

National Transportation Safety Board  
Washington, DC 20594

Brief of Incident

Adopted 12/14/2007

OPS06IA008A  
File No. 22848                      07/23/2006                      Chicago, IL                      Aircraft Reg No. N315UA                      Time (Local): 22:00 CDT

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Make/Model: Boeing / 737-322  
Engine Make/Model:  
Aircraft Damage: None  
Number of Engines: Unk/Nr  
Operating Certificate(s): Flag Carrier/Domestic  
Name of Carrier: UNITED AIR LINES INC  
Type of Flight Operation: Scheduled; Domestic; Passenger Only  
Reg. Flight Conducted Under: Part 121: Air Carrier

	Fatal	Serious	Minor/None
Crew	0	0	7
Pass	0	0	120

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Last Depart. Point: Same as Accident/Incident Location  
Destination: Denver, CO  
Airport Proximity: On Airport/Airstrip  
Airport Name: CHICAGO O'HARE INTL  
Runway Identification: 27L  
Runway Length/Width (Ft): 10144 / 150  
Runway Surface: Asphalt; Concrete  
Runway Surface Condition: Dry

Condition of Light: Night/Dark  
Weather Info Src: Weather Observation Facility  
Basic Weather: Visual Conditions  
Lowest Ceiling: None  
Visibility: 10.00 SM  
Wind Dir/Speed: Calm  
Temperature (°C): 20  
Precip/Obscuration: No Obscuration; No Precipitation

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Pilot-in-Command Age:

Flight Time (Hours)

Certificate(s)/Rating(s)

Total All Aircraft: Unk/Nr  
Last 90 Days: Unk/Nr  
Total Make/Model: Unk/Nr  
Total Instrument Time: Unk/Nr

Instrument Ratings

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Brief of Incident

Adopted 12/14/2007

OPS06IA008B  
File No. 22848                      07/23/2006                      Chicago, IL                      Aircraft Reg No. N418MC                      Time (Local): 22:00 CDT

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Make/Model:	Boeing / 747	Fatal	0	Serious	0	Minor/None	4
Engine Make/Model:		Crew	0		0		4
Aircraft Damage:	None	Pass	0		0		0
Number of Engines:	Unk/Nr						
Operating Certificate(s):	Flag Carrier/Domestic						
Name of Carrier:	Atlas Air						
Type of Flight Operation:	Scheduled; International; Cargo						
Reg. Flight Conducted Under:	Part 125: 20+ Pax,6000+ lbs						

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Last Depart. Point:	Frankfurt, UN	Condition of Light:	Night/Dark
Destination:	Same as Accident/Incident Location	Weather Info Src:	Weather Observation Facility
Airport Proximity:	On Airport/Airstrip	Basic Weather:	Visual Conditions
Airport Name:	CHICAGO O'HARE INTL	Lowest Ceiling:	None
Runway Identification:	27L	Visibility:	10.00 SM
Runway Length/Width (Ft):	10144 / 150	Wind Dir/Speed:	Calm
Runway Surface:	Asphalt; Concrete	Temperature (°C):	20
Runway Surface Condition:	Dry	Precip/Obscuration:	No Obscuration; No Precipitation

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Pilot-in-Command Age:	Flight Time (Hours)
Certificate(s)/Rating(s)	Total All Aircraft: Unk/Nr
Instrument Ratings	Last 90 Days: Unk/Nr
	Total Make/Model: Unk/Nr
	Total Instrument Time: Unk/Nr

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OPS06IA008A

At the time of the incident, the north local control (NLC) position was closed and the responsibilities were combined with south local control (SLC), located at the LC5 position in the ORD tower cab. The SLC was responsible for aircraft landing and departing runway 14R and departing runway 27L and used frequencies 120.75 and 126.9. Because of this configuration the ORD Standard Operating Procedures Order, ORD 7110.65E, required that either the Electronic Flight Strip Transfer System (EFSTS) position or Local Monitor (LMN) position be staffed to assist the SLC. The third local controller (LC3) was responsible for aircraft departing runway 22L and used frequency 132.7. SLC had several flightcrews who had requested to depart from runway 14R for operational purposes. Because aircraft departing from runway 14R entered LC3's airspace, SLC was required to coordinate with LC3 for the release of those flights. SLC verbally coordinated the release of two departure aircraft, United Airlines (UAL) flight 938 and Air India (AI) flight 124, that he intended to depart before GTI6972 landed.

