In the fall of 1992, the U.S. Congress passed, and President Bush signed, the Hatfield/Exon/Mitchell amendment (Section 507) to the FY 1993 Energy and Water Development Appropriations Act prohibiting all U.S. nuclear tests before July 1, 1993. The legislation stipulates that on or after July 1, 1993, a limited number of safety and reliability tests are allowed through September 30, 1996, at which point all U.S. nuclear tests are banned. However, if a foreign state tests after that date the ban on U.S. testing is lifted. (U)

The legislation also requires the President to submit a report to Congress not later than March 1 of each year, beginning in 1993, that includes, inter alia, (1) a schedule for resuming the Nuclear Testing Talks with Russia, (2) a plan for achieving a Comprehensive Test Ban (CTB) on or before September 30, 1996, and (3) a schedule for conducting nuclear tests to incorporate modern safety features into the remaining weapons stockpile. Testing can resume on or after July 1, 1993, only if the President has submitted this report and 90 days have elapsed without Congress passing a Joint Resolution of disapproval. (U)

On January 19, the Bush administration submitted a report on nuclear testing to Congress. However, the report did not contain a schedule for resuming the nuclear testing talks with Russia, a plan for achieving a CTB by 1996, or a schedule for conducting nuclear tests to incorporate modern safety features into the remaining stockpile. On February 12, President Clinton informed Congress that this report did not comply with the substantial

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majority of the requirements of this legislation, and therefore has no bearing on the provisions contained in the legislation that prescribe the conditions upon which a limited program of U.S. nuclear testing could be resumed on or after July 1, 1993. The President supports the Hatfield/Exon/Mitchell amendment and the limitations and requirements contained therein. He has, therefore, stated his intention to submit his own report pursuant to Section 507 at an early date.

This Policy Review Directive (PRD) requires a comprehensive examination of the political, military, technical, diplomatic, and verification questions associated with negotiations to achieve a CTB. The PRD also directs the Interagency Working Group to identify a limited program of U.S. nuclear testing consistent with the provisions of the Hatfield/Exon/Mitchell amendment. Upon completion of this review, the Administration will submit its Section 507 report to Congress.

PART I: ASSESSMENT

A. CTB Negotiating Issues

1. What is the current status of nuclear testing by Russia, China, France, and the UK?

   - Which of these states are currently observing nuclear testing moratoria? What would be their attitude towards extending (or enacting) moratoria?

   - Which nuclear weapon states are likely to extend their moratoria without reference to U.S. actions or those of other nuclear weapon states?

   - Which of these states would support negotiating and concluding a CTB? What kind of permitted experiments would they seek?

   - How would a moratorium -- and a CTB -- affect the nuclear weapons programs of these states and the threat Russian and Chinese programs pose to the U.S.?
2. How would a CTB affect undeclared nuclear weapons programs in the Middle East and South Asia?
   - What would be the attitudes of states with such programs towards negotiating and concluding a CTB?
   - Would attainment of a CTB help obtain the compliance of such states with international norms, including adherence to the Nuclear Non-Proliferation Treaty (NPT) as non-nuclear weapons states and compliance with the Treaty, especially Article II? \( \text{(S)} \)

3. What would be the attitude of the non-nuclear weapons states towards negotiating and concluding a CTB? \( \text{(S)} \)

4. Would other states be willing to agree to a CTB by September 30, 1996? \( \text{(S)} \)

5. Would extension of the U.S. moratorium facilitate or hamper the CTB negotiations? \( \text{(S)} \)

6. How would a CTB affect U.S. allies that rely on the U.S. nuclear deterrent? \( \text{(S)} \)

7. How important is progress toward or attainment of a CTB for U.S. efforts to extend indefinitely the NPT at the Extension Conference in 1995? \( \text{(S)} \)

8. What are current and projected U.S. capabilities for monitoring a CTB? How will these be affected by pending resource decisions? What U.S. programs that are currently not in the budget or are underfunded could provide improved verification if adequately funded? \( \text{(S)} \)

9. What level of testing will be detectable even with the improvements cited? \( \text{(S)} \)

B. U.S. Nuclear Testing Issues.

1. What warheads should the U.S. retain into the 21st Century assuming (a) full implementation of START I and II, and (b) failure to implement START I and II? \( \text{(S)} \)
2. What will be the effect on overall stockpile safety if the scheduled reductions under START I/II are implemented?

3. What safety features are incorporated in these warheads?

4. How safe are existing nuclear weapons designs?

5. What safety improvements were recommended in 1991 by the Drell Commission?

6. What would be the cost and impact on military capabilities associated with incorporating all Drell Commission improvements in all weapons in the residual U.S. inventory? If pit manufacturing were needed, how would it be done and at what cost?

