ops began boarding before all 3 FAs were onboard.
1952	4/25/2014	Sent to ERC for review			OWWE_Briefing, Failure to brief Exit Row

1954	4/28/2014	Sent to ERC for review	Arm/Disarm Door, Forward service door was armed from previous flight
1956	4/25/2014	Sent to ERC for review	OWWE_Briefing, "C" FA said she had forgotten to brief OWWE
1957	4/27/2014	Sent to ERC for review	Unsecure Cabin, I was assisting the working cabin crew with a medical emergency and inflight service while deadheading.
1958	4/29/2014	Sent to ERC for review	Unsecure cabin, Jumpseat, I was not secured in jumpseat for landing.
1959	4/29/2014	Sent to ERC for review	Arm/Disarm Door, Failure to disarm door. I was at door ready to disarm. Agent came in to replace trash. I moved aside and forgot my door.
1960	4/29/2014	Sent to ERC for review	Child Restraint Device, Failure to acknowledge infant carrier directly behind OWWE row 13
1961	4/29/2014	Sent to ERC for review	OWWE_Briefing, "C" FA could not remember if she briefed the overwing. I cannot remember if I confirmed with "C"
1962	4/30/2014	Sent to ERC for review	OWWE_Briefing, Failed to verify with "C" position that the OWWE had been briefed prior to closing cabin door for pushback.
1963	4/29/2014	Sent to ERC for review	Boarding, Minimum Crew Violation, Ops agent started to board the flight without all flight attendants on the plane
1964	4/29/2014	Sent to ERC for review	"B" F/A refused to comply with proper boarding position (after several requests)
1965	4/29/2014	Sent to ERC for review	Demo, Emergency briefing not completed
1966	4/27/2014	Sent to ERC for review	Demo, Failure to Complete Emergency Demo
1967	5/3/2014	Sent to ERC for review	Unsecure Cabin, Due to turbulence, CPT said F/As sit down, I quickly put my makeup bag in the stowage area for the emerg. checklist
1968	5/4/2014	Sent to ERC for review	OWWE_Briefing, did not cross check "C" FA about briefing overwing exit

1969	5/4/2014	Sent to ERC for review	Jumpseat, Landing in the Aft jumpseat
1970	5/4/2014	Sent to ERC for review	OWWE_Briefing, I forgot to give the exit row briefing before departure. I realized my mistake and briefed during cabin service.
1971	5/4/2014	Sent to ERC for review	Arm/Disarm Door, slide fell out of casing
1975	5/5/2014	Sent to ERC for review	Cabin Walk Through, did not perform final cabin walk through before cleared for departure signal from captain
1976	5/6/2014	Sent to ERC for review	Arm/Disarm Door, Failure to unarm door slide.
1977	5/5/2014	Sent to ERC for review	OWWE_Briefing, forgot to brief exit until during safety demo
1978	5/9/2014	Sent to ERC for review	Arm/Disarm Door, Did not crack open service door
1979	5/10/2014	Sent to ERC for review	Unsecure Cabin, Medical ER. Landed in aisle with ill passenger, MD and RN.
1980	5/10/2014	Sent to ERC for review	Unsecure Cabin, When I started taking drink orders, I realized I had 5 in a row (infant twins). Moved a pax to get compliant.

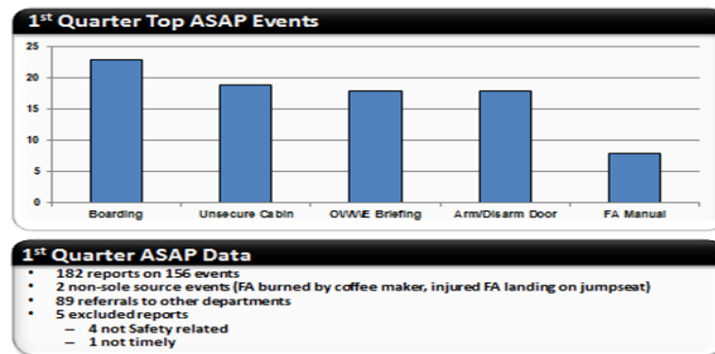
ASAP Reports received to date:

1980

▪ Accepted Reports to date =

1796

Q1 2014 ASAP Data:



Aviation Safety & Health Database Int'l (ASHDI) – Reports Received = **0**

Report

Entered into LaborForce

***Southwest Airlines Event Notification System (ENS) and
AirTran Safety Information Reported Event Notification (SIREN)****

Fielded Events for Period:

- 04/14/14 through 05/12/14 = **192**
- Emergencies Declared = **29**
- All OF 2014 to Date = **836**
- ALL OF 2013 = **1138****
- ALL OF 2010 = **1413**
- ALL OF 2009 = **1210**
- ALL OF 2008 = **940**

*With the advent of SWA / AT SOC, TWU 556 receives both ENS and SIREN events from NOC. All ENS events will be tracked, trended and vetted for possible follow-up. All SIREN events will be tracked and trended but will not be vetted for follow-up as AT is covered under a different CBA and bargaining unit.

