

ingots were sold as scrap.

5. CAIS Disposal Program

There were 18 different set configurations grouped into seven types. The sets contained from one to five different chemical agents and some sets contained chemical agent simulants or non-lethal riot control compounds such as chloroacetophenone (CN) or Adamsite. These compounds were adsorbed on plastic pellets, adsorbed in charcoal, in chloroform solutions or were in pure form; all configurations were in glass ampules or bottles. Because the chemical agents could not be readily separated, the contents of a set were incinerated simultaneously. This concept of incinerating multiple chemical agents (albeit in small quantities) marks the CAIS Disposal Program as unique among the U.S. CW destruction programs. Except for one set type, all CAIS sets were fed to a rotary kiln deactivation furnace for destruction; disassembly was required for some of the sets before being fed to the kiln. The kiln was the same one used during the Honest John warhead disposal program, except that a separately fired afterburner operating at 900°C and a two second gas residence time was added to ensure complete agent destruction. The Honest John decontamination furnace was used to process the one set type which was too large to be processed by the deactivation furnace and was also used to thermally decontaminate the empty steel cylinders known as "pigs" which were used to overpack many of the sets. The PAS for the furnaces consisted of a quench chamber, a five-stage ESP, two parallel packed bed scrubber towers, an induced draft fan and a stack. All liquids generated during the CAIS disposal program were dried to a salt using a spray dryer. Approximately 237 metric tonnes of salt, 75 metric tonnes of furnace residue and 17 tonnes of ESP residue were generated, packed into drums and placed in an approved landfill. The salt and ESP residue were classified as hazardous wastes under the U.S. Resource Conservation and Recovery Act (RCRA) because of high arsenic and cadmium concentrations.