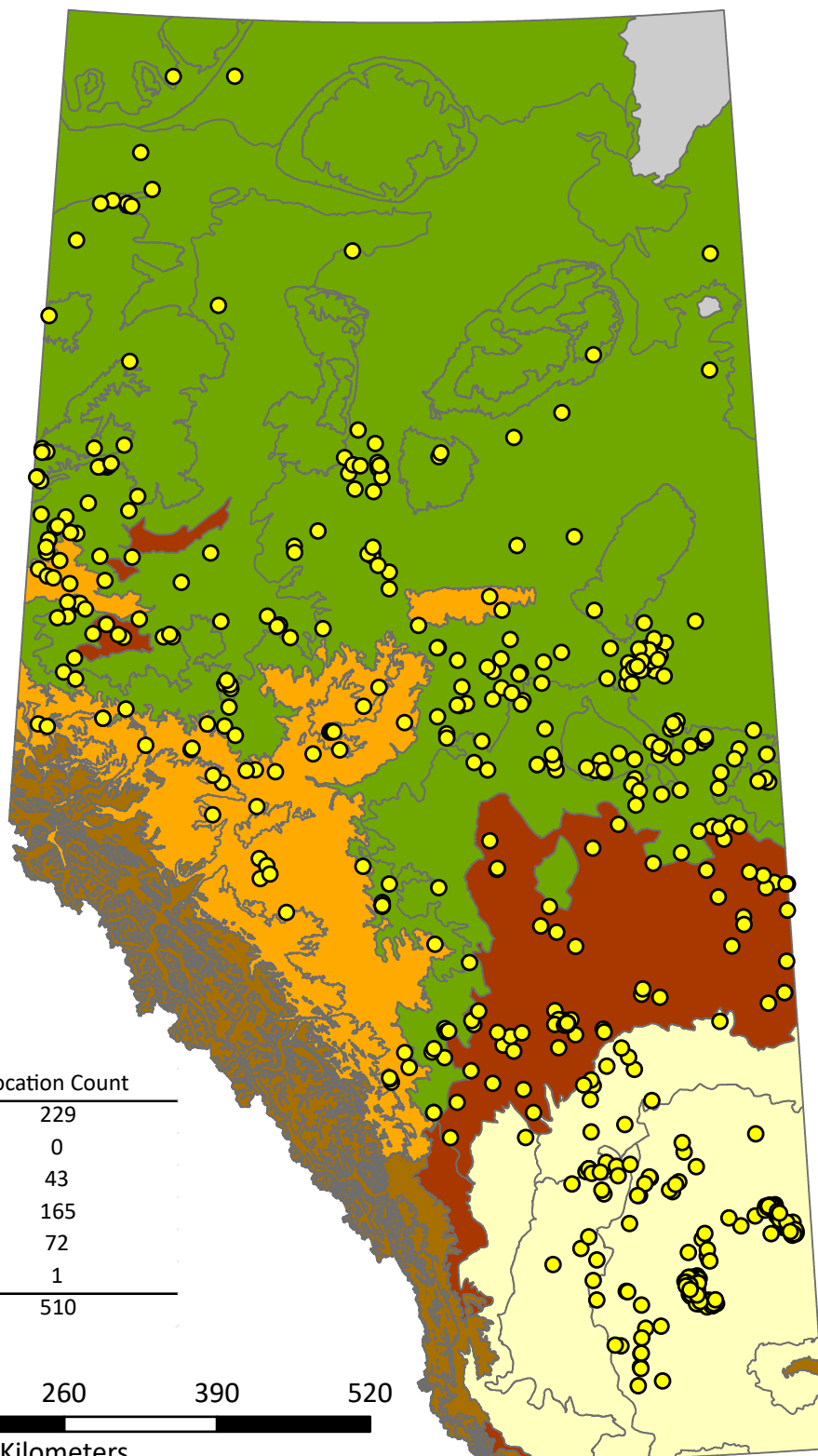




# FIGURES










Natural Region	Location Count
Boreal	229
Canadian Shield	0
Foothills	43
Grassland	165
Parkland	72
Rocky Mountain	1
Total	510

0 65 130 260 390 520  
Kilometers



**NORTH SHORE**  
**Environmental Consultants**  
# 143, 201 Kaska Road  
Sherwood Park, Alberta  
T8A 2J6  
(780) 467-3354

#### Natural Regions of Alberta

-  Boreal
-  Canadian Shield
-  Foothills
-  Grassland
-  Parkland
-  Rocky Mountain
-  Candidate Locations

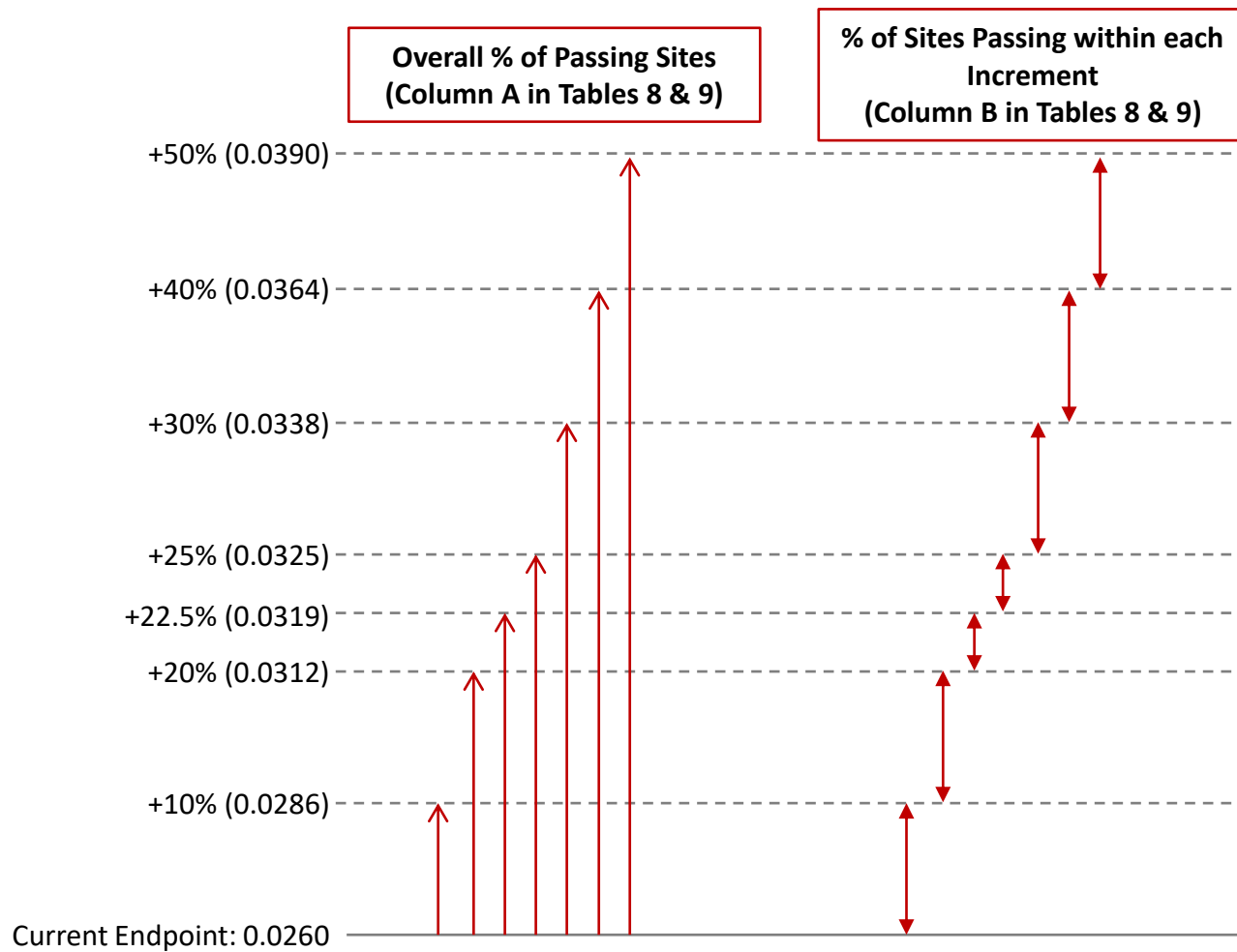
#### Figure 1: GIS Map of Candidate Site Locations

Scale: 1:5,977,078

JUNE 2020

Projection: NAD 1983 CSRS 10TM AEP Forest.  
Source: Alberta Parks 2017, Cenovus Energy Inc, Canadian Natural Resources Ltd., Husky Energy Inc., Orphan Well Association.

Figure 2: Diagram of Increased Endpoint Evaluation Methodology for Salt Calculation

