ACKNOWLEDGEMENT

_The fear of the LORD is the beginning of knowledge—Proverbs 1:7_

I wish to express my sincere thanks and deep sense of gratitude to my supervisor, Prof. D.C. Baruah, Department of Energy, Tezpur University for his constant inspiration, scholarly guidance and helpful suggestions throughout the course of this Ph.D. research. I will always remember his quick analysis, thoughtful solutions and critical reviews. I regard him as my personal as well as professional mentor.

I am thankful to Dr. Sonia Yeh, Institute of Transportation Studies, University of California, Davis, USA for acting as an advisor during my 9 months visit to the University of California, Davis as a 2013-2014 Fulbright-Nehru Doctoral and Professional Research Fellow.

I also like to thank the Doctoral Committee members of my Ph.D. research-Prof. Dhanapati Deka, Dr. Rupam Kataki (Department of Energy, Tezpur University), Prof. S M Hazarika (Department of Computer Science and Engineering, Tezpur University) and Prof. K P Sarma (Department of Environmental Science, Tezpur University) for their valuable suggestions, necessary guidance and encouragement throughout the Ph.D. research.

I am thankful to the Council of Scientific and Industrial Research (CSIR), Govt. of India for providing me financial assistance in terms of Senior Research Fellowship during 2012-2014.

I also express my thankfulness to the NRDMS, Department of Science and Technology (DST), Govt. of India for providing me financial assistance in terms of JRF and SRF as a part of a funded research project carried out in the Department of Energy, Tezpur University.
I am thankful to the J William Fulbright Foreign Scholarship Board, Washington, D.C. and United States-India Educational Foundation, New Delhi for selecting me as a 2013-2014 Fulbright-Nehru Doctoral and Professional Research Fellow and granting financial assistance to conduct part of my Ph.D. research at the University of California, Davis, USA.

My would also like to thank Mr. Sadhan Mahapatra and Mr. P. K. Chaudhury (Assistant professor, Department of Energy, Tezpur University) for their support and valuable suggestions. I am also thankful to all the staff members of Department of Energy, Tezpur University.

I would also like to thank:

Dr. R J Nair, Dr. Maumita Chakraborty, Dr. Rahul Chutia, Dr. Mayur M. Phukan, (Ph.D. Alumni, Tezpur University), Mr. Dipal Baruah, Miss Sampriti Kataki (Ph.D. scholars, Department of Energy, Tezpur University) for their friendly help and support.

Moonmoon Hiloidhari