



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

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Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

Scenario: You purchased existing oilfield assets and performed environmental due diligence. Now what?

- Air permits
 - - Deep dive
 - - Issue date
 - - Production
- State/county/local requirements
 - - Expertise
 - - Experience



If you answered “NO,” you need a knowledgeable professional ASAP.

Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

Two case studies to illustrate types of environmental compliance challenges faced by operators:

- ❑ CASE Study 1: Newly formed private equity backed company purchases Central Texas Eagle Ford Shale upstream production assets.
- ❑ CASE Study 2: Midstream oil & gas company headquartered and operating outside of Texas purchases Central Texas Eagle Ford midstream assets.

Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 1: Company A

- A newly formed private equity backed company purchases some Central Texas Eagle Ford Shale upstream production assets in mid-2018.



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 1: Company A

History of Assets

- Knowledgeable corporate environmental air permitting and compliance staff
- Facilities, which handle sour gas, oil and produced water, installed between 5 and 10 years ago.
- Facilities equipped with Amine Units to remove H₂S, with acid gas routed to the flare
- Assets originally had air authorizations, including several Title V permits, authorizing high production levels



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 1: Company A

□ History of Assets (continued)

- All production flows and throughputs originally instrumented, data collected and tracked remotely by divesting company
- Vapor Recovery Towers (VRTs) installed upstream of storage tanks to recover flash and route it to sales pipelines, ensured all flash occurred upstream of tanks
- Facilities equipped with closed vent systems for routing emissions from tanks and loading to the flares for control



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CASE Study 1: Company A

□ History of Assets (continued)

- Treated produced gas originally routed to a sales pipeline, acid gas destroyed in onsite 80 ft flares designed for high production levels
- SO₂ levels originally high enough to potentially trigger PSD thresholds, tools used to track emissions and ensure PSD thresholds weren't exceeded



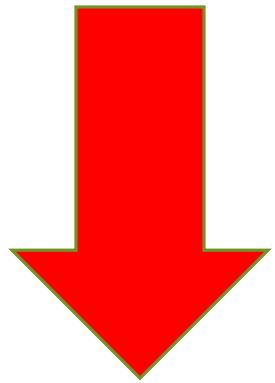
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CASE Study 1: Company A

□ History of Assets (continued)

➤ Over time, production in the asset dwindled resulting in the following:

- Volume of produced gas too low to meet contractual obligations, gas flared, and amine treaters removed from most facilities.
- Flash gas volume dropped below NSPS 0000 trigger levels and VRTs removed
- Some air permits adjusted as needed



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CASE Study 1: Company A

□ History of Assets (continued)

- As production continued to dwindle, the following resources allocated for facility support also dwindled:
 - Corporate and contract environmental staff time and travel
 - Preventive maintenance money and staff
- Drop in resources = exposure to corrosive gasses and liquids and weather, damaging facility piping and equipment (tankage and closed vent lines, facility berms)
- Only daily produced gas collected electronically at each facility inlet



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 1: Company A

□ Company Background

- Company Executive Officers, including Operations VP, located in Houston
- Field Superintendent, Field Foreman, and Operators all operating out of field office in Central Texas
- Field Foreman and Operators came with acquisition, thus knowledgeable of history and operations of assets

Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 1: Company A

□ Company Background

- No environmental professionals on staff. Consultants contacted to provide air and water permitting and reporting support:
 - Air Quality Consultant
 - Provided past air permitting and compliance support
 - Familiar with asset equipment and processes
 - Water Quality Consultant
 - Knowledgeable in oil & gas operations and SPCC regulations

Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 1: Company A

□ Environmental Compliance Challenges

➤ Flares:

○ U.S. EPA Inspection

- EPA flyover of newly acquired assets using IR camera
- Two facilities had flares without a flame, but with apparent VOC emissions
- Management installed alarms to inform field operations of pilot flame loss on flares
- EPA issued NOV, company's responsiveness helped avoid civil penalty
- Hired air quality consultant to provide site inspections and compliance support



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CASE Study 1: Company A

□ Environmental Compliance Challenges

➤ Flares (continued):

○ Air Quality Consultant Field Inspection

- Inspected all production locations
- Identified flares lit at most locations, but smoking because air blowers turned off
- Operations acknowledged issue, but said blowers could not be turned on because they would blow out pilot flame
- Due to drop in production, determined flares significantly oversized



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CASE Study 1: Company A

□ Environmental Compliance Challenges

➤ Flares (continued):

○ Air Quality Consultant Field Inspection

- Notified company that unlit/smoking flares violate state rules & air permits
- Company seeking possible solutions (e.g., combining production streams to increase flare flows)
- Consultant revising air permits to allow bypass of flare and uncontrolled venting when production drops below certain level



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CASE Study 1: Company A

□ Environmental Compliance Challenges

➤ Flares (continued):

○ Air Quality Consultant Field Inspection

- In the interim, the danger exists that neighbors, people driving by or regulators may see smoking flares and take action
- EPA unlikely to be as understanding 2nd time



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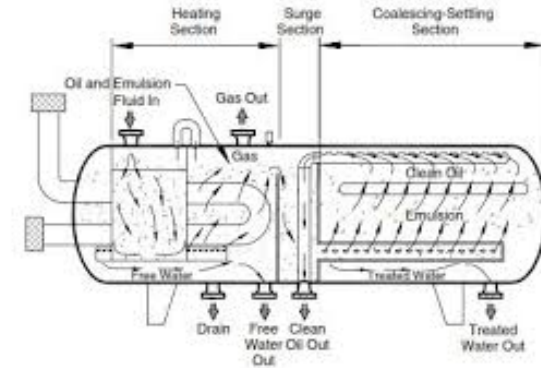
CASE Study 1: Company A