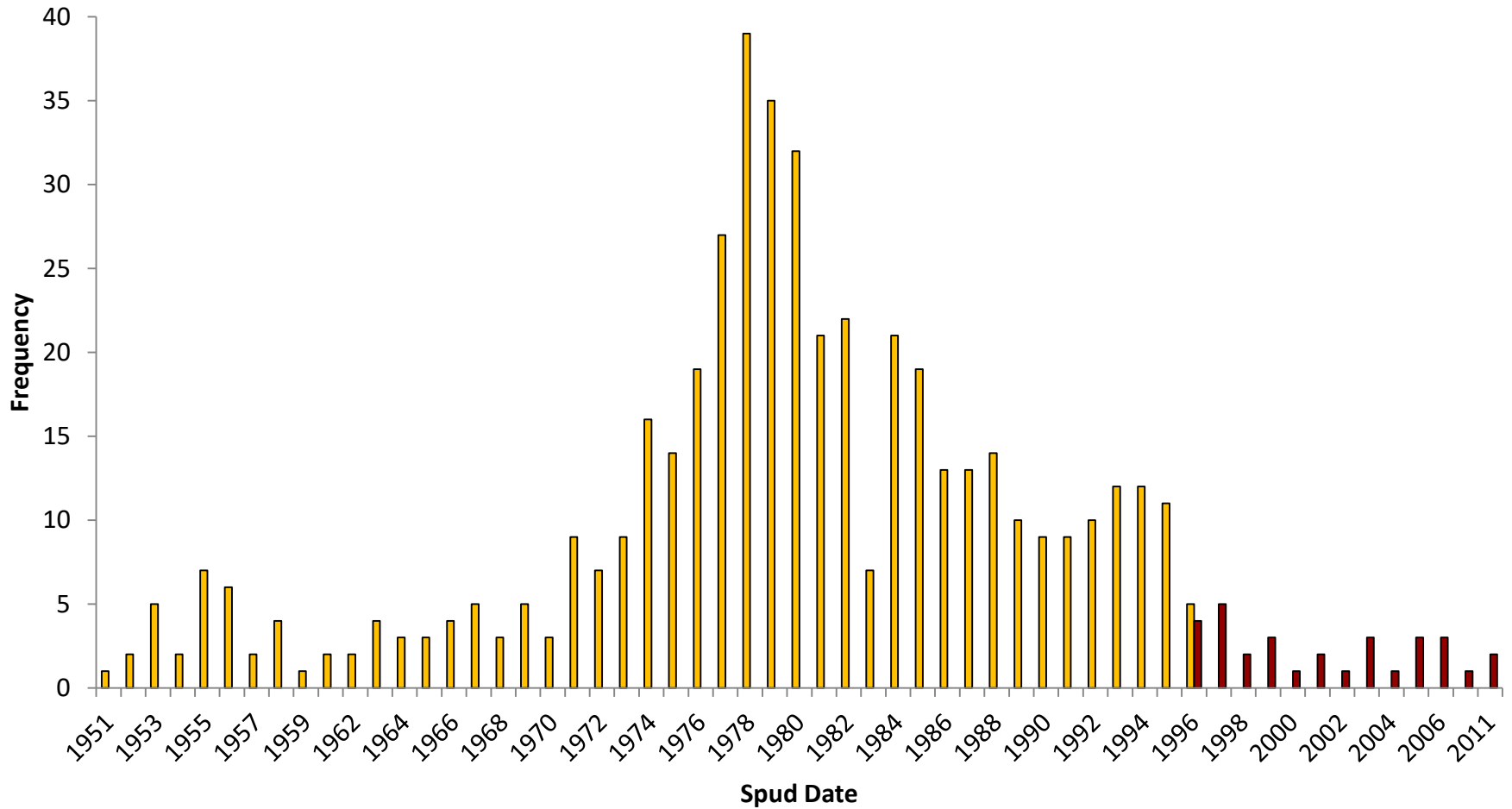




## APPENDIX - GRAPHS



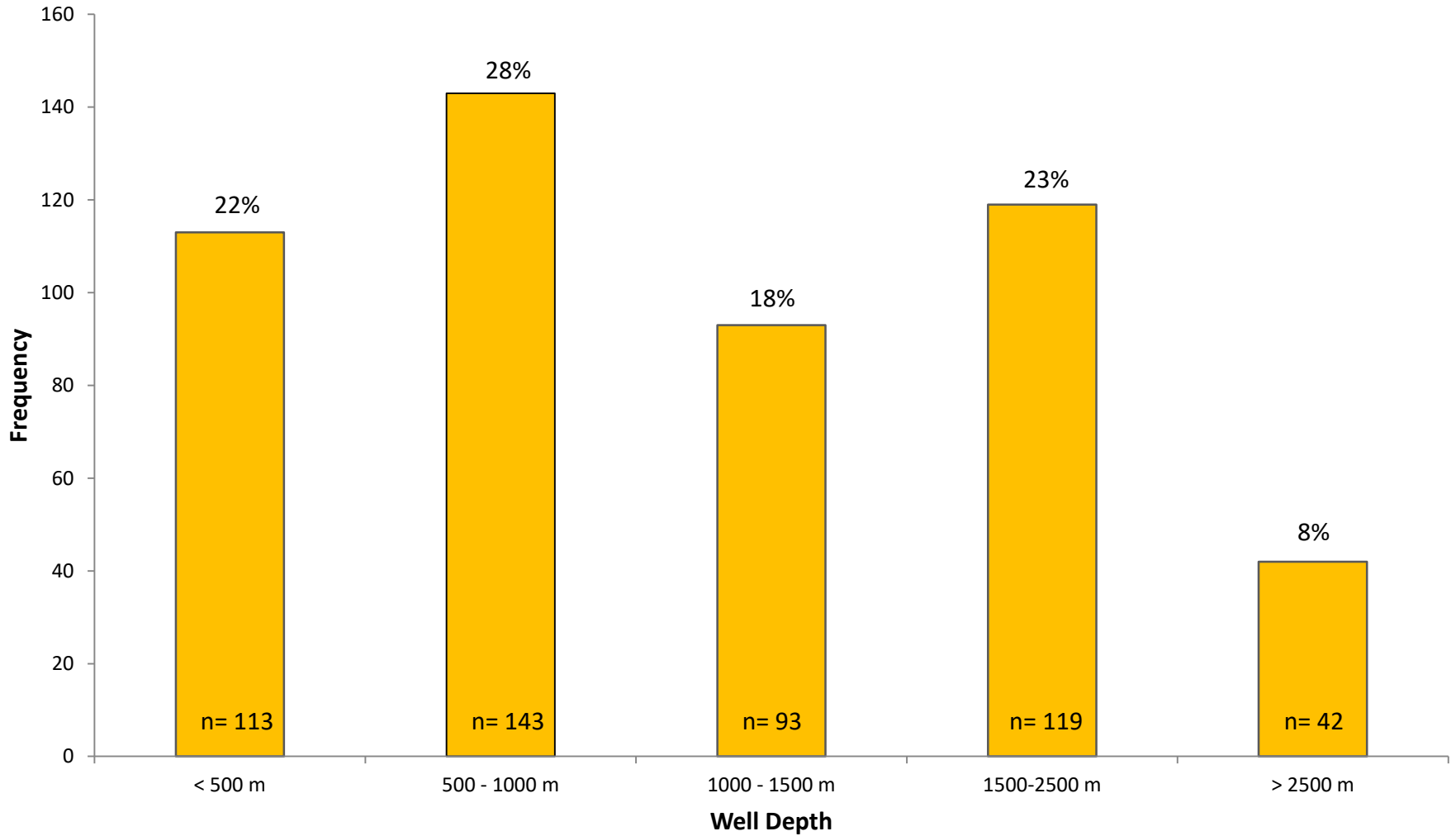
**Graph 1: All Sites – Spud Date Histogram**



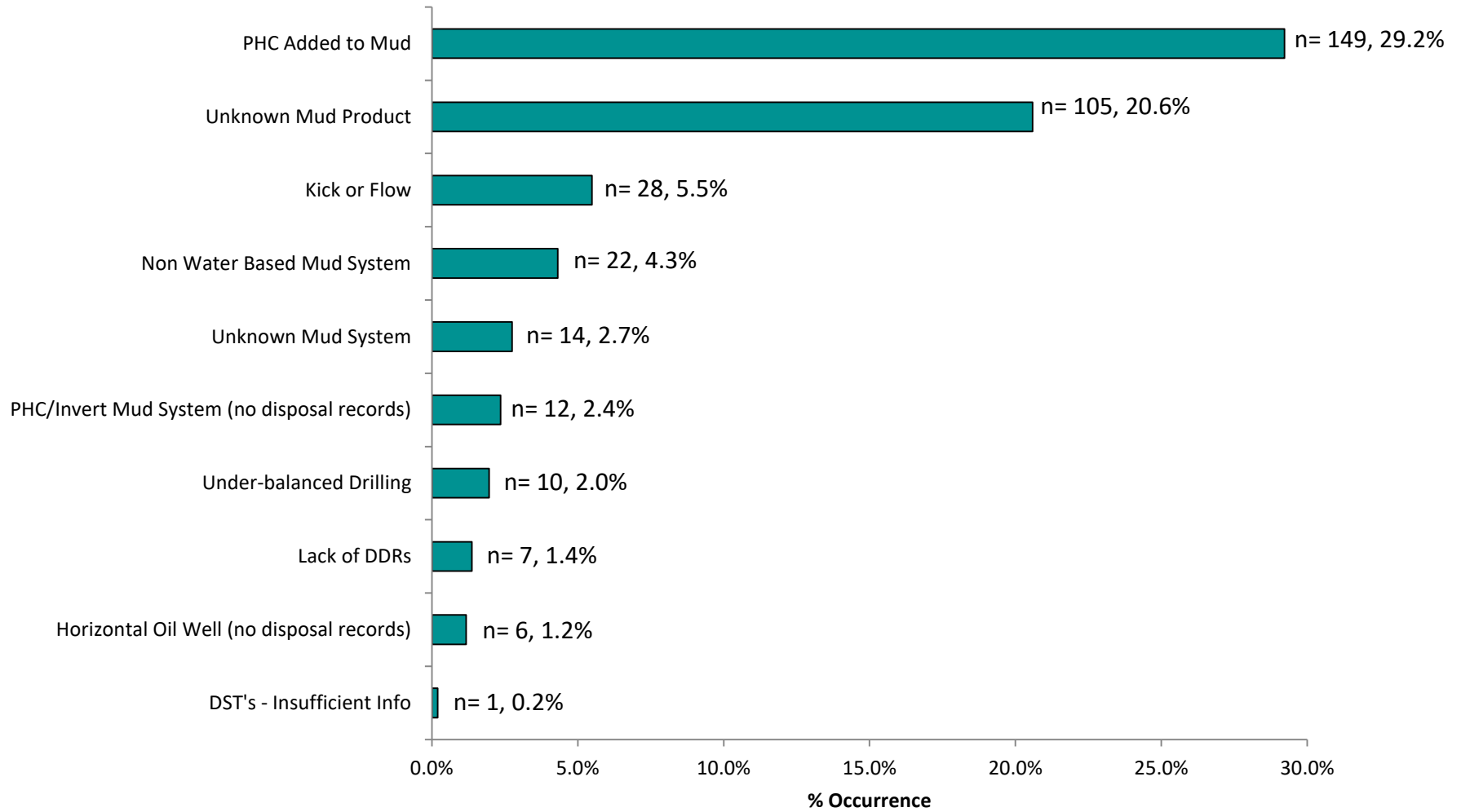
Pre Oct. 22, 1996 (1:1 mix ratio)  
n=479, 93.9%

Post Oct. 22, 1996 (3:1 mix ratio)  
n=31, 6.1%

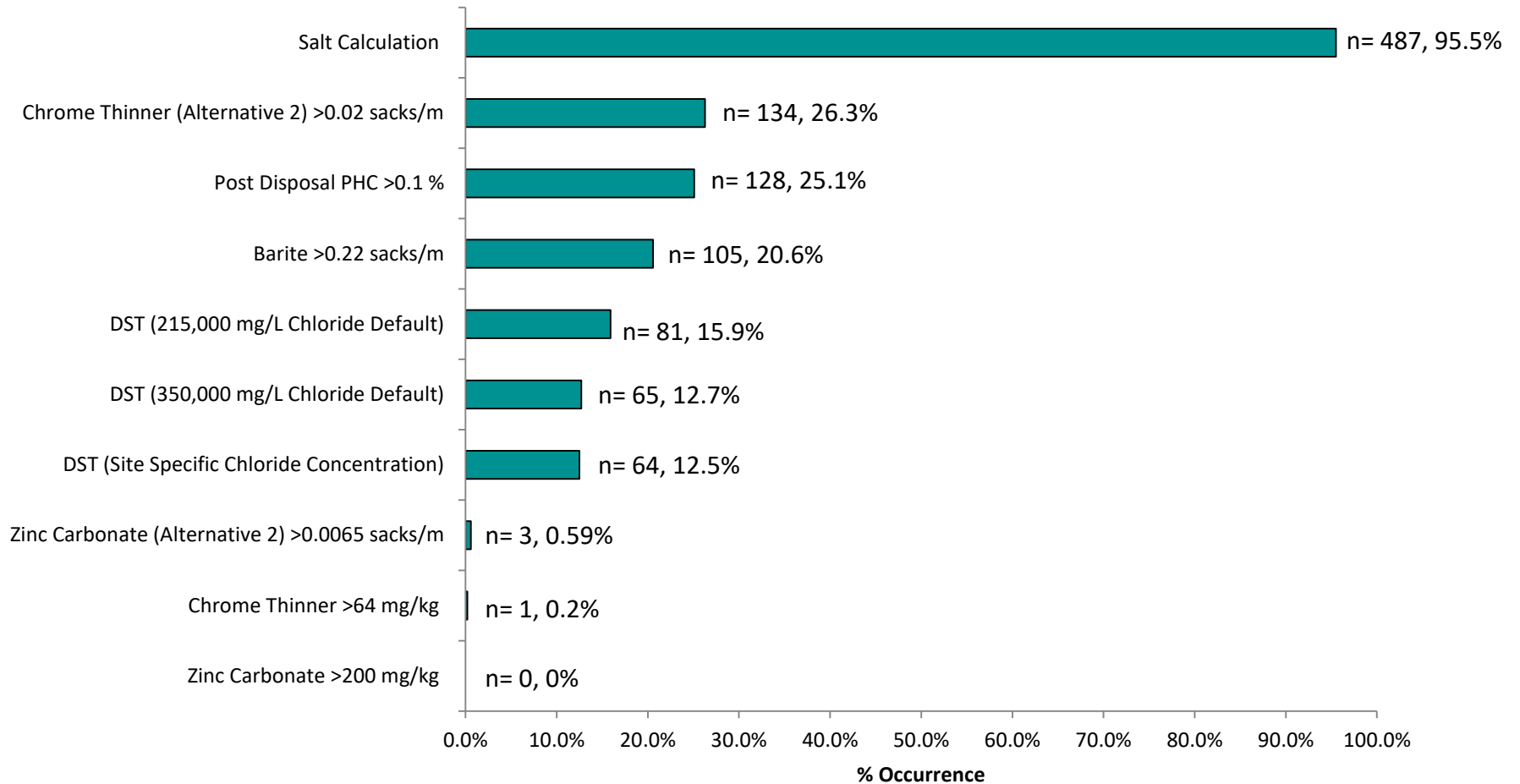
**Graph 2: All Sites - Well Depth Histogram**



