

REINHOLD ENVIRONMENTAL Ltd.



**2013 Coal to Gas Conversion Round Table
& Expo Presentation**

October 29, 2013, in Chattanooga, TN / Sponsored by Southern Company

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WorleyParsons

resources & energy

Permitting Issues Associate with Coal to Gas Conversion

Coal to Gas/PCUG Conference Round Table
Sponsored by Southern Company

Joe Takats, WorleyParsons

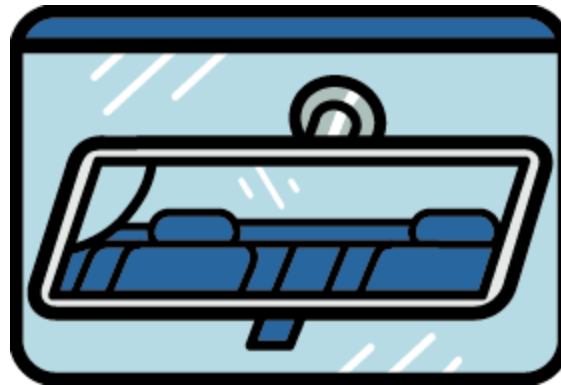
October 29, 2013 / Chattanooga Marriott, Chattanooga, TN



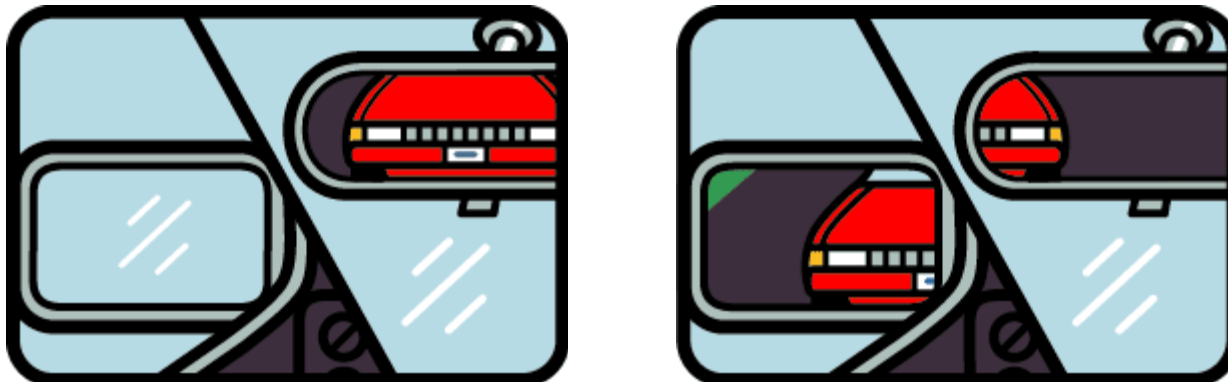
OneWayTM
to zero harm

Zero Harm is WorleyParsons'
corporate vision for Health,
Safety and the Environment

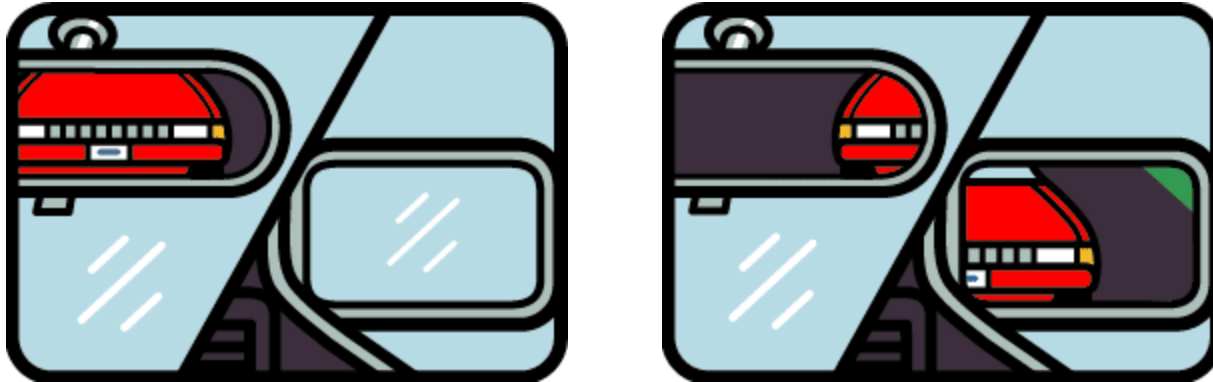
Spend A MINUTE adjusting your side view and rear view mirrors



