COMMITTEE REPORTS

WATER COMMITTEE
Tyler Hussey, Apache Corporation

The PBPA Water Committee had its second quarter meeting on July 20th. The meeting started off with an update on the Texas Produced Water Consortium. Participating members discussed that much of the current focus has been on identifying constituents in produced water. The consortium is beginning to wrap up their research this year and is preparing the first-year report that is due in September.

After this initial discussion, Dr. Bob Ballantyne with Resource West Inc. (RWI) gave a presentation on enhanced evaporation of produced water. Enhanced evaporation is not a new concept in produced water management. Historically, systems have failed due to the high salinity. Traditional evaporator units originated from the design of snow blowers – spraying water into the air through nozzles that create small droplets. While this form of evaporation works outside of the oilfield, the application does not work with produced water as salt precipitates out as small particles. According to Dr. Ballantyne, these particles generally are under 10 micron in diameter and have such a low settling velocity that it is impossible to contain in produced water ponds. Dr. Ballantyne and his team at RWI were able to simulate this form of evaporation in the lab and realized that traditional forms of evaporation would not work.

As the industry continues to evaluate alternative forms of water disposal, RWI has presented important scientific data explaining why traditional forms of evaporation produce too much salt and has recommended an alternative to enhance natural evaporation while keeping the surrounding habitat free of salt particulates. RWI concluded that the safest and most effective way to enhance evaporation is to modify the surface of the water on a produced water pond. Their technology blows air onto the surface of the pond – creating waves, increasing surface area, and wicking away the humid layer just above the air-water interface. RWI is able to increase natural evaporation by about 50-70%. The research and conclusions presented are important work for those in the industry looking to increase natural evaporation and reduce overall volume of water sent to disposal.