NATIONAL TRANSPORTATION SAFETY BOARD

Office of Aviation Safety
Washington, D.C. 20594

September 22, 2000

AIR TRAFFIC CONTROL GROUP CHAIRMAN'S FACTUAL REPORT

A. ACCIDENT

NTSB No:	DCA-00-MA-030
Aircraft:	Boeing 737, Southwest Airlines Flight 1455
Date:	March 6, 2000 (UTC)[1] or March 5, 2000 (PST)
Time:	0211 UTC or 1811 PST
Location:	Burbank, CA

B. AIR TRAFFIC CONTROL GROUP

Chairman:	Allen E. Lebo National Transportation Safety Board
Member:	Robin Worgull, Burbank Air Traffic Control Tower
Member:	T. R. Proven, Federal Aviation Administration
Member:	Stan D. Humphery, Southwest Airlines Pilots' Association
Member:	Patrick Dempsey, Southwest Airlines Company

C. SUMMARY

On March 5, 2000, at 1811 pacific standard time, a Southwest Airlines Boeing 737-300, N668SW, operating as flight 1455 from Las Vegas, Nevada, overran the departure end of runway 8 following a landing at Burbank-Glendale-Pasadena Airport, Burbank, California. The aircraft traveled through a fence at the end of the runway and came to rest on the street outside the airport perimeter. There were no fatalities to the 137 passengers and 5 crew aboard. The flight was on an instrument flight rules (IFR)

[1] Universal Time Coordinated

flight plan, and had been cleared for a visual approach. Visual meteorological conditions prevailed at the time of the accident.

D. DETAILS OF INVESTIGATION

1. History of Flight

After departing Las Vegas, Nevada, Southwest Airlines Flight 1455 (SWA1455) was instructed to contact the Los Angeles Air Route Traffic Control Center (ARTCC), and was climbed to FL220. The R-17 controller then instructed the flight to descend to 14,000 feet, and to contact Joshua Approach Control. At 0153 UTC[2] SWA1455 acknowledged. Joshua Approach called R-17 to issue SWA1455 control instructions because they were not yet in radio contact. Although another attempt was made to communicate with SWA1455, there was no response.

At 0204:45 UTC, SWA1455 advised the Southern California TRACON (SCT) Woodland controller that the flight was at 8,000 feet. The Woodland controller replied that ATIS Oscar was current, that the altimeter setting was 29.96, and to expect an ILS to runway 8.

During the time period that SWA1455 was on the Woodland controller's frequency, there were also 11 other aircraft on the frequency including Executive Jet Flight 327 (EJA327), Executive Jet Flight 278 (EJA278), and Southwest Airlines Flight 1713 (SWA1713). During the Woodland controller's interview he stated that he planned to put SWA1455 (coming from the North), between SWA 1413 (coming from the West), and EJA278 (also coming from the west). SWA1713 would then be first followed by SWA1455, and then EJA278.[3]

At 0203:22 UTC, SWA1713 was given descent to 5,000 ft. At 0203:33 UTC, the controller transmitted to SWA1455, "turn left heading one niner zero, vector to final, descend and maintain six thousand." SWA1455 repeated the instructions. About 30 seconds later, SWA1455 was instructed to "maintain [a speed of] two thirty or greater until advised please." SWA1455 repeated the instruction.

[2] The FAA reported that no one contacted Joshua Approach Control to retain the voice communication tape. Therefore, no record of communication exists between SWA1455 and Joshua Approach Control.
[3] EJA327 preceded SWA1713 in line on final approach for landing.

At 0203:42 UTC, the pilot of EJA278 reported on the Woodland controller's frequency advising the flight was descending out of seven thousand. At 0203:58 UTC, the Woodland controller instructed EJA278 to reduce speed to 210.

SWA1713 reported the field in sight. The Woodland controller cleared SWA1713 for a visual approach straight in, with the restriction to cross Van Nuys at or above 3,000 feet.

The Woodland controller then instructed SWA1455 to turn left heading 160 at 0205:10 UTC. SWA1455 repeated the instruction. About a minute later, at 0205:56 UTC, the controller instructed SWA1455 to "descend and maintain 5,000, if you'd like the visual you will be following company, right now they're [at] your one o'clock and 12 miles turning onto the final, out of forty-six hundred." SWA1455 replied that they were looking.

The Woodland controller then descended EJA278 from 8,000 to 7,000 feet, and at 0206:54 UTC, told SWA1713 to contact the tower.

At 0207:00 UTC the Woodland controller assigned a heading of 110 to EJA278 to join the runway 8 localizer. The Woodland controller then told a Gulfstream aircraft to contact Point Mugu Approach, and instructed American West flight 476 to change heading and altitude.

At 0207:45 UTC, the controller instructed SWA1455 to "descend and maintain 3,000 [feet], company's over Van Nuys at 3,000." SWA1455 repeated the instructions, and then at 0208:19 UTC SWA1455 reported that the company aircraft was in sight. The controller then cleared SWA1455 to "cross Van Nuys at or above three thousand, cleared visual approach runway eight." SWA1455 repeated the clearance, and then the controller instructed SWA1455 to contact the Burbank tower on frequency 118.7. SWA1455 acknowledged.

After SWA1455 contacted the Burbank Tower at 0209:47, the local controller issued the wind, "two one zero at six, runway eight, cleared to land." At 0211:37 UTC, SWA1455 transmitted on the local control frequency, "And folks remain seated, remain seated, we're all right." The local controller then transmitted, "...we have crash response coming now." EJA278 was then issued a go-around from the local controller.

2. Runways at Burbank Airport

Regarding runway usage at Burbank, Tower personnel reported the following:

Landing on runway 8: It is the only runway served by a precision approach. It is the only arrival runway that avoids high terrain. It is used "most of the time."

Departing on runway 8: Departures are limited to aircraft less than 12,500 pounds.

Landing on runway 26: This is used very little by air carriers due to terrain to the south and the east of the airport.

Departing on runway 26: If the air carrier requests it and traffic permits, runway 26 can be used.

Landing on runway 33: This is used when the tail-wind component for runway 8 exceeds ten knots and the wind is from the Northwest. It will be issued upon pilot request. The reasons that this type of landing is undesirable is that there is no instrument approach, the only approach is a left base to the airport, and rising terrain is in the area of the left base.

Departing on Runway 33: This runway goes uphill, with the North end being higher, a 75-foot difference. American Airlines and Alaska Airlines will use this runway occasionally, but the majority of the time they will wait until the wind allows the use of runway 15. Other carriers will use runway 33 only in strong wind conditions.

Landing on runway 15: This is accomplished from a right base or occasionally a high straight-in on a visual approach. Whiteman Airport is about 4 miles north west of Burbank Airport. Aircraft have to be established on final approach before they can descend out of 3000 feet. There is terrain (San Gabriel mountains 4000 feet) to the north, and there is hang glider activity in the area of the final approach.

Departures on runway 15 are preferable. The runway runs downhill. Most departing aircraft turn to a heading of 210 to miss terrain. This runway allows the highest gross weight departures for B-737s.

4. Interview Summary

Mr. Mark Conley was working the Woodland Radar position at SCT at the time of the incident. Following is a summary of his responses to questions:

He entered on duty with the FAA in May of 1989. He is a private pilot with about 145 hours of flight time. He received his initial air traffic control training at Oklahoma City. He started controlling traffic at Gillespe Field and was a Full Performance Level controller there. In April 1992 he went to Lindberg Tower, then in September of 1998 he transferred to SCT.

The day that the accident occurred was the second day of a five-day work week. He was assigned the 1300 to 2100 shift.

SCT is beginning to get some assigned overtime.

He was on the sector about 15 minutes before the accident occurred. He had been on a break of about 20-25 minutes prior to arriving at the radar position.

He took a handoff on SWA1455 and then he took a handoff on SWA 1713, on a Fernando arrival. [SWA1455 was coming from the north & SWA1713 was coming from the west.] About the time that SWA1455 came unto the frequency he got a handoff on Executive Jet Flight 278 (EJA278), also coming from the west. He planned to put SWA1455 between SWA1713 and EJA278. He gave vectors and then slowed EJA278 to 210 knots. He asked that SWA1713 hold 230 knots until sometime later. This was done to ensure that separation was "safe and clean." He issued clearance for SWA1713 to conduct a visual approach and told SWA1455 to look for the company traffic. When SWA1455 was near "Magic Mountain" he turned him to a heading of 160. He considered this to be normal handling.

He switched SWA1713 to the tower frequency, but recalled that SWA1455 had not reported the company in sight. He then started to descend SW1455 to 3000 feet on an 11 to 12-mile base and when SW1455 reached an altitude of about 4500 feet SWA1455 reported that SWA1713 was in sight. SWA1713 was on a 2-3 mile final at that point. He cleared SWA1455 for a visual approach with the standard Van Nuys restriction [3,000 feet]. Then he told SWA1455 to contact tower turning base to final.

He did not notice anything unusual on altitude or airspeed [groundspeed], throughout the approach. He watched the data tag after the frequency change and did not see anything unusual. He did not recall the position of SWA1455 when he observed the last radar hit.

He did recall that when SWA1455 called company in sight at 4500 feet, that there had been previous reports of cumulus clouds at 4800 feet. He was not concerned about the heading of 160 and the aircraft speed. He thought it looked fairly standard.

He decided that SWA1455 would be sequenced behind SWA1713 and in front of EJA278.

When a speed restriction has been issued, he expects an aircraft to slow when the approach clearance is issued. When asked what he would do if the visual approach didn't work he said that he was "setting SWA1455 up for the ILS." He felt the interval with the Executive Jet was satisfactory. He did not remember why he kept the 230 knot restriction on SWA1455.

After SWA1455 was cleared for the visual he did not recall him overshooting the localizer. He did not recall the speed of EJA278.

Regarding the highest altitude he had ever seen for a B-737 over VNY on a completed visual approach [without the flightcrew executing a missed approach], he said that he didn't recall, but that if the aircraft was above 3200 feet, he would advise Valley Control that the aircraft was high. If SWA1455 had not called company in sight, he stated that he would have issued a heading of 100 degrees and cleared him for the approach. In his opinion all speed restrictions are dropped when the approach clearance is issued unless the controller repeats them.

He has seen B-737's at 250 knots at VNY (Van Nuys) and make the landing. He thought that SWA1455 was 230-240 knots on the base leg. He did not notice the speed on final. He described the traffic load as moderate and the Burbank traffic as light.

He used the minimum vectoring altitude (MVA) chart during SWA1455's approach. He brought it up on the display when the aircraft was on base leg. He issued SWA1455 3000 feet when it was crossing the 5000/4000 foot boundary. SWA1455 crossed the bottom part of the 5000 foot MVA at 5000 feet, so he skipped the 4000-foot requirement and assigned 3000 feet.

When he works without an associate, he checks the data blocks before handoffs. It is second nature for him. When he does silent handoffs he only notices unusual situations. He felt that he would notice anything above about 3200 feet and 250 knots at Van Nuys.

He would use the land line to the Burbank Tower for a pilot request, if he noticed something out of the ordinary, or if he saw anything other than normal situations. He thought the track of SWA1455 looked normal. The last altitude he noticed for SWA1455 was "3000 something". He thought the last speed he saw when he switched SWA1455 was 230 knots.

Mr. Patrick Quaranta was working in the Assistant Radar position at the time of the event. Following is a summary of his responses to questions:

He entered on duty with the FAA in February of 1985. His initial assignment was at Los Angeles ARTCC. In October of 1993 he moved to Burbank Approach Control. In November of 1994 he transferred physical location to the new SCT, but continued to work the Burbank Approach area.

He holds a Private Pilot certificate with about 200-300 hours.

The day that the accident occurred was day 2 of a 5-day workweek. He was assigned the 1300-2100 shift. He had been on position for about 15 minutes before the accident occurred. He considered traffic to be moderate.

He recalled seeing SWA1455 when it was approaching his airspace boundary. Everything was routine. The radar controller had to decide which aircraft would be first. He picked SWA1455 to be ahead of EJA 278. The radar controller assigned SWA1455 a speed, and the spacing was working. The situation was so normal that he didn't notice much else.

He did not recall specific speeds. Everything was working out.

He thought the approximate traffic flow was as follows, but said it was just a guess: From JANNI intersection, to the north, about 35 percent of the traffic goes to Burbank, and from Fillmore or Point Mugu, to the west, about 45 percent of the traffic is for Burbank.

He thought a typical speed at JANNI was about 260-280 as shown on the data block. The aircraft do not normally slow when they are turned to the south but it can happen. He thought the average aircraft speed when turning inbound is 210 knots, but he's seen up to 240. The range of speeds he sees for aircraft turning onto the localizer is from 240-160 so it would not be a surprise to see 240 knots.

