Curtis Bay Pier CSX North Coal Reclaim Tunnel Explosion Investigation

Forensic Investigation Update – January 17, 2022
Explosion in north coal reclaim tunnel
- 11:24 am, December 30, 2021

CSX – Mike Austin and Aleek Young

Lead investigator – GHD, Dyron Hamlin, Dominic DeMatteo

Investigation support – EFI Global, Jim Wesevich, David Beachy, and Kevin Reilly
- Blast sub-consultant – SciRisq, Andrew Staszak
Site Overview (provided by Arcadis)
North Coal Reclaim Tunnel

North Reclaim Tunnel Plan

North Reclaim Tunnel Elevation
Emergency Tunnel and Bump out at North End of North Tunnel (~2019 era of construction)
Emergency Tunnel Bump out at North End of North Tunnel (~2019 era of construction)
Emergency Tunnel Bump out Wing Wall Failure Blast Estimates (upper bound)
Propane-Oxygen Cart Example
Tunnel White Board Sketches
Typical Hopper over Coal Conveyer Belt – return conveyor belt below structural framing
Conveyor reaction structure pullout and overturning north of #4
Deformed stiffened Vibrator Hopper Plate below Opening north of #4
Deformed #4 Hopper Bin
Deformed #4 Hopper Bin with Vibrator End shoved inside of Hopper
Deformed stiffened Vibrator Hopper Plate below Opening #5
Hopper Bin with Vibrator End for #5
#5 Hopper Bin
Stiffened Vibrator Hopper Plate below Opening #6
Hopper Bin with Vibrator End for #6
#6 Hopper Bin
Impinged aluminum ladder at #8
#8 Feeder
#10 Feeder
#10 Feeder
Stiffened Vibrator Hopper Plate and Vibrator below Opening #12
#12 Hopper Bin
#13 Feeder, Daylight Opening Above
#13 Feeder
#14 Feeder, Daylight Opening Above
#14 Feeder
Impinged fiberglass ladder near #14
Cutting Hose and Fire Extinguisher
Found between #14 and #15
#15 Feeder, Daylight Opening Above
#15 Feeder
Propane cylinder, Cutting torch, Regulator, and Hose
Found between #15 and #16
#16 Feeder
#16 Feeder
Oxygen bottle attached to dolly and detached oxygen valve at #16
#17 Feeder
Stiffened Vibrator Hopper Plate and Vibrator below Opening #18
Hopper Bin separated from end of vibrator at #18
Stiffened Vibrator Hopper Plate and Vibrator below Opening #19
Hopper Bin with Vibrator End for #19
Deformed Stiffened Vibrator Hopper Plate and Vibrator below Opening #21
Deformed Stiffened Vibrator Hopper Plate and Vibrator below Opening #21
Flattened aluminum tubing starting at #21
#22 Feeder
Conveyor framing bolt pullout between #22 and #23
#23 Feeder
#23 Feeder
#24 Feeder
#25 Feeder
#25 Feeder
#25 Feeder with failed bottom structural supports and rollers supporting return belt – return belt sagging on floor
#26 Feeder