

# WASTEWATER FACILITIES PLAN & DESIGN-BUILD-OPERATE PROCUREMENT EPIC, INC. & CPF, INC. PEPSI BOTTLING PLANTS Ayer, Massachusetts

## CLIENT:

Epic, Inc. and CPF, Inc.  
Pepsi Bottling Companies

## PROJECT FEATURES

In Phase I of the project, ARI:

- conducted a process flow and loading analysis of existing equipment and determined Epic-CPF's projection of wastewater flows for a variety of production schemes;
- developed specific disposal options to include solutions involving: discharge to the local POTW, on-site groundwater discharge, on-site surface water discharge, and hauling wastewater for off-site treatment & disposal;
- screened all the alternatives and eliminated the non-viable options
- prepared conceptual process flow diagrams of the screened treatment and disposal alternatives;
- estimated the costs of all conceptual designs and performed life-cycle cost analysis to determine the most cost effective solution;
- recommended on-site anaerobic pretreatment of both high strength and low strength wastewater & discharge to the local POTW.



segregated, the high strength wastewater (HSWW) is pumped to tank trucks for final transport & disposal. The low strength wastewater (LSWW) is discharged to the Town of Ayer wastewater treatment plant.

Realizing that additional capital improvements were required and to save expenses, EPIC and CPF expressed a desire to outsource the wastewater pretreatment operation and capital improvements to a private company. Both industries were interested in the design/build/operate form of project delivery.

In Phase II, ARI will conduct a Design/Build/Operate procurement process that will involve RFP preparation, evaluation and selection of a vendor and negotiation of the DBO contract.

On January 15, 1998, the Town of Ayer issued Industrial User Wastewater Discharge Permits to both EPIC and CPF. The Town of Ayer WWTP is both hydraulically and organically overloaded; thus, wastewater discharges from EPIC and CPF, have undergone increased scrutiny. From time to time, wastewater discharges from both industries have not met the effluent requirements of the Town with respect to five day BOD and pH. As a result, various Notices of Violation were issued to Epic and CPF by the Town.

ARI was retained to provide EPIC/CPF with engineering and management consulting services in a two-phased approach to:

1. determine the most cost effective waste-water disposal option for Epic/CPF, and,
2. Select and procure the best design-build-operate delivery method to implement the Phase I disposal option.

## PROJECT DESCRIPTION:

Over the last several years, Pepsi bottlers, EPIC, Inc. and CPF, Inc., have had various wastewater disposal issues to deal with. The majority of wastewater flows are generated from: washing of process equipment, syrup spills and container preparation. Currently, both companies manually segregate the high biochemical oxygen demand (BOD) wastewater from the more dilute wash water via control of valves, settling pits and pumping systems. Once

The management of the Epic and CPF changed the wastewater disposal practices within their respective production facilities by making minor improvements and educating pretreatment operators.

In Phase I, ARI determined that on-site pretreatment of both HSWW and LSWW using the low rate anaerobic process was the cost-effective solution for EPIC/ CPF.

Phase II of the project is underway.



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