

# *909.j Produced Water Quality Analyses*

## Operator Training

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**COLORADO**  
Oil & Gas Conservation  
Commission  
Department of Natural Resources

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- **909.j Produced Water Quality Analyses.** Beginning January 15, 2021, Operators will submit an initial water quality analysis for produced water for **each Well** from which produced water is placed into a permitted or registered Pit, including Pits that were constructed prior to January 15, 2021.
  - Initial sampling must be conducted in first year following January 15, 2021 and submitted to COGCC no later than July 15, 2022 or prior to Pit closure or Well plugging as applicable.
  - For all Pits, Operators will collect and analyze a subsequent produced water sample for any new Well that contributes water to a Pit. For all Pits, Operators will collect and analyze a subsequent produced water sample at any time the Director has reason to believe the water quality in the Pit has changed. For all Pits, the Director may require more frequent or additional sampling if variable water quality is observed.



- 909.j Produced Water Quality Analyses

### Data submittal

- All data will be submitted by Form 43 with a suitable electronic data deliverable (EDD) generated by the laboratory, PDF of lab reports, summary of field measurements, other field notes and a record of Operator inspection of Pit at time of sampling. Operators need to ensure that the laboratory utilized for these analyses are capable of producing an EDD in one of the two COGCC accepted formats prior to sample collection.
- Help regarding the EDD requirements can be found at: [https://cogcc.state.co.us/documents/about/COGIS\\_Help/EnviroDB/EnviroDB.htm](https://cogcc.state.co.us/documents/about/COGIS_Help/EnviroDB/EnviroDB.htm)
- Help regarding the EDD Form 43 upload process can be found at: [https://cogcc.state.co.us/documents/reg/Forms/instructions/Form\\_Instructions/Form\\_43\\_Instructions\\_09282018.pdf](https://cogcc.state.co.us/documents/reg/Forms/instructions/Form_Instructions/Form_43_Instructions_09282018.pdf)



# 909.j Produced Water Quality Analyses Lined Pits Subsequent Sampling

- Subsequent produced water samples of Well(s) that flow to lined Pits will be collected between 33 and 39 months after the initial sampling and analysis event
- Data must be submitted to COGCC by Form 43 within 3 months of sample collection



# 909.j Produced Water Quality Analyses Unlined Pits Subsequent Sampling

- Subsequent produced water samples of Well(s) that flow to unlined Pits will be collected on an annual basis after the initial sampling and analysis event
- Data must be submitted to COGCC by Form 43 within 3 months of sample collection



## 909.j Produced Water Quality Analyses Multi-well Pits

- As an alternative to sampling produced water from each Well that flows to a multi-well Pit
- Operators can request to collect and analyze produced water samples from representative Wells in the same formation in each field or unit by submission of a form 4 submitted for the Pit.
- Such alternative sampling and analysis programs are subject to Director review and approval.
- For such an alternative sampling plan to be approved the Operator will supply data that demonstrates the proposed sampling is representative of a formation or comingled formations is a discrete geographic area within the same field or unit.



## 909.j Produced Water Quality Analyses Sample Collection

- If Operator has the ability to collect a produced water sample directly from each Well or from separation equipment that serves an individual Well, then Operator will collect one sample per event for each Well.
- In cases where all Wells flow multiphase fluids to a single separator at a central location, then Operator will collect a produced water sample from the common separator or other shared separation equipment, but upstream of the Pit.
- If no other produced water sampling options are available, Operator will collect a produced water sample from the discharge pipe into the Pit.
- **Samples of standing/stagnant produced water already discharged into the Pit are not acceptable for compliance with Rule 909.j.**

## 909.j Produced Water Quality Analyses

### Sample Analysis

- Operator will analyze each produced water sample required by Rule 909.j.(1).A-K, and the 800 Series Rules for the target analytes in Table 1. If requested by the Director, the Operator will analyze samples for additional constituents that may be present.
- Operator will analyze samples in an accredited laboratory using established methodologies. For those analytes with Groundwater threshold concentrations listed in WQCC Regulation 41, as incorporated by reference in Rule 901.b, the analytical technique will be capable of achieving, and will achieve, reporting limits at concentrations less than the WQCC Regulation 41 thresholds in the matrix submitted. Data which include analytes indicated as not detected by the lab with limits of quantification equal to or greater than the thresholds from WQCC Regulation 41 will not meet the requirements of Rule 909.j and resampling and re-analysis will be required for those analytes. The Director may review the analytical standard used for each analyte and may request the analysis be run by a different method.