At 0257:00, the SLC controller instructed UAL938 to taxi into position to hold on runway 14R. The crew acknowledged.

At 0257:28, the flight crew of GTI6972 made initial contact with the ORD SLC and said, "hello tower, Giant 6972 heavy 9 D-M-E I-L-S one four right. The tower controller replied, "...O'Hare tower, runway 14 right cleared to land. [Wind] one six zero at eight, traffic will depart ahead of your arrival." The flight crew read back the landing clearance.

At 0257:50, the SLC cleared UAL938 for takeoff.

At 0258:10, the SLC instructed UAL1015, "Traffic lands, departs, crossing, runway 27 left position and hold. The crew replied, "need about two minutes, UAL1015 if you could delay us in position that's fine." The SLC said, "UAL1015, let me know when you're ready, hold in position runway 27L." The crew acknowledged.

According to the SLC's interview, he stated that at this time he determined there was not enough spacing to permit AI124 to depart from runway 14R prior to GTI6972's arrival. He walked to the LC3 controller and advised that he would not be departing the second airplane and would re-coordinate a release at a later time.

At 0259:19, the SLC instructed UAL938 to contact departure control, which the crew acknowledged.

At 0300:20, the crew of UAL1015 advised, "tower, United 1015, we're ready 27L." In his interview, the SLC said, "As this was happening, I looked to see what was on the third local controller's board to effectively coordinate the remaining departures from runway 14R. GTI6972 was the last arrival that was on the D-BRITE display so it allowed for a great deal of flexibility. Because of this flexibility, rather than cut off the [runway] 22L departures, I looked at his board to see what the best time to release his flights would be. I then saw an American B777 moving up as the third departure aircraft [from runway 14R]. As I was determining the traffic flow, UAL1015 called 'ready'. I checked the [runway] 14R final out the window and there was nothing

there. I scanned [runway] 27L from the departure end to the aircraft and there was nothing there. I checked the D-BRITE. I was checking the range on UAL938 to be sure he was far enough out on [runway] 14R to ensure I had the necessary wake turbulence separation for a [runway] 27L departure, and there was. Based on recall and hindsight, all this happened in about 3 or 4 seconds." At 0300:22, the SLC said, "United 1015, thank you, fly runway heading runway 27 left cleared for takeoff, wind one five zero at seven." The crew responded, "runway heading, cleared for takeoff United 1015."

During the EFSTS' interview, he said he looked up and saw GTI6972 on landing roll on runway 14R at slow speed approaching taxiway T10. Although he was required to monitor the SLC frequencies, he did not and did not hear any communications between the SLC and any flight crews. He said he assumed GTI6972 was turning off at taxiway T10, because "it is very common". He looked left and saw out of the corner of his eye UAL1015 departing runway 27L. He looked back to GTI6972 and thought he might turn off on the next taxiway, M, to go to the NE cargo area then decided he was not. He then alerted the SLC.

At 0301:12, the SLC said, "stop, stop, stop."

According to the United 1015 Captain's written statement, "The takeoff was completely normal until approximately 110 knots, when I noticed [GTI6972] approaching our runway on what appeared to be [runway] 14R or taxiway T. I commented that it didn't look like he was going to stop. I would estimate [GTI6972] was traveling 15-20 knots. At that point, I did not feel that we would be able to abort and stop prior to those intersections (around 110-120 knots), so I decided to continue accelerating towards [GTI6972] and if needed, attempt to rotate over him. The other option was an abort and a right steer behind [GTI6972] to the north of runway 27L. Knowing there are substantial obstacles right of [runway] 27L, I felt that option would guarantee significant airframe damage and probably passenger injury. [GTI6972] continued encroaching on our runway, and it became clear that I would have to rotate early to clear it. By the time I rotated, [GTI6972] was fully on our runway. Vr at our weight was 143 knots, and I estimate I began the rotation 10 knots prior to Vr. The First Officer called V1 shortly after I started rotating. I flew a smooth rotation until we were airborne for fear of dragging the tail and delaying further rotation."