7. What percentage improvement in safety would result from these modifications?

8. How would our level of confidence in the reliability of the modified designs compare with our level of confidence in the reliability of existing designs?

9. How long would it take to make the Drell Commission modifications?

10. How many nuclear tests of each modified design would be required to verify its effectiveness and design specifications in production models, assuming: no decrease in permitted level of confidence; a decrease in permitted level of confidence?

11. How long would it take to conduct these verifying tests?

12. What nuclear tests does Hatfield/Exon/Mitchell permit?

13. Once these tests were completed and all U.S. nuclear testing ceased for the indefinite future, what would be the effect of a CTB on the U.S. nuclear weapons program (including the nuclear weapons labs, scientific/engineering expertise, and the Nevada test site) and our ability to resume testing if our national security requirements change in the future?
14. What would be the effect of a CTB on our nuclear deterrent? 

15. How will the performance of our stockpile be certified under a CTB, and with what level of confidence? 

16. Based on previous experience, what sort of reliability problems can we expect after (a) 10 years, (b) 20 years, and (c) 30 years after cessation? 

17. What techniques could we employ to maintain confidence that the stockpile is safe and reliable without further testing? To what extent could improvements in computer modeling and simulator technology improve our level of confidence? 

18. How might reliability problems be corrected under a CTB? 

19. What are the requirements of the Test Ban Readiness Program and how do they compare to Hatfield/Exxon/Mitchell? 

PART II: POLICY OPTIONS AND RECOMMENDATIONS

In each area below, analyze the listed options and make appropriate recommendations.

A. CTB Negotiating Options

1. With whom do we negotiate, and in what forum?
   - Options for participants should include:
     - the declared nuclear powers or some subset thereof;
     - the non-declared nuclear weapons states; and
     - the non-nuclear states.
   - Options for fora should include:
     - a five power conference among the declared nuclear powers (or subset thereof); and
multilateral talks, either in the CD or as part of an LTBT amendment conference or a separate multilateral forum.

- Phased approaches should also be considered. For example:
  - the LTBT amendment conference could be reconvened to endorse the goal of a CTB, and then refer the problem to the declared nuclear powers and/or the CD; or
  - the declared nuclear powers could begin negotiations, and at some point, break off discrete aspects of the problem to the CD, or bring an amendment to the LTBT conference for approval.

2. What limitations, if any, would be placed on foreign nuclear testing before EIF?

- Options should include:
  - placing TTBT/PNET yield limits on France and China; and
  - placing limits on the number and purpose of nuclear tests of all nuclear states.

- Options should consider what verification provisions would be required during this interim period.

3. What should be the U.S. standard for verification of a CTB, and what specific verification provisions are required to monitor compliance?

- Options for monitoring compliance should include:
  - on-site challenge inspections; and
  - the establishment of seismic stations within parties' territories.

- Who has access to information, either through these measures or national technical means, also should be addressed.
4. Should the lower end of the CTB be limited to what we can verify? (S)

5. What should be the duration of the treaty? If not indefinite, what would be the process for renewal? Specifically, should renewal require a positive act by the Parties? (S)

6. What sanctions, if any, should be applied to states that refuse to join a CTB or violate its provisions? Should the CTB Treaty itself deal with sanctions or should that be left as a separate issue? (S)

7. Should the U.S. observe a CTB if one or more nuclear weapons states refuse to join and/or continue testing? Does it matter which states continue testing? (S)

8. What should our strategy be to ensure that our approach to the negotiations most effectively promotes U.S. nonproliferation goals, including extending the NPT indefinitely? Specific attention should be given to timing our CTB efforts in light of the 1995 Extension Conference. (S)

B. U.S. Nuclear Testing

1. What should be the U.S. test program, consistent with the provisions of Hatfield/Exon/Mitchell, to support the nuclear stockpile into the 21st century? Specifically, identify the number, type and cost of tests, and the time, required to:

   (a) incorporate modern safety improvements into the remaining stockpile; and

   (b) ensure we can retain a safe and reliable stockpile without further testing. (S)

2. What "nuclear" experiments, if any, should be permitted after entry into force? (S)

3. Should there be any provisions for infrequent testing to deal with urgent safety problems after entry into force? (S)
4. How should we define a "nuclear" test in the context of a CTB?

5. What safeguard programs can/should be undertaken to maintain the physics competence of the U.S. nuclear weapon design community under a CTB?

PART III: TASKINGS

This review should be conducted by the Interagency Working Group on Arms Control, under the chairmanship of the Senior Director for Defense Policy and Arms Control, National Security Council and completed by March 29, 1993.

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