He felt comfortable with the actions of the radar controller. He did not see the speed/altitude block of SWA1455 when it was cleared for the visual

approach. His last recollection of the data block was when it was south of Magic Mountain, at about 240 knots. He recalled seeing EJA 278 but did not recall the speed. EJA's decent was stopped at 7000 because of traffic at 6000 feet.

Handoffs to Burbank are silent. There is no verbal communication. He does do coordination on the land line if something is unusual. For example; no mode C, an unusual request, an aircraft with difficulties, or the aircraft wants some specific information passed along. The assist does handoffs. When he makes handoffs he checks the data block. Because the Burbank handoff is silent, he recalled verifying information but he could not recall specifically what it was. He did not discuss the sequencing with the radar controller, he just noticed the controller's decision. If the radar controller makes the handoff, he, the associate, may or may not check the data block. He knew SWA was going to be first when he heard the turn and instruction "maintain 230 knots or greater."

He recalled when SWA1455 was cleared for the visual but did not recall the specific conditions such as altitude, speed, or position. He is qualified as a radar controller for Burbank. He received his enroute training at the Federal Aviation Administrations indoctrination course in Oklahoma City, Oklahoma. He is only qualified on the Burbank positions.

He has not noticed any increase in the amount of traffic since arriving at SCT. His training when he arrived from Los Angeles ARTCC wasn't hard or easy, it was just different. His transition time was normal. He received classroom training using "TRACON PRO," rules, terminal rules, then on-the-job training.

Again, he did not know which aircraft he would have picked to be number 1, if he had been the radar controller. He would have let them get closer, watch their speed, and make the decision at that time.

The arrivals to Burbank Tower were light. He makes his decisions based on experience. He expects the pilots to stop flying the assigned speed when the pilot no longer feels comfortable flying at the assigned speed.

He was asked if he considered the effect of wind when establishing sequence. In response, he said that once he established a sequence he would try to make it work. After issuing a speed adjustment, he would not change the sequencing if the speeds didn't change. The speed information on the data block lags so much that it's not a big deal if the speed information doesn't change. He said that unless it is clear, very clear, that a plan isn't working he would stick to that plan. If it needs "massaging" he would do that, but he wouldn't change the basic plan. When an aircraft is

cleared for the approach all speed restrictions are dropped. The controller must re-issue the speed restriction after the clearance is given if the controller feels it is needed.

He did not see the distance between SWA1455 and EJA278 when EJA278 was cleared for the approach. He said he would issue a visual approach clearance to an aircraft, without slowing it to below 230 knots, depending on the circumstances.

His normal sequence for a descent from JANNI is to issue a clearance to 6000 feet, then 5000 feet, then 3000 or 3500 depending on the location of the aircraft. He checks the current aircraft altitude when he gives altitude assignments when he is acting as the radar controller. His descent instructions are based on the MVA's. He recalled seeing the track while SWA1455 was at Magic Mountain where the MVA is 5000 feet. The MVA 6 miles north of Magic Mountain is 6000 feet. The MVA south of Magic Mountain is 4000 feet. The MVA goes to 3000 feet about a mile north of the Northridge Mall.

As a controller he takes into consideration if an aircraft is high and fast. He was asked if he would consider an aircraft to be high and fast for a B-737 at the general location, speed and altitude that SWA1455 was issued a visual approach clearance. He responded that that was difficult to answer. The aircraft would have to be "pretty high and fast before he'd worry." He said the highest altitude he'd ever seen at that location was 7000 feet but he did not recall the speed for that aircraft. He then stated that the highest he'd seen for a B-737 was 6000 feet. The fastest he had ever seen a B-737 at the same area was about 260 knots.

Speed changes are easier to see when aircraft are moving fast. He can see, through experience, when aircraft are closing or separating. He did not feel that the aircraft speed was too fast for the intercept heading, but he really didn't pay attention.

If an aircraft overshoots final on a visual approach he felt that he would not be concerned but he would monitor the traffic to see how it was doing, if something was out of the ordinary. He gives a good angle of intercept for the visual approaches. Depending on procedures and traffic, less emphasis is placed on intercept angle for visual approaches.

Craig Lippert was working the local control position at the Burbank Tower when the accident occurred. In response to questions, he issued the following information:

He entered on duty with the FAA on November 2, 1982. Prior to this he was in the military doing "Air Support Control." After initial training at the FAA Academy in Oklahoma City, he went to Los Angeles ARTCC. In December of 1984 he went to the Palmdale Tower. In June of 1987, he went to the Santa Barbara Tower, and in May of 1989 he went to the Oxnard/Camarillo Tower (Camarillo Tower opened in July of 1989). He came to Burbank in January 1991, and has remained there since then.

The accident occurred on the first day of his 5-day workweek. He was working the 4 pm to 12 pm shift. He started on the clearance delivery position, then went to the local control position, and took a break. After the break, he went back to the local control position.

He recalled that when SWA1713 was west of BUDDE intersection, he cleared the flight to land. He then talked to a helicopter, County Fire 14. After that SWA1455 came on the display southeast of BUDDE starting an S-turn. He recalled that SWA1455's data block at this time showed a ground speed of 270 knots. The spacing between SWA1455 and SWA1413 was at a safe distance. He then recalled talking to the helicopter, and then "reaching out" for SWA1455. He issued the wind, and then cleared the aircraft to land. Then the following aircraft, EJA278, checked on the frequency. He estimated that there was 6 miles between EJA278 and SWA1455.

He recalled seeing that SWA1455 was rapidly closing on SWA1413and told SWA1413 the "company" was behind, and to not delay on the runway.

When SWA1455 was on a 1½ mile final, he noted that the ground speed readout was 210 knots. At the 1-mile point he noticed the aircraft was in a turn. He described the touchdown as being between taxiways C6 and C7 (about 2750 feet down the runway) at an "above-normal speed." At this point he said that he didn't know if the flightcrew was going to be able to stop, and said something to the ground controller. He recalled the aircraft swerving right, and hitting the blast fence, producing lots of sparks. He then told EJA278 to prepare for a go-around, and coordinated it with approach control. He told EJA278 to turn right to 210 degrees, and to climb and maintain 4,000 feet. After he verified the altitude assignment with approach control he instructed EJA278 to contact approach control.

When he initially established visual contact with SWA1455 out of the tower cab window, his impression was the "he was really moving, and looked a little high." He also noticed the nose of the aircraft move to a lower position on short final. He saw no more turns after the aircraft passed a point 1 to 1 ½ miles from the end of the runway.

He told SWA1455 that the crash people were coming.

He saw no spoilers deploy, and didn't remember seeing any spray from the wheels as when there is a large amount of water on the runway. However, he also said that he believed the runway not to be completely dry.

It rained between 3:00 and 4:00 local time. Runways 26 and 33 were in use. The winds were out of the west 240 - 280 degrees at 15 to 18 knots.

The ground controller initiated the call on the crash phone.

He felt that at the times the winds were unpredictable, and "squirrely." At the time the accident occurred there was a tail wind.

He has seen a lot of aircraft touch down between taxiways C6 and C7, and make it okay.

SWA1713's profile looked good. He was not concerned about SWA1713's speed.

Mr. Ancil Young was working the ground control position when the accident occurred. The following answers were given in response to questions:

He started at the Ontario Approach Control in 1970. In 1974 he came to the Los Angeles Tower, and in 1976 went to the Los Angeles TRACON. In 1981 he left the FAA due to the air traffic controller strike. He was rehired in October of 1997, coming to the Burbank Tower.

The day the accident occurred was the 3rd day of his work week. He was working the 1 to 9 pm shift. He recalled being on duty on the ground control position about an hour prior to the incident. He recalled first seeing SWA1455 about a ¼ mile on final approach.

He recalled the local controller telling the preceeding arrival to not delay clearing the runway. He saw SWA1455 "leveling out" and touching down at a speed faster than most. When he saw the aircraft crossing runway 15, he started to put his hand on the crash phone. The pilot appeared to have the plane under control from the intersection of runway 15 to the 1,000 foot marker. Thinking SWA1455 would "bump the barrier," he decided to activate the crash phone when SWA1455 was about 300 feet from the end of the runway.

The CFR (crash, fire, rescue) response was amazingly fast.

He saw no spray from the runway. "The runway was dry."

He normally expects aircraft to touch down at 1,000 feet and turn off at the intersection of the runways.

He saw no full S-turns, only the last portion. It was still day light, but after sunset.

He could not recall seeing the use of thrust reversers or spoilers. The winds were around 5 knots at the time of the accident. The winds the previous hour were from the south to southwest at a higher velocity. A windshift such as this is common.

He saw no smoke from the tires, but described the touch down as "firm." When the supervisor hollered to "get the crash phone," he was already doing it.

Mr. Jose Clue was working the combined clearance delivery/flight data position when the accident occurred. The following answers were given in response to questions:

He was a controller from 1978 to 1981 (until the air traffic controller strike) at the Hawthorne Tower, which was a level II tower. He was fully certified there. He was rehired in 1996 and began working at the Chino Tower. In May of 1999 he came to Burbank Tower.

He did some flying from 1981 to 1996 as a private pilot. He holds a private certificate, single-engine land with 140 to 200 hours.

The day the accident occurred was his 2nd day of a 5-day workweek. He couldn't recall his assigned shift, but said that it was either 2 to 10pm or 1 to 9pm.

When first sighting SWA1455, it had already landed and was between C6 and runway 15, east-bound. The speed was higher than normal, rather fast. It looked like the pilot was attempting to brake, and then turned before hitting the blast fence. He heard no verbal comments in the tower regarding the flight other than something about the crash phone.

All aircraft landings prior to SWA1455's appeared to be normal.

His normal scan brought attention to SWA1455. He was concerned about SWA1455 when he first sighted it. He had never seen other aircraft land at such a high speed.

He was not qualified as a local controller. He was certified to work the flight data/clearance delivery position, and ground control position at Burbank. Burbank is a limited radar facility. He was certified on the local control positions at Hawthorne and Chino Towers.

On the day of the accident he said that the sky was overcast, and the sun was not visible.

There were no shiny spots denoting water on the runway. "There might have been a few on the other side of the field, on the taxiway." He saw no puddles. It was more dry than wet. The runway is asphalt.

He recalled seeing SWA1413 taxi to the gate, and a Gulfstream executing a missed approach.

He characterized the Southwest pilots as a good group of pilots. "They seem to be very competent. They are friendly, cordial, very professional."

He felt that there was no difference in the flying styles of the various air carriers flying out of Burbank.

Mr. Walter A. Fuller was the supervisor in the tower cab when the accident occurred. The following was given in response to questions:

He started as a controller in 1982. His first facility was the San Francisco Tower. Then in 1986 he went to the Burbank Tower and TRACON. In 1989 the Tower and TRACON split, and he went to the TRACON. In 1991 he became a supervisor at the tower, qualified on all positions. In 1994 he went the Los Angeles Tower as a controller, and in 1996 he returned to Burbank Tower as a supervisor, again qualifying on all positions. He still "plugs in" because he is required to have some time on all positions.

On the day of the accident he was working the 1 to 9pm shift. It was his first day of a 5-day week. He had signed in at about 1230.

When he first became aware of SWA1455 he was working on the schedule, hearing the local controller "reaching out" for the aircraft. He recalled the local controller clearing SWA1455 to land. It caught his attention when the local controller told SWA1413 to expedite clearing the runway. At that point SWA1455 was making a left turn toward the runway to line up. He then saw the nose drop on a 1 ½ mile final. The aircraft came over the runway extremely fast, and touched down just before the intersection of

runway 15. At that point he recalled telling the ground controller to get ready to use the crash phone. The flight touched down 2000 feet to 2500 feet down the runway. (At this point he explained that he had initially written on facility paper work that the aircraft had touched down 1200 to 1500 ft. down the runway. He said this prior information was wrong. He knew physically where the aircraft touched down, but made an error in converting to "feet.")

On touchdown the nose was up slightly, but it was close to a "3-point landing." The aircraft had rolled out of a turn over the lights.

He has heard the phrase, "Can you make it from there?'

On touch-down no spray was noted, and no smoke was seen from the tires. He saw a discernable slowing of the aircraft, but then beyond the intersection the slowing continued but was not as discernable as before.

Regarding CFR response, he considered it very adequate. "They were out there in minutes."

When SWA1413 was turning off the runway, SWA1455 was 1 to ½ miles out.

He was on duty when the runway change occurred. From 53 minutes past the hour until the time of the accident, the wind velocity was 5 to 7 knots from the southwest . Preceeding that the winds were southwest to west at 15 to 25 knots. Then about a ½ hour prior to the runway change, the winds began tapering off. The air carriers prefer runway 15 because of weight restrictions for departures on runway 33.

He considered the traffic volume to be light at the time of the accident. An Executive Jet was about 6 miles behind SWA1455, and was not gaining on SWA1455. Following the Executive Jet was an American West aircraft coming in for runway 15.

