Tennessee Valley Authority, 1101 Market Street, LP 5A, Chattanooga, Tennessee 37402-2801

September 4, 2008

10 CFR 52.79

U.S. Nuclear Regulatory Commission
ATTN: Document Control Desk
Washington, D.C. 20555

In the Matter of) Docket No. 52-014 and 52-015
Tennessee Valley Authority)

BELLEFONTE COMBINED LICENSE APPLICATION – RESPONSE TO REQUEST FOR ADDITIONAL INFORMATION – AIRCRAFT HAZARDS

Reference: Letter from Brian Hughes (NRC) to Andrea L. Sterdis (TVA), Request for Additional Information Letter No. 100 Related to SRP Section 3.5.1.6 for the Bellefonte Units 3 and 4 Combined License Application, dated August 05, 2008

This letter provides the Tennessee Valley Authority's (TVA) responses to the Nuclear Regulatory Commission's (NRC) request for additional information (RAI) items included in the reference letter.

A response to each NRC request in the subject letter is addressed in the enclosure which also identifies any associated changes that will be made in a future revision of the BLN application.

Attachment 03.05.01.06-02C to this letter contains Sensitive Unclassified Non-Safeguards Information (SUNSI) that should be withheld from public disclosure under 10 CFR 2.390(d)(1).

If you should have any questions, please contact Phillip Ray at 1101 Market Street, LP5A, Chattanooga, Tennessee 37402-2801, by telephone at (423) 751-7030, or via email at pmray@tva.gov.

I declare under penalty of perjury that the foregoing is true and correct.

Executed on this 4th day of Sep, 2008.

Andrea L. Sterdis
Manager, New Nuclear Licensing and Industry Affairs
Nuclear Generation Development & Construction

Enclosure
cc: See Page 2

D085
NRO

cc: (w/Enclosure)
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E. Cummins, Westinghouse
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C. R. Pierce, SNC
R. Reister, DOE/PM
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T. Simms, NRC/HQ
J. M. Sebrosky, NRC/HQ

Enclosure
TVA letter dated September 4, 2008
RAI Responses

Responses to NRC Request for Additional Information letter No. 100 dated August 5, 2008
(8 pages, including this list)

Subject: Aircraft Hazards in the Final Safety Analysis Report

RAI Number	Date of TVA Response
03.05.01.06-01	This letter – see following pages
03.05.01.06-02	This letter – see following pages

Associated Additional Attachments / Enclosures	Pages Included
Attachment 03.05.01.06-01A	4 pages
Attachment 03.05.01.06-01B	2 page
Attachment 03.05.01.06-01C	2 pages
Attachment 03.05.01.06-01D	2 page
Attachment 03.05.01.06-02A	2 page
Attachment 03.05.01.06-02B	2 page
Attachment 03.05.01.06-02C	6 pages

NRC Letter Dated: August 5, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 03.05.01.06-01

Please provide the basis or reference for the estimation of flight operations between Langrange-Callaway Airport, Georgia and Nashville International Airport, Tennessee. Also provide the basis for assuming compound growth rate of 2.84 percent for airway J73 operations and 1 percent for Scottsboro Municipal Airport operations to the year 2060.

BLN RAI ID: 1117

BLN RESPONSE:

The portion of J73 high altitude jet route considered in the risk evaluation is not between the LaGrange-Callaway Airport and Nashville International Airport (the infrastructure facilities with runways, hangers, terminals, etc.), but between the LaGrange VHF Omni-directional Range (VOR) navigation system and the Nashville VOR, which are navigational aide components of the national airspace system. These VORs are physical radio transmitters that broadcast in the VHF range. Defining the air traffic of interest as being between the two respective airports does not accurately characterize the use of J73; J73 is primarily used for high altitude over flight traffic between the upper Midwest (i.e. Chicago) and Florida airports.

Since the number of flights that utilize airway J73 is not fixed, it was necessary to develop a method to conservatively estimate compound growth rate for airway J73 operations. First, the number of flights that currently travel high altitude airway J73 was established by obtaining the list of flight paths from the FAA website (Reference 1) and determining the number of flights which travel along the route string of interest. (A route string is a list of airways that comprise a flight's path.) The list of flight paths which contained J73 as part or all of the route string was used as the basis for determining the number of flights. This list is shown in Table 1 (Attachment 03.05.01.06-01A). Those flights that did not follow the section of airway J73 between Lagrange-Callaway and Nashville were removed from further consideration.

