

NM1 - 3

C-138

YEAR(S):

2001-2000



NORM DECON SERVICES, LLC

OFFICE: 1910 North Big Spring
Midland, Texas 79705
915-682-4559 • Fax 915-682-3946

YARD: 2809 S. County Rd. #1257
Midland, Texas 79706
915-563-1123 • Fax 915-563-1823

*ALL: MARTYNE
FOR YOUR FILES!*

RP

August 24, 2001

Mr. Wayne Price
New Mexico Oil Conservation Division
1220 S. St. Francis Dr.
Santa Fe, NM 87504

Dear Mr. Price:

Thank you for meeting with myself, Ms. Haynes and Mr. Curtis this past Wednesday. Per your request, I have enclosed the waste receipt tickets for the material that went to Parabo and the waste certifications for material that went to Waste Management. I have also enclosed the laboratory results for the samples that were taken at J&L Landfarms which indicate that regulated NORM is not present. You also requested the amount of waste that went to Parabo. Approximately 2800 yds of waste were transported and disposed at Parabo.

Please contact me at 915-563-1123 should you have any questions or require additional information. Mr. Curtis can be reached at 505-393-9174.

Sincerely,

Mitchell W. Davis, RRPT
Health Physicist

| | | | |
|---|--|-------------------------|-------------------|
| Sundance Services, Inc. P.O. Box 1737 ★ Eunice, NM 88231 (505) 394-2511 | | | No 29209 |
| LEASE OPERATOR/SHIPPER/COMPANY: <u>Rice</u> | | | |
| LEASE NAME: <u>EME-M-33</u> | | | |
| TRANSPORTER COMPANY: <u>Walton</u> | | | TIME: _____ AM/PM |
| DATE: <u>6-7-00</u> | | VEHICLE NO.: <u>209</u> | DRIVER NO.: _____ |
| CHARGE TO: <u>Rice</u> | | | |
| TYPE OF MATERIAL | | | |
| <input type="checkbox"/> Production Water <input type="checkbox"/> Drilling Fluids <input type="checkbox"/> Completion Fluids <input type="checkbox"/> Tank Bottoms <input checked="" type="checkbox"/> Contaminated soil <input type="checkbox"/> C-117 No.: _____ <input type="checkbox"/> Other Material: <input type="checkbox"/> BS&W Content: _____ | | | |
| Description: _____ | | | |
| <u>Wood</u> | | | |
| VOLUME OF MATERIAL <input type="checkbox"/> BBLs. _____ : <u>22</u> YARD <u>5</u> : <input type="checkbox"/> _____ | | | |
| <p>AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.</p> <p>ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.</p> <p><i>THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.</i></p> | | | |
| DRIVER: <u>[Signature]</u> (SIGNATURE) | | | |
| FACILITY REPRESENTATIVE: <u>[Signature]</u> (SIGNATURE) | | | |
| <small>White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter Revised 12/27/95</small> | | | |

Sundance Services, Inc.P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

Nº 29194

LEASE OPERATOR/SHIPPER/COMPANY:

Rice

LEASE NAME:

EME M-33

TRANSPORTER COMPANY:

Walton const.

TIME:

AM/PM

DATE:

6-7-00

VEHICLE NO.:

57

DRIVER NO.:

CHARGE TO:

Rice

TYPE OF MATERIAL☐ Production Water☐ Drilling Fluids☐ Completion Fluids☐ Tank Bottoms☒ Contaminated soil☐ C-117 No.:☐ Other Material:☐ BS&W Content: _____

Description: _____

wood.

VOLUME OF MATERIAL ☐ BBLs. _____ :☐ YARD 25 :☐ _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: _____

(SIGNATURE)

FACILITY REPRESENTATIVE: _____

(SIGNATURE)

White-Sundance Canary-Sundance Acc#1 Pink-Sundance Acc#2 Gold-Transporter
Revised 12/27/95

Sundance Services, Inc.P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

No 29193

LEASE OPERATOR/SHIPPER/COMPANY: RiceLEASE NAME: EME M-33TRANSPORTER COMPANY: Walton Const.

TIME: AM/PM

DATE: 6-7-00 VEHICLE NO.: # 209 DRIVER NO.:CHARGE TO: Rice**TYPE OF MATERIAL**☐ Production Water☐ Tank Bottoms☐ Other Material:☐ Drilling Fluids☒ Contaminated soil☐ BS&W Content: _____☐ Completion Fluids☐ C-117 No.: _____

Description: _____

woodVOLUME OF MATERIAL ☐ BBLs. _____☐ YARD 5

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.

THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.

DRIVER: Kelly Roach
(SIGNATURE)FACILITY REPRESENTATIVE: Kelly Roach
(SIGNATURE)White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
Revised 12/27/95

these aren't clear
but you can read
the originals

| | | | |
|---|--|--|-------------------|
| Sundance Services, Inc. P.O. Box 1737 ★ Eunice, NM 88231 (505) 394-2511 | | | NE 25117 |
| LEASE OPERATOR/SHIPPER/COMPANY: _____ | | | |
| LEASE NAME: <u>6-21</u> | | | |
| TRANSPORTER COMPANY: _____ | | | TIME: _____ AM/PM |
| DATE: _____ | VEHICLE NO.: _____ | DRIVER NO.: _____ | |
| CHARGE TO: _____ | | | |
| TYPE OF MATERIAL | | | |
| <input type="checkbox"/> Production Water | <input type="checkbox"/> Drilling Fluids | <input type="checkbox"/> Completion Fluids | |
| <input type="checkbox"/> Tank Bottoms | <input type="checkbox"/> Contaminated soil | <input type="checkbox"/> C-117 No.: _____ | |
| <input type="checkbox"/> Other Material: | <input type="checkbox"/> BS&W Content: _____ | | |
| Description: _____ | | | |
| VOLUME OF MATERIAL <input type="checkbox"/> BBLs. _____ <input type="checkbox"/> YARD _____ <input type="checkbox"/> _____ | | | |
| <p>AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.</p> <p>ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.</p> <p>THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.</p> | | | |
| DRIVER: _____ (SIGNATURE) | | | |
| FACILITY REPRESENTATIVE: _____ (SIGNATURE) | | | |
| White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter Revised 12/27/95 | | | |

| | | | |
|---|---------------------|--------------------|----------|
| Sundance Services, Inc. P.O. Box 1737 ★ Eunice, NM 88231 (505) 394-2511 | | | N2 25072 |
| LEASE OPERATOR/SHIPPER/COMPANY: | | | |
| LEASE NAME: | | L-21 | |
| TRANSPORTER COMPANY: | | TIME: AM/PM | |
| DATE: | VEHICLE NO.: | DRIVER NO.: | |
| CHARGE TO: | | | |
| TYPE OF MATERIAL | | | |
| <div style="display: flex; justify-content: space-between;"><div><input type="checkbox"/> Production Water <input type="checkbox"/> Tank Bottoms <input type="checkbox"/> Other Material:</div><div><input type="checkbox"/> Drilling Fluids <input type="checkbox"/> Contaminated soil <input type="checkbox"/> BS&W Content: _____</div><div><input type="checkbox"/> Completion Fluids <input type="checkbox"/> C-117 No.: _____</div></div> <p>Description: _____</p> | | | |
| VOLUME OF MATERIAL <input type="checkbox"/> BBLs. _____ : <input type="checkbox"/> YARD _____ : <input type="checkbox"/> _____ | | | |
| <p>AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.</p> <p>ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.</p> <p><i>THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.</i></p> <p>DRIVER: _____ (SIGNATURE)</p> <p>FACILITY REPRESENTATIVE: _____ (SIGNATURE)</p> <p><small>White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter Revised 12/27/95</small></p> | | | |

| | | | |
|---|-----------------------------------|----------------------------------|---|
| Sundance Services, Inc. P.O. Box 1737 * Eunice, NM 88231 (505) 394-2511 | | | 112 25177 |
| LEASE OPERATOR/SHIPPER/COMPANY: | | | |
| LEASE NAME: <u>6-21</u> | | | |
| TRANSPORTER COMPANY: | | | TIME: <u> </u> AM/PM |
| DATE: <u> </u> | VEHICLE NO.: <u> </u> | DRIVER NO.: <u> </u> | |
| CHARGE TO: <u> </u> | | | |
| TYPE OF MATERIAL <div style="display: flex; justify-content: space-between;"> <div style="width: 30%;"> <input type="checkbox"/> Production Water <input type="checkbox"/> Tank Bottoms <input type="checkbox"/> Other Material: </div> <div style="width: 30%;"> <input type="checkbox"/> Drilling Fluids <input type="checkbox"/> Contaminated soil <input type="checkbox"/> BS&W Content: </div> <div style="width: 30%;"> <input type="checkbox"/> Completion Fluids <input type="checkbox"/> C-117 No.: </div> </div> <p style="margin-top: 10px;">Description: <u> </u></p> | | | |
| VOLUME OF MATERIAL <input type="checkbox"/> BBLs. <u> </u> : <input type="checkbox"/> YARD <u> </u> : <input type="checkbox"/> | | | |
| <p>AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME. 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.</p> <p>ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.</p> <p><i>THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.</i></p> <p>DRIVER: <u> </u> (SIGNATURE)</p> <p>FACILITY REPRESENTATIVE: <u> </u> (SIGNATURE)</p> <p style="font-size: small; margin-top: 10px;">White-Sundance Canary-Sundance Acco#1 Pink-Sundance Acco#2 Gold-Transporter Revised 12/27/95</p> | | | |

| | | | |
|---|--------------|-------------|-------------|
| Sundance Services, Inc. P.O. Box 1737 ★ Eunice, NM 88231 (505) 394-2511 | | | NO 25129 |
| LEASE OPERATOR/SHIPPER/COMPANY: | | | |
| LEASE NAME: <u>L-21</u> | | | |
| TRANSPORTER COMPANY: | | | TIME: AM/PM |
| DATE: | VEHICLE NO.: | DRIVER NO.: | |
| CHARGE TO: | | | |
| TYPE OF MATERIAL | | | |
| <input type="checkbox"/> Production Water <input type="checkbox"/> Drilling Fluids <input type="checkbox"/> Completion Fluids <input type="checkbox"/> Tank Bottoms <input checked="" type="checkbox"/> Contaminated soil <input type="checkbox"/> C-117 No.: _____ <input type="checkbox"/> Other Material: <input type="checkbox"/> BS&W Content: _____ | | | |
| Description: _____ | | | |
| <u>2000</u> | | | |
| VOLUME OF MATERIAL <input type="checkbox"/> BBLs. <u>122</u> : <input type="checkbox"/> YARD <u>12</u> : <input type="checkbox"/> _____ | | | |
| <p>AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HEREWITH IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976, AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 351.001, et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.</p> <p>ALSO AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, TRANSPORTER REPRESENTS AND WARRANTS THAT ONLY THE MATERIAL DELIVERED BY OPERATOR/SHIPPER TO TRANSPORTER IS NOW DELIVERED BY TRANSPORTER TO SUNDANCE SERVICES, INC.'S FACILITY FOR DISPOSAL.</p> <p><i>THIS WILL CERTIFY that the above Transporter loaded the material represented by this Transporter Statement at the above described location, and that it was tendered by the above described shipper. This will certify that no additional materials were added to this load, and that the material was delivered without incident.</i></p> | | | |
| DRIVER: _____ (SIGNATURE) | | | |
| FACILITY REPRESENTATIVE: _____ (SIGNATURE) | | | |
| White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter Revised 12/27/95 | | | |

Sundance Services, Inc.P.O. Box 1737 ★ Eunice, NM 88231
(505) 394-2511

NO 25066

LEASE OPERATOR/SHIPPER/COMPANY: *Rice*LEASE NAME: *EM-E 1+20*TRANSPORTER COMPANY: *Walt Ton Corp*

TIME: AM/PM

DATE: *11/7/00* VEHICLE NO.: *37*

DRIVER NO.:

CHARGE TO: *Rice**Wood***TYPE OF MATERIAL**☐ Production Water☐ Drilling Fluids☐ Completion Fluids☐ Tank Bottoms☐ Contaminated soil☐ C-117 No.:☐ Other Material:☐ BS&W Content: _____Description: *oil dirt*VOLUME OF MATERIAL ☐ BBLs. _____☐ YARD *47.4* _____

AS A CONDITION TO SUNDANCE SERVICES, INC.'S ACCEPTANCE OF THE MATERIALS SHIPPED WITH THIS JOB TICKET, OPERATOR/SHIPPER REPRESENTS AND WARRANTS THAT THE WASTE MATERIAL SHIPPED HERewith IS MATERIAL EXEMPT FROM THE RESOURCE, CONSERVATION AND RECOVERY ACT OF 1976. AS AMENDED FROM TIME TO TIME, 40 U.S.C. § 6901, et seq., THE NM HEALTH AND SAF. CODE § 361.001 et seq., AND REGULATIONS RELATED THERETO, BY VIRTUE OF THE EXEMPTION AFFORDED DRILLING FLUIDS, PRODUCED WATERS, AND OTHER WASTE ASSOCIATED WITH THE EXPLORATION, DEVELOPMENT OR PRODUCTION OF CRUDE OIL OR NATURAL GAS OR GEOTHERMAL ENERGY.

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DRIVER: _____

(SIGNATURE)

FACILITY REPRESENTATIVE: _____

(SIGNATURE)

White-Sundance Canary-Sundance Acct#1 Pink-Sundance Acct#2 Gold-Transporter
Revised 12/27/95

RICE Operating Company

122 West Taylor

HOBBS, NEW MEXICO 88240

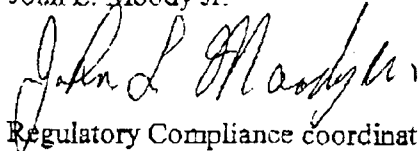
(505) 393-9174

Certification of Waste Status

The waste (oil stained lumber) contained in Waste Management's 25 cubic yard rolloff has been surveyed in accordance with 20 NMAC 3.1 subpart 1408. The maximum radiation exposure reading and norm concentration do not exceed that listed in 20 NMAC 3.1 subpart 1403 c. and d. The survey results are attached.

