

Earned Value Tracking

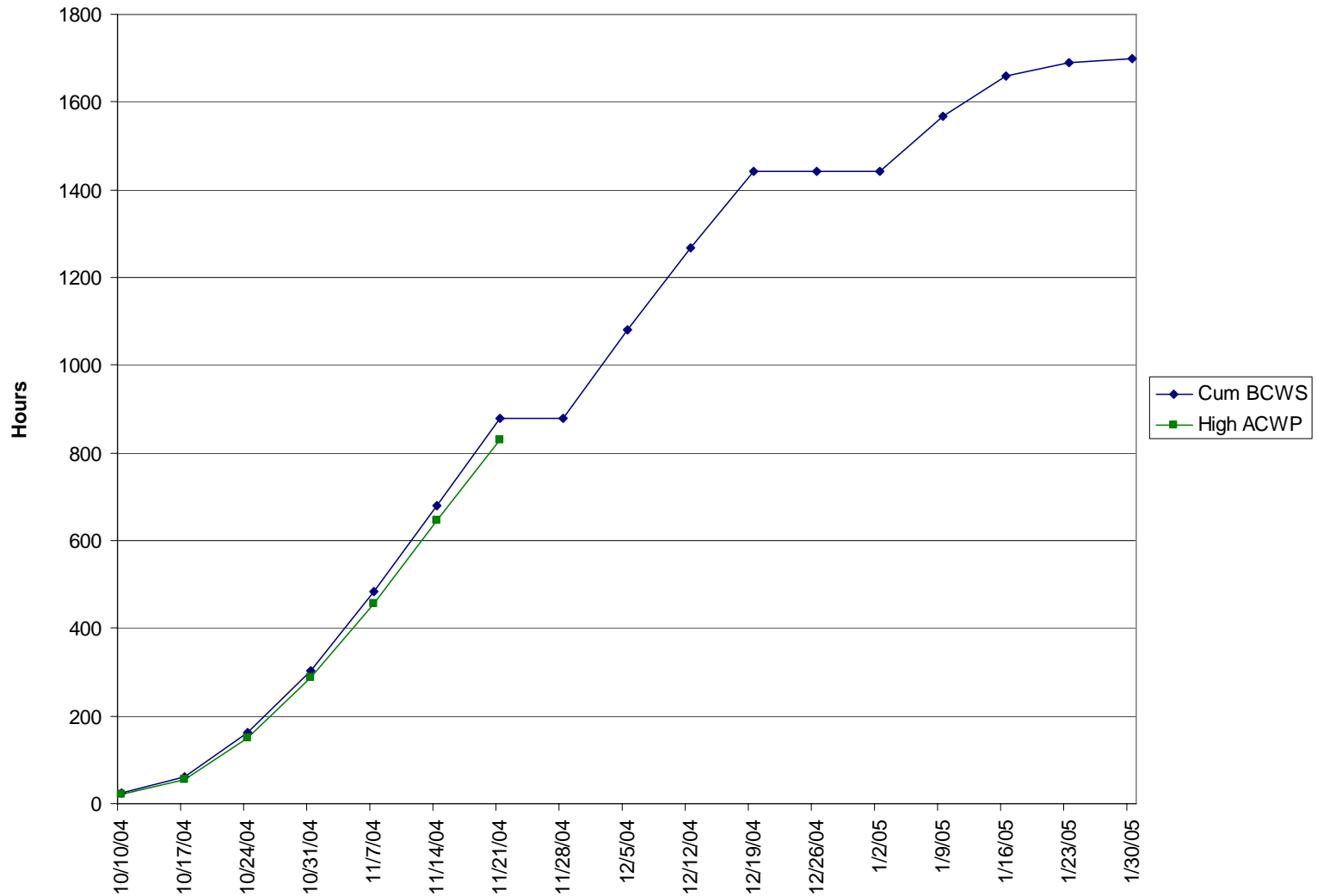
Hayden Leon

Typical Budget Tracking

- Before 1970 only Actual Cost and Budget Cost were tracked
- This resulted in unanticipated overruns
- 90% Complete Carrier America was towed to BNSY to complete last 25%
- Secretary Packard Directed performance tracking