In order to establish a number of flights that travel along the route string of interest, the peak month and day of the week were identified for use in establishing a conservative average flight count. Statistics of weekly airborne aircraft (Reference 2) show Thursday as the day of the week with the most domestic commercial flights, both passenger and freight. Monthly flight data for 2005 and 2006 obtained from the Bureau of Transportation Statistics (Reference 3) is summarized in Table 2 (Attachment 3.05.01.06-01B). The month of August had the greatest number of domestic flights of any month of the year.

After identifying the day of the week and the month with the greatest number of flights, data was gathered for the flight paths that contain J73 between Lagrange-Callaway and Nashville as part of the flight string for a 24 hour period on Thursday August 9, 2007 using a flight tracking service (Reference 4), which tracks domestic commercial flights, both passenger and freight. The number of daily flights for each route is summarized in Table 3 (Attachment 03.05.01.06-01C). The total number of flights that traverse J73 between Lagrange-Callaway and Nashville was determined to be 60.

Then, the total annual number of flights was calculated by conservatively assuming that the number of flights per day remained constant throughout the year at the total number of flights during the month and the day of the week with the greatest number of flights, i.e., 60. Therefore, the total number of flights that traverse J73 annually is estimated to be 21,900 (= 60 flights/day * 365 days/year).

The estimated annual projected growth rate from 2007 to 2060 for each destination airport is based on an average of the FAA projected growth between 2007 and 2025 (Reference 5). The average destination airport growth rates between 2007 and 2025 are summarized in Table 4 (Attachment 03.05.01.06-01D). The average projected growth rate for each destination was weighted with regards to the current number of flights which contained J73 in its route string. Although some of the airports showed zero growth, this did not affect the final average growth rate, because it was weighted per number of flights destined to that airport. The sum of the weighted growth rates per number of daily flights was calculated in Table 4 (Attachment 3.05.01.06-01B) to be 170.4 %.

Finally; the weighted average growth rate is determined by dividing the total weighted growth rate per number of daily flights by the total number of flights per day. The weighted average growth rate was calculated to be 2.84% (170.4%*flights/day /60flights/day). Since the flights traveling on J73 are nearly all southbound flights to Florida airports, it was determined to be most conservative to use the projected growth rates of the destination airports in order to account for an increase of flights originating from other airports than those currently following J73. Based on annual compound growth rate of 2.84% from 2007 to 2060, the projected annual number of operations on airway J73 in the year 2060 was approximately 96,877 ($=21,960 \times [1+0.0284]^{2060-2007}$).

According to FAA Terminal Area Forecast (Reference 5), no growth is projected for Scottsboro Municipal Airport, Isbell Field Airport, and Guntersville Municipal Airport from 2001 to 2025. Therefore, a conservatively annual air traffic growth rate of 1% for small airports such as Scottsboro Municipal Airport was assumed.

REFERENCES:

Reference 1: This website belongs to the FAA and provides information on every flight and flight path available throughout the nation; http://www.fly.faa.gov/rmt/data_file/prefroutes_db.csv

Reference 2: Statistics of weekly airborne aircraft; http://flightaware.com/analysis/graphs/total.rvt

Reference 3: Month Flight Data

(Jan) http://www.bts.gov/press_releases/2006/bts017_06/html/bts017_06.html#table_01

(Feb) http://www.bts.gov/press_releases/2006/bts023_06/html/bts023_06.html#table_01

(Mar) http://www.bts.gov/press_releases/2006/bts028_06/html/bts028_06.html#table_07

(Apr) http://www.bts.gov/press_releases/2006/bts033_06/html/bts033_06.html#table_07

(May) http://www.bts.gov/press_releases/2006/bts038_06/html/bts038_06.html#table_07

(June) http://www.bts.gov/press_releases/2006/bts042_06/html/bts042_06.html#table_07

(July) http://www.bts.gov/press_releases/2006/bts048_06/html/bts048_06.html#table_07

