



CleanSoils Inc.
14120 23rd Avenue North
Minneapolis, MN 55447
(612) 557-7106

RECEIVED
MAR 6 1990
DER-BAQM

February 27, 1990

Mr. C.H. Fancy
Deputy Chief
Bureau of Air Quality Management
Florida DER
Tallahassee, FL 32399-2400

RE: AC48-166670

Dear Mr. Fancy:

As per our earlier discussions, I am requesting that our permit be amended as follows:

1. Include operation in Lake, Seminole and Brevard Counties. The Public Notice of Intent to Issue was published in the Orlando Sentinel, which covers these counties, on February 13, 1990 (see enclosed).
2. The wording on operation time be amended to reflect tonnage. The present permit allows 60 TPH for 800 hours per year, which would total 48,000 tons per year. We would like to be allowed to process 48,000 tons per year not to exceed 60 TPH and in compliance with local ordinances on process operating hours. This does not allow any additional or higher concentration of effluents in any time frame. It does keep us from being penalized for operating at less than 60 TPH.

If this is acceptable would you please notify us.

If you have any further questions or need further information please do not hesitate to call our toll free number 1-800-486-7645.

Sincerely,

Robert A. Wills, Ph.D.
Vice President of Engineering

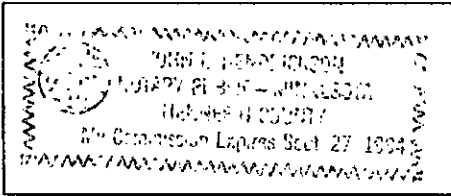
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enclosure

AFFIDAVIT OF PUBLICATION

State of Minnesota,
County of Hennepin

Robert A. Wills, Vice President of Engineering of CleanSoils Inc., County of Hennepin, State of Minnesota, being duly sworn, says that on the 13th day of February, 1990, the State of Florida Department of Environmental Regulation Notice of Intent to issue was published in The Orlando Sentinel and that the Notary has viewed the notice in its entirety in said paper.



Notary Stamp

Robert A. Wills

Signature

Subscribed and sworn to before me this 27th
day of February, 1990

John L. Henderson

SIGNATURE OF NOTARY PUBLIC

State of Florida
Department of Environmental Regulation
Notice of Intent to Issue
The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to CleanSoils Inc., 14120 23rd Avenue North, Minneapolis, MN 55447 to construction a portable 60 TPH soil remediation unit with air pollution controlled by a baghouse and afterburner. The unit will be authorized to operate in any county in Florida. Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (LAER) terminations were not required. The unit may emit 1.2 TPY particulate matter, 14.4 TPY VOC, and 2.3 TPY NOx. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.52, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel at the Department at 2600 Blair Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within the time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes.

The petition shall contain the following information:
(a) The name, address, and telephone number of each petitioner, the applicant's name and address, the Department Permit File Number and the County in which the project is proposed;
(b) A statement of how and when each petitioner received notice of the Department's action or proposed action;
(c) A statement of how each petitioner's substantial interests are affected by the Department's action or proposed action;
(d) A statement of the material facts disputed by Petitioner, if any;
(e) A statement of facts which petitioner contends warrant reversal or modification of the Department's action or proposed action;
(f) A statement of which rules or statutes petitioner contends require reversal or modification of the Department's action or proposed action; and
(g) A statement of the relief sought by petitioner, stating precisely the action petitioner wants the Department to take with respect to the Department's action or proposed action.
If a petition is filed, the administrative hearing process is designed to formulate agency action. Accordingly, the Department's final action may be different from the position taken by it in this Notice. Persons whose substantial interests will be affected by any decision of the Department with regard to the application have the right to petition to become a party to the proceeding. The petition must conform to the requirements specified above and be filed (received) within 14 days of publication of this notice in the Office of General Counsel at the above address of the Department. Failure to petition within the allowed time frame constitutes a waiver of any right such person has to request a hearing under Section 120.57, F.S., and to participate as a party to this proceeding. Any subsequent intervention will only be at the approval of the presiding officer upon motion filed pursuant to Rule 28.5 207, F.A.C.
The application is available for public inspection during normal business hours, 8:00 a.m. to 5:00 p.m., Monday through Friday, except legal holidays, at:
Department of Environmental Regulation
Bureau of Air Regulation
2600 Blair Stone Road
Tallahassee, Florida 32399-2400
Dept. of Environmental Regulation