Certified on 1-3-00 by

John L. Moody Jr.



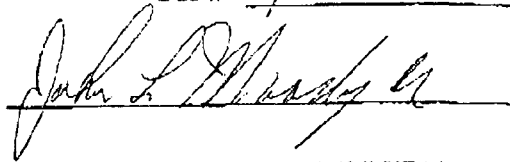
Regulatory Compliance coordinator

Cc: WM File

N.O.R.M. SURVEY FOR WASTE MANAGEMENT

DATE 1-3-00TIME 10:30 AM

SURVEY PERFORMED BY (INDIVIDUALS SIGNATURE)

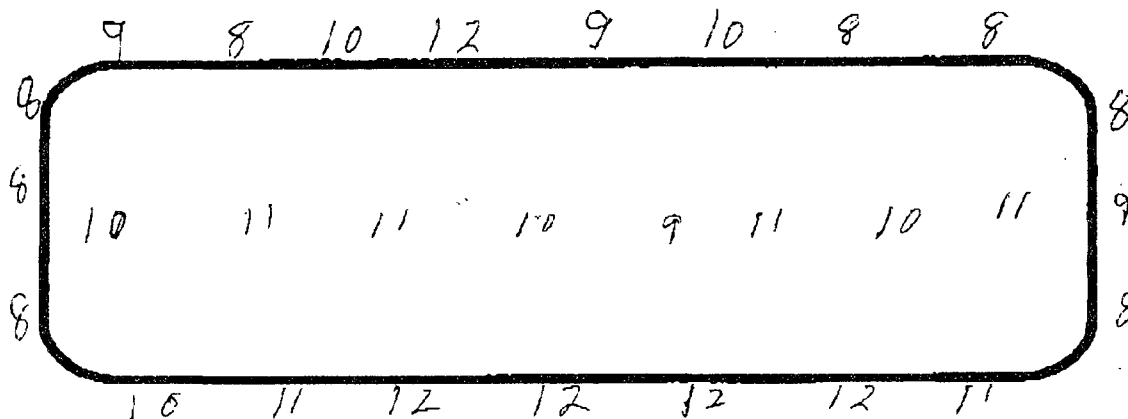


CLIENT: WASTE MANAGEMENT

LOCATION: RICE YARD

EXPOSURE RATE INSTRUMENT (TYPE, SERIAL #) Model 19 SER #127382CALIBRATION DUE DATE 10-1-00 BACKGROUND READING 8 uR/hrBATTERY AND RESPONSE CHECKS PERFORMED SATISFACTORY? ☒

NORTH



25 CUBIC YARD ROLLOFF
ALL READINGS ARE IN uR/hr

RICE Operating Company

122 West Taylor

HOBBS, NEW MEXICO 88240

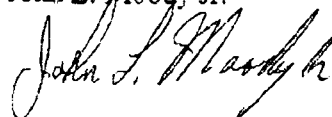
(505) 393-9174

Certification of Waste Status

The waste (oil stained lumber) contained in Waste Management's 25 cubic yard rolloff has been surveyed in accordance with 20 NMAC 3.1 subpart 1408. The maximum radiation exposure reading and norm concentration do not exceed that listed in 20 NMAC 3.1 subpart 1403 c. and d. The survey results are attached.

Certified on 1-31-00 by

John L. Moody Jr.



Regulatory Compliance coordinator

Cc: WM File

N.O.R.M. SURVEY FOR WASTE MANAGEMENT

DATE 1-31-00TIME 4:00 PM

SURVEY PERFORMED BY (INDIVIDUALS SIGNATURE)

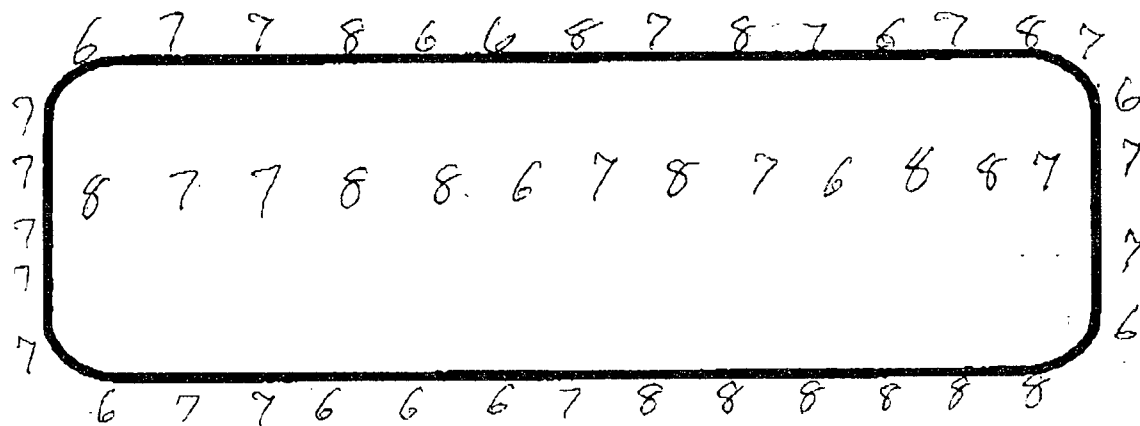
John L. Maughan

CLIENT: WASTE MANAGEMENT

LOCATION: RICE YARD

EXPOSURE RATE INSTRUMENT (TYPE, SERIAL #) Mod 19 #120918CALIBRATION DUE DATE 14 APR - 00 BACKGROUND READING 6 uR/hrBATTERY AND RESPONSE CHECKS PERFORMED SATISFACTORY? ☒

NORTH



25 CUBIC YARD ROLLOFF
ALL READINGS ARE IN uR/hr

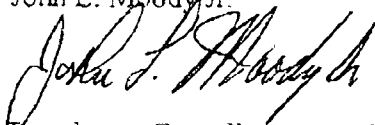
RICE Operating Company

122 West Taylor
HOBBS, NEW MEXICO 88240
(505) 393-9174

Certification of Waste Status

The waste (oil stained lumber) contained in Waste Management's 25 cubic yard rolloff has been surveyed in accordance with 20 NMAC 3.1 subpart 1408. The maximum radiation exposure reading and norm concentration do not exceed that listed in 20 NMAC 3.1 subpart 1403 c. and d. The survey results are attached.

Certified on 12-13-99 by
John L. Moody Jr.



Regulatory Compliance coordinator

Cc: WM File

N.O.R.M. SURVEY FOR WASTE MANAGEMENT

DATE 12-13-99TIME 1:30 pm

SURVEY PERFORMED BY (INDIVIDUALS SIGNATURE)

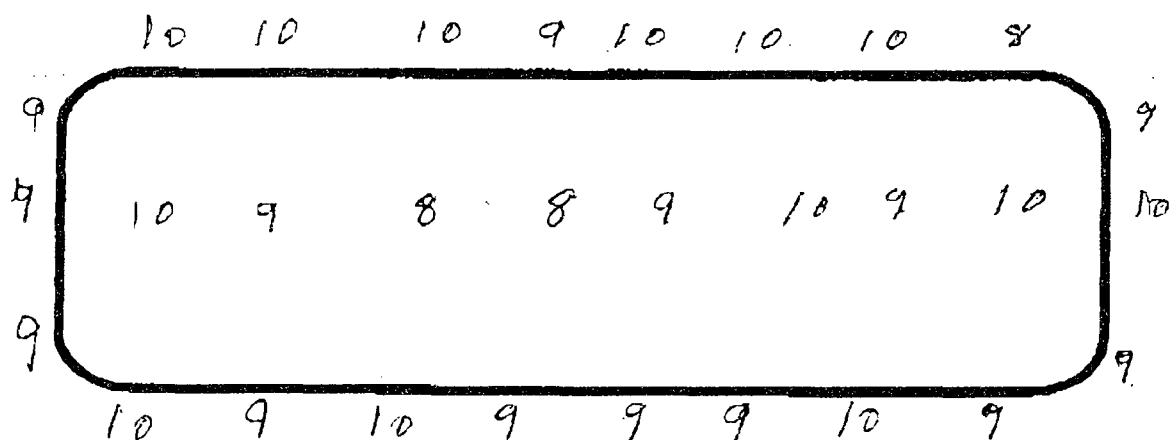
John L. Moody Jr

CLIENT: WASTE MANAGEMENT

LOCATION: RICE YARD

EXPOSURE RATE INSTRUMENT (TYPE, SERIAL #) Mod-19 SRRT# 127364CALIBRATION DUE DATE 11-1-00 BACKGROUND READING 7-8 $\mu\text{R/hr}$ BATTERY AND RESPONSE CHECKS PERFORMED SATISFACTORY? YES

NORTH



25 CUBIC YARD ROLLOFF
ALL READINGS ARE IN $\mu\text{R/hr}$

RICE Operating Company

122 West Taylor

HOBBS, NEW MEXICO 88240

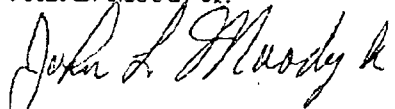
(505) 393-9174

Certification of Waste Status

The waste (oil stained lumber) contained in Waste Management's 25 cubic yard rolloff has been surveyed in accordance with 20 NMAC 3.1 subpart 1408. The maximum radiation exposure reading and norm concentration do not exceed that listed in 20 NMAC 3.1 subpart 1403 c. and d. The survey results are attached.

Certified on 12-16-99 by

John L. Moody Jr.



Regulatory Compliance coordinator

Cc: WM File

N.O.R.M. SURVEY FOR WASTE MANAGEMENT

DATE 12-16-99TIME 2:00 pm

SURVEY PERFORMED BY (INDIVIDUALS SIGNATURE)

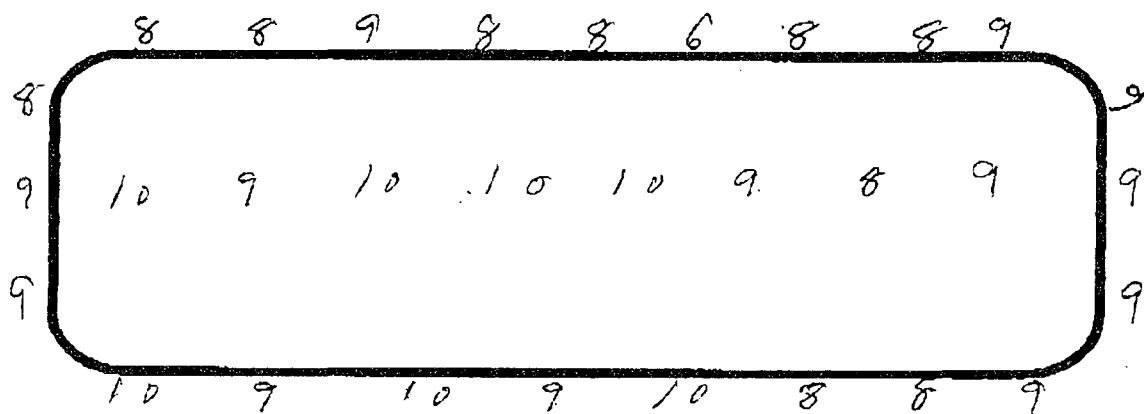
John L. Moody Jr.

CLIENT: WASTE MANAGEMENT

LOCATION: RICE YARD

EXPOSURE RATE INSTRUMENT (TYPE, SERIAL #) Mod 19 SER # 127382CALIBRATION DUE DATE 10 AUG 00 BACKGROUND READING 6 uR/hrBATTERY AND RESPONSE CHECKS PERFORMED SATISFACTORY? ✓

NORTH



25 CUBIC YARD ROLLOFF
ALL READINGS ARE IN uR/hr



726 Wooddale Court • Baton Rouge, Louisiana 70808

1 (800) 401-4277 • Fax (225) 927-6822

ARS Tracking Number: ARS-01-1169 P.O. Number: Verbal
 Client I.D.: Grid #11 comp. 15cm ARS Sample I.D.: ARS-01-4880
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1100 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|----------------------------|----------------|-----------------|----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 3.94 | 0.98 | pCi/gm | 0.146 | 0.036 | Bq/gm | EPA 901.1M | 08/15/01 13:41 | rb |
| Ra-228 | 0.31 | 0.09 | pCi/gm | 0.011 | 0.003 | Bq/gm | EPA 901.1M | 08/15/01 13:41 | rb |
| Pb-210 | 2.47 | 0.97 | pCi/gm | 0.091 | 0.036 | Bq/gm | EPA 901.1M | 08/15/01 13:41 | rb |
| Total Activity | 20.00 | N/A | pCi/gm | 0.740 | N/A | Bq/gm | EPA 901.1M | 08/15/01 13:41 | rb |

Notes: Job: Hobbs

Jodie L. Allen
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ARS Tracking Number: ARS-01-1169 P.O. Number: Verbal
 Client I.D.: Grid #10 comp. 15cm ARS Sample I.D.: ARS-01-4881
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1100 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 4.95 | 0.36 | pCi/gm | 0.183 | 0.013 | Bq/gm | EPA 901.1M | 08/15/01 13:40 | rb |
| Ra-228 | 0.48 | 0.06 | pCi/gm | 0.018 | 0.002 | Bq/gm | EPA 901.1M | 08/15/01 13:40 | rb |
| Pb-210 | 3.82 | 0.49 | pCi/gm | 0.141 | 0.018 | Bq/gm | EPA 901.1M | 08/15/01 13:40 | rb |
| Total Activity | 22.50 | N/A | pCi/gm | 0.832 | N/A | Bq/gm | EPA 901.1M | 08/15/01 13:40 | rb |