(Aug) http://www.bts.gov/press_releases/2006/bts054_06/html/bts054_06.html#table_07

(Sept) http://www.bts.gov/press_releases/2006/bts059_06/html/bts059_06.html#table_07

(Oct) http://www.bts.gov/press_releases/2007/bts002_07/html/bts002_07.html#table_07

(Nov) http://www.bts.gov/press_releases/2007/bts007_07/html/bts007_07.html#table_07

(Dec) http://www.bts.gov/press_releases/2007/bts012_07/html/bts012_07.html#table_07

Reference 4: Number of flights for each day of the week (Sun through Sat). http://flightaware.com/live/findflight_route.rvt

Reference 5: Projected growth rate for airports with destinations routed on airway J73. http://tafpub.itworks-software.com

This response is PLANT-SPECIFIC.

ASSOCIATED BLN COL APPLICATION REVISIONS:

No COLA revisions have been identified associated with this response.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

Attachment 03.05.01.06-01A

Attachment 03.05.01.06-01B

Attachment 03.05.01.06-01C

Attachment 03.05.01.06-01D

NRC Letter Dated: August 05, 2008

NRC Review of Final Safety Analysis Report

NRC RAI NUMBER: 03.05.01.06-02

Please provide the data, including the site specific effective area estimated, used for the calculation of the aircraft crash probability in Section 3.5.1.6 Aircraft Hazards. In doing so, clarify whether flight operations data projected to 2060 is used.

BLN RAI ID: 1118

BLN RESPONSE:

In accordance with Section II of the SRP 3.5.1.6, Rev. 3, the screening of the local airports, heliports, military training routes, federal airways, holding and approach pattern showed that further detailed probability calculations of an aircraft crash accident are necessary for Scottsboro Municipal Airport and high altitude Airway J73.

Scottsboro Municipal Airport does not meet the 5-mile screening criterion of Section II of the SRP 3.5.1.6 due to the plant to airport distance. Scottsboro Municipal Airport - Word Field is located approximately 4.9 miles west-southwest of the site. Thus, specific evaluation of this airport is required. Other airports considered were the Chattanooga Metropolitan Airport, Huntsville International Airport, Stevenson Airport, Isbell Field Airport, Guntersville Municipal Airport, and Hazel Green Airport; however these airports meet the exclusion distance criteria from SRP 3.5.1.6, thus the probability is considered to be less than an order of magnitude of 10^{-7} per year.

High altitude Airway J73 did not meet the criteria contained in Section II of the SRP 3.5.1.6; specifically, the plant location criterion of 2 statute miles beyond the nearest edge of a federal airway, holding pattern, or approach pattern. High altitude Airway J73 passes over the site. The Bellefonte plant is at least two statute miles beyond the nearest edge of low altitude airways V54, V115, and V321 and high altitude airways J22, J118, J45, and J66; thus they represent negligible hazard per SRP 3.5.1.6 and were not considered in the probability calculation.

The probability per year of an aircraft crashing from Scottsboro Municipal Airport into the site is determined using the following equation (NRC Standard Review Plan Section 3.5.1.6):

$$P_A = \sum_{i=1}^{L} \sum_{j=1}^{M} C_j N_{ij} A_j$$

Where:

M = number of different types of aircraft using the airport

L = number of flight trajectories affecting the site

Cj = probability per square mile of a crash per aircraft movement, for the j^{th} aircraft

Nij = number (per year) of movements by the j^{th} aircraft along the i^{th} flight path

Aj = effective plant area in square miles for the j^{th} aircraft

Based on communication with a Scottsboro Municipal-Word Field official, it was determined that the aircraft based at Scottsboro Municipal Airport are primarily used by general aviation and are small, relatively light weight and piston type aircraft. The number of different types of aircraft was assumed to

be one (M=1), since the planes at Scottsboro Municipal Airport were similar size, weight, and type. The flight trajectories for the aircraft were assumed to be the same (L=1) since the planes are similar size, weight, and type. The Federal Aviation Administration (FAA) forecasted approximately 7,745 operations per year for the Scottsboro Municipal Airport for year 2025. The FAA also projected no growth for Scottsboro Municipal Airport, but for conservatism, a 1% annual compound growth rate from year 2025 to year 2060 was assumed. Therefore, projected annual number of operations at Scottsboro Municipal Airport for year 2060 was approximated as N=10,972 (from $7,745 \times [1.01]^{2060-2025}$).

