stainless casting causing the casting to rip at the weld and cracks to then form in the casting.

We advised in the meeting that the temporary repairs that IPSC wanted to implement would not resolve the barrel overheating and nozzle cracking problem. ABT explained that it would be necessary to extend the carbon/stainless steel weld point further from the furnace by replacing a section of the carbon steel barrel with a stainless steel barrel. IPSC advised in the meeting that the OEM burners originally provided on the Unit had experienced the same overheating problems witnessed on the ABT nozzles and the resolution was to extend the stainless steel portion of the barrel just as ABT is recommending. IPSC advised in the meeting that based on conditions observed during the recent October 2005 outage, it would not be necessary to implement ABT's recommendation to extend the carbon/stainless steel weld point back during the April 2006 outage.

Note that this was the first time ABT was advised of this overheating condition with the OEM burners and, had this been conveyed to ABT during the bidding or design phase of the project, we would have extended the stainless steel portion of the barrel.

We have not experienced this type overheating problem on any of the ABT burner designs currently operating in the industry, which all have the carbon/stainless steel weld point in similar proximity to the furnace as is currently operating on the ABT burners at IPSC. The only time we have seen elevated temperatures on the carbon steel barrel is when the cooling secondary airflow to the burners was completely shutoff and we suspect that this may be happening at IPSC. We have suggested an investigative program to the Plant in order to determine if any operating conditions exist where insufficient cooling flow is available to the burners. In particular we believe that the compartmented windbox air control dampers may be too closed when the burner deck is out of service and have asked the Plant to investigate this. To date we have not had any response or been provided with any information.

4. Erosion of the ceramic lined long-sweep elbow and x-vane diffuser.

ABT response:
The ceramic lined long sweep elbows are original boiler equipment and were not replaced by ABT during the Low NOx Burner retrofit. The erosion of the x-vane diffuser is discussed in item 1 above and is a result of IPSC operating the coal mills at primary air and coal flows much higher than allowed by the contract.

The x-vanes are replaceable components and are expected to wear over a period of years. ABT has an on-going development project to identify the latest wear-resistant materials so that we can select those materials that best fit the specific fuel properties and flow conditions for each project. At the design fuel and flow conditions specified by the IPSC project, the x-vane assemblies supplied by ABT would last many years prior to needing replacement. The fuel and flow conditions that IPSC has been recently operating at, and has defined for the future, would require a change to material selection of ABT's x-vanes, at an increased cost, in order to minimize the type wear IPSC is experiencing of this component. Further the burner barrels would have to be lined and the nozzles replaced with new ones designed for the actual flows now being utilized.

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