

X-33 Environmental Impact Statement: A Fast Track Approach

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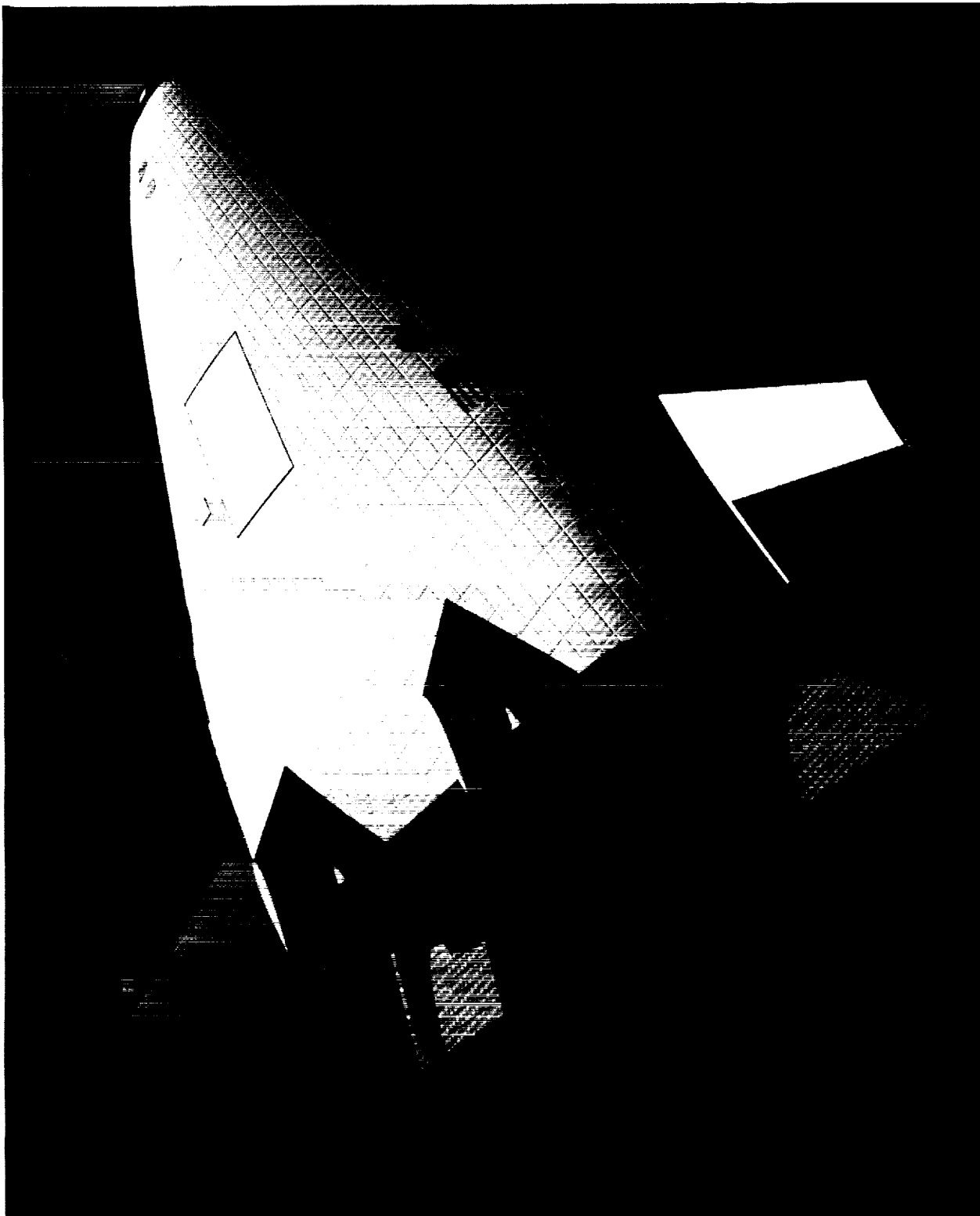
June 2, 1998

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National Aeronautics and
Space Administration