### Graph 3: All Condition Triggers - % Occurrence



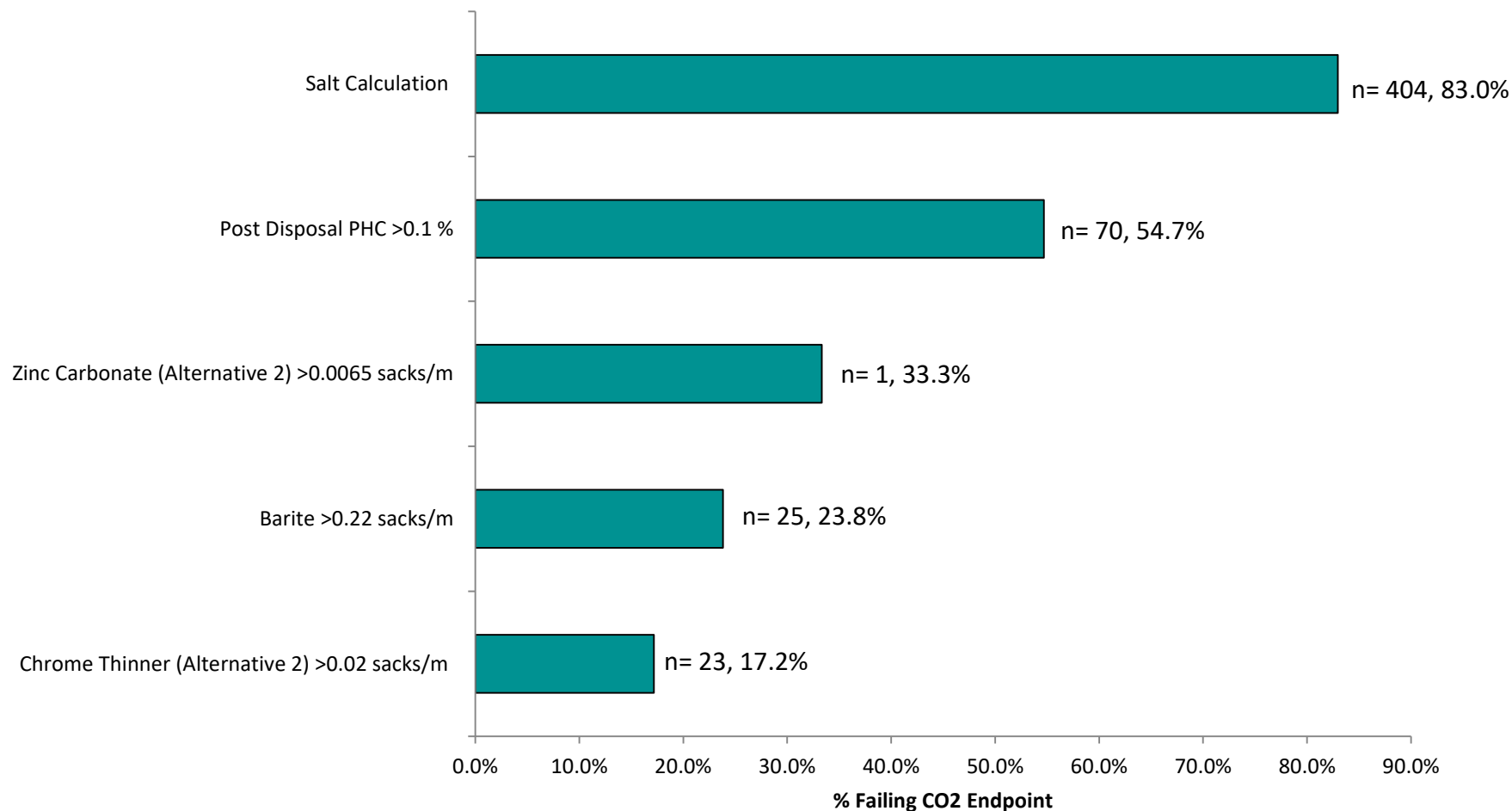
**Graph 4: All Calculation Triggers - % Occurrence**



Note: % Occurrence includes all sites where the calculations were completed (both passing and failing CO<sub>2</sub> endpoints)

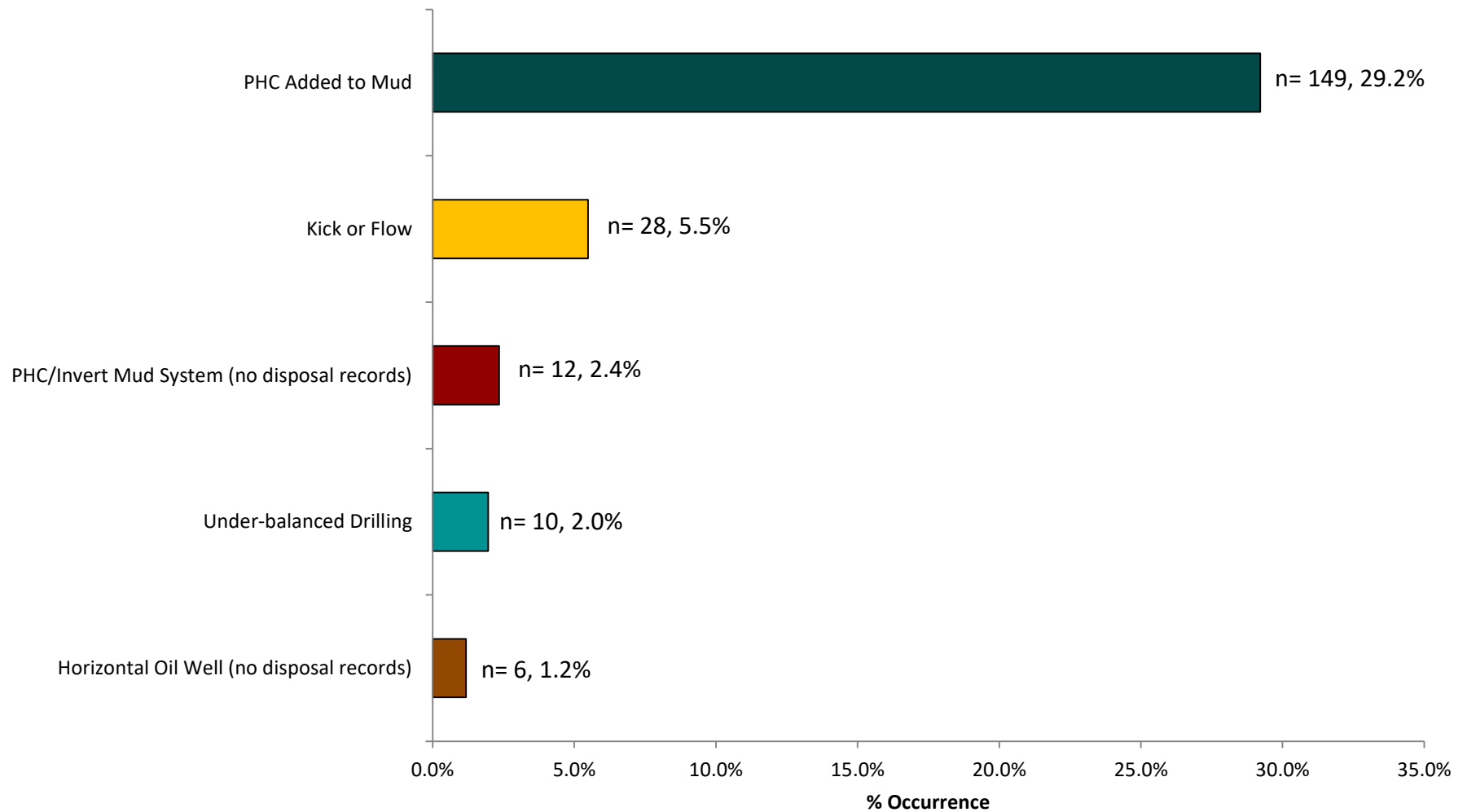


### Graph 5: All Calculation Triggers - % Failing CO2 Endpoint

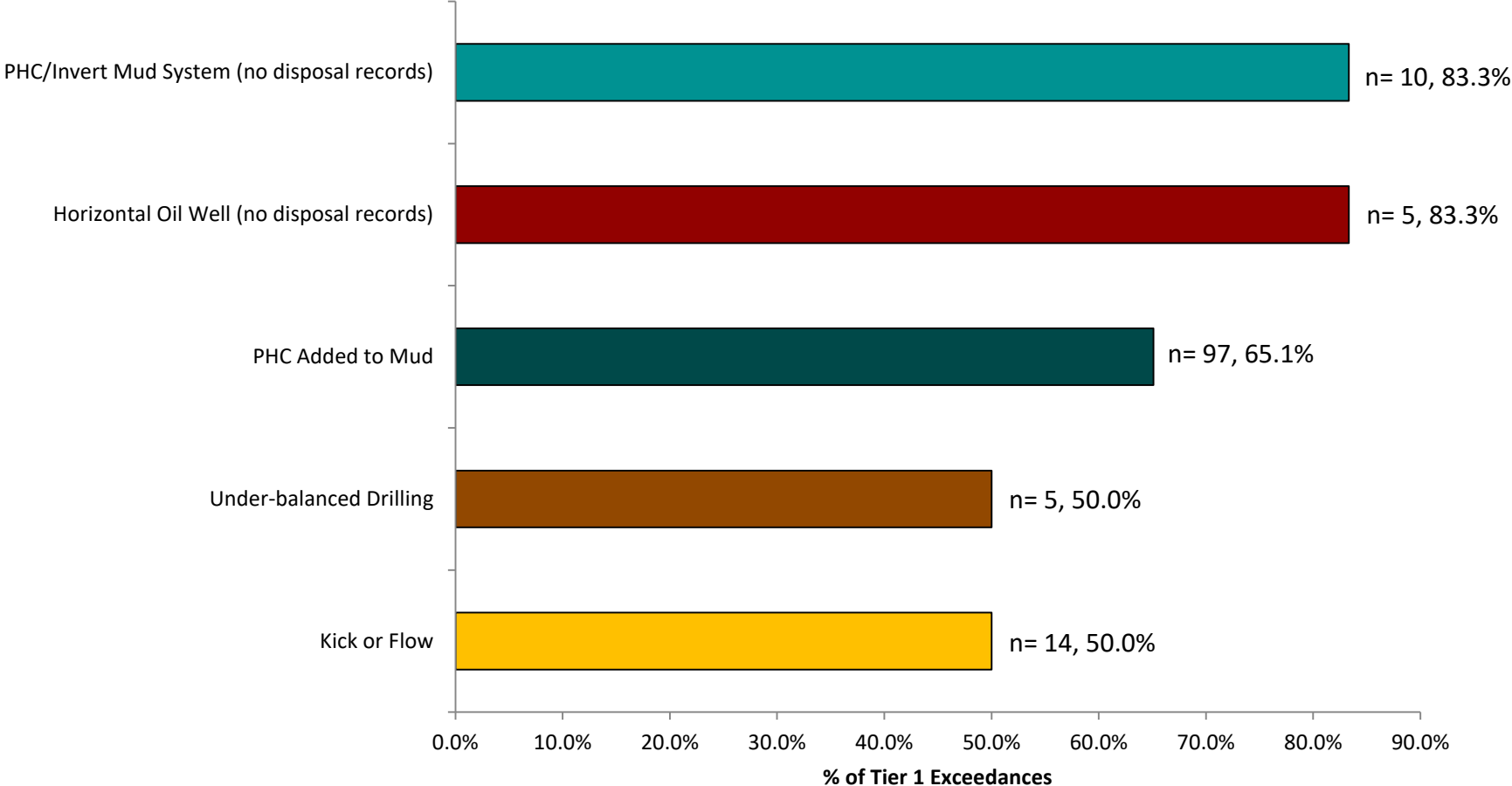


Note: %of sites Failing the CO2 Endpoint was calculated per total occurrences of each trigger.