□ Environmental Compliance Challenges

➤ Heater Treaters:

○ Air Quality Consultant Field Inspection

- Burning untreated field gas, only permitted to burn sweet natural gas (issue arose when amine treaters removed)
- Additional heater treater installed with each new well drilled, not added to permits
- Revised air permits to authorize the burning of field gas and additional heater treaters, higher emissions included on annual emissions inventories for prior year



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CASE Study 1: Company A

□ Environmental Compliance Challenges

➤ Storage Tanks:

- Air Quality Consultant Field Inspection
 - VRTs upstream of oil, produced water storage tanks no longer in service, much higher flash emissions now occurring from tanks
 - Additional storage tanks added or existing out of service tanks not included in permits placed back into service when new wells drilled
 - Consultant revised air permits to authorize the higher/new tank emissions



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 1: Company A

□ Environmental Compliance Challenges

➤ Lessons Learned:

- Obtain and utilize environmental expertise to perform detailed environmental due diligence and ongoing compliance support to help ensure facilities can be operated in compliance when ownership changes
- When acquiring assets in an area with declining production, companies should pay special attention to how current operations and equipment have changed since air permits were originally obtained, especially the following:
 - ❖ Flared gas quantity and composition
 - ❖ Storage Tank throughputs and composition of produced liquids
 - ❖ Composition of fuel gas burned in fired equipment, including heater treaters



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 2: Company B

- ❑ A midstream oil & gas company headquartered and operating outside of Texas purchases some Central Texas Eagle Ford midstream assets.



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 2: Company B

□ History of Assets

- Assets purchased from a large midstream oil & gas company with knowledgeable and active corporate environmental group
- Detailed due diligence efforts completed by the company prior to acquisition that determine:
 - Facilities are not maintained as well as Company B would have liked, but
 - Potential environmental issues are manageable and air authorizations, including required Title V permits, are in place



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 2: Company B

□ Company Background

- Oil & gas operations in multiple U.S. states and offshore, newly acquired assets comprise company's first foray into Texas
- Well-staffed and experienced corporate environmental group based outside of Texas
- Developed a practice of going above and beyond in environmental compliance requirements, transparent in reporting to maintain good relationship with the agency and its neighbors



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 2: Company B

□ Environmental Compliance Challenges

- Corporate environmental group has little experience supporting operations in Texas
- Texas air permitting program different than most other states:
 - Large number of different mechanisms for authorizing construction and operations
 - Sites can have combination of these different authorization mechanisms, which was the case at this facility



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 2: Company B

□ Environmental Compliance Challenges

- Texas Non-Rule Standard Permit, primary authorization at these sites, can be confusing for the following reasons:
 - NRSP requirements appear applicable to equipment and processes at the facility, but don't apply unless modifications occurred after a fairly recent date. Not the case at this facility.
 - Multiple references in NRSP to tables and other paragraphs within text difficult to determine actual requirements



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CASE Study 2: Company B

□ Environmental Compliance Challenges

➤ TCEQ policy: Issue NOVs for any Title V deviations reported

➤ Confusing TX permitting requirements combined with Company B's practice of being completely transparent in reporting and the TCEQ's enforcement policies, resulted in the following:

- Semi-annual Title V Deviation Report for one of its facilities included deviations against requirements that weren't actually applicable at that facility
- TCEQ issued NOV for these reported deviations
- TCEQ later understood these weren't actual permit violations, did not levy a civil penalty, but did not rescind the associated NOV



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CASE Study 2: Company B

□ Environmental Compliance Challenges

➤ Fallout

- NOV open to the public and could:
 - Affect public opinion during future expansion projects in the area
 - Negative factor in penalty assessment calculations for future NOVs at TX facilities
- This incident:
 - Raised TCEQ focus on affected facility and company in general
 - Upset company executive leadership:
 - Expected near 100% compliance
 - Setting negative precedent with TCEQ and Texas public



Environmental Compliance Challenges With Today's Oil & Gas Acquisitions

CASE Study 2: Company B

□ Environmental Compliance Challenges

➤ Lessons Learned

- Even companies with large, experienced environmental departments can experience issues when trying to manage compliance in states, in which they don't have much experience.
- Companies acquiring assets in states, in which they have never operated, may want to utilize local environmental expertise to help manage compliance and reporting until permanent environmental staff gets up to speed.



Questions for Pete?

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Next Session – 3:15pm-4:00pm

1. Reduce Air Permitting Costs Through Accurate Project Emissions Increase Calculation – Dallas Ballroom D1
 - Chase Perry, Civil & Environmental Consultants, Inc.
2. Drilling Mud: Waste for Reuse? A Texas Study – Dallas Ballroom D2
 - Julie Morelli, POWER Engineers, Inc.
3. Regulation of Ephemeral Waters Under the Proposed Redefinition of Waters of the U.S.: Implications on the Oil and Gas Industry – Dallas Ballroom D3
 - Bruce Flowers, Kane Russel Coleman Logan PC & C. Keith Bradley, REP, CWB, Groundwater Environmental Services, Inc.
4. More Sustainable LNAPL Remediation: It's Already Happening, You Just Have To Look – Dallas Ballroom A1
 - Daniel Wascom & Joann Dyson, Ph. D, GHD Services, Inc
5. Unconventional Oil and Gas: Interactions with and Implications for Groundwater – Dallas Ballroom A2
 - Brett A. Miller, Phelps Dunbar LLP
6. Ecological Construction Techniques for Pipelines and Well Pads – Dallas Ballroom A3
 - Richard Pais, Groundwater and Environmental Services, Inc.