In order to implement its strategic maintenance and reliability plan that supports its mission and vision, MSD’s WWT division has shifted towards a team-based approach and created a group of change agents called the “Positive Energy Team.” The team is composed of champions (crafts, crew leaders, supervisors and reliability engineers) who have volunteered to participate with positive energy in implementation activities. The implementation activities are carried out through chartered sub-teams composed of selected pE Team members and other division staff.

Over the past 1 ½ years the pE Team and chartered sub-teams completed two RCM studies, created a centralized Predictive Maintenance function, purchased and implemented Predictive Maintenance technologies including laser alignment, adopted advanced planning and scheduling practices, performed lubrication practices audit, go-live support of an upgrade to Maximo 7.6. In addition, the team has created the “Find of the Week” to highlight positive work performed by staff, completed over 20 training workshops and given numerous program updates at the semi-annual State of Plant Process Maintenance presentation at each treatment plant.

Since 2012 to date across 7 plants, efforts of implementing best practices have increased proactive maintenance hours by 24 percent. Increase in reliability by 33.6 percent, reduced downtime by 23.6 percent, work order cost reduction of over $500 thousand and cost avoidance of $650 thousand due to proactive maintenance activities. Monthly emergency failure rate has decreased by 55 percent including 67 percent scheduling success.

Through the leadership of the Positive Energy team and hard work of treatment staff, MSD was selected as the 2013 international UPTIME Magazine’s award winning “Best Emerging Maintenance Reliability program” award stating “Best Emerging Maintenance Reliability program award for best practices centered around Reliability Centered Maintenance, Condition Based Maintenance and Advanced Maintenance Planning and Scheduling. Positive Energy Team Members: Charlie Becker, Kevin Cunningham, Mike Duffy, John Feist, John Gardiner, Tom Goodman, Rob Johnson, Rick Maeda, Brent Marans, Brent Miley, Zeno Perry, Bob Smith, Eric Stevens, John Shinn Jr, and not pictured Doug Little and Mike Mueller.

CMMS Software and Predictive Maintenance 
Instruments/Software:
- Emerson CSI 2130 Data Collectors
- Emerson AMS Machinery Health Manager
- UE 10,000 Ultrasonic
- UltraTrend DMSS and UE Spectralyzer
- UE Grease Caddy
- SKF Surveyor Explorer AC 3.02.1
- MCEGold 2.5.1
- Infrascan
- BICycle for Reliability Analysis and KPI Measures
- 24/7 Tango software for PdMMS Routes/Data Correlation
- Maximo 7.5
- Think/Reliability for RCA
- JMS Software

PdM Equipment is as follows:
1. Vibration, CSI 2130
2. Online Motor Testing, Baker Explorer 3000
3. Offline Motor Testing, PdM AEMC Max
4. Infrared, Flir 640 and the Fluke Ti 60
5. Prüftechnik (Ludeca) Optalign Smart