



Appendix L

NATIONAL PARK SERVICE COORDINATION

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NATIONAL PARK SERVICE COORDINATION

As previously discussed, Double Eagle II Airport is adjacent to the Petroglyph National Monument which is jointly managed by the City of Albuquerque Open Space Division and the National Park Service (NPS). During previous consultation processes, the City of Albuquerque and the NPS have indicated concerns regarding the potential impacts of airport development on the monument. Due to previous involvement with projects at the airport, the NPS was included as a cooperating agency for this EA and was kept abreast of the EA analysis through multiple meetings and teleconferences.

A meeting was held on May 14, 2008 at the NPS Visitors Center for Petroglyph National Monument to brief NPS on the findings of the overflight analysis conducted as part of the EA. Invitees included the representatives from the City of Albuquerque, NPS, and the consultant team. This appendix includes the meeting sign-in sheets and a copy of the presentation slides used during the meeting.

Also included in this appendix is the documentation prepared for the noise measurement exercise performed at the onset of this Environmental Assessment (EA). The noise measurement program was undertaken at the request of the NPS.

Beginning on page L-25 are copies of the coordination undertaken with the NPS regarding the contents of this document.



United States Department of the Interior
NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
Petroglyph National Monument
6001 Unser Blvd., NW
Albuquerque, New Mexico 87120

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ASW-640

In reply refer to:
L3025(PETR)

February 10, 2006

U.S. Department of Transportation
Federal Aviation Administration
Southwest Region
Lacey Spriggs, Manager,
Airports Development Office
2601 Meacham Blvd.
Fort Worth, Texas 76193

Dear Ms. Spriggs:

Thank you for the invitation to participate as a cooperating agency in the upcoming environmental review of the runway extensions at Double Eagle II Airpark (AEG) adjacent to Petroglyph National Monument in Albuquerque, New Mexico. We have developed good working relations with the City, FAA and PNM and look forward to working with everyone to find mutually acceptable solutions to issues of concern.

As a sister federal agency, we believe that it is our duty at the federal level to work together to protect the resources our agencies have been entrusted to care for in an appropriate manner and appreciate your consideration of our previous formal request to serve as a cooperating agency on these projects at Double Eagle II. We will await your development of the Memorandum of Understanding (MOU) addressing the roles and responsibilities of all parties to begin this process.

Sincerely,

Joseph P. Sánchez, Ph.D.
Superintendent

cc:

Mike Snyder, Regional Director, National Park Service, Intermountain Region, P.O. Box 25287,
Denver, Colorado 80225-0287

Chris Turk, National Park Service, Intermountain Region-Environmental Review, P.O. Box 25287,
Denver, Colorado 80225-0287

MEETING ATTENDANCE RECORD

[illegible]



Double Eagle II Airport Environmental Assessment (EA)

Meeting with National Park Service
May 14, 2008



Purpose of Meeting

- Discuss recent decisions regarding the EA
- Provide NPS Regional Staff with a brief project overview
- Provide initial results of the overflight and noise analysis
- Obtain feedback from NPS staff regarding initial analysis results

Recent EA Changes



- Scope of EA limited to the following
 - Runway Extension
 - Alternatives A and B
 - Straightening of Paseo Del Volcan
 - Due to schedule concerns this project is undergoing evaluation in a separate EA
 - Crosswind runway still part of future planning – FAA excluded from this ongoing EA
- Pilot Involvement
- West aircraft traffic pattern will be evaluated upon the ATCT becoming operational

Project Overview



- History of alternatives evaluation
 - Assurances made during ATCT EA to evaluate runway alternatives
- Purpose of proposed improvements
 - Double Eagle II has a limited ability to fulfill the role as a reliever airport
 - Defined need for a minimum 9,000 foot runway at the airport
 - Need to correct unsafe airport access road intersection (separate ongoing EA)

NPS Concerns Analysis was Intended to Address

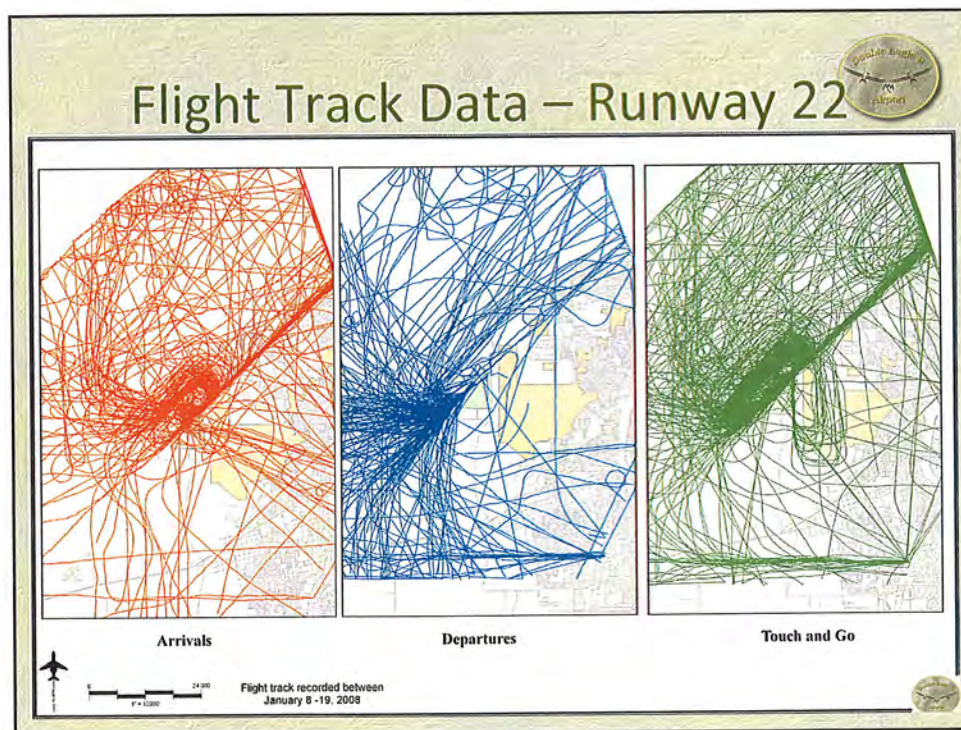
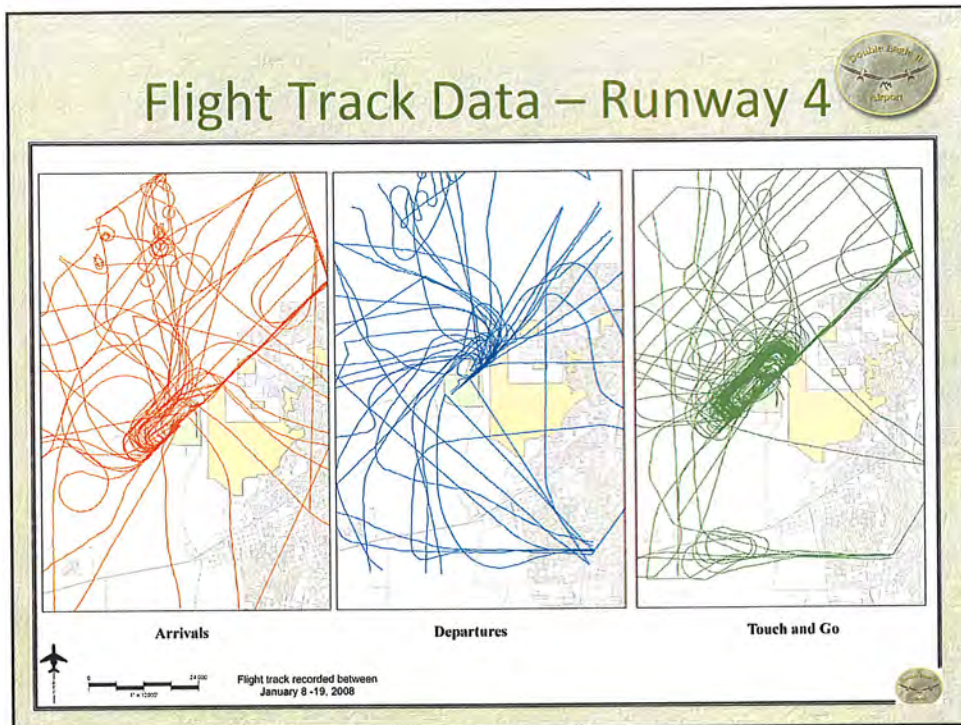


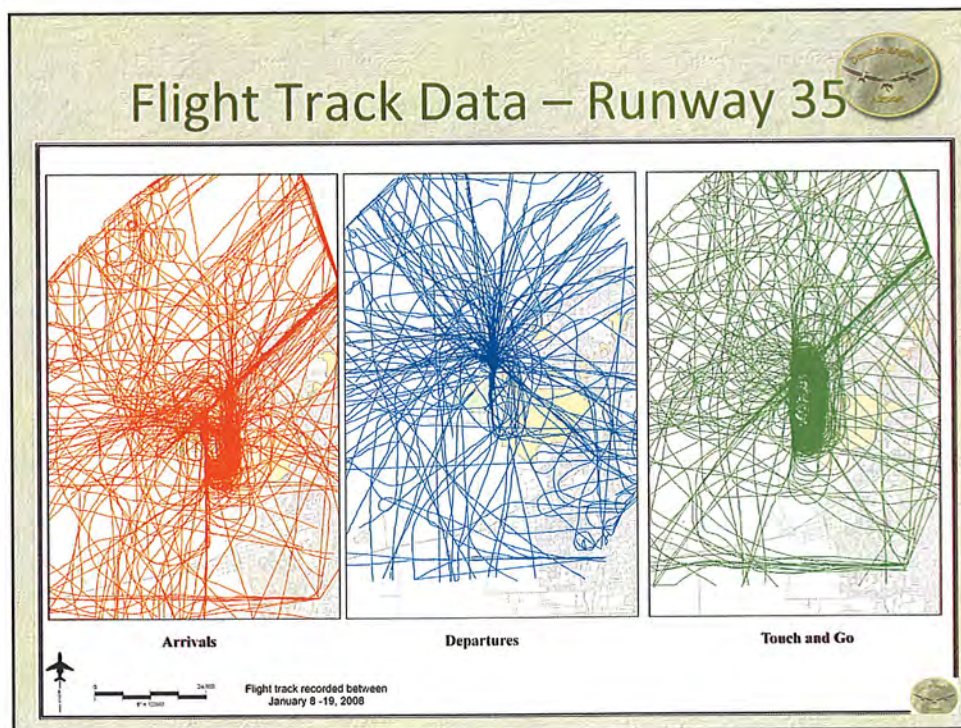
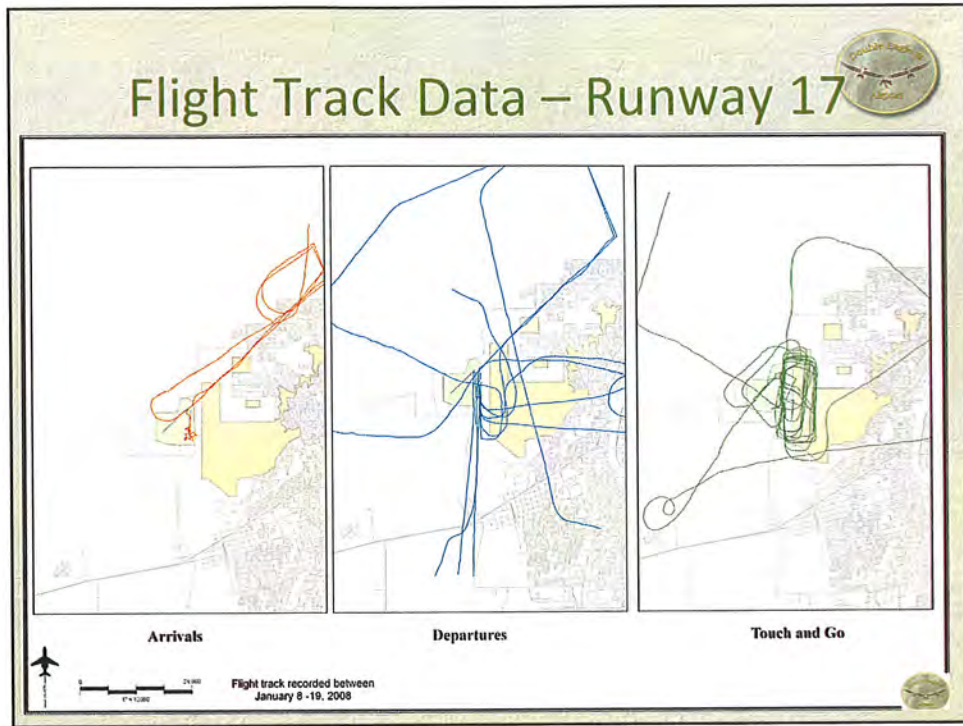
- Helicopter Overflights
 - This will be resolved through the development of helicopter operating procedures which will not require NEPA analysis.
- Fixed Wing Overflights
 - Runway 22 overflights of northern volcano and geologic window
 - Runway 17-35 training over the volcanos

Structure of Analysis



- Noise monitoring was undertaken at various points at the airport and within the monument
- Obtained, through FOIAs, three sets of flight track information to determine where aircraft are operating
- Analyzed flight track information to determine runway use
- Established flight tracks for Alternative A (Alternative B would mirror the existing condition)
- Undertook a grid point analysis to assess the noise impacts of the alternatives



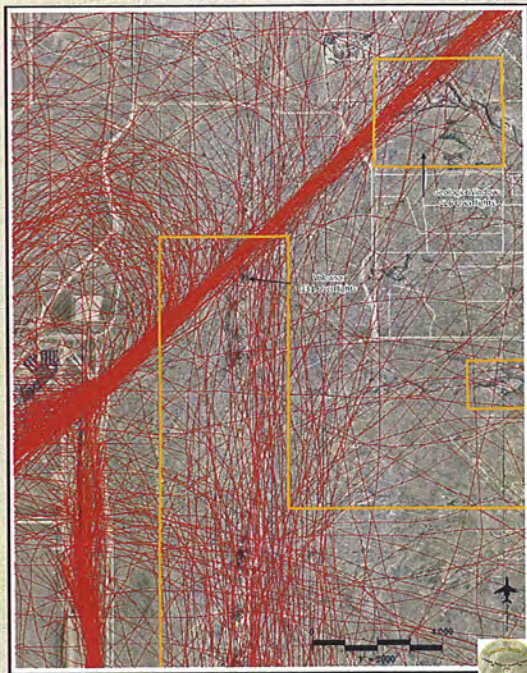


Geologic Window and Northern Volcano Overflights

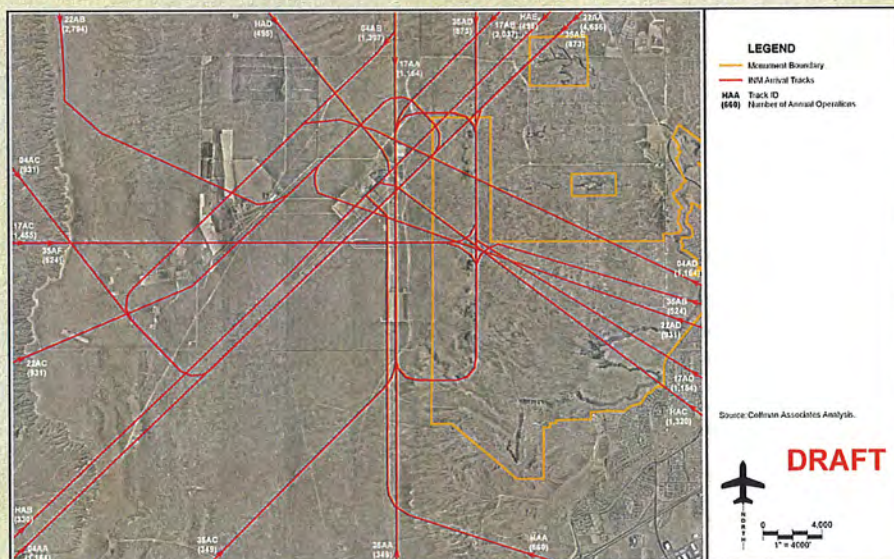
Exhibit depicts only arrivals

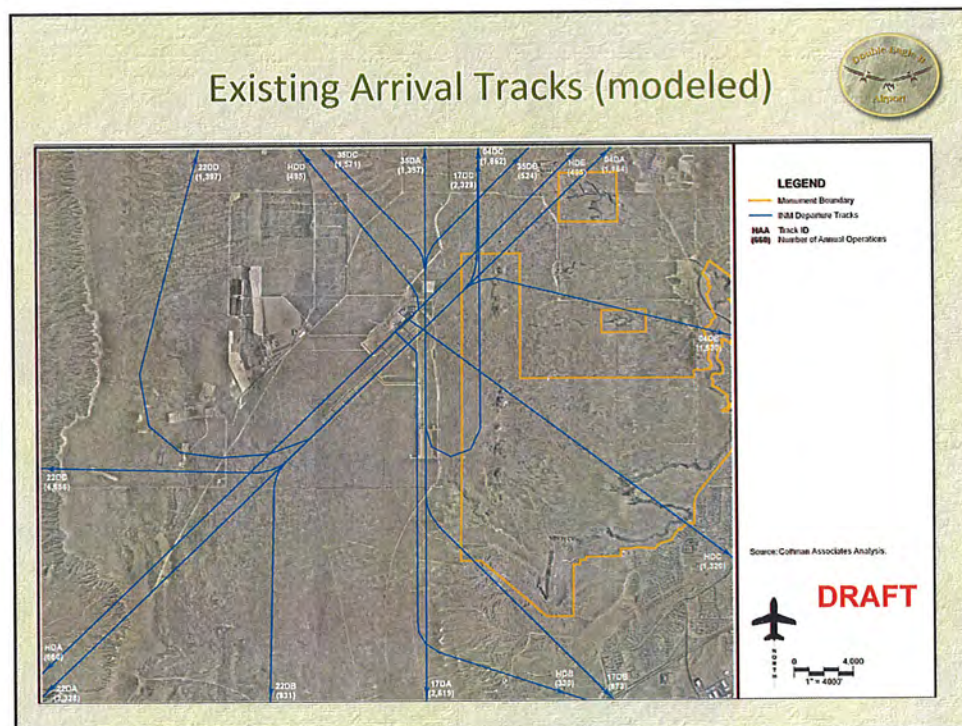
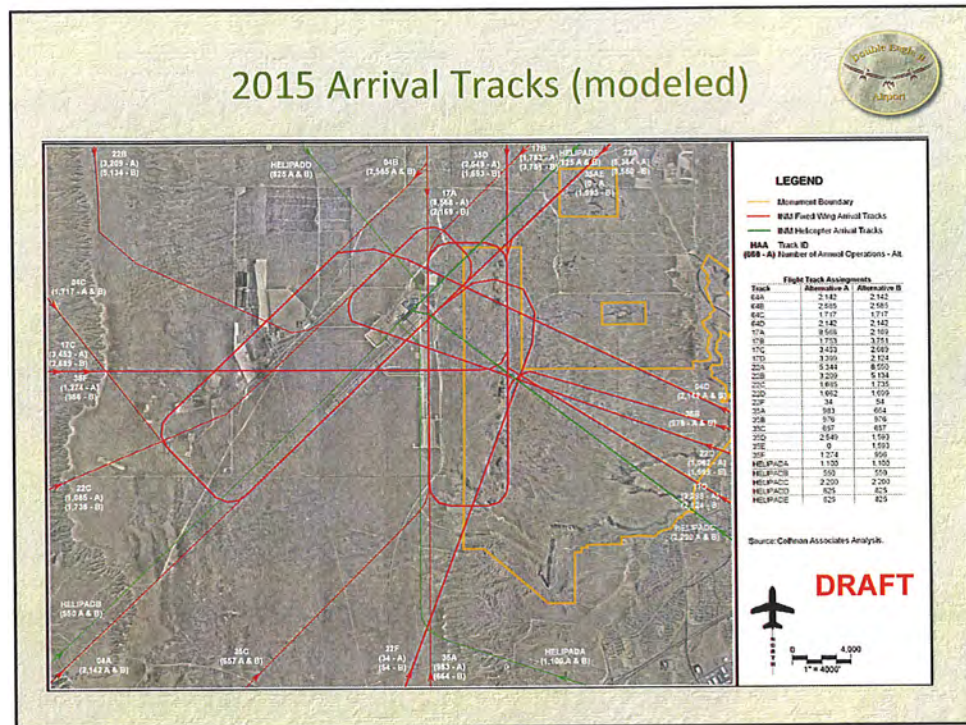
126 Overflights of the geologic window

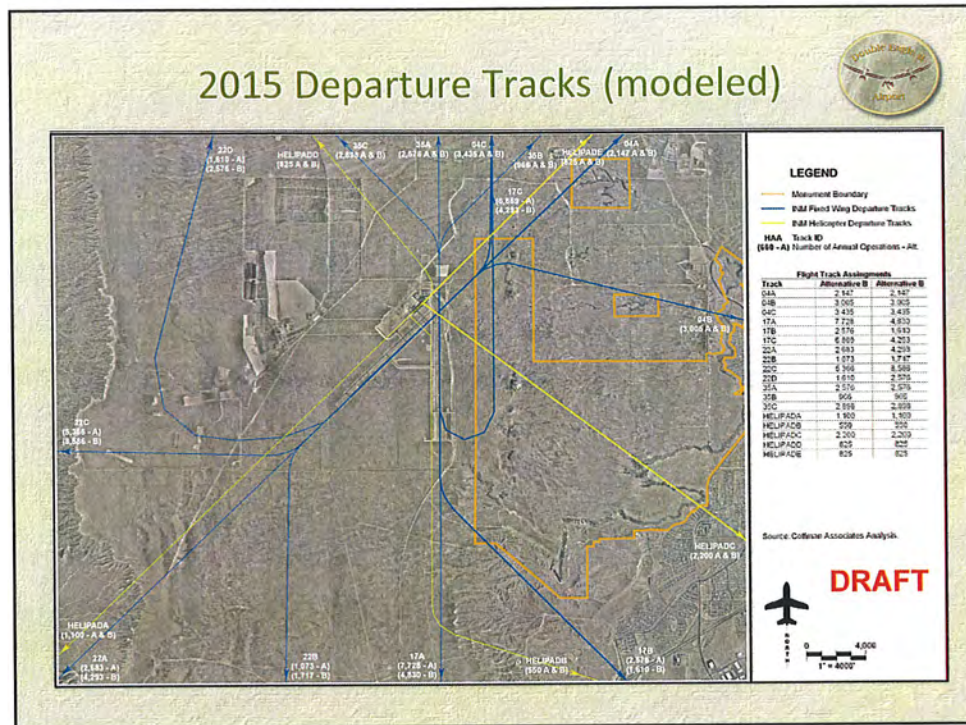
131 overflights of the northernmost volcano



Existing Arrival Tracks (modeled)

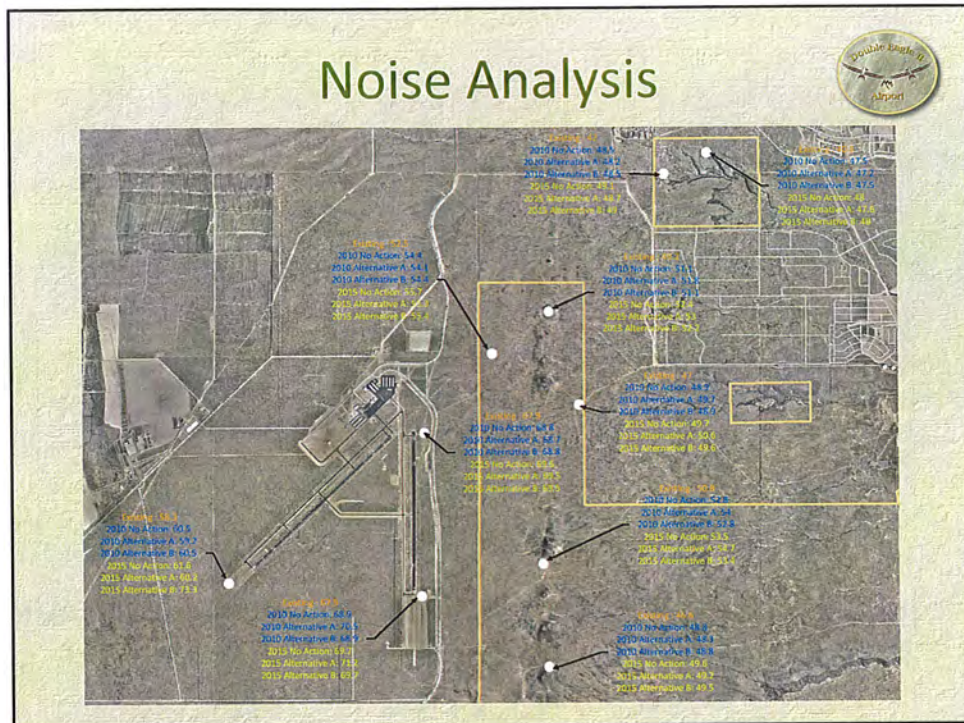






Noise Analysis

- Analysis does not include the assignment of a west traffic pattern on Runway 17-35
- Analysis indicated a slight increase in noise over the westernmost portion of the monument. With west pattern this increase would not occur.



AIRCRAFT NOISE MEASUREMENT PROGRAM

Noise measurements were taken in the vicinity of Double Eagle II Airport between June 19 and June 25, 2006. The measurement program was designed and undertaken to provide field-collected data for comparison with the computer-predicted values generated from the Integrated Noise Model (INM).

It should be noted that when comparing field measurements to computer-generated noise levels that discrepancies may exist. The 24-hour field measurements represent noise conditions for individual days, while the computer model represents the average condition for the measurement site. As a result, field-measured noise levels may be greater or less than the average condition represented by the model. These differences can be attributed to a number of variables including the number and type of aircraft operations and climatic conditions during the noise measurement period.

Information collected during the noise monitoring program includes 24-hour measurements at seven different sites for comparison with computer-generated day-night noise levels (DNL). DNL is a measure of cumulative sound energy during a 24-hour period. All noise occurring from 10:00 p.m. to 7:00 a.m. is assigned a 10 decibel (dB) penalty to account for the potentially greater annoyance caused by nighttime noise.

In addition to the cumulative noise data, information was collected for single-event measurements. This information is used as an indicator of typical dB and sound exposure levels (SEL) within the airport area.

ACOUSTICAL MEASUREMENTS

Five noise monitors were used to collect data during the noise measurement program. The instruments included three Larson Davis Model 820 monitors and two Bruel and Kjaer Model 2250 monitors. Each unit was equipped with an external microphone and a weatherproof case to protect the equipment from inclement weather.

Each unit was calibrated to assure consistency between measurements at different locations. A calibrator, with an accuracy of 0.5 decibels (dB), was used for all measurements. At the completion of each field measurement, the monitors were re-calibrated.

Logged noise data was retrieved from the monitors during routine site visits and stored on a laptop computer. The raw data from each unit is included in the analysis discussed later in this section.

Measurement Procedures

To minimize the potential for non-aircraft noise measurements, thresholds for noise levels and duration were established. These thresholds are programmed as part of the initial setup for the noise monitoring equipment. For the Larson Davis monitors, which were used on airport property, a 60 dB threshold (approximately 5 to 10 dB greater than the ambient level), was established. Additionally, a minimum event duration of five seconds was set to ensure that brief events were not logged. These two thresholds limit the single noise events logged by the noise monitor. Only those events which exceed both thresholds were noted as noise events and included as part of the raw data.

Similar thresholds were employed with the Bruel and Kjaer monitors. Because these monitors were used in areas farther from the airport, the noise level threshold was set at 50 dB due to the decreased ambient noise levels. The duration threshold for these monitors was also set at 5 seconds to eliminate the measurement of brief, single noise events. Noise events which exceeded these thresholds were recorded by the monitor and stored as audio files to be verified as part of this noise analysis.

For both monitor types, selected single events were specially retained and analyzed to consider all noise present at the site, regardless of its level, and provide hourly summations of equivalent noise levels (Leq). Also, the equipment optionally provided information on SEL values for each event which exceeded the preset threshold and duration, and distributions of decibel levels throughout the measurement period.

Weather Information

Weather during the measurement period was typical for this time of year in the Albuquerque area. High temperatures ranged between 87 and 98 degrees Fahrenheit (F) with the average for the area being 92 degrees F. Low temperatures ranged from 63 to 69 degrees F which was above the average of 61 degrees F. There was no measurable precipitation during the monitoring period; however, a trace of precipitation was noted on June 23, 2006. Weather conditions were considered adequate for aircraft using visual flight rules (VFR). Winds ranged between 9 and 17 knots with gusts ranging between 21 and 42 knots.

Aircraft Noise Measurement Sites

Noise measurements were taken at a total of seven sites, indicated on **Exhibit L1**. Three of the sites were located on airport property, and the remaining four were positioned within the Petroglyph National Monument. The sites within the National Monument were selected following consultation with the National Park Service. The purpose of these sites was to monitor overflight noise from aircraft operating in the area.

Airport Site 1 – This site was positioned near the northern end of Runway 17-35 to monitor arrival and departure noise for activity on Runway 17-35 and Runway 4-22. Measurements were taken for five days at this site. At this time of installation, light winds were noted at the site.

Airport Site 2 – A monitor was placed near the southwestern end of Runway 4-22 to measure arrival and departure activity on this runway. Measurements were taken at this site for four days. Light winds were noted during the installation of this monitor.

Airport Site 3 – Site 3 was positioned at the southern end of Runway 17-35 and measurements were taken for two days at this site. Light winds were noted at this site during installation.

Park Site 1 – This site was located on the northern side of the JA volcano within Petroglyph National Monument. Measurements were taken for a total of two days at this site. Wind noise which measured above 50 dB was noted during the installation of this monitor.

Park Site 2 – Park Site 2 was positioned on the southern slope of Vulcan Volcano within the National Monument. Measurements were taken for two days at this site. Wind noise which measured above 50 dB was noted during the installation of this monitor.

Park Site 3 – Park Site 3 was positioned east of the northern end of Runway 17-35, approximately one mile from the airport. Data for one day was recorded at this site. Light winds were noted during the installation of this monitor.

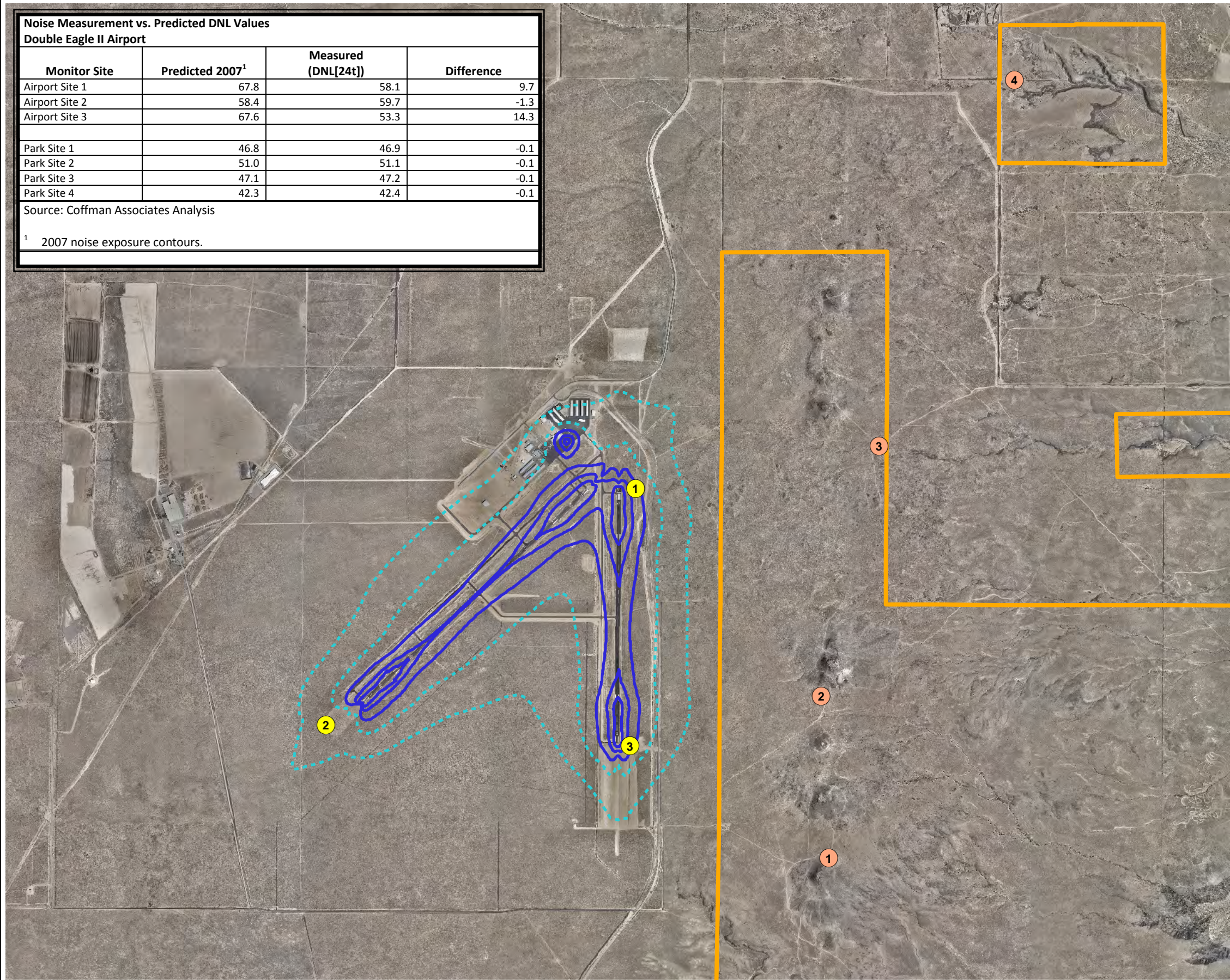
Park Site 4 – This site was aligned with Runway 4-22 and positioned approximately two and a half miles from the runway. Data for one day was recorded at this site. Light winds were noted during the installation of this monitor.

MEASUREMENT RESULTS SUMMARY

Collected noise data is summarized in the following tables. The information includes the average 24-hour Leq for each site. The Leq metric is the logarithmic average of the cumulative noise during a given time period. It is similar to the DNL metric except that no extra weight is assigned to nighttime noise.

The DNL(24) value represents the cumulative noise from all sources, including non-aviation noise. DNL(24t) is developed only from noise attributable to aircraft operations or maintenance activities such as engine run-ups.

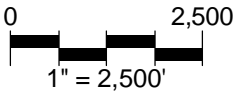
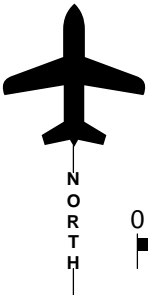
Noise Measurement vs. Predicted DNL Values Double Eagle II Airport			
Monitor Site	Predicted 2007 ¹	Measured (DNL[24t])	Difference
Airport Site 1	67.8	58.1	9.7
Airport Site 2	58.4	59.7	-1.3
Airport Site 3	67.6	53.3	14.3
Park Site 1	46.8	46.9	-0.1
Park Site 2	51.0	51.1	-0.1
Park Site 3	47.1	47.2	-0.1
Park Site 4	42.3	42.4	-0.1
Source: Coffman Associates Analysis			
¹ 2007 noise exposure contours.			



LEGEND

- Monument Boundary
- Marginal Contours
- Significant Contours
- 1 Airport Measurement Site
- 1 Park Measurement Site

Source: Coffman Associates Analysis.



As previously stated, the Bruel and Kjaer monitors used at the Petroglyph National Monument sites were programmed to save an audio recording of events above 50 dB that were more than five seconds in duration. Following the measurement period, these files were evaluated to determine which events could be positively identified as aircraft noise. Typical events that were excluded from the analysis were wind noise, emergency vehicles, and coyotes. The DNL(24t) calculations for these sites include only aircraft operations verified through the audio files.

The Larson Davis equipment used for the airport sites does not have the audio recording feature. To supplement these measurements, aircraft observations were performed to identify potential non-aviation activity that could have affected the measurements. During the observation periods, there were no noise events noted that were considered to be non-aviation related.

The DNL(24t) values calculated for each of the monitoring sites are compared to the Integrated Noise Model. The results of this comparison can be found later in this section.

L(50) values are also presented for each site. These values represent sound levels above which 50 percent of the samples were recorded.

The tables also present data on other characteristics of the noise measurements for comparison. These include:

- Maximum recorded noise level, measured in dB (Lmax);
- Maximum recorded sound exposure level SEL(max);
- Longest single event duration in seconds Max Duration(sec); and
- Number of single events above the threshold (60 dB for airport sites and 50 dB for park sites)
- Single event distribution.

A total of 2,270 events were logged during all of the monitoring periods. This includes 998 at the airport sites (those above 60 dB for more than five seconds) and 1,272 at the park sites (those above 50 dB for more than five seconds).

As shown in **Table L1**, the DNL(24t) values for Airport Site 1 ranged between 51.9 and 59.4. The logarithmic average DNL(24t) for this site is 58.1. The longest events occurred on Day 1 and Day 4, each at approximately 140 seconds. The L(max) values were consistent on Days 2-5, with a lesser value of 82 on Day 1. Day 4 was the only measurement period with SEL values over 100 db. The remaining days had similar distributions, with a majority of events between 70 and 90 dB.

TABLE L1					
Measurement Result Summary					
Double Eagle II Airport					
	Airport Site 1				
	Day 1	Day 2	Day 3	Day 4	Day 5
Measurement Dates	6/19/06 to 6/24/06				
Cumulative Data					
LEQ(24)	54.0	51.8	52.2	58.5	51.7
DNL(24)	59.4	57.1	57.6	60.4	51.9
DNL(24t)	59.4	57.1	57.6	60.4	51.9
L(50)	41.7	39.5	39.5	38.7	38.7
Single Event Data					
L(max)	82	88.7	89	88.9	88.9
SEL(max)	88.4	94.1	95.5	101.9	94.4
Max Duration (sec)	139	76	72.5	140.5	64.4
Number of Single Events above 60 dB (SEL)	164	85	72	115	74
Single Event Distribution					
SEL 60 -70-dB	19	3	4	6	11
SEL 70 - 80 dB	72	64	46	50	45
SEL 80 - 90dB	73	14	18	52	14
SEL 90 - 100 dB	0	4	4	5	4
SEL +100 dB	0	0	0	2	0

Table L2 presents the summary information for Airport Site 2. The DNL(24t) for this site ranges between 56.8 and 58.1 over the four monitoring periods. The logarithmic average DNL(24t) for this site is 59.7. The maximum duration for an event at this site is 63 seconds, logged on Day 1. The total number of events logged at this site is 286 with a high of 86 on Day 2 and a low of 46 on Day 3. The single event distribution shows that a majority of events ranged between 70 and 90 dB. There was only one event above 100 dB logged at this site. This occurred on Day 3.

TABLE L2				
Measurement Result Summary				
Double Eagle II Airport				
	Airport Site 2			
	Day 1	Day 2	Day 3	Day 4
Measurement Dates	6/19/06 to 6/22/06, 6/24/06			
Cumulative Data				
LEQ(24)	56.5	54.7	55.2	55.5
DNL(24)	58.1	57.6	57.4	56.8
DNL(24t)	58.1	57.6	57.4	56.8
L(50)	33.8	33.8	36.3	33.6
Single Event Data				
L(max)	94.6	91.2	98.9	88.7
SEL(max)	98.1	95	102.5	94.5
Max Duration (sec)	62.8	39.7	51.9	28.7
Number of Single Events above 60 dB (SEL)	73	86	46	81
Single Event Distribution				
SEL 60 - 70-dB	2	3	6	3
SEL 70 - 80 dB	14	12	20	20
SEL 80 - 90dB	48	66	16	54
SEL 90 - 100 dB	9	5	3	4
SEL +100 dB	0	0	1	0

Table L3 summarizes the noise measurement information for Airport Site 3. Three measurement periods were observed at this site. The DNL(24t) for this site ranged from a low of 49.0 to a high of 55.0 with a logarithmic average of 53.3. The maximum duration of an event logged at this site was 81 seconds, recorded on Day 2. The greatest L(max) value was recorded on Day 1 at 97.4 dB. A total of 202 events above 60 dB were logged at this site with the greatest number, 103, occurring on Day 2. As with the first two sites, a majority were between 70 and 90 dB.

TABLE L3			
Measurement Result Summary			
Double Eagle II Airport			
	Airport Site 3		
	Day 1	Day 2	Day 3
Measurement Dates	6/22/06 to 6/24/06		
Cumulative Data			
LEQ(24)	54.5	53.7	48.3
DNL(24)	55.0	53.9	49.0
DNL(24t)	55.0	53.9	49.0
L(50)	35.9	38.2	38.2
Single Event Data			
L(max)	97.4	91.2	85.2
SEL(max)	100.5	96	90.8
Max Duration (sec)	32.2	81.2	42.5
Number of Single Events above 60 dB (SEL)	60	103	39
Single Event Distribution			
SEL 60 - 70-dB	6	15	4
SEL 70 - 80 dB	18	54	17
SEL 80 - 90dB	34	30	17
SEL 90 - 100 dB	1	4	1
SEL +100 dB	1	0	0

Noise measurement information of Park Site 1 is summarized in **Table L4**. Two measurement periods were completed for this site. The DNL(24t) is 60.2 for Day 1 and 48.7 for Day 2. The logarithmic average for the two days is 57.4. A total of 652 events above 50 dB were logged for this site, most of which were measured between 60 and 70 dB. On Day 1, there were three events that exceeded 100 dB. As shown in the table, the longest event for this site, and for the entire monitoring program, was 840 seconds. The audio file associated with this measurement indicates that an aircraft was operating in the area during this time. Interference in the microphone was also noted for those recordings, which could account for a portion of the prolonged exceedance.

TABLE L4 Measurement Result Summary Double Eagle II Airport		
	Park Site 1	
	Day 1	Day 2
Measurement Dates	6/19-6/22	
Cumulative Data		
LEQ(24)	59.5	42.5
DNL(24)	60.5	48.9
DNL(24t)	60.2	48.7
L(50)	60.8	52.5
Single Event Data		
L(max)	85.3	73.9
SEL(max)	102.4	86
Max Duration (sec)	840	147
Number of Single Events above 50 dB (SEL)	316	336
Single Event Distribution		
SEL 50 -60-dB	82	130
SEL 60 -70-dB	148	178
SEL 70 - 80 dB	54	25
SEL 80 - 90dB	22	3
SEL 90 - 100 dB	7	0
SEL +100 dB	3	0

Table L5 summarizes the noise monitoring data from Park Site 2. The DNL(24t) measurements for the two monitoring periods were 48.5 and 43.0. The logarithmic average for this is 43.5. The longest event recorded at this site was 134 seconds. A total of 439 events above 50 dB were logged during the two monitoring periods. Of these, a majority were measured between 60 and 70 dB. The greatest L(max) value for this site, 97.8, was recorded on Day 1.

TABLE L5		
Measurement Result Summary		
Double Eagle II Airport		
	Park Site 2	
	Day 1	Day 2
Measurement Dates	6/19-6/21	
Cumulative Data		
LEQ(24)	47.6	42.3
DNL(24)	48.6	44.0
DNL(24t)	48.5	43.0
L(50)	52.9	52.7
Single Event Data		
L(max)	97.8	76.6
SEL(max)	92.2	85.9
Max Duration (sec)	96	134
Number of Single Events above 50 dB (SEL)	220	219
Single Event Distribution		
SEL 50 -60-dB	74	159
SEL 60 -70-dB	103	114
SEL 70 - 80 dB	36	21
SEL 80 - 90dB	5	2
SEL 90 - 100 dB	1	0
SEL +100 dB	0	0

Table L6 presents the summary results for Park Sites 3 and 4. One measurement period was completed for each of these sites. The DNL(24t) for Site 3 was 43.5 and for Site 4 it was 45.4. A total of 114 events above 50 dB were logged at Site 3 while 67 were logged at Site 4. A majority of the single events occurred between 60 and 70 dB.

TABLE L6 Measurement Result Summary Double Eagle II Airport		
	Park Site 3	Park Site 4
Measurement Dates	6/21-6/22	
Cumulative Data		
LEQ(24)	41.9	45.2
DNL(24)	43.6	45.4
DNL(24t)	43.5	45.4
L(50)	52.8	53.7
Single Event Data		
L(max)	82.0	87.7
SEL(max)	85.4	92.7
Max Duration (sec)	58	58
Number of Single Events above 50 dB (SEL)	114	67
Single Event Distribution		
SEL 50 -60-dB	50	19
SEL 60 -70-dB	44	26
SEL 70 - 80 dB	18	17
SEL 80 - 90dB	2	4
SEL 90 - 100 dB	0	1
SEL +100 dB	0	0

COMPARATIVE ANALYSIS

Exhibit L1 displays the existing condition noise contours in relation to the noise monitoring sites. The DNL(24t) values derived from the field noise measurements have been compared to the computer-modeled noise values for the same locations. In doing this, it is important to note the distinction between the two values. The computer-modeled DNL values are analogous to the climate of an area and represent the noise levels on an average day of the period under consideration. In contrast, the field measurements reflect only the noise levels on the specific days of measurement. The DNL(24t) was used for the comparison as it is a reasonable approximation of the DNL attributable to aircraft noise alone.

DNL Comparison

The measured and predicted 2008 noise exposure contours for the annual average condition are presented for each aircraft noise measurement site on **Exhibit L1** and **Table L7**. A positive number in the difference column represents a modeled value which is greater than the measured value, while a negative number in the column indicates a modeled value which is less than the measured value.

Differences between the measurements and the model can be attributed to differences in operations for the specific days measured when compared to the average day used in the model. Double Eagle II Airport does not have the capability to log all aircraft events for an exact operations count; therefore, the model is based on estimates. The runway use assumptions in the noise model are also generalized and do not account for daily changes in runway use due to prevailing wind conditions. Additionally, some of the aircraft events logged by the monitors could have been operating near Double Eagle II Airport, but may not have landed there. This would include aircraft flying near Double Eagle II Airport en route to Albuquerque International Sunport.

TABLE L7

**Noise Measurement vs. Predicted DNL Values
Double Eagle II Airport**

Monitor Site	Predicted 2007 ¹	Measured (DNL[24t])	Difference
Airport Site 1	67.8	58.1	9.7
Airport Site 2	58.4	59.7	-1.3
Airport Site 3	67.6	53.3	14.3
Park Site 1	46.8	46.9	-0.1
Park Site 2	51.0	51.1	-0.1
Park Site 3	47.1	47.2	-0.1
Park Site 4	42.3	42.4	-0.1

Source: Coffman Associates analysis

¹ 2007 noise exposure contours.



U.S. Department
of Transportation
**Federal Aviation
Administration**

Airports Division
Southwest Region
Arkansas, Louisiana,
New Mexico, Oklahoma,
Texas

2601 Meacham Blvd
Fort Worth, Texas 76137

June 8, 2009

Joseph P. Sanchez, Ph.D., Superintendent
Petroglyph National Monument
6001 Unser Blvd. NW
Albuquerque, NM 87120

Dear Dr. Sanchez,

Enclosed are two copies of the preliminary draft environmental assessment (EA) for a proposed runway extension at Double Eagle II Airport. The Federal Aviation Administration (FAA) has completed an internal review of the document, revisions have been made as necessary, and we consider it ready for your review and comment. Since the National Park Service is a cooperating agency and potential impacts to Petroglyph National Monument are identified as a primary concern in the document, we wish to incorporate your comments into the draft EA which will be made available for public review.

We respectfully request that you comment within thirty days of receiving the draft EA. The FAA has greatly appreciated the efforts of you and your staff in association with this study, and we look forward to working with you as the environmental review process moves forward.

Please feel free to contact me at telephone (817)222-5644 or email tim.tandy@faa.gov if you have any questions or concerns.

Sincerely,

Original signed by:

Tim Tandy, Environmental Specialist
Louisiana/New Mexico Airports Development Office

cc: w/o enclosure:

Mr. Jim Hinde, Planning Manager
Aviation Department, City of Albuquerque
2200 Sunport Boulevard SE
Albuquerque, NM 87106

Ms. Molly Waller, Coffmann Engineers
237 NW Blue Parkway, Suite 100
Lee's Summit, MO 64063



United States Department of the Interior

NATIONAL PARK SERVICE
INTERMOUNTAIN REGION
Petroglyph National Monument
6001 Unser Blvd., NW
Albuquerque, New Mexico 87120

In reply refer to:
L7619(PETR)

July 10, 2009

Mr. Tim Tandy
Environmental Specialist
Federal Aviation Administration
Louisiana/New Mexico Airports Development Office
2601 Meacham Blvd
Fort Worth, Texas 76137

Dear Mr. Tandy:

Thank you for the opportunity to comment on the Revised Preliminary Draft Environmental Assessment for a Proposed Runway Extension at Double Eagle II Airport. The staff from Petroglyph National Monument and from the National Park Service Natural Sounds Program has reviewed the EA and our combined comments are listed below.

Should you need additional information or have any questions regarding our comments, please contact Mike Medrano, Chief, Division of Resource Management at (505) 899-0205 ext 334 or via email at Mike_Medrano@nps.gov.

Sincerely,

/s/ Joseph P. Sánchez

Joseph P. Sánchez, Ph.D.
Superintendent

Comments on Double Eagle II Airport Draft EA
National Park Service
10 July 2009

Chapter 1

1. Page 1-2 – *1.1 Project Background* – In the first full paragraph on this page, there is reference to AWOS. I might have missed it, but I didn't see what this acronym referred to.

Chapter 2

2. Page 2-2 – *Footnote* – Third sentence from the bottom – "...which was established when the monument was included as a National Park." Should read "...included as a unit of the National Park Service."

Chapter 3

3. Page 3-7 – *3.4.2.2 Off-Airport Resources* – Throughout this description of the National Monument, there is no discussion of the wildlife species present in the park. There is discussion of wildlife within the airport study area, but we would recommend specifically mentioning wildlife at the Monument. Petroglyph National Monument personnel can provide information regarding species found in the Volcanoes Day Use area.

Chapter 4

4. Page 4-18 – *4.8.3 Alternatives Evaluation* - With regards to the grid point analysis, what was the time frame over which measurements were taken? Was it during the January 1 – 19, 2008 time period? Or was this over one day? Analyses conducted by NPS indicate that one day of data is not statistically adequate for determining ambient conditions. Sound sources can vary significantly from day-to-day, and thus we do not believe that collecting data for one day provides an accurate assessment of the existing conditions at the particular site. Our protocol is to monitor for a period of time sufficient to ensure a degree of error less than ± 3 dB.
5. Page 4-18 – *Table 4C* – Misspelling in the column heading. Should say "Grid Point Number".
6. Page 4-19 – *Alternative B* – In the paragraph following Table 4D, it says, "The dB DNL increase ranges from **1.7 dB DNL** at grid point 2 to 0.7 dB DNL increase for grid points 1, and 3 to 0.6 dB DNL increase at grid points 4, 5, 6, and 7." When looking at grid point 2, we are not seeing where the 1.7 dB is coming from. We are only seeing a range of 0.5 dB between 2010, 2015, and 2015 "Fly Friendly" for grid point 2.
7. Page 4-23 - *Analysis and Mitigation* – It is concluded that "Based on the grid point analysis it is not anticipated that either Alternative A or Alternative B will result in substantial impairment that would reduce the value of the Monument." The NPS is mandated by policy (Section 8.2.3 of the 2006 NPS Management Policies) to use natural ambient sound level as the baseline condition for impact analysis. The NPS would prefer the use of additional noise metrics (in addition to DNL) to determine impacts to park resources and values. This analysis could be supplemental to the FAA's traditional analysis using DNL and the Part 150 Land Use Compatibility guidelines. FAA Order 1050.1E states: "*Additional factors must be*

weighed in determining whether to apply the thresholds listed in Part 150 guidelines to determine the significance of noise impacts on noise sensitive areas within national parks . . . For example, Part 150 guidelines may not be sufficient for all historic sites and do not adequately address the effects of noise on the expectations and purposes of people visiting areas within a national park or national wildlife refuge where other noise is very low and a quiet setting is a generally recognized purpose and attribute.” Many of the metrics are easily calculated using INM. Examples of additional metrics include:

Metric	Description
Lmax	Peak noise exposure level, useful to identify the most acute exposure conditions.
Percent Time Audible	Percentage of time per day during which aircraft will be audible
Natural Ambient Sound Level	Sound level in the absence of human-caused noise
Time above natural ambient + 3 dBA	The amount of time per day during which aircraft noise is 3 dBA or more above natural ambient. This sound level relates to a 50% loss of listening area for humans and wildlife.
Time above natural ambient +10 dBA	The amount of time per day during which aircraft noise is 10 dBA or more above natural ambient. This sound level relates to a 90% loss of listening area for humans and wildlife.

8. Page 4-22 – *Alternative A (Proposed Action)* - It states, “the changes in noise at the Monument with implementation of Alternative A will not likely be perceivable to the human ear.” The following sentence then describes that people cannot distinguish between sounds less than 2 or 3 dB. After looking at Exhibit 4F, it seems that sound levels are increasing by about 3 or more dB when comparing existing conditions to the No Action, Alternative A, and Alternative B. Therefore, there would be changes that could be perceptible to humans.
9. Page 4-35 – *Fish, Wildlife and Plants* – Second paragraph, first sentence, should be New Mexico Department of Game and Fish, not Texas Parks and Wildlife Department.

Appendix D

10. Page D-22 – *Table P. Share of U.S. Tower Total General Aviation Operations*- What does “Scenario I” and “Scenario II” refer to? Is that referring to Alternative A and B? Should include that in the table footnote or the paragraph describing the table.

Appendix G

11. Page G-3 – *INM Input* – Might want to consider discussing one of the major limitations with INM. INM does not compute audibility in a manner that takes into account overlapping events. The only way to account for overlapping events is to use a compression algorithm. If the compression algorithm is not used, time audible (metric mentioned above) totals would be overstated. Was a compression algorithm was used?

**Double Eagle II Airport Environmental Assessment (EA)
Response to July 10, 2009 Comments from the National Park Service
Regarding Contents of Preliminary Draft EA**

Chapter 1

1. Comment noted. AWOS acronym will be described.

Chapter 2

2. Comment noted. Footnote will be revised to incorporate suggested text.

Chapter 3

3. Comment noted. Additional information will be incorporated regarding the wildlife species that are present at the park, specifically the Volcanoes Day Use area.

Chapter 4

4. The grid point analysis described in Section 4.8.3 was performed with the use of the Integrated Noise Model (INM). No field measured noise was included within the analysis.
5. Comment noted. Typographical error will be corrected.
6. The reference to 1.7 dB DNL is incorrect. The sentence will be revised as follows: "The dB DNL increase ranges from 0.7dB DNL increase for grid points 1, 2, and 3 to 0.6 dB DNL increase at gridpoints 4, 5, 6, and 7."
7. The FAA is of the opinion a supplemental noise analysis is not required for this EA for the following reasons:
 - When comparing the No Action alternative to Alternatives A and B, the difference in noise exposure is relatively small (0.6 – 0.7 dB DNL). Any analysis using additional metrics would also result in relatively small differences between the noise exposure levels.
 - The FAA is aware of the NPS's policy concerning natural ambient sound levels. If the Petroglyph National Monument was located in a rural setting and not currently subject of overflights, the FAA may agree with the NPS's general position. However, the park is located on the western boundary of the City of Albuquerque, and therefore subject to sound levels not found at other more rural locations within the National Park System. The use of "natural quiet" would not be appropriate under the National Environmental Policy Act (NEPA). NEPA calls for the various alternatives to be assessed for impacts on the future human environment. Under no future alternative circumstance, including the "No Action" alternative, does the FAA foresee the environment at the park to be devoid of any human-generated sound, including that due to aircraft overflights. It would not be an accurate representation of the future condition to use "natural quiet" as a future baseline condition at the park.
8. The discussion referenced on page 4-22 compares the Proposed Action Alternative to the No Action alternative. The Existing Condition is provided for informational purposes only. Additional text will be added to the EA to explain why the existing condition information is being provided.
9. Comment noted. Appropriate agency will be cited.

Appendix D

10. Table P in Appendix D refers to different forecast scenarios, not operational levels for the alternatives under consideration. Scenario 1 will be retitled "Constant Share Forecast" and Scenario II will be retitled "Increasing Share Forecast".

Appendix G

11. This comment would only apply if supplemental noise metrics were being utilized.