Instructions
Appendix for Schedule 8D

Cooling Diagram Key

Discharge ——————▶	T_1 Withdrawal Temperature Point
Withdrawal ——————▶	
Diversion ——————▶	T_2 Discharge Temperature Point
Water flow not surveyed – – – –▶	
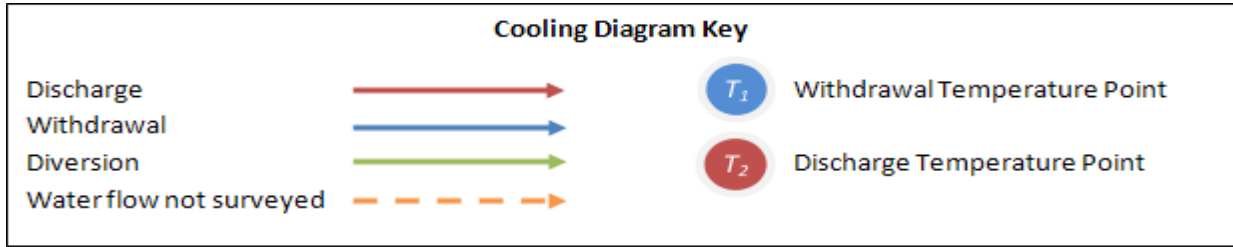
Once-Through System without Cooling Ponds or Canals (ON)
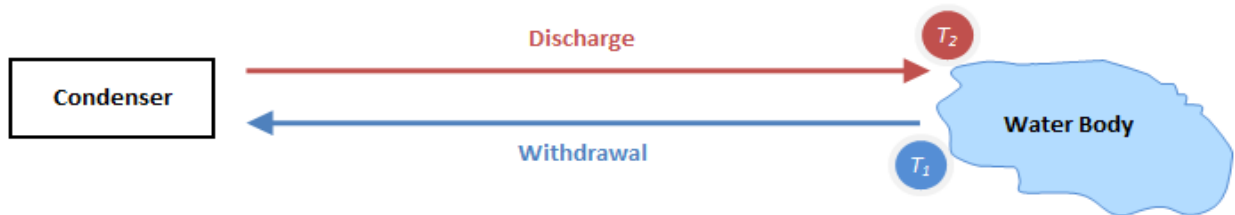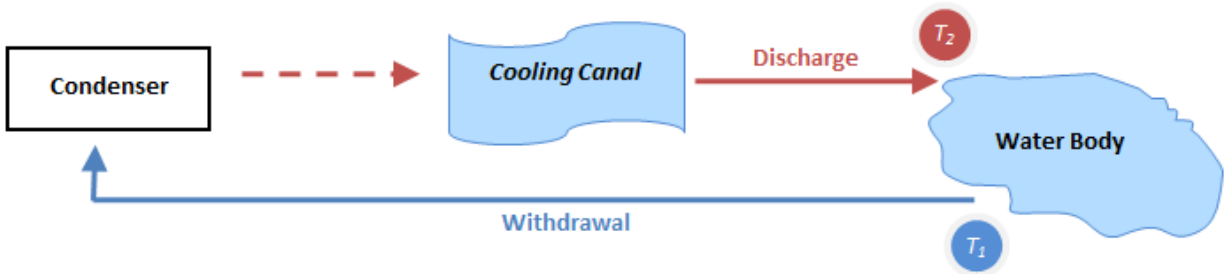

Withdrawal: Report the water that is removed from a water body for cooling, i.e. water used through the condenser.
Discharge: Report the flow of water that is returned to the water body.

Diversion: Diversion is not expected with once through systems.
Consumption: Evaporative losses are not expected with once through systems as withdrawal should equal discharge.

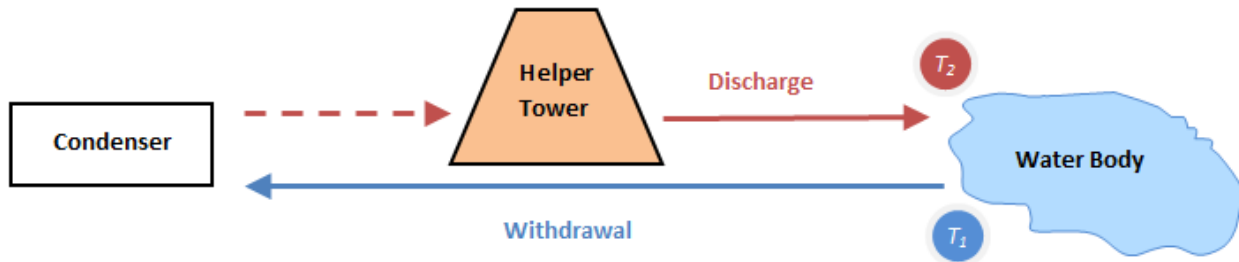**Once-Through System with Cooling Pond or Canal (OC)**

Withdrawal: Report the water that is removed from a water body for cooling, i.e. water used through the condenser.

