Table 3.1.1-1. Flight GPHS Fuel Composition and Characteristics at BOM*

	F-2 RTG	F-6 RTG	F-7 RTG
^{238}Pu Weight (g)	7,693.695	7,774.060	7,756.398
^{239}Pu Weight (g)	1,426.545	1,447.791	1,441.775
^{240}Pu Weight (g)	199.873	212.380	202.623
^{241}Pu Weight (g)	20.236	20.754	20.540
^{242}Pu Weight (g)	11.836	14.134	12.534
^{236}Pu Weight (g)	1.07×10^{-4}	1.14×10^{-4}	1.13×10^{-4}
Total Pu Weight (g)	9,352.185	9,469.119	9,433.869
Other Actinides (g)	235.073	166.955	184.739
Impurities (g)	14.456	15.538	14.263
Oxygen (g)	1,275.940	1,243.133	1,263.327
Total Fuel (g)	10,877.654	10,894.745	10,896.198
Pu-238/Total Pu (%)	82.266	82.099	82.219
Avg. Pellet Weight (g)	151.078	151.316	151.336
Heat Output (Wt)	4,368.06	4,413.78	4,403.68
Avg. Pellet Heat (Wt)	60.668	61.302	61.162
Avg. Pellet Density (g/cc)	9.832	9.936	9.895
Activity (Curies)	133,934	135,368	135,040

*BOM - Beginning of Mission, Launch date of 15 October 1997

3.1.1.2 Fueled Clad (FC)

Each fuel pellet within a GPHS module is individually encapsulated in a welded iridium alloy (DOP-26) clad which has a minimum wall thickness of 0.055 cm. The clad consists of an iridium alloy shield cup and an iridium alloy vent cup. The DOP-26 alloy is capable of resisting oxidation in a post-impact environment while also being chemically compatible with the fuel and graphitic components during high temperature operation and postulated accident environments.

The fueled clad is designed with an iridium frit vent that permits release of helium gas produced by the decay of the Pu-238 fuel without releasing fuel particulates. The FC also contains a decontamination cover which is welded over the FC vent hole to permit decontamination after encapsulation welding. A weld shield is located inside the FC to