If he had been working local control he would have taken no action differently that that of the local controller.

He has never seen a go-around initiated at the intersection of 15.

It was an airport rule that there be no takeoffs on runway 8. Landing on 8 and departing 15 is the normal operation. When the strong winds subsided, the runways were changed.

5. Burbank Weather

The weather report just prior to the accident was taken at 1753 PDT, "few clouds at six thousand five hundred, 9,000 overcast, visibility ten miles, wind two five zero degrees at six knots, altimeter two nine six nine, temperature nine celsius, dew point one celsius."

After the accident a special weather observation was made at 1820 PDT: "Overcast at nine thousand five hundred, visibility ten miles, wind two five zero degrees at six knots, altimeter two nine six nine, temperature nine celsius, dew point zero celsius."

6. Vectors for Visual Approach

Air Traffic Control 7110.65M states that a vector for a visual approach may be initiated if the reported ceiling at the airport of intended landing is at least 400 feet above the MVA/MIA [minimum vectoring altitude/minimum IFR altitude] and the visibility is 3 miles or greater. See section 8D of Attachments.

7. Atis Information information Oscar & Papa

Airport Information Oscar was first issued at 0053 UTC. Information Papa was first issued at 0153 UTC. See Section 8 H. of Attachments.

8. Attachments

A. Full Transcript from Southern California Tracon (15 pages)
B. Abbreviated Transcript Southern California Tracon (3 pages)
C. Burbank Tower Partial Transcript (2 pages)
D. 7110.65M Air Traffic Control Excerpts (4 pages)
E. MVA Chart & MVA with Video Map Chart (2 pages)
F. FAA Plot of flight path. (5 pages)
G. Daily Record of Facility Operation (4 pages)
H. Filmore & Woodland Sector Maps (2 pages)
I. ATIS information (2 pages)

Allen E. Lebo
Senior Air Safety Investigator

U.S. Department
of Transportation
Federal Aviation Administration

Memorandum

Subject: **ACTION**: Full Transcript; Aircraft Accident; SWA1455; Burbank, CA; March 06, 2000, 0210 UTC

Date: June 14, 2000

From: Southern California TRACON

Reply to Attn. of:

To: Aircraft Accident File BUR-ATCT-062

This transcription covers the Southern California TRACON Woodland Radar position for the time period from March 06, 2000, 0157 UTC to March 06, 2000, 0215 UTC.

Agencies Making Transmissions	Abbreviations
KING01	KING01
SCT Woodland Radar position	WDLR
Beachcraft Baron N6SP	N6SP
Gulfstream N4TL	N4TL
Gulfstream N5QS	N5QS
Exec Jet FLight 327	EJA327
UNKNOWN Transmission	UNK
Southwest AirlinesFLight 1713	SWA1713
Southwest Airlines Flight 1455	SWA1455
Joshua Approach Control Antelope Sector	Antelope
Exec Jet Flight 278	EJA278
Hawker Jet N877RP	N7RP
Gulfstream N777SA	N7SA
America West FLight 476	AWE476
Lear Jet N136JP	N6JP
Burbank Tower	BUR
Twin Cessna N2729L	N29L
Citation N91MM	N91MM
Lear Jet N29NW	N9NW

I hereby certify that the following is a true transcription of the recorded conversations pertaining to the subject aircraft accident involving SWA1455.

[redacted]

William L. Smith
Support Specialist
Southern California TRACON

0157

0157:05	KING01	(two aircraft transmitting at the same time) *socal approach king one with you at eight thousand
0157:08	WDLR	ok i had a couple calling at the same time king zero one socal approach burbank altimeter two niner six six are you on uniform sir
0157:16	KING01	two niner six six that's affirmative
0157:17	WDLR	thank you
0157:19	WDLR	and who was calling on three four point two
0157:22	N6SP	that's baron six sierra papa with you at six thousand (unintelligible)
0157:27	WDLR	(unintelligible) i think that might have been baron six six sierra papa if it is you need to try another transmitter sir
0157:34	WDLR	gulfstream four tango lima contact van nuys tower one one niner point three
0157:39	N4TL	nineteen three four tango lima
0157:42	N6SP	and socal approach baron uh six sierra papa with you level six thousand

0157:45	WDLR	baron six sierra papa socal approach descend and maintain five thousand
0157:48	N6SP	five thousand six sierra papa
0157:59	WDLR	gulfstream five quebec sierra contact van nuys tower one one niner point three
0158:04	N5QS	gulfstream three quebec sierra so long
0158:10	WDLR	king zero one descend and maintain six thousand
0158:13	KING01	king zero one leaving eight for six thousand
0158:18	WDLR	baron six sierra papa descend and maintain four thousand
0158:21	N6SP	four thousand for six sierra papa
0158:40	WDLR	baron six sierra papa turn right heading three four zero vector to final
0158:45	N6SP	uh right heading three four zero for six sierra papa
0159:07	WDLR	attention aircraft atis papa now current at burbank runway eight and one five in use altimeter two niner six six
0159:31	WDLR	king air six sierra papa descend and maintain three thousand
0159:37	WDLR	i'm sorry for baron six sierra papa descend and maintain three thousand

0159:41	WDLR	baron six sierra papa descend and maintain three thousand
0159:45	N6SP	baron six sierra papa down to three thousand
0159:47	EJA327	socal approach execjet three twenty seven with you at eight thousand
0159:50	WDLR	execjet three twenty seven socal approach burbank altimeter two niner six six van nuys zulu current expect i l s one six right approach
0159:58	UNK	(unintelligible)
0159:59	EJA327	two niner six six expect i l s one six approach execjet three twenty seven
0200:02	EJA327	and we do have information zulu this is execjet three twenty seven
0200:10	WDLR	thank you
0200:18	WDLR	(unintelligible) woodland point out
0200:19	BUR	burbank
0200:20	WDLR	van nuys three west six sierra papa for uh whiteman v o r (unintelligible)
0200:23	BUR	baron six sierra papa point out approved b e
0200:25	WDLR	thanks (unintelligible)
0200:33	WDLR	execjet three twenty seven five from umbra turn left heading one eight zero descend and maintain six thousand until established on the localizer cleared i l s one six right approach

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0200:41	EJA327	say again three twenty seven
0200:42	WDLR	king air six sierra pa baron six sierra papa's four from van nuys turn right heading zero five zero maintain three thousand until established on the final approach course cleared v o r alpha approach circle to three zero
0200:51	N6SP	ok uh zero five zero three thousand until established cleared for the approach six sierra papa
0200:54	WDLR	execjet three twenty seven four from umber turn left heading one nine zero descend and maintain six thousand until established on the final approach course (unintelligible) on the localizer cleared i l s one six right
0201:04	EJA327	ok left to one nine zero and down to four thousand until established cleared for i l s one six approach execjet three twenty seven
0201:10	WDLR	execjet three twenty seven descend and maintain six thousand until established
0201:15	EJA327	left to one nine oh and down to six thousand six thousand until established execjet three twenty seven
0201:36	WDLR	execjet three twenty seven that was a late turn to the final turn left continue on the left turn now heading one four zero to join
0201:41	EJA327	left one four zero to join execjet three twenty seven
0201:52	WDLR	baron six sierra papa contact whiteman tower one three five point zero

0201:57	N6SP	thirty five point zero thanks a lot
0202		
0202:03	WDLR	king one contact point mugu approach three two five point zero
0202:07	KING01	king one switching three twenty five zero
0202:21	WDLR	attention aircraft van nuys atis information alpha now current wind two four zero at six visibility one zero few clouds at five thousand scattered clouds a six thousand scattered clouds at eight thousand runway one six in use
0202:34	WDLR	execjet three twenty seven descend and maintain five thousand until established cleared approach
0202:38	EJA327	down to five thousand execjet three twenty seven
0202:38	SWA1713	socal approach southwest seventeen thirteen one zero thousand six hundred (unintelligible)
0202:45	SWA1455	socal southwest fourteen fifty five eight thousand ocker
0202:50	WDLR	southwest seventeen thriteen socal approach proceed direct silex
0202:53	SWA1713	direct silex southwest seventeen thirteen
0202:55	WDLR	southwest fourteen fifty five socal approach atis papa current at burbank i missed if you had that altimeter two niner niner six expect i l s eight
0203		
0203:03	SWA1455	alright ah we don't have papa i'll get it (unintelligible) fourteen fifty five we have oscar

0203:08	WDLR	southwest fourteen fifty five change to my frequency one three four point two
0203:11	SWA1455	see ya thirty four two southwest fourteen fifty five
0203:11	WDLR	antelope from uh woodland
0203:13	Antelope	antelope
0203:15	WDLR	can you give thirty four two for the frequency please fillmore's at woodland
0203:18	Antelope	fillmore's at woodland got it
0203:19	WDLR	thanks
0203:20	Antelope	c d
0203:22	WDLR	southwest seventeen thirteen descend and maintain five thousand
0203:26	SWA1713	five thousand southwest seventeen thirteen
0203:29	SWA1455	socal southwest fourteen fifty five up thirty four two
0203:33	WDLR	southwest fourteen fifty five thanks loud and clear turn left heading one niner zero vector to final descend and maintain six thousand
0203:38	SWA1455	heading one nine zero six thousand southwest fourteen fifty five

0203:42	EJA278	good evening approach execjets two seventy eight's out of ten for seven thousand
0203:46	WDLR	execjet two seventy eight socal approach loud and clear
0203:51	WDLR	execjet three twenty seven contact van nuys tower one one niner point three
0203:54	EJA327	nineteen three to the tower execjet uh three twenty seven
0203:58	WDLR	execjet two seventy eight reduce speed to two one zero
0204:01	EJA278	slowing back to two one zero execjet two seventy eight
0204:05	WDLR	southwest fourteen fifty five maintain two thirty or greater until advised please
0204:09	SWA1455	two hundred thirty knots or greater southwest fourteen fifty five
0204:14	N7RP	socal hawker eight seven seven romeo papa eight thousand
0204:16	WDLR	gulfstream seven seven sierra alpha socal
0204:18	N7SA	ya we're with ya sierra alpha
0204:19	WDLR	gulfstream seven sierra alpha radar contact turn right heading two five five vector to santa barbara final appro co correction vector to kwang climb and maintain six thousand
0204:28	N7SA	two five five six thousand sierra alpha

0204:29	WDLR	gulfstream eight seven seven romeo papa socal burbank altimeter two niner six six atis alpha current at van nuys expect i l s one six right
0204:36	N7RP	expect the i l s one six right romeo papa
0204:56	WDLR	southwest seventeen thirteen seven from silex cross silex at or above three thousand five hundred cleared i l s eight approach
0205:02	SWA1713	field's in sight southwest seventeen thirteen
0205:04	WDLR	southwest seventeen thirteen cross van nuys at or above three thousand cleared visual approach straight in runway eight
0205:07	SWA1713	straight in to eight (unintelligible) van nuys at or above three southwest seventeen thirteen thanks
0205:10	WDLR	southwest fourteen fifty five turn left heading one six zero
0205:15	SWA1455	left one six zero southwest fourteen fifty five
0205:17	WDLR	hawker seven romeo pap five from umber turn left heading one eight zero descend and maintain six thousand until established on the localizer cleared i l s one six right
0205:23	N7RP	left left one eight zero and down to six thousand uh cleared for the approach seven seven romeo papa
0205:28	WDLR	gulfstream seven sierra alpha fly heading two seven zero when able proceed direct kwang

0205:32	N7SA	two seven zero direct kwang sierra alpha
0205:56	WDLR	southwest fourteen fifty five descend and maintain five thousand if you'd like the visual you will be following company dah right now they're your one o'clock and twelve miles turning onto the final out of forty six hundred
0206:05	SWA1455	alright down to five thousand looking for company southwest fourteen fifty five
0206:15	WDLR	execjet two seventy eight descend and maintain uh seven thousand i'll have lower for you here in just a moment
0206:21	EJA278	staying at seven execjet two seventy eight
0206:35	AWE476	socal good evening cactus four seventy six eight thousand uh oscar
0206:39	WDLR	cactus four seventy six socal approach burbank altimeter's two niner six six expect i l s runway eight approach atis papa's current now
0206:46	AWE476	ok six six's on the meter and we'll expect runway eight now cactus four seventy six
0206:50	WDLR	southwest seventeen thirteen contact burbank tower one one eight point seven so long
0206:54	SWA1713	going to tower have a good day southwest seventeen thirteen
0207:00	WDLR	execjet two seventy eight turn left heading one one zero to join the runway eight localizer
0207:05	EJA278	one one zero to join execjet two seventy eight