Discharge: Report the flow of water that is ultimately returned to a water body not the pond or canal.

Diversion: Diversion is not expected with once through systems.
Consumption: Evaporative losses are not expected with once through systems as withdrawal should equal discharge.

Once-Through without Cooling Pond or Canal and Helper Tower Application (ON & HT)
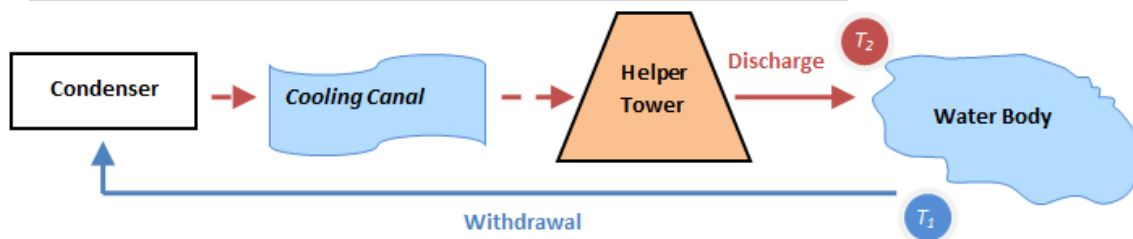

Withdrawal: Report the water that is removed from a water body for cooling, i.e. water used through the condenser.

Discharge: Report the water that is returned to a water body. Do not report water flows from the condenser to the helper tower(s).

Diversion: Diversion is not expected with once through systems.
Consumption: Evaporative losses can occur within the helper tower(s). Consumption is the difference between withdrawal and discharge.

Once-Through with Cooling Pond or Canal and Helper Tower Application (OC & HT)

* Helper Tower can be positioned before, after or along the canal.

Withdrawal: Report the water that is removed from a water body for cooling, i.e. water used through the condenser.

Discharge: Report the water that is returned to a water body. Regardless of the tower(s) orientation report the water flows to the water body. Do not report water flows from the condenser to the helper tower(s).

Diversion: Diversion is not expected with once through systems.
Consumption: Evaporative losses can occur within the helper tower(s). Consumption is the difference between withdrawal and discharge.

Recirculating System with Pond and No Tower (RC)
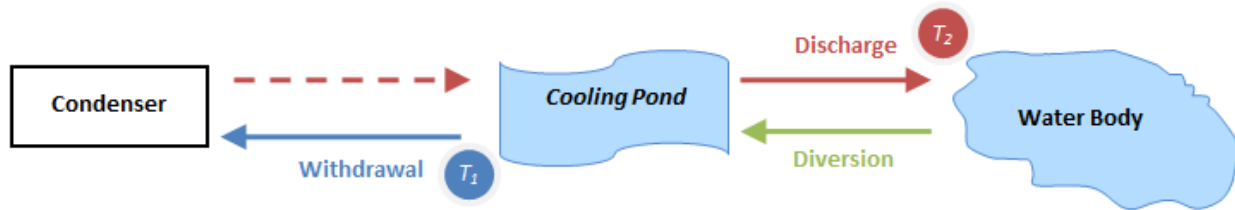
Withdrawal: Report the water flow to the condenser from the cooling pond.

Discharge: Report the water that is returned to a water body (not a cooling pond). Do not report the water discharged back into the cooling pond for recirculation.

Diversion: Report the water that is moved from a watercourse without immediate beneficial use for purposes such as filling a cooling pond, or adding water to a lake from which thermoelectric power water withdrawals can occur. **Consumption:** Report evaporative losses that occur within the cooling pond. Consumption is the difference between diversion and discharge. Water from other sources than natural water bodies, including wells, water utilities, and waste water treatment plants, is not Diversion.