### Graph 6: PHC - Condition Triggers % Occurrence

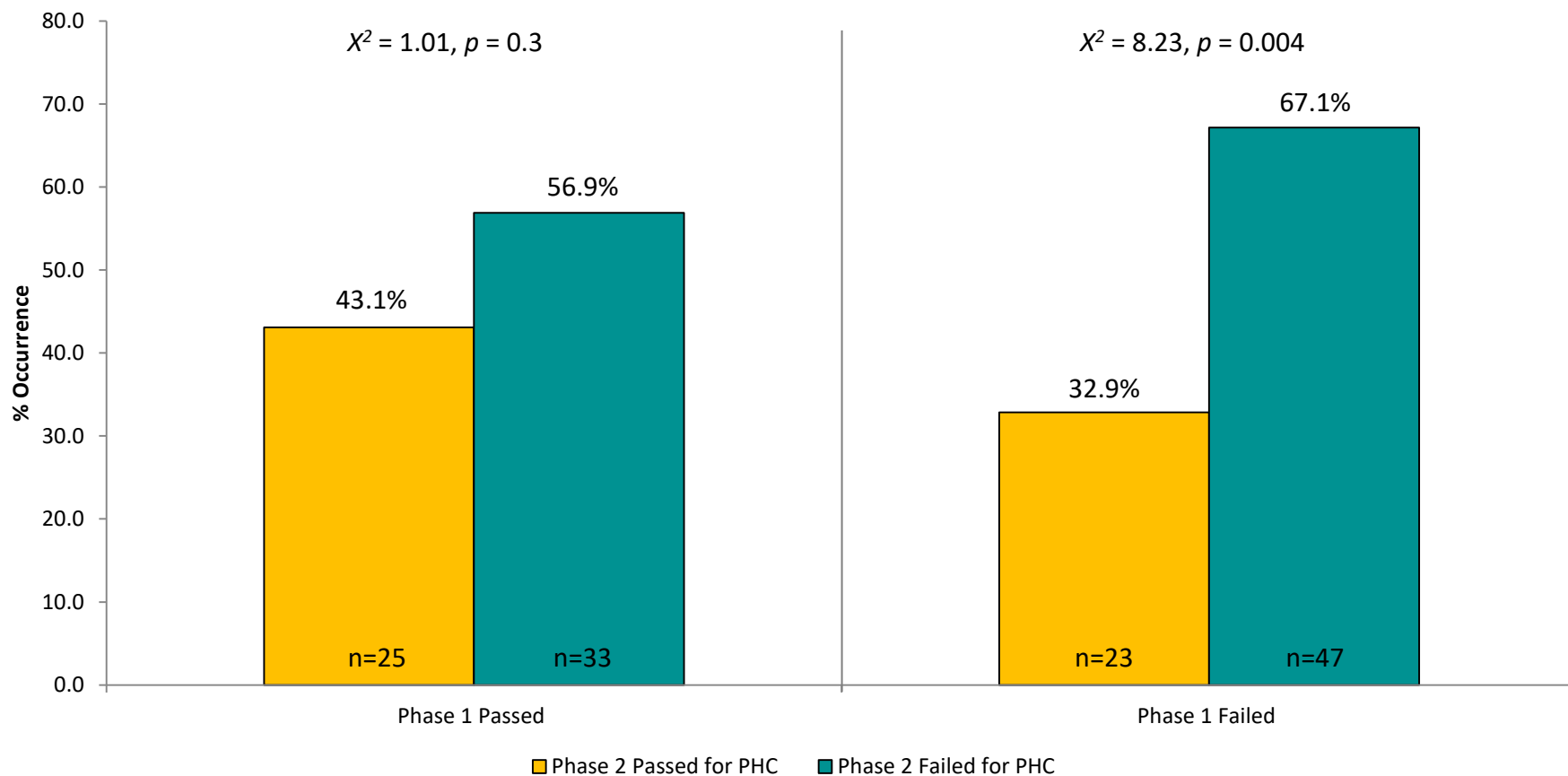


**Graph 7: PHC Condition Occurrence - % of Tier 1 Exceedances**



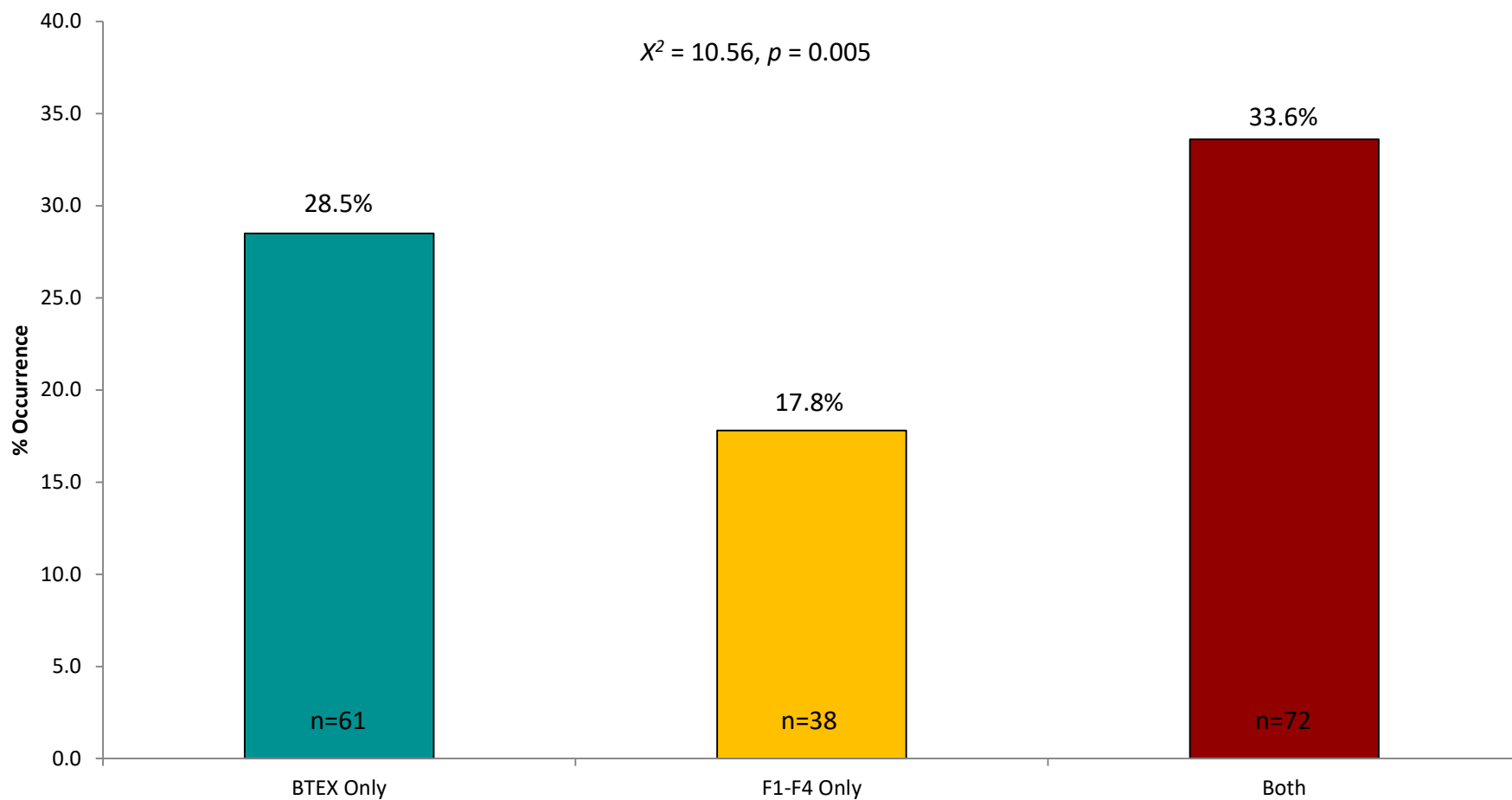
Note: % of Tier 1 Exceedances was calculated per total occurrences of each PHC Condition.

**Graph 8: PHC - Comprison of CO2 Post-Disposal PHC Values to Phase 2 Outcomes**



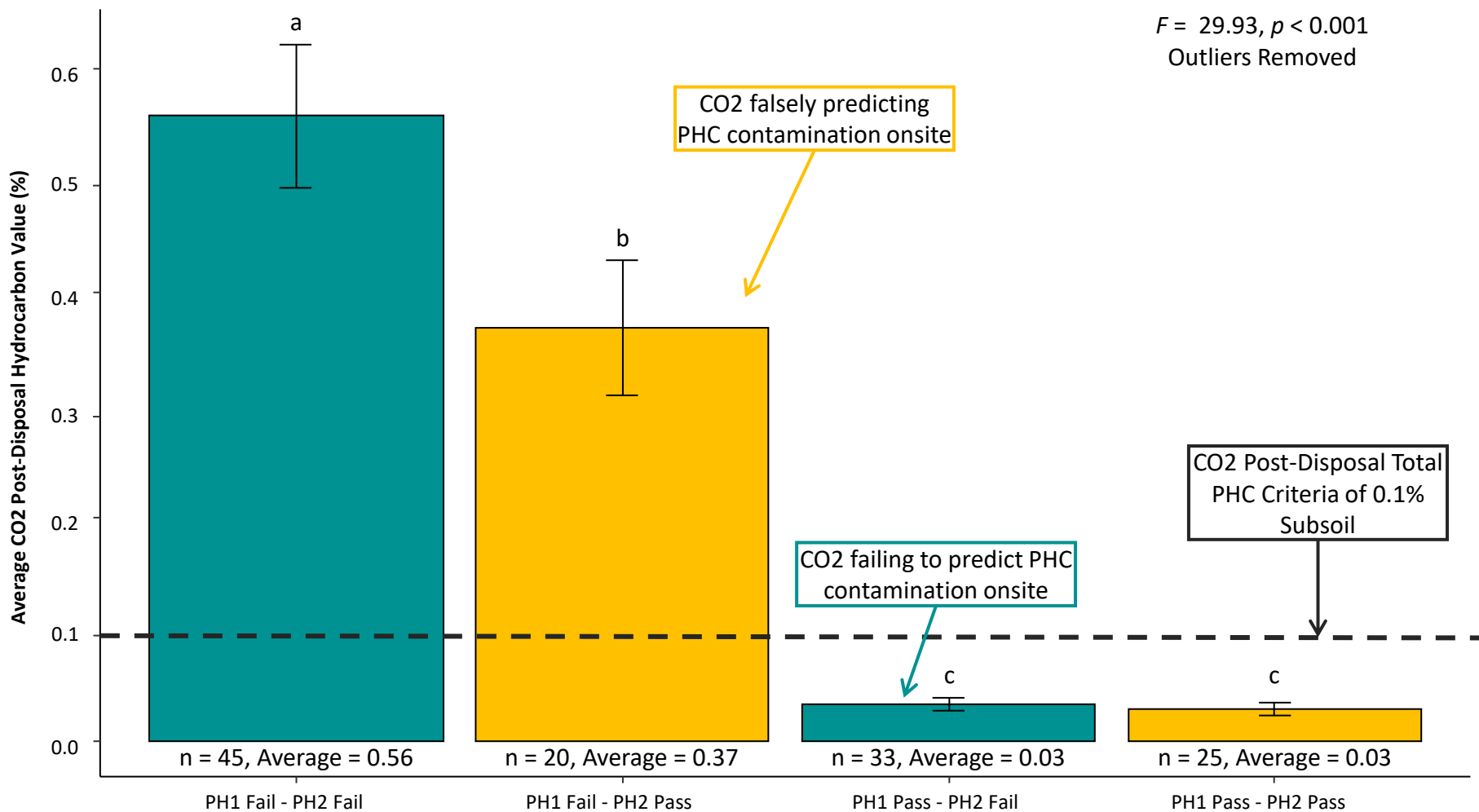
Note: CO2 Post-Disposal PHC endpoint of 0.1% total PHC in subsoil. Includes all sites where the calculation was completed (both passing and failing the 0.1% total PHC endpoint).