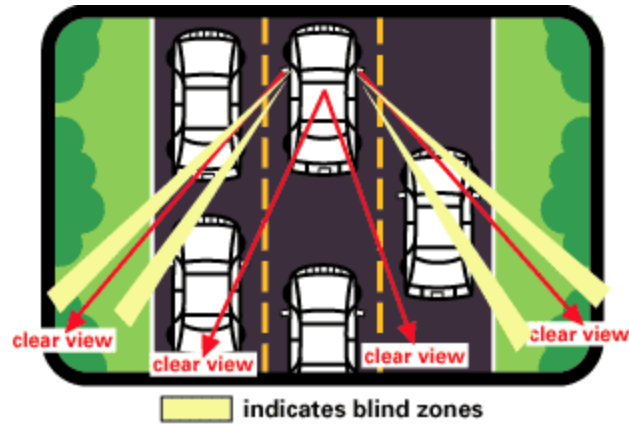
Start by setting you rear view mirror as you normally would



Left side mirror alignment



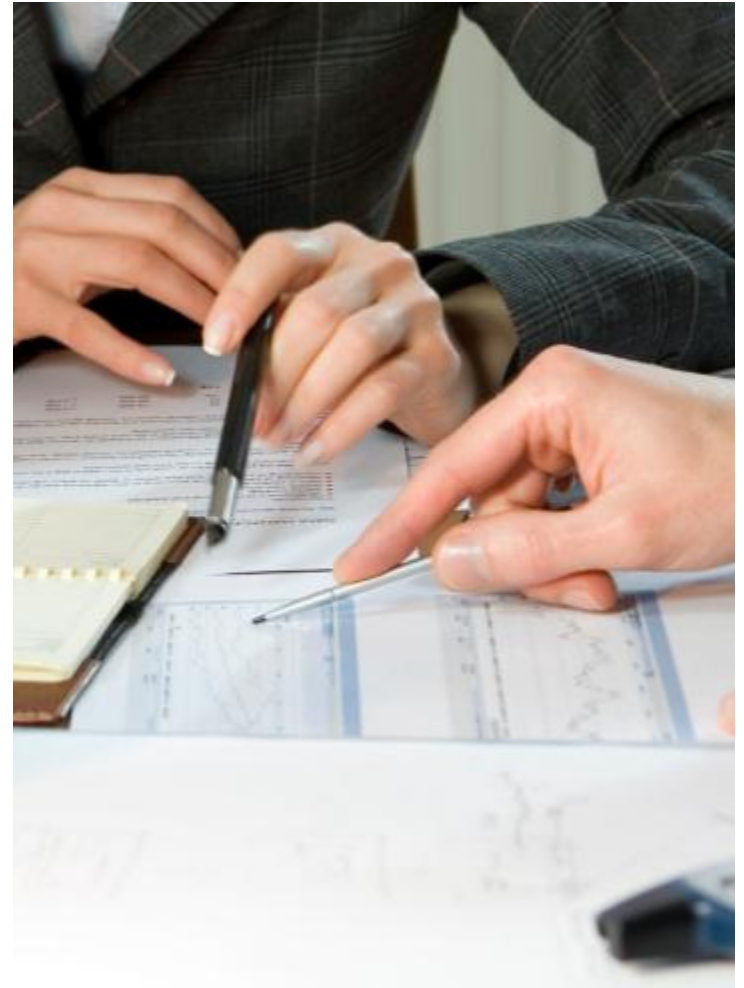
Right side mirror alignment



End Result? No huge blind spot

Permitting

- ▶ Does not matter who does the permitting
- ▶ Job is not done until the paperwork is complete