Typical Performance Graph

Typical Budget Performance Graph

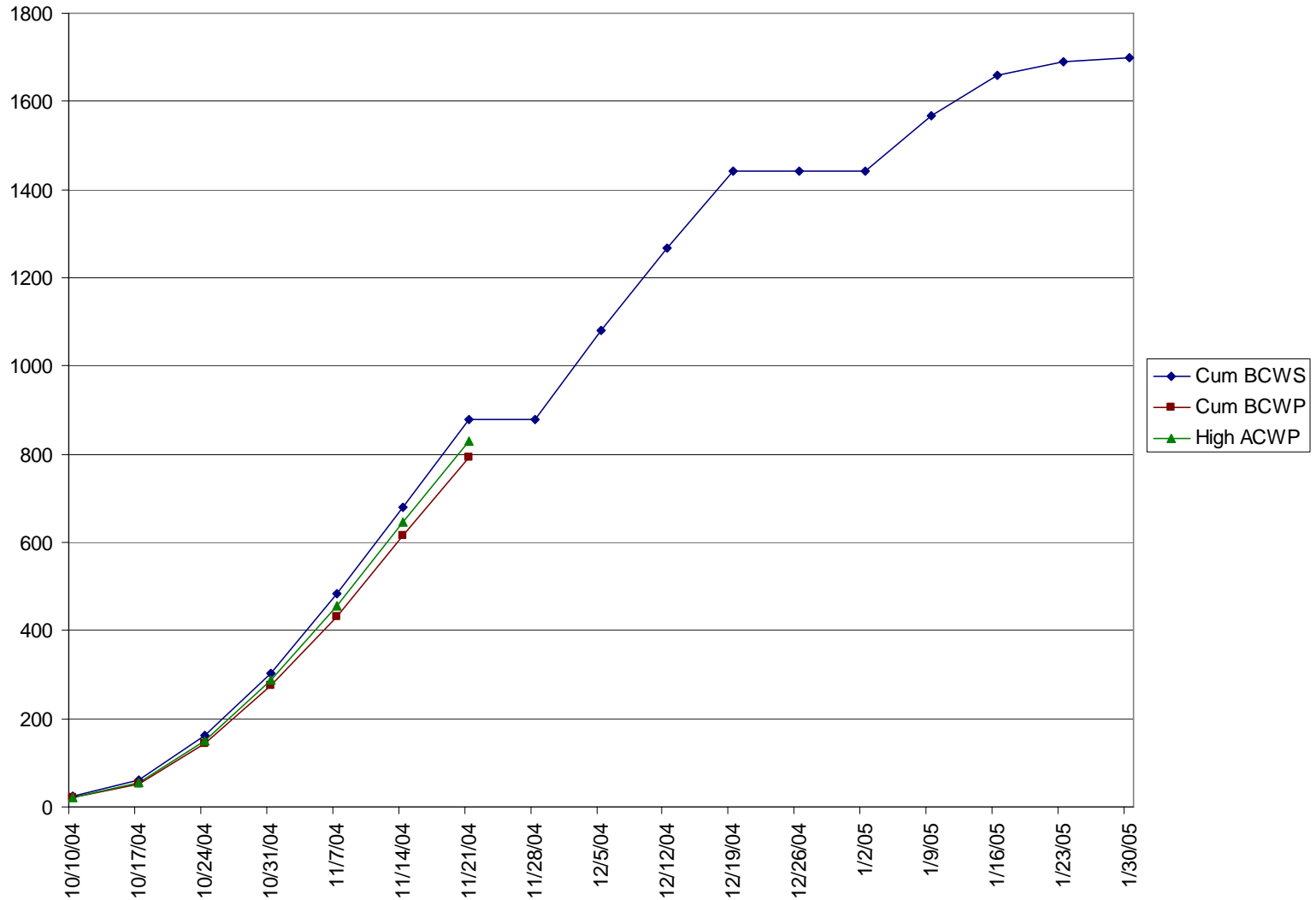


Definitions

- BCWS: Budgeted Cost of Work Scheduled
- ACWP: Actual Cost of Work Performed
- BCWP: Budgeted Cost of Work Performed