**Graph 9: PHC - % of Phase 2 Exceedances by Hydrocarbon Type with No PHC Triggers in CO2**

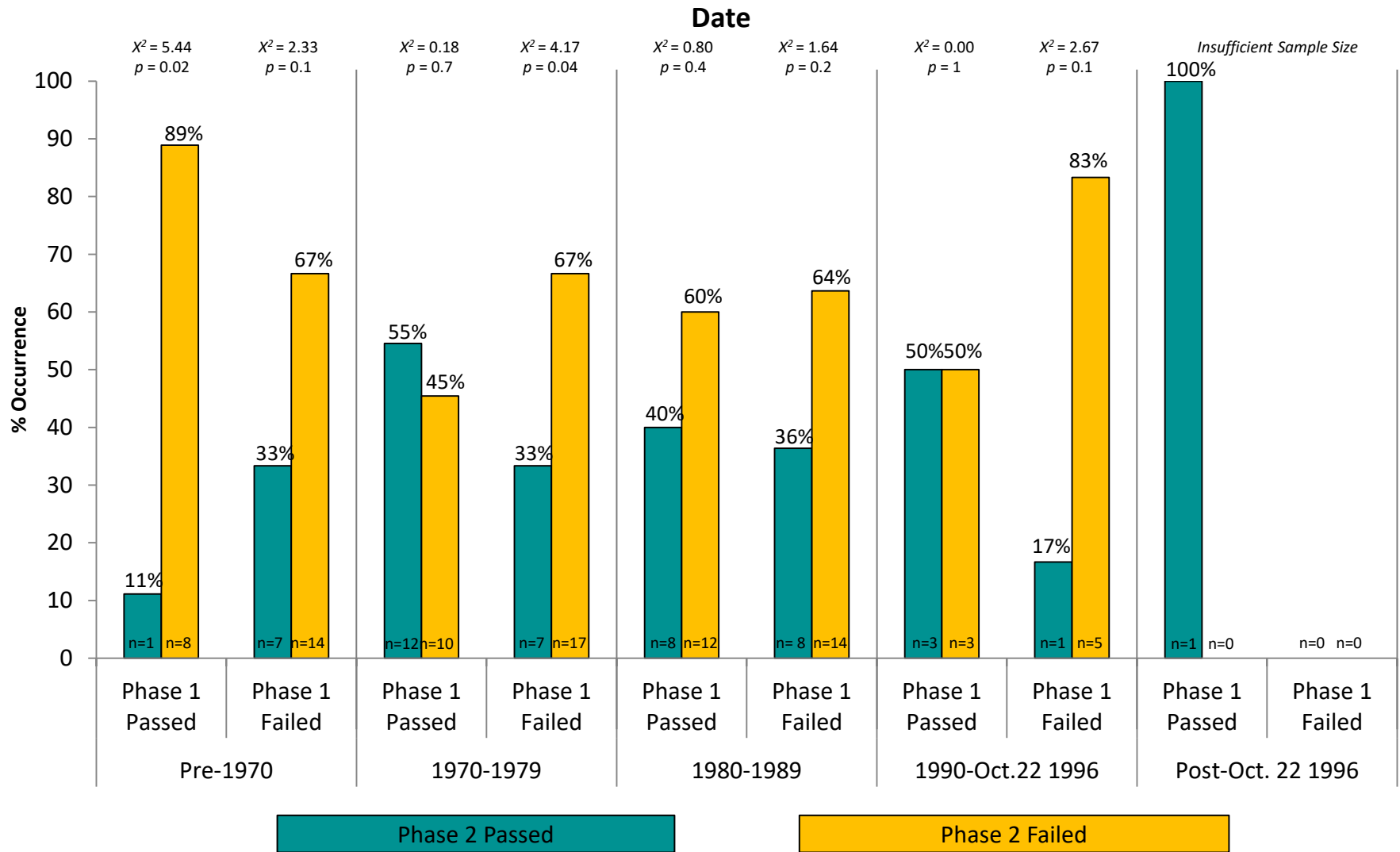


Note: Includes all sites where no PHC or other condition or calculation triggers were identified in CO2; however, sampling for PHC was completed during the Phase 2.

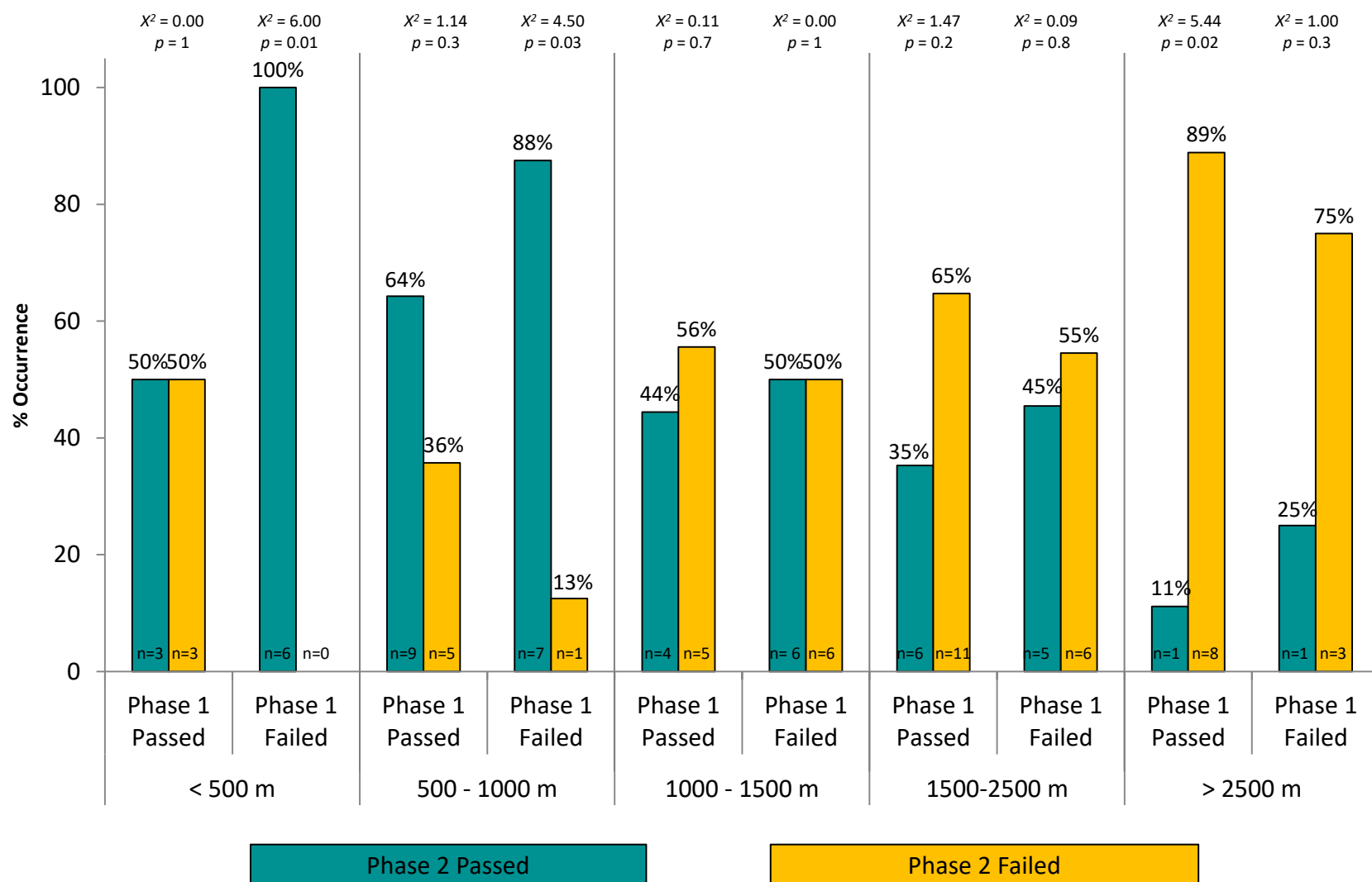
**Graph 10: PHC - Post-Disposal Hydrocarbon Values Based on Phase 1 and Phase 2 Outcomes**