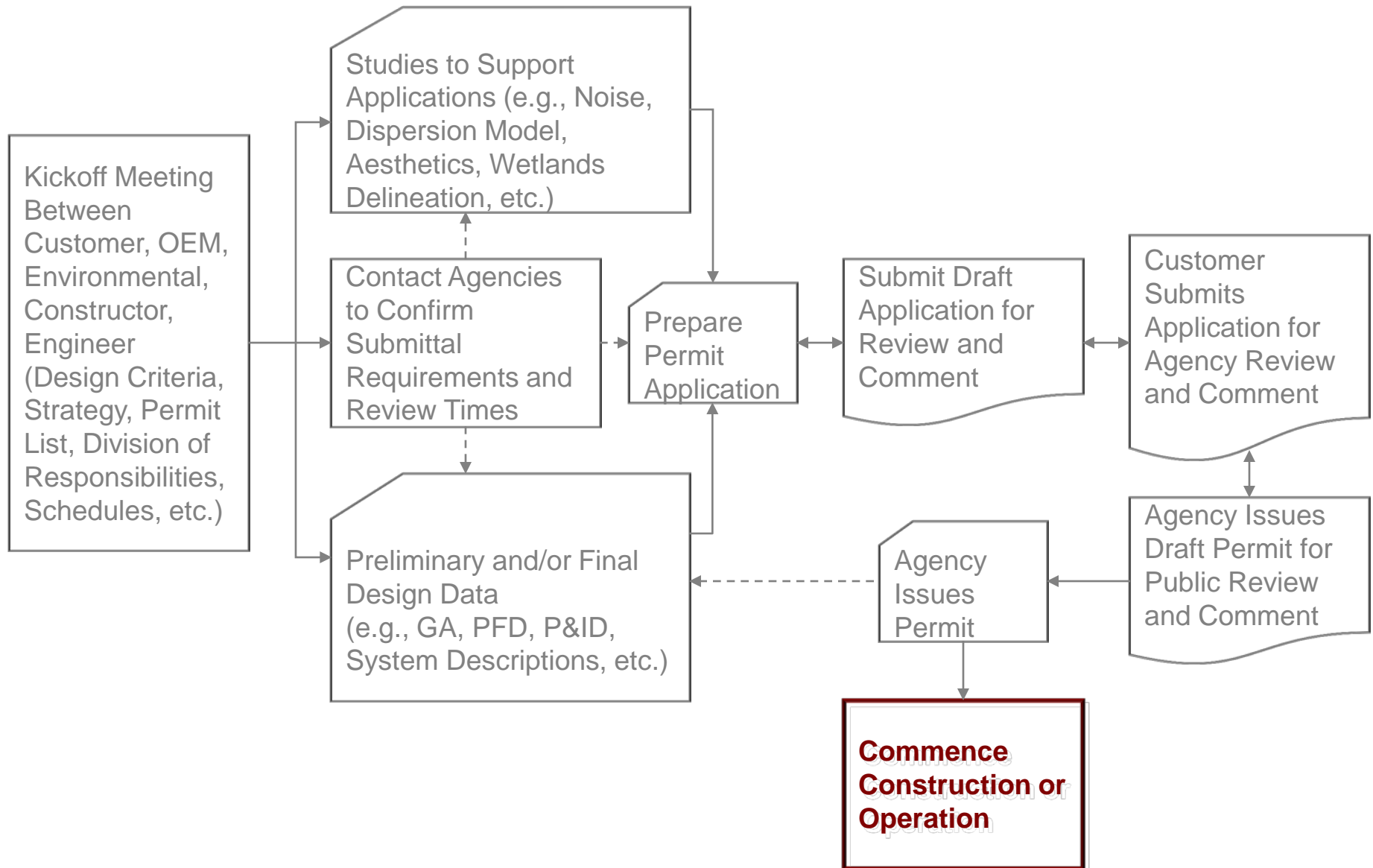


AGENDA

- ▶ Air
- ▶ Water / wastewater
- ▶ Waste
- ▶ Other



Permitting Process Flow Diagram



- ▶ Review current air permit
- ▶ Review latest air permit application
- ▶ Review any consent decrees for conditions regarding air emissions or source operation