## 2. Weather

At the time of the incident, the ATIS information "U" broadcasted the 0253 UTC weather. The information was: wind calm, visibility 10 statute miles, few clouds at 25,000 feet. Temperature 20 degrees Celsius, dew point 15. Altimeter 29.95.

## 3. ORD Standard Operating Procedures (SOP), (Order ORD 7110.65E)

The purpose of this document is to prescribe standard operating procedures for providing air traffic control services by O'Hare Airport Traffic Control Tower (ATCT). ORD ATCT controllers are required to be familiar with and apply the procedures contained within this Order. On February 15, 2004, the ORD Air Traffic Manager signed the document.

#### 4. Facility Waivers

##### a. Taxi in Position and Hold (TIPH)

FAA Order 7110.65, Air Traffic Control, paragraph 3-9-4, "Taxi into Position and Hold (TIPH)" states in part:

The intent of TIPH is to position aircraft for an imminent departure. Authorize an aircraft to taxi into position and hold, except as restricted in subpara f, when takeoff clearance cannot be issued because of traffic. Issue traffic information to any aircraft so authorized. Traffic information may be omitted when the traffic is another aircraft which has landed on or is taking off the same runway and is clearly visible to the holding aircraft. Do not use conditional phrases such as "behind landing traffic" or "after the departing aircraft."

Paragraph 3-9-4f, states:

Do not authorize an aircraft to taxi into position and hold at an intersection between sunset and sunrise or at anytime when the intersection is not visible from the tower.

The Acting Director, Terminal Safety and Operations Support signed Waiver 98-T-53F on December 12, 2005 authorizing ORD ATCT to taxi aircraft into position and hold from the following intersections between sunset and sunrise or when the intersections are not visible from the tower:

Runway 27L and taxiway M6

Runway 14L and taxiway U

Runway 32L and taxiways T10 and M

Runway 32R and taxiway V

Runway 14L and taxiway V

According to the waiver, procedures were required to be appropriately addressed in the facility's SOP. Procedures in the SOP require that the ground controller ensure the accuracy of the departure sequence prior to switching the aircraft to LC; GC/LC correlate the aircraft's position using the Airport Surface Detection Equipment (ASDE); on initial contact LC shall state the aircraft call sign and the runway/intersection when issuing a taxi into position and hold clearance and request a pilot read back, and LC restate the aircraft call sign and runway/intersection when issuing a departure clearance.

While exercising the provisions of the waiver, the listed runways/intersections must be "departure only" runways. Only one aircraft is permitted to taxi into position and hold on each respective runway and intersection listed. The waiver was effective December 12, 2005 and valid for 2 years.

On April 14, 2006, the ORD Acting Manager requested a waiver for FAA Order 7110.65, paragraph 3-9-4g and FAA Order 7210.3, paragraph 10-3-8b6.

FAA Order 7110.65, paragraph 3-9-4g states:

Do not authorize aircraft to taxi into takeoff position to hold simultaneously on intersecting runways.

A review of FAA Order 7210.3, indicated that paragraph 10-3-8b6 does not exist.

General Notice (GENOT) 6/13 eliminated TIPH procedures on intersecting runways. On March 17, 2006, the Director, Terminal Safety and Operations Support, signed Waiver number 06-T-C-ORD-01 that provided that facility a waiver to GENOT 13.

GENOT 6/15 mandated a variety of requirements to be met to continue TIPH operations on all runways, in addition to GENOT 6/13. On March 20, 2006, the Director, Terminal Safety and Operations Support, signed Waiver number 06-T-C-ORD-02 that provided a waiver to GENOT 15, N7210.622, Amendment to TIPH Operations. Both waivers authorize the ATCT personnel to conduct TIPH. To maintain the conditional approves, facilities must submit the risk mitigation strategy for any requirements they are unable to meet. Submissions must be made within 30 days from the date of the temporary waiver. Although official documentation was not provided, Safety Board staff was advised that these were the planned Mitigating Strategies:

During operations that use multiple runways with aircraft in position and hold, as many as 3 controllers are plugged in, and listening to the frequency. For example, on Plan X, aircraft typically depart runways 9L, 4L, and 32R. During those operations, a LMN is actively watching the LC position with the shared responsibility of the intersecting runways. By definition, the LMN can have no other duties. In addition to the LMN, an EFSTS position is open, listening to the operation through a headset. These positions are open regardless of the weather conditions. ORD also has 2 Operational Supervisors on duty each day and evening shift.