0207:25	WDLR	gulfstream seven sierra alpha contact point mugu approach one two seven point six five
0207:29	N7SA	Twenty eight sixty five seven sierra alpha
0207:34	WDLR	cactus four seventy six turn left heading one nine zero vector to final descend and maintain six thousand
0207:40	AWE476	one ninety one the heading down to six cactus uh four seventy six
0207:44	WDLR	southwest fourteen fifty five descend and maintain three thousand company's over van nuys no at three thousand
0207:50	SWA1455	*(alright) down to three thousand looking for company over van nuys at three thousand southwest fourteen fifty five
0207:55	WDLR	gulfstream seven romeo papa contact van nuys tower one one niner point three
0207:58	N7RP	nineteen three good day romeo papa
0208		
0208:06	WDLR	execjet two seventy eight seven miles from silex cross silex at or above three thousand five hundred cleared i l s runway eight approach
0208:12	EJA278	silex above three and a half cleared i l s approach execjet two seventy eight
0208:19	SWA1455	southwest fourteen fifty five company's in sight
0208:21	WDLR	southwest fourteen fifty five cross van nuys at or above three thousand cleared visual approach runway eight

0208:25	SWA1455	van nuys at or above three cleared dah visual to eight *(southwest) fourteen fifty five
0209		
0209:38	WDLR	southwest fourteen fifty five contact burbank tower one one eight point seven so long
0209:42	SWA1455	(unintelligible) fourteen fifty five
0209:45	WDLR	execjet two seventy eight contact burbank tower one one eight point seven good day
0209:50	EJA278	eighteen seven good night
0209:56	WDLR	cactus four seventy six turn left heading one six zero descend and maintain five thousand
0210:02	AWE476	one sixty on the heading down to five thousand cactus four seventy six
0210:04	WDLR	cactus four seventy six just to let you know previous arrival in from the north go the airport uh...actually coming out of about forty five hundred is when he said he was able to find his company on final there
0210:15	AWE476	roger that cactus four seventy six
0210:32	N6JP	and socal lear jet one three six juliet papa's out of eight for seven with the field in sight
0210:38	WDLR	lear jet one three six juliet papa socal approach cleared visual approach runway one six right uh right base entry
0210:44	N6JP	cleared the visual one six right with a right base entry for one three six juliet papa

0211		
0211:58	BUR	woodland burbank
0212		
0212:06	WDLR	cactus four seventy six descend and maintain three thousand
0212:10	BUR	crash (unintelligible) all runways proceed to the end of runway for emergency vehicles
0212:11	AWE476	three thousand cactus four seventy six
0212:16	WDLR	cactus four sevent six uh amend that maintain five thousand maintain actually descend and maintain four thousand cactus four seventy six maintain four thousand
0212:24	AWE476	four thousand cactus four seventy six
0212:26	WDLR	i just got the word that uh burbank airport is just closed down uh I don't know the exact cause right now you can probably expect holding for just a litte bit
0212:32	AWE476	uh roger
0212:35	N29L	cessna two niner lima with you climbing to five thousand
0212:40	WDLR	cessna two seven two niner lima socal approach maintain five thousand burbank altimeter two niner six six
0212:45	N29L	*six six thank you five thousand (unintelligible)
0213		
0213:10	UNK	yes

0213:11	WDLR	cactus four seventy six uh advise ready to copy some holding instructions and I well let me get ya swung back around towards it first
0213:19	AWE476	alright sir and uh we got the airport in sight if it's a weather problem
0213:21	WDLR	* uh roger uh it's my understanding it's not a weather problem cactus four seventy six turn right heading of two eight zero and join the uh localizer uh for runway eight outbound
0213:33	AWE476	ok two eighty on the heading to uh join the eight uh localizer outbound cactus four seventy six
0213:41	N1MM	nine one one mike mike with you at six
0213:45	WDLR	cactus four seventy six amend that now fly heading two five zero this is going to be a vector to the hold
0213:48	AWE476	two fifty on the heading cactus four seventy six
0213:51	WDLR	citation niner one mike mike socal approach traffic ten o'clock three miles northwest bound five thousand a twin cessna
0213:57	N1MM	nine one one mike mike roger
0213:58	WDLR	twin cessna two niner lima traffic two moving to one o'clock three miles e westbound at six thousand is a citation expect higher when you clear that traffic
0214:07	N29L	we're looking thank you

0214:08	N9NW	socal lear two niner november whiskey heading one one zero down to seven thousand like to cancel i f r proceed v f r van nuys
0214:13	WDLR	lear six juliet papa contact van nuys tower one one niner point three
0214:17	N6JP	switching j p
0214:19	WDLR	lear two niner november whiskey socal approach were you looking for the visual
0214:21	N29NW	affirmative we're leveling uh seven thousand heading one one zero we've got van nuys in sight like to cancel i f r proceed v f r
0214:26	WDLR	lear niner november whiskey i f r cancellation is received maintain v f r own nav to the airport
0214:31	N29NW	v f r own nav to the airport
0214:35	N1MM	uh nine one mike mike I'm east of...van nuys I'd like to go out here and stay v f r for a little bit...i can certainly go into one five if uh burbank if that opens
0214:50	WDLR	citation one mike mike i understand you want to cancel your i f r and hold out to the west v f r is that correct
0514:55	N1MM	that's correct if you let me know if when when the airport opens

0215

End of Transcript

*This portion of the rerecording is not entirely clear, but this represents the best interpretation possible under the circumstances.

U.S. Department of Transportation
Federal Aviation Administration

Memorandum

Subject: **ACTION**: Partial Transcript; Aircraft Accident; SWA1455; Burbank, CA; March 06, 2000, 0211 UTC

Date: March 9, 2000

From: Southern California TRACON

Reply to Attn. of:

To: Aircraft Accident File BUR-ATCT-062

This transcription covers the Southern California TRACON Woodland Radar position for the time period from March 06, 2000, 0157 UTC to March 06, 2000, 0215 UTC.

Agencies Making Transmissions	Abbreviations
Southwest Airlines Flight 1455	SWA1455
SCT Woodland Radar position	WDLR

I hereby certify that the following is a true transcription of the recorded conversations pertaining to the subject aircraft accident involving SWA1455.

[redacted]
Jerry A. Serafini
Support Specialist
Southern California TRACON

0157
0158
0159
0200
0201

B-1

0202

0202:45	SWA1455	socal southwest fourteen fifty five eight thousand ocker
0202:55	WDLR	southwest fourteen fifty five socal approach atis papa current at burbank i missed if you had that altimeter two niner niner six expect i l s eight

0203

0203:03	SWA1455	alright ah we don't have papa i'll get it (unintelligible) fourteen fifty five we have oscar
0203:08	WDLR	southwest fourteen fifty five change to my frequency one three four point two
0203:11	SWA1455	see you at thirty four two for fourteen fifty five
0203:29	SWA1455	socal southwest fourteen fifty five up thirty four two
0203:33	WDLR	southwest fourteen fifty five thanks loud and clear turn left heading one niner zero vector to final descend and maintain six thousand
0203:38	SWA1455	heading one nine zero six thousand southwest fourteen fifty five

0204

0204:05	WDLR	southwest fourteen fifty five maintain two thirty or greater until advised please
0204:09	SWA1455	two hundred thirty knots or greater southwest fourteen fifty five

0205

0205:10	WDLR	southwest fourteen fifty five turn left heading one six zero

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BUR- 062
SWA1455

0205:13	SWA1455	left one six zero southwest fourteen fifty five
0205:56	WDLR	southwest fourteen fifty five descend and maintain five thousand if you'd like the visual you will be following company dah right now they're your one o'clock and twelve miles turning onto the final out of forty six hundred
0206		
0206:05	SWA1455	alright down to five thousand looking for company sahwest fourteen fifty five
0207		
0207:45	WDLR	southwest fourteen fifty five descend and maintain three thousand company's over van nuys now at three thousand
0207:50	SWA1455	*(alright) down to three thousand looking for company over van nuys at three thousand sahwest fourteen fifty five
0208		
0208:19	SWA1455	sahwest fourteen fifty five company's in sight
0208:21	WDLR	southwest fourteen fifty five cross van nuys at or above three thousand cleared visual approach runway eight
0208:25	SWA1455	van nuys at or above three cleared dah visual to eight *(southwest) fourteen fifty five
0209		
0209:38	WDLR	southwest fourteen fifty five contact burbank tower one one eight point seven so long
0209:42	SWA1455	(unintelligible) fourteen fifty five
0210		
0211		
0212		
0213		
0214		
0215		

End of Transcript

*This portion of the rerecording is not entirely clear, but this represents the best interpretation possible under the circumstances

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BUR-ATCT-062
SWA1455

U.S. Department
of Transportation

**Federal Aviation
Administration**

Memorandum

Subject: INFORMATION: Partial Transcript; Aircraft Accident, SWA1455; Burbank, CA; March 6, 2000, 0211 UTC

Date: March 15, 2000

From: Burbank ATCT

Reply to
Attn of:

To: Aircraft Accident File BUR-ATCT-062

This transcription covers the Burbank ATCT Local Control position for the time period from March 6, 2000, 0204 UTC to March 6, 2000, 0220 UTC.

Agencies Making Transmissions	Abbreviations
Burbank ATCT Local Control	LC
Southwest Airlines Flight 1455	SWA1455

I hereby certify that the following is a true transcription of the recorded conversations pertaining to the subject aircraft accident involving SWA1455:

[redacted]

Clifford Travis
Acting Assistant Manager
Van Nuys Hub

0204		
0205		
0206		
0207		
0208		
0209		
0209:47	LC	southwest fourteen fifty five burbank tower
0209:50	SWA1455	burbank tower southwest fourteen fifty five with you visual eight
0209:53	LC	southwest fourteen fifty five wind un two one zero at six runway eight cleared to land
0210		
0211		
0211:37	SWA1455	and folks remain seated remain seated we're all right
0211:42	LC	southwest seventeen thirteen we have uh crash response coming now

C-1

0213		
0213:57	SWA1455	and uh tower southwest fourteen fifty five can you hear us
0214:01	LC	southwest fourteen fifty five burbank tower
0214:05	SWA1455	tower southwest fourteen fifty five can you hear us
0214:07	LC	southwest fourteen fifty five affirmative i can hear you
0214:10	SWA1455	yea you better send that emergency equipment over uh uh we went through the barrier
0214:15	LC	affirmative he should be over there already
0214:20	LC	they're coming up hollywood way sir they'll be coming up off your left wing
0214:25	SWA1455	roger
0214:29	LC	southwest fourteen fifty five we're still looking at thirteen they're uh coming up now right off your left on hollywood way
0214:35	SWA1455	o k thank you we're evacuating the aircraft at this time
0214:38	LC	roger
0215		
0216		
0217		
0218		
0219		
0220		

End of Transcript

C-2

Section 4. Approaches

7-4-1. VISUAL APPROACH

A visual approach is an ATC authorization for an aircraft on an IFR flight plan to proceed visually to the airport of intended landing; it is not an instrument approach procedure. Also, there is no missed approach segment. An aircraft unable to complete a visual approach shall be handled as any go-around and appropriate separation must be provided.

REFERENCE-
FAAO 7110.65, Wake Turbulence Cautionary Advisories, Para 2-1-20.
FAAO 7110.65, Forwarding Approach Information by Nonapproach Control Facilities, Para 3-10-2.
FAAO 7110.65, Visual Separation, Para 7-2-1.
FAAO 7110.65, Approaches to Multiple Runways, Para 7-4-4.

7-4-2. VECTORS FOR VISUAL APPROACH

A vector for a visual approach may be initiated if the reported ceiling at the airport of intended landing is at least 500 feet above the MVA/MIA and the visibility is 3 miles or greater. At airports without weather reporting service there must be reasonable assurance (e.g. area weather reports, PIREP's, etc.) that descent and flight to the airport can be made visually, and the pilot must be informed that weather information is not available.

PHRASEOLOGY-
(Ident) FLY HEADING OR TURN RIGHT/LEFT HEADING (degrees) VECTOR FOR VISUAL APPROACH TO (airport name).

(If appropriate)

WEATHER NOT AVAILABLE.

NOTE-
At airports where weather information is not available, a pilot request for a visual approach indicates that descent and flight to the airport can be made visually and clear of clouds.

REFERENCE-
FAAO 7110.65, Vectors to Final Approach Course, Para 5-9-1.
FAAO 7110.65, Visual Separation, Para 7-2-1.
FAAO 7110.65, Clearance for Visual Approach, Para 7-4-3.
FAAO 7110.65, Approaches to Multiple Runways, Para 7-4-4.
FAAO 7110.65, Sequencing, Para 7-6-7.
FAAO 7110.65, Separation, Para 7-7-3.

7-4-3. CLEARANCE FOR VISUAL APPROACH

ARTCC's and approach controls may clear aircraft for visual approaches using the following procedures:

NOTE-
Towers may exercise this authority when authorized by a LOA with the facility that provides the IFR service, or by a facility directive at collocated facilities.

a. Controllers may initiate, or pilots may request, a visual approach even when an aircraft is being vectored for an instrument approach and the pilot subsequently reports:

1. The airport or the runway in sight at airports with operating control towers.

2. The airport in sight at airports without a control tower.

b. Resolve potential conflicts with all other aircraft, advise an overtaking aircraft of the distance to the preceding aircraft and speed difference, and ensure that weather conditions at the airport are VFR or that the pilot has been informed that weather is not available for the destination airport. Advise the pilot of the frequency to receive weather information where AWOS/ASOS is available.