Determination of the effective area:

The analysis for the determination of the effective area is provided in Attachment 03.05.01.06-02C. Attachment 03.05.01.06-02C is Security-Related Information to be withheld under 10 CFR 2.390(d).

Probability of Aircraft Crash Per Square Mile:

In accordance with Section II of the SRP 3.5.1.6, the probability of a fatal crash per square mile per aircraft movement for an airport with the end of runway at the distance between 4 to 5 miles from the site for general aviation aircraft is 1.2×10^{-8}.

Probability Calculation for General Aviation:

Scottsboro Municipal Airport runways are designated as Runway 3 and Runway 21 ("4A6 Scottsboro Municipal Airport – Word Field," Website, http://www.airnav.com/airport/4A6). An aircraft departing Runway 3 flies a course of approximately 30 degrees with respect to magnetic north. Similarly, an aircraft landing on Runway 3 also flies an approximate course of 30 degrees with respect to magnetic north prior to touchdown. Use of Runway 21 sets the flight course at 210 degrees with respect to magnetic north. Similarly, an aircraft landing on Runway 21 also flies an approximate course of 210 degrees with respect to magnetic north prior to touchdown. These runways are not aligned with the Bellefonte site and FAA temporary flight restriction rules do not allow an aircraft flight path within three miles of a nuclear plant site. Due to FAA restrictions and the orientation of the Scottsboro Municipal Airport runways, no flights will be scheduled to fly over the Bellefonte site. However, for conservatism in the evaluation, 20 percent of the flight trajectories approaching or departing Scottsboro Municipal Airport were considered to fly over the Bellefonte site.

Therefore,

$P_A = P_{A\ \text{general aviation}}$

$P_A = 0.2*C_l*N*A_l = 1.2*10^{-8}*0.2*10{,}972*0.02974 = 7.831*10^{-7}$ per year

The probability of aircraft crashing from Scottsboro Municipal Airport into the BLN site was $7.831*10^{-7}$ per year.

Airway J73:

The annual probability of aircraft crashing from Airway J73 into the plant site, P_{FA} can be estimated by the following equation (from NRC Standard Review Plan Section 3.5.1.6):

$$P_{FA} = C * N * A / w$$

Where:

C = in-flight crash rate per mile for aircraft using airway

N = number of flights per year along the airway

A = effective area of plant in square miles

w = width of airway (plus twice the distance from the airway edge to the site when the site is outside the airway) in miles

The high altitude airway J73 is assumed to be a commercial aircraft route. In general, high altitude airways are used by commercial air carriers and military aircraft.

Per NRC Standard Review Plan Section 3.5.1.6, the probability of a fatal crash for commercial air carriers is higher than for military aircraft. The Standard Review Plan, 3.5.1.6, Aircraft Hazards states that a value of $C = 4 \times 10^{-10}$ has been used as the in-flight crash rate per mile for commercial aircraft. This value is based on the Nuclear Regulatory Commission (NRC) report "Testimony on Aircraft Operations in Response to a Request from the Board in the Matter of Pacific Gas and Electric, Diablo Canyon Nuclear Power Station Unit Nos. 1 and 2, Docket Nos. 50-275 and 50-323," which used data from 1965 to 1975 to obtain a conservative value for the in-flight crash rate per mile. To obtain a value for "C" that was more representative of today's flying habits and improved flying conditions, more recent data depicted in Table 2 (Attachment 03.05.01.06-02B) from the Bureau of Transportation Statistics from 1991 to 2001 was used. Using the same methodology used by the NRC to develop the in-flight crash rate per mile provided in the SRP, the updated value using more recent data was determined as follows:

$$C = \frac{\frac{\#\ failures}{year}}{\frac{average - aircraft - miles}{year}} = \frac{failures}{aircraft - mile}$$

The average number of aircraft-miles for this time period (1991 to 2001) is as follows:

$(\text{Total}_{\text{aircraft miles}}/\text{Total}_{\text{years}})$= (66,984,000,000 aircraft-miles)/(11 years)
= 6,089,454,545 aircraft-miles/ year

Conservatively assuming that one major en-route failure occurs per year, the en-route crashes per aircraft-mile became the reciprocal of 6,089,454,545:

C=1(failure/year)/ 6,089,454,545 (aircraft-miles)/(years)= 1.6×10^{-10} failure/aircraft-mile

Thus, the in-flight crash rate per mile for commercial aircraft using this airway is $C = 1.6 \times 10^{-10}$ per aircraft mile.

The number of flights per year using Airway J73 based on annual compound growth rate of 2.84% from 2007 to 2060 is approximately $N=96,877(21,960 \times [1+0.0284]^{2060-2007})$.

Total effective crash area for commercial aircraft is A = 0.06 square miles.

The centerline of Airway J73 is approximately 3.4 miles west of the Bellefonte site. J73 airway width is eight (8) nautical miles ($\approx$ 9.2 miles) and is flown from 18,000 feet to the top of controlled airspace of 45,000 feet. Considering the width of this airway, the Bellefonte site is located inside the width of Airway J73.

Therefore,

$$P_{FA}=1.6 * 10^{-10} * 96,877 * (0.06/9.2) = 1.01 * 10^{-7} \text{ per year}$$

Since there is no aircraft holding pattern in this airway, holding pattern is not considered. The total aircraft hazard probability at the site, P equals the sum of the above calculated probabilities.

Therefore,

$$P = P_A + P_{FA} = 7.831 * 10^{-7} + 1.01 * 10^{-7} \approx 8.8 * 10^{-7} \text{ per year}$$

This response is PLANT SPECIFIC.

ASSOCIATED BLN COL APPLICATION REVISIONS:

COLA Part 2, FSAR Chapter 3, Subsection 3.5.1.6, 7th paragraph, will be changed from:

Utilizing the above data, the total probability of an aircraft crash into the plant was determined to be 1.04 x 10^{-6} per year.

To read:

Utilizing the above data, the total probability of an aircraft crash into the plant was determined to be 8.8 x 10^{-7} per year.

ASSOCIATED ATTACHMENTS/ENCLOSURES:

Attachment 03.05.01.06-02A

Attachment 03.05.01.06-02B

Attachment 03.05.01.06-02C (***Security-Related Information — Withheld Under 10 CFR 2.390***)

ATTACHMENT 03.05.01.06-01A

(4 pages)

Table 1

Flight Routes Containing J73

Table 1

Flight Routes Containing J73

Orig.	Route String	Dest.	Travels J73 Between Lagrange-Callaway and Nashville Airport
CHI	CHI GUIDO J73 SZW DARBS-STAR TPA	TPA	Yes
CHI	CHI GUIDO J73 SZW CLAMP-STAR SRQ	SRQ	Yes
CHI	CHI J73 GUIDO SZW J43 PIE SARASOTA-STAR RSW	RSW	Yes
CHI	CHI GUIDO J73 SZW DARBS-STAR PIE	PIE	Yes
CHI	CHI GUIDO J73 LAL LLAKE-STAR PBI	PBI	Yes
CHI	CHI GUIDO J73 SZW J43 PIE CYPRESS-STAR MIA	MIA	Yes
CHI	CHI GUIDO J73 SZW J43 PIE FORTL-STAR FLL	FLL	Yes
CHI	CHI GUIDO J73 PXV CCT HEHAW-STAR BNA	BNA	No
FLL	FLL LAL J73 SZW J2 MSY	MSY	No
FLL	FLL LAL J73 SZW J2 SJI J37 PEKON IAH	IAH	No
FLL	FLL LAL J73 SZW J2 SJI J37 PEKON HOU	HOU	No
FLL	FLL LAL J73 SZW J2 CEW J50 AEX CQY DFW	DFW	No
FLL	FLL LAL J73 SZW J41 MEM RZC PER GCK J154 RYLIE DANDD-STAR DEN	DEN	No
FMY	FMY LAL J73 J119 TAY J85 DJB JUNKR-STAR YQG	YQG	No
FMY	FMY LAL J73 J119 TAY J85 DJB JUNKR-STAR PTK	PTK	No
FMY	FMY LAL J73 J119 TAY J85 DJB JUNKR-STAR DET	DET	No
MIA	MIA J73 TLH	TLH	No
MIA	MIA LAL J73 SZW J41 VUZ STL	STL	Yes
MIA	MIA J73 LAL OCF	OCF	No
MIA	MIA LAL J73 SZW J2 MSY	MSY	No
MIA	MIA LAL J73 SZW J2 SJI TRINITY-STAR HOU	HOU	No
MIA	MIA LAL J73 SZW J2 CEW J50 AEX CQY DFW	DFW	No

Orig.	Route String	Dest.	Travels J73 Between Lagrange-Callaway and Nashville Airport
MIA	MIA LAL J73 SZW J41 MEM RZC PER GCK J154 RYLIE DANDD-STAR DEN	DEN	No
MKE	MKE OBK J73 SZW DARBS-STAR TPA	TPA	Yes
MKE	MKE OBK J73 SZW CLAMP-STAR SRQ	SRQ	Yes
MKE	MKE OBK J73 SZW CTY LLAKE-STAR PBI	PBI	Yes
MKE	MKE OBK J73 SZW CTY GULLO_RNAV-STAR PBI	PBI	No
MKE	MKE OBK J73 SZW J43 PIE CYPRESS-STAR MIA	MIA	Yes
MKE	MKE OBK J73 SZW J43 PIE SARASOTA-STAR FMY	FMY	Yes
MKE	MKE OBK J73 SZW J43 FORTL-STAR FLL	FLL	Yes
MKE	MKE OBK J73 PXV CCT HEHAW-STAR BNA	BNA	No
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW DARBS-STAR TPA	TPA	Yes
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW CLAMP-STAR SRQ	SRQ	Yes
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW J43 PIE SARASOTA-STAR RSW	RSW	Yes
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW CTY LLAKE-STAR PBI	PBI	No
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW CTY GULLO_RNAV-STAR PBI	PBI	Yes
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW J43 PIE ZEILR-STAR MKY	MKY	No
MSP	MSP ODI J30 BRIBE BDF ENL 162 PLESS J45 BNA J73 SZW J41 PIE CYPRESS-STAR MIA	MIA	Yes
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW J43 PIE SARASOTA-STAR FMY	FMY	Yes
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW J41 PIE FORTL-STAR FLL	FLL	Yes
MSP	MSP ODI J30 BRIBE BDF ENL ENL162 PLESS J45 BNA J73 SZW J43 PIE ZEILR-STAR APF	APF	Yes
ORD	ORD GUIDO J73 SZW CTY LLAKE-STAR PBI	PBI	Yes
ORD	ORD GUIDO J73 SZW CTY GULLO_RNAV-STAR PBI	PBI	No
RSW	RSW LAL J73 J119 TAY J85 DJB JUNKR-STAR YQG	YQG	No

Orig.	Route String	Dest.	Travels J73 Between Lagrange-Callaway and Nashville Airport
RSW	RSW LAL J73 SZW J41 VUZ STL	STL	No
RSW	RSW LAL J73 J119 TAY J85 DJB JUNKR-STAR PTK	PTK	No
RSW	RSW LAL J73 J119 TAY J85 DJB CETUS-STAR DTW	DTW	No
RSW	RSW LAL J73 SZW J2 CEW J50 AEX CQY DFW	DFW	No
RSW	RSW LAL J73 J119 TAY J85 DJB JUNKR-STAR DET	DET	No
RSW	RSW LAL J73 SZW J41 MEM RZC PER GCK J154 RYLIE DANDD-STAR DEN	DEN	No
RSW	RSW LAL J73 J119 TAY J85 HVQ APE CMH	CMH	No
RSW	RSW LAL J73 J119 TAY J85 IRQ J85 HVQ J85 TVT040 KEATN KEATN-STAR CLE	CLE	No
RSW	RSW LAL J73 SZW HONIE_RNAV-STAR ATL	ATL	No
RSW	RSW LAL J73 SZW LAGRANGE-STAR ATL	ATL	No
STL	STL PLESS-DP BNA J73 SZW OTK LEESE-STAR ORL	ORL	Yes
ZTL	ZTL BNA J73 SZW TPA	TPA	No
ZTL	ZTL BNA J73 SZW SRQ	SRQ	No
ZTL	ZTL BNA J73 SZW RSW	RSW	No
ZTL	ZTL BNA J73 SZW PBI	PBI	No
ZTL	ZTL BNA J73 SZW MCO	MCO	No
ZTL	ZTL BNA J73 SZW FMY	FMY	No
ZTL	ZTL BNA J73 SZW FLL	FLL	No

ATTACHMENT 03.05.01.06-01B

(2 page)

Table 2

Domestic Nationwide Airline Travel (in thousands) per Month in 2005 and 2006

Table 2

**Domestic Nationwide Airline Travel
(in thousands) per Month in 2005 and 2006.**

	2005	2006
January	811	775
February	766	748
March	873	828
April	849.2	783.9
May	872.6	804.6
June	863.0	814.7
July	886.6	845.8
August	891.0	866.1
September	815.0	799.8
October	831.3	824.6
November	797.5	788.3
December	802.1	798.1

ATTACHMENT 03.05.01.06-01C

(2 pages)

Table 3

Number of Daily Flights Per Route Summary

Table 3

Number of Daily Flights Per Route Summary

Origin	Destination	Number of Daily Flights
CHI (ZAU)	TPA	14
CHI (ZAU)	SRQ	1
CHI (ZAU)	RSW	7
CHI (ZAU)	PIE	0
CHI (ZAU)	PBI	1
CHI (ZAU)	MIA	13
CHI (ZAU)	FLL	11
MIA	STL	2
MKE	TPA	2
MKE	SRQ	0
MKE	PBI	0
MKE	MIA	0
MKE	FMY	0
MKE	FLL	1
MSP	TPA	2
MSP	SRQ	0
MSP	RSW	2
MSP	PBI	0
MSP	MIA	2
MSP	FMY	0
MSP	FLL	1
MSP	APF	0
ORD	PBI	1
STL	ORL	0
Total Number of Daily Flights		**60**

ATTACHMENT 03.05.01.06-01D

(2 page)

Table 4

Annual Average Growth Rate at Destination Airports Traveling Airway J73

Table 4

Annual Average Growth Rate at Destination Airports Traveling Airway J73

Destination Airport	Average Projected Growth Rate (%)	Current # of Daily Flights	Weighted Growth Rate Per # of Daily Flights (%)
PBI	2.91	2	5.82
TPA	2.99	18	53.82
RSW	3.59	9	32.31
SRQ	0.95	1	0.95
PIE	2.38	0	0
MIA	2.31	15	34.65
FLL	2.91	13	37.83
STL	2.51	2	5.02
FMY	0.0	0	0
ORL	0.0	0	0
APF	0.75	0	0.75
MKY	0.0	0	0
Total	--	60	170.4
Weighted Average Growth Rate			2.84

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(2 pages)

Table 1

DOE Standard data

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DOE Standard data

Description	General Aviation Aircraft	Commercial Aircraft
Aircraft wingspan, ft	60*	98
Mean of the cotangent of the aircraft impact angle (cot Φ)	8.2	10.2
Mean skid distance for the aircraft, ft	60	1,440

* Data obtained from the Manager of Scottsboro Municipal World Field

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(2 pages)

Table 2

Total Accidents, Aircraft-Miles, and Accidents per Aircraft-Mile for years 1991 through 2001

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Total Accidents, Aircraft-Miles, and Accidents per Aircraft-Mile for years 1991 through 2001

Year	Total Accidents	Aircraft-Miles (millions)	Accidents per Aircraft-Mile
1991	26	4,825	5.389×10^{-9}
1992	18	5,039	3.572×10^{-9}
1993	23	5,249	4.382×10^{-9}
1994	23	5,478	4.199×10^{-9}
1995	36	5,654	6.367×10^{-9}
1996	37	5,873	6.300×10^{-9}
1997	49	6,697	7.317×10^{-9}
1998	50	6,737	7.422×10^{-9}
1999	51	7,102	7.181×10^{-9}
2000	56	7,521	7.446×10^{-9}
2001	45	6,809	6.609×10^{-9}
Total	414	66,984	6.181×10^{-9}

Data source: Bureau of Transportation Statistics from 1991 to 2001