These requirements include that the Operations Supervisor (OS) position not be combined with another position, local control positions not be combined with any other positions, and AMASS be in the "full core" alert mode.

If AMASS is not in "full core" alert status, ORD has a current waiver that permits TIPH at intersections after dark, and when the intersections are not visible from the tower. To mitigate risk during TIPH operations, the following apply:

1. Require the 2 OS positions be staffed (Watch Supervisor and Support Supervisor) when conducting runway TIPH.
2. Amend ORD 7110.65, 4-3-2a, Support Supervisor, to include a section requiring the Support Supervisor to eliminate/minimize distractions surrounding the LC position and the LMN position.
3. ORD 7110.65, 4-3-2a, Support Supervisor, assigns responsibilities to the Support Supervisor to, "provide general supervision to the LC and LMN positions."
4. Air Traffic Manager will provide a face-to-face briefing to all Operations Supervisors covering items 1-3.
5. Provide a face-to-face briefing to all personnel concerning duties of control positions and hazards of distractions.
6. Ground Control (GC) shall ensure the accuracy of the departure sequence prior to switching the aircraft to LC.
7. GC/LC shall correlate the aircraft's position using the Airport Surface Detection Equipment (ASDE) in accordance with FAA Order 7110.65, Section 6, Airport Surface Detection Procedures.

8. LC on initial contact shall state the aircraft call sign and the runway/intersection when issuing a taxi into position and hold clearance.
9. LC shall request a pilot read back for accuracy when issuing taxi into position and hold clearance.
10. LC shall restate the aircraft call sign and runway/intersection when issuing a departure clearance.

b. Waiver to FAA Order 7110.65, paragraph 3-10-4a1, "Intersecting Runway Separation"

FAA Order 7110.65, paragraph 3-10-4 states in part:

a. Separate an arriving aircraft using one runway from another aircraft using an intersecting runway or a nonintersecting runway when the flight paths intersect by ensuring that the arriving aircraft does not cross the landing threshold or flight path of the other aircraft until one of the following conditions exists:

1. The preceding aircraft has departed and passed the intersection/flight path or is airborne and turning to avert any conflict.

On May 6, 2006, the Director, Terminal Safety and Operations Support signed Waiver 04-T-10A authorizing ORD personnel to conduct intersecting runway operations to runway 27L and runway 14R whereby an aircraft departing runway 27L shall be through the intersection of runway 14R prior to the arriving aircraft on runway 14R reaching a point no closer than 5,000 feet from the intersection of both runways.

Special provision: LC must issue traffic information to both aircraft; procedures broadcast on the ATIS; special procedures be advertised in a Letter to Airmen, Notice to Airmen Publication, and the Airport Facility Directory. The waiver is issued on the basis that the procedure continues to provide an equivalent level of safety and ensures the safe and efficient control of aircraft.

The waiver became effective on May 6, 2006, and valid until May 5, 2008.

#### 5. Changes to ORD 7110.65E

On July 24, 2006, the ORD Acting ATM, as a result of the operational error, directed these changes to be made immediately:

When landing 14R and departing 27L or landing 27R departing 32R, the option of staffing either the LMN or the EFSTS position is removed. The LMN shall be staffed when landing runway 14R departing 9R/27L and also when landing runway 27R departing 32R. All other pertinent requirements of the LMN position remain in effect.

The Watch Supervisor position shall be open 24 hours per day, and staffed by an Operations Supervisor or CIC. The net effect of this change is requiring 3 positions to be open during the midnight shift operation. The Watch Supervisor position shall not be combined with any other operating position other than those listed in the Notice.

On July 24, 2006, the Acting ATM made the following change to ORD 7110.65E, paragraph 4-3-1p:

The Watch Supervisor shall be staffed 24 hours per day. This position shall not be combined with any other positions except the Operations Manager, Support Supervisor, Secondary Support Supervisor, or Traffic Management Coordinator position.