PHRASEOLOGY-
(Ident) (instructions) CLEARED VISUAL APPROACH RUNWAY (number);

or

(ident) (instructions) CLEARED VISUAL APPROACH TO (airport name)

(and if appropriate)

WEATHER NOT AVAILABLE OR AWOS/ASOS WEATHER AVAILABLE ON FREQUENCY (freq) MHZ.

REFERENCE-
FAAO 7110.65, Visual Separation, Para 7-2-1.

c. Clear an aircraft for a visual approach when:

1. The aircraft is number one in the approach sequence, or

2. The aircraft is to follow a preceding aircraft and the pilot reports the preceding aircraft in sight and is instructed to follow it, or

NOTE-
The pilot need not report the airport/runway in sight.

3. The pilot reports the airport or runway in sight but not the preceding aircraft. Radar separation must be maintained until visual separation is provided.

d. All aircraft following a heavy jet/B757 must be informed of the airplane manufacturer and model.

EXAMPLE-
"Cessna Three Four Juliet, following a Boeing 757, 12 o'clock, six miles."

e. Inform the tower of the aircraft's position prior to communications transfer at controlled airports. ARTS/STARS functions may be used provided a facility directive or LOA specifies control and communication transfer points.

PHRASEOLOGY-
(Ident) (instructions) CLEARED VISUAL APPROACH RUNWAY (number);

or

(ident) (instructions) CLEARED VISUAL APPROACH TO (airport name).

(And if appropriate)

WEATHER NOT AVAILABLE OR AWOS/ASOS WEATHER AVAILABLE ON FREQUENCY (freq) MHZ.

f. In addition to the requirements of para 7-4-2, Vectors for Visual Approach, and subparas a, b, c, d, and e, ensure that the location of the destination airport is provided when the pilot is asked to report the destination airport in sight.

g. In those instances where airports are located in close proximity, also provide the location of the airport that may cause the confusion.

EXAMPLE-
"Cessna Five Six November, Cleveland Burke Lakefront Airport is at 12 o'clock, 5 miles. Cleveland Hopkins Airport is at 1 o'clock 12 miles. Report Cleveland Hopkins in sight."

REFERENCE-
FAAO 7110.65, Approaches to Multiple Runways, Para 7-4-4.

7-4-4. APPROACHES TO MULTIPLE RUNWAYS

a. All aircraft must be informed that approaches are being conducted to parallel/intersecting/converging runways. This may be accomplished through use of the ATIS.

b. When conducting visual approaches to multiple runways ensure the following:

1. Do not permit the respective aircrafts' primary radar returns to merge unless visual separation is being applied.

2. When the aircraft flight paths intersect, ensure standard separation is maintained until visual separation is provided.

c. In addition to the requirements in para 7-2-1, Visual Separation, para 7-4-1, Visual Approach, para 7-4-2, Vectors for Visual Approach, and para 7-4-3, Clearance for Visual Approach, the following conditions apply to visual approaches being conducted simultaneously to parallel, intersecting, and converging runways, as appropriate:

1. Parallel runways separated by less than 2,500 feet. Unless standard separation is provided by ATC, an aircraft must report sighting a preceding aircraft making an approach (instrument or visual) to the adjacent parallel runway. When an aircraft reports another aircraft in sight on the adjacent final approach course and visual separation is applied, controllers must advise the succeeding aircraft to maintain visual separation. However, do not permit a heavy/B757 aircraft to overtake another aircraft. Do not permit a large aircraft to overtake a small aircraft.

2. Parallel runways separated by at least 2,500 feet, but less than 4,300 feet.

(a) Standard separation is provided until the aircraft are established on a heading which will intercept the extended centerline of the runway at an angle not greater than 30 degrees, and each aircraft has been issued and the pilot has acknowledged receipt of the visual approach clearance.

NOTE-
The intent of the 30 degree intercept angle is to reduce the potential for overshoots of the final, and preclude side-by-side operations with one or both aircraft in a "belly-up" configuration during the turn. Aircraft performance, speed, and the number of degrees of the turn to the final are factors to be considered by the controller when vectoring aircraft to parallel runways.

(b) Visual approaches may be conducted to one runway while visual or instrument approaches are conducted simultaneously to the other runway, provided the conditions of subpara (a) are met.

(c) Provided aircraft flight paths do not intersect, and when the provisions of subparas (a) and (b) are met, it is not necessary to apply any other type of separation with aircraft on the adjacent final approach course.

Section 9. Radar Arrivals

5-9-1. VECTORS TO FINAL APPROACH COURSE

Except as provided in para 7-4-2, Vectors for Visual Approach, vector arriving aircraft to intercept the final approach course:

a. At least 2 miles outside the approach gate unless one of the following exists:

1. When the reported ceiling is at least 500 feet above the MVA/MIA and the visibility is at least 3 miles (report may be a PIREP if no weather is reported for the airport), aircraft may be vectored to intercept the final approach course closer than 2 miles outside the approach gate but no closer than the approach gate.

2. If specifically requested by the pilot, aircraft may be vectored to intercept the final approach course inside the approach gate but no closer than the final approach fix.

b. For a precision approach, at an altitude not above the glideslope/glidepath or below the minimum glideslope intercept altitude specified on the approach procedure chart.

c. For a nonprecision approach, at an altitude which will allow descent in accordance with the published procedure.

NOTE-
A pilot request for an "evaluation approach," or a "coupled approach," or use of a similar term, indicates the pilot desires the application of subparas a and b.

d. *EN ROUTE.* The following provisions are required before an aircraft may be vectored to the final approach course:

1. The approach gate and a line (solid or broken), depicting the final approach course starting at or passing through the approach gate and extending away from the airport, be displayed on the radar scope; for a precision approach, the line length shall extend at least the maximum range of the localizer; for a nonprecision approach, the line length shall extend at least 10NM outside the approach gate; and

2. The maximum range selected on the radar display is 150 NM; or

3. An adjacent radar display is set at 125 NM or less, configured for the approach in use, and is utilized for the vector to the final approach course.

4. If unable to comply with subparas 1, 2, or 3 above, issue the clearance in accordance with para 4-8-1, Approach Clearance.

REFERENCE-
FAAO 7110.65, Approach Clearance, Para 4-8-1.
FAAO 7110.65, Final Approach Course Interception, Para 5-9-2.

5-9-2. FINAL APPROACH COURSE INTERCEPTION

a. Assign headings that will permit final approach course interception on a track that does not exceed the interception angles specified in the TBL 5-9-1.

Approach Course Interception Angle

Distance from interception point to approach gate	*Maximum interception angle*
Less than 2 miles or triple simultaneous ILS/MLS approaches in use	20 degrees
2 miles or more	30 degrees (45 degrees for helicopters)

TBL 5-9-1

b. If deviations from the final approach course are observed after initial course interception, apply the following:

1. Outside the approach gate: apply procedures in accordance with subpara a, if necessary, vector the aircraft for another approach.

2. Inside the approach gate: inform the pilot of the aircraft's position and ask intentions.

PHRASEOLOGY-
(Ident) (distance) MILE(S) FROM THE AIRPORT, (distance) MILE(S) RIGHT/LEFT OF COURSE, SAY INTENTIONS.

NOTE-
The intent is to provide for a track course intercept angle judged by the controller to be no greater than specified by this procedure.

REFERENCE-
FAAO 7110.65, Chapter 5, Section 9, Radar Arrivals, and Section 10, Radar Approaches- Terminal.

ALTERNATE AIRPORT- An airport at which an aircraft may land if a landing at the intended airport becomes inadvisable.

(See ICAO term ALTERNATE AERODROME.)

ALTIMETER SETTING- The barometric pressure reading used to adjust a pressure altimeter for variations in existing atmospheric pressure or to the standard altimeter setting (29.92.)

(Refer to FAR Part 91.)

(Refer to AIM.)

ALTITUDE- The height of a level, point, or object measured in feet Above Ground Level (AGL) or from Mean Sea Level (MSL.)

(See FLIGHT LEVEL.)

a. MSL Altitude- Altitude expressed in feet measured from mean sea level.

b. AGL Altitude- Altitude expressed in feet measured above ground level.

c. Indicated Altitude- The altitude as shown by an altimeter. On a pressure or barometric altimeter it is altitude as shown uncorrected for instrument error and uncompensated for variation from standard atmospheric conditions.

(See ICAO term ALTITUDE.)

ALTITUDE [ICAO]- The vertical distance of a level, a point or an object considered as a point, measured from mean sea level (MSL.)

ALTITUDE READOUT- An aircraft's altitude, transmitted via the Mode C transponder feature, that is visually displayed in 100-foot increments on a radar scope having readout capability.

(See AUTOMATED RADAR TERMINAL SYSTEMS.)

(See NAS STAGE A.)

(See ALPHANUMERIC DISPLAY.)

(Refer to AIM.)

ALTITUDE RESERVATION- Airspace utilization under prescribed conditions normally employed for the mass movement of aircraft or other special user requirements which cannot otherwise be accomplished. ALTRV's are approved by the appropriate FAA facility.

(See AIR TRAFFIC CONTROL SYSTEM COMMAND CENTER.)

ALTITUDE RESTRICTION- An altitude or altitudes, stated in the order flown, which are to be maintained until reaching a specific point or time. Altitude restrictions may be issued by ATC due to traffic, terrain, or other airspace considerations.

ALTITUDE RESTRICTIONS ARE CANCELED- Adherence to previously imposed altitude restrictions is no longer required during a climb or descent.

ALTRV-

(See ALTITUDE RESERVATION.)

AMVER-

(See AUTOMATED MUTUAL-ASSISTANCE VESSEL RESCUE SYSTEM.)

APPROACH CLEARANCE- Authorization by ATC for a pilot to conduct an instrument approach. The type of instrument approach for which a clearance and other pertinent information is provided in the approach clearance when required.

(See INSTRUMENT APPROACH PROCEDURE.)

(See CLEARED APPROACH.)

(Refer to AIM and FAR Part 91.)

APPROACH CONTROL FACILITY- A terminal ATC facility that provides approach control service in a terminal area.

(See APPROACH CONTROL SERVICE.)

(See RADAR APPROACH CONTROL FACILITY.)

APPROACH CONTROL SERVICE- Air traffic control service provided by an approach control facility for arriving and departing VFR/IFR aircraft and, on occasion, en route aircraft. At some airports not served by an approach control facility, the ARTCC provides limited approach control service.

(Refer to AIM.)

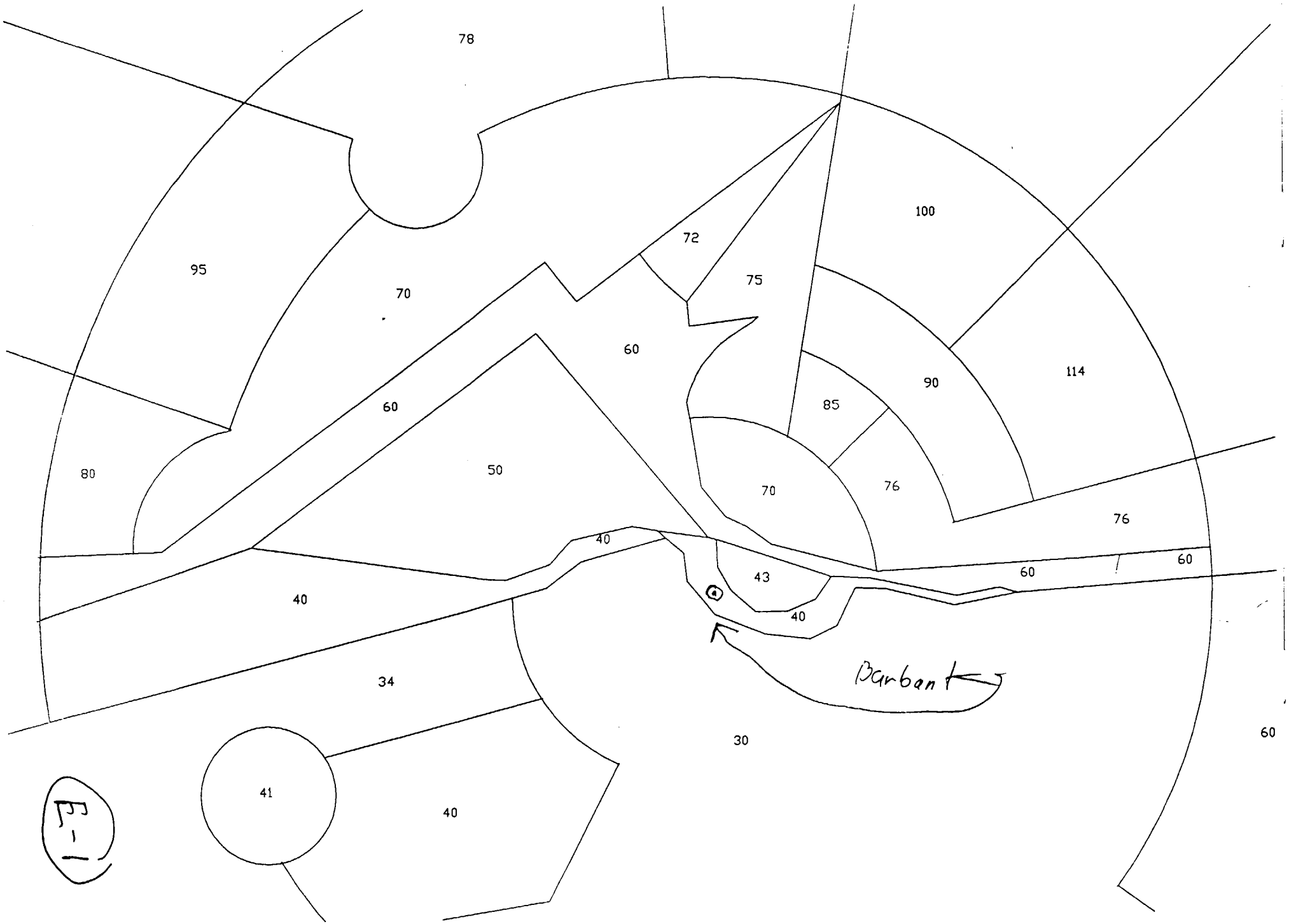
(See ICAO term APPROACH CONTROL SERVICE.)