LEGAL NOTICES

- Northwest District
160 Governmental Center
Panama City, Florida 32501-5794
Dept. of Environmental Regulation
- Southwest District
4520 Oak Fair Boulevard
Tampa, Florida 33610-7347
Dept. of Environmental Regulation
- South Florida District
2299 Bay Street
Ft. Myers, Florida 33901-2898
Dept. of Environmental Regulation
- Northwest District
3426 Briles Road
Jacksonville, Florida 32207
Dept. of Environmental Regulation
- Central Florida District
3318 Mequira Blvd., Suite 232
Orlando, FL 32803-3767
Dept. of Environmental Regulation
- Southeast Florida District
1900 S. Congress Avenue,
Suite A
West Palm Beach, Florida 33406
Broward County Environmental
Quality Control Board
621 South Andrews Avenue
Ft. Lauderdale, Florida 33310
Duval County Dept. of
Environmental Resources
Management
Jose Marti Building
801 S.W. 3rd Avenue, 2nd Floor
Miami, Florida 33130
Duval County Dept. of Health,
Welfare and Bio-
Environmental Services
421 West Church Street, Suite
412
Jacksonville, Florida 32202
Environmental Protection
Commission of Hillsborough
County
1410 North 21st Street
Tampa, Florida 33605
Palm Beach County Health
Dept. Division of
Environmental Science
and Engineering
801 S. Evernia Street
West Palm Beach, Florida 33402
Pinellas County Department of
Environmental Management
315 Court Street
Clearwater, Florida 34616
Sarasota County Environmental
Services Department
1301 Catterman Road
Sarasota, Florida 33582-9631
Orange County Environmental
Protection Department
2002 E. Michigan Avenue
Orlando, Florida 32806

Any person may send written comments on the proposed action to Mr. Bill Thomas at the Department's Tallahassee address. All comments mailed within 14 days of the publication of this notice will be considered in the Department's final determination.
CL-820 Feb. 13, 1990



CleanSoils Inc.
14120 23rd Avenue North
Minneapolis, MN 55447
(612) 557-7106

RECEIVED
MAR 5 1990
DER. CAG.

February 27, 1990

Mr. Willard Hanks
Bureau of Air Quality Management
Florida Department of Environmental Regulation
2600 Blair Stone Road
Tallahassee, Fl 32301

RE: AC 48-166670

Dear Willard:

I thought I'd let you know that I've sent the enclosed Notice of Intent to C. Fancy along with a request to amend our permit to allow operation in Lake, Seminole, and Brevard Counties. I also requested that the wording be changed to reflect 48,000 tons to be processed per year rather than 800 hours at 60 TPH. This doesn't penalize us for operating at a lower throughput.

Thank you for passing along my request for an updated list of soil processors in Florida. It doesn't seem to have grown much.

It appears that we've won the contract on a cleanup for the town of Rockledge near Cocoa Beach. I believe that we will be relocating our processor to this site after we finish our present project in Milwaukee. This should allow plenty of time before the July 15, 1990 expiration of the construction permit.

Thanks again for your help. I'm sure I'll be down for part of this Rockledge project. I'll try and stop by your office and say hi.