#### 6. South Local Control (SLC) Controller Interview Summary

Prior to the configuration change, he was working runway 32L/T10 departures. After the configuration change, he became responsible for arrivals on runway 14R and departures on runways 14R and 27L. SLC Plan X became LC3 Plan 14s. The transition between configurations was "very smooth."

He did not recall any equipment problems before the incident. AMASS was in "limited" mode. He understood that to mean it would alert if an airplane started to take off or land on a closed runway, and that the ASDE display would show a data block including a call sign for an arrival aircraft.

Asked whether he used the ASDE display when the AMASS was in "limited" mode, he said he would use it if working IGC, or if working NLC on Plan Weird with a triple arrival runway, or SLC on Plan X because the data blocks were useful. Asked whether that was the only time he would use it, he said, "given clear weather, yes."

He was asked to describe the incident as it developed. He stated that he had three departure aircraft holding short of runway 14R. They were "heavy" aircraft bound overseas. The first was UAL938. The next was Air India 124 (AI124). It was followed by a UAL going to South America. The outbound fixes for these aircraft were the responsibility of the SLC who was clearing airplanes for takeoff on 22L.

He coordinated the release for the first two departures, UAL938 and AI124, to depart in a gap between a UAL Boeing 757 on final approach and GTI6972 that was on 10 mile final. UAL1015 was taxiing and approaching runway 27L, and he told him to "position and hold" on runway 27L. UAL1015 said he wasn't ready and would need a couple minutes, but would take the delay on the runway if that was okay. He told him okay, and instructed the pilot to advise when ready.

As the UAL 757 exited runway 14R, he cleared UAL938 for takeoff. As he did that, he decided that there wasn't quite enough room to get AI124 out in that same gap, so he told LC3 that he was only departing one airplane and that he would re-coordinate the other departures.

He instructed UAL938 to contact departure control. Not long after that, UAL1015 advised that he was ready. As this was happening, he was looking to see what was on the LC3's strip board to effectively coordinate the remaining departures from runway 14R. GTI6972 was the last arrival on the D-BRITE, so it allowed for a great deal of flexibility. Rather than stop the runway 22L departures, he looked at the LC3's strip board to determine the best time to depart airplanes from runway 14R. He then noticed an American B-777 taxiing to runway 14R, meaning he had three airplanes waiting to depart runway 14R.



When UAL1015 advised they were ready for departure, he checked the runway 14R final approach area out the tower window, and saw nothing. He scanned runway 27L from the departure end to the aircraft in position, and there was nothing there. He checked the D-BRITE, examining the range on ULA938 to ensure he had adequate spacing for wake turbulence to be maintained, and it was. Based on recall and hindsight, he thought all this happened in about 3 or 4 seconds: checked the final approach area, checked runway 27L, checked the D-BRITE for distance on the prior departure, and seeing that everything looked clear, cleared UAL1015 for takeoff, runway heading.

A few seconds later he heard someone say, "look out," and "I saw United 1015 at about taxiway F lifting, and the B-747 either in between taxiway M and 27L or with the nose on 27L." He keyed up and said something. After listening to the tape, he knew it was "Stop, stop, stop." He heard UAL1015 say something like "we got it," and UAL1015 lifted off and cleared the B-747. He thought they missed by about 150 feet.

UAL1015 said "Why aren't you holding short?" and GTI6972 replied, "Because no one told us to." UAL1015 asked for the tower's telephone number, which he provided. About that time, another controller was relieving him from position and he conducted a relief briefing.

Asked whether he had any idea why the incident happened, he said, "Yeah. I let myself focus on something other than the basic air traffic control function of preventing collisions and started sorting out the efficient use of runways and airspace. I set a trap for myself by putting United in position when he wasn't ready, and when he did call ready I was missing a piece of information." He stated that, in his mind, arrivals weren't an issue after GTI6972 landed. He did not see GTI6972 on landing roll, and did not hear anything from him. The SLC said he forgot about GTI6972.

He was asked whether he had an arrival log, and said yes. Asked whether he had written down GTI6972's call sign, he said he was not sure. Asked whether he usually scanned the arrival log, he said, "Usually it is part of my scan, but I drew myself away." He stated that he was the active player in the error. He was distracted by trying to determine how depart the aircraft from runway 14R with a minimum of interference to the runway 22L departure flights. As the situation was, with UAL1015 being ready on runway 27L, it struck him "as a good thing" to be able to go ahead of the runway 14R departures, and not have to wait for the wake turbulence separation problem. He stated that the trap he set for himself was that he "was happy to have a problem solved by having UAL1015 not be an airplane loaded in position and liable to mishear instructions for other airplanes on other runways."