Notes: Job: Hobbs

Joelle L. Allen
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ARS Tracking Number: ARS-01-1170 P.O. Number: Verbal
 Client I.D.: Grid #20 comp. 30cm ARS Sample I.D.: ARS-01-4882
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1100 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-------------------------|----------------|-----------------|-------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 2.19 | 0.75 | pCi/gm | 0.081 | 0.028 | Bq/gm | EPA 901.1M | 08/15/01 14:45 | rb |
| Ra-228 | < 0.06 | N/A | pCi/gm | < 0.002 | N/A | Bq/gm | EPA 901.1M | 08/15/01 14:45 | rb |
| Pb-210 | 1.78 | 0.76 | pCi/gm | 0.066 | 0.028 | Bq/gm | EPA 901.1M | 08/15/01 14:45 | rb |
| Total Activity | 13.73 | N/A | pCi/gm | 0.508 | N/A | Bq/gm | EPA 901.1M | 08/15/01 14:45 | rb |

Notes: Job: Hobbs

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ARS Tracking Number: ARS-01-1170 P.O. Number: Verbal
 Client I.D.: Grid #20 comp. 15cm ARS Sample I.D.: ARS-01-4883
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1100 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-------------------------|----------------|-----------------|-------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 4.71 | 0.65 | pCi/gm | 0.174 | 0.024 | Bq/gm | EPA 901.1M | 08/15/01 14:13 | rb |
| Ra-228 | 0.35 | 0.11 | pCi/gm | 0.013 | 0.004 | Bq/gm | EPA 901.1M | 08/15/01 14:13 | rb |
| Pb-210 | 2.64 | 0.85 | pCi/gm | 0.098 | 0.031 | Bq/gm | EPA 901.1M | 08/15/01 14:13 | rb |
| Total Activity | 17.42 | N/A | pCi/gm | 0.644 | N/A | Bq/gm | EPA 901.1M | 08/15/01 14:13 | rb |

Notes: Job: Hobbs

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| | | | |
|----------------------|--------------------|------------------|-------------|
| ARS Tracking Number: | ARS-01-1170 | P.O. Number: | Verbal |
| Client I.D.: | Grid #8 comp. 30cm | ARS Sample I.D.: | ARS-01-4884 |
| Date Sampled: | 08/14/01 | Date Received: | 8/15/01 |
| Time Sampled: | 1130 | Time Received: | 0900 |
| Type of Sample: | Solid | Date of Report: | 8/16/01 |

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-----------------------------|----------------|-----------------|-----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 1.87 | 0.64 | pCi/gm | 0.069 | 0.024 | Bq/gm | EPA 901.1M | 08/15/01 15:16 | rb |
| Ra-228 | 0.30 | 0.07 | pCi/gm | 0.011 | 0.003 | Bq/gm | EPA 901.1M | 08/15/01 15:16 | rb |
| Pb-210 | 0.99 | 0.58 | pCi/gm | 0.037 | 0.021 | Bq/gm | EPA 901.1M | 08/15/01 15:16 | rb |
| Total Activity | 13.16 | N/A | pCi/gm | 0.487 | N/A | Bq/gm | EPA 901.1M | 08/15/01 15:16 | rb |

Notes: Job: Hobbs

John Salvo
Quality Assurance Review

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ARS Tracking Number: ARS-01-1170 P.O. Number: Verbal
 Client I.D.: Grid #8 comp. 15cm ARS Sample I.D.: ARS-01-4885
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1130 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-----------------------------|----------------|-----------------|-----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 2.24 | 0.61 | pCi/gm | 0.083 | 0.023 | Bq/gm | EPA 901.1M | 08/15/01 16:09 | rb |
| Ra-228 | 0.33 | 0.07 | pCi/gm | 0.012 | 0.003 | Bq/gm | EPA 901.1M | 08/15/01 16:09 | rb |
| Pb-210 | 1.85 | 0.79 | pCi/gm | 0.068 | 0.029 | Bq/gm | EPA 901.1M | 08/15/01 16:09 | rb |
| Total Activity | 14.97 | N/A | pCi/gm | 0.554 | N/A | Bq/gm | EPA 901.1M | 08/15/01 16:09 | rb |

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| | | | |
|----------------------|-------------|------------------|-------------|
| ARS Tracking Number: | ARS-01-1171 | P.O. Number: | Verbal |
| Client I.D.: | HS-1 30cm | ARS Sample I.D.: | ARS-01-4886 |
| Date Sampled: | 08/14/01 | Date Received: | 8/15/01 |
| Time Sampled: | 1145 | Time Received: | 0900 |
| Type of Sample: | Solid | Date of Report: | 8/16/01 |

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-----------------------------|----------------|-----------------|-----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 15.76 | 1.55 | pCi/gm | 0.583 | 0.057 | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |
| Ra-228 | < 0.08 | N/A | pCi/gm | < 0.003 | N/A | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |
| Pb-210 | 7.90 | 2.13 | pCi/gm | 0.292 | 0.079 | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |
| Total Activity | 56.91 | N/A | pCi/gm | 2.105 | N/A | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |

Notes: Job: Hobbs

John L. Allen
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ARS Tracking Number: ARS-01-1171 P.O. Number: Verbal
 Client I.D.: HS-1 15cm ARS Sample I.D.: ARS-01-4887
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1145 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-----------------------------|----------------|-----------------|-----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 10.05 | 1.91 | pCi/gm | 0.372 | 0.071 | Bq/gm | EPA 901.1M | 08/15/01 13:03 | rb |
| Ra-228 | 0.32 | 0.10 | pCi/gm | 0.012 | 0.004 | Bq/gm | EPA 901.1M | 08/15/01 13:03 | rb |
| Pb-210 | 5.99 | 1.73 | pCi/gm | 0.222 | 0.064 | Bq/gm | EPA 901.1M | 08/15/01 13:03 | rb |
| Total Activity | 38.14 | N/A | pCi/gm | 1.411 | N/A | Bq/gm | EPA 901.1M | 08/15/01 13:03 | rb |

Notes: Job: Hobbs

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ARS Tracking Number: ARS-01-1171 P.O. Number: Verbal
 Client I.D.: HS-2 15cm ARS Sample I.D.: ARS-01-4888
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1145 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-----------------------------|----------------|-----------------|-----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 9.71 | 0.85 | pCi/gm | 0.359 | 0.031 | Bq/gm | EPA 901.1M | 08/15/01 11:18 | rb |
| Ra-228 | 0.36 | 0.12 | pCi/gm | 0.013 | 0.004 | Bq/gm | EPA 901.1M | 08/15/01 11:18 | rb |
| Pb-210 | 5.58 | 1.38 | pCi/gm | 0.206 | 0.051 | Bq/gm | EPA 901.1M | 08/15/01 11:18 | rb |
| Total Activity | 36.27 | N/A | pCi/gm | 1.342 | N/A | Bq/gm | EPA 901.1M | 08/15/01 11:18 | rb |

Notes: Job: Hobbs

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ARS Tracking Number: ARS-01-1171

P.O. Number: Verbal

Client I.D.: HS-2 30cm

ARS Sample I.D.: ARS-01-4889

Date Sampled: 08/14/01

Date Received: 8/15/01

Time Sampled: 1145

Time Received: 0900

Type of Sample: Solid

Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 0.93 | 0.20 | pCi/gm | 0.034 | 0.007 | Bq/gm | EPA 901.1M | 08/15/01 13:02 | rb |
| Ra-228 | 0.31 | 0.04 | pCi/gm | 0.011 | 0.001 | Bq/gm | EPA 901.1M | 08/15/01 13:02 | rb |
| Pb-210 | 0.62 | 0.24 | pCi/gm | 0.023 | 0.009 | Bq/gm | EPA 901.1M | 08/15/01 13:02 | rb |
| Total Activity | 10.59 | N/A | pCi/gm | 0.392 | N/A | Bq/gm | EPA 901.1M | 08/15/01 13:02 | rb |

Notes: Job: Hobbs

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ARS Tracking Number: ARS-01-1171 **P.O. Number:** Verbal
Client I.D.: Background **ARS Sample I.D.:** ARS-01-4890
Date Sampled: 08/14/01 **Date Received:** 8/15/01
Time Sampled: 1145 **Time Received:** 0900
Type of Sample: Solid **Date of Report:** 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 0.66 | 0.16 | pCi/gm | 0.024 | 0.006 | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |
| Ra-228 | 0.25 | 0.03 | pCi/gm | 0.009 | 0.001 | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |
| Pb-210 | 0.68 | 0.25 | pCi/gm | 0.025 | 0.009 | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |
| Total Activity | 9.99 | N/A | pCi/gm | 0.370 | N/A | Bq/gm | EPA 901.1M | 08/15/01 11:48 | rb |

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John Hobbs
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| | | | |
|----------------------|---------------------|------------------|-------------|
| ARS Tracking Number: | ARS-01-1168 | P.O. Number: | Verbal |
| Client I.D.: | Grid #32 comp. 15cm | ARS Sample I.D.: | ARS-01-4876 |
| Date Sampled: | 08/14/01 | Date Received: | 8/15/01 |
| Time Sampled: | 1040 | Time Received: | 0900 |
| Type of Sample: | Solid | Date of Report: | 8/16/01 |

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-----------------------------|----------------|-----------------|-----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 2.63 | 0.31 | pCi/gm | 0.097 | 0.011 | Bq/gm | EPA 901.1M | 08/16/01 08:43 | rb |
| Ra-228 | 0.23 | 0.03 | pCi/gm | 0.009 | 0.001 | Bq/gm | EPA 901.1M | 08/16/01 08:43 | rb |
| Pb-210 | 1.85 | 0.33 | pCi/gm | 0.068 | 0.012 | Bq/gm | EPA 901.1M | 08/16/01 08:43 | rb |
| Total Activity | 14.01 | N/A | pCi/gm | 0.518 | N/A | Bq/gm | EPA 901.1M | 08/16/01 08:43 | rb |

Notes: Job: Hobbs

John L. Lyles
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ARS Tracking Number: ARS-01-1168 P.O. Number: Verbal
 Client I.D.: Grid #23 comp. 15cm ARS Sample I.D.: ARS-01-4877
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1040 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|----------------------------|----------------|-----------------|----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 3.16 | 0.80 | pCi/gm | 0.117 | 0.030 | Bq/gm | EPA 901.1M | 08/16/01 08:45 | rb |
| Ra-228 | < 0.05 | N/A | pCi/gm | < 0.002 | N/A | Bq/gm | EPA 901.1M | 08/16/01 08:45 | rb |
| Pb-210 | 1.46 | 0.78 | pCi/gm | 0.054 | 0.029 | Bq/gm | EPA 901.1M | 08/16/01 08:45 | rb |
| Total Activity | 15.68 | N/A | pCi/gm | 0.580 | N/A | Bq/gm | EPA 901.1M | 08/16/01 08:45 | rb |

Notes: Job: Hobbs

John L. Liles
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| | | | |
|----------------------|---------------------|------------------|-------------|
| ARS Tracking Number: | ARS-01-1168 | P.O. Number: | Verbal |
| Client I.D.: | Grid #22 comp. 15cm | ARS Sample I.D.: | ARS-01-4878 |
| Date Sampled: | 08/14/01 | Date Received: | 8/15/01 |
| Time Sampled: | 1040 | Time Received: | 0900 |
| Type of Sample: | Solid | Date of Report: | 8/16/01 |

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 2.96 | 0.28 | pCi/gm | 0.110 | 0.010 | Bq/gm | EPA 901.1M | 08/16/01 07:55 | rb |
| Ra-228 | 0.34 | 0.04 | pCi/gm | 0.013 | 0.001 | Bq/gm | EPA 901.1M | 08/16/01 07:55 | rb |
| Pb-210 | 1.99 | 0.31 | pCi/gm | 0.074 | 0.011 | Bq/gm | EPA 901.1M | 08/16/01 07:55 | rb |
| Total Activity | 14.73 | N/A | pCi/gm | 0.545 | N/A | Bq/gm | EPA 901.1M | 08/16/01 07:55 | rb |

Notes: Job: Hobbs

John Z...
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ARS Tracking Number: ARS-01-1168 P.O. Number: Verbal
 Client I.D.: Grid #21 comp. 15cm ARS Sample I.D.: ARS-01-4879
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1040 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 4.34 | 0.85 | pCi/gm | 0.161 | 0.031 | Bq/gm | EPA 901.1M | 08/16/01 09:17 | rb |
| Ra-228 | < 0.05 | N/A | pCi/gm | < 0.002 | N/A | Bq/gm | EPA 901.1M | 08/16/01 09:17 | rb |
| Pb-210 | 2.81 | 0.95 | pCi/gm | 0.104 | 0.035 | Bq/gm | EPA 901.1M | 08/16/01 09:17 | rb |
| Total Activity | 19.18 | N/A | pCi/gm | 0.710 | N/A | Bq/gm | EPA 901.1M | 08/16/01 09:17 | rb |

Notes: Job: Hobbs

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ARS Tracking Number: ARS-01-1167 P.O. Number: Verbal
 Client I.D.: Grid #9 comp. 30cm ARS Sample I.D.: ARS-01-4871
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1140 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|----------------------------|----------------|-----------------|----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 1.72 | 0.27 | pCi/gm | 0.064 | 0.010 | Bq/gm | EPA 901.1M | 08/15/01 10:44 | rb |
| Ra-228 | < 0.13 | N/A | pCi/gm | < 0.005 | N/A | Bq/gm | EPA 901.1M | 08/15/01 10:44 | rb |
| Pb-210 | 1.13 | 0.29 | pCi/gm | 0.042 | 0.011 | Bq/gm | EPA 901.1M | 08/15/01 10:44 | rb |
| Total Activity | 11.94 | N/A | pCi/gm | 0.442 | N/A | Bq/gm | EPA 901.1M | 08/15/01 10:44 | rb |

