Phys 280 RE3v1 rubric: **No hard copy submitted: -5 No writer’s memo: -10 RE3v1 submitted late: -15**

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| **Features**: | **Description:** | **Range**: | **Comments on student paper for each feature (noting problems and strengths)**: |
| **Coverage of issues and information** | Includes the following:1. A brief summary.
2. An introductory paragraph that describes some of the most important nuclear-explosive nuclides.
3. A paragraph that (a) lists the isotope requirements for making a uranium weapon, (b) lists the technologies currently available to produce uranium that meets these requirements, and (c) notes and describes the particular technology that is currently favored.
4. A paragraph that describes the simplest way to create a nuclear explosion using weapons-grade uranium.
5. A paragraph that lists the usually quoted isotope requirements for making a plutonium weapon and describes the technologies used to produce plutonium that meets these requirements.
6. A paragraph that describes how to create a nuclear explosion using weapons-grade plutonium.
7. A paragraph that explains why the production method that is optimal for producing weapons-grade plutonium is incompatible with efficient power generation.
8. A paragraph that describes why it is more difficult to make a bomb using reactor-grade plutonium than using weapons-grade plutonium. Indicate whether it is possible to create a nuclear explosion using reactor-grade plutonium.
9. A final paragraph that explains briefly why restricting the availability of nuclear explosive nuclides is the most effective way to prevent the spread of nuclear weapons.
 | 30%**High****Mid****Low** |  |
| **Precise and accurate use of concepts** | Course concepts from lecture and readings are employed clearly, accurately, and with a sufficient level of detail (i.e. quantified) in service of the above objectives. | 15%**High****Mid****Low** |  |
| **Explanation & argument** | Rationale for arguments (particularly regarding sections 3c, 4, 7, 8, and 9) is clear and convincing. | 15%**High****Mid****Low** |  |
| **Professional style** | Geared toward college-educated member of congress. Congruent with Congressional Research Service report style. Language (word choice, sentence structure, flow of information etc.) is precise and straightforward, attending to:Concision Clarity BrevityProfessional toneOrganization Comprehensive and thoughtful use of sources (need all three). - Source info clearly cited. - Uses a mixture of quotation, paraphrase, and summary. | 10%**High****Mid****Low** |  |
| **Conformity to conventions** | 3-4 pagesTitle and section headings specified in promptHeader and date in correct format Page numbers12-point Times New Roman font throughout (including page numbers)1.25" side margins and 1" top margins and .5" bottom margins.Citation practices specified in prompt.Key terms bolded in first use(check = all correct, x = some mistakes (-5))\*\*If you can't find the error, come to office hours! | 10%**High****Low** |  |
| **Copy editing and use of standard language** | Grammar and mechanics are edited for correctness and legibility. Perfect polish is not necessary in a first draft, but out of respect for your reader, you should make some effort to make the draft an easy read. | 5%**High****Low** |  |
| **Thoughtful peer response** |  | 15% | **Note: The score marked by your TA does not yet include these points.** |
| **Overall Comments:** |