Asked whether he had anyone assisting him, he said [another controller] was working the EFSTS position. He was handing the other controller flight progress strips, and he scanned them. He had since heard that the other controller was not signed on, but he did not know about that. He knew the other controller was sitting down and taking the strips as he handed them to him and sending the information to departure control. When asked how long the other controller had been doing that, he said, "He came over at about the time of the configuration change. I believe about half an hour."

Asked whether the D-BRITE was working, he said yes. Asked whether there were any problems with other people in the tower blocking his views, he said, "In retrospect, and it didn't bother me at the time, IGC was working the position directly between me and where [GTI6972] would have been, based on my reconstruction of the time. I'm not sure, but I think, knowing now that [GTI6972] was probably between [taxiways] T7, T6, roughly there, as I cleared UAL for takeoff. [GTI6972] was probably behind IGC at the time."

Asked whether he was standing or sitting at the time of the incident, he said he was standing. Asked whether he was walking around, he said, "At that time I was just standing. Again, this was part of looking at LC3's strip board to see when the best time for the departures would be." He stated that he was wearing a headset.

He was asked whether he could typically see the entire length of runways 14R and 27L from the LC5 station. He stated, "Not without moving around, which is why I usually work standing up." Asked whether he could see UAL1015, he said yes.

He was asked to recall the last time he recalled seeing GTI6972. He stated that he remembered thinking about GTI6972 when the airplane was on a 3.5 to 4-mile final, which was far enough out that it would have been possible to get A1124 out in front of him, but, at the time, he did not think that was the right thing to do. In retrospect, he wished he had. That was how he came up with the estimate of GTI6972's position when he last thought about the airplane, based his recollection of this "go/no go decision".

He said his typical cutoff point for clearing a "heavy" aircraft for takeoff on runway 14R with another "heavy" aircraft on final was typically 5 miles but liked a little more with a B-747, with a faster approach speed, or with a foreign carrier. Asked whether GTI6972 was fast on approach, he said he could not recall. He thought GTI6972 might have been indicating 180 knots at 1 or 2 miles outside the final approach fix.

Asked whether he believed a LMN would have been of assistance to him, he said "A local monitor or a local assist who was interested in the situation, yes." He was asked how the 5000-foot waiver option was used, with the 5,000 feet distance requirement. He stated, "The way I do it is that I wait until the arrival is slow enough that I can be sure he is going to turn off, and with my eyes on him I clear the [runway] 27L departure for takeoff, if the next [runway] 14R arrival is approximately 2 or more miles away. As I see the [runway] 14R arrival [airplane] exit, my scan goes to [runway] 27L from the departure to the approach end, to see that the [runway] 27L departure is rolling in time to be ahead of the next [runway] 14R arrival. Usually, the [runway] 27L departure is through intersection as the arrival is close to the threshold so I'm not trying to see how close I can come to that 5000 foot mark. I'm satisfied that I've run a good operation if the arrival is at or near the threshold and airborne as the [runway] 27L is through the intersection. I can send the arrival around, if necessary. This is something that I'd like to leave as a legacy to teach controllers how to watch the boring stuff as well as the interesting stuff. When you're near the threshold or you're near the intersection, that's easy to watch. There wasn't anything to watch with [GTI6972]. [Taxiways] T4 and T5 are approximately 5000 feet from the edge of 27L."

Returning to the question of whether a LMN would have made a difference, despite the fact that it was normal to see airplanes converging with runway 27L departures and runway 14R arrivals, He said "[The LMN] might speak up if he's keyed up and listening. But it's not something you see out the window. He has to recognize that I've forgotten about [GTI6972]. Would he have recognized that I haven't given exit instructions to [GTI6972], and that was unusual? If I had to give odds, I'd say an omission like that would be caught roughly half the time, especially after half an hour."

Asked whether the EFSTS was plugged in at the time of the incident, He said he did not know. He had heard that he was not, but that was after the fact. He could not say, one way or the other.

