GAS CENTRIFUGE FACILITY DESIGNED TO HAVE ITS OWN WATER SUPPLY SYSTEM

PORTS Water Treatment

System Description

Raw Water Supply

A. Source Description:

1. X-608-A & B Well Field: 15 Wells @ 1,000 Gallons Per Minute Capacity Each
2. X-6609 Well Field: 12 Wells @ 500 Gallons Per Minute Capacity Each
3. X-605 G Well Field: 2 Wells @ 900 Gallons Per Minute Capacity Each
   2 Wells @ 500 Gallons Per Minute Capacity Each
4. X-611B Recycle Lagoon: 2 Pumps @ 1000 Gallons Per Minute Capacity Each
5. X-608 Scioto River Intake: 3 Pumps @ 5600 Gallons Per Minute Capacity Each

B. Total Source Design Capacity (Million Gallons Per Day):

1. X-608-A & B: 21.6 MGD
2. X-6609: 8.6 MGD
3. X-605G: 4.0 MGD
4. X-611B: 2.9 MGD
5. X-608 River: 24.2 MGD

TOTAL: 61.3 MGD

C. Current Practical Capacity (MGD):

1. X-608-A & B: 5 Wells @ 1000 GPM = 7.2 MGD
2. X-6609: 5 Wells @ 500 GPM = 3.6 MGD

TOTAL: 10.8 MGD

D. Current Usage(MGD):

1. X-608-A & B: 3 Wells @ 1000 GPM = 4.3 MGD
2. X-6609: 2 Wells @ 500 GPM = 1.4 MGD

TOTAL: 5.7 MGD

X-611 Water Treatment Plant

Note: All raw water to the X-611 WTP is lime softened and the softening precipitates settled before being split into the plant recirculating cooling water make-up and the plant potable (sanitary) water supply.

A. Treatment System Description:

1. Plant Design Features:

- 40 MGD Treatment Capacity
- 2 rapid mix units
- 2 flocculation units
- 2 primary settling basins @ 1.67 MG each
- 4 secondary settling basins @ 1.67 MG each

2. Lime Softening:

- Quicklime (CaO) used for hardness removal
- Raw water is softened from 280 milligrams per liter total hardness to 125 milligrams per liter
- Lime Slaker Capacity: 3 Units @ 2,000 Pounds Per Hour

3. Softening Precipitates Settling:

- Anionic Polymer AE1115P used as coagulant
- Coagulant dosage approximately 0.25 milligrams per liter

B. Sanitary Water Treatment:

1. General Treatment Consideration:

- Sanitary Water Design Capacity is 4.0 MGD
- Sanitary Water Current Production is 2.8 MGD

2. Recarbonation:

   - Liquid Carbon Dioxide used for water stabilization

3. Filtration:

   - 4 rapid sand gravity filters
   - Current filter capacity is 4.0 MGD
   - Filter capacity could be increased to 6.0 MGD by changing from conventional sand to multi-media design.

4. Chlorination:

   - Filtered water is disinfected using liquid chlorine
   - Design capacity of chlorine contact clearwell is 6.0 MGD
   - 4 chlorinators available (2 pre-filter and 2 post-filter) each 100 pound per day capacity

5. Sanitary Water Pumpage:

   - Design Capacity: 4 pumps total 6.0 MGD (2 pumps at 2.0 MGD and 2 pumps at 1.0 MGD)
   - Current Usage: 2.8 MGD

Note: All Ohio EPA Safe Drinking Water Act requirements are being met.