Sincerely,

Robert A. Wills, Ph.D.
Vice President of Engineering

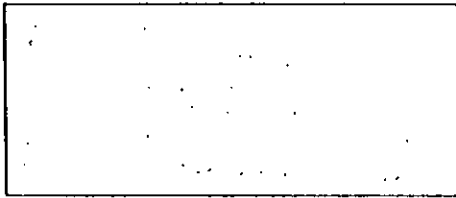
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Notary Stamp

Robert A. Wills

Signature

Subscribed and sworn to before me this 13th
day of February, 19 90

John L. Hennelich

SIGNATURE OF NOTARY PUBLIC

Requestion
Notice of Intent to Issue
The Department of Environmental Regulation hereby gives notice of its intent to issue a permit to CleanSoils Inc., 14120 23rd Avenue North, Minneapolis, MN 55447 to construct a portable 80 TPH soil remediation unit with air pollution controlled by a baghouse and afterburner. The unit will be authorized to operate in any county in Florida Best Available Control Technology (BACT) and Lowest Achievable Emission Rate (ALEM) de terminations were not required. The unit may emit 1.2 TPY particulate matter, 14.4 TPY VOC, and 2.3 TPY NOx. These emissions will not cause a violation of any ambient air quality standard or Prevention of Significant Deterioration (PSD) increment. A person whose substantial interests are affected by the Department's proposed permitting decision may petition for an administrative proceeding (hearing) in accordance with Section 120.57, Florida Statutes. The petition must contain the information set forth below and must be filed (received) in the Office of General Counsel of the Department at 2000 Blak Stone Road, Tallahassee, Florida 32399-2400, within fourteen (14) days of publication of this notice. Petitioner shall mail a copy of the petition to the applicant at the address indicated above at the time of filing. Failure to file a petition within the time period shall constitute a waiver of any right such person may have to request an administrative determination (hearing) under Section 120.57, Florida Statutes. The petition shall contain the following information:
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Dade County Dept. of Environmental Resources Management
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Miami, Florida 33130
Duvall County Dept. of Health, Welfare and Bio-Environmental Services
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315 Court Street
Clearwater, Florida 34616
Sarasota County Environmental Services Department
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Sarasota, Florida 33582-9831
Orange County Environmental Protection Department
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Orlando, Florida 32808
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CL-820 Feb 13, 1990

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Bureau of Air Regulation
2000 Blak Stone Road
Tallahassee, Florida 32399 2400
Dept. of Environmental Regulation



March 1, 1991

Mr. Willard Hanks
Bureau of Air Quality Management
2600 Blair Stone Road
Twin Towers Office Building
Tallahassee, FL 32301

RE: Permit # AC 48-166670

Dear Willard:

I have enclosed preliminary information from our stack test performed February 8th and 9th. When Interpoll Laboratories has completed their report, I will forward a copy to you.

In attempting to comply with informational requests specified in 17-2.700(7)(c), we have answered the first six items and items 17, 20 and 21. Items 7 through 16, 18 and 19 will be answered in the report provided by Interpoll.

If you have any further questions, please do not hesitate to call.

Sincerely,

A handwritten signature in cursive script that reads "R. A. Wills".

Robert A. Wills, PhD
Vice President of Engineering

Enclosures

cc: Bob Soich
Hillsborough County

RECEIVED
MAR 04 1991

DEL.

DER 17-2.700(7)(C) REPORT ON STACK TEST

1. CleanSoils mobile soil remediation unit, SRU-101. Tests were performed at the site of remediation, Bay Concrete, 3121 East Clark Street, Tampa, Florida. The stack from the mobile unit was evaluated as sole source for emissions.
2. Bay Concrete, 3121 East Clark Street, Tampa, Florida
3. CleanSoils Inc., 84 2nd Avenue SE, New Brighton, Minnesota
4. Normal processing of contaminated soils (mobile):
 - Propane fuel (Dryer and Afterburner)
 - 25-30 Ton per hour of soil
 - 15-20 gallons propane/ton soil
 - Typical site - 2,000 tons

Site (Clark St.) processing of contaminated soil

- Propane fuel
- 8-10* ton per hour of soil
- 30-35* gallon propane/ton soil
- 148 tons processed during test

*Processing rate and fuel consumption were abnormal due to high moisture content in the soil.

