The M139 bomblets were then removed by hand and placed on the punch and drain machine conveyor. The inert parts were transferred to the decontamination furnace. The bomblets were punched by one of two parallel machines and the GB was allowed to drain from the bomblets into a collection tank. The drained bomblets were rinsed with water and transferred to the rotary kiln deactivation furnace where the explosives decomposed. The kiln was similar to the one used for the M125 bomblets, but operated at a lower temperature and a longer residence time (316°C for 30 minutes as compared to 677°C for 12 minutes). The bomblets were discharged onto conveyors which delivered them to the decontamination furnace. The decontamination furnace was different than the one used for the M34 Cluster Bombs and was used to thermally treat all the components and packing material of the Honest John warhead. The decontamination furnace consisted of two compartments: (1) the melting compartment which was operated at 816°C and was used to melt the aluminum bodies of the M139 bomblets; and (2) the holding compartment which was operated in excess of 650°C and was equipped with a pouring spout which was periodically opened to allow the molten aluminum to flow into molds. The decontamination furnace was also used to pyrolyze the silicone and plastic components of the warhead, as well as thermally decontaminate warhead components made of ferrous alloy.

g. Problems were experienced initially with GB emissions from the spray dryer in excess of the allowable stack concentration (ASC) of 0.0003 mg/m^3. The stack analyses were performed with the enzymatic detection method and it was not certain if the problem was purely analytical in nature or if GB was actually being emitted from the spray dryer. An intensive study was performed which concluded that: (1) no GB was in the brine although it was possible for minuscule amounts to be encapsulated or occluded in degradation products, rust or scale; (2) GB could be reformed in minuscule quantities when the brine was being extracted for analysis under acidic conditions (ph 4.5) used in the analytical procedures; (3) GB could be reformed in minute quantities from the brine during drying when the proper pH (less than 6.5) and heat conditions were met; and (4) minute quantities of GB could be formed from the salts under acidic conditions (pH less than 6.5). It should be stressed that the GB emissions were very low and at no time were the work area or general population limits (0.0001 mg/m3 and 0.000003 mg/m^3 respectively) exceeded. Based on the results of these studies the following changes were adopted which minimized the occasions when GB emissions exceeded the ASC: (1) switching the spray dryer fuel from fuel oil to natural gas which had less acidic combustion products; (2) reducing the dryer temperature to 370°C; and (3) reducing the brine feed rate to 45 liters per hour.

h. Unlike Phase I, not all liquids generated during Phase II were dried to a salt; at least a portion of the washdown water/decontamination solution was discharged to a collection pond known as Basin F. The GB neutralization brine generated 9,752 metric tonnes of salt which was packaged into drums and placed in an approved landfill. The furnace ash was also drummed and placed in a landfill. The thermally decontaminated metal and aluminum