X-33 Advanced Technology Demonstrator



- **Cooperative Agreement Notice CAN 8-1**
 - **RFP: January, 1995**
 - **3 Cooperative Agreements for Phase I issued March, 1995 for 15 months:**
 - + **Lockheed Martin Skunk Works**
 - + **McDonnell-Douglas Aerospace**
 - + **Rockwell International Corp.**
- **CAN 8-1 Final Reports issued June, 1996**
- **Cooperative Agreement Notice CAN 8-3**
 - **RFP: April, 1996**
 - **1 Cooperative Agreement for Phase II issued to Lockheed Martin Skunk Works: July, 1996**
 - **Construction Startup: September 15, 1997**

Phase I

Final X-33 Programmatic Environmental Assessment:

– Vehicle and Technology Demonstration Concepts; June 1996

- **Proposed Launch Sites:** KSC, Edwards AFB, White Sands Missile Range
- **Landing Sites:** Generic
- **Special considerations:** Global impact (stratospheric) of theoretical full size vehicle based on X-33 technology
- **Decision:** Proceed with Phase II and prepare EIS to support final development, selection of launch and landing sites, construction, and flight testing

Phase II Preparation of EIS

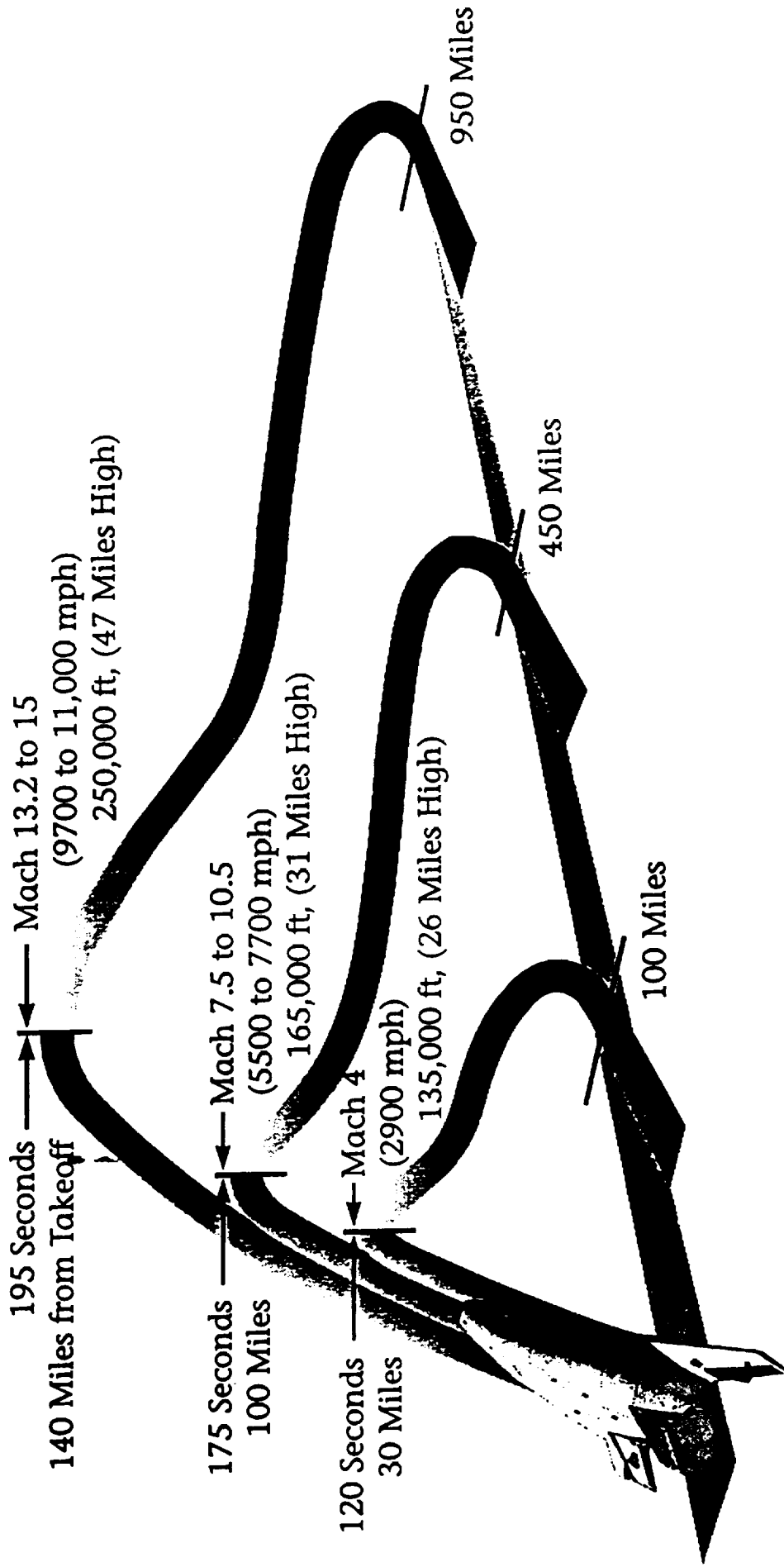
- **Notice of Intent: October 7, 1996**
- **Scoping of issues: October 1996 through January 1997**
 - 12 Public meetings: 528 total attendance
 - 80 Comment letters, e-mails, faxes, and voice messages ("800" number)
- **Issues**
 - Public safety/risk
 - Hazardous materials
 - Flight path(s)
 - Avalanche (sonic boom)
 - Wildlife impacts (sonic boom)
 - Spectator impacts
 - Disruption of airport services
 - Threatened and endangered species impacts
 - Diminishment of National Airspace
 - Noise/sonic booms
 - Accessibility to launch/landing
 - Wilderness Area impact
 - Reliability
 - Avoidance of sensitive facilities
 - Abort/emerencies
 - Benefits
 - Schedule
- **Program endorsements from public and political leaders**

