RECORD OF CATEGORICAL EXCLUSION DETERMINATION

Project ID No. & Title: BH-MM-1370 Heat Exchanger Bundle Spares
BM-MM-1371 Heat Exchanger Bundle Spares
WH-MM-1100 Replace WHT-1 Flush Water and WHT-10 Seal
WH-MM-1372 Heat Exchanger Bundle Spares

Description:
BH-MM-1370 – This project consists of maintaining the existing system in place and providing appropriate numbers and placement of valves for isolation of each exchanger. A number of spare tube bundles will need to be provided so exchangers can be quickly repaired by plugging failed tubes or replacing tube bundles with spares on hand following the discovery of failures during fitness for service testing prior to drawdown.

The effectiveness of plugging individual tubes is limited in the face of progressive tube failures due to corrosion, leading to continued loss of effective heat transfer area in the exchanger and exchanger capacity. Having spare tube bundles available provides for full tube bundle replacement to restore full heat transfer surface area to avoid reducing drawdown rates below the Level I criterion.

BM-MM-1371 - This project consists of maintaining the existing system in place and providing appropriate numbers and placement of valves for isolation of each exchanger. A number of spare tube bundles will need to be provided so exchangers can be quickly repaired by plugging failed tubes or replacing tube bundles with spares on hand following the discovery of failures during fitness for service testing prior to drawdown.

The effectiveness of plugging individual tubes is limited in the face of progressive tube failures due to corrosion, leading to continued loss of effective heat transfer area in the exchanger and exchanger capacity. Having spare tube bundles available provides for full tube bundle replacement to restore full heat transfer surface area to avoid reducing drawdown rates below the Level I criterion.

WH-MM-1100 - Tank WHT-10 stores potable or well water for bearing cooling and seal flush to the raw water injection pumps. Tank WHT-1 stores city water, raw water, or well water for flush water pumps. The seal flush water system is critical for the drawdown and fill operations. The pressure of the seal flush water has to overcome the pumped pressure for injection into seals. A reliable supply of seal flush water is essential for pump operation. The useful life of the existing tank is coming to an end. Due to the age of the tanks, deterioration of the interior linings, the settlement of the tanks below grade, and the cost for a local confined space rescue team during a six-week repair schedule, make the refurbishment of the tanks cost prohibitive.

The final design includes a total of four Fiberglass Reinforced Plastic (FRP) Tanks, three nominal 750 barrel (BBL) tanks to replace WHT-1 and one nominal 750 BBL tank for WHT-10. These tanks will be nominally 14'W x 30'H and will share a single reinforced concrete pad surrounded by bollards for impact protection. A header will connect the three WHT-1 tanks to keep uniform flow during filling and cavern flushing procedures. Tanks will be constructed of polyester resin industrial grade with a white exterior gel-coat filament wound construction.

WH-MM-1372 - This project consists of maintaining the existing system in place and providing appropriate numbers and placement of valves for isolation of each exchanger. A number of spare tube bundles will need to be provided so exchangers can be quickly repaired by plugging failed tubes or replacing tube bundles with spares on hand following the discovery of failures during fitness for service testing prior to drawdown.

The effectiveness of plugging individual tubes is limited in the face of progressive tube failures due to corrosion, leading to continued loss of effective heat transfer area in the exchanger and exchanger capacity. Having spare tube bundles available provides for full tube bundle replacement to restore full heat transfer surface area to avoid reducing drawdown rates below the Level I criterion.

Regulatory Requirements National Environmental Policy Act (NEPA) Implementing Procedures (10 Code of Federal Regulations (CFR) 1021)

10 CFR 1021.410 (Application of Categorical Exclusions)

(a) The actions listed in Appendices A and B of Subpart D are classes of actions that Department of Energy (DOE) has determined do not individually or cumulatively have a significant effect on the human environment (categorical exclusions).

(b) To find that a proposal is categorically excluded, DOE shall determine the following:

(1) The proposed action fits within a class of actions that is listed in Appendix A or B of Subpart D;

(2) There are no extraordinary circumstances related to the proposal that may affect the significance of the environmental effects of the proposal; and

(3) The proposal is not "connected" (40 CFR 1508.25(a)(1)) to other actions with potentially significant impact, is not related to other proposed actions with cumulatively significant impacts (40 CFR 1508.25(a)(2)), and is not precluded by 40 CFR 1506.1 or 10 CFR 1021.211.

Appendix B (Categorical Exclusions Applicable to Specific Agency Actions)

The proposed action must not:

1. Threaten a violation of statutory, regulatory, or permit requirements for environment, safety, and health, including requirements of DOE and/or Executive Orders;
2. Require siting and construction or major expansion of waste storage, disposal, recovery, or treatment facilities (including incinerators), but the proposal may include categorically excluded waste storage, disposal, recovery, or treatment actions or facilities;
3. Disturb hazardous substances, pollutants, contaminants, or Comprehensive Environmental Response, Compensation and Liability Act (CERCLA)-excluded petroleum and natural gas products that preexist in the environment such that would be uncontrolled or un-permitted releases;
4. Have the potential to cause significant impacts on environmentally sensitive resources, which includes (i) property (sites, buildings, structures, and objects) of historical, archeological, or architectural significance; (ii) federally-listed and state-listed threatened or endangered species or their habitat, federally-protected marine mammals and essential fish habitat and otherwise federally-protected species; (iii) floodplains and wetlands; (iv) federally and state designated areas (wilderness areas, national parks, national monuments, national natural landmarks, wild and scenic rivers, wildlife refuges, scenic areas, and marine sanctuaries); (v) prime or unique farmland; (vi) special sources of water (sole-source aquifers, wellhead protection areas, and other vital water resources); and (vii) tundra, coral reefs, or rain forests); or
5. Involve genetically engineered organisms, synthetic biology, governmentally designated noxious weeds, or invasive species.

Categorical Exclusion to be applied: B1.3

Routine maintenance activities and custodial services for buildings, structures, rights-of-way, infrastructures, vehicles and equipment, and localized vegetation and pest control, during which operations may be suspended and resumed. Custodial services are activities to preserve facility appearance, working conditions, and sanitation. Routine maintenance activities (corrective, preventive, and predictive) are required to maintain and preserve buildings, structures, infrastructures, and equipment in a condition suitable for a facility to be used for its designated purpose. Routine maintenance may result in replacement to the extent that replacement is in kind and is not a substantial upgrade or improvement. In kind replacement includes installation of new components to replace outmoded components if the replacement does not result in a significant change in the expected useful life, design capacity, or function of the facility. Routine maintenance does not include replacement of a major component that significantly extends the originally intended useful life of a facility.

Electronic approval via NEPA Workflow
Approved by SPRPMO
NEPA Compliance Officer

9/26/2016
Determination Date