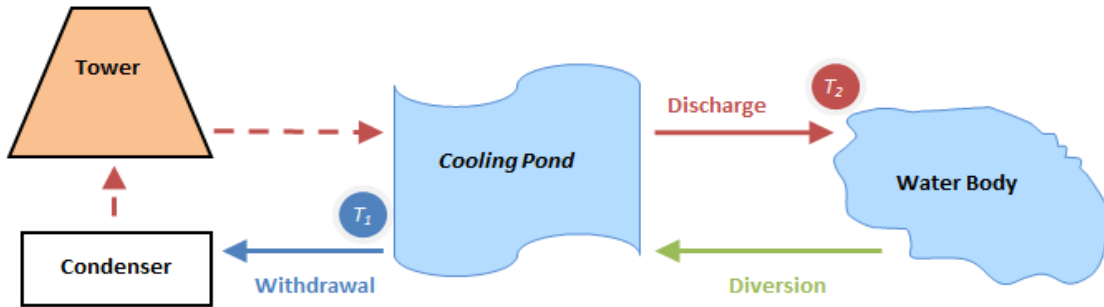## Recirculating System with Tower and No Pond (RN, RI, RF)
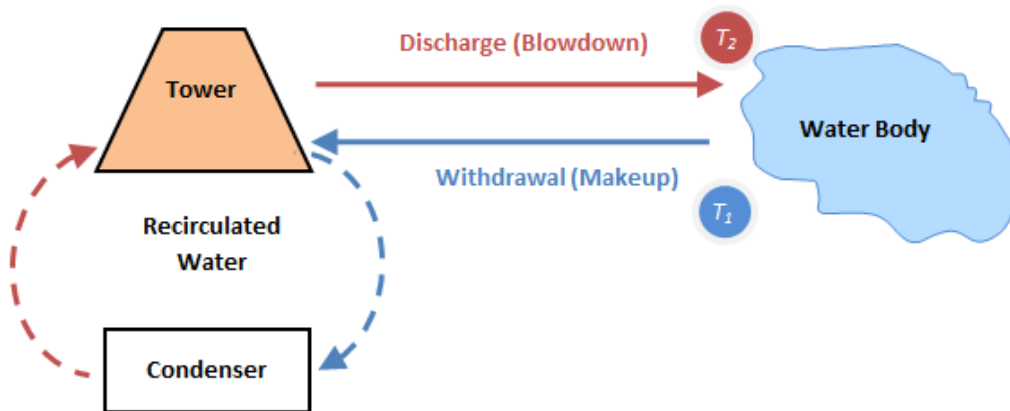
Withdrawal: Report the cooling tower makeup water that is removed from a water body.

Discharge: Report the water that is returned to a water body. Cooling tower blowdown that is diverted to treatment or evaporation ponds is not considered Discharge. Water that is returned to a water body from evaporative or blowdown treatment ponds is considered Discharge. For zero discharge systems report zero in the discharge field.

Diversion: Not expected with recirculating tower systems.

Consumption: Report evaporative losses from cooling tower(s). Consumption is the difference between withdrawal and discharge.

Recirculating Cooling Circuit with both Towers and Ponds (RC with RN, RI, or RF)
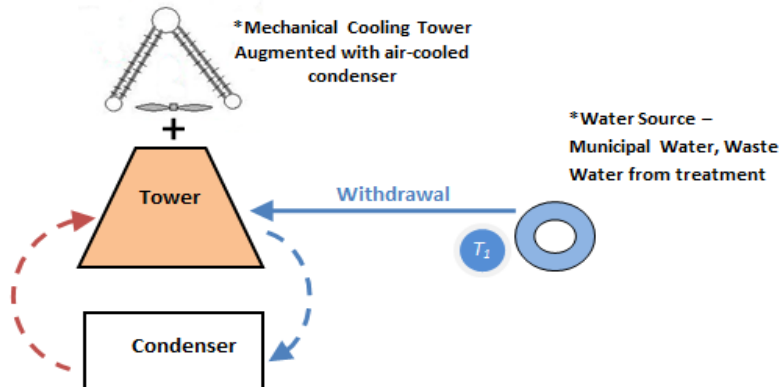

Withdrawal: Report the water flow to the condenser.

Discharge: Report the water that is returned to a water body (not a cooling pond). Do not report the water discharged back into the cooling pond for recirculation. Cooling tower blowdown that is diverted to treatment or evaporation ponds is not considered Discharge. Water that is returned to a water body from evaporative or blowdown treatment ponds is considered Discharge. For zero discharge systems report zero in the discharge field.

Diversion: Report the water that is moved from a watercourse without immediate beneficial use for purposes such as filling a cooling pond, or adding water to a lake from which thermoelectric power water withdrawals can occur.

Consumption: Report evaporative losses from cooling pond and tower(s). Consumption is the difference between diversion and discharge.

Dry Cooling Hybrid Systems (HRF or HRI)

Withdrawal: Report the cooling tower makeup water that is removed from a water body.

Discharge: Report the water that is returned to a water body. Cooling tower blowdown that is diverted to treatment or evaporation ponds is not considered Discharge. Water that is returned to a water body from evaporative or blowdown treatment ponds is considered Discharge. For zero discharge systems report zero in the discharge field.

Diversion: Not expected with hybrid recirculating tower systems.

Consumption: Report evaporative losses from cooling tower(s). Consumption is the difference between withdrawal and discharge.