Proposed Modification to Design Basis: Groundwater Discharge Permit No. GW1810162

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Infiltration System: Existing Permitted Design versus Proposed Modified Design

Existing Permitted Designed Treated Water Infiltration System

Proposed Modified Designed Treated Water Infiltration System

504,000 gal/day Max. Discharge

March 25, 2010
Infiltration System: Existing Permitted Design versus Proposed Modified Design

Existing Permitted Designed Treated Water Infiltration System

- REST
- ACTIVE
- 126,000 gallons/day

Proposed Modified Designed Treated Water Infiltration System

- REST
- ACTIVE
- 126,000 gallons/day

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Infiltration System: Existing Permitted Design versus Proposed Modified Design

Existing Permitted Designed Treated Water Infiltration System

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**Existing Permitted Designed Treated Water Infiltration System – Cross-Section**

- 4-INCHES TOP SOIL
- 56-IN CHES MIN. SAND
- GEOTEXTILE (NON-WOVEN)
- GEOTEXTILE (NON-WOVEN) IF REQUIRED
- 6-INCHES MIN. SAND
- 1 ½ -INCHES DIA. LATERAL DISTRIBUTION PIPING
- APPROX. GROUND ELEVATION
- 6-INCHES GRAVEL
- SAND BACKFILL/SUBGRADE

**Proposed Modified Designed Treated Water Infiltration System – Cross-Section**

- 40 MIL HDPE GEOMEMBRANE
- 2-INCHES DIA. HDPE SDR-17 LATERAL PIPING
- OVER LATERAL PIPING
- STYROFOAM ® EXTRUDED POLYSTYRENE INSULATION
- APPROX. GROUND ELEVATION
- ¾” WASHED STONE
- 8-INCHES MIN.
- SUBGRADE

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In summary, the proposed modifications include:

- Water is delivered to the infiltration system in a slightly different manner namely eliminating the distribution chamber and replacing it with individual valves and flow meters.

- The diameter of the laterals has been increased from 1.5 inch PVC to 2 inch HDPE.

- The length of the lateral distribution pipe has been decreased.

- The cover system has changed from several feet of soil to synthetic insulation overlain by a geomembrane.
Most importantly, this design does not change the chief precepts of the permitted rapid infiltration system. These design precepts include:

- The source, quantity and quality of the treated water is unchanged.
- The location is unchanged.
- The original footprint and dimensions are unchanged.
- The maximum discharge rate of 504,000 gallons per day is unchanged.
- The maximum loading rate of 10 gallons per square foot per day is unchanged.
- The operational plan to use 4 cells at any given time and rest 1 cell is unchanged.
- The perimeter ditch preventing surface water run-on and run-off remains unchanged.