Air permit

- ▶ State air permit to construct / install (if no increase in emissions)
- ▶ New Source Performance Standards [NSPS] (if increase in hourly emissions)
- ▶ New Source Review [NSR] / Prevention Of Significant Deterioration [PSD] (if significant increase in annual emissions)



Application

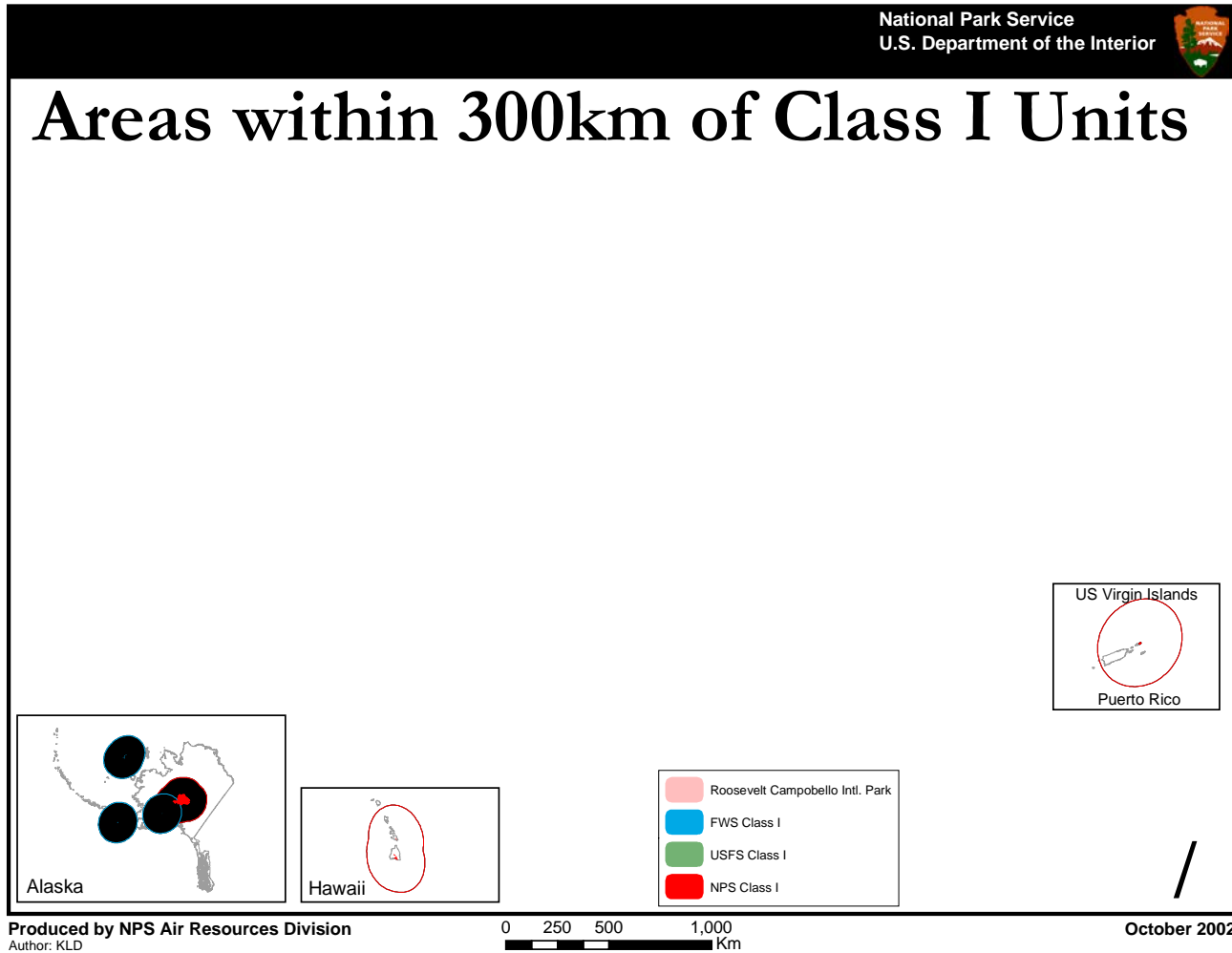
- ▶ State goal is for the source not to cause violation of National Ambient Air Quality Standards [NAAQS]
 - Air quality dispersion modeling
- ▶ Best Available Control Technology [BACT] / Lowest Achievable Emission Rate [LAER] Technology
- ▶ Continuous Emissions Monitoring
- ▶ Endangered Species
- ▶ Cultural Resources



