Environmental Protection Agency

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My Mentor

Name: Cindy Beeler

Cindy Beeler obtained a B.S. in Civil Engineering and worked for Exxon for 15 years. After earning a M.S. in Environmental Engineering she started work at EPA in their Region 8 office. She works primarily on air issues associated with oil & gas development.

Background of the EPA

Founded in 1970 under the Nixon Administration

Mission: To protect human health and the environment

Congress passes laws or statutes (e.g. Clean Air Act, Clean Water Act)

EPA Headquarter offices develop policy and write regulations to fulfill intent of laws

EPA Regional Offices implement the regulations

Region 8 focuses on oil & gas emissions because there are tens of thousands of oil & gas wells in Region 8 and a lot of oil & gas development on Indian country

Oil and Gas – Clean Air Act Regulations

Several regulations – I focused on the New Source Performance Standards (NSPS), subpart OOOOa that limits Volatile Organic Compounds (VOCs)

NSPS OOOOa requires among other things, leak detection and repair (LDAR) at oil & gas wellsites and the reporting of the company's leak survey, leaks found, and repairs made

The Clean Air Act Enforcement Division at Region 8, has five inspectors that cover Region 8 and all industrial sectors. They assess compliance of industrial facilities with applicable air regulations, including NSPS subpart OOOOa at oil & gas facilities

What I Did

I mined data from LDAR reports submitted by oil & gas companies to the EPA and populated an Excel workbook with that data:

- US Well IDs (to determine production volumes)
- The duration of the leak detection survey time
- Particularly identified leaks from thief hatches

The purpose was to:

- Inform policy making on leak detection requirements with respect to production volumes
- Compare leak survey times across companies
- Contribute data for inspection planning

What I Learned

Managing Excel - I learned to:

- adjust column widths
- hide and unhide columns
- add formulas to perform calculations
- enter raw data

Valued the importance of the environment

Processes to extract and produce oil & gas to be sent to homes and businesses

Oil & gas helps run your world a lot more than you think and creates air emissions in the process