- **Draft EIS: July 3, 1997**
 - 750 DEIS and 500 Executive Summaries mailed
 - 11 public meetings
 - Total attendance: 298
 - Advertisements of availability in 7 states
 - Issues/concerns/questions: essentially same as scoping
 - 53 letters, e-mails; 8 voice messages

- **Final EIS: October 3, 1997**
 - 650 FEIS and 500 Executive Summaries mailed
 - Advertisements of availability in 7 states
 - 1 comment letter received to date; 1 more expected from JSC
 - 30 day regulatory wait period expires November 3, 1997

X-33 Baseline Flight Envelope Expansion Test Plan

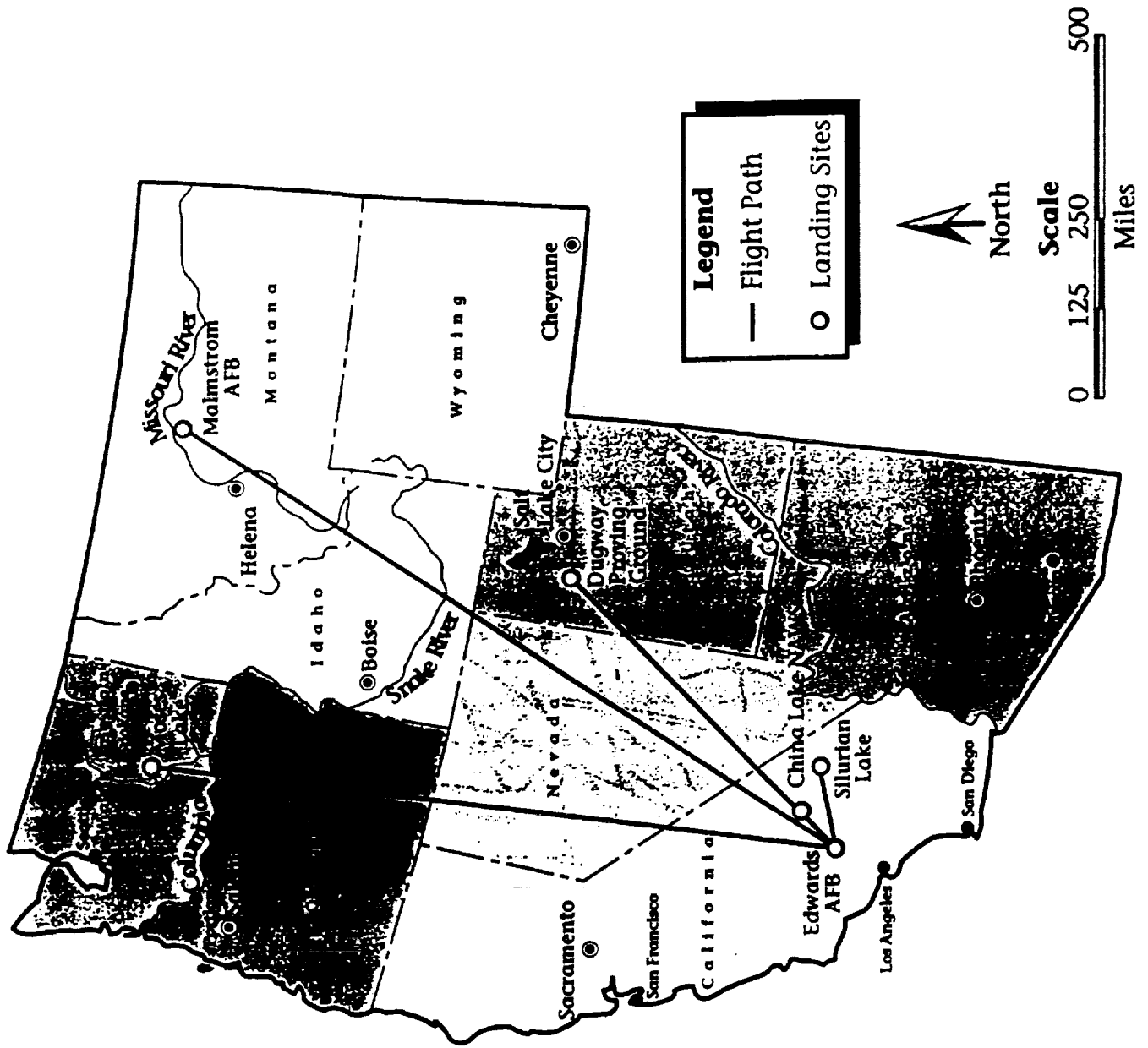
Higher—Faster—Farther



Operating Site

3 Landing Sites

X³³ Alternative Flight Operations and Landing Sites



Cooperating Agencies, Sub-Elements, and Sites

Cooperating Agency	Sub-Element	Site	Purpose
Department of Defense	U.S. Air Force	Edwards AFB	Flight operations/launch site
		Utah Test and Training Range	Trajectory(ies) to Dugway Proving Ground
		Malmstrom AFB	Long-range landing site
	U.S. Army	Dugway Proving Ground	Mid-range landing site
		Ft. Irwin ¹ (Silurian Lake)	Short-range landing site
	U.S. Navy	China Lake Naval Air Weapons Station	Short-range landing site
Department of the Interior, Bureau of Land Management	California Desert District, Barstow Resource Area	Silurian Lake	Short-range landing site
