

Ecoserv was not only the first company to introduce steam generation to the Gulf of Mexico as a means of De-gassing vessels, but also owns and maintains the largest fleet of mobile steam boilers in the GOM.

### Steam Generation Facts

- Hydrocarbons are removed from vessels at 180° F
- Ecoserv Steam Generators produce dry steam which greatly reduces waste water from operation
- Steam temperature is proportional to pressure

Gauge Pressure (psig)	Steam Temperature (°F)
70	316
75	320
80	324
85	328
90	331
95	335
100	338
105	341
110	344



### Ecoserv Fleet Specs

- 80 - 100 psi
- 324°F - 338° F
- 1000 - 1600 lbs. of steam per hour
- Will heat a typical separator (48" x 20') to 180° F in less than 2 hours

### Paraffin Removal from Pipelines

#### 50' Pipeline Riser & Decommission Pipeline

#### Paraffin Removed From Pipeline Riser



This 50' Pipeline Riser was cleaned at Acadian Contractors. The during and after photos illustrate the visual difference between a riser with paraffin and a riser after the completion of the steam generation process. The paraffin pictures are what was removed from 1 pipeline riser. All paraffin was contained in cutting boxes.



The pipe is set at an 10°-15° angle which allows the paraffin to flow thru the pipe and into the cutting box. The steam is injected on the high end of the pipe and waste is released at the low end of the pipe.

### Case Study

#### Customer Challenge

Ecoserv was recently challenged by a customer to remove accumulated paraffin from 3 process systems on one of their facilities. Liquid handling equipment was performing at less than 50% rated volumes and well flowing tubing pressure exhibited back pressure due to restricted piping. The customer required that waste be minimized and confined space entry be avoided.

Ecoserv surveyed the facility, created a unique procedure, and fabricated specialty equipment required.

#### Result

- A high volume steam generator was employed to melt paraffin and a vacuum system directed the injected dry steam to low point takeoffs and removed wastes to containers, generating minimal waste water.
- Two 6" x 60ft and one 4" x 60ft header logs were found restricted to less than 1" ID
- 125 bbls of paraffin were recovered from the test and 2 LP systems. No confined space entry was required
- Job was completed incident-free
- Customer reports that, although all well test data has not yet been compiled, process upsets have decreased dramatically and system pressures and tubing pressures have decreased