Case Study: Open Pit Phosphate Mining, Milling, & Chemical Production - significant results from integrated operations

Client

U.S.A

Phosphate Producer

Solutions

- Process Excellence
- Operations Management
- Organizational Effectiveness
- Maintenance Management Systems
- Asset Lifecycle Management & Reliability

CHALLENGE

- Poor compliance to weekly and monthly production plans, missed opportunities for preventative maintenance, and delays in equipment handoff
- Mine, mill, and chemical plant operated with insufficient regard for each other's availability and production schedules
- Supervisors and managers had little exposure to cost reporting and the financial impacts of their operational decisions
- Planning was often driven by sales targets rather than proven capacity in each segment of the process
- Insufficient attention paid to risks, contingencies, coordination

APPROACH

- Benchmark planning: planners, schedulers, and supervisors are coached to develop production targets based on demonstrated rates
- Integrated planning, scheduling, execution and reporting management systems developed
- Equipment availability: workshops are facilitated with front-line maintenance crews to identify and resolve equipment failures and workflow practices
- Shutdown maintenance: improve work order system by developing upgraded scheduling tools and communication to reduce shutdown periods and overall unscheduled downtime

RESULT

- Projected annual production plan deficit of -10% eliminated and plan exceeded by 3%.
- Product stockpile volume up 120%
- Production cost per ton down 17%
- Emergency work orders reduced by 55%
- Plant down days shortened by 10%

Company was facing production shortages due to lack of raw ore, poor communication between departments, and insufficient integration of plans.