5. The amount of material processed is weighed on a Technetics Model WY11-01-24 belt scale. This provides throughput in tons per hour and accumulated tons across the scale. Fuels are not typically considered with respect to emissions from our unit. Fuel consumption is based on percent change in fuel transporter volume over time.
 6. Air pollution equipment
- Baghouse:
- Overall unit is in very good condition. During the stack test the damper was open to 100% throughout the tests.
 - At maximum flow 4.2:1 air to cloth
 - Normal pressure drop (across tube sheet) is 7-10 inch of water (at full damper open) depending on pulse cycle.
- Afterburner:
- Overall unit is in very good condition.
 - Normal operation is 1400°F exhaust gas.
 - Fuel usage is dependent on BTU value of contaminants being destructed.
 - This unit ran at 1400°F or higher except for process upsets (noted on attached Log Sheet).

17. The individuals testing the stack gases will be indicated in the Interpoll report. Operators for the SRU-101 during the stack tests were Troy Watling and Ed O'Connor, under the direction of Dr. R. A. Wills, Vice President of Engineering.
20. The emissions standards for this unit according to Florida permit number AC 48-166670 are:

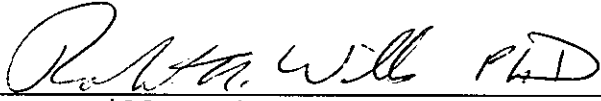
Particulate matter:
 < 0.08 grains/dscf
 < 3.0 lb/hour

Opacity:
 < 5%

VOC's:
 Benzene < 5.6 lb/hour
 Total <36 lb/hour

Test results will be provided in the follow-up Interpoll report.

21. A certificate will be provided on the follow-up data when it is available. The above information is true and correct to the best of my knowledge.

Signed: 
Robert A. Wills, PhD.
Vice President of Engineering

Addendum A to Stack Test Results
For CleanSoils Inc., SRU-101
Conducted February 8 and 9, 1991

The following items were approved by Willard Hanks, FL-DER, in a phone conversation with Robert Wills, CleanSoils Inc. on January 22, 1991.

1. Co-current testing of the inlet and outlet gases for the afterburner using Method 25A was not necessary. Alternating between the two sources with a single Ratfisch was acceptable.
2. Opacity need not be monitored co-currently with the running of the particulate tests. Opacity may be monitored during other times of operation.
3. The pressure drop need not be continuously monitored/recorded. Pressure drop data for the baghouse may be read and recorded at 1 (one) minute intervals.

Addendum B to Stack Test Results
For CleanSoils Inc., SRU-101
Conducted February 8 and 9, 1991

Throughput through the SRU-101 was substantially reduced by the moisture content in the soil. Under normal operations, a moisture content of 5%-10% is expected. As seen on the enclosed analytical report, the moisture content was 22.2%.

During the test on February 8, 1991, there was concern that the concentration of contaminants was changing. This was partially confirmed by noting that the afterburner fuel controller steadily decreased from 24% down to as low as 9.5% while still maintaining temperature in excess of 1400°F. Our experience has shown that the fuel in the soil is actually providing the combustion fuel. As "this" fuel increased, the burner backed off to maintain acceptable temperature maximums. This increase was probably due to removing soil for feed material from the outside of the pile toward the center as the day progressed. The center of the piles tend to have higher concentration of both water and contaminants for a variety of reasons.