**Graph 11: PHC - Comparison of Post-Disposal PHC Trigger to Phase 2 Outcomes by Spud**

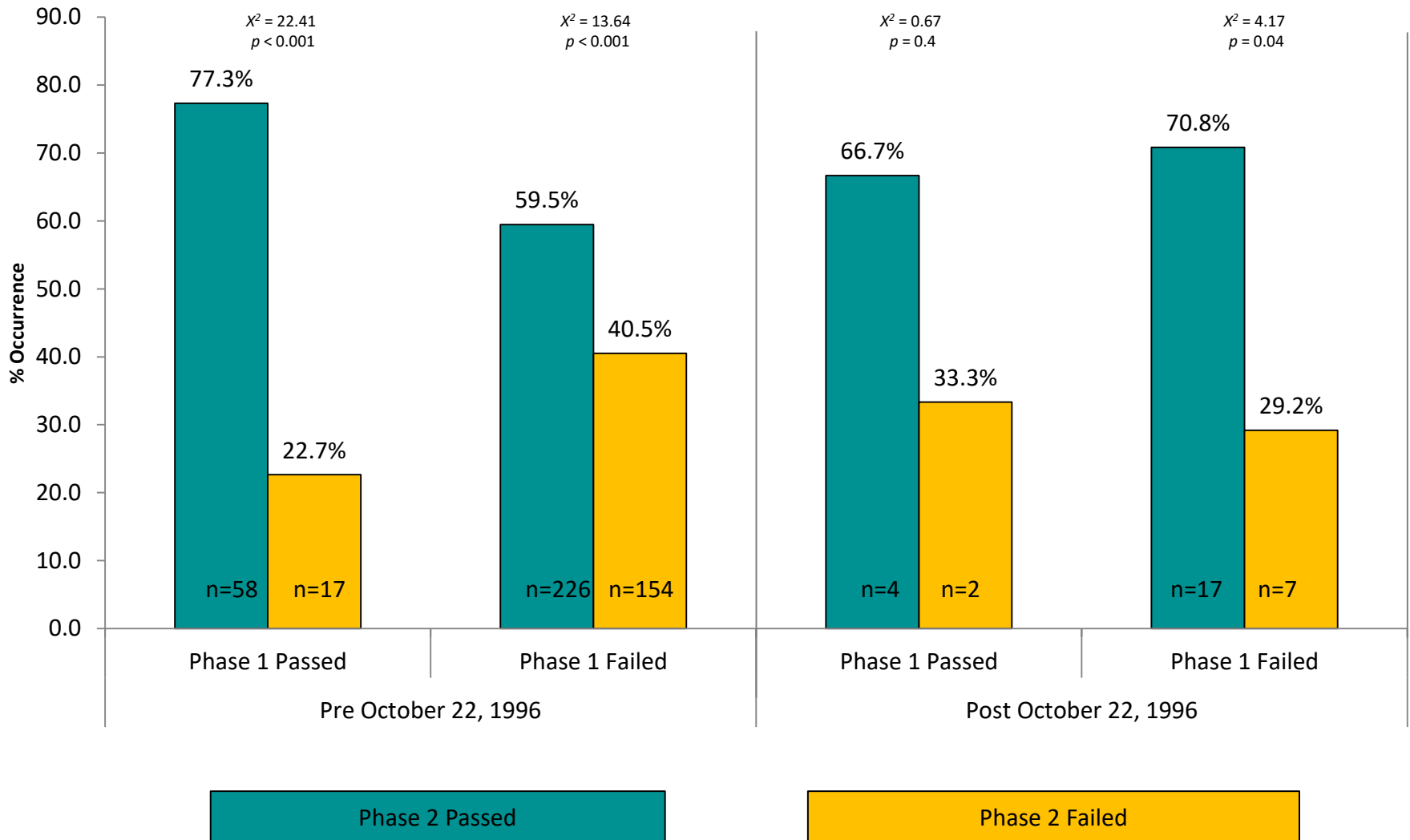


**Graph 12: PHC - Comparison of Post-Disposal PHC Trigger to Phase 2 Outcomes by Well Depth**

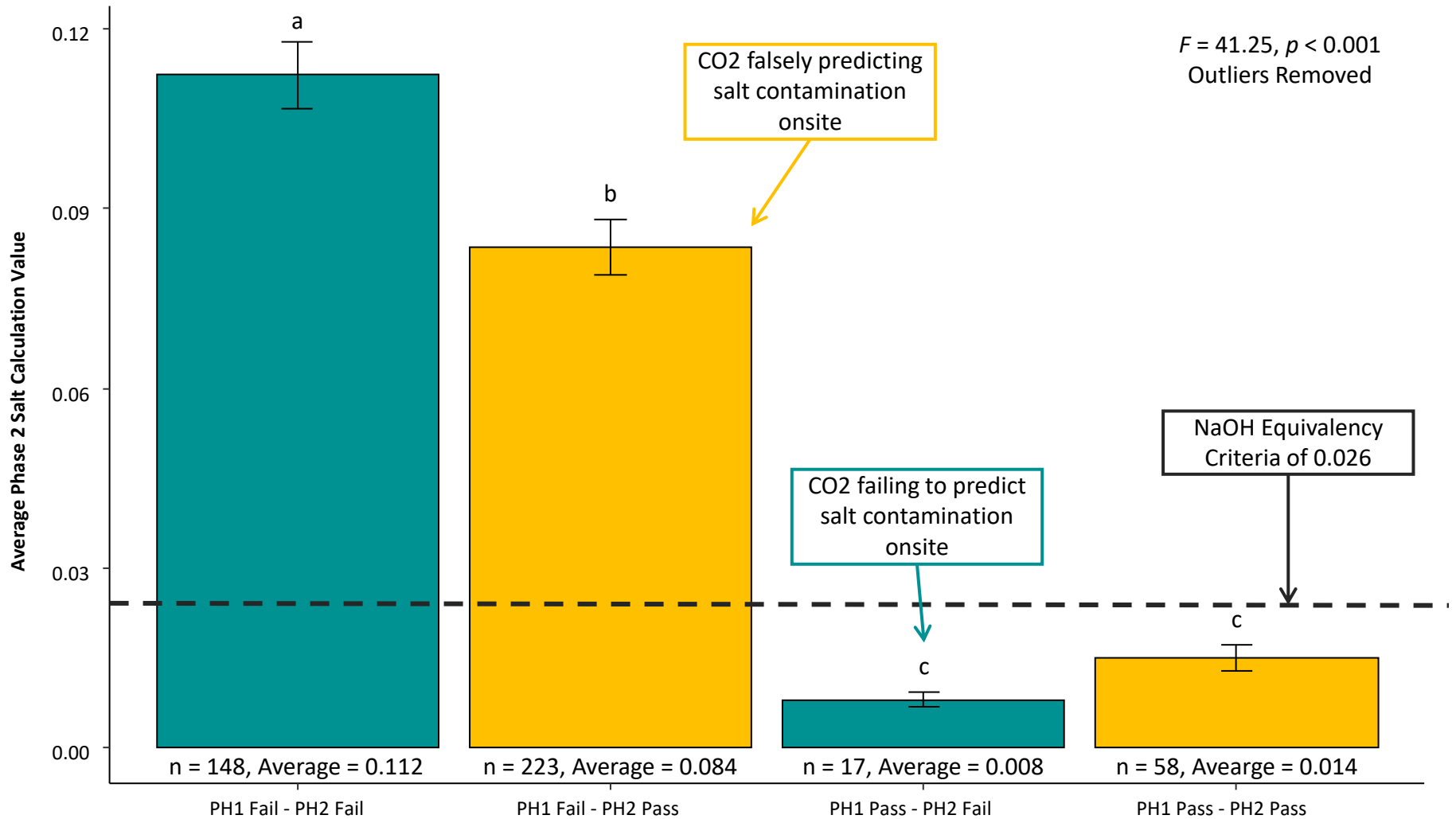




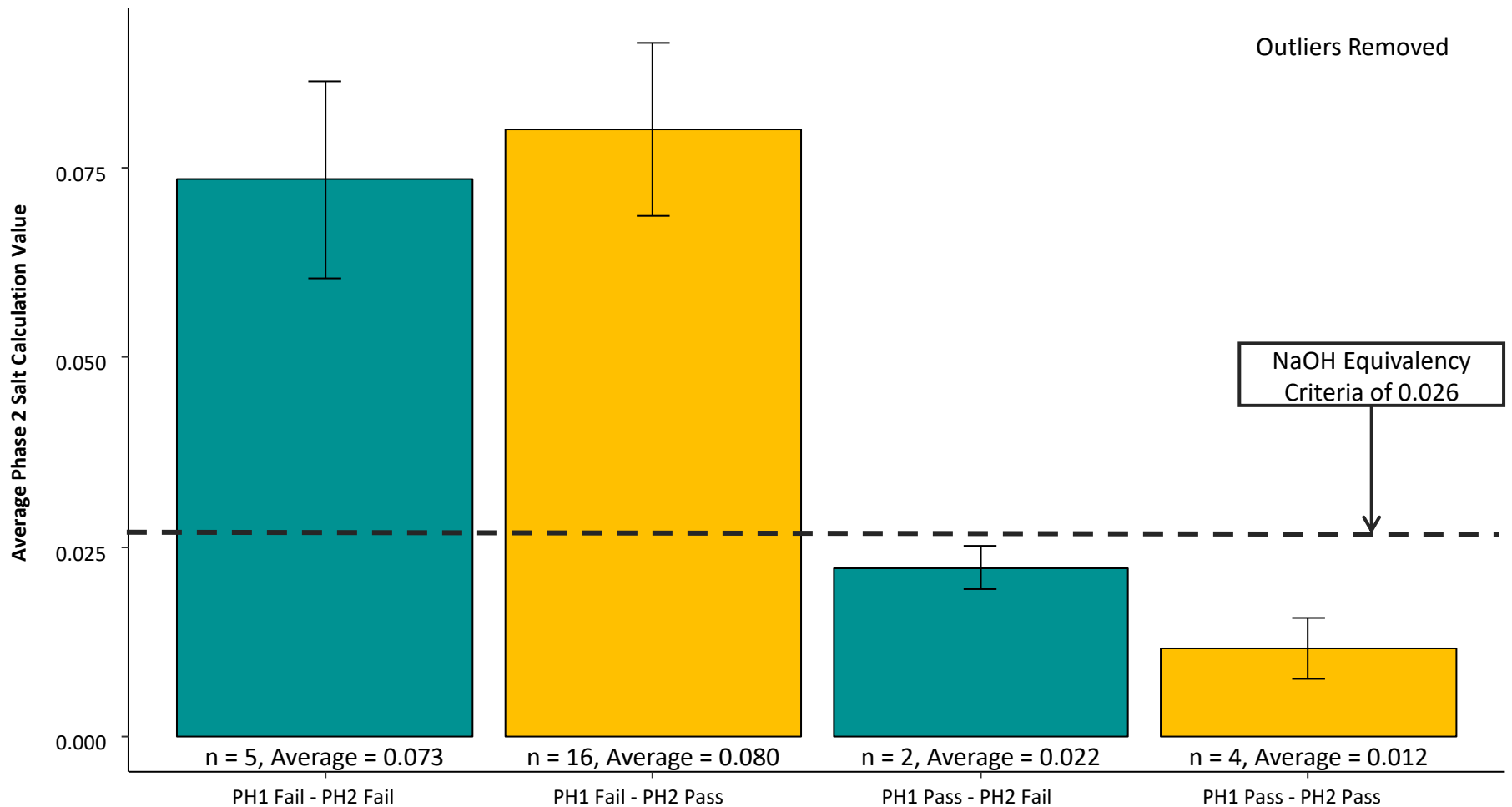
**Graph 13: Salinity - Comparison of CO2 Salt Calculation Values to Phase 2 EC Outcomes**



**Graph 14: Salinity - CO2 Salt Calculation Values based on Phase 2 EC Outcomes (Pre-October 22, 1996)**

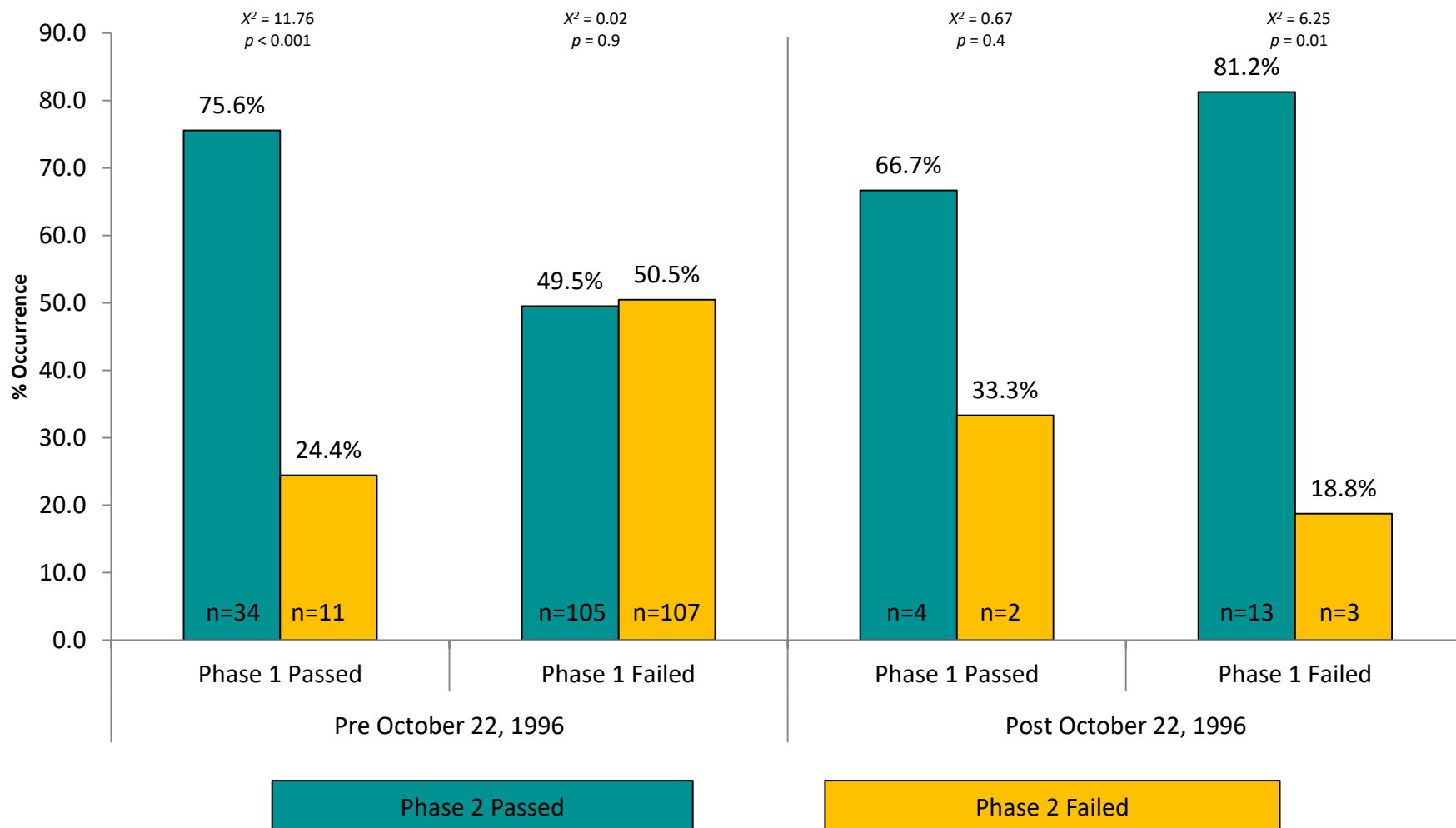


**Graph 15: Salinity - CO2 Salt Calculation Values based on Phase 2 EC Outcomes (Post-October 1996)**

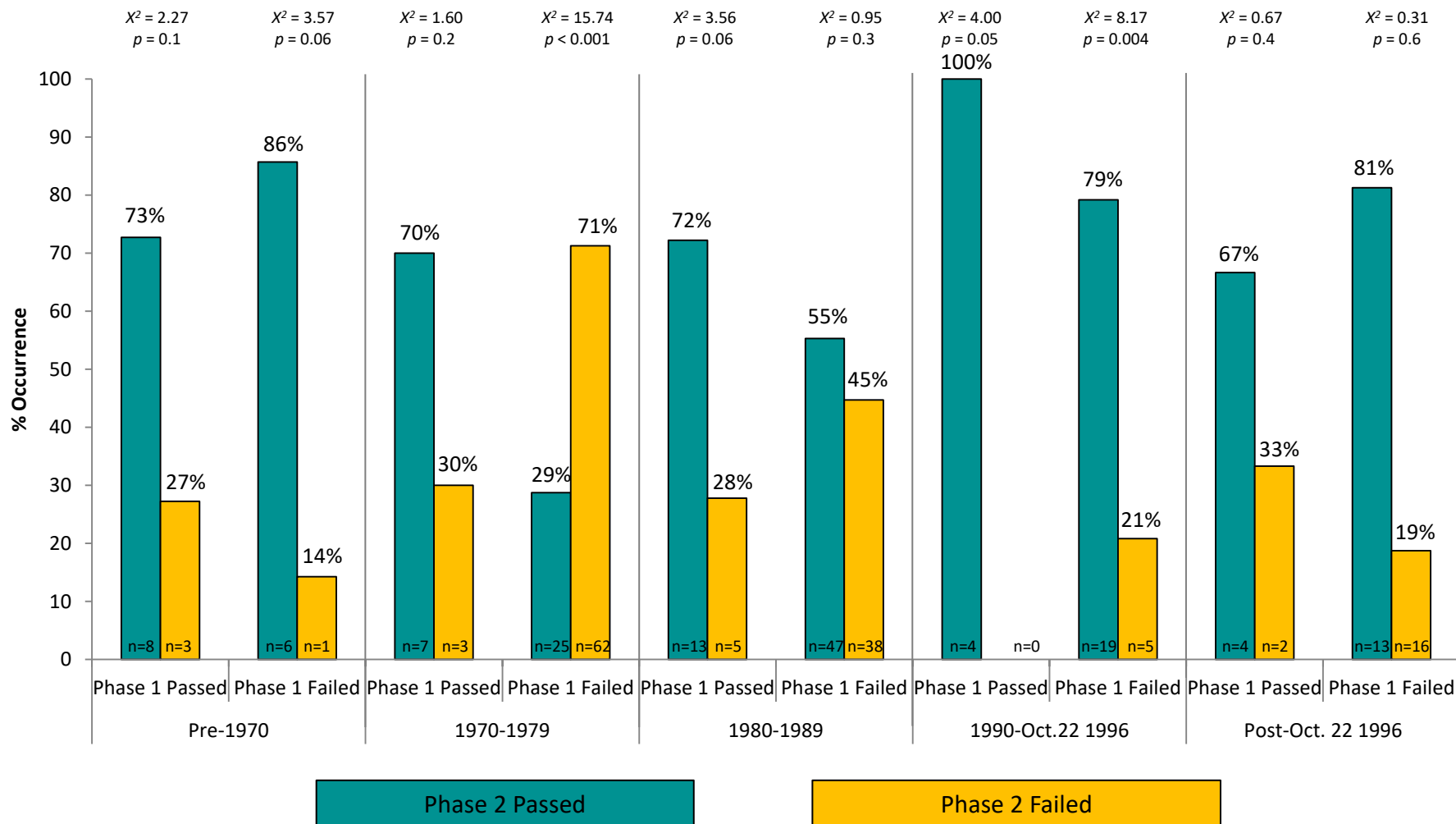


Note: Statistical analysis could not be completed due to low sample size.

