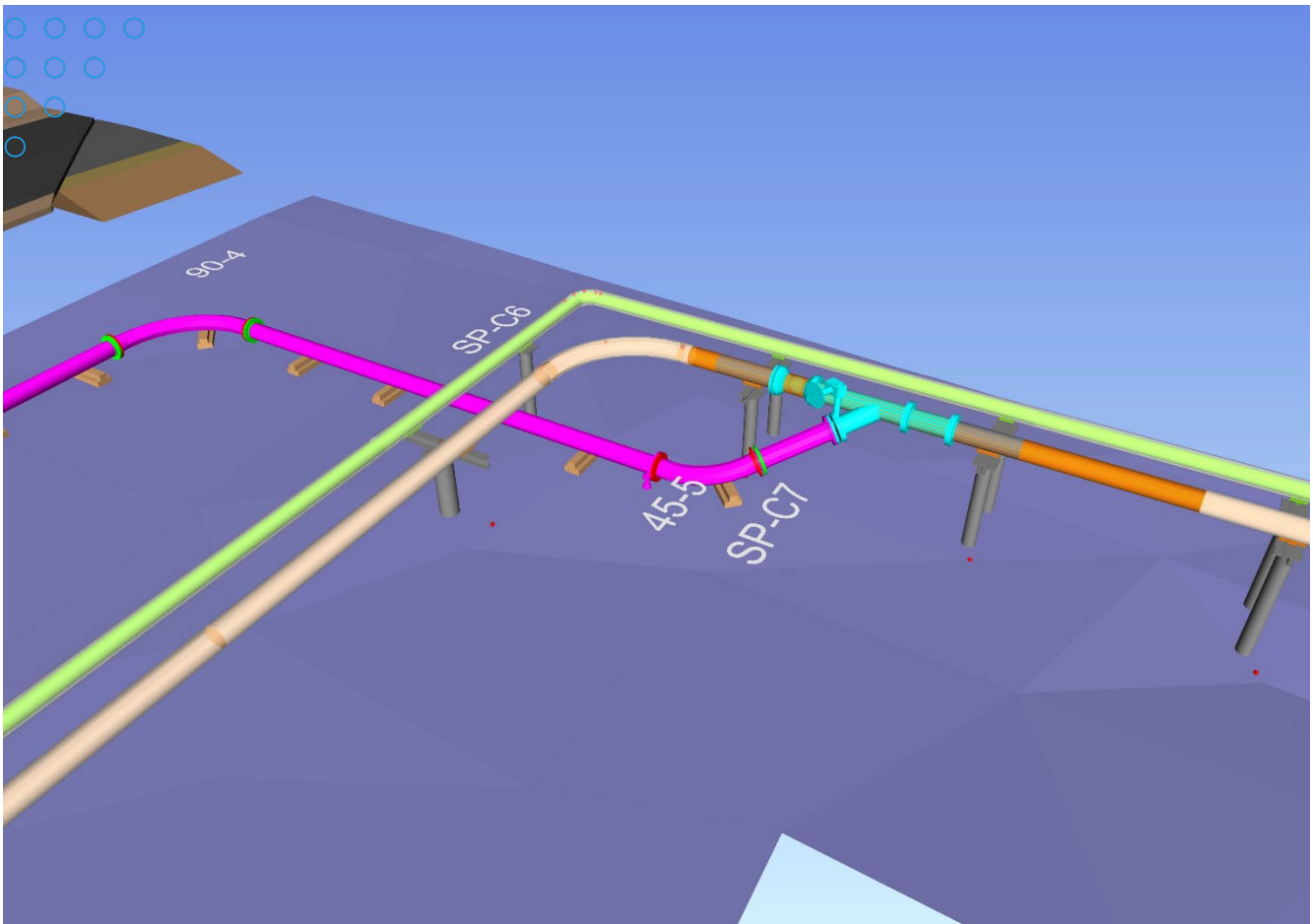


# Emergency Tailings Line Bypass

During an inspection, an in-service tailings line was found to be very close to failing due to the combined effects of corrosion and erosion. The Client required the complete design and construction of 300 metres of NPS 18 carbon steel bypass piping in less than four weeks. Final drawings were issued for construction within two weeks of project kick off. Despite the extremely tight timeframe, all Client risk management processes and best engineering design practices were followed. A HAZOP was conducted to ensure the integrity of the process design, and 3D modeling was done to facilitate operability and constructability reviews. Rally also provided support for material procurement and piping fabrication work.



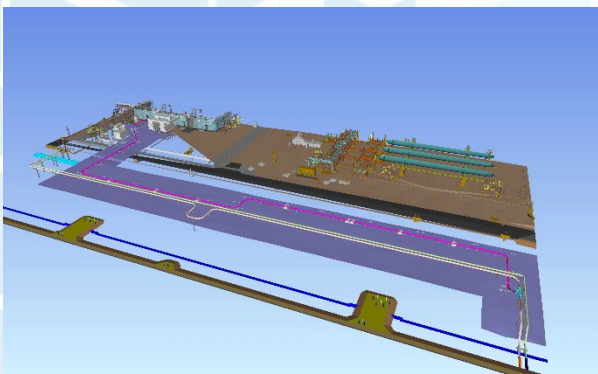
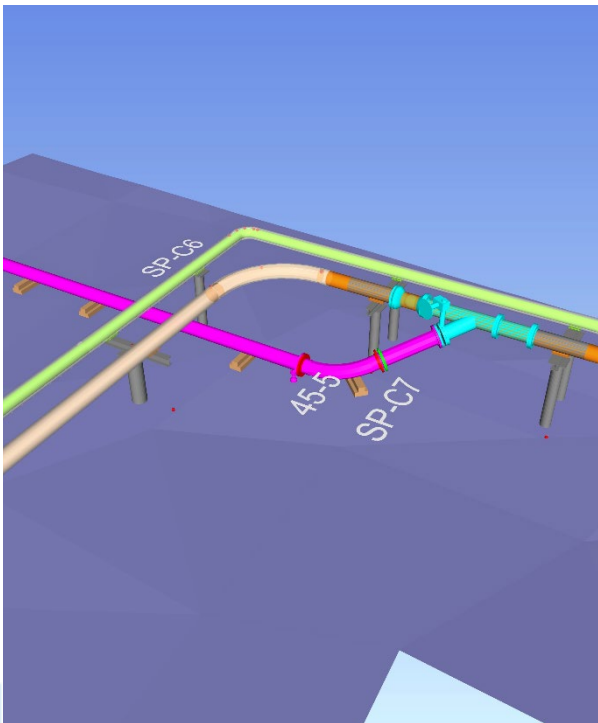
# Emergency Tailings Line

## Bypass

Alberta

Oil Sands & SAGD

\$1.6M TIC



### SCOPE

Rally defined the basic process requirements, revised the P&IDs, facilitated the HAZOP, completed piping layouts, analyzed the piping stresses, and engineered the structural supports and anchors for the final routing. Rally also issued engineering work packages (EWPs) to the fabricators, and provided RFI and construction support.

### DELIVERABLES

- Developed 3D piping and 3D civil models to support the design.
- Completed a stress analysis of the piping system including pump nozzle loads and piping constraints (i.e., anchors and guides).
- Facilitated a process hazard assessment (HAZOP).
- Facilitated a 3D model and constructability review.
- Developed a bill of materials to quickly procure materials.
- Developed drawings for pipe spool pre-fabrication.
- Registered the changes to the original pressure piping design with the provincial authority.
- Provided home office RFI support.