SRU 101 STACK TEST

MAGNEHELIC READINGS 2/8/91

START #1	<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>
	1225	8.25	1311	8.75	1446	9.2
	1226	8.5	1312	8.75	1447	9.2
	1227	8.5	1313	8.75	1448	9.2
	1228	8.5	1314	8.75	1449	9.2
	1229	9.2	1315	8.75	1450	9.2
			1316	8.75	1451	9.2
	1230	8.5	1317	8.75	1452	9.2
	1231	8.5	1318	8.75	1453	9.2
	1232	8.5	1319	8.75	1454	9.2
	1233	8.25	1320	8.75	1455	9.2
	1234	8.5	1321	8.75	1456	9.2
	1235	8.5	1322	8.75	1457	9.2
	1236	8.75	1323	8.9	1458	9.2
	1237	8.5	1324	8.8	1459	9.5
	1238	8.5	1325	8.9		
	1239	8.5	STOP/START #2		1500	9.5
	1240	8.5	1415	9.2	1501	9.5
	1241	8.5	1416	9.2	1502	9.5
	1242	8.5	1417	9.2	1503	9.5
	1243	8.25	1418	9.2	1504	9.5
	1244	8.5	1419	9.2	1505	9.5
	1245	8.75	1420	9.5	1506	9.5
	1246	8.75	1421	9.5	1507	9.5
	1247	8.5	1422	9.5	1508	9.5
	1248	8.75	1423	9.5	1509	9.5
	1249	8.75	1424	9.5	1510	9.5
	1250	8.75	1425	9.5	1511	9.5
	1251	8.75	1426	9.5	1512	9.5
	1252	8.75	1427	9.2	1513	9.5
	1253	8.75	1428	9.2	1514	9.5
	1254	8.75	1429	9.2	1515	9.5
	1255	8.75	STOP/START #3			
	1256	8.75	1430	9.2	1516	9.5
	1257	8.75	1431	9.2	1517	9.5
	1258	8.75	1432	9.2	1518	9.5
	1259	8.75	1433	9.2	1519	9.5
			1434	9.2	1520	9.5
	1300	8.75	1435	9.2	1521	9.5
	1301	8.75	1436	9.2	1522	9.5
	1302	8.75	1437	9.2	1523	9.5
	1303	8.75	1438	9.2	1524	9.75
	1304	8.75	1439	9.2	1525	9.75
	1305	8.75	1440	9.2	1526	9.75
	1306	8.75	1441	9.2	1527	9.75
	1307	8.75	1442	9.2	1528	9.5
	1308	8.75	1443	9.2	1529	9.5
	1309	8.75	1444	9.2		
	1310	8.75	1445	9.2	1530	9.5

SRU 101 STACK TEST 2/8/91

<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>
1531	9.5	1621	9.5	1710	9.75
1532	9.5	1622	9.5	1711	9.75
1533	9.75	1623	9.5	1712	9.75
1534	10	1624	9.5	1713	9.75
1535	10	1625	9.5	1714	9.75
1536	9.75	1626	9.5	1715	9.75
1537	10	1627	9.5	1716	9.75
1538	9.75	1628	9.75	1617	9.75
1539	9.75	1629	9.75	1718	9.75
1540	9.75			1719	9.75
1541	9.75	1630	9.75	1720	9.75
1542	9.75	1631	9.75	1721	9.75
1543	9.75	1632	9.75	1723	9.75
1544	9.75	1633	9.75	1724	9.75
1545	9.75	1634	9.75	1725	9.75
1546	9.75	1635	9.75	1726	9.75
1547	9.75	1636	9.75	1727	9.75
1548	9.75	1637	9.75	1728	9.75
1549	9.75	1638	9.75	1729	9.75
1550	9.75	1639	9.75		
1551	9.75	1640	9.75	1730	9.5
1552	9.75	1641	9.75	1731	9.75
1553	9.75	1642	9.75	1732	9.75
1554	9.75	1643	9.75	1733	9.75
1555	9.75	1644	9.75	1734	9.5
1556	9.75	1645	9.75	1735	8.5
1557	9.75	1646	9.75	1736	8.0
1558	9.75	1647	9.75	1737	7.5
1559	9.75	1648	9.75	1738	7.5
		1649	9.75	1739	7.0
1600	9.75	1650	9.75	1740	7.0
1601	9.75	1651	9.75	1741	7.0
1602	9.75	1652	9.75	1742	7.25
1603	9.75	1653	9.75	1743	7.25
1604	9.5	1654	9.75	1744	7.25
1605	9.5	1655	9.75	1745	7.5
1606	9.5	1656	9.75	1746	7.5
1607	9.5	1657	9.75	1747	7.5
1608	9.5	1658	9.75	1748	7.5
1609	9.5	1659	9.75	1749	7.5
1610	9.5			1750	7.5
1611	9.5	1700	1.75	1751	7.5
1612	9.5	1701	9.75	1752	7.75
1613	10	1702	9.75	1753	7.75
1614	10	1703	9.75	1754	7.75
1615	10	1704	9.75	1755	7.75
1616	10	1705	9.75	1756	7.75
1617	10	1706	9.75	1757	7.75
1618	9.75	1707	9.75	1758	7.75
1619	9.5	1708	9.75	1759	7.75
1620	9.5	1709	9.75		