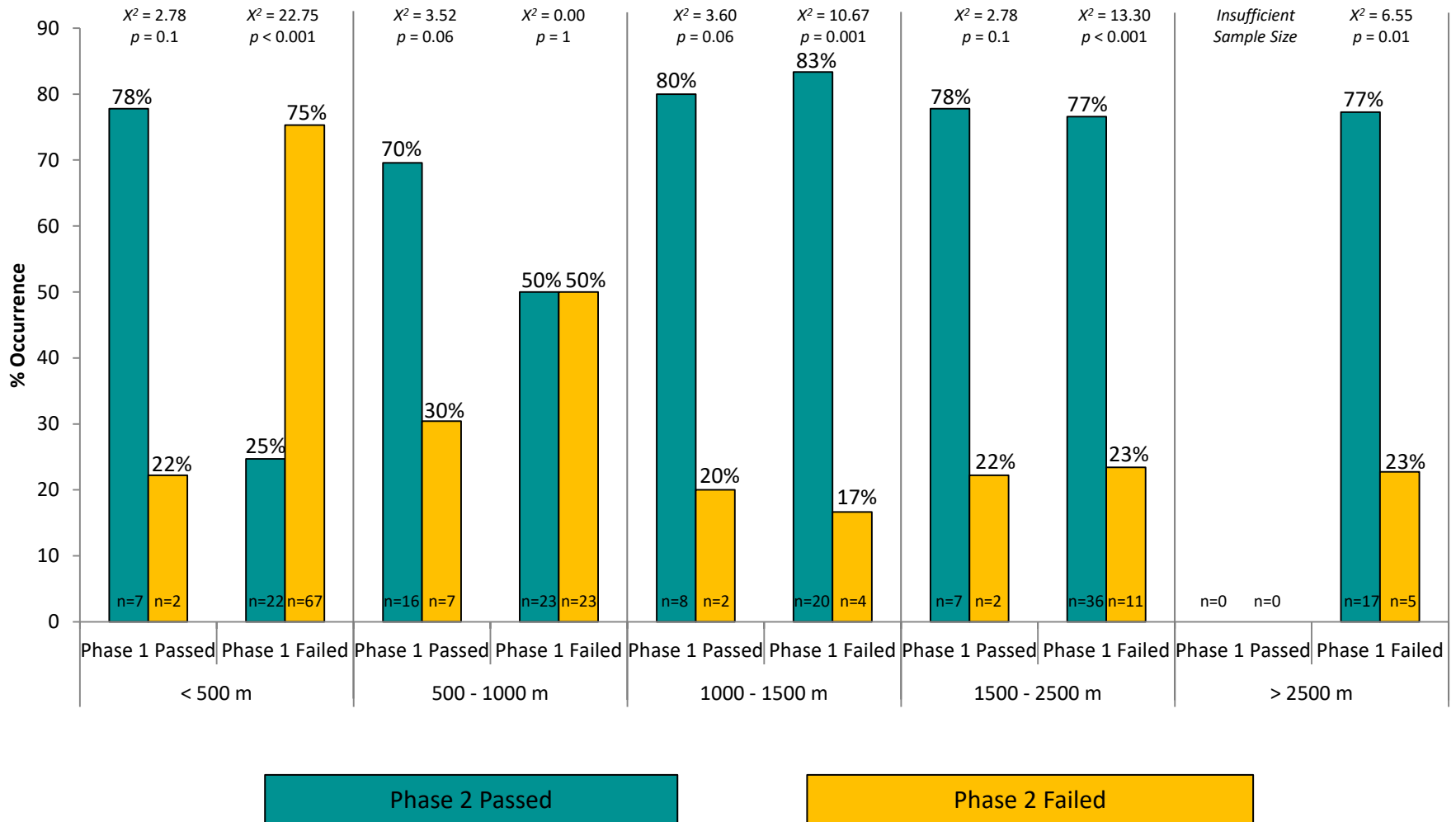
**Graph 16: Salinity – CO2 Salt Calculation Values (Mud Additives Only)  
compared to Phase 2 EC Outcomes**



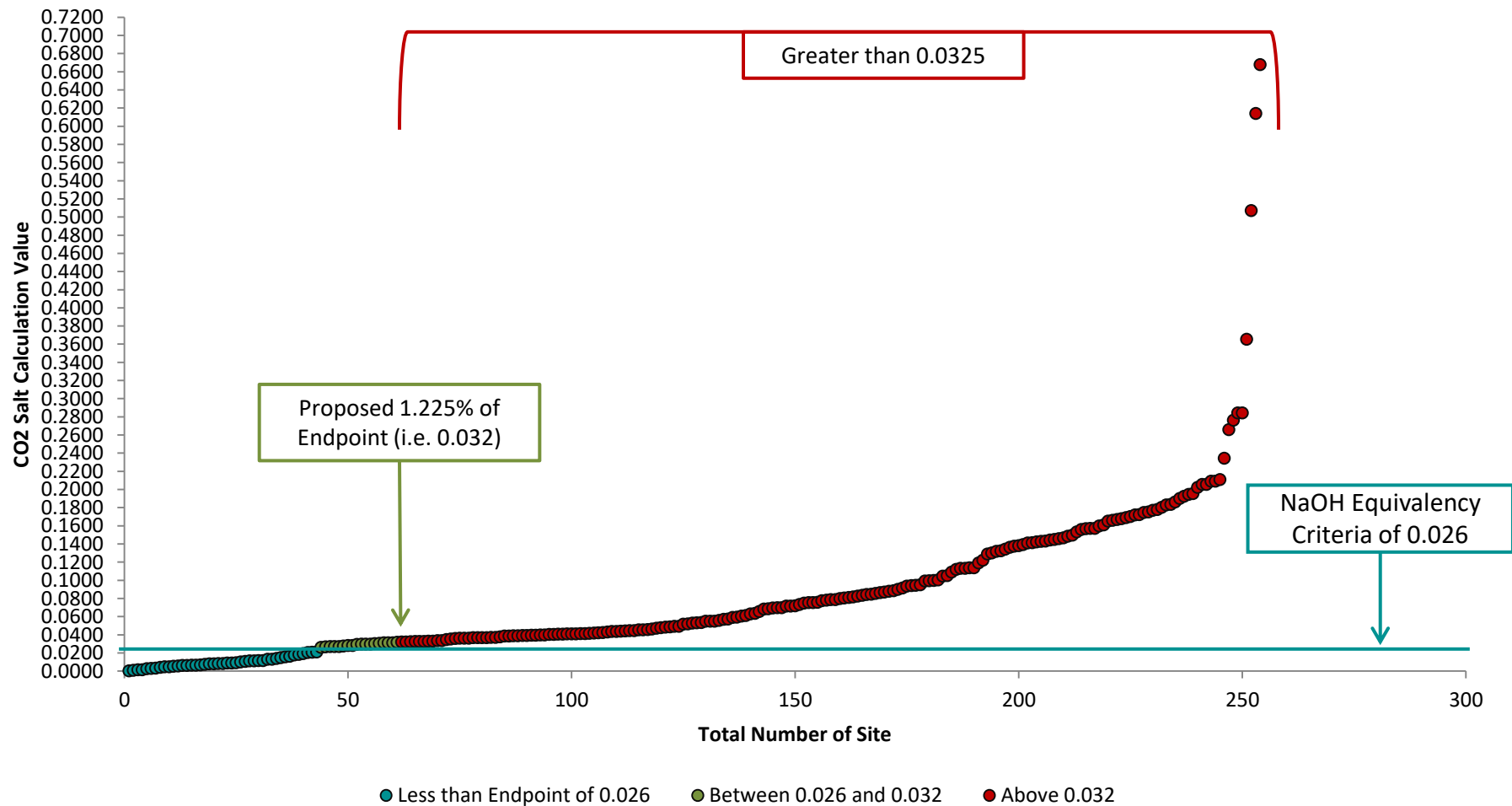
# Graph 17: Salinity - Comparison of CO2 Salt Calculation Values (Mud Additives Only) to Phase 2 Outcomes by Spud Date



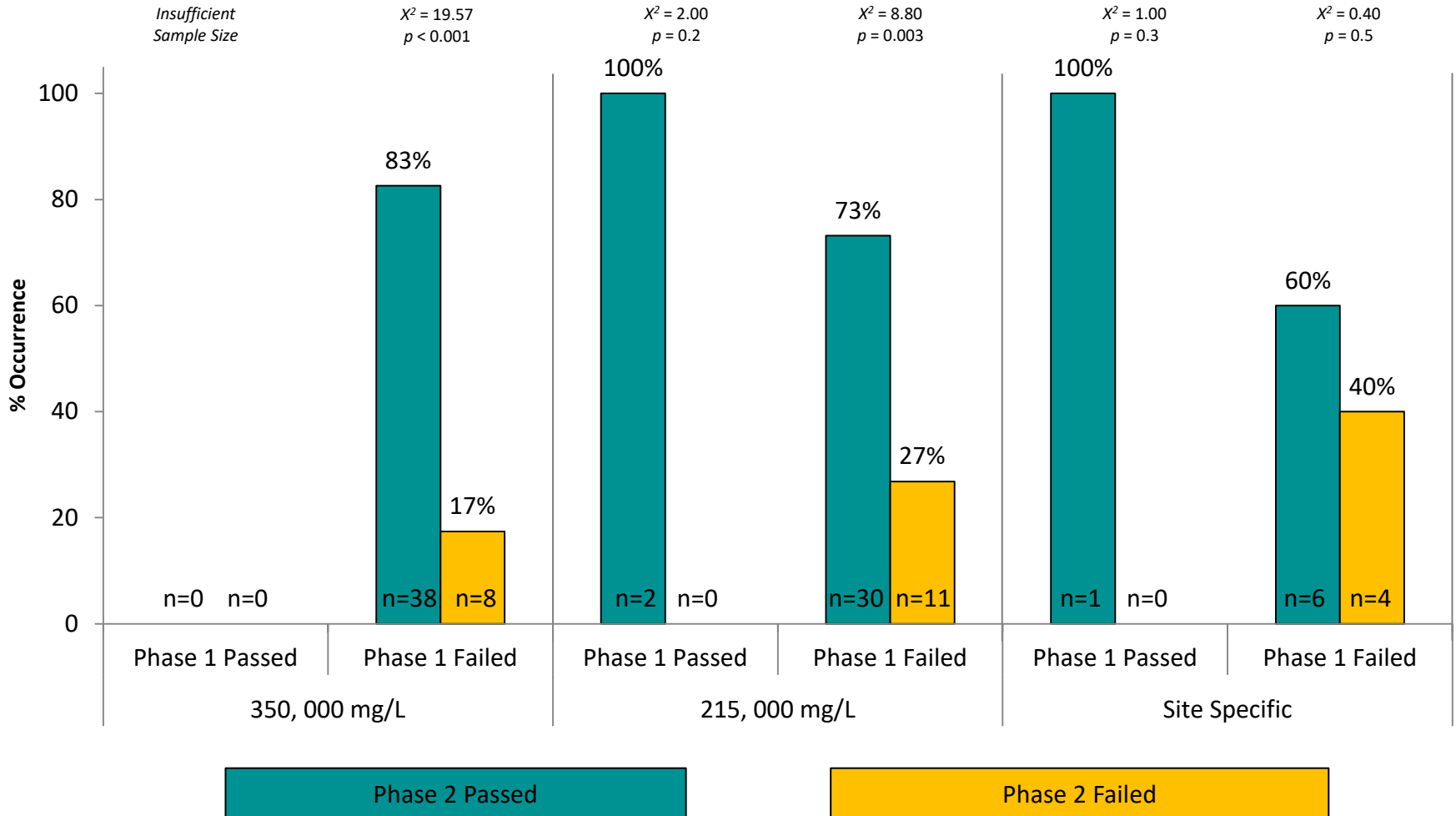
**Graph 18: Salinity - Comparison of CO2 Salt Calculation Values (Mud Additives Only) to Phase 2 EC Outcomes by Well Depth**