APPROACH CONTROL SERVICE [ICAO]- Air traffic control service for arriving or departing controlled flights.

APPROACH GATE- An imaginary point used within ATC as a basis for vectoring aircraft to the final approach course. The gate will be established along the final approach course 1 mile from the outer marker (or the fix used in lieu of the outer marker) on the side away from the airport for precision approaches and 1 mile from the final approach fix on the side away from the airport for nonprecision approaches. In either case when measured along the final approach course, the gate will be no closer than 5 miles from the landing threshold.

APPROACH LIGHT SYSTEM-

(See AIRPORT LIGHTING.)


MVA
78
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Barbant
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114
90
85
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70
76
76
40
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43
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34
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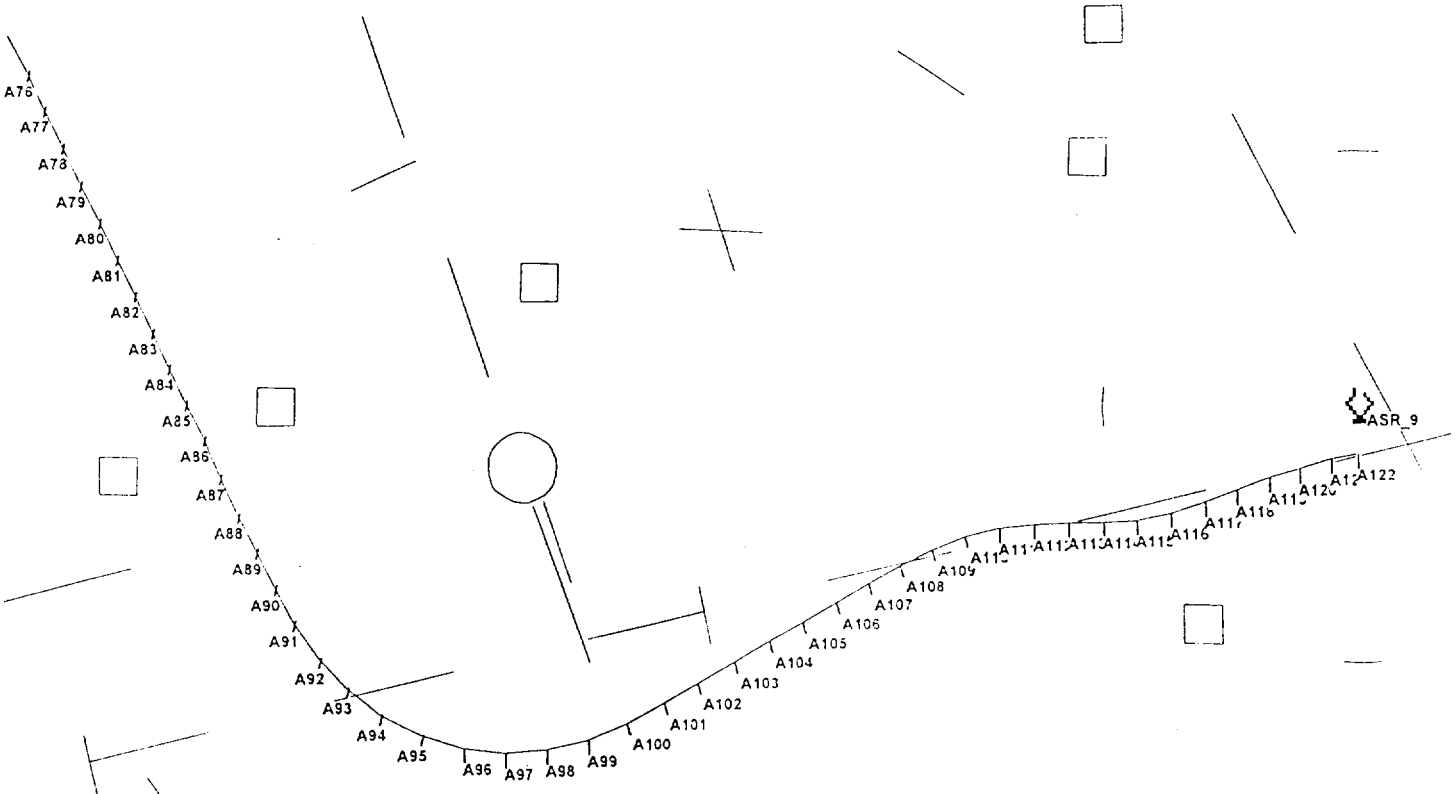
60
41
40
E-2

PLOT V1.0

Plotted 03-06-2000 @ 10:39:42

Above Scale = 1nm
Sub System = 02
Range = 6, Y-Offset = 3, X-Offset = 5
Range Marks at every 10 nm



A=SWA1455 4754 007

This document is derived from computer magnetic recordings of internal computer processing. It is not an exact representation of the control position display. Date:Mar/06/00

Prepared by _____

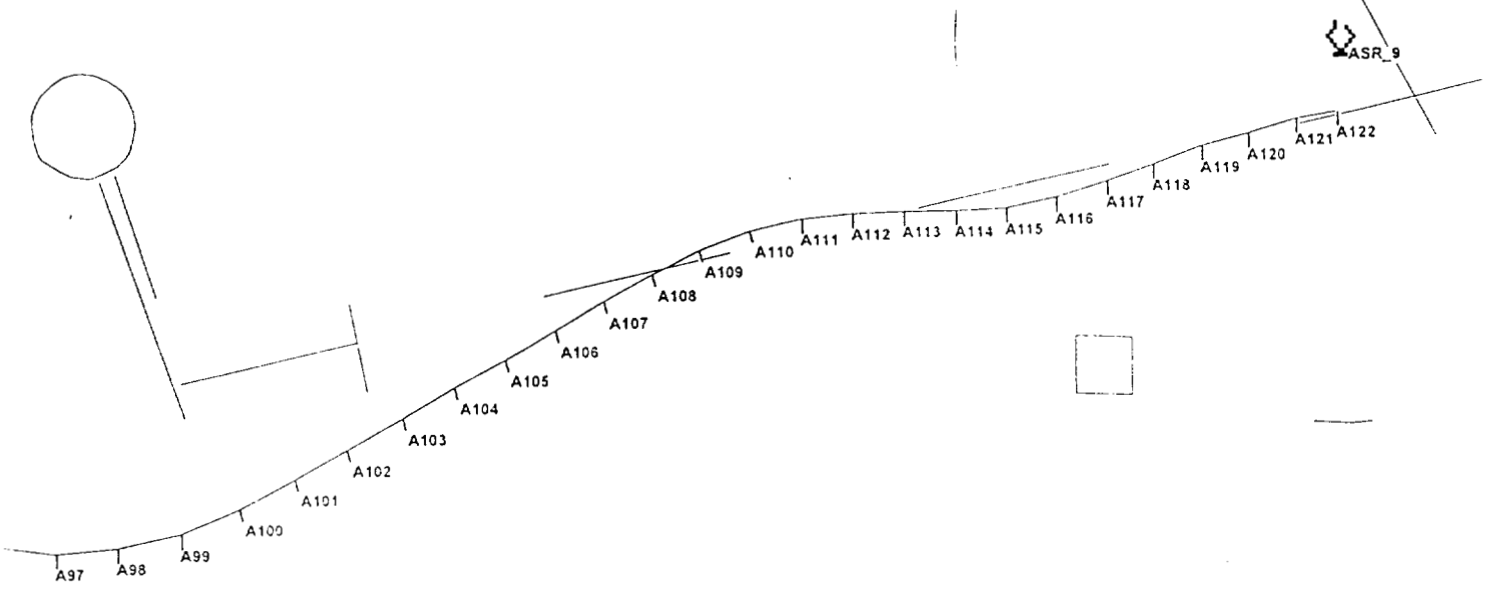
Facility/Title _____/_____

F-1

PLOT V1.0

Plotted 03-06-2000 @ 10:42:12

Above Scale = 1nm
Sub System = 02
Range = 4, Y-Offset = 2, X-Offset = 3
Range Marks at every 10 nm



A=SWA1455 4754 007

This document is derived from computer magnetic recordings of internal computer processing. It is not an exact representation of the control position display. Date:Mar/03/00