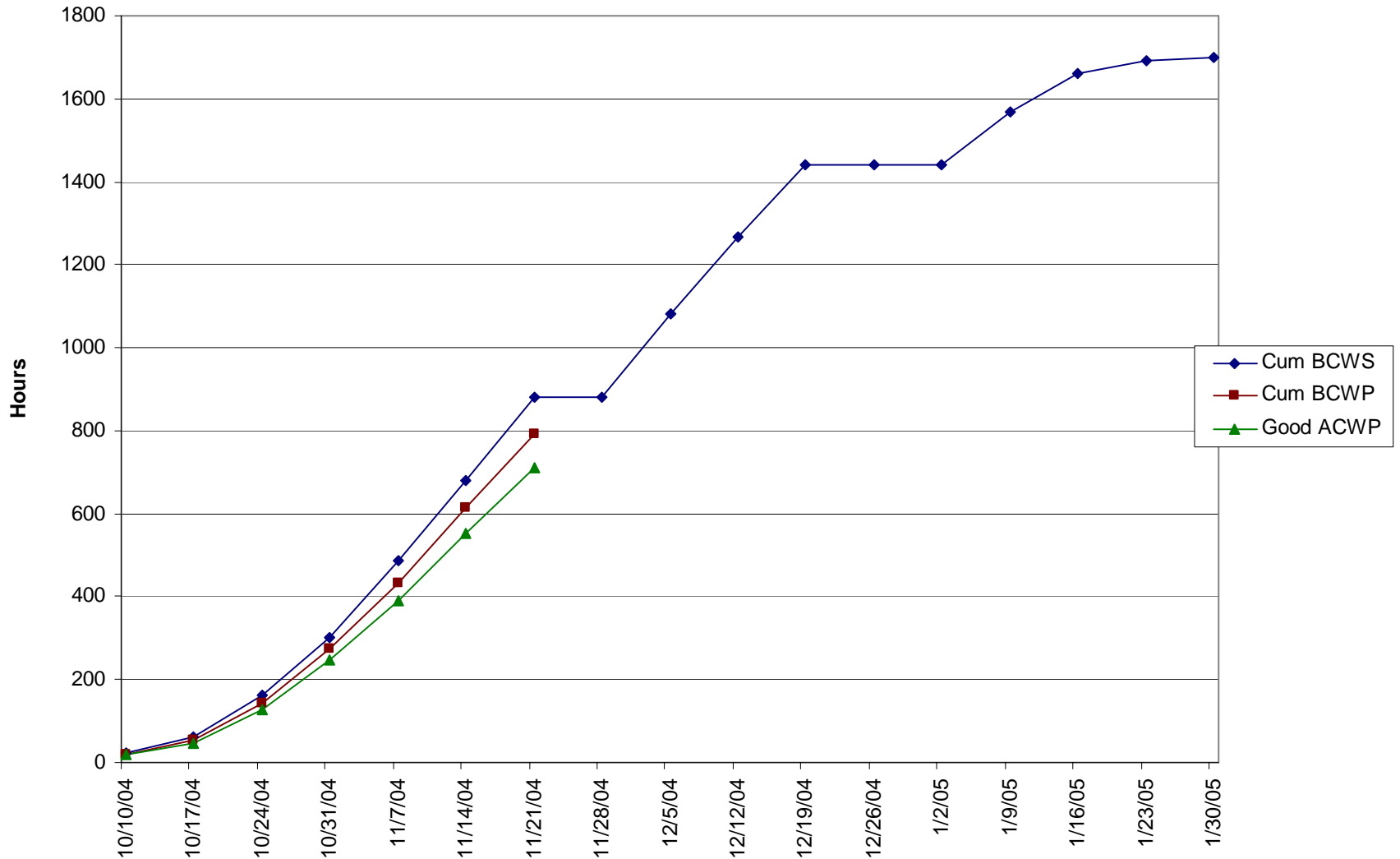
Too Often the Example

Above Budget Costs



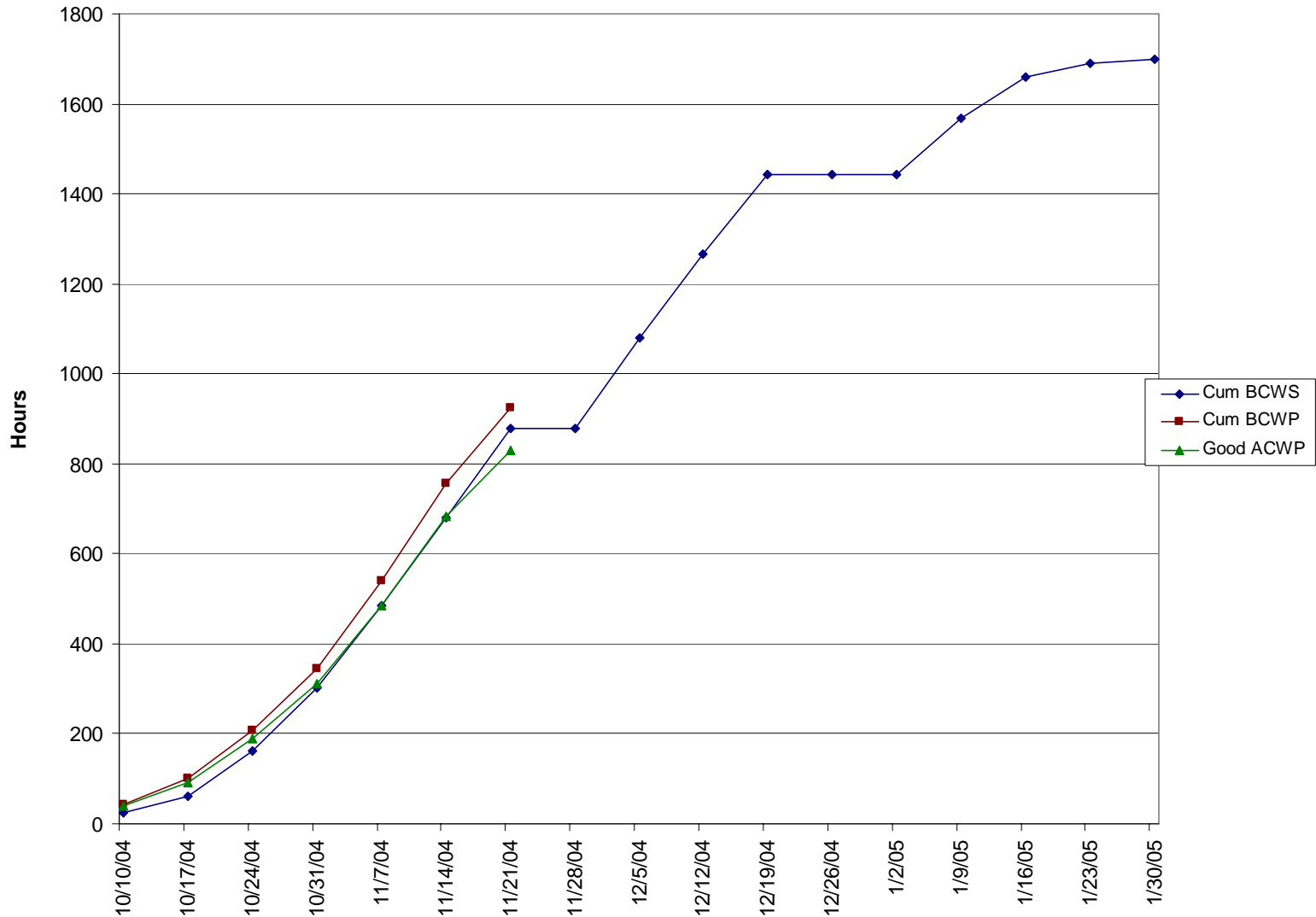
At Least Good Cost Performance

Good Cost, Behind Schedule Performance