SRU 101 STACK TEST 2/8/91

<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>
1800	7.75	1850	8.25	1939	8.5
1801	7.75	1851	8.25	1940	8.5
1802	7.75	1852	8.25	1941	8.5
1803	7.75	1853	8.25	1942	8.5
1804	7.75	1854	8.25	1943	8.5
1805	7.75	1855	8.25	1944	8.5
1806	8.0	1856	8.25	1945	8.5
1807	8.0	1857	8.25	1946	8.5
1808	8.0	1858	8.25	1947	8.5
1809	8.0	1859	8.25	1948	8.5
1810	8.0			1949	8.5
1811	8.0	1900	8.25	1950	8.5
1812	8.0	1901	8.25	1951	8.75
1813	8.0	1902	8.25	1952	8.75
1814	8.0	1903	8.25	1953	8.75
1815	8.0	1904	8.25	1954	8/75
1816	8.0	1905	8.25	1955	8.75
1817	8.0	1906	8.25	1956	8.75
1818	8.0	1907	8.25	1957	8.75
1819	8.0	1908	8.25	1958	8.5
1820	8.0	1909	8.25	1959	8.5
1821	8.0	1910	8.25		
1822	8.0	1911	8.25	2000	8.5
1823	8.0	1912	8.5	2001	8.5
1824	8.0	1913	8.5	2002	8.5
1825	8.0	1914	8.5	2003	8.5
1826	8.0	1915	8.5	2004	8.5
1827	8.0	1916	8.5	2005	8.5
1828	8.0	1917	8.5	2006	8.5
1829	8.0	1918	8.5	2007	8.5
		1919	8.5	2008	8.5
1830	8.0	1920	8.5	2009	8.5
1831	8.0	1921	8.5	2010	8.5
1832	8.0	1922	8.5	2011	8.5
1833	8.0	1923	8.5	2012	8.5
1834	8.0	1924	8.5	2013	8.5
1835	8.0	1925	8.5	2014	8.5
1836	8.0	1926	8.5	2015	8.5
1837	8.0	1927	8.5	2016	8.5
1838	8.0	1928	8.5	2017	8.5
1839	8.0	1929	8.5	2018	8.5
1840	8.0			2019	8.5
1841	8.0	1930	8.5	2020	8.5
1842	8.25	1931	8.5	2021	8.5
1843	8.25	1932	8.5	2022	8.5
1844	8.25	1933	8.5	2023	8.5
1845	8.25	1934	8.5	2024	8.5
1846	8.25	1935	8.5	2025	8.5
1847	8.25	1936	8.5	2026	8.5
1848	8.25	1937	8.5	2027	8.5
1849	8.25	1938	8.5	2028	8.5

SRU 101 STACK TEST 2/8/91

<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>
2029	8.5				
2030	8.5				
2031	8.5				
2032	8.5				
2033	9.0				