Notes: Job: Hobbs

John Zalik
 Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

ENT BY: AMERICAN RADIATION SERVICES INC; 225 927 6822;

AUG-16-01 10:30;



1726 Wooddale Court - Baton Rouge, Louisiana 70806

1 (800) 401-4277 • Fax (225) 927-6822

ARS Tracking Number: ARS-01-1167 P.O. Number: Verbal
 Client I.D.: Grid #9 comp. 15cm ARS Sample I.D.: ARS-01-4872
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1140 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-------------------------|----------------|-----------------|-------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 3.26 | 0.35 | pCi/gm | 0.121 | 0.013 | Bq/gm | EPA 901.1M | 08/15/01 11:17 | rb |
| Ra-228 | 0.26 | 0.04 | pCi/gm | 0.010 | 0.001 | Bq/gm | EPA 901.1M | 08/15/01 11:17 | rb |
| Pb-210 | 1.87 | 0.27 | pCi/gm | 0.069 | 0.010 | Bq/gm | EPA 901.1M | 08/15/01 11:17 | rb |
| Total Activity | 15.90 | N/A | pCi/gm | 0.588 | N/A | Bq/gm | EPA 901.1M | 08/15/01 11:17 | rb |

Notes: Job: Hobbs


 Quality Assurance Review

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| | | | |
|----------------------|---------------------|------------------|-------------|
| ARS Tracking Number: | ARS-01-1167 | P.O. Number: | Verbal |
| Client I.D.: | Grid #34 comp. 15cm | ARS Sample I.D.: | ARS-01-4873 |
| Date Sampled: | 08/14/01 | Date Received: | 8/15/01 |
| Time Sampled: | 1140 | Time Received: | 0900 |
| Type of Sample: | Solid | Date of Report: | 8/16/01 |

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|----------------------------|----------------|-----------------|----------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 3.07 | 0.32 | pCi/gm | 0.114 | 0.012 | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |
| Ra-228 | 0.24 | 0.03 | pCi/gm | 0.009 | 0.001 | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |
| Pb-210 | 2.04 | 0.29 | pCi/gm | 0.075 | 0.011 | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |
| Total Activity | 15.01 | N/A | pCi/gm | 0.555 | N/A | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |

Notes: Job: Hobbs

Joan L. Allen
Quality Assurance Review

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ARS Tracking Number: ARS-01-1167 P.O. Number: Verbal
 Client I.D.: Grid #33 comp. 15cm ARS Sample I.D.: ARS-01-4874
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1140 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Result | Analysis Error + 2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|--------------------------|----------------|-----------------|--------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 4.42 | 0.81 | pCi/gm | 0.164 | 0.030 | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |
| Ra-228 | 0.23 | 0.06 | pCi/gm | 0.009 | 0.002 | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |
| Pb-210 | 3.59 | 1.12 | pCi/gm | 0.133 | 0.041 | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |
| Total Activity | 21.71 | N/A | pCi/gm | 0.803 | N/A | Bq/gm | EPA 901.1M | 08/15/01 10:11 | rb |

Notes: Job: Hobbs

Julie Talley

Quality Assurance Review

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

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AUG-16-01 10:30;

PAGE 7/8



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ARS Tracking Number: ARS-01-1167 P.O. Number: Verbal
 Client I.D.: Grid #35 comp. 15cm ARS Sample I.D.: ARS-01-4875
 Date Sampled: 08/14/01 Date Received: 8/15/01
 Time Sampled: 1140 Time Received: 0900
 Type of Sample: Solid Date of Report: 8/16/01

| Analysis Description | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Result | Analysis Error +2 Sigma | Analysis Units | Analysis Test Method | Analysis Date & Time | Analysis Technician |
|----------------------|-----------------|-------------------------|----------------|-----------------|-------------------------|----------------|----------------------|----------------------|---------------------|
| Ra-226 | 2.61 | 0.58 | pCi/gm | 0.097 | 0.021 | Bq/gm | EPA 901.1M | 08/15/01 10:45 | rb |
| Ra-228 | 0.35 | 0.06 | pCi/gm | 0.013 | 0.002 | Bq/gm | EPA 901.1M | 08/15/01 10:45 | rb |
| Pb-210 | 2.15 | 0.80 | pCi/gm | 0.080 | 0.030 | Bq/gm | EPA 901.1M | 08/15/01 10:45 | rb |
| Total Activity | 14.18 | N/A | pCi/gm | 0.525 | N/A | Bq/gm | EPA 901.1M | 08/15/01 10:45 | rb |

Notes: Job: Hobbs

Joan Zeller
 Quality Assurance Review

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1 (800) 401-4277 • Fax (225) 927-6822

Notes:

Comments:

- 1.0) Soil and Sludge analysis are reported on a wet basis or an as received basis unless otherwise indicated.
- 2.0) The data in this report are within the limits of uncertainty specified in the reference method unless specified.
- 3.0) Modified analysis procedures are procedures that are modified to meet the certain specifications. An example may be the use of a water method to analyze a solid matrix due to the lack of an officially recognized procedure for the analysis of the solid matrix.
- 4.0) Derived Air Concentrations and Effluent Release Concentrations are obtained from 10 CFR 20 Appendix B.
- 5.0) Total activity is actually total gamma activity and is determined utilizing the prominent gamma emitters from the naturally occurring radioactive decay chains and other prominent radioactive nuclides. Total activity may be lower than actual total activity due to the extent of secular equilibrium achieved in the various decay chains at the time of analysis. The total activity is not representative of nuclides that emit solely alpha or beta particles.
- 6.0) Ra-228 is determined via secular equilibrium with its daughter, Actinium 228. (Gamma Spectroscopy only).
- 7.0) U-238 is determined via secular equilibrium with its daughter, Thorium 234. (Gamma Spectroscopy only).
- 8.0) All Gamma spectroscopy was performed utilizing high purity germanium detectors (HPGe).

Method References:

- 1.0) EPA 600/4-80-032, Prescribed Procedures for the Measurements of Radioactivity in Drinking Water, August 1980.
- 2.0) Standard Methods for the Examination of Water and Waste Water, 18th, 1992.
- 3.0) EPA SW-846, Test Methods for Evaluating Solid Waste, Third Edition, (9/86). (Updated through 1995).
- 4.0) EPA 600/4-79-020, Methods for Chemical Analysis of Water and Waste, March 1983.
- 5.0) HASL 300

Definitions:

- | | |
|----------------------|--|
| 1.0) BDL | Analyte not detected because the value was below the detection limit. |
| 2.0) ND | Not detected above the detection limit. |
| 3.0) Detection Limit | The minimum amount of the analyte that ARS can detect utilizing the specific analysis. |
| 4.0) B | Method Blank |
| 5.0) D | Method Duplicate |
| 6.0) MS | Matrix Spike |
| 7.0) S | Spike |
| 8.0) RS | Reference Spike |
| 9.0) *SC | Subcontracted out to another qualified laboratory |
| 10.0) NR | Not Referenced |
| 11.0) N/A | Not Applicable |

Notes: American Radiation Services, Inc. assumes no liability for the use or interpretation of any analytical results provided other than the cost of the performed analysis itself. Reproduction of this report in less than full requires the written consent of the client.

110005, NM 88241-1980
District II - (505) 748-1283
811-S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

RECEIVED

DEC 18 2001

Environmental Bureau
Oil Conservation Division

Originated

Submit On
Plus 1
to appro
District

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|---|----------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator Halliburton |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site Artesia Faci |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318, State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 2311 S. First Artesia, NM 88210 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. | |
| All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are for Halliburton Energy's Artesia Facility. This waste is generated by the washing of trucks and flowing into the wash rack sump. I have included a certificate of waste status and chain of custody. Sundance Services would like approval to accept this into our Parabo disposal facility.

Estimated Volume 150 yards cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 12-10-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: Adrian Alarcon TITLE: Environmental Eng DATE: 12-12-01
APPROVED BY: Matthew J. Kelly TITLE: Environmental Eng DATE: 12-18-01



Company Name:
Project Manager:
Address: 2311
City: Aylesia
Phone #: 505
Fax #: 505
Project #: Was
Project Name: V
Project Location:

LAB ID. #

1

PLEASE NOTE: Leaving and changing
address, including phone or fax number,
must be reported and confirmed by
email or facsimile within 30 days of
change.

Sampler Requisition:

505 N

Requisition Br:

505 N

Delivered Br: 70

UPS - Fed Ex - B

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION

COMPANY/GENERATOR: Halliburton

ADDRESS: 2311 S. 1ST ST

GENERATING SITE: ARTESIA Yard

COUNTY EDDY STATE NM

TYPE OF WASTE: Wash Rack Grit

ESTIMATED VOLUME: 300,000 lbs.

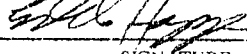
GENERATING PROCESS: Wash Rack Sumps

REMARKS: _____

NMOCD FACILITY: Sundance

TRUCKING FACILITY: Chaparral

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: 
SIGNATURE

NAME: Eddie Hopper
PRINTED

ADDRESS: 5801 Lovington Hwy Hobbs, NM 88240

DATE: 12/14/01

RDINAL LABORATORIES

PHONE 505 392-2215 • 901 E. MAPLAND • C-285, TM 18470

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

My Name: **Halliburton Energy Services**
 Manager: **Scott Nalson**
 S: **2311 S. First**
 Address: **Alameda**
 State: **NM** Zip: **88210**
 S: **505 392 0746**
 S: **505 392 7062**
 #: **Washack**
 Name: **Washack Gert**
 Location: **Washack Gert**

Company: **Halliburton**
 Attn: **Scott Nalson**
 Address: **5801 Livingston Hwy**
 City: **Hobbs**
 State: **NM** Zip: **88240**
 Phone #: **505 392 0746**
 Fax #: **505 392 7062**

ANALYSIS REQUEST

| Matrix | | Concentration | | Sampling | |
|----------|------------------|---------------|---------------|----------|------|
| B.L.D. # | Sample L.D. | Matrix | Concentration | Sampling | Time |
| | | | | | |
| 1 | # 7 Washack Gert | GROUNDWATER | | | |
| | | WATERWATER | | | |
| | | OR | | | |
| | | SLUDGE | | | |
| | | ACID: | | | |
| | | ICE/COOL | | | |
| | | OTHER: | | | |

TCLO

Relinquished: **St Nalson** Date: **12/16/99** Time: **3:00**

Received By: **St Nalson** Date: **12/16/99** Time: **3:00**
 Checked By: **St Nalson** Date: **12/16/99** Time: **3:00**
 Sample Condition: **Intact**
 Cgo: **Yes** M: **Yes**

Phone Result: ☒ Yes ☐ No
 Fax Result: ☐ Yes ☐ No
 Additional Fax #: ☐ No

REMARKS:



ARDINAL LABORATORIES

PHONE (815) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

**ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
6801 LOVINGTON HWY
HOBBS, NM 88240
FAX TO: (505) 392-7062**

Receiving Date: 12/16/99
Reporting Date: 12/23/99
Project Number: NOT GIVEN
Project Name: WASH RACK GRIT
Project Location: WASH RACK, ARTESIA

Sampling Date: 12/16/99
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH/GP

TCLP METALS

| LAB NO. | SAMPLE ID | As ppm | Ag ppm | Ba ppm | Cd ppm | Cr ppm | Pb ppm | Hg ppm | Se ppm |
|--------------------------------|-------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ANALYSIS DATE: | | 12/23/99 | 12/22/99 | 12/22/99 | 12/22/99 | 12/22/99 | 12/22/99 | 12/22/99 | 12/23/99 |
| EPA LIMITS: | | 5 | 5 | 100 | 1 | 5 | 5 | 0.2 | 1 |
| H4516-1 | #1 WASH RACK GRIT | <1 | <1 | <5 | <0.1 | <1 | <1 | <0.02 | <0.1 |
| Quality Control | | 0.198 | 4.759 | 51.10 | 1.002 | 5.056 | 5.045 | 0.00355 | 0.053 |
| True Value QC | | 0.200 | 5.000 | 50.00 | 1.000 | 5.000 | 5.000 | 0.00400 | 0.050 |
| % Recovery | | 97 | 85 | 102 | 100 | 101 | 101 | 89 | 106 |
| Relative Standard Deviation | | 4.3 | 0.2 | 1.7 | 0.2 | 0.8 | 0.6 | 1.3 | 0.2 |
| METHODS: EPA 1311, 600/4-91/01 | | 206.2 | 272.1 | 208.1 | 213.1 | 218.1 | 239.1 | 245.1 | 270.2 |

*Sample contains <10% solid.

Amy Hill
Chemist

12/23/99
Date

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PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX TO: (505) 392-7062

Receiving Date: 12/16/99
Reporting Date: 12/27/99
Project Number: NOT GIVEN
Project Name: WASH RACK GRIT
Project Location: WASH RACK, ARTESIA

Sampling Date: 12/16/99
Sample Type: LIQUID*
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH/BC

REACTIVITY
LAB NUMBER SAMPLE ID Sulfide Cyanide CORROSIVITY IGNITABILITY
(ppm) (ppm) (pH) (°F)

| ANALYSIS DATE: | 12/22/99 | 12/23/99 | 12/17/99 | 12/20/99 |
|-----------------------------|--------------|--------------|----------|----------|
| H4516-1 #1 WASHRACK | Not reactive | Not reactive | 7.76 | >140 |
| GRIT | | | | |
| LABORATORIES | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 7.07 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 101 | NR |
| Relative Percent Difference | NR | NR | 0.6 | NR |

*Sample contains <10% solid.