## 909.j Produced Water Quality Analyses Target Analyte List for Sample Analysis

- Operator will analyze each produced water sample required by Rule 909.j.(1).A-K, and the 800 Series Rules for the target analytes in Table 1 (of the 909.j. guidance document). If requested by the Director, the Operator will analyze samples for additional constituents that may be present.
- See Table 1 of the guidance document for more details regarding required analytes, and also for guidance with respect to required detection limits for analytes reported by the as not detected.
- The 909.j. guidance document can be accessed on this page and is listed under form 43: <https://cogcc.state.co.us/sb19181.html#/guidance>
- A Model Sampling and Analysis Plan for produced water sampling and analysis is in preparation by COGCC staff.

# *Permitted Pits*

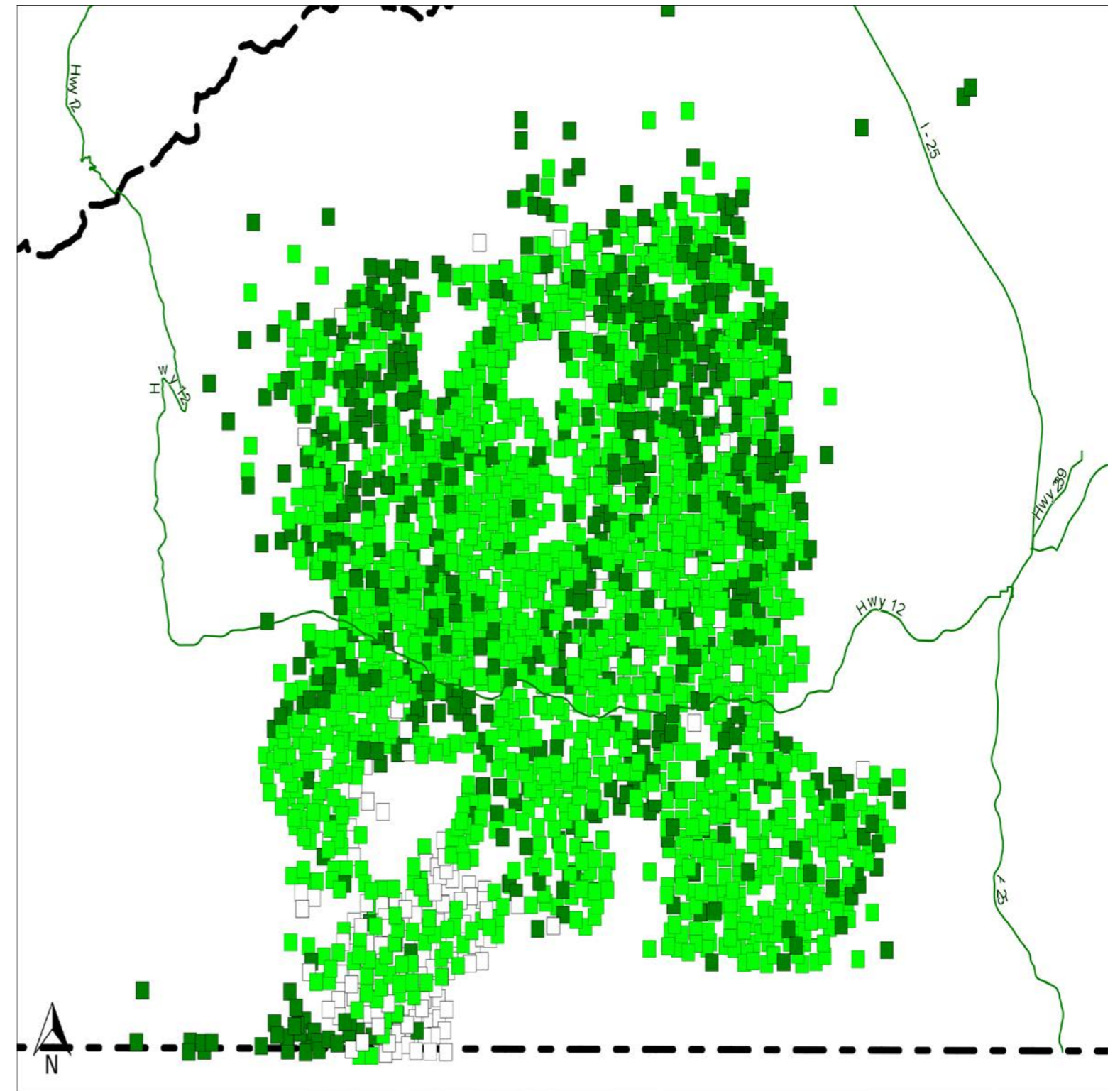
## *Las Animas County Area as example*

Operator to inspect at time of sample collection and submit record of inspection as PDF attachment via Form 43 process.

Rule 909.a. requires

Operators will ensure that the Pits they operate are:

- (1) Properly permitted through a Form 15 approved by the Director, or registered in their names with an active Pit Facility ID;
- (2) [Accurately mapped](#); and
- (3) Listed according to current facility records in the Commission's database. Operators may update facility records using a Form 15.



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