LOG SHEET

<u>TIME</u>	<u>TONS PER HOUR</u>	<u>SOIL TEMP.</u>	<u>AFTERBURNER TEMP.</u>	<u>PRESSURE DROP</u>
11:00	START SOIL			
11:15	7.8	480	1238	.5
11:30	8.8	453	1286	.5
11:45	7.5	574	1391	1.0
12:00	10.6	569	1411	1.0
12:15	AFTERBURNER DOWN SCANNER FAILURE			
12:30	9.2	423	1281	4.5
12:45	11.4	422	1416	5.5
13:00	12.2	442	1512	6.0
13:15	12.1	421	1491	5.0
13:23	AFTERBURNER DOWN SCANNER FAILURE			
13:30	11.8	418	1400	6.0
13:45	10.3	471	1461	6.0
	AFTERBURNER DOWN SCANNER FAILURE			
14:00	8.7	482	1498	6.25
14:15	9.8	560	1398	5.5
14:30	11.7	569	1374	6.0
14:45	DRIER BURNER PROBLEM (LEAKY FUEL NOZZLE)			
15:25	START SOIL			
15:45	8.8	451	1445	
16:00	9.6	503	1460	
16:15	8.7	512	1438	
16:30	8.9	462	1499	
16:45	9.8	489	1451	
17:00	9.4	496	1462	
17:15	7.1	372	1465	
17:30	9.6	586	1425	
17:45	9.4	581	1431	
18:00	9.1	433	1425	5.0
18:15	13.0	422	1454	6.0

90.246

2/9/91

5000

1900

5DPM

1800

DEVAR Inc.

1700

BPND

1600

For Business Data

1500

6PM

DEVAR Inc.

1400

10 20 30 40 50 60 70 80 90

1300

12,800
4PM

1215

1200

DEVAR Inc.

2PND 20 30 40 50 60 70 80 90

PRINTED IN U.S.A.

0 360 720 1080 1440 1800

°F

SRU 101 STACK TEST
MAGNEHELIC READINGS 2/9/91

START #1	PRESSURE *		PRESSURE		PRESSURE	
	TIME	DROP	TIME	DROP	TIME	DROP
	1235	5.0	1322	5.0	1427	6.5
	1236	5.0	1323	5.0	1428	5.5
	1237	5.0	1324	5.0	1429	5.5
	1238	5.0	1325	5.5		
	1239	5.0	1326	6.0	1430	6.0
	1240	5.0	1327	6.0	1431	6.0
	1241	5.0	1328	6.0	1432	6.0
	1242	5.0	1329	6.0	1433	6.5
	1243	5.0	1330	6.0	1434	6.5
	1244	5.0	1331	6.0	1435	6.5
	1245	5.5	1332	6.0	1436	5.5
	1246	5.5	1333	6.0	1437	4.5
	1247	5.5	1334	6.0	1438	4.5
	1248	5.5	1335	6.0	1439	5.0
	1249	5.5			1440	5.5
	1250	5.5	1336	6.0	1441	6.0
	1251	5.5	1337	6.0	1442	6.0
	1252	5.5	1338	6.5	1443	6.0
	1253	5.5	1339	6.5		
	1254	5.5	1340	4.5		
	1255	5.5	1341	5.5		
	1256	6.0	1342	5.5		
	1257	6.0	1343	5.5		
	1258	6.0	1344	6.0		
	1259	6.0	1345	6.0		
			1346	6.0		
	1300	6.0	1347	6.0		
	1301	6.0	1348	6.0		
	1302	6.0	1349	6.25		
	1303	6.0	1350	6.5		
	1304	6.0	1351	5.5		
	1305	6.0	1352	5.5		
	1306	6.0	1353	5.5		
	1307	6.5	1354	6.0		
	1308	6.5	1355	6.0		
	1309	6.5	1356	6.0		
	1310	5.5	1357	6.0		
	1311	3.5	1358	6.0		
	1312	3.5	1359	6.25		
	1313	4.0				
	1314	4.5	1400	6.25		
	1315	4.5	1420	5.5		
	1316	5.0	1421	5.5		
	1317	5.0	1422	6.0		
	1318	5.0	1423	6.0		
	1319	5.0	1424	6.0		
	1320	5.0	1425	6.0		
	1321	5.0	1426	6.0		
					1500	7.0
					1501	6.0
					1502	5.0
					1503	4.0
					1504	4.5
					1505	5.0
					1506	5.0
					1507	5.0
					1508	5.5
					1509	5.5
					1510	6.0
					1511	6.0
					1512	6.0