METHOD: EPA SW 846-7.3, 7.2, 1010, 1311, 40 CFR 261

Buysen J. Cashe
Chemist

12/27/99
Date

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ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX TO: (505) 392-7082

Receiving Date: 12/16/99
Reporting Date: 12/17/99
Project Number: NOT GIVEN
Project Name: WASH RACK GRIT
Project Location: WASH RACK, ARTESIA
Lab Number: H4516-1
Sample ID: #1 WASH RACK GRIT

Analysis Date: 12/16/99
Sampling Date: 12/16/99
Sample Type: LIQUID*
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

| TCLP SEMIVOLATILES (ppm) | EPA LIMIT | Sample Result H4516-1 | Method Blank | True Value | |
|--------------------------|--------------|--------------------------|-----------------|-------------|----------|
| | | | | QC % Recov. | QC |
| Pyridine | 5.00 | <0.020 | <0.005 | 0.006 | 12 0.050 |
| 1,4-Dichlorobenzene | 7.50 | 0.035 | 0.005 | 0.038 | 72 0.050 |
| o-Cresol | 200 | <0.020 | <0.005 | 0.017 | 34 0.050 |
| m, p-Cresol | 200 | 0.087 | <0.005 | 0.017 | 34 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.005 | 0.027 | 64 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.005 | 0.034 | 68 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.005 | 0.034 | 68 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.005 | 0.032 | 64 0.050 |
| 2,4,5-Trichlorophenol | 400 | <0.020 | <0.005 | 0.038 | 72 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.005 | 0.045 | 90 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.005 | 0.044 | 88 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.005 | 0.040 | 80 0.050 |

% RECOVERY

| | |
|----------------------|----|
| Fluorophenol | 23 |
| Phenol-d5 | 22 |
| Nitrobenzene-d5 | 62 |
| 2-Fluorobiphenyl | 87 |
| 2,4,6-Tribromophenol | 72 |
| Terphenyl-d14 | 99 |

METHODS: EPA SW 846-8270, 1311, 3510

*Sample contains <10% solid.


Burgess J. A. Coble, Ph. D.Date 12/17/99

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX TO: (505) 392-7062

Receiving Date: 12/16/99
Reporting Date: 12/17/99
Project Number: NOT GIVEN
Project Name: WASH RACK GRIT
Project Location: WASHRACK, ARTESIA
Lab Number: H4516-1
Sample ID: #1 WASH RACK GRIT

Analysis Date: 12/16/99
Sampling Date: 12/16/99
Sample Type: LIQUID
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: BC

TCMP VOLATILES (ppm) EPA LIMIT Sample Result H4516-1 Method Blank True Value QC %Recov. QC

| | | | | | | |
|----------------------|------|--------|--------|-------|-----|-------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.097 | 97 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.101 | 101 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.088 | 88 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.097 | 97 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.103 | 103 | 0.100 |
| Benzene | 0.5 | <0.005 | <0.005 | 0.097 | 97 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.112 | 112 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.098 | 98 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.114 | 114 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.102 | 102 | 0.100 |
| 1,4-Dichlorobenzene | 7.5 | <0.005 | <0.005 | 0.099 | 99 | 0.100 |

% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 85 |
| Toluene-d8 | 90 |
| Bromofluorobenzene | 82 |

METHODS: EPA SW 846-8260, 1311

*Sample contains <10% solid.

Burgess J. A. Cook
Burgess J. A. Cook, Ph. D.

12/17/99
Date

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District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

RECEIVED

DEC 18 2001

Environmental Bureau
Oil Conservation Division

Originated

Submit C
Plus 1
to appr
District

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|---|---------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site HOBBS FACIL |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter CHAPARRAL |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 5801 Lovinton Hwy Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis. PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following waste is generated by the washing of tools and oil equipment. This analytical is from Halliburtons Hobbs facility. Sundance would like approval to accept this waste into our Parabo facility.

Estimated Volume 300 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 12-10-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)
APPROVED BY: Charles H. Cherry TITLE: Environmental Eng. DATE: 12-12-01
APPROVED BY: Maryann J. Kelly TITLE: Environmental Geologist DATE: 12-18-01

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION

COMPANY/GENERATOR: Halliburton

ADDRESS: 5801 Lovington Hwy

GENERATING SITE: Hobbs Yard

COUNTY Lea STATE NM

TYPE OF WASTE: Wash Rack Grit

ESTIMATED VOLUME: 300,000 lbs.

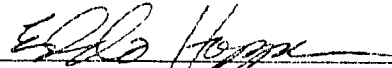
GENERATING PROCESS: Wash Rack Sumps

REMARKS: _____

NMOCD FACILITY: Sundance

TRUCKING FACILITY: Chaparral

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: 
SIGNATURE

NAME: Eddie Hopper
PRINTED

ADDRESS: 5801 Lovington Hwy Hobbs, NM 88240

DATE: 12/6/01



CARDINAL LABORATORIES

PHONE (816) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTTY NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| 12- TCLR VOLATILES (ppm) | EPA LIMIT | Sample Result H5422-1 | Method Blank | QC | %Recov. | True Value QC |
|--------------------------|--------------|--------------------------|-----------------|-------|---------|------------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.006 | 0.108 | 108 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.083 | 83 | 0.100 |
| Chloroform | 8.0 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| Benzene | 0.5 | <0.005 | <0.005 | 0.088 | 88 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.092 | 92 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.091 | 91 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.099 | 99 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.094 | 94 | 0.100 |
| 1,4-Dichlorobenzene | 7.6 | <0.005 | <0.005 | 0.104 | 104 | 0.100 |

% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 95 |
| Toluene-d8 | 91 |
| Bromofluorobenzene | 98 |

METHODS: EPA SW 846-8260, 1311

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

12/14/00
Date

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**CARDINAL
LABORATORIES**

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 593-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Analysis Date: 12/18/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

12-20-2000 02:33pm LAB NUMBER SAMPLE ID

TPH
(mg/Kg)

| | | |
|-----------------------------|----------------|-------|
| H5422-1 | WASHBAY SLUDGE | 77300 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Quality Control | | 228 |
| True Value QC | | 240 |
| % Recovery | | 95.0 |
| Relative Percent Difference | | 4.0 |

METHOD: EPA 600/4-79-020 418.1

Bureau J. Coche
Chemist

12/18/00
Date

H5422T.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



ARDINAL LABORATORIES

PHONE (916) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79605

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| TCLP SEMI-VOLATILES (ppm) | EPA LIMIT | Sample Result H5422-1 | Method Blank | QC | % Recov. | True Value QC |
|---------------------------|-----------|-----------------------|--------------|-------|----------|---------------|
| Pyridine | 5.00 | <0.020 | <0.005 | 0.011 | 22 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.020 | <0.005 | 0.024 | 48 | 0.050 |
| o-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| m, p-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.005 | 0.021 | 42 | 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.005 | 0.034 | 68 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.005 | 0.026 | 52 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.005 | 0.040 | 80 | 0.050 |
| 2,4,6-Trichlorophenol | 400 | <0.020 | <0.005 | 0.048 | 92 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.005 | 0.046 | 92 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.005 | 0.045 | 90 | 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.005 | 0.047 | 94 | 0.050 |

% RECOVERY

| | |
|----------------------|-----|
| Fluorophenol | 56 |
| Phenol-d5 | 40 |
| Nitrobenzene-d5 | 104 |
| 2-Fluorobiphenyl | 68 |
| 2,4,6-Tribromophenol | 89 |
| Terphenyl-d14 | 81 |

METHODS: EPA SW 846-8270, 1311, 3510

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

12/14/00
Date

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HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/BC

REACTIVITY

12-10-00 LAB NUMBER SAMPLE ID

Sulfide
(ppm)

Cyanide
(ppm)

CORROSION
(pH)

IGNITABILITY
(°F)

| ANALYSIS DATE: | 12/14/00 | 12/14/00 | 12/18/00 | 12/18/00 |
|-----------------------------|--------------|--------------|----------|--------------|
| H5422-1 WASHBAY SLUDGE | Not reactive | Not reactive | 7.65 | Nonflammable |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 7.03 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 100 | NR |
| Relative Percent Difference | NR | NR | 0.1 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1030 (proposed), 1311, 40 CFR 261

Burgess & Coe
Chemist

12/18/00
Date

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MOBOS, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

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Environmental Bureau
Oil Conservation Division

Form C-1
Originated 8/8

Submit Orig
Plus 1 C
to appropri
District Off

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|-----------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site Brownfield TX |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter Chaparral |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State TEXAS | |
| 7. Location of Material (Street Address or ULSTR) 1301 W. Webb Brownfield, Texas 79316 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are from Halliburton's Brownfield yard. This waste was generated from the washing of oilfield equipment. I have included a certificate of waste status and chain of custody. Sundance would like approval to accept this material into our Parabo Facility.

Estimated Volume 150 yds cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 12-10-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)
APPROVED BY: Walter C. Cully TITLE: Environmental Engr. DATE: 12-12-01
APPROVED BY: Monty J. J. TITLE: Environmental Geologist DATE: 12-18-01

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION

COMPANY/GENERATOR: Halliburton

ADDRESS: 1301 W WEBB

GENERATING SITE: BROWNFIELD Yard

COUNTY TERRY STATE TX

TYPE OF WASTE: Wash Rack Grit

ESTIMATED VOLUME: 300,000 lbs.

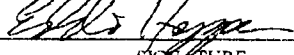
GENERATING PROCESS: Wash Rack Sumps

REMARKS: _____

NMOCD FACILITY: Sundance

TRUCKING FACILITY: Chaparral

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 261.3.

AGENT: 
SIGNATURE

NAME: Eddie Hopper
PRINTED

ADDRESS: 5801 Lovington Hwy Hobbs, NM 88240

DATE: 12/12/01



CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 10



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: BROWNFIELD YARD
Sample ID: WASHBAY
Lab Number: H5425-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

| TCLP VOLATILES (ppm) | EPA LIMIT | Sample Result H5425-1 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|--------------|--------------------------|-----------------|-------|---------|------------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.006 | <0.005 | 0.089 | 89 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.083 | 83 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| Benzene | 0.5 | <0.005 | <0.005 | 0.088 | 88 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.092 | 92 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.091 | 91 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.099 | 99 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.094 | 94 | 0.100 |
| 1,4-Dichlorobenzene | 7.5 | 0.007 | <0.005 | 0.104 | 104 | 0.100 |

% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 83 |
| Toluene-d8 | 88 |
| Bromofluorobenzene | 92 |

METHODS: EPA SW 846-8260, 1311

Burgess J.A. Cooke
Burgess J.A. Cooke, Ph. D.

12/14/00
Date

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ARDINAL LABORATORIES

PHONE (815) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: BROWNFIELD YARD
Sample ID: WASHBAY
Lab Number: H5426-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

| TCLP SEMI-VOLATILES (ppm) | EPA LIMIT | Sample Result H5426-1 | Method Blank | QC | % Recov. | True Value QC |
|---------------------------|-----------|-----------------------|--------------|-------|----------|---------------|
| Pyridine | 5.00 | <0.020 | <0.005 | 0.011 | 22 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.020 | <0.005 | 0.024 | 48 | 0.050 |
| o-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| m, p-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.005 | 0.021 | 42 | 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.005 | 0.034 | 68 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.005 | 0.026 | 52 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.005 | 0.040 | 80 | 0.050 |
| 2,4,5-Trichlorophenol | 400 | <0.020 | <0.005 | 0.046 | 92 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.005 | 0.046 | 92 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.005 | 0.045 | 90 | 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.005 | 0.047 | 94 | 0.050 |

% RECOVERY

| | |
|----------------------|----|
| Fluorophenol | 51 |
| Phenol-d5 | 44 |
| Nitrobenzene-d5 | 99 |
| 2-Fluorobiphenyl | 68 |
| 2,4,6-Tribromophenol | 88 |
| Terphenyl-d14 | 91 |

METHODS: EPA SW 846-8270, 1311, 3510

Burgess J. Cooke
Burgess J. B. Cooke, Ph. D.

12/14/00
Date

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ARDINAL LABORATORIES

PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: BROWNFIELD YARD

Analysis Date: 12/16/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

12-20-2000 02:30 LAB NUMBER SAMPLE ID

5053827062
TPH
(mg/Kg)

| | | |
|-----------------------------|----------------|-------|
| H5425-1 | WASHBAY SLUDGE | 19100 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Quality Control | | 228 |
| True Value QC | | 240 |
| % Recovery | | 95.0 |
| Relative Percent Difference | | 4.0 |

METHOD: EPA 800/4-79-020 418.1

Bryan J. Cook
Chemist

12/18/00
Date

H5425T.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



ARDINAL LABORATORIES

PHONE (815) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: BROWNFIELD YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/BC

REACTIVITY

LAB NUMBER SAMPLE ID

Sulfide
(ppm)Cyanide
(ppm)CORROSIVITY
(pH)IGNITABILITY
(°F)

| ANALYSIS DATE: | 12/14/00 | 12/14/00 | 12/16/00 | 12/16/00 |
|-----------------------------|--------------|--------------|----------|--------------|
| H5425-1 WASHBAY | Not reactive | Not reactive | 8.63 | Nonflammable |
| SLUDGE | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 7.03 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 100 | NR |
| Relative Percent Difference | NR | NR | 0.1 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1030 (proposed), 1311, 40 CFR 261

Chemist

Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/16/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: BROWNFIELD YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: GP
Analyzed By: AH/GP

TCLP METALS

| LAB NO. | SAMPLE ID | As ppm | Ag ppm | Ba ppm | Cd ppm | Cr ppm | Pb ppm | Hg ppm | Se ppm |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|

| | | | | | | | | | |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|----------|
| ANALYSIS DATE: | 12/13/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/15/00 | 12/14/00 |
| EPA LIMITS: | 5 | 5 | 100 | 1 | 5 | 5 | 5 | 0.2 | 1 |
| H5425-1 WASHBAY SLUDGE | <1 | <1 | <5 | <0.1 | <1 | <1 | <1 | <0.02 | <0.1 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Quality Control | 0.193 | 4.719 | 44.56 | 1.047 | 5.009 | 0.00945 | 5.076 | 0.053 | |
| True Value QC | 0.200 | 5.000 | 50.00 | 1.000 | 5.000 | 0.01000 | 5.000 | 0.050 | |
| % Recovery | 96.5 | 94.4 | 89.1 | 105 | 100 | 94.5 | 102 | 106 | |
| Relative Standard Deviation | 2.0 | 0.6 | 3.7 | 0.3 | 2.9 | 5.8 | 0.4 | 2.0 | |

| | | | | | | | | | |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|
| METHODS: EPA 1311, 800/4-91/01 | 206.2 | 272.1 | 208.1 | 213.1 | 218.1 | 239.1 | 245.1 | 270.2 | |
|--------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|--|

Amy Hill
Chemist

12-16-00
Date

H5425M.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

10000, NM 88241-1980
District II - (505) 748-1283
811 S. First
Alamogordo, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

RECEIVED

NOV 26 2001

Environmental Bureau

Oil Conservation Division

Submit Orig
Plus 1 C
to appropri
District Off

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|---|------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator Halliburton |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site Hobbs Facility |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter Halliburton |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 5801 Lovington Hwy, Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following MSDS sheets are for Halliburton's Hobbs facility waste cement. This waste is generated when the generator mixes up cement for an oilfield cement job and some cement is left over. It is then put into a truck for holding until disposal. I have attached a certificate of waste status and MSDS on all of the cement types used by this facility. Sundance would like approval to accept this material into our disposal.

