*ABSTRACT* 

Six Sigma is a comprehensive and structuralized methodology in which to

reach, support and maximize business activities that focused on understanding of

customers satisfaction fulfillment, which use the facts, data and statistical analyze,

also continually concern on arrangement, improvement and business processes re-

engineering. The Six Sigma goal is that to achieve zero defect

Inventory Record Accuracy (IRA) with: Measure – Analyze – Improve –

Control approach apply to raw material at PTX which is as Multinational Chemical

Industry be based in Midland, USA. Previous condition as baseline, daily ending

inventory is difficult to ensure the accuracy, due to reconciliation and physically

counting performed only monthly basis.

Condition after improvement the root cause of accuracy discrepancies,

achieve increasing accuracy percentage from 86.5% to 97.6% and sigma level from

2.59 sigma to 3.47 sigma.

Key words: MAIC, Six Sigma, find root cause, validate, process improvement