PREPARING FOR YOUR NEXT OUTAGE/SHUTDOWN

All of us in our day-to-day work responsibilities have some exposure to facility outages or shutdowns. In the facility world it may be a long holiday weekend or in the manufacturing world if could be a week or two in length involving extensive repair of equipment installations. The weekend outage and the weeklong shutdown both have the same level of stress depending on the type of business you are in. The challenge is to make these outages and shutdowns progress smoothly, finish on time, completed within scope, and on budget. To do this you must have detailed planning and scheduling.

Before I get into how to prepare for a shutdown I will tell you a story of how not to prepare for a shutdown. Learning from your mistakes is sometimes the best way to learn. It can be rather painful but it makes it hard to forget.

It was 20 years ago and I had just been transferred and promoted to the Director of Engineering and Maintenance for the largest carpet manufacturing plant in the world, 34 acres under one roof. I had 150 or so craftsman and 16 salaried engineers and supervisors to lead the team. My first day was around the first of June and we had our annual week long shutdown scheduled for the 4th of July week. My management team kept saying “don’t worry boss we have it covered, we do this every year.” Well those of you out there with a little gray hair are probably starting to smile or even giggle a little because you have already figured my team didn’t have it covered. On Monday morning everything was buzzing along with 20-30 contractors in the plant and about 300 or so workers doing everything from replacing equipment, pouring concrete, painting the ceiling, you name it and we were doing it. About 10 am the power goes out and the plant got real quiet and dark real fast. My electrical engineer decided that Monday morning was the best time to clean and test our main substation gear; so he had the power company pull the main knife switches. Most of you know I’m a mechanical engineer so I love telling stories about EE’s. So, after the fear for my job, the anger, and the desire to dismember his body
subsided we regrouped, and rented or bought every generator within 50 miles. We finished the week pretty well and accomplished 95% of what we had planned.

It turned out that every crew had a pretty good plan but no one pulled all of the plans together in one Master Plan to see if there any conflicts between the crews and contractors. So the next year the electrical engineer, his electricians, and his contractors all worked at night. I figured they have to work in the dark anyway might as well be at night and let everyone else work during the day when the power was on. This story seems funny after 20 years; I guess time does heal all wounds!

So here is the list of key items which will ensure a successful outage or shutdown.

1. **Forecasting and Budgeting** – The first task is to determine how much money you need for the outage, complete a rough scope of work, and an order of magnitude cost estimate. Get it approved before you waste a lot of time on planning when it may not happen.

2. **Planning** – develop the detailed plans for each approved task. Define parts, supplies, and labor requirements needed.

3. **Equipment Requirements** – define what special equipment you need like tools, lifts, generators, lift trucks, etc. If you are in a large campus environment ask yourself if you need extra transportation like golf carts.

4. **Contractor assistance** – do you need extra contractors to assist with the work load or maybe just hire additional contract labor to work with your employees.

5. **Work Scheduling** – each work task must be scheduled by the hour, shift, day, etc. This is the only way to prevent conflicts like the lights going out!

6. **Contingency Plans** – Yes that’s right, not everything will go smoothly. Go through the “what if” drill and be prepared.

7. **Pre-Shutdown Work** – perform as much work as possible prior to the beginning of the outage. The more you do ahead of time will free you up to complete more tasks.
8. **Shutdo \-wn Management** – if it is a large and complicated outage consider having at least two meetings a day. In the morning ask what happen last night and then asked what we are doing today. In the afternoon ask what happen today and what are we doing tonight. Lots of communication is critical while the outage is progressing.

9. **Post Mortem** – the week after the outage is the time to complete the autopsy. Discuss and document what went well and what needs improvement for the next outage.

In summary

- Develop long range plans
- Prioritize work tasks and projects
- Develop detailed plans
- Meet regularly
- Schedule out conflicts
- Critique and revise the plan

And remember the electrical guys work in the dark!