Estimated Volume 400 tons cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 11-12-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)
APPROVED BY: [Signature] TITLE: Environmental Engr. DATE: 11-16-01
APPROVED BY: [Signature] TITLE: Environmental Geologist DATE: 11-26-01

:5053927082 # 17

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION

COMPANY/GENERATOR: Halliburton Energy Services

ADDRESS: 5801 Lovington Hwy

GENERATING SITE: Hobbs Yard

COUNTY Lea STATE NM

TYPE OF WASTE: Cement

ESTIMATED VOLUME: 1,000, sacks

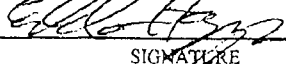
GENERATING PROCESS: Unused cement

REMARKS: _____

NMOCD FACILITY: Sundance

TRUCKING FACILITY: Halliburton

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: 
SIGNATURE

NAME: Eddie Hopper
PRINTED

ADDRESS: 5801 Lovington Hwy

DATE: 8/28/2001

Halliburton Energy Services Shipping Papers
For
Movement of Materials According to Federal Regulations
As specified on CFR 49 sec.117.817 and 176.24

Location: Hobbs, New Mexico

Truck or Trailer No. 52043 - 8101

For Emergency Contact:

Name: Steve Luscomb

Telephone: (505) 392-6531

Driver _____

U.S. DOT Hazmat Reg. No. -051496 005 031E

Total Net Lbs 31,100 No. Cont. _____ Type: Bulk

Not Restricted

Halco Name & Number: Cement-Bulk

Gross Lbs./Pkg. 90,924 #5K ERG
94,282 #5K

This is to certify that the above named materials are properly classified, described, packaged, marked and labeled, and are in proper condition for transportation according to the applicable regulations of the Department of Transportation.

Signature: _____

Time Loaded _____

Bulk Ticket No. _____ Freight Bill No. _____

| | |
|---------------------|-------------|
| Premium Cement | 23,154 lbs. |
| Poz Mix | 3,960 lbs. |
| Silica | 2,904 lbs. |
| HA1-9 | 21 lbs. |
| CFR-3 | 92 lbs. |
| gilsonite | 1,320 lbs. |
| HA1A0-344 | 115 lbs. |
| HR-7 | 46 lbs. |
| Salt (Cement grade) | 264 lbs. |

FOR
MOVEMENT OF MATERIALS ACCORDING TO FEDERAL REGULATION
AS SPECIFIED IN CFR 49, SEC.177.817 AND 176.24

LOCATION: 15540

FOR EMERGENCY CONTACT:
NAME: STEVE LUSCOMBE
TELEPHONE: (505) 392-6531

DRIVER:

U.S. DOT HAZMAT REG. NO. - 060497 003 42F

*HM:*****

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: BULK

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: CEMENT - CLASS H - PREMIUM - BULK 516.00272

* * * GROSS LBS/PKG: ERG =>

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: BULK

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: POZMIX(R) A - BULK 516.00286

* * * GROSS LBS/PKG: ERG =>

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: BULK

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: SILICALITE ADDITIVE - 50/50 W/ POZMIX 516.00443

* * * GROSS LBS/PKG: ERG =>

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: 50 LB BAG

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: HALAD(R) 9 CEMENT ADDITIVE 70.15556

* * * GROSS LBS/PKG: ERG =>

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: 50 LB BAG

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: CFR-3 CEMENT FRICTION REDUCER DEFOAM 516.00295

* * * GROSS LBS/PKG: ERG =>

FOR
MOVEMENT OF MATERIALS ACCORDING TO FEDERAL REGULATION
AS SPECIFIED IN CFR 49, SEC.177.817 AND 176.24

LOCATION: 15540

TRUCK# OR TRLR# : 52043-8101

FOR EMERGENCY CONTACT:
NAME: STEVE LUSCOMBE
TELEPHONE: (505) 392-6531

DRIVER:

U.S. DOT HAZMAT REG. NO. - 060497 003 42F

*HM:*****

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: BULK

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: GILSONITE(R) RESIN - BULK 516.00337

* * * GROSS LBS/PKG: ERG =>

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: 50 LB BAG

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: HALAD(R) 344 CEMENT ADDITIVE 516.00227

* * * GROSS LBS/PKG: ERG =>

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: 50 LB BAG

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: HR-7 ADDITIVE 890.50903

* * * GROSS LBS/PKG: ERG =>

* * TOT GROSS LBS _____ NUM CONTAINERS: TYPE: BULK

* *****

* * NOT RESTRICTED

* *

* *

* *

* *HALCO NAME & NO.: SALT - CEMENT GRADE - BULK 516.00315

* * * GROSS LBS/PKG: ERG =>

THIS IS TO CERTIFY THAT THE ABOVE NAMED MATERIALS ARE PROPERLY CLASSIFIED,
DESCRIBED, PACKAGED, MARKED AND LABELED, AND ARE IN PROPER CONDITION FOR
TRANSPORTATION ACCORDING TO THE APPLICABLE REGULATIONS OF THE DEPARTMENT OF
TRANSPORTATION.

SIGNATURE _____

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 01-17-96

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: CEMENT - CLASS H - PREMIUM - BULK PART NUMBER: 516002720
PKG QTY: BULK APPLICATION: CEMENTING
SERVICE USED: CEMENT

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT + + + + + | PERCENT | TLV | PEL |
|-----------------------------|---------|-----------|-----------|
| PORTLAND CEMENT | 60 % | 10 MG/M3 | 10 MG/M3 |
| SILICA, CRYSTALLINE--QUARTZ | 3 % | 0.1 MG/M3 | 0.1 MG/M3 |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|---|--------------------|
| APPEARANCE | GRAY SOLID, POWDER |
| ODOR | ODORLESS |
| SPECIFIC GRAVITY (H2O=1) | 3.150 |
| BULK DENSITY | 94.00 LB/CU.FT. |
| PH | 12.4 |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | .1-1.0 |
| BIODEGRADABILITY | N/A |
| PERCENT VOLATILES | 0 |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/A |
| BOILING POINT(760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:

HEALTH 0 FLAMMABILITY 0 REACTIVITY 0 SPECIAL NONE
FLASH POINT N/A
AUTOIGNITION TEMPERATURE NO F / NO C
FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER N/D UPPER N/D

EXTINGUISHING MEDIA:

NONCOMBUSTIBLE

SPECIAL FIRE FIGHTING PROCEDURES:

NOT APPLICABLE.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

NO FIRE HAZARD.

NOT APPLICABLE.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:
PRODUCT OR PRODUCT COMPONENTS ARE REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:
PRODUCT OR COMPONENTS ARE LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : IARC

PRODUCT TOXICITY DATA: NOT DETERMINED

PRODUCT TLV: 10 MG/M3

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

MAY CAUSE SEVERE IRRITATION WHICH MAY BE PERSISTENT.

SKIN:

CEMENT DUST CAN BE IRRITATING TO SKIN. WET CEMENT CAN DRY THE SKIN AND
CAUSE ALKALI BURNS. SENSITIVE INDIVIDUALS MAY DEVELOP ALLERGIC DERMATITIS.

INHALATION:

MAY BE IRRITATING.

TREAT AS NUISANCE DUST.

INGESTION:

THIS MATERIAL IS OF VERY LOW ACUTE TOXICITY. THERE IS NO EVIDENCE OF
ADVERSE EFFECTS FROM AVAILABLE INFORMATION.

CHRONIC EFFECTS:

CRYSTALLINE SILICA IS NOT ON THE OSHA CARCINOGEN LIST. NTP AND IARC HAVE
DETERMINED THERE IS SUFFICIENT EVIDENCE FOR CARCINOGENICITY OF CRYSTALLINE
SILICA TO EXPERIMENTAL ANIMALS AND LIMITED EVIDENCE TO HUMANS. "LIMITED
EVIDENCE" MEANS POSSIBLE RELATIONSHIP, BUT OTHER FACTORS CANNOT BE EXCLUDED.
CONTAINS TRACE AMOUNTS OF ARSENIC, A CHEMICAL KNOWN TO THE STATE OF
CALIFORNIA TO CAUSE CANCER. EXPOSURE TO ARSENIC SHOULD NOT EXCEED THE
FEDERAL OSHA PEL UNLESS USED IN A MANNER THAT PRODUCES EXTREMELY HEAVY AIR-
BORNE CONCENTRATIONS OF PRODUCT AT LEVELS WELL ABOVE THE ALLOWABLE LIMITS.

OTHER SYMPTOMS AFFECTED:

A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENERD BY
EXPOSURE TO THIS PRODUCT.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE
QUANTITIES ARE INGESTED. HOWEVER, MEDICAL ADVICE SHOULD BE OBTAINED.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

STORE IN A DRY LOCATION.

INCOMPATIBILITY (MATERIALS TO AVOID):

NONE KNOWN.

HAZARDOUS DECOMPOSITION PRODUCTS:

NONE KNOWN.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING DUST.

WASTE DISPOSAL METHOD:

IF NOT CONTAMINATED, REUSE PRODUCT.

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

DUST PROOF GOGGLES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING CEMENT - CLASS H - PREMIUM - BULK 516.002720

WARNING:

CONTAINS A SMALL AMOUNT OF CRYSTALLINE SILICA, REPEATED OR PROLONGED INHALATION OF DUST MAY CAUSE A DELAYED RESPIRATORY ILLNESS (SILICOSIS). THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) AND NTP HAVE DETERMINED THERE IS LIMITED EVIDENCE OF THE CARCINOGENICITY OF CRYSTALLINE SILICA.

MAY CAUSE EYE AND SKIN IRRITATION.

MAY CAUSE SKIN BURNS IF CEMENT IS WET OR WITH CONFINED INTIMATE CONTACT.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.

AVOID CREATING OR INHALING DUST.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE. RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE
DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM
VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS
GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN
BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE
DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO
SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY
SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR
CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS
SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY
OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE
REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR
DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND
SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY
PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY
SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 01-17-96

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: POZMIX(R) A - BULK PART NUMBER: 516002860
PKG QTY: BULK APPLICATION: LIGHT WEIGHT CEMENT ADDITIVE
SERVICE USED: CEMENT

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT***** | PERCENT | TLV | PEL |
|----------------------------------|---------|------------|------------|
| SILICA, CRYSTALLINE--QUARTZ | 31-60 X | 0.1 MG/M3 | 0.1 MG/M3 |
| CALCIUM OXIDE | 1-10 X | 2 MG/M3 | 5 MG/M3 |
| IRON OXIDE | 1-10 X | 5 MG/M3 | 10 MG/M3 |
| MAGNESIUM OXIDE | 1-10 X | 10 MG/M3 | 10 MG/M3 |
| SILICA, CRYSTALLINE-CRISTOBALITE | 1-10 X | 0.05 MG/M3 | 0.05 MG/M3 |
| ALUMINUM OXIDE | 11-30 X | 10 MG/M3 | 10 MG/M3 |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|---|-----------------------------|
| APPEARANCE | GRAY OR BLACK SOLID, POWDER |
| ODOR | ODORLESS |
| SPECIFIC GRAVITY (H2O=1) | 2.300 |
| BULK DENSITY | 74.00 LB/CU.FT. |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | NEG |
| BIODEGRADABILITY | N/A |
| PERCENT VOLATILES | N/A |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/A |
| BOILING POINT(760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:

HEALTH 1 FLAMMABILITY 0 REACTIVITY 0 SPECIAL NONE
FLASH POINT N/A FLASH MTHD
AUTOIGNITION TEMPERATURE
FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER N/A UPPER N/A

EXTINGUISHING MEDIA:

USE MEDIA APPROPRIATE FOR SURROUNDING MATERIALS.
SPECIAL FIRE FIGHTING PROCEDURES:
NOT APPLICABLE.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
NOT APPLICABLE.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : IARC

PRODUCT TOXICITY DATA: NOT DETERMINED

PRODUCT TLV: 0.1 MG/M3 (AS CRYSTALLINE SILICA)

----- EFFECTS OF EXPOSURE -----

PRIMARY ROUTES OF EXPOSURE:

INHALATION.

EYE:

DUST MAY CAUSE A MECHANICAL IRRITATION TO THE EYES.

SKIN:

ESSENTIALLY NON-IRRITATING.

INHALATION:

MAY BE IRRITATING.