Impacting existing fossil fuel-fired units

- ▶ NSPS (Reviewed and, if applicable revised every 8 years)
 - Carbon dioxide (greenhouse gas)
 - PROPOSED June 1, 2014
 - FINAL June 1, 2015
 - STATE PLANS June 30, 2016
- ▶ NAAQS (reviewed and, if applicable revised every 5 years)
 - Hourly standards for sulfur dioxide / nitrogen dioxide
 - Ozone
 - Particulate matter 2.5 microns and smaller
 - Carbon dioxide???
- ▶ Clean Air Interstate Rule [CAIR] / Cross-State Air Pollution Rule [CSPAR]
- ▶ Clean Air Visibility Rule [CAVR] / Regional Haze
 - BART / 2064

Class I Areas



- ▶ Review current National Pollutant Discharge Elimination System [NPDES] Permit
- ▶ Review latest NPDES permit application
- ▶ Review any consent decrees for water or wastewater issues



- ▶ 316(a) Thermal Discharge
 - Temperature
 - Heat
- ▶ 316(b) Cooling Water Intake Structures
 - Impingement
 - Entrainment
 - Endangered Species Spawning
 - EPA PROPOSED April 20, 2011
 - EPA FINAL November 4, 2013
 - Check for State Requirements



Applications

- ▶ Modify NPDES Permit
 - Wet scrubber air pollution control systems
 - Bottom ash transport water
 - Fly ash transport water
 - Coal pile runoff
- ▶ Permit to install / modify / close wastewater treatment systems
- ▶ Groundwater Monitoring Plan
- ▶ Update Spill Prevention, Control, And Countermeasure (SPCC) Plans
- ▶ Update Stormwater Pollution Prevention Plans (SWPPP)
– Operation

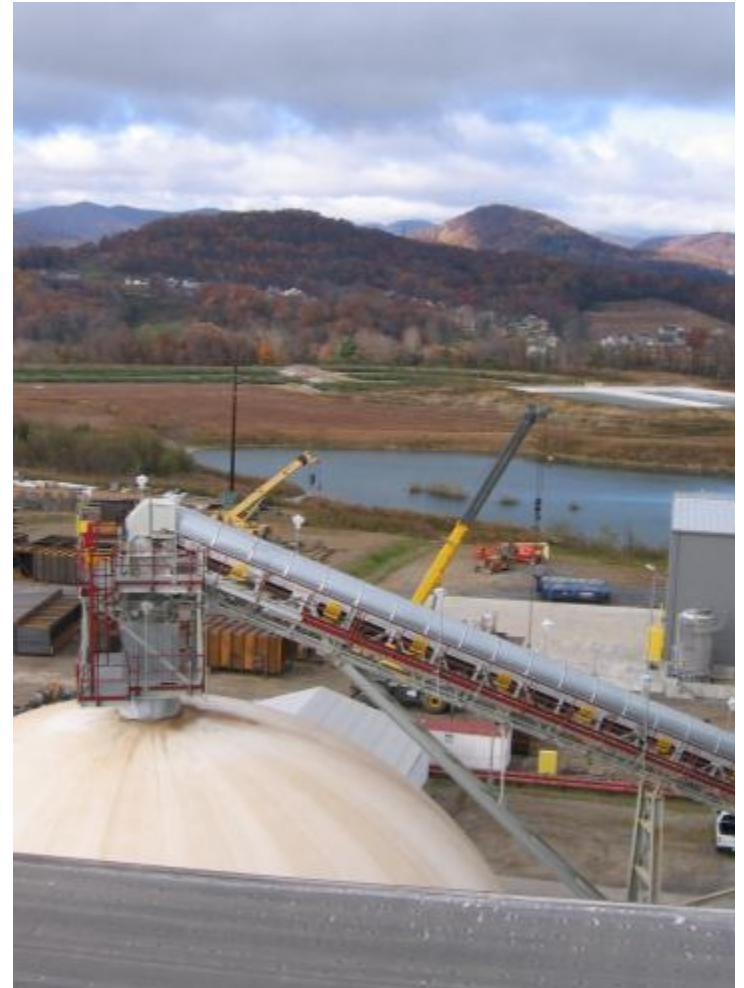
Impacting existing fossil fuel-fired units

