

Abandoned Fallout Bunker (solution)

by Ong Kah Kien

The word “Fallout” in the puzzle title, and the words “vault (boy)” and “radioactivity” in the flavortext clue the [Fallout video game series](#). The given images are 10 of the [in-game perks from Fallout 4](#), featuring Vault Boy, the icon of Fallout. These perk images can be seen in the [Vault-Tec perk poster](#), as well as in the perk chart and perks screens on the in-game device Pip-Boy.

The 10 perks are shown in alphabetical name order, and each of them has a corresponding in-game attribute (with the acronym SPECIAL) and a level from 1-10 (hinted by the word “levels” in the flavortext). This corresponds to the given 7x10 table of “SPECIAL” element codes, which also resembles the perk poster. Extracting the 10 bigrams matching those cells in order gives the clue phrase “PRINTER’S DEVILRY CLUES”, and the remaining codes in table order read as confirmation to “DISREGARD UNUSED CODES”. This hints that the 10 perk names can be solved as [Printer’s Devilry](#) clues, with a string of letters to be inserted into each clue to form another meaningful phrase.

Continuing the theme of radioactivity for this puzzle, the next instruction asks solvers to find the original unstable isotopes and the emitted alpha-particles, with a list of observed gamma rays (letter strings) provided. The aha is that the metaphor of gamma decay process is being used here for the Printer’s Devilry clues, which are like the final ground state atoms. And the missing string of letters are like the emitted gamma rays (two strings of letters each, with the alpha-particle sandwiched in-between) and alpha-particles (a single letter) from the original unstable isotope (the undevilled clues). As confirmation, the 10 given reference phrases at the end match the undevilled clues, and also provide the final ordering for the extracted alpha-particles. The table below summarizes, in matching given references order, the perk names, undevilled clues, matching gamma rays and extracted alpha-particles.

Matching Reference In Given Order	Unstable Isotope (Matching Phrase)	Gamma Ray 1	Alpha Particle	Gamma Ray 2	Ground State (Perk Name)
Fortnite Battle Pass skin customized green	GHOUL TROOPER TOONA FISH	TROO	P	ERTOONAF	GHOULISH (E9)
Server	BANQUET WORKER	QUETW	O	R	CRITICAL BANKER (L7)
Morgan Freeman	BLACK, WIDELY-KNOWN FELLOW	ELYKNOWNFE	L	L	BLACK WIDOW (C2)
Ganges	LIFE-GIVING RIVER	IV	I	NGR	LIFEGIVER (E3)
Glenda Chong	NEWS TONIGHT PERSON	EW	S	TON	NIGHT PERSON (P6)
Socratic-questioning students	BETTER CRITICAL THINKERS	T	H	INKER	BETTER CRITICALS (L6)
Photo of Joe Black	GRIM REAPER’S SILVER PRINT	I	L	VER	GRIM REAPER’S SPRINT (L8)

Matching Reference In Given Order	Unstable Isotope (Matching Phrase)	Gamma Ray 1	Alpha Particle	Gamma Ray 2	Ground State (Perk Name)
Julianne Moore	CLARICE IN HANNIBAL	L	A	RICEINH	CANNIBAL (E8)
Keep your free throws in	MISHEARD IN ENTER SANDMAN	HEAR	D	INEN	MISTER SANDMAN (A4)
Juanita Hall	BLOODY MARY ACTRESS	AR	Y	ACTR	BLOODY MESS (L3)

The 10 extracted alpha-particles, in order of the given reference phrases at the end, gives the answer for this puzzle **POLISH LADY**. This answer is a reference to Marie Skłodowska-Curie, who co-discovered radioactivity.

Constructor's notes:

I took on the task of writing a puzzle for this answer as it appeared to be one of the harder ones on paper to come up with a fitting theme that is also matching to the dystopian or apocalyptic theme of Inside Out. Fortunately, I remembered that Marie Skłodowska-Curie identified with her Polish roots, and the reference could form a basis for a puzzle themed around radioactivity and nuclear holocaust. The Fallout reference was a fitting inclusion as it was the iconic video game series in this genre, and aptly clued by the puzzle title. Similarly, Vault-Boy being a recognizable icon for Fallout, provided the basis for the image identification portion, as well as some gory imagery to strengthen the overall feel of Inside Out. The choice of using Printer's Devilry as a metaphor for gamma decay came somewhat by accident while exploring different ways of using the perk names. Over many weeks of trial and error, I had noticed that the names were sometimes oddly constructed, and could potentially yield other meaningful phrases with the Printer's Devilry technique. And once I managed to confirm a few good ones, it was just a matter of finding the rest, as I wasn't constrained by the extraction from SPECIAL and the levels.