REPEATED OVEREXPOSURE TO CRYSTALLINE SILICA MAY CAUSE ACUTE SILICOSIS, A
FIBROTIC LUNG CONDITION THAT REDUCES LUNG FUNCTION AND MAY LEAD TO
CARDIOPULMONARY IMPAIRMENT. SILICOSIS IS RAPIDLY PROGRESSIVE AND THE ONSET
OF SYMPTOMS MAY BE DELAYED.

INGESTION:

THIS MATERIAL IS OF VERY LOW ACUTE TOXICITY. THERE IS NO EVIDENCE OF
ADVERSE EFFECTS FROM AVAILABLE INFORMATION.

CHRONIC EFFECTS:

CRYSTALLINE SILICA IS NOT ON THE OSHA CARCINOGEN LIST. NTP AND IARC HAVE
DETERMINED THERE IS SUFFICIENT EVIDENCE FOR CARCINOGENICITY OF CRYSTALLINE
SILICA TO EXPERIMENTAL ANIMALS AND LIMITED EVIDENCE TO HUMANS. "LIMITED
EVIDENCE" MEANS POSSIBLE RELATIONSHIP, BUT OTHER FACTORS CANNOT BE EXCLUDED.

OTHER SYMPTOMS AFFECTED:

MAY AGGRAVATE ASTHMA AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE
QUANTITIES ARE INGESTED. HOWEVER, MEDICAL ADVICE SHOULD BE OBTAINED.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

NONE KNOWN.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING DUST.

WASTE DISPOSAL METHOD:

IF NOT CONTAMINATED, REUSE PRODUCT.

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

DUST PROOF GOGGLES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING POZMIX(R) A - BULK

516.002860

WARNING!

CONTAINS CRYSTALLINE SILICA WHICH MAY CAUSE A DELAYED, PROGRESSIVE LUNG DISEASE (SILICOSIS). THE IARC AND NTP HAVE DETERMINED THERE IS LIMITED EVIDENCE OF THE CARCINOGENICITY OF CRYSTALLINE SILICA.

MAY CAUSE MILD EYE AND RESPIRATORY TRACT IRRITATION.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.

AVOID CREATING OR INHALING DUST.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE. RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): Y MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE DRSM NE

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE
DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM
VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS
GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN
BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE
DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO
SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY
SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR
CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS
SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY
OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE
REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR
DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND
SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY
PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY
SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 01-17-96

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: SILICALITE ADDITIVE - 50/50 W/ POZHIX PART NUMBER: 516004430
PKG QTY: BULK APPLICATION: CEMENT ADDITIVE
SERVICE USED: CEMENT

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT+ + + + + + + + | PERCENT | TLV | PEL |
|--------------------------|---------|-----|-----|
|--------------------------|---------|-----|-----|

| | | | |
|-------------------------|------|------------|---------|
| SILICA, AMORPHOUS-FUMED | > 60 | X 10 MG/M3 | 6 MG/M3 |
|-------------------------|------|------------|---------|

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|----------|-------------|
|----------|-------------|

| | |
|---|---------------------|
| APPEARANCE | BLACK SOLID, POWDER |
| ODOR | ODORLESS |
| SPECIFIC GRAVITY (H2O=1) | 2.380 |
| BULK DENSITY | 26.30 LB/CU.FT. |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | INSOLUBLE |
| BIODEGRADABILITY | N/A |
| PERCENT VOLATILES | N/A |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/A |
| BOILING POINT(760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANDL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:

| | | | |
|------------------------------------|----------------|--------------|--------------|
| HEALTH 0 | FLAMMABILITY 0 | REACTIVITY 0 | SPECIAL NONE |
| FLASH POINT | N/A | | |
| AUTOIGNITION TEMPERATURE | NO | NO | |
| FLAMMABLE LIMITS (OZ. PER CU. FT.) | LOWER | N/D | UPPER N/D |

EXTINGUISHING MEDIA:

USE MEDIA APPROPRIATE FOR SURROUNDING MATERIALS.
SPECIAL FIRE FIGHTING PROCEDURES:
NOT APPLICABLE.
UNUSUAL FIRE AND EXPLOSION HAZARDS: *
NOT APPLICABLE.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT, OR COMPONENTS ARE LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : IARC

PRODUCT TOXICITY DATA: TOX ORL-RAT LD50: 3160 MG/KG
TOX IPR-RAT LD01: 50 MG/KG

PRODUCT TLV: NOT ESTABLISHED

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

DUST MAY CAUSE A MECHANICAL IRRITATION TO THE EYES.

SKIN:

ESSENTIALLY NON-IRRITATING.

INHALATION:

MAY BE IRRITATING.

CONTAINS A SMALL AMOUNT OF CRYSTALLINE SILICA, REPEAT OR PROLONG EXPOSURES
MAY CAUSE A DELAYED RESPIRATORY SYSTEM ILLNESS, SILICOSIS. SYMPTOMS INCLUDE
SHORTNESS OF BREATH, COUGH, FEVER, WEIGHT LOSS, CHEST PAIN, REDUCTION OF
LUNG FUNCTION AND HEART IMPAIRMENT. ONSET OF SYMPTOMS MAY BE DELAYED.

INGESTION:

THIS MATERIAL IS OF VERY LOW ACUTE TOXICITY. THERE IS NO EVIDENCE OF
ADVERSE EFFECTS FROM AVAILABLE INFORMATION.

CHRONIC EFFECTS:

CRYSTALLINE SILICA IS NOT ON THE OSHA CARCINOGEN LIST. NTP AND IARC HAVE
DETERMINED THERE IS SUFFICIENT EVIDENCE FOR CARCINOGENICITY OF CRYSTALLINE
SILICA TO EXPERIMENTAL ANIMALS AND LIMITED EVIDENCE TO HUMANS. "LIMITED
EVIDENCE" MEANS POSSIBLE RELATIONSHIP, BUT OTHER FACTORS CANNOT BE EXCLUDED.

OTHER SYMPTOMS AFFECTED:

MAY AGGRAVATE ASTHMA AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE.
IF IRRITATION DEVELOPS, SEEK PROMPT MEDICAL ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION,

INGESTION:

DO NOT INDUCE VOMITING! IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE
QUANTITIES ARE INGESTED. HOWEVER, MEDICAL ADVICE SHOULD BE OBTAINED.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

HYDROGEN FLUORIDE OR HYDROFLUORIC ACID.

HAZARDOUS DECOMPOSITION PRODUCTS:

NONE KNOWN.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING

DUST.
WASTE DISPOSAL METHOD:
IF NOT CONTAMINATED, REUSE PRODUCT.
GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION SHOULD BE USED IN DUSTY ENVIRONMENTS.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

DUST PROOF GOGGLES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING SILICALITE ADDITIVE - 50/50 W/ POZMIX 516.004430

WARNING!

CONTAINS A SMALL AMOUNT OF CRYSTALLINE SILICA, REPEATED OR PROLONGED INHALATION OF DUST MAY CAUSE A DELAYED RESPIRATORY ILLNESS (SILICOSIS). THE INTERNATIONAL AGENCY FOR RESEARCH ON CANCER (IARC) AND NTP HAVE DETERMINED THERE IS LIMITED EVIDENCE OF THE CARCINOGENICITY OF CRYSTALLINE SILICA. MAY CAUSE RESPIRATORY IRRITATION.

DUST MAY CAUSE A MECHANICAL IRRITATION TO THE EYES.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.

AVOID CREATING OR INHALING DUST.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE. RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): Y MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

N/A N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE
DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM
VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS
GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN
BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE
DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO
SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY
SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR
CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS
SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY
OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE
REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR
DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND
SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY
PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY
SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 08-20-97

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: HALAD(R) 9 CEMENT ADDITIVE PART NUMBER: 070155560
PKG QTY: 50 LB BAG APPLICATION: LOW FLUID LOSS ADDITIVE
SERVICE USED: CEMENT

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT + + + + + | PERCENT | TLV | PEL |
|---------------------------------------|---------|----------|----------|
| CONDENSATE OF SULFONATED ORGANIC SALT | 31-60 % | 10 MG/M3 | 15 MG/M3 |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|---|------------------|
| APPEARANCE | TAN SOLID POWDER |
| ODOR | ODORLESS |
| SPECIFIC GRAVITY (H2O=1) | 1.220 |
| BULK DENSITY | 37.20 LB/CU.FT. |
| PH | 5.5 |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | 10 |
| BIODEGRADABILITY | READILY |
| PERCENT VOLATILES | N/A |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/A |
| BOILING POINT(760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | FORMS GEL |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:
HEALTH 0 FLAMMABILITY 0 REACTIVITY 0 SPECIAL NONE
FLASH POINT N/A
AUTOIGNITION TEMPERATURE NO NO
FLAMMABLE LIMITS (% BY VOLUME) LOWER N/D UPPER N/D

***** EXTINGUISHING MEDIA:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:

AVOID CREATING DUST CLOUDS WITH EXTINGUISHERS.

FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING

APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON MONOXIDE AND SULFUR OXIDES.

ORGANIC DUST IN THE PRESENCE OF A SOURCE OF IGNITION CARRIES A POTENTIAL EXPLOSION HAZARD IF THE CONCENTRATION IN THE AIR IS TOO HIGH. GOOD

PROCEDURES ARE REQUIRED TO MINIMIZE THIS POTENTIAL HAZARD.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: AQU TLM96: 3300 PPM(BROWN SHRIMP)

PRODUCT TLV: NUISANCE: 10 MG/M3(T)

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

DUST MAY CAUSE SEVERE EYE IRRITATION.

SKIN:

DUST MAY CAUSE MILD SKIN IRRITATION.

INHALATION:

MAY BE IRRITATING.

INGESTION:

NO DATA AVAILABLE

CHRONIC EFFECTS:

NO CHRONIC EFFECTS EXPECTED.

OTHER SYMPTOMS AFFECTED:

A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENERD BY
EXPOSURE TO THIS PRODUCT.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE
REMOVING CONTAMINATED CLOTHING AND SHOES. IF IRRITATION PERSISTS, SEEK
PROMPT MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION,

INGESTION:

DO NOT INDUCE VOMITING! IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE
QUANTITIES ARE INGESTED. HOWEVER, MEDICAL ADVICE SHOULD BE OBTAINED.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

OXIDES OF SULFUR, CARBON DIOXIDE AND/OR CARBON MONOXIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING
DUST.

IF NOT CONTAMINATED, REUSE PRODUCT.

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

DUST PROOF GOGGLES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING HALAD(R) 9 CEMENT ADDITIVE

070.155560

WARNING:

MAY CAUSE ALLERGIC RESPIRATORY REACTION IN SUSCEPTIBLE INDIVIDUALS.

MAY CAUSE SKIN AND RESPIRATORY IRRITATION.

MAY CAUSE SEVERE EYE IRRITATION.

AIRBORNE DUST MAY BE EXPLOSIVE!

PRODUCT IS VERY SLIPPERY WHEN WET! DO NOT SPREAD WITH WATER.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE AWAY FROM OXIDIZERS.

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.

AVOID CREATING OR INHALING DUST.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE.

RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING

LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA YES EEC NO ACOIN N/D NPR NE DRSM NE

I. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 01-17-96

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: CFR-3 CEMENT FRICTION REDUCER DEFOAM PART NUMBER: 516002950
PKG QTY: 50 LB BAG APPLICATION: DISPERSANT FOR SALT CEMENT
SERVICE USED: CEMENT

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT***** | PERCENT | TLV | PEL |
|--------------------------------------|---------|----------|---------|
| SULFONIC ACID SALT | > 60 % | NOT EST | NOT EST |
| SILICA, AMORPHOUS-DIATOMACEOUS EARTH | 1-10 % | 10 MG/M3 | 6 MG/M3 |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|---|------------------------|
| APPEARANCE | DARK RED SOLID, POWDER |
| ODOR | MUSTY |
| SPECIFIC GRAVITY (H2O=1) | 1.290 |
| BULK DENSITY | 38.00 LB/CU.FT. |
| PH | 7 |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | SOLUBLE |
| BIODEGRADABILITY | N/D |
| PERCENT VOLATILES | 0 |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/A |
| BOILING POINT(760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | > 600,000 |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:

HEALTH 1 FLAMMABILITY 0 REACTIVITY 0 SPECIAL NONE

FLASH POINT N/A

AUTOIGNITION TEMPERATURE NO NO

FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER N/D UPPER N/D

EXTINGUISHING MEDIA:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:

AVOID CREATING DUST CLOUDS WITH EXTINGUISHERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON MONOXIDE AND SULFUR OXIDES.

ORGANIC DUST IN THE PRESENCE OF A SOURCE OF IGNITION CARRIES A POTENTIAL EXPLOSION HAZARD IF THE CONCENTRATION IN THE AIR IS TOO HIGH. GOOD HOUSEKEEPING PROCEDURES ARE REQUIRED TO MINIMIZE THIS POTENTIAL HAZARD.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: AQU TLM96: >3300 PPM (BROWN SHRIMP)

PRODUCT TLV: 10 MG/M3 (T); 5 MG/M3 (R)

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

DUST MAY CAUSE MILD EYE IRRITATION.

SKIN:

ESSENTIALLY NON-IRRITATING.

INHALATION:

MAY BE IRRITATING.

TREAT AS NUISANCE DUST.

INGESTION:

NO DATA AVAILABLE

CHRONIC EFFECTS:

NO CHRONIC EFFECTS EXPECTED.

OTHER SYMPTOMS AFFECTED:

A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENER BY
EXPOSURE TO THIS PRODUCT.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE.
IF IRRITATION DEVELOPS, SEEK PROMPT MEDICAL ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! GIVE UP TO TWO (2) QUARTS OF WATER TO DILUTE.
NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL
ATTENTION.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

OXIDES OF SULFUR, CARBON DIOXIDE AND/OR CARBON MONOXIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING
DUST.

WASTE DISPOSAL METHOD:

IF NOT CONTAMINATED, REUSE PRODUCT.