* Inches of Water

P = pulsed baghouse

<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>
1513	6.0	1602	5.5	1713	5.0
1514	6.0	1603	6.0	1714	5.0
1515	6.0	1604	6.0	1715	5.0
1516	6.0	1605	6.5	1716	5.5
1517	6.0	1606	7.0	1717	5.5
1518	6.0	1607	5.0	1718	5.5
1519	6.0	1608	4.0	1719	5.75
1520	6.0	1609	5.0	1720	6.0
1521	6.5	1610	5.0	1721	6.0
1522	4.5] P	1611	5.5	1722	6.0
1523	4.5	1612	6.0	1723	6.0
1524	5.0	1613	6.0	1724	6.0
1525	5.0	1614	6.0	1725	6.0
1526	5.5	1615	6.0	1726	6.25
1527	6.0	1616	6.5] P	1727	6.5] P
1528	6.0	1617	6.0	1728	6.0] P
1529	6.5] P	1618	4.5	1729	4.5] P
		1619	5.0		
1530	4.5] P	1620	5.5	1730	5.0
1531	5.0	1621	6.0	1731	5.25
1532	5.5	1622	6.0	1732	5.5
1533	6.0	1623	6.0	1733	5.5
1534	6.0	1624	6.0	1734	5.75
1535	6.0	1625	6.5] P	1735	5.75
1536	6.0	1626	6.0	1736	6.0
1537	6.0	1627	4.5] P	1737	6.0
1538	6.0	1628	5.0	1738	6.25
1539	6.0	1629	5.5	1739	6.25
1540	6.0			1740	6.5] P
1541	6.5	1630	6.0	1741	5.0] P
1542	6.5	1631	6.0	1742	4.5] P
1543	6.5	1632	6.0	1743	5.0
1544	5.0	1633	6.25	1744	5.25
1545	5.0	1634	6.5] P	1745	5.5
1546	6.0	1635	6.0	1746	5.75
1547	6.0	1636	5.0] P	1747	6.0
1548	6.0	1637	4.5] P	1748	6.0
1549	6.0	1638	5.5	1749	6.0
1550	6.5] P	1639	5.5	1750	6.25
1551	4.5] P	1640	6.0	1751	6.25
1552	5.0	1641	END	1752	6.5] P
1553	6.0			1753	5.25] P
1554	6.0	START		1754	4.0] P
1555	6.0	1706	6.5] P	1755	4.5
1556	6.0	1707	6.0	1756	4.5
1557	6.5] P	1708	5.0] P	1757	4.0
1558	5.5] P	1709	4.0] P	1758	4.5
1559	4.5] P	1710	4.5	1759	4.5
		1711	4.5		
1600	5.0	1712	5.0	1800	4.75
1601	5.5			1801	5.0

<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>	<u>TIME</u>	<u>PRESSURE DROP</u>
START					
1802	5.0				
1803	5.0				
1804	5.0				
1805	5.25				
1806	5.25				
1807	5.25				
1808	5.5				
1809					
1810					
1811					
1812					
1813					
1814					
1815					
1816					
1817					
1818					
1819					
1820					
1821					
1822					
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1824					
1825					
1825					
1826					
1827					
1828					
1829					
1830					
1831					
1832					