

2.3.3.16 *Plant Drains*

2.3.3.16.1 Summary of Technical Information in the Application

This section discusses plant drains systems in LRA Section 2.3.3.16, "Plant Drains."

2.3.3.16.2 Staff Evaluation

The staff evaluated the plant drain system functions described in the LRA, USAR, Entergy's engineering reports, and license renewal boundary drawings to verify that Entergy included within the scope of license renewal all components with intended functions as described in 10 CFR 54.4(a). The staff then reviewed those components that Entergy identified as within the scope of license renewal to verify that Entergy included all passive and long-lived components subject to an aging management review, in accordance with the requirements of 10 CFR 54.21(a)(1).

Using the evaluation methodology in LRA Section 2.1, "Scoping and Screening Methodology," and the guidance in NUREG-1800, Revision 2, Section 2.3, "Scoping and Screening Results: Mechanical Systems," the staff reviewed:

- LRA Section 2.3.3.16
- LRA Table 2.3.3-16
- USAR Section 9.2.4, Section 9.3.3, and Section 9.3.7
- USAR Table 3.9A-10.

The staff identified two areas where it needed additional information to complete the review of Entergy's scoping and screening results. To obtain this information, the staff issued two requests for additional information: (1) RAI 2.3.3.16-1 and (2) RAI 2.3.3.16-3 on February 12, 2018 (ADAMS Accession No. ML18043A351). For these two RAIs, Entergy provided its response by letter dated March 14, 2018 (ADAMS Accession No. ML18073A068). Entergy provided a revised response to RAI 2.3.3.16-1 by letter dated October 9, 2018 (ADAMS Accession No. ML18283A082).

(1) RAI 2.3.3.16-1

In the first request for additional information (RAI 2.3.3.16-1), the staff requested clarification regarding two vent pipes each from each crankcase of standby diesel engine EGS*EG1A(AR) and EGS*EG1B(BB). The venting of combustion fumes from the diesel engine crankcases is discussed in LRA Section 2.3.3.16. The relevant LRA drawing (i.e., LRA-PID-08-9B) identified these vent pipes as not subject to aging management review. The staff requested that Entergy justify why these vent pipes are not subject to aging management review.

Entergy responded to RAI 2.3.3.16-1 by stating that Division I and II diesel engine vent pipes are not addressed in LRA Table 3.3.2-16 "Plant Drains-Summary of Aging Management Evaluation" and are not subject to aging management review since these vent pipes do not have a license renewal intended function. In its revised response to this RAI, Entergy further stated that:

The purpose of the vent pipe is to vent the gasses from the diesel generator to the outdoors. Upon loss of the vent pipe pressure boundary, the gasses would exhaust into the room, but the diesel would continue to perform its function. When the diesel is in operation, the room ventilation system is in service, venting the room. Therefore, the loss of pressure boundary of this pipe has no impact on the diesel or personnel and it has no safety function. The function of venting the crankcase to the outdoors is not necessary for the diesel to operate under emergency conditions. Periodic surveillance testing confirms adequate crankcase venting for both Division I and II and Division III diesel engines.

The nonsafety-related Division I and II diesel engine vent lines are not subject to aging management review under 54.4(a)(2) criteria due to leakage or spray because the vent lines contain no liquids that would impact other components in the room. The vent lines are installed with seismic supports that are subject to aging management review and included in the Structures Monitoring Program. Therefore, the vent lines cannot fall and impose an unanalyzed load on the connection to the safety-related diesel engine that would render it unable to perform its intended function under both normal operation and seismic CLB design conditions.

In contrast to the Division I and II diesel generator engines, Entergy noted that the Division III diesel engine does not have an independent crankcase vent line directly routed to the outdoors. The Division III diesel engine vents the crankcase to the outdoors via the engine exhaust line, and the engine functionality is demonstrated as a complex assembly during periodic surveillance testing.

The staff finds Entergy's response acceptable because it explains:

- why the effects of aging on the Division I, II and III standby diesel engine vent piping pressure boundary function do not require management during the period of extended operations;
- why the Division I, II and III standby diesel generator engine vent piping is not Within the Scope of License Renewal (WSLR) as defined by 10 CFR 54.4(a)(1); and
- why the Division I and II standby diesel generator engine directly connected vent piping is not WSLR as defined by 10 CFR 54.4(a)(2).

Therefore, the staff's concern described in RAI 2.3.3.16-1 is resolved.

(2) RAI 2.3.3.16-3

In the second request for additional information (RAI 2.3.3.16-3), the staff requested clarification on the instrument tubing to four pressure indicators (i.e., PI-12A/B/D/E) that were identified as being subject to aging management review on the relevant LRA drawing (LRA-PID-32-09P). In contrast, the staff noted that neither LRA Table 2.3.3-16, "Plant Drains System Components Subject to Aging Management Review," nor LRA Table 3.3.2-16 lists tubing as a component type subject to aging management review.

In response to RAI 2.3.3.16-3, Entergy acknowledged this deficiency by revising LRA Table 2.3.3-16 and LRA Table 3.3.2-16. In both tables, Entergy added under the column,

“Component Type,” tubing with an intended function of pressure boundary. In its response, Entergy stated the following:

The tubing is stainless steel exposed to environments of waste water (internal) and indoor air (external). The Internal Surfaces in Miscellaneous Piping and Ducting Components Program manages the aging effects in waste water; there are no aging effects to be managed for stainless steel in indoor air.

The staff finds Entergy’s response acceptable because it revises LRA Table 2.3.3-16 to add tubing as a plant drain component subject to aging management review and assigns the correct intended function (i.e., pressure boundary). Furthermore, Entergy revised LRA Table 3.3.2-16 to provide for managing the aging effects of waste water in the tubing. The staff’s concern described in RAI 2.3.3.16-3 is resolved.

2.3.3.16.3 Conclusion

Based on the staff’s evaluation in SER Section 2.3.3.16.2 and on its review of the LRA, USAR, Entergy’s engineering reports, license renewal boundary drawings, and RAI responses, the staff concludes that Entergy has appropriately identified the plant drains system components within the scope of license renewal as required by 10 CFR 54.4(a). The staff also concludes that Entergy has adequately identified the system components subject to an aging management review in accordance with the requirements in 10 CFR 54.21(a)(1).