- ▶ Effluent Limitations Guidelines (reviewed and, if applicable revised every 8 years)
 - PROPOSED June 7, 2013
 - FINAL May 22, 2014
- ▶ Water Quality Standards
 - Check for State Requirements



Waste

- ▶ Review current solid waste disposal permit
- ▶ Review latest solid waste disposal permit application
- ▶ Review any consent decrees for waste disposal issues



- ▶ Coal Combustion Residuals (CCR) Options
 - Solid Waste Under Resource Conservation And Recovery Act (RCRA) Subtitle D
 - Hazardous Waste Under RCRA Subtitle C
 - PROPOSED June 21, 2010
 - FINAL ~2014
- ▶ Implement Closure / Post-Closure Plan
- ▶ Continue with Groundwater Monitoring Plan



- ▶ Permitting Kickoff Meeting
- ▶ As design progresses
 - Need larger natural gas supply pipeline
 - Need alternate source of natural gas supply
 - Removal of Equipment Associated with Coal



Potential approvals in no particular order

- ▶ Federal Energy Regulatory Commission – new pipeline
- ▶ US Department of Transportation, Pipeline and Hazardous Materials Safety Administration – design approval
- ▶ Army Corps of Engineers – stream crossings, wetlands delineation
- ▶ State – Clean Water Act Section 401- Water Quality Certification



- ▶ State / Local – highway or road crossings
- ▶ Utilities / Railroads – pipeline crossings
- ▶ State – Stormwater Pollution Prevention Plans (SWPPP)
– Construction
- ▶ Local – Soil Erosion And Sedimentation Control Plan
- ▶ State – Contaminated Soil Storage Permit
- ▶ Local – Zoning / Land Use
- ▶ Local – Activities in Floodplain
- ▶ Update Consumptive Water Use Permit
- ▶ State – Approval of pressure piping (B31.1)
- ▶ State – Demolition of existing buildings

- ▶ EPA / State – Asbestos / Lead Abatement Notification
- ▶ NRC / State – Radioactive Materials License Disposal
- ▶ Plant Site – Work Permits
 - Hot Work
 - Confined Space, etc.
- ▶ Customer's Insurance Department / Provider
 - Modifications Involving Fire Prevention
 - Modifications Involving Fire Protection
 - Gas Monitors (Methane, Carbon Monoxide)
 - Odorize Natural Gas
- ▶ Environmental Site Assessment

Permitting Recap

- ▶ Air
- ▶ Water / Wastewater
- ▶ Waste
- ▶ Other

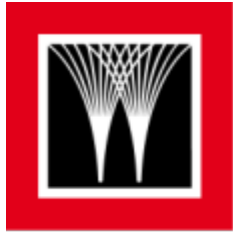


Thank You

Questions?

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