



PROJECT EXAMPLES

GEOENVIRONMENTAL PERMITTING & COMPLIANCE

GROUNDWATER TREATMENT SYSTEM PERMITTING

Hughes Aircraft Company, Fullerton, California

Engineering Analytics, Inc. staff acquired multiple permits for construction and operation of a 600 gallon per minute (gpm) groundwater treatment system at the Hughes Aircraft Company (HAC), Ground Systems Group facility in Fullerton, California. The project involved the installation of nine vertical extraction wells, six horizontal extraction wells, and five injection wells. Contaminated groundwater was extracted from the affected area, piped to the treatment plant, and then reinjected down-gradient of the contaminant plume. The large scale of this project required that pipelines and wells be located on properties owned by adjacent land owners. Therefore, access agreements were necessary for both wells and pipelines. Permits acquired as part of this project included: building permits, access agreements for pipelines and wells, FAA ground access permits for airports, NPDES permits, well permits, air permits, and Underground Injection Control Permits.

UIC CLASS II PERMIT FOR BRINE DISPOSAL FACILITY

Baldwin Exploration Corporation, Mountrail County, North Dakota

Engineering Analytics staff prepared an application for Injection to convert an exploratory oil and gas well to a UIC Class II injection well. The permit was processed through the North Dakota Industrial Commission (NDIC) Oil and Gas Division requesting use of the well for commercial disposal of produced brine. We worked closely with the facility operator to delineate the environmental design features for aquifer protection, spill prevention, containment, security, and emergency response.

AQUIFER PROTECTION PERMITS

San Manuel Smelter/ Mine Site and Pinto Valley Mine, Arizona

Engineering Analytics staff prepared aquifer protection permits (APP) for the San Manuel Smelter and Mine sites, and the Pinto Valley Mine in Arizona. APPs are prepared to demonstrate that facilities have incorporated the Best Available Demonstrated Control Technology (BADCT) into their operations. The permits involved intensive investigation of all potential discharge points at the site including valves, pipelines, tanks, pits and the mines themselves to either document compliance or design required control technologies that could be implemented in a reasonable period of time. These permits involved intensive field investigations combined with regulatory negotiation, report production, and engineering design.

Highlighted Services

- Feasibility and Conceptual Design
- Compliance Auditing and Support
- Regulatory Impact Analysis
- Water Discharge Permits (Surface and Groundwater)
- Pre-Treatment Permits
- UIC Class I, II and V Permits
- Air Quality Waivers, Notifications, and Pre-construction Permits
- Air Operating Permits
- Site Location Approvals
- Mining Permits
- APDs and Well Conversions
- Construction and Industrial Storm Water Permits and Plans (SWPPP)
- Spill Prevention, Control, and Countermeasure Plans (SPCC)
- MSW Landfills and Closures
- Aquifer Protection Permits
- Section 404 Permits
- Environmental Site Assessments (Phase I and II)





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AIR PERMIT WAIVER FOR OIL PRODUCTION FACILITY

Elk Petroleum, South Sand Draw Facility, Fremont County, Wyoming

Engineering Analytics, Inc. (EA) staff prepared an air quality permit application for Elk Petroleum's South Sand Draw production facility. The application, processed by the Wyoming Department of Environmental Quality (WDEQ) Air Quality Division (AQD), resulted in an air permit waiver. In preparing the application, we developed an inventory of fugitive and point source emissions from knockout vessels, sales oil tanks, produced water storage tanks, heater treaters, gas-fired burners, truck unloading operations, and gas vents. EA staff coordinated sampling and analysis of produced gas, oil, and water under operating temperatures and pressures. The extended hydrocarbon analysis was used to predict flashing emissions, and working, standing, and breathing losses using AQD accepted emission models especially E&P Tank V2.0 and EPA Tanks.

STORM WATER POLLUTION PREVENTION PLAN (SWPPP) FOR EXPLORATION ACTIVITIES

Ryckman Creek Field, Ryckman Creek Resources, Uinta County, Wyoming

Engineering Analytics staff prepared a Large Construction Storm Water Pollution Prevention Plan (SWPPP) for redevelopment of an oil and gas field in southwest Wyoming. Activities covered by the SWPPP included construction of 4-5 miles of access roads, 15 well site pads, a new pipeline, and a gas processing facility. EA staff prepared the Notice of Intent for the Wyoming Department of Environmental Quality (WDEQ) requesting field-wide coverage for a project between 5 and 100 acres. The SWPPP was continuously revised to address changes in construction plans as dictated by the progression of oil and gas exploration activities. When part of the mineral assets were transferred during the second year of construction, a Notice of Transfer and Acceptance (NOTA) was filed with the WDEQ to facilitate compliance with program administrative requirements.

SPILL PREVENTION, CONTROL, AND COUNTERMEASURE PLANS FOR AN OIL PRODUCTION FACILITY

Skull Creek Production Facility, Windsor Energy Group, Park County, Wyoming

Engineering Analytics staff prepared a Spill Prevention, Control and Countermeasure Plan (SPCC) for Windsor Energy's Skull Creek operations. The Skull Creek Production Facilities include four well sites, gas collection flow line piping, and a central gas treatment and compressor station. Each well site had one or more oil and water storage tanks, and a gas treatment skid, with some sites having blow down pits. The total oil storage capacity of the facility is 170,000 gallons, including a pipeline drip tank, well site storage, and the compressor station. EA Staff certified the SPCC Plan as meeting 40 CFR Part 112 requirements for an on-shore production facility.

SITE LOCATION APPROVAL AND GROUNDWATER DISCHARGE PERMIT FOR LARGE CAPACITY ON-SITE WASTEWATER TREATMENT FACILITY

Pioneer Natural Resources, Inc., Las Animas County, Colorado

Engineering Analytics staff received Site Location and Design approval from the Colorado Department of Public Health and Environment (CDPHE) for a large capacity on-site domestic wastewater treatment system for Pioneer Natural Resources. The system was designed by EA staff to treat domestic wastewaters generated at a remote administrative and maintenance shop facility in the Raton Basin Natural Gas Field. We worked with CDPHE and the 208 Planning Commission for Site Location Approval and successfully permitted groundwater discharge of treated liquids. The design incorporated subsurface drip irrigation and an engineered drainfield.