**Graph 19: Salinity - CO2 Salt Calculation Values (Mud Additives Only)  
Divided by Different Endpoints**

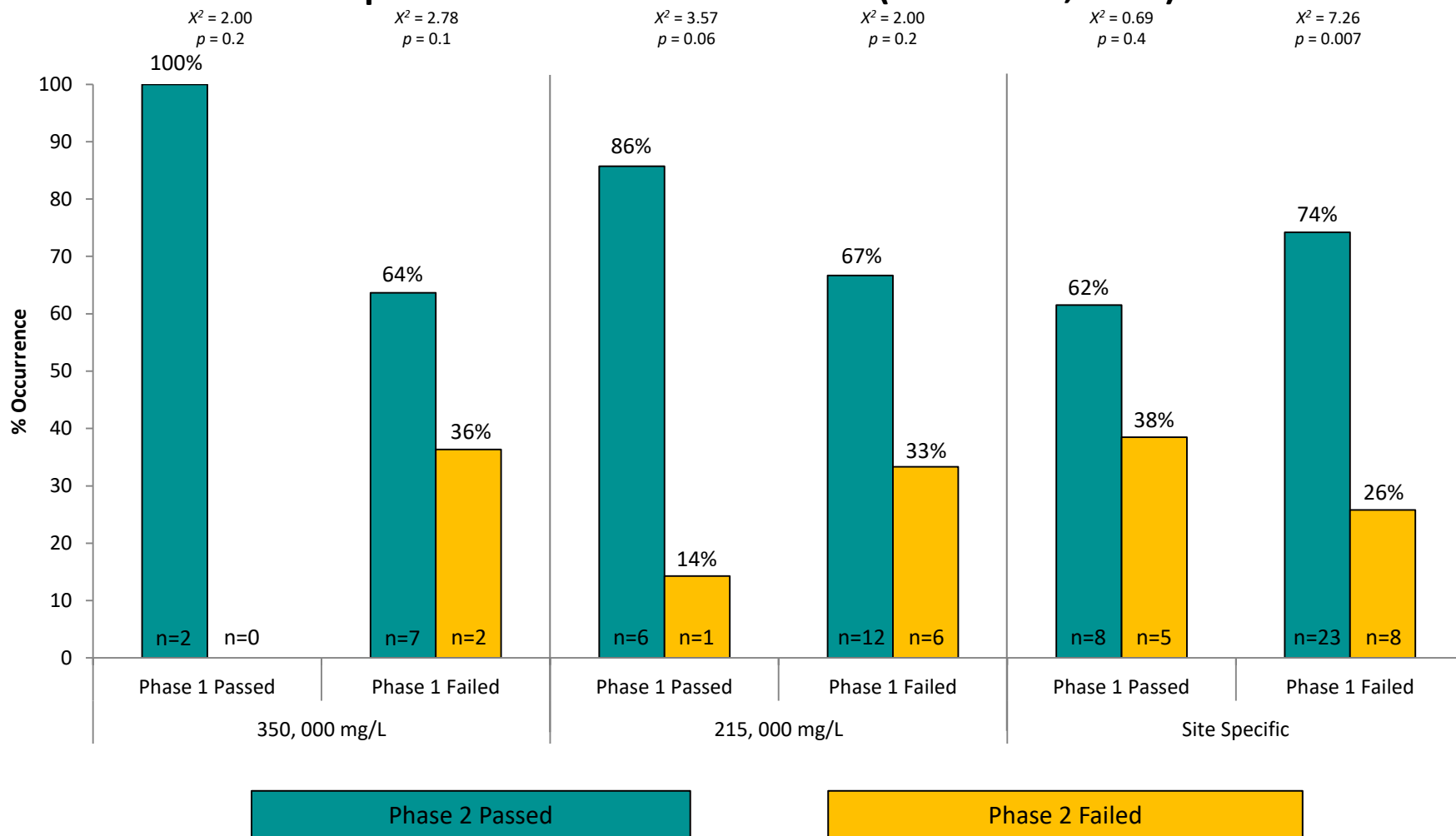


**Graph 20: Salinity – DST Contribution (>50%) to CO2 Salt Calculation Compared to Phase 2 EC Outcomes (Pre-Oct 22, 1996)**

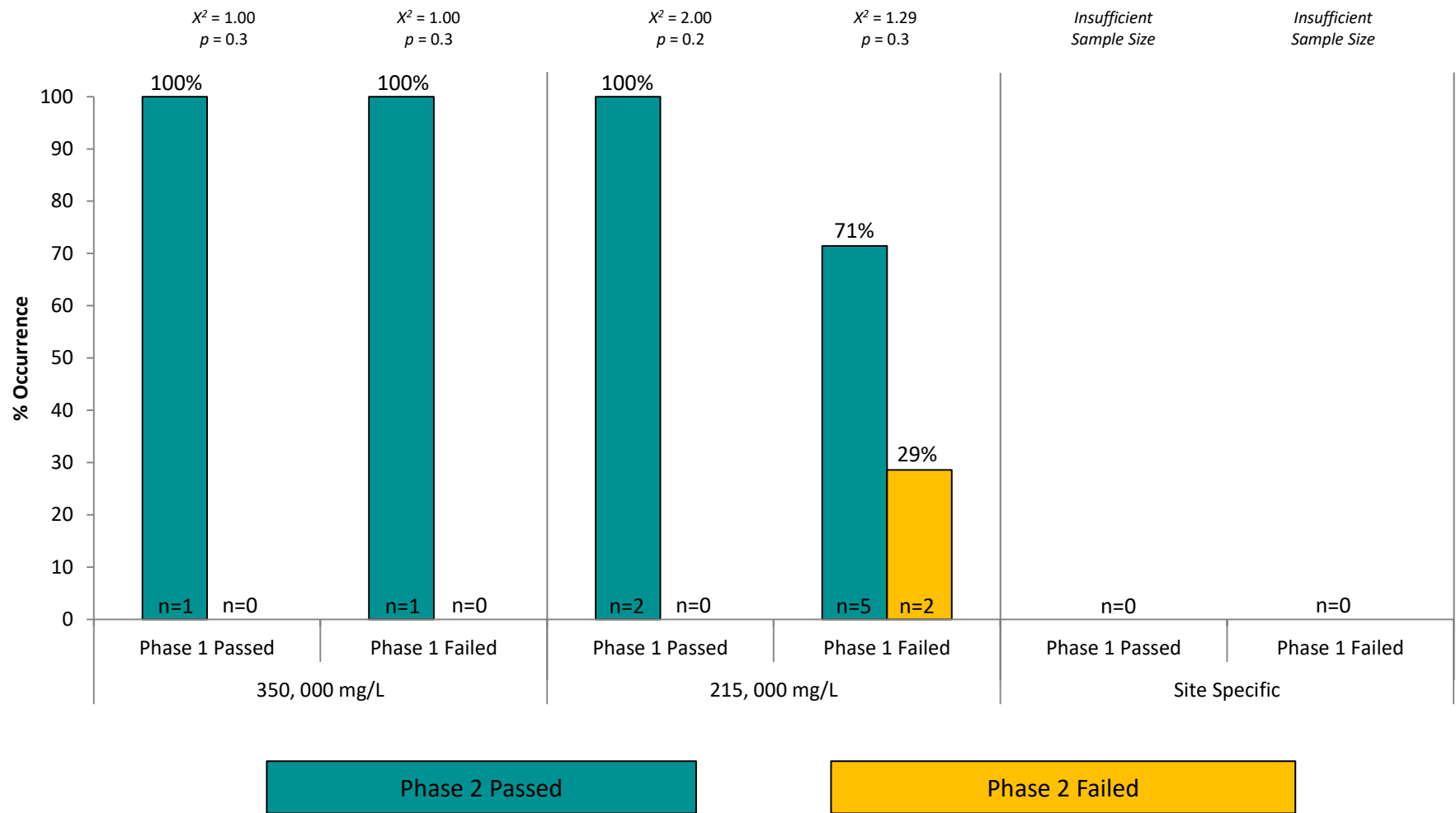




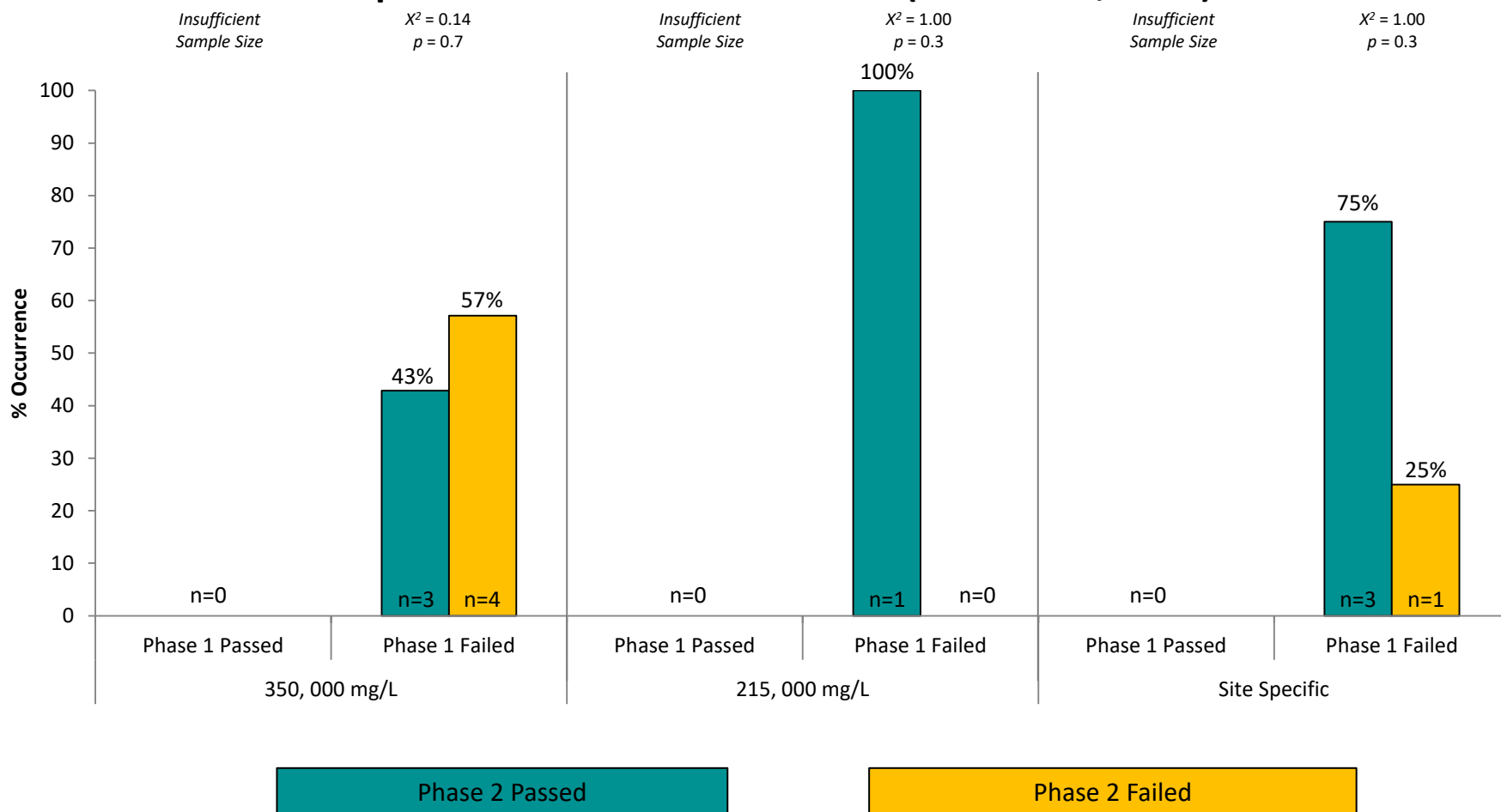
**Graph 21: Salinity - DST Contribution (0.1 - 40%) to CO2 Salt Calculation Compared to Phase 2 EC Outcomes (Pre-Oct 22, 1996)**



**Graph 22: Salinity - DST Contribution (41 - 60%) to CO2 Salt Calculation Compared to Phase 2 EC Outcomes (Pre-Oct 22, 1996)**



## Graph 23: Salinity - DST Contribution (61 - 80%) to CO2 Salt Calculation Compared to Phase 2 EC Outcomes (Pre-Oct 22, 1996)



Note: Statistical analysis could not be completed due to low sample size.

**Graph 24: Salinity - DST Contribution (81 - 100%+) to CO2 Salt Calculation Compared to Phase 2 EC Outcomes (Pre-Oct 22, 1996)**