Prepared by _____

Facility/Title _____/_____

F-2

Separation Alt/Rng Plotted 03-06-2000 @ 10:00:21

Index	Time	ACID	ACP	X Pos	Y Pos	Brg	Rng	Alt	Hdg	Spd
A018	02:03:00	SWA1455	3816	-08.70	18.99	335	20.92	080	240	000
A019	02:03:04	SWA1455	3805	-09.01	18.83	334	20.89	080	243	000
A020	02:03:09	SWA1455	3795	-09.29	18.68	333	20.88	080	240	000
A021	02:03:14	SWA1455	3785	-09.57	18.51	333	20.86	080	239	000
A022	02:03:18	SWA1455	3774	-09.88	18.35	332	20.84	080	242	000
A023	02:03:23	SWA1455	3763	-10.19	18.18	331	20.84	080	241	000
A024	02:03:28	SWA1455	3754	-10.45	18.05	330	20.84	080	244	000
A025	02:03:32	SWA1455	3740	-10.84	17.84	329	20.86	080	241	000
A026	02:03:37	SWA1455	3732	-11.07	17.72	328	20.88	080	240	000
A027	02:03:41	SWA1455	3720	-11.40	17.53	327	20.89	080	240	000
A028	02:03:46	SWA1455	3711	-11.66	17.39	326	20.91	080	242	000
A029	02:03:50	SWA1455	3700	-11.94	17.18	325	20.94	080	232	000
A030	02:03:55	SWA1455	3689	-12.21	16.95	324	20.92	080	229	000
A031	02:04:00	SWA1455	3679	-12.42	16.70	323	20.89	079	219	000
A032	02:04:04	SWA1455	3669	-12.61	16.42	322	20.81	078	213	000
A033	02:04:09	SWA1455	3659	-12.79	16.13	321	20.70	077	211	000
A034	02:04:13	SWA1455	3650	-12.91	15.82	321	20.58	076	201	000
A035	02:04:18	SWA1455	3642	-12.98	15.52	320	20.42	075	193	000
A036	02:04:23	SWA1455	3634	-13.04	15.21	319	20.23	074	190	000
A037	02:04:27	SWA1455	3624	-13.12	14.84	318	20.03	072	193	000
A038	02:04:32	SWA1455	3617	-13.15	14.55	318	19.81	071	184	000
A039	02:04:37	SWA1455	3606	-13.25	14.18	317	19.61	070	196	000
A040	02:04:41	SWA1455	3598	-13.28	13.86	316	19.41	068	185	000
A041	02:04:46	SWA1455	3589	-13.33	13.54	315	19.20	067	188	000
A042	02:04:50	SWA1455	3580	-13.38	13.22	314	19.00	066	188	000
A043	02:04:55	SWA1455	3570	-13.44	12.87	314	18.81	064	189	000
A044	02:04:59	SWA1455	3560	-13.50	12.54	313	18.61	063	189	000
A045	02:05:04	SWA1455	3550	-13.55	12.20	312	18.42	062	188	000
A046	02:05:09	SWA1455	3540	-13.60	11.87	311	18.23	061	188	000
A047	02:05:13	SWA1455	3530	-13.65	11.55	310	18.05	060	189	000
A048	02:05:18	SWA1455	3519	-13.69	11.20	309	17.88	059	187	000
A049	02:05:23	SWA1455	3510	-13.71	10.91	308	17.69	059	183	000
A050	02:05:27	SWA1455	3500	-13.73	10.58	307	17.52	060	182	000
A051	02:05:32	SWA1455	3491	-13.68	10.24	307	17.33	060	171	000
A052	02:05:36	SWA1455	3483	-13.60	09.93	306	17.09	060	165	000
A053	02:05:41	SWA1455	3476	-13.50	09.63	305	16.84	060	159	000
A054	02:05:46	SWA1455	3468	-13.38	09.30	305	16.58	060	160	000
A055	02:05:50	SWA1455	3462	-13.24	09.02	304	16.30	060	152	000
A056	02:05:55	SWA1455	3455	-13.09	08.72	303	16.02	060	153	000
A057	02:05:59	SWA1455	3448	-12.94	08.42	303	15.73	060	152	000
A058	02:06:04	SWA1455	3438	-12.83	08.07	302	15.44	059	162	000
A059	02:06:09	SWA1455	3430	-12.70	07.77	301	15.16	059	155	000
A060	02:06:13	SWA1455	3423	-12.54	07.49	300	14.89	059	150	000
A061	02:06:18	SWA1455	3414	-12.41	07.18	300	14.61	058	156	000
A062	02:06:22	SWA1455	3405	-12.27	06.87	299	14.34	057	154	000
A063	02:06:27	SWA1455	3396	-12.14	06.58	298	14.06	056	155	000
A064	02:06:31	SWA1455	3386	-12.01	06.28	297	13.81	055	156	000
A065	02:06:36	SWA1455	3376	-11.86	05.97	297	13.55	054	153	000
A066	02:06:41	SWA1455	3367	-11.71	05.69	296	13.28	052	150	000
A067	02:06:45	SWA1455	3354	-11.59	05.35	295	13.02	051	160	000
A068	02:06:50	SWA1455	3344	-11.45	05.07	294	12.77	050	151	000
A069	02:06:54	SWA1455	3331	-11.31	04.75	293	12.52	050	157	000
A070	02:06:59	SWA1455	3320	-11.16	04.46	292	12.27	049	151	000
A071	02:07:04	SWA1455	3307	-11.02	04.16	291	12.02	049	155	000
A072	02:07:08	SWA1455	3295	-10.89	03.88	290	11.78	050	153	000
A073	02:07:13	SWA1455	3282	-10.75	03.59	289	11.56	050	153	000
A074	02:07:18	SWA1455	3269	-10.61	03.31	287	11.33	050	152	000
A075	02:07:22	SWA1455	3254	-10.49	03.01	286	11.11	050	157	000
A076	02:07:27	SWA1455	3240	-10.34	02.72	285	10.91	050	151	000
A077	02:07:31	SWA1455	3225	-10.21	02.44	284	10.69	050	155	000
A078	02:07:36	SWA1455	3209	-10.07	02.15	282	10.50	050	154	000
A079	02:07:40	SWA1455	3192	-09.94	01.85	281	10.30	050	155	000
A080	02:07:45	SWA1455	3175	-09.80	01.56	280	10.11	050	153	000
A081	02:07:50	SWA1455	3157	-09.67	01.27	278	09.92	050	155	000
A082	02:07:54	SWA1455	3139	-09.53	00.98	276	09.75	049	153	000
A083	02:07:59	SWA1455	3120	-09.39	00.69	275	09.58	049	154	000
A084	02:08:03	SWA1455	3101	-09.27	00.41	273	09.42	048	155	000
A085	02:08:08	SWA1455	3081	-09.14	00.13	272	09.28	047	154	000
A086	02:08:12	SWA1455	3061	-09.00	-00.15	270	09.14	045	152	000
A087	02:08:17	SWA1455	3039	-08.88	-00.45	269	09.00	044	157	000
A088	02:08:22	SWA1455	3016	-08.74	-00.75	267	08.89	042	154	000
A089	02:08:26	SWA1455	2994	-08.60	-01.03	265	08.77	041	153	000
A090	02:08:31	SWA1455	2971	-08.46	-01.32	263	08.66	039	153	000
A091	02:08:35	SWA1455	2948	-08.32	-01.60	261	08.56	038	152	000
A092	02:08:40	SWA1455	2923	-08.12	-01.89	259	08.47	037	145	000
A093	02:08:45	SWA1455	2901	-07.91	-02.12	256	08.34	035	137	000
A094	02:08:49	SWA1455	2879	-07.65	-02.33	254	08.19	034	128	000
A095	02:08:54	SWA1455	2858	-07.34	-02.50	253	08.00	033	117	000
A096	02:08:58	SWA1455	2840	-07.01	-02.61	251	07.75	033	107	000
A097	02:09:03	SWA1455	2826	-06.68	-02.65	249	07.48	032	097	000
A098	02:09:08	SWA1455	2817	-06.36	-02.62	248	07.19	032	085	000
A099	02:09:12	SWA1455	2811	-06.03	-02.55	247	06.88	032	077	000
A100	02:09:17	SWA1455	2811	-05.73	-02.42	247	06.56	031	067	000
A101	02:09:22	SWA1455	2814	-05.43	-02.27	247	06.22	030	058	000

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Index	Time	ACID	ACP	X Pos	Y Pos	Brg	Rng	Alt	Hdg	Spd	Separation Alt/Rng Plotted 03-06-2000 @ 10:00:21
A102	02:09:26	SWA1455	2818	-05.16	-02.12	247	05.89	030	061	000	
A103	02:09:31	SWA1455	2823	-04.87	-01.96	247	05.58	029	060	000	
A104	02:09:35	SWA1455	2829	-04.60	-01.80	248	05.25	029	059	000	
A105	02:09:40	SWA1455	2834	-04.33	-01.66	248	04.94	030	061	000	
A106	02:09:45	SWA1455	2841	-04.07	-01.51	249	04.64	030	060	000	
A107	02:09:49	SWA1455	2849	-03.82	-01.36	249	04.34	030	059	000	
A108	02:09:54	SWA1455	2857	-03.57	-01.22	250	04.05	029	061	000	
A109	02:09:58	SWA1455	2864	-03.32	-01.10	251	03.77	029	063	000	
A110	02:10:03	SWA1455	2867	-03.06	-01.00	251	03.50	028	068	000	
A111	02:10:08	SWA1455	2862	-02.80	-00.93	251	03.22	026	076	000	
A112	02:10:12	SWA1455	2848	-02.53	-00.91	251	02.95	024	084	000	
A113	02:10:17	SWA1455	2827	-02.27	-00.90	250	02.69	023	087	000	
A114	02:10:21	SWA1455	2798	-02.00	-00.89	248	02.44	020	089	000	
A115	02:10:26	SWA1455	2766	-01.74	-00.88	245	02.19	018	087	000	
A116	02:10:31	SWA1455	2738	-01.47	-00.83	243	01.95	016	078	000	
A117	02:10:35	SWA1455	2713	-01.21	-00.74	240	01.69	014	072	000	
A118	02:10:40	SWA1455	2685	-00.97	-00.65	238	01.42	012	069	000	
A119	02:10:44	SWA1455	2641	-00.72	-00.56	235	01.17	011	069	000	
A120	02:10:49	SWA1455	2553	-00.48	-00.49	232	00.91	009	074	000	
A121	02:10:53	SWA1455	2385	-00.24	-00.42	224	00.69	008	072	000	
A122	02:10:58	SWA1455	2095	-00.03	-00.38	209	00.48	007	079	000	

BUR-ATCT-062
SWA 1455

DAILY RECORD OF FACILITY OPERATION

PAGE NO. 1

DATE 03/05/00

LOCATION	IDENTIFICATION	TYPE FACILITY	OPERATION POSITION	CHECKED BY
San Diego, Ca.	SCT	TRACON	OPERATIONS MANAGER	K. KARPE
				AIR TRAFFIC MANAGER: G.Mueller

TIME (GMT)	REMARKS
0800	T. BERNEZ ON. *CFPL :* **Burbank:** none. **Coast:** SLI in temp. tower, ARTS keyboard and shout line OTS. Freq. 269.6 Rx OTS. **Departures:** None. **Empire:** None. **Los Angeles:** Over Ocean Operation. **San Diego:** None.
0900	Facility walk-thru complete.
0945	LAX east traffic.
1126	Cold start.
1128	Restore base.
1350	J. BRAITHWAITE ON.
1404	A1 DEPARTED LAX.
1409	A1 DEPARTED SCT AIRSPACE.
1535	WCLC.
1825	M. BULLINGTON ON.
Q1842	OEDP, UAL2624 AND SWA974. DIVERGING COURSES (PER QT). QAR CLOSED.
1947	LAX WEST.
1953	J. BRAITHWAITE ON.
2121	M. BULLINGTON ON.
2317	R. PFAHLER ON.
2330	WCLC.
2342	NOTIFIED BY CPC S. SMITH (LA AREA) THAT A TREE HAS FALLEN AND DAMAGED HIS CAR IN THE SCT PARKING LOT. MCC ADZ. FOLLOW UP REPORT TO BE COMPLETED ON 3/6/00.
Q2356	OEDP ALERT COA1014/N212K, BOTH LAX TRM DEPARTURES. NO SEPERATION ISSUES. NO ACTION REQUIRED, QAR CLOSED.
0005	M. BULLINGTON ON.
Q0100	OEDP, UAL2043 AND AAL143 LAX ARRIVALS. NO SEPARATION ISSUES. QAR CLOSED.
0140	R. PFAHLER ON.
Q0214	NOTIFIED BY BUR OPS SUP THAT SWA 1455, B-737, RAN OFF THE DEPARTURE END OF RWY 8 @ BUR. OPERATIONS SUSPENDED, RDO ADZ, AATM/QA MANAGER ADZ. TAPES PULLED, NATCA ADZ. ARTS CLOCK AND WWV TIME CHECKED, ARTS CLOCK –2 SECONDS, ARTS CLOCK AND VOICE RECORDER CLOCK CHECKED, VOICE RECORDER CLOCK +1 SECOND.
0222	OPERATIONS AT BUR RESUMED TO RWY 15/33, RWY 8/26 CLOSED. RDO ADZ. RDO ADZ SCT THAT THIS ACCIDENT/INCIDENT PACKAGE WILL BE FILED BY BUR TOWER.
0306	CONFERENCED WITH AWP-505 (BEDOW) CONCERNING SWA1455. AWP-500 CAME UP AND DETERMINED NO DRUG TESTING WOULD BE CONDUCTED, AWP505 REQUESTED A CDR BE PRODUCED TONIGHT, MCC(MIKE) ADZ AND WILLTRY TO COMPLY.
Q0348	OEDP, AAL2719/SWA1311, ON FINAL @ LAX, SIMOS IN PROGRESS, NO SEPERATION ISSUES,QAR CLOSED.
0404	ARTS TECH (DARLENE) IN BUILDING, AWP-505 HAS REQUESTED A REPLAY TONIGHT. ARTS HAS ADZ DISK WILL BE FULL @APPX.0500, AWP-505 HAS AGREED TO WAIT UNTIL THE DISK IS FULL FOR THE REPLAY.

0515	REPLAY IEWED, RESULTS DISSCUSSED WITH AWP-505 (BEDC NO FURTHER ACTION REQUIRED AT THIS TIME. ALL INFO FORWARDED TO QA OFFICE. ARTS TECH (DARLENE) WILL MAKE BOTH AN OPTICAL COPY OF THE DISK, AND A DATA DISK FOR QA. DATA DISK IN PACKAGE FOR QA. OPTICAL COPY TO BE FORWARDED ON 3/6/00. AWP-505 ADZ THAT 3/6/00 WILL BE SUFFICIENT FOR THE DATA INFO TO BE FORWARDED.
0600	K. KARPE ON. WCLC.
0759	COB.

I CERTIFY that entries above are correct: that all scheduled operations have been accomplished, except as noted, and that all abnormal occurrences and conditions have been recorded.	SIGNATURES(S) OF WATCH SUPERVISOR(S) [redacted]

BUR-ATCT-062
SWA 1455

G-2

BUR-ATCT-~~249~~ 062 75
SWA 1455

DAILY RECORD OF FACILITY OPERATION

PAGE NO. 1

DATE 03/05/00

LOCATION	IDENTIFICATION	TYPE FACILITY	OPERATION POSITION	CHECKED BY
SAN DIEGO, CA	BURBANK AREA	TRACON	OPERATIONS SUPERVISOR	AIR TRAFFIC MANAGER G. MUELLER

TIME (GMT)	REMARKS
0800	COMBINED AT STMCIC
1400	**K. KARPE** ON. WCLC.
2100	**G. BAUMGART** ON.
2345	WCLC.
0200	**J. COVEY** ON.
Q 0211	BUR AIRPORT CLOSED, AIRCRAFT ACCIDENT.
0222	BUR AIRPORT OPEN FOR OPERATIONS ON RWY 15/33 ONLY. RWY 8/26 CLOSED UFN.
0600	COMBINED AT STMCIC.

