LRC-I-4
CARBONDRY COAL DRYING PROCESS

CONTRACTOR: Carbontec Corporation

PRINCIPAL INVESTIGATOR: John J. Simmons
(701) 663-0449

PARTICIPANTS

<table>
<thead>
<tr>
<th>Sponsor</th>
<th>Cost Share</th>
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<tbody>
<tr>
<td>Carbontec</td>
<td>$25,000</td>
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<tr>
<td>ND Industrial Commission</td>
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<td>Total</td>
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Project Schedule – 1 Year

- Contract Date – 9/14/88
- Start Date – 3/21/88
- Completion Date – 3/21/89

Project Deliverables

- Project Reports ✓
- Final Report – 3/2/90 ✗

OBJECTIVE / STATEMENT OF WORK

The carbondry coal drying process is a multi-stage process which involves the use of oil-based chemicals and additives to dry and stabilize the coal. The first stage was a hot chemical bath which operated at 270-325°F for periods of 5 to 15 minutes. In the second stage the coal was heated to 400°F for 10 to 20 minutes. The objective of this study was to evaluate operating parameters that would yield a stable dry lignite product.

STATUS

This project was combined with LRC-III-16. Run-of-mine North Dakota lignite containing 42-40% moisture and 6,000-6,300 Btu/lb. was upgraded to a dried coal product containing 9.5-5.6% moisture and 10,100-11,600 Btu/lb. The information obtained in this program added to the base of information necessary for a successful test program for North Dakota lignite in Carbontec’s continuous pilot plant.