***ENS tracking and trending was suspended for the period of May 2012 – June 24th, 2013 – However ENS follow-up was maintained throughout this period. The Safety Team has re-established the practice of tracking and trending all ENS/SIREN events and will include the same in all future Safety Team Reports*

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- TWU Local 556 Operational Safety Chair, Michael Massoni and Occupational Health and Safety Coordinator, Michele Moore are continuing to monitor **Flight Attendant reported allergic reactions that are seemingly linked to Evolve interior converted aircraft**. Since this phenomenon surfaced the TWU 556 Safety Team has encouraged Flight Attendants to report any and all suspected Evolve related allergic reactions via IR and/or ASAP. At this time the TWU 556 Safety Team, in cooperation with Management, concluded our investigative efforts and are in receipt of the following Independent Medical Evaluation/Review in the matter:

March 24, 2014

INDEPENDENT MEDICAL EVALUATION/REVIEW

Medical Toxicology

Banner Good Samaritan Medical Center

I was asked by Ms. Amy Reeg of Southwest Airlines (SWA) Workers' Compensation to conduct an independent medical evaluation/review (IME) regarding health complaints and their possible relationship to workplace exposures to several chemicals. Although the exact etiology of the complaints was unknown, focus has been on the installation of new Evolve[®] interiors (including Mohawk[®] and Interface[®] carpets) and cleaning agents (e.g. Celeste[®] Interior Cleaner Complete). There are several employees (36) and one passenger involved with numerous dates of exposures and symptoms.

The requesting clients were informed about the IME process and that I would not be assuming a treating role for any of the claimants. However, if requested, formal evaluations of the involved workers can be arranged.

The IME process involved discussions with SWA staff, a purpose letter (dated 3/5/14), and review of the provided records, Material Safety Data Sheets (MSDS), photographs and relevant scientific literature prior to the preparation of this report. The opinions provided at the conclusion of this report are stated to a reasonable degree of medical certainty and subject to modification upon review of any additional material received subsequent to submission.

CHIEF COMPLAINTS - Rash, headache, mucous membrane irritation, nausea and bad odor.

HISTORY OF EVENTS - Starting in March of 2013, several SWA flight attendants started noticing a constellation of symptoms thought to be related to their work environment; specifically, time spent inside aircraft. These symptoms included respiratory complaints (e.g. cough), mucous membrane irritation (e.g. eye and sinus pain), rash and headaches. Other neurological complaints, including numbness and tingling, and loss of consciousness, were also reported. Although the cause for these complaints was unknown, several reports included an irritant/offensive odor; others implicated a carpet or cleaning agent.

The involved persons included 35 flight attendants, one pilot and one passenger during this (approximate) 11-month time period. Several flight attendants registered more than one report of health complaints; others reported being seen by workplace or private health care providers.

In response to these issues the manufacturers of the carpet and cleaning agents were contacted for background product information and any other reported complaints. A time line of reported effects, aircraft involved and history of carpet installation was developed. No definitive etiology(s) for any of the complaints has been identified.

REPORTED CLINICAL EFFECTS

General: Offensive odor, health deterioration, severe allergy attack, allergic reaction, feeling tired and noticed strong vapors.

HEENT: Right ear pain, headache, sneezing, sinus issues, eyes water and itch, throat itches, glands blow up, nose bleed, face itched, raspy voice, loss of voice, congestion, ears ringing/itching/ burning, eyelids swollen with crust and rhinitis.

Pulmonary: Shortness of breath, cough, dyspnea, "acute pulmonary edema."

GI: Nausea and emesis.

Derm: Skin reactions, hives, irritation and blisters.

Infectious: "Diagnosed with laryngitis" and "otitis media."

Neuro: Loss of consciousness, light-headed, migraine, unilateral tingling and numbness in toes.

REPORTED MEDICAL HISTORY AND RELATED INTERVENTIONS

"Chronic sinus problems; [contact wearer] had to remove my contacts; asthma; took 4 non-aspirin and used Flonase; physical therapy [for unknown reason]; used Benadryl; used my nose spray; migraine; took an allergy pill."

PHYSICAL FINDINGS

Photographs revealed several persons with various rashes involving their face, arms and/or chest.

PREVIOUS HEALTH CARE RECORDS AND ASSESSMENTS (as provided)

Patient - C.B.

