



CASE STUDY

Newterra Enables a Client To Lead a Better Way to Sustainable Energy

A California biomass power plant enhances environmental compliance with new stormwater treatment system.

Market Served: Biomass-fired Power Plant
Application: Industrial Stormwater Treatment
Treatment Location: Central California, USA
Challenge: Pollutants Reduction
Solution: Stormwater Filtration & Polishing System

The Client

A California Biomass power plant was seeking a stormwater treatment system for BMPs for two main outfalls of a 25 megawatt biomass-fired power plant located on a 50-acre industrial site in central California.

Biomass power plants, like these utilize organic materials, such as wood or crop residues, to generate electricity through combustion. Unlike traditional coal-fired plants, biomass power plants use renewable and carbon-neutral sources.

The Challenge

The power plant's fuel consists of approximately 240,000 tons annually of biomass waste made up of principally urban wood waste, in-forest brush and clearing, agricultural byproducts, and other wood related products. The facility discharges stormwater to the Sacramento River, San Joaquin River, and the Sacramento-San Joaquin River Delta in central California.

The Solution

After qualifying other technologies and systems on the basis of performance, cost, and installation base, the plant was retrofit with a Newterra Clara® 90CP plug flow separator system and an Aquip® 210SBI stormwater filtration system to reduce stormwater pollutants from the main plant outfall. The systems were retrofit to an existing outfall in a treatment train configuration with Clara followed by Aquip.

A second outfall draining runoff from the biomass feedstock stockpile area has been retrofit with a low profile Aquip 200CIL stormwater filtration system. The Clara plug flow separator and

Aquip filtration systems work in tandem to remove pollutants by gravity separation and filtration, respectively. The Aquip SBI filtration system includes an internal passive mineral buffering process to condition the stormwater and promote more effective removal of oil, organics and metals through the inert filtration media bed. The Aquip CIL filtration system promotes infiltration of runoff before filtration of excess runoff prior to discharge.

In conjunction with other source control BMPs, the Newterra treatment system reduces discharges of stormwater pollutants including total suspended solids (TSS), specific conductance, oil and grease or total organic carbon (TOC), biochemical oxygen demand (BOD), chemical oxygen demand (COD), copper, iron, lead, zinc, aluminum, arsenic, and chromium. The combination of Clara and Aquip plus other site BMPs qualify as Best Available Technology and Best Conventional Pollution Control Technology (BAT/ BCT) for this industry sector.

Newterra, manufactures industrial stormwater treatment Best Management Practices (BMPs) for customers throughout North America. Products include the Clara settling system, Aquip stormwater filtration system, and Purus™ stormwater polishing system.

What's Your Unique Water Question?

Contact us today at [+1.800.420.4056](tel:+1800.420.4056) to solve your most challenging water issue.

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