

ATTACHMENT A
DISSOLVED GAS SAMPLE ANALYSIS

I. DISSOLVED GAS SAMPLE ANALYSIS

Sample Source	Sample Date/Time
Initial Sample Gas Pressure (P _o) PI-662 psia	Temperature TI-660 °F
Final Sample Gas Pressure (P _f) PI-662 psia	Contact Dose Rate mR/hr

II. GAS CHROMATOGRAPH ANALYSIS

Analysis Date/Time	CTE #	Tech
Hydrogen (C _H) %	Oxygen (C _O) %	Nitrogen %

III. DISSOLVED GAS CONCENTRATIONS

Total Dissolved Gas Concentration:

$$C_T = MF_T \times [P_f - (1.05 \times P_o) - P_v]$$

$$= \text{___} \times [\text{___} - (1.05 \times \text{___}) - \text{___}]$$

$$= \text{___} \text{ scc/kg}$$

WHERE:

C_T = Total Dissolved Gas Concentration (scc/kg)
 MF_T = Multiplication Factor for gas and liquid loop volumes
 Unit 1: 6.33 Unit 2: 8.33
 P_f = Final Sample Gas Pressure PI-662 (psia)
 P_o = Initial Sample Gas Pressure PI-662 (psia)
 P_v = Liquid vapor pressure of sample @ temperature TI-660 from Attachment B

Dissolved Hydrogen Concentration:

$$C_H = \frac{(MF_H) \times (\% H_2) \times (P_f)}{(TI-660 \text{ } ^\circ\text{F} + 460)} = \frac{(\text{___}) \times (\text{___}) \times (\text{___})}{(\text{___} + 460)}$$

$$= \text{___} \text{ scc/kg}$$

WHERE:

C_H = Dissolved Hydrogen Concentration (scc/kg)
 MF_H = Multiplication Factor
 Unit 1: 48.6 Unit 2: 63.31
 %H₂ = Percent hydrogen from gas chromatograph analysis
 P_f = Final Sample Gas Pressure PI-662 (psia)
 TI-660 = Temperature (°F) at TI-660