Department of Transportation	Federal Aviation Administration	National Air Space	Trajectories, or portions thereof, under 18,000 m (60,000 ft) and not within established controlled air space

¹Potential future federal manager of Silurian Lake

X³³ Techniques Contributing to Success of Fast Track EIS

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- EIS team began work early with CAN 8-1 and brought team up to speed on X-33 Program requirements and issues early
- Cooperating Agencies agreed to review EIS products on NASA schedule, and NASA did not extend invitation to sign concurrence of release of EIS major documents or the Record of Decision (ROD)
- Cooperating Agencies subsequently issued their own RODs and adopted NASA EIS
- EIS team maintained intact from EA through EIS
- EIS team prepared majority of documents in-house with limited outside contracting; therefore, no time was required for a competitive procurement process
- Detailed project scheduling

continued

- EIS team personally briefed key reviewers on draft documents and conducted resolution of cooperating agency comments quickly in face-to-face meetings in Washington, D.C.
- Used the following services extensively: Videoteleconferencing, e-mail, fax, Fed Ex, credit cards
- Compressed public meeting schedules
- Used rapid turn around GSA printers (premium cost)
- COMMITMENT TO SCHEDULE BY ALL INVOLVED PARTIES INCLUDING THE COOPERATING AGENCIES: THE MOST IMPORTANT FACTOR!**