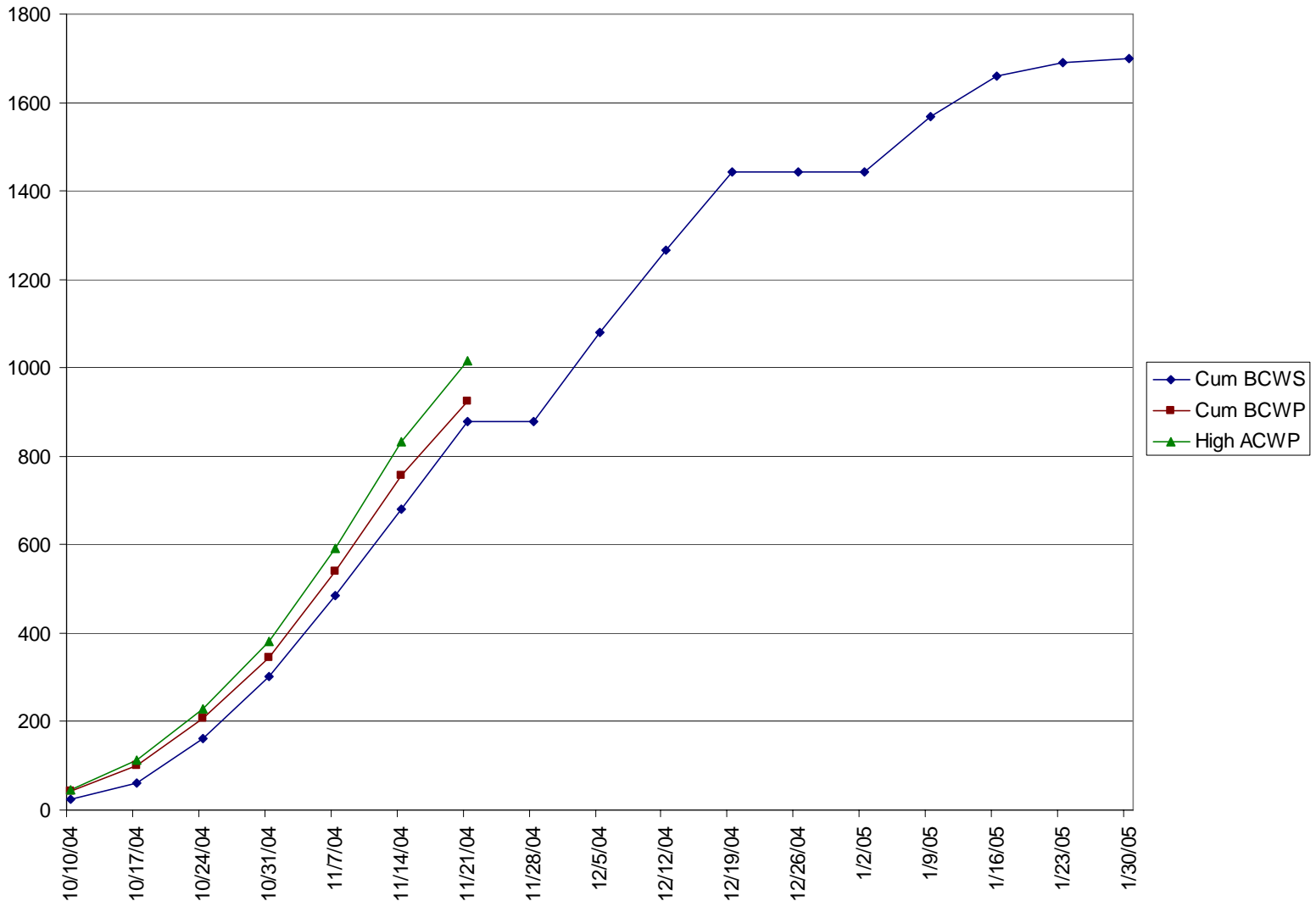
A Good Performing Program

Good Cost and Schedule Performance



Costs need Work

Above Budget Costs



Setting up Tracking

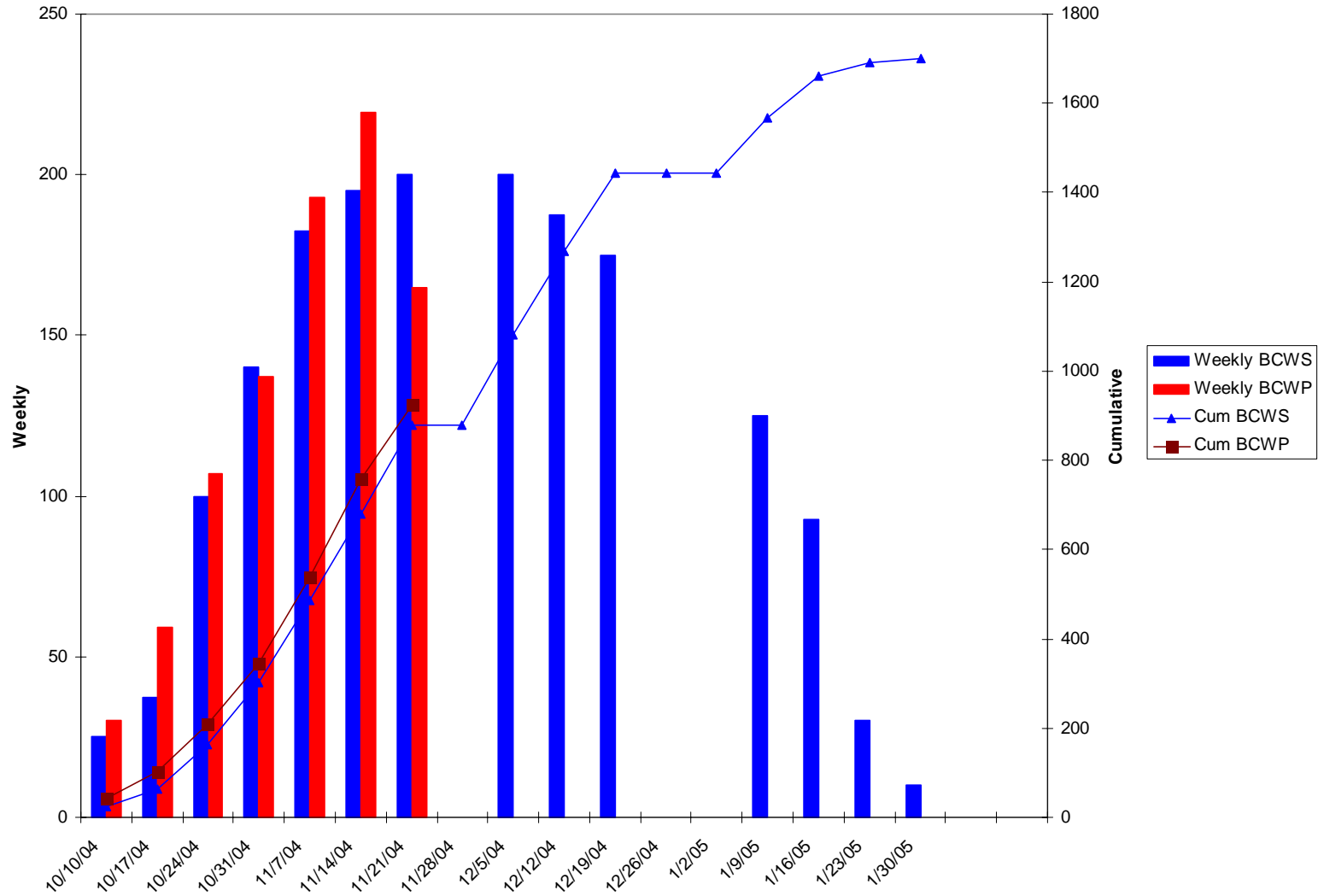
- Define “bite sized” tasks
- Consider reporting interval
- Quantify deliverables
 - Should be paper/hardware (put in your hand)
- Define how credit is taken
 - Upon completion
 - Percent Complete
 - Fixed Ratio (30%/70%)

Sample Program

- Change Incorporation
 - 170 Change packages
 - 10/4/04 - 1/30/05
 - Steps in Incorporation
 - Redline
 - Incorporate
 - Validate
 - Release

