PIPELINE GAS FROM SOLID WASTES BY THE SYNGAS RECYCLING PROCESS. H. F. Feldmann, G. W. Felton, H. Nack, Battelle, Columbus Laboratories, 505 King Avenue, Columbus, Ohio, 43201; J. Adlerstein, Syngas Recycling Corp., Suite 2120, The Thomson Building, 65 Queen Street W., Toronto, Ontario, Canada M5H 2M5

A two-stage process for converting solid wastes into a methane rich gas capable of being upgraded to pipeline quality is described. In the first zone, the raw solid wastes are contacted with a hydrogen containing gas and are converted to hydrocarbon gases consisting mostly of methane with smaller amounts of ethane, carbon oxides, carbonaceous char and less than one percent oil. The char is used in a second stage connected reactor to generate a synthesis gas for the first stage. Results of continuous operation of the first stage as both a moving-bed and free-fall reactor are presented and these data are combined with gasifier performance calculations to establish large-scale performance characteristics of the integrated system.