SUMMARY OF CHANGES:

The following list of changes is in the order that the changes appear in the Technical Specifications (TS) Bases.

Page	Description of Changes
1.2-4	Make clarifications to the last paragraph on this page to describe why there is a SAFETY LIMIT associated with the RHR System. Also capitalize the defined term SAFETY LIMIT.
1.2-5	Add further discussion on the Bases for the setpoint of the instrument which initiates an isolation of the Shutdown Cooling Piping.
3.2-44	Add discussion to the Bases for TS Section 3.2 regarding the permissive signal which allows operation of the RHR System in the shutdown cooling mode when reactor pressure is below the design pressure for the RHR piping.

N:\\Iowa\\Licensing\\Template\\RTSPGS.dot design pressure (120% x 1150 = 1380 psig; 120% x 1325 = 1590psig).

The analysis of the worst overpressure transient, a 3 second closure of all main steam isolation valves with a direct valve position scram failure (i.e., scram is assumed to occur on high neutron flux), shows that the peak vessel pressure experienced is much less than the code allowable overpressure limit of 1375 psig (Reference 1). Thus, the pressure safety limit is well above the peak pressure that can result from reasonably expected overpressure transients.

A SAFETY LIMIT is applied to the shutdown cooling suction piping of the Residual Heat Removal System (RHR) when it is operating in the shutdown cooling mode. While in shutdown cooling, the RHR system forms part of the reactor coolant system.

1.2 References

1. Supplemental Reload Licensing Submittal for Duane Arnold Atomic Energy Center, Unit 1.*

* Refer to analyses for the current operating cycle.

emergency diesel generators. These trip level settings were chosen to be high enough to prevent spurious actuation but low enough to initiate ECCS operation and primary system isolation so that post accident cooling can be accomplished and the guidelines of 10 CFR 100 will not be exceeded. For large breaks up to the complete circumferential break of a 22-inch recirculation line and with the trip setting given above, ECCS initiation and primary system isolation are initiated in time to meet the above criteria. Reference Sections 6.3 and 7.3 of the Updated FSAR.

The high drywell pressure instrumentation is a diverse signal for malfunctions to the water level instrumentation and in addition to initiating ECCS, it causes isolation of Group 2 and 3 isolation valves. For the breaks discussed above, this instrumentation will generally initiate ECCS operation before the low-low-low water level instrumentation; thus the results given above are applicable here also. The water level instrumentation initiates protection for the full spectrum of loss-of-coolant accidents and causes isolation of all isolation valves except Group 6.

Venturis are provided in the main steam lines as a means of measuring steam flow and also limiting the loss of mass inventory from the vessel during a steam line break accident. The primary function of the instrumentation is to detect a break in the main steam line. For the worst case accident, main steam line break outside the drywell, a trip setting of 140% of rated steam flow in conjunction with the flow limiters and consequently main steam line valve closure, limits the mass inventory loss such that fuel is not uncovered, fuel clad temperatures peak at approximately 1000°F and release of radioactivity to the environs is below 10 CFR 100 guidelines. Reference Subsection 15.6.5 of the Updated FSAR.

Temperature monitoring instrumentation is provided in the main steam line tunnel and turbine building to detect leaks in this area. Trips are provided on this instrumentation and when exceeded, cause closure of isolation valves. The setting is 200°F for the main steam line tunnel detector. For large breaks, the high steam flow instrumentation is a backup to the temperature instrumentation.

High radiation monitors in the main steam line tunnel have been provided to detect gross fuel failure as in the control rod drop accident. A trip setting of 3 times normal full-power background is established to close the main steam line drain valves, recirculation loop sample valves, and trip the Mechanical Vacuum Pump. For changes in the Hydrogen Water Chemistry hydrogen injection rate, the trip setpoint may be adjusted based on a calculated value of the radiation level expected. Hydrogen addition will result in an increase in the nitrogen (N-16) activity in the steam due to increased N-16 carryover in the main steam. Reference Subsection 15.4.7 of the Updated FSAR.

Pressure instrumentation is provided to close the main steam isolation valves in the RUN Mode when the main steam line pressure drops below 850 psig. The Reactor Pressure Vessel thermal transient due to an inadvertent opening of the turbine bypass valves when not in the RUN Mode is less severe than the loss of feedwater analyzed in Subsection 15.6.3 of the Updated FSAR, therefore, closure of the Main Steam Isolation valves for thermal transient protection when not in the RUN Mode is not required.

Pressure instrumentation provides a permissive function for opening RHR shutdown cooling isolation valves and provides automatic isolation of RHR shutdown cooling on increasing system pressure. This instrumentation provides assurance that the RHR piping transient pressure limits are not exceeded during shutdown cooling operation.

The HPCI high flow and temperature instrumentation are provided to detect a break in the HPCI steam piping. Tripping of this instrumentation results in