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

NOT NORMALLY NECESSARY.

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

GOGGLES OR SAFETY GLASSES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING CFR-3 CEMENT FRICTION REDUCER DEFOAM 516.002950

WARNING!

CAUTION!

IRRITATING TO THE EYES, SKIN AND RESPIRATORY SYSTEM.

TREAT AS NUISANCE DUST.

AIRBORNE DUST MAY BE EXPLOSIVE!

PRODUCT IS VERY SLIPPERY WHEN WET! DO NOT SPREAD WITH WATER.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE AWAY FROM OXIDIZERS.

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.

AVOID CREATING OR INHALING DUST.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE.

RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING

LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: PURE

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE
DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM
VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS
GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN
BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE
DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO
SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY
SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR
CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS
SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY
OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE
REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR
DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND
SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY
PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY
SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 01-17-96

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: GILSONITE(R) RESIN - BULK PART NUMBER: 516003370
PKG QTY: BULK APPLICATION: LOST CIRC & LT WT ADDITIVE
SERVICE USED: CEMENTING

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT***** | PERCENT | TLV | PEL |
|-----------------|---------|-----------------|----------|
| NATURAL ASPHALT | | > 60 X 10 MG/M3 | 15 MG/M3 |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|---|------------------|
| APPEARANCE | DARK-BROWN SOLID |
| ODOR | ASPHALTIC |
| SPECIFIC GRAVITY (H2O=1) | 1.050 |
| BULK DENSITY | 65.55 LB/CU.FT. |
| PH | 5.8 |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | NIL |
| BIODEGRADABILITY | SLOWLY |
| PERCENT VOLATILES | 2 |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/D |
| BOILING POINT(760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:
HEALTH 0 FLAMMABILITY 1 REACTIVITY 1 SPECIAL NONE
FLASH POINT 599 F / 315 C FLASH MTHD COC
AUTOIGNITION TEMPERATURE NO NO
FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER 0.020 UPPER N/D

EXTINGUISHING MEDIA:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:

FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING
APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE TOXIC GASES.
ORGANIC DUST IN THE PRESENCE OF A SOURCE OF IGNITION CARRIES A POTENTIAL
EXPLOSION HAZARD IF THE CONCENTRATION IN THE AIR IS TOO HIGH. GOOD
HOUSEKEEPING PROCEDURES ARE REQUIRED TO MINIMIZE THIS POTENTIAL HAZARD.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: TOX DETAILED STUDIES AVAILABLE UPON
REQUEST

PRODUCT TLV: 10 MG/M3 (N)

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

DUST MAY CAUSE A MECHANICAL IRRITATION TO THE EYES.

SKIN:

MAY CAUSE MILD IRRITATION.

INHALATION:

MAY BE IRRITATING.

INGESTION:

NO DATA AVAILABLE

CHRONIC EFFECTS:

NO SPECIFIC INFORMATION IS AVAILABLE ON THE CHRONIC EFFECTS OF EXPOSURE.

OTHER SYMPTOMS AFFECTED:

A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENER BY
EXPOSURE TO THIS PRODUCT.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION,

INGESTION:

DO NOT INDUCE VOMITING! GIVE UP TO TWO (2) QUARTS OF WATER TO DILUTE.
NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL
ATTENTION.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON DIOXIDE AND/OR CARBON MONOXIDE AND UNIDENTIFIED HYDROCARBON VAPORS.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE, AVOID CREATING OR INHALING
DUST.

WASTE DISPOSAL METHOD:

IF NOT CONTAMINATED, REUSE PRODUCT.

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT ABSORBED MATERIAL TO
SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

NOT NORMALLY NECESSARY.

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

DUST PROOF GOGGLES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING GILSONITE(R) RESIN - BULK

516.003370

CAUTION!

MAY CAUSE IRRITATION TO THE EYES, SKIN OR RESPIRATORY SYSTEM.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.

AVOID CREATING OR INHALING DUST.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN

PLACE. RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST

OBTAINING LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE ORSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 08-19-97

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: HALAD(R) 344 CEMENT ADDITIVE PART NUMBER: 516002270
PKG QTY: 50 LB BAG APPLICATION: FLUID LOSS ADDITIVE
SERVICE USED: CEMENT

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT+ + + + + | PERCENT | TLV | PEL |
|--------------------|---------|-----|-----|
|--------------------|---------|-----|-----|

| | | | |
|-------------------------------|--------|----------|----------|
| MODIFIED ACRYLAMIDE COPOLYMER | > 60 % | 10 MG/M3 | 15 MG/M3 |
|-------------------------------|--------|----------|----------|

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|----------|-------------|
|----------|-------------|

| | |
|---|---------------------------------|
| APPEARANCE | WHITE TO OFF-WHITE SOLID POWDER |
| ODOR | ODORLESS |
| SPECIFIC GRAVITY (H2O=1) | 1.220 |
| BULK DENSITY | 26.00 LB/CU.FT. |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | SOLUBLE |
| BIODEGRADABILITY | N/D |
| PERCENT VOLATILES | <5 |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/D |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/D |
| BOILING POINT(760 MMHG) | N/D |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | SOLUBLE |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:

HEALTH 1 FLAMMABILITY 0 REACTIVITY 0 SPECIAL NONE

FLASH POINT N/A

AUTOIGNITION TEMPERATURE NO NO

FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER N/D UPPER N/D

EXTINGUISHING MEDIA:

USE MEDIA APPROPRIATE FOR SURROUNDING MATERIALS.

SPECIAL FIRE FIGHTING PROCEDURES:

AVOID CREATING DUST CLOUDS WITH EXTINGUISHERS.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON
MONOXIDE AND NITROGEN OXIDES.ORGANIC DUST IN THE PRESENCE OF A SOURCE OF IGNITION CARRIES A POTENTIAL
EXPLOSION HAZARD IF THE CONCENTRATION IN THE AIR IS TOO HIGH. GOOD
HOUSEKEEPING PROCEDURES ARE REQUIRED TO MINIMIZE THIS POTENTIAL HAZARD.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: AQU TLM96: >3300 PPM(BROWN SHRIMP)

PRODUCT TLV: NOT ESTABLISHED

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

MAY CAUSE MILD IRRITATION.

SKIN:

ESSENTIALLY NON-IRRITATING.

INHALATION:

MAY BE IRRITATING.

TREAT AS NUISANCE DUST.

INGESTION:

NO DATA AVAILABLE

CHRONIC EFFECTS:

NO CHRONIC EFFECTS EXPECTED.

OTHER SYMPTOMS AFFECTED:

A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENERD BY
EXPOSURE TO THIS PRODUCT.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE.
IF IRRITATION DEVELOPS, SEEK PROMPT MEDICAL ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION,

INGESTION:

DO NOT INDUCE VOMITING! IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE
QUANTITIES ARE INGESTED. HOWEVER, MEDICAL ADVICE SHOULD BE OBTAINED.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

NONE KNOWN.

HAZARDOUS DECOMPOSITION PRODUCTS:

NITROGEN OXIDES, CARBON DIOXIDE AND/OR CARBON MONOXIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING
DUST.

WASTE DISPOSAL METHOD:

IF NOT CONTAMINATED, REUSE PRODUCT.

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

GOGGLES OR SAFETY GLASSES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING HALAD(R) 344 CEMENT ADDITIVE

516.002270

CAUTION!

MAY CAUSE MILD IRRITATION TO EYES, SKIN AND THE RESPIRATORY SYSTEM.

TREAT AS NUISANCE DUST.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.

AVOID CREATING OR INHALING DUST.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE.

RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING

LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: PURE

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)

PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC NO ACOIN NO NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE

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MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 12-30-97
REVISED DATE 01-17-96

EMERGENCY TELEPHONE: 405/251-4689 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: HR-7 ADDITIVE PART NUMBER: 890509030
PKG QTY: 50 LB BAG APPLICATION: RETARDER & DISPERSANT
SERVICE USED: EMENTING

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT+ + + + + | PERCENT | TLV | PEL |
|-------------------------|---------|------------|----------|
| MODIFIED LIGNOSULFONATE | UNK | X 10 MG/M3 | 15 MG/M3 |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|------------------------------------|---------------------|
| APPEARANCE | BLACK SOLID, POWDER |
| ODOR | MOLASSES-LIKE |
| SPECIFIC GRAVITY (H2O=1) | 1.410 |
| BULK DENSITY | 38.00 LB/CU.FT. |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT | |
| 20 DEG C. GMS/100ML H2O | FREELY |
| BIODEGRADABILITY | SLOWLY |
| PERCENT VOLATILES | N/A |
| EVAPORATION RATE (BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/D |
| BOILING POINT (760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:
HEALTH 0 FLAMMABILITY 1 REACTIVITY 0 SPECIAL NONE
FLASH POINT N/A
AUTOIGNITION TEMPERATURE NO NO
FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER N/D UPPER N/D

***** EXTINGUISHING MEDIA:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:

AVOID CREATING DUST CLOUDS WITH EXTINGUISHERS.

FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON MONOXIDE AND SULFUR OXIDES.

ORGANIC DUST IN THE PRESENCE OF A SOURCE OF IGNITION CARRIES A POTENTIAL EXPLOSION HAZARD IF THE CONCENTRATION IN THE AIR IS TOO HIGH. GOOD

HOUSEKEEPING PROCEDURES ARE REQUIRED TO MINIMIZE THIS POTENTIAL HAZARD.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN

ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: AQU TLM96: >1000 PPM(BROWN SHRIMP)

PRODUCT TLV: NUISANCE: 10MG/M3(T)

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

MAY CAUSE MILD IRRITATION.

SKIN:

ESSENTIALLY NON-IRRITATING.

INHALATION:

MAY BE IRRITATING.

INGESTION:

NO DATA AVAILABLE

CHRONIC EFFECTS:

NO CHRONIC EFFECTS EXPECTED.

OTHER SYMPTOMS AFFECTED:

A REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENER BY EXPOSURE TO THIS PRODUCT.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER. WASH CLOTHING BEFORE REUSE. IF IRRITATION DEVELOPS, SEEK PROMPT MEDICAL ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF IRRITATION PERSISTS, SEEK MEDICAL ATTENTION,

INGESTION:

DO NOT INDUCE VOMITING! IN GENERAL, NO TREATMENT IS NECESSARY UNLESS LARGE QUANTITIES ARE INGESTED. HOWEVER, MEDICAL ADVICE SHOULD BE OBTAINED.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

HAZARDOUS DECOMPOSITION PRODUCTS:

OXIDES OF SULFUR, CARBON DIOXIDE AND/OR CARBON MONOXIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING DUST.

WASTE DISPOSAL METHOD:

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

NOT NORMALLY NECESSARY.
TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

GOGGLES OR SAFETY GLASSES.

OTHER PROTECTIVE EQUIPMENT:

NORMAL WORK COVERALLS.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING HR-7 ADDITIVE

890.509030

CAUTION!

MAY CAUSE MILD IRRITATION TO EYES, SKIN AND UPPER RESPIRATORY SYSTEM.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE.
AVOID CREATING OR INHALING DUST.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE.
RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING
LANDFILL OPERATOR'S AUTHORIZATION.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y
CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)
CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES
TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

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SALT-CEMENT GRADE, BULK

PAGE

MATERIAL SAFETY DATA SHEET
HALLIBURTON SERVICES
DUNCAN, OKLAHOMA 73536

DATE: -
REVISED DATE 09-0

EMERGENCY TELEPHONE: 405/251-3565 OR 405/251-3569
AFTER HOURS: 405/251-3760

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: SALT-CEMENT GRADE, BULK PART NUMBER: 51600
PKG QTY: BULK APPLICATION: ACCELERATOR
SERVICE USED: CEMENT

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT | PERCENT | TLV | PEL |
|-----------------|---------|----------|----------|
| SODIUM CHLORIDE | 60 % | 10 MG/M3 | 15 MG/M3 |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|-----------------------------------|--------------------------|
| APPEARANCE | WHITE SOLID, CRYSTALLINE |
| O | ODORLESS |
| SPECIFIC GRAVITY (H2O=1) | 2.165 |
| BULK DENSITY | 71.00 LB/CU.FT. |
| PH | 5.2 FOR SAT SOL |
| SOLUBILITY IN WATER AT | |
| 20 DEG C. GMS/100ML H2O | 35.7 |
| BIODEGRADABILITY | N/A |
| PERCENT VOLATILES | N/A |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | N/A |
| VAPOR PRESSURE (MMHG) | N/D |
| BOILING POINT(760 MMHG) | N/A |
| POUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | SOLUBLE |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:
HEALTH 0 FLAMMABILITY 0 REACTIVITY 0 SPECIAL NONE
FLASH POINT NONE
AUTOIGNITION TEMPERATURE ND F / ND C
FLAMMABLE LIMITS (OZ. PER CU. FT.) LOWER N/D UPPER N/D

EXTINGUISHING MEDIA?
- USE MEDIA APPROPRIATE FOR SURROUNDING MATERIALS.
SPECIAL FIRE FIGHTING PROCEDURES:
NOT APPLICABLE.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
NOT APPLICABLE.

***** SECTION V - HEALTH HAZARD DATA *****

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: IRR SKN-RBT 50 MG/24H MLD
IRR EYE-RBT 100 MG/34H SEV
TOX ORL-HMN TDLO: 12357 MG/KG/23D-C
TOX ORL-RAT LD50: 3000 MG/KG
AQU TLM96: OVER 1000 PPM

PRODUCT TLV: 10 MG/M3 (N)

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

MAY BE IRRITATING.

SKIN:

MAY BE IRRITATING.

INHALATION:

MAY BE IRRITATING.

INGESTION:

NO DATA AVAILABLE

CHRONIC EFFECTS:

NO CHRONIC EFFECTS EXPECTED.

OