1
00:00:14,560 --> 00:00:12,010
a estar the advanced solid rocket motor

2
00:00:17,109 --> 00:00:14,570
court is essential to the continued

3
00:00:21,160 --> 00:00:17,119
launch of a space shuttle into the year

4
00:00:23,099 --> 00:00:21,170
2000 and beyond use of the redesigned

5
00:00:26,050 --> 00:00:23,109
motors in the shuttle program of the

6
00:00:30,240 --> 00:00:26,060
mid-1990s will greatly improve flight

7
00:00:35,530 --> 00:00:32,470
Stennis Space Center in Hancock County

8
00:00:37,950 --> 00:00:35,540
Mississippi has been selected as the new

9
00:00:41,020 --> 00:00:37,960
site for testing of the rocket motors

10
00:00:45,610 --> 00:00:41,030
the test facility an associated easement

11
00:00:47,469 --> 00:00:45,620
area cover over 130 9,000 acres the

12
00:00:49,869 --> 00:00:47,479
proposed test area for the advanced

13
00:00:52,420 --> 00:00:49,879

solid rocket motor is located in the

14
00:00:54,939 --> 00:00:52,430
eastern half of the fee area north of

15
00:00:57,189 --> 00:00:54,949
the access canal and east of the

16
00:00:58,539 --> 00:00:57,199
existing test stands used for the

17
00:01:02,469 --> 00:00:58,549
testing of the space shuttles main

18
00:01:04,240 --> 00:01:02,479
engines the new asrm test n will be at

19
00:01:08,350 --> 00:01:04,250
least six miles from the nearest

20
00:01:10,480 --> 00:01:08,360
community testing of the new motors is

21
00:01:13,720 --> 00:01:10,490
scheduled to begin in late nineteen

22
00:01:16,000 --> 00:01:13,730
ninety-two 8motor tests are planned for

23
00:01:19,840 --> 00:01:16,010
the first two years followed by two

24
00:01:25,330 --> 00:01:19,850
tests per year there after each test

25
00:01:27,640 --> 00:01:25,340
will last about two minutes nASA has a

26
00:01:29,260 --> 00:01:27,650
considerable database of experience in

27
00:01:32,800 --> 00:01:29,270
the testing and launching of solid

28
00:01:35,050 --> 00:01:32,810
rocket motors likewise NASA also has

29
00:01:39,580 --> 00:01:35,060
access to the experience of Department

30
00:01:45,620 --> 00:01:42,140
since nineteen sixty four nASA has

31
00:01:48,500 --> 00:01:45,630
launched 143 vehicles using solid

32
00:01:52,400 --> 00:01:48,510
propellants included in the number are

33
00:01:55,640 --> 00:01:52,410
32 space shuttle flights since 1981 from

34
00:01:57,800 --> 00:01:55,650
Kennedy Space Center employed in all

35
00:01:59,870 --> 00:01:57,810
these years nASA has seen no negative

36
00:02:02,330 --> 00:01:59,880
environmental impact of the critical

37
00:02:05,000 --> 00:02:02,340
Florida ecological system or wildlife

38
00:02:08,359 --> 00:02:05,010

habitat a habitat which includes the

39
00:02:10,840 --> 00:02:08,369
manatee bald eagle and approximately 50

40
00:02:13,610 --> 00:02:10,850
other threatened and endangered species

41
00:02:15,350 --> 00:02:13,620
likewise NASA has accomplished 22

42
00:02:18,680 --> 00:02:15,360
firings of the Space Shuttle solid

43
00:02:20,870 --> 00:02:18,690
rocket motors at a site in Utah the test

44
00:02:23,800 --> 00:02:20,880
site is just four miles from farmlands

45
00:02:26,570 --> 00:02:23,810
where crops are grown in cattle graves

46
00:02:28,610 --> 00:02:26,580
nASA has extensively monitored many

47
00:02:31,490 --> 00:02:28,620
tests with ground instrumentation and

48
00:02:34,280 --> 00:02:31,500
aircraft measurements the combustion

49
00:02:37,340 --> 00:02:34,290
byproducts ride the thermal plume up to

50
00:02:40,850 --> 00:02:37,350
a 20,000 foot altitude then dissipate

51
00:02:42,770 --> 00:02:40,860
over a very large area this experience

52
00:02:45,259 --> 00:02:42,780
coupled with advanced field certified

53
00:02:47,509 --> 00:02:45,269
computer modeling efforts provides NASA

54
00:02:49,140 --> 00:02:47,519
with the confidence to test at Stennis

55
00:02:53,520 --> 00:02:49,150
Space Center

56
00:02:56,160 --> 00:02:53,530
with an adequate buffer zone to ensure

57
00:02:59,670 --> 00:02:56,170
proper acoustical protection relating to

58
00:03:01,800 --> 00:02:59,680
test firing the asrm test and location

59
00:03:04,110 --> 00:03:01,810
was chosen to minimize noise to the

60
00:03:06,240 --> 00:03:04,120
surrounding communities testing will

61
00:03:08,640 --> 00:03:06,250
only be done under proper weather

62
00:03:11,970 --> 00:03:08,650
conditions to minimize sound effects

63
00:03:13,979 --> 00:03:11,980

related to testing a noise monitoring

64
00:03:16,860 --> 00:03:13,989
program will also be established to

65
00:03:19,649 --> 00:03:16,870
verify actual levels of noise resulting

66
00:03:21,449 --> 00:03:19,659
from test firing noise levels will be

67
00:03:23,789 --> 00:03:21,459
below those experienced during the

68
00:03:25,259 --> 00:03:23,799
earlier Saturn stage testing done at

69
00:03:28,199 --> 00:03:25,269
Stennis Space Center in the Apollo

70
00:03:32,309 --> 00:03:28,209
program public announcements will be

71
00:03:34,559 --> 00:03:32,319
made prior to all tests a portion of the

72
00:03:37,589 --> 00:03:34,569
Stennis Space Center area where the asrm

73
00:03:40,349 --> 00:03:37,599
test and will be built is defined as a

74
00:03:42,690 --> 00:03:40,359
wetlands and therefore requires a

75
00:03:45,960 --> 00:03:42,700
wetlands permit from the US Army Corps

76
00:03:48,089 --> 00:03:45,970
of Engineers as required by law this

77
00:03:50,250 --> 00:03:48,099
area will be replaced by creating

78
00:03:52,379 --> 00:03:50,260
wetlands and another area of Stennis

79
00:03:54,629 --> 00:03:52,389
Space Center in order for construction

80
00:03:56,339 --> 00:03:54,639
to start at the test site the Corps of

81
00:03:58,949 --> 00:03:56,349
Engineers must approve NASA's

82
00:04:01,890 --> 00:03:58,959
replacement wetlands plan and issue a

83
00:04:04,559 --> 00:04:01,900
permanent in addition to the wetlands

84
00:04:06,869 --> 00:04:04,569
permit an air permit must also be issued

85
00:04:10,140 --> 00:04:06,879
to NASA before construction of the test

86
00:04:11,759 --> 00:04:10,150
n can occur dr. Becky McCaleb

87
00:04:13,890 --> 00:04:11,769
Environmental Officer at Stennis Space

88
00:04:16,310 --> 00:04:13,900

Center has been involved in the

89
00:04:18,270 --> 00:04:16,320
environmental impact studies and permits

90
00:04:21,360 --> 00:04:18,280
associated with the advanced solid

91
00:04:22,710 --> 00:04:21,370
rocket motor program information on the

92
00:04:25,620 --> 00:04:22,720
project was released in the

93
00:04:27,149 --> 00:04:25,630
environmental impact statement as well

94
00:04:30,990 --> 00:04:27,159
as in public meetings with adjacent

95
00:04:33,180 --> 00:04:31,000
communities a typical test scenario as

96
00:04:36,390 --> 00:04:33,190
it will occur at Stennis Space Center is

97
00:04:38,760 --> 00:04:36,400
explained by dr. Michaela advanced solid

98
00:04:41,250 --> 00:04:38,770
rocket motors will be tested at Stennis

99
00:04:43,560 --> 00:04:41,260
Space Center using a man-made deflector

100
00:04:46,200 --> 00:04:43,570
to protect the soils or mechanically

101
00:04:50,250 --> 00:04:46,210
turn the exhaust upward the exhaust

102
00:04:53,610 --> 00:04:50,260
consisting of primarily 127 tons of

103
00:04:56,939 --> 00:04:53,620
hydrogen fluoride 212 tons of aluminum

104
00:05:00,959 --> 00:04:56,949
oxide and water vapor will be released

105
00:05:03,899 --> 00:05:00,969
in 135 seconds and rapidly rise above

106
00:05:06,810 --> 00:05:03,909
the mixing layer spanning altitudes of 1

107
00:05:08,269 --> 00:05:06,820
to 3 miles and more above the ground the

108
00:05:10,969 --> 00:05:08,279
boater burn rate characteristics

109
00:05:13,379 --> 00:05:10,979
producing exhaust 6,000 degrees

110
00:05:16,320 --> 00:05:13,389
Fahrenheit for the initial velocities

111
00:05:19,110 --> 00:05:16,330
eight times the speed of sound assuring

112
00:05:22,170 --> 00:05:19,120
dispersion at high altitudes unlike the

113
00:05:24,269 --> 00:05:22,180

exhaust from industrial smokestacks NASA

114
00:05:27,709 --> 00:05:24,279
will assure dispersion of the motor

115
00:05:30,390 --> 00:05:27,719
exhaust using both on-site and off-site

116
00:05:32,700 --> 00:05:30,400
modern meteorological monitoring

117
00:05:35,519 --> 00:05:32,710
techniques to determine atmospheric

118
00:05:37,500 --> 00:05:35,529
conditions firings will only be

119
00:05:40,469 --> 00:05:37,510
conducted when wind conditions and

120
00:05:43,050 --> 00:05:40,479
atmospheric stability fully comply with

121
00:05:45,330 --> 00:05:43,060
permit restrictions established by the

122
00:05:47,940 --> 00:05:45,340
Mississippi Bureau of pollution control

123
00:05:50,879 --> 00:05:47,950
and the US Environmental Protection

124
00:05:53,339 --> 00:05:50,889
Agency permanent restrictions will be

125
00:05:56,430 --> 00:05:53,349
developed through comprehensive computer

126
00:05:58,769 --> 00:05:56,440
analyses consideration of worker and

127
00:06:00,450 --> 00:05:58,779
public health and protection and

128
00:06:03,659 --> 00:06:00,460
maintenance of the quality of our