Savannah River NUCLEAR SOLUTIONS℠

FLUOR DANIEL • NORTHROP GRUMMAN • HONEYWELL

Pareto Charts

Steven S Prevette

Senior Statistician
Savannah River Nuclear Solutions, LLC

FLUOR®

SPC Trending Primer/ Two Day Training

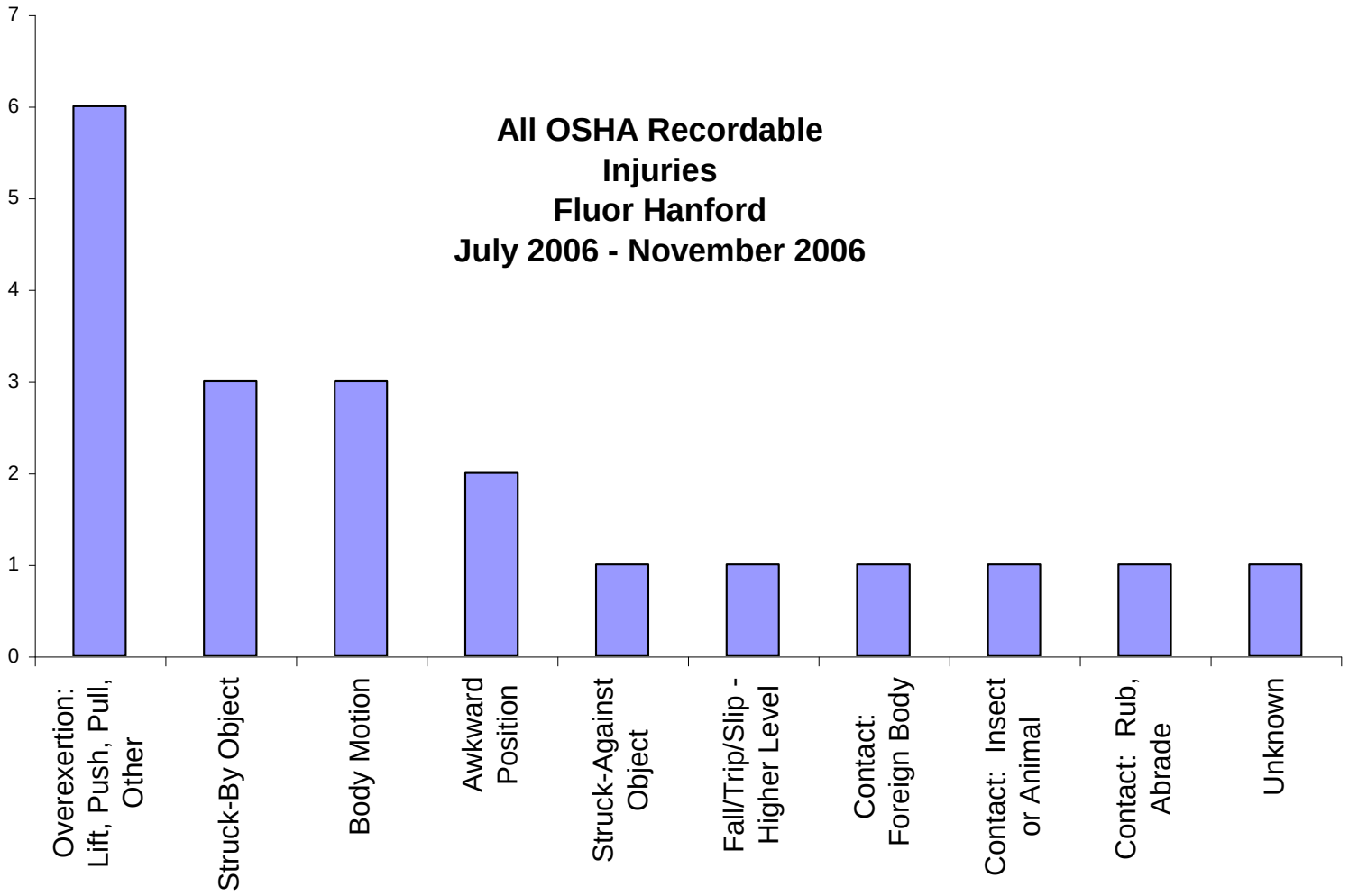
http://www.efcog.org/wg/esh_es/Statistical_Process_Control/index.htm

Exercise Description

- Once you have identified a time period of interest on a control chart, you may want to determine subgroupings of data
- A Pareto Chart is a bar chart for qualitative data, and are sorted from most common to least common
- Can be used to find “Low Hanging Fruit”

http://www.efcog.org/wg/esh_es/Statistical_Process_Control/docs/Pareto_Charts.pdf

Pareto Chart Example



Pareto Chart and SPC Relationship

Trend Exists on Control Chart?	Data Points Used	Purpose
No	**Use all data in the statistically stable time period**	**Find Common Cause(s) to apply to process improvement**
Yes	**Use only the data for the point(s) which have been identified as within the significant trend, such as a point outside the control limits**	**Find Special Cause(s) for basis of corrective actions for declining trends or reinforcing actions for improving trends**

Pareto Chart Generator

- Open file ORPS Data.mdb
- Open file Pareto Chart Generator.xls
- Let us make a Pareto chart of the ISM core function
- Copy the ISM column from the ALL_Orps table to cell A2 in the Pareto Chart Generator
- Follow instructions in the Excel File

Pareto Charts

- **Some applications do add a cumulative percentage curve to show when 85% of the data are captured**
  - "Pareto Principle" 85% of the problems come from 15% of the causes
- **Generally, I have found this to be not worth the added complication**