I CERTIFY that entries above are correct: that all scheduled operations have been accomplished, except as noted, and that all abnormal occurrences and conditions have been recorded.

SIGNATURES(S) OF WATCH SUPERVISOR(S)

[redacted]

BUR-ATCT-062
SWA 1455

FAA Form 7230-4 (4-82) Supersedes previous edition

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BUR-ATCT-062
~~SWA 1145~~

DAILY RECORD OF FACILITY OPERATION

DATE
March 05, 2000

LOCATION	IDENTIFICATION	TYPE FACILITY	OPERATING POSITION	CHECKED BY
Burbank, California	BUR	ATCT	OS/CIC	CHIEF

	TIME (GMT)	REMARKS
	0800	P. BUGARIN ON. WCLC. RWYS 8/15 IN USE. CFPL: RWY 15 REILS OTS. GS UNMONITORED.
	14/0 ~~0610~~	B. RUSSELL ON. ABOVE NOTED.
	1415 ~~0615~~	WCLC.
E	1752	RWY 8 WIND VELOCITY INDICATOR OTS. MCC AND SCT NOTIFIED.
	1850	P. WIDUP ON.
	1909	B. RUSSELL ON.
	2100	K. FERRIS ON.
E	2200	FDIO PRINTER OTS. SWITCHED OUT WITH THE SPARE.
	2236	R. WORGULL ON.
	2310	W. FULLER ON. ABOVE NOTED.
	2315	WCLC.
	0011	R. WORGULL ON.
	0053	RWYS 26/33 IN USE.
	0134	W. FULLER ON.
	0152	RWYS 8/15 IN USE.
	3/9/00 0211	ALERT 3, SWA1455/B733. LANDED RWY 8 AND SLID THROUGH THE BLAST FENCE.
	0225	R. WORGULL ON.
	0243	W. FULLER ON.
	0348	C. LIPPERT ON.
	0421	B. RUSSELL ON.
	0505	BGPAA ADVISED RWY 26 CLSD UFN. UNLIGHTED BARRACADES ON RWY 26. NOTAM ISSUED TO HHR FSS BY BGPAA.
	0512	GO-AROUND, UAL2223/B735, ILS RWY 8, CIRCLE TO RWY 15, PO, LOST SIGHT OF APT.
	0515	GO-AROUND, UAL1285/B733, ILS RWY 8, CIRCLE TO RWY 15, PO, LOST SIGHT OF APT.
	0540	C. LIPPERT ON.
	0558	B. RUSSELL ON.
	0620	W. FULLER ON.
	0640	C. LIPPERT ON.
	0759	COB.

BUR-ATCT-062
SWA 1455

I CERTIFY that entries above are correct, that all scheduled operations have been accomplished, except as noted, and that all abnormal occurrences and conditions have been recorded.

SIGNATURE(S) OF WATCH SUPERVISOR(S)

[redacted]

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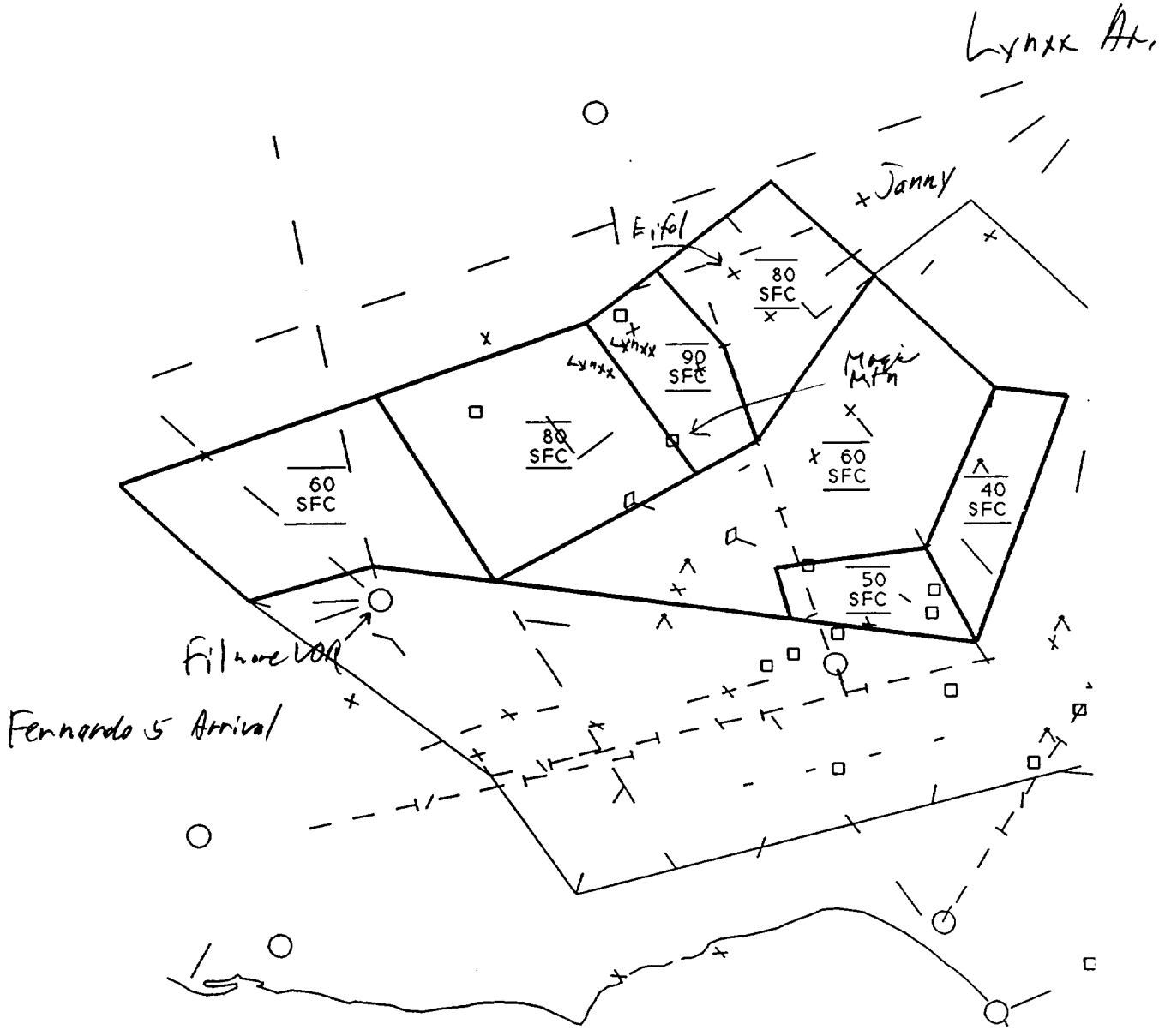
SECTION 2. BURBANK AREA MAPS

13-2-1. FILLMORE SECTOR

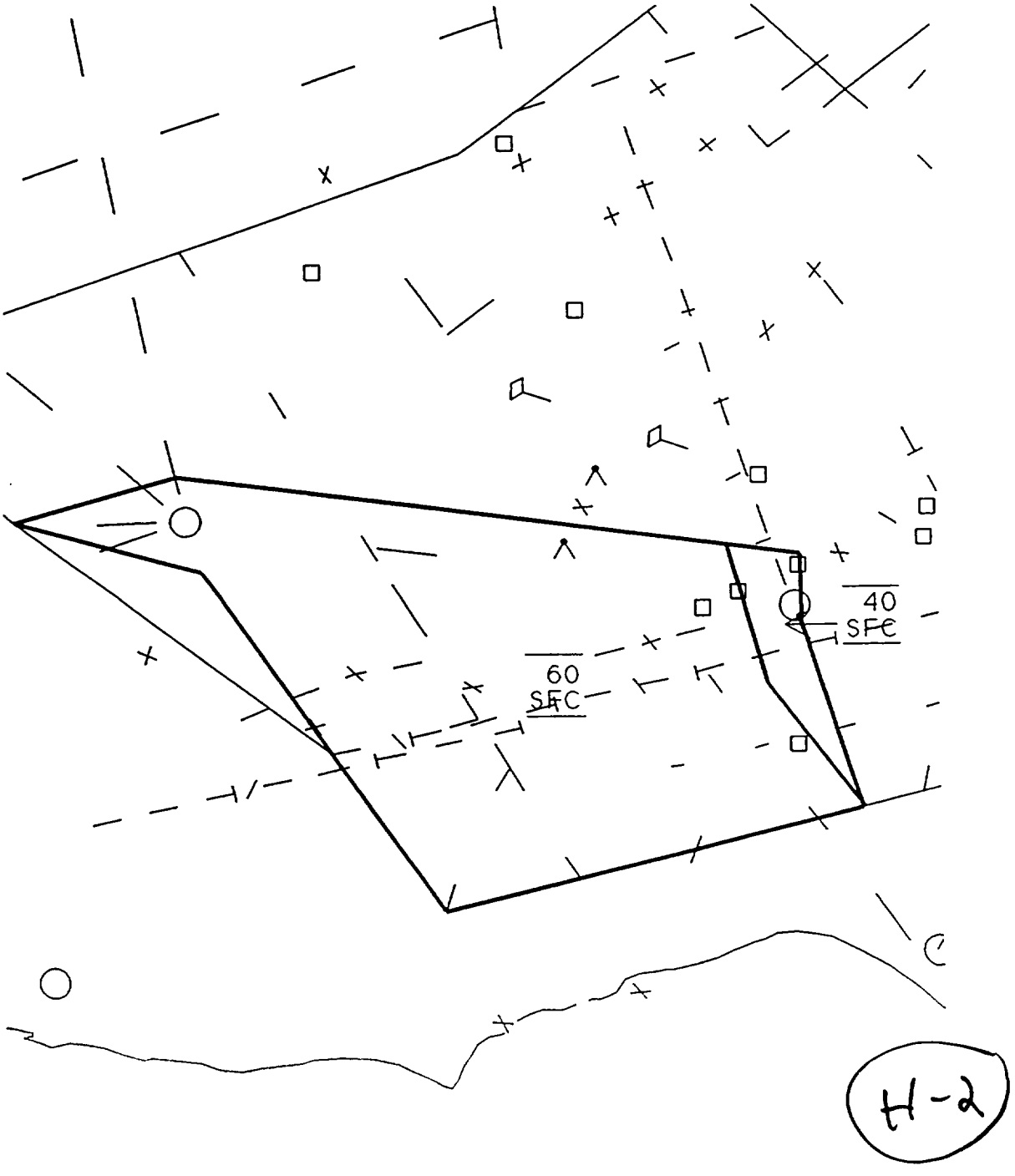
a. FILLMORE SECTOR – BUR RWY 8/15, LAX WEST OR EAST



H-1

13-2-2. WOODLAND SECTOR

a. WOODLAND SECTOR – BUR RWY 8/15, LAX WEST OR EAST



Memorandum

U. S. Department of Transportation

Federal Aviation Administration

Subject: INFORMATION: Partial Transcript
Aircraft Accident: SWA1455
Burbank, CA; March 05, 2000

Date: October 6, 2000

Reply to Attn of:

From: Burbank ATCT

To: Aircraft Accident File: BUR-ATCT-062

This transcription covers the Burbank ATIS position for the time period from March 5, 2000, 0145 UTC to March 5, 2000, 0210 UTC.

Agencies Making Transmissions	Abbreviation
Burbank ATIS	ATIS

I hereby certify that the following is a true transcription of the recorded ATIS's Oscar and Papa pertaining to the subject aircraft accident involving SWA1455.

[redacted]
Theresa Walton
Air Traffic Operations Supervisor
Burbank ATCT

0053 burbank airport information oscar zero zero five three zulu wind two six zero at one eight gusts two six visibility one zero few clouds at three thousand niner hundred ceiling six thousand broken seven thousand five hundred broken temperature one one dew point two altimeter two niner six two visual approaches in use arriving and departing runway two six and runway three three helicopter pilots use frequency one one eight point seven advise on initial contact you have information oscar

0153 burbank airport information papa zero one five three zulu wind two four zero at six visibility one zero few clouds at six thousand five hundred ceiling niner thousand overcast temperature niner dew point one altimeter two niner six five i l s runway eight approach in use arriving and

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BUR-ATCT-062
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departing runway eight and runway one five helicopter pilots use frequency one one eight point seven advise on initial contact you have information papa

End of Transcript

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