When asked how he would categorize traffic complexity at the time of incident, He said, "I'd call it medium." He stated that he based that categorization on the presence of runway 14R departures, runway 27L departures, and runway 22L departures. He stated that it was going to be tricky, with the coordination required between him and SLC. It was going to take some consideration to move things safely and effectively.

He stated that all the positions in the tower were open at the time as far as he knew. There was not anything about the staffing that was remarkable to him at the time. He stated, "In the past, with staffing such as we had, breaks would have been longer but I don't think staffing was the issue there. There had been emphasis from air traffic about showing us on position longer, but that's conjecture on my part."

He was asked whether he felt fatigued, overworked or stressed out prior to the incident. He stated, "No. That came later."

Asked whether he usually advised of traffic on an intersecting runway when he instructed and airplane to taxi into position and hold, he said yes.

He was asked whether the noise level in the tower was ever a distraction on the evening of the incident. He said, "Earlier that night, yes, but I wasn't going to be drawn in. EFSTS had things to say about recreational activities and I was blocking him almost to the point of being rude, so I simply stopped conversing. This was not part of the incident, it was before. This speaks to what I think is a lack of teamwork and lack of interest and this may, I don't know whether it's so much the noise, it's that people aren't helping out. If you're working local and you've got a busy situation and [another controller] and I are having a conversation about something else, we may be speaking in such low voices you can barely hear, but you're also aware that someone's not paying attention to the situation. So whether it is the voice or the distraction, I couldn't tell you. The noise wasn't a distraction, but the fact that they couldn't be bothered was."

Asked whether the tower had a waiver allowing position and hold in the daytime, He said, he believed there was a waiver for the daytime, but was not sure.

At the time of the incident, the ASDE display was low and to his left. The DBRITE display was directly in front of him. Asked whether it would have helped if he had looked at the ASDE display, he stated, "In retrospect. Probably because I would have seen a target with or without the

data block, but with the ASDE the definition is so high that you can see what type airplane it is (747). As far as ASDE goes, sometimes the data blocks drop off."

Asked to clarify whether the ASDE and AMASS were separate displays, he said, "Same displays, AMASS derives information from the ASDE and ARTS. But it's the ASDE that's the useful system. That's where I would have seen a target if I had looked."

He stated that he was qualified as a controller in charge.

Asked how familiar he was with the position and the configuration he was working, He said it was routine for him to work the configuration and position involved. He estimated he had worked the modified plan B configuration from the position 10-12 hours in last 3 or 4 months. The configuration was one of the more common configurations. However, when LAHSO was no longer authorized for runway 14R arrivals and runway 27L departures, Plan B went from "happy tower" to "plan bad."

He said what made Plan B difficult was the increased spacing required on runway 14R to accommodate the departures under the new rules. It increased the time that runway 22L was required to be used. Ordinarily, runway 22L would be a free roll runway, but with arrivals coming in, it slowed the operation considerably. Runway 22L slowed down. The runway 14L arrival streams slowed down, especially with wake turbulence [separation requirement]. The arrivals on runway 22L had to get back to the terminal, increasing work on the south local with airplanes crossing runway 27L on taxiway T. That became a worry because one would see airplanes converging. The LAHSO with runway 14R arrivals and runway 27L departures had worked very well, and it was changed for reasons he thought were political. He believed the history was that a United B-737 was landing, blew a landing clearance, and a B-737 British Airways was aborted and blew 16-18 tires. The runways were wet and the UAL airplane had landed long and could not stop before the intersection. He stated, "What had been a configuration that represented happy tower, went the way of the wildebeest." Summarizing, he stated that despite the procedural changes, he was very familiar with the configuration and generally comfortable working it.

He stated that the change from the standard LAHSO procedure, to no LAHSO, to the 5000 foot waiver had been handed down. An OE occurred during the training on the 5000 foot waiver. After the waiver, it became normal to see airplanes rolling on both runways.

The National Transportation Safety Board determines the probable cause(s) of this incident as follows.

The failure of the ORD tower south local controller to monitor Atlas Air flight 6972, B747, on arrival to runway 14R and subsequently clearing United Airlines flight 1015, B737, for takeoff on intersecting runway 27L causing a loss of separation between the two aircraft.