Date - 10/17/13 and 10/18/13.

Provider - Karin O'Clair DO (Concentra).

Assessments / Recommendations - Patient statement: "Allergy/hives on face after working on aircraft." "The patient is a flight attendant who presents with a rash on her face on and off for the past 6 [weeks]. She states that this occurs while she is working and other employees have a similar rash ... can progress to blisters if she works a few days in a row... The rash only occurs on the face... no wheezing or SOB." Physical examination: "Rhinorrhea... face with erythematous wheels - periorbital and on cheeks with mild soft tissue swelling." Assessments: "Urticaria, dermatitis. Etiology unknown." Treated with Medrol® dose pack and Zyrtec®. Re-evaluation on 10/18/103: continued signs and symptoms; referred to an Allergist.

PRODUCT AND EXPOSURE ASSESSMENTS

Time Line of Related Events: (reviewed)

Symptoms between 3/13/2013 and 1/29/2014.

Evolve interior modifications: between 1/2012 and 9/18/2013.

Interface carpets replaced by Mohawk carpets: completed by 7/2014.

Soap and Flight Fresh Disk fragrance (Eucalyptus): 1/2013.

Material Safety Data Sheets (MSDS):

Biozyme EX3 Solution: viable biological enzymes 1-10%; other "proprietary or nonhazardous" ingredients. "Not OSHA regulated ... ingredients present are below the levels specified as hazardous..."

Celeste Interior Cleaner Complete: "proprietary surfactant blend." "Prolonged skin contact may cause irritation... mild [skin] irritation in single 4 hour application... can cause eye irritation with prolonged contact."

Celeste Leather Conditioner: water 80-95%; cetearyl isononanoate 1.5-3%; ceteareth-20 <1.5%; ceteraryl alcohol <1.5%; glyceryl stearate <1%; glycerin <1%; cetyl palmitate <1%; ceteareth-12 <1%; polyglycol <1%; polydimethyl siloxane <1%; alkyl glucosides <1%; fragrance <1%; methylchloroisothiazolinone & methylisothiazolinone <0.1%. "Very unlikely to cause skin irritation."

Fiberglass continuous filament: fibrous glass >95%; organic surface binder/sizing < 5%. "... may cause mechanical irritation to the skin, eye and upper respiratory tract."

Flight Fresh Deodorant Disk: "Essential oils on polyester absorbent disk" (trade secrets). "May be irritating to skin & eyes."

Flood Surface Area Disinfectant: n-alkyl dimethyl benzyl ammonium chloride 0.01%; n-alkyl dimethyl ethylbenzyl ammonium chloride 0.01%. "May cause mild nasal passage, throat, or lung irritation if breathed over a prolonged period of time in the form of a mist."

Fluorex EX5R (fluoropolymer emulsion): components and CAS numbers not provided. Listed as 'may cause eye, skin, inhalation or GI irritation.'

Host SJ Dry Carpet Cleaner: processed (white), bio-based, cellulosic fibers moistened with a water-based cleaning solution. "This product is not classified as hazardous per OSHA and EU regulations."

Non-alcohol hand sanitizer: benzalkonium chloride 0.2% and "trade secrets." "Very unlikely to cause skin irritation."

Pearled Anti-bacterial foaming hand soap: mixture of surfactants 5-30%; triclosan 0.2%. "Not known to cause irritation."

Plyamide 66: nylon polymer 100%. "not likely to be hazardous by inhalation ... [or] skin contact..."

Sani-Cide: n-alkyl dimethyl benzyl ammonium chloride 0.105%; n-alkyl dimethyl ethylbenzyl ammonium chloride 0.105%; tetrasodium EDTA 4.21%; nonylphenoethoxylate 0.526%; sodium metasilicate 0.263%; diethylene glycol monobutyl ether 8%; fragrance 0.2%; water 86.38%. "May cause chronic nasal passage, throat, or lung irritation if breathed over a prolonged period of time in the form of a mist."

Sky Tile Generation I & II Carpet Tile: nylon 22-32%; non-woven polyester fabric 4-7%; heat cured flame retardant latex coating 25-35%; aviation plasticol 30-40%; non-woven fiberglass fabric 2-5%. "Not expected to have any adverse health effects [from skin exposure] ... This product is not considered an irritant."

Solution Dyed Nylon BCF: nylon 6,6 polyamide 90-99%; water 0-5%; finishes 0-2%; carbon black 0-1%; nickel compounds 0-1%. "not expected to be a primary skin irritant."

7-B-3035: "To the best of our knowledge this product does not contain substance(s) above the *de minimus* level which require reporting under this statute... may cause slight irritation."

Other:

Belle-Aire Frangrances correspondence (Eucalyptus #58599): reviewed.

E-leather Product Data Sheet for SL3UL (Version 2; 14/01/2013): reviewed.

Foam and Fabric Composite: graphite filled polyurethane, proprietary non-hazardous [flame retardant] chemicals.

Mohawk Aviation Carpet: 100% BCF nylon (synthetic).

SUMMARY - Over the past year a group of SWA employees (and one passenger) have reported a constellation of adverse health effects while onboard different aircraft. The reported symptoms include dermal and mucous membrane irritation, allergic-type reactions and neurologic dysfunction. Other than headache, the other reported neurological complaints (i.e. numbness and tingling, and loss of consciousness) involved only two employees.

Although several of these events were associated with an irritant odor, no specific chemical, activity or location has been isolated. A review of the provided time line has failed to establish a temporal association between changing the aircraft's carpets and the reported clinical effects.

Although a number of the involved products are capable of causing dermal, mucous membrane or respiratory irritation, the reported workplace exposures are not overtly concerning for clinically significant effects. There are no reports of workplace accidents or known exposure to specific chemicals. Based on the provided records it is my opinion that the entire constellation of events and symptoms were caused or influenced by several etiologies.

Many of the reported symptoms can be explained by one of the following: mild irritant effects from a transient exposure; effects of other etiologies (e.g. viral infection); or normal variations of pre-existing medical conditions (e.g. allergic rhinitis) without causal relationship to a workplace exposure. It is possible that several of the claimants experienced allergic reactions to unknown exposures. Some of these reactions appear to have occurred in persons with pre-existing allergies. Likewise, other specific complaints are reported to have occurred in persons with relevant, pre-existing medical conditions. An example of this is an employee, with a history of migraine headaches, who experienced a migraine. Adverse (unique) reactions to irritant odors are also suspected. Lastly, some of the complaints (e.g. loss of consciousness) cannot be explained and are not thought to be directly related to a workplace exposure.

I was asked to answer the following specific questions:

1. What are the complainants' diagnoses?

Although various diagnoses are suspected, mild transient effects from an unknown irritant exposure is most probable. Other diagnoses include the following: allergic reaction (unknown cause, seasonal allergies cannot be ruled out); infectious illness (e.g. upper respiratory tract viral infection) and pre-existing medical conditions (e.g. rhinitis, migraines, susceptibility to odors).

2. Are any of the diagnoses attributable to the complainants' alleged exposure to Evolve interior elements?

It is impossible to definitively establish a causal relationship for any of the claimants' symptoms or diagnoses. Of the included medical records, it is not probable that an Evolve[®] product caused the suspected allergic-type reactions.

3. Is there objective medical evidence that these complainants were exposed to, and sustained a toxic effect from alleged exposure to Evolve interior elements?

No; there is no evidence of a toxic exposure or injury due to any workplace exposure.

4. If you assume that the complainants' initial symptoms are fairly explained by exposure to Evolve interior elements, is there any indication that any ongoing complaints are attributable to such exposure? If not, when would you have expected any transient symptoms to have resolved?

Not applicable. However, if the claimant's initial symptoms were due to a workplace exposure these effects should have resolved shortly after the exposure was terminated. Prolonged or ongoing clinical effects

are most likely explained by one of the following: result of a true allergic reaction (with ongoing exposure); or unrelated to a workplace exposure.

5. If you believe these complainants sustained an injurious exposure, please indicate what element, or elements of the Evolve interior you believe caused said injurious exposure.

Not applicable.

RECOMMENDATIONS - Only those employees with objective evidence of an illness (e.g. urticarial rash evaluated by a physician), thought to be related to a workplace exposure, should be treated on an industrial basis. Other, unrelated medical issues should be treated on a non-industrial basis.



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A communications plan has been developed in order to respond to all Flight Attendants that provided reports (IR, ASAP, OJI and/or email). Please see attached Memorandum.

OPEN DISCUSSION ITEM(S):

- Cabin Pets Policy (Numbers Allowed)
- Unacceptable Passenger Carriage Education Initiative (Video)
- Hot Aircraft Procedures
 - Operational Challenges
 - Problem Reporting Procedures

SCHEDULED AND STANDING MEETINGS:

- **Tuesday, May 13, 2014** – Health & Safety Coordination (HASC) with Inflight Safety, Regulatory Standards and SWA Safety and Security
- **May 7, 8, 13, 29, 2014** – ASAP Related Meeting(s)
- **June 2-4, 2014** – GDT Visit to Encore Industries (737-MAX Related)
- **May 20-22, 2014** – Meeting with FCC regarding Mobile Broadband on Aircraft NPRM