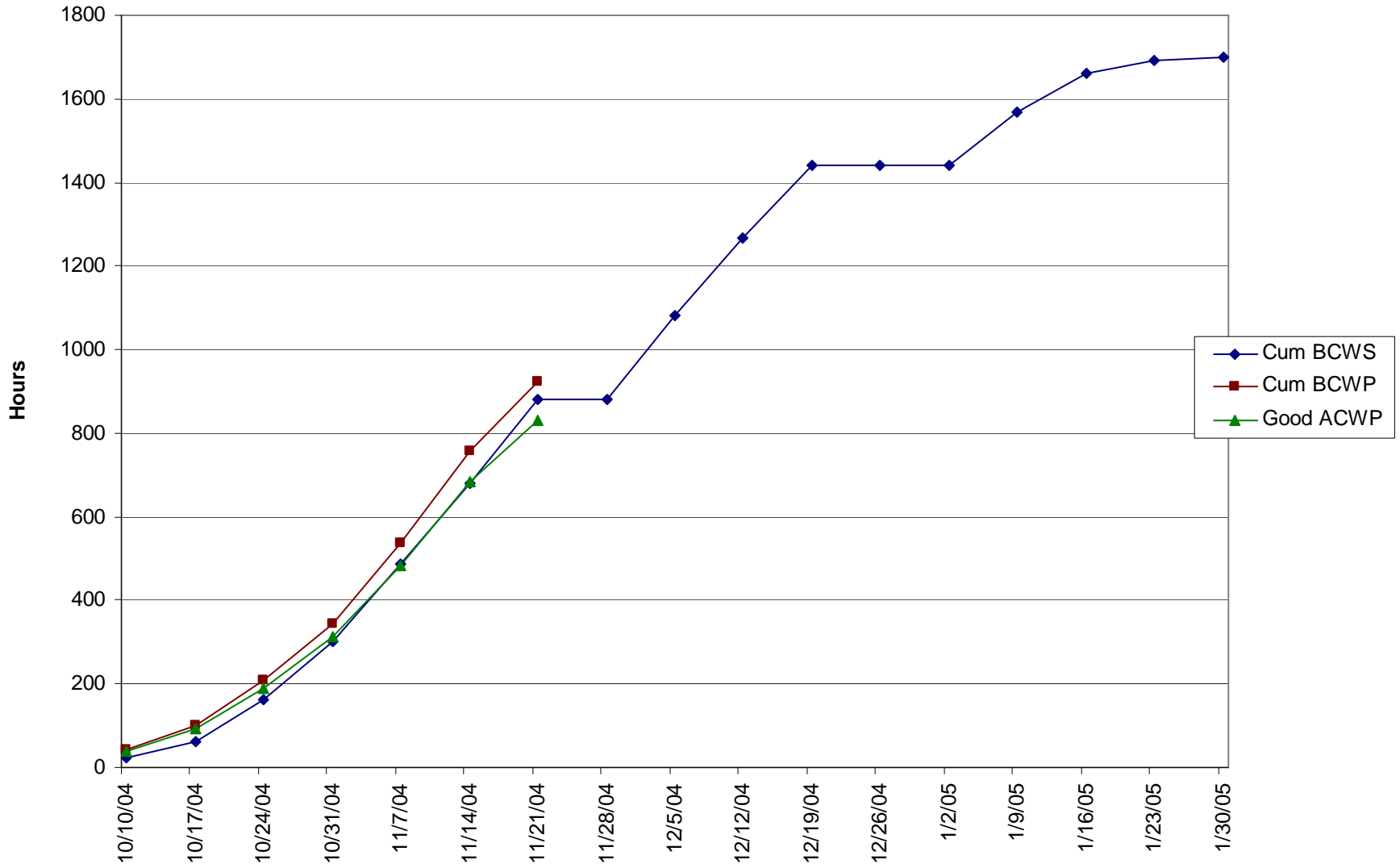
Each Stage Tracked

Redline



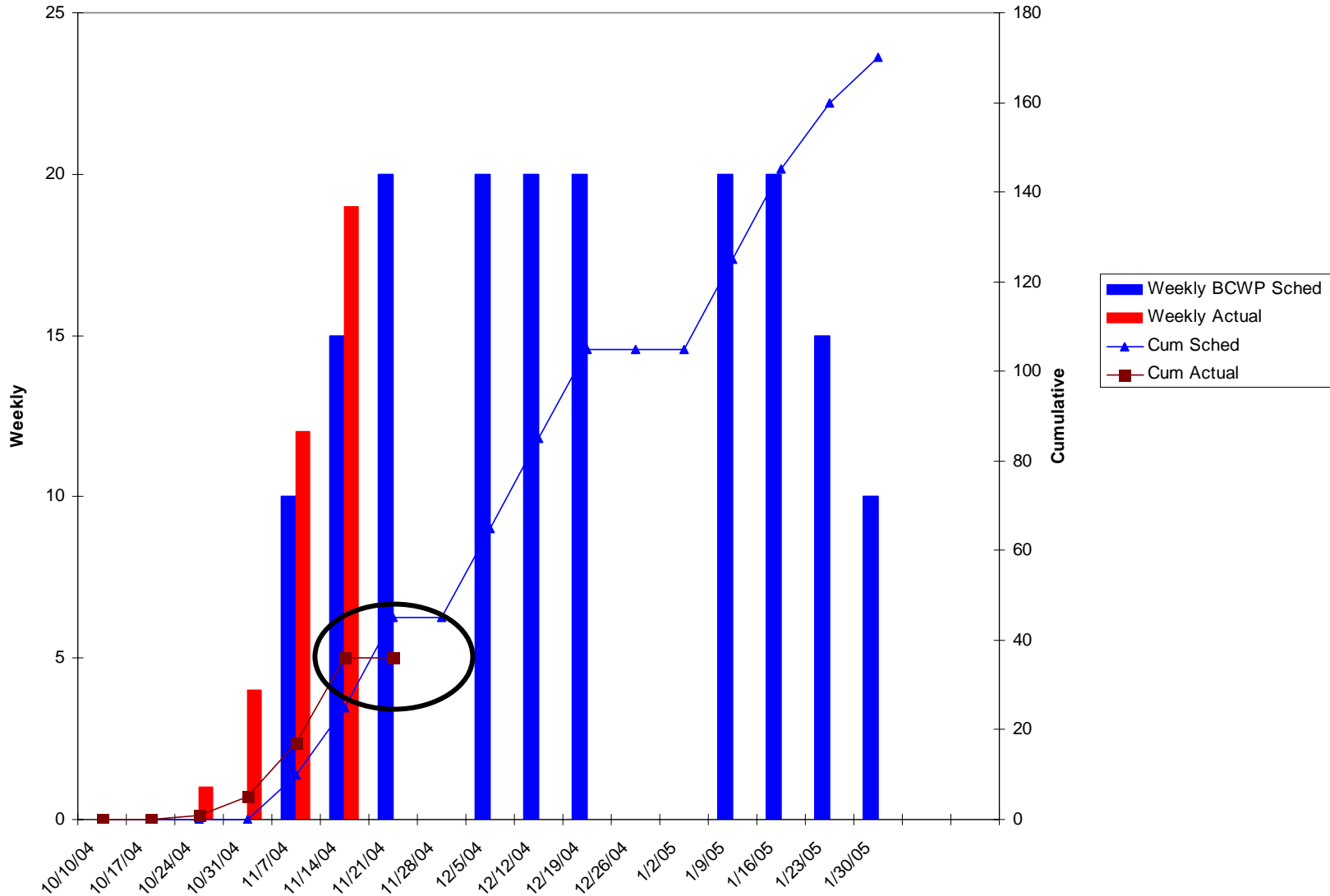
Cumulative Performance

Good Cost and Schedule Performance



Good Performance Hides Problems

Release Performance



Earned Value Use

- Generally required for DoD programs - good for any program
- For large programs, keep tasks under 1 month and 300 hours
- Common Ratios
 - Cost Performance Index

$$\text{CPI} = \text{BCWP}/\text{ACWP}$$

- Schedule Performance Index

$$\text{SPI} = \text{BCWP}/\text{ACWS}$$