Appendix 1: Technical Session Highlights

HPHT Session:
BSEE stated it looked to API 17TR8 and PER 15k when reviewing HPHT projects for approval. BSEE also stated that all required HPHT safety related equipment must exist before any HPHT project is approved. In the absence of published standards, BSEE will establish conservative conditions for approval. Various industry standards committees presented including API 17TR8, API 17D, ASME BPV Div 2 & Div 3, API 6X, API 14A, API 17G, API 16A, and the HPHT Seals and Bolts group.

It also became clear that if BSEE is to succeed in making fair regulations, industry must participate and set aside their conflicts of interests. Some points of follow up in the technical discussions include: building a database of materials testing results at high temperatures to understand the material properties required for HPHT; understanding and aligning the overlap of standards across API, ASME and NACE for HPHT; design methodologies of ASME BPVC Div 2 & 3; fatigue analysis and monitoring; HPHT bolts; and welding and cladding. Ultimately it is the stance of BSEE that HPHT is a topic that will take many years to mature. The HPHT session benefited BSEE by stating BSEE's stance on various HPHT issues, re-iterating industry buy-in, and discussing steps ahead.

Pipeline and Production Session:
BSEE presented their views on external pressure and determining rated working pressure (RWP) for deepwater components. Currently external pressure is not addressed in the CFRs. BSEE requirements for allowing credit for external hydrostatic pressure is still being developed. Key concerns which need to be addressed include complex geometries, pressure containing and pressure controlling equipment, and hydrostatic pressure testing. BSEE will choose the conservative approach if industry does not reach a consensus whether external hydrostatic pressure can offset internal pressure. API 17TR12 and 17TR11 presented their work on addressing these issues. They summarized their findings on differences between pressure containing and pressure controlling equipment, the API 17TR12 JIP results, depth adjusted working pressure, methodologies for determining rated working pressure, and how to properly consider hydrostatic pressure and internal pressure.

API 14C and 17V presented the work they have completed to date on surface and subsea safety systems. BSEE has been very active in both committees. There is a very good understanding on what API 14C will recommend and the potential BSEE requirements. BSEE production team and TAS are looking at the new edition of API 14C and considering it for incorporation into CFR and inspection protocol. BSEE's stance on 17V is that the regulations may go above and beyond what is included in the API 17V standard.

BSEE stated considering API 17O, High Integrity Pressure Protection Systems, for CFR incorporation. BSEE has also developed a guidance document on HIPPS, has approved a conceptual DWOP, and is reviewing a site specific DWOP including the HIPPS technology. Industry input on HIPPS considerations would be appreciated. API 17O presented their views on HIPP and the challenges which have been identified. API 17O was published in 2009, and is now under revision. New challenges include assessing

risks, maintaining zero leakage, testing, increasing water depth, higher flow rates, and a lack of clear government position on HIPPS. Questions rose on whether pumping/injection was covered, hydrotesting, policy on zero leakage and whether the riser need to be fully rated for pressure.

Structures

BSEE's perspective on structural research needs include synthetic hurricane modeling, hurricane damage to shallow water shelf platforms and re-use and life extension of risers. BSEE stated that as new structural standards are published, they will be considered for incorporation into the regulations. Industry may request other, new documents as alternative compliances. Various API Subcommittee 2 committees presented their work to date including API 2GEN-S, API 2A, API 2MET, API 2SIM, and API 2FPS. Some major points and questions came up including, "Why all the new standards? And why so many changes?" The answer was that these new recommended practices are being written in a holistic fashion, even though they are new documents with new names, there isn't substantially additional new content. Other high points include a new draft NTL on currents and drilling in the GOM was announced by the BSEE structures group and was open for comments.