where there also are animal pens which probably are guard dog kennels. 2

Rail Facilities

Each of the SOCs is served by extensive rail facilities having from nine to 12 spur tracks or sidings. One spur leads to a locomotive shed, indicating that at least one switch locomotive is probably always present. Rail car population has varied from 18 to 63 cars, most of which are 78 feet long. 4

One rail siding at each SOC passes through a bridge crane, which is used as a rail-to-road transfer point. A road also passes through the bridge crane, and a platform runs between it and the rail spur. The bridge cranes are located at the SOCs themselves, except in the case of Berezovka and Chebsara, whose rail facilities are 13 nautical miles and 7.5 nautical miles away, respectively. At Berezovka, Malin, Zhakovka, and Mikhaylovka, the bridge cranes are in the operations areas. During transloading operations at all of the on-site rail facilities, curtains that can be closed at each end of the bridge crane provide ground-level visual security. A high, solid fence furnishes ground-level visual security for the rail facilities serving Berezovka and Chebsara. 3

transloading operations at a number of the SOCs, and during such operations a 78-foot rail car, with a platform extended from one end, typically is in the bridge crane enclosure. Objects being transloaded have been too small for accurate measurement, but in no instance have they exceeded 26 feet in any dimension. 1 2 5

THE SOCs AS NUCLEAR WEAPON STOCKPILE SITES

Of all Soviet installations, the SOCs show the most similarity to national nuclear weapon storage sites. First of all, the over-all layout of the SOCs more closely resembles the layout of the national nuclear weapon stockpile sites than that of any other type of Soviet installation. 6-15 (Figure 4) The resemblance is so close, in fact, that for a number of years after their discovery, Berezovka, Golovchino, Bulyzhino and Chebsara were classified as national stockpile sites. 16 The remoteness of the SOCs, their heavy security and their internal division into separately secured support and operations areas are features typical of national nuclear stockpile sites. So is the combination of high-quality civilian housing and military housing with schools, hospitals and other facilities that make the SOCs self-sufficient.

The SOCs also resemble the national stockpile sites in the layout and security of their operations areas. Like the national sites, the SOCs tend to make use of terrain features, where possible, for hardening and physical concealment of the storage bunkers, and they augment this natural protection with heavy earth covering and fencing for each bunker. 3

The consistency in the kinds of bunkers found at the four different types or "generations" of SOCs and the evolution of the generations are not typical of the national stockpile sites. They are typical, however, of operational nuclear storage and handling facilities built at airfields for the Soviet Long Range Air Force, Tactical Air Force and Naval Air Force, at medium and intermediate range missile launch facilities, 17-19 and, to a certain extent, at tactical surface-to-surface missile support facilities. 20 Most of the SOCs were completed

*At about half of the national sites, use of the terrain has been carried even farther and vaults rather than bunkers have been dug back into the hillsides. Like the bunkers, most but not all vaults have entrance buildings.