OKLAHOMA MANUFACTURING PLANT FLOOD

Case Study

Incident

When torrential rains caused the Arkansas River to reach some of the highest levels on record, levees overtopped causing flooding to several areas of Oklahoma. Among those impacted by the floods was a manufacturing facility whose entire 160-acre plant was flooded with approximately three feet of contaminated water. The water affected the plant's control cabinets, electrical distribution and computer numerically controlled machines. In less than 48 hours of receiving a signed agreement, AREPA was on site working to get the plant back up and running.



 Okuma CNC lathe control cabinet before decontamination



 Okuma CNC lathe control cabinet after decontamination

Challenges & Logistics

The severity of the flood shut down the plant with the insured being unable to access or assess the damages for approximately two weeks. This caused additional damage to the equipment and electronics as they were submerged which accelerated corrosion formation.

Once AREPA was on site, our experts noted that in addition to the contamination caused by the flood, the equipment also suffered from years of lack of maintenance. Upon further analysis, AREPA determined that the equipment underwent improvised wiring modifications in an effort to keep the equipment operating when manufacturer support was no longer available. In addition, a portion of the plant's main electrical and gas feeds was also in need of replacement. AREPA deployed generators for lighting and utilized building electrical feeds once they were restored in certain areas.

While most of the equipment was above the flood line, all electronics below the water line required replacement. To ensure that there would be no residual moisture within equipment from the elevated humidity, AREPA utilized a vacuum chamber and drying chambers to thoroughly dry all affected items.

Highlights

- When torrential rains caused the Arkansas River to reach some of the highest levels on record, levees overtopped causing flooding to several areas of Oklahoma.
- A manufacturing facility's entire 160-acre plant was flooded with approximately three feet of contaminated water affecting the plant's control cabinets, electrical distribution and computer numerically controlled machines.
- In less than 48 hours of receiving a signed agreement, AREPA was on site working to get the plant back up and running.
- Experts noted that the equipment also suffered from years of lack of maintenance.
- The equipment underwent improvised wiring modifications in an effort to keep the equipment operating when manufacturer support was no longer available.
- A portion of the plant's main electrical and gas feeds was in need of replacement. AREPA deployed generators for lighting and utilized building electrical feeds when they were restored in certain areas. All electronics below the water line required replacement.
- AREPA was able to successfully restore 100 percent of the eligible equipment in only three weeks.





Outcome

As most of the equipment was custom made for this manufacturing facility, replacement lead times could have been anywhere from nine to 12 months, which would have brought the business to a halt. AREPA was able to successfully restore 100 percent of the eligible equipment in only three weeks. The submerged electronics and dry transformers were replaced.

AREPA IN ACTION



Bronx Eng. control cabinet before decontamination



▲ OMAX waterjet cutter control cabinet before decontamination



Crack inspection discharge switchgear bucket before decontamination



A Bronx Eng. control cabinet after decontamination



▲ OMAX waterjet cutter control cabinet after decontamination



▲ Crack inspection discharge switchgear bucket after decontamination