



Missile site radar at Safeguard near Grand Forks, N. D., is housed in 75-ft.-high pyramid of reinforced concrete. Beneath the pyramid, a 230-ft. square building houses the data processing equipment underground. Nearby are an underground power plant and administrative support facilities. Note the radar face mounted in the pyramid. Radar antennas face the four points of the compass and phase shifters electronically steer the radar beams for detection and tracking of hostile reentry vehicles. Equipment within the MSR is isolated and designed to move 4-9 in. on shock mountings to

avoid damage in an attack. Six generator modules used for power are Cooper-Bessemer natural gas/diesel dual fuel turbo-charged engines with 16 cylinders, 15.5-in. bore and 22-in. stroke. Operating at 360 rpm., they develop 5,000 hp. Fuel oil tanks have a 30-day capacity. In the foreground are the co-located McDonnell Douglas Spartan/Martin Marietta Sprint missile fields. The larger Spartan missiles have a radar antenna pedestal at each launch cell for communication with the MSR. Once the missile is aloft and in the radar's beam, commands are passed directly to it.

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