

Hydrocarbon Condensate EC Treatment

30% moisture coal was heated to drive off the moisture. The moisture condensate was then electrocoagulated, Lab analyses (006-597):

Constituent	Concentration		% Removal
	Incoming (mg / l)	Electrocoagulated Water (mg / l)	
Aluminum	1.9	0.5	73.7%
Ammonia	46.6	22.3	50%
Arsenic	0.067	0.042	37.3
Barium	0.5	<0.1	80% +
Beryllium	<0.001	<0.001	
Boron	2.7	1.7	37.0%
Cadmium	<0.001	<0.001	
Chloride	12	29	(241.7%)
Chromium	0.02	<0.01	50% +
Cobalt	<0.01	<0.01	
Copper	0.17	<0.01	94.1%
Cyanide	0.009	0.006	33.3%
Fluoride	0.59	0.18	69.5%
Iron	29.1	3.13	89.2
Lead	1.88	<0.01	99.5% +
Lithium	<0.1	<0.1	
Manganese	0.24	0.80	(333%)
Mercury	0.01	0.004	60%
Nickel	0.05	0.02	60%
Nitrate	<0.05	0.05	
Nitrite	<0.05	<0.05	
Total Oil & Grease	1,610	47.0	97.1%
Phenol	520	145.0	72.1%
Selenium	<0.005	<0.005	
Silver	<0.005	0.01	
Sulfate	104	68.0	34.6%
TDS	1,060	470.0	55.7%
Uranium	<0.0003	0.001	
Vanadium	<0.1	<0.10	
Zinc	0.27	<0.01	96.3% +
Ph	6.6 SU	7.2 SU	

The following lab analyses (006-597) is for the sludge created in the electrocoagulation process. This sludge can be burned.

<u>Sludge</u>	<u>As Received</u>	<u>DMB</u>
% Moisture	69.88%	XXXX
% Ash	2.34	7.76
% Volatile	22.67	75.25
% Fixed Carbon	<u>5.11</u>	<u>16.99</u>
Total	100.00	100.00
BTU / lb.	4,429	14,704
% Sulfur	0.69%	2.30%
MAF BTU	XXXX	15,943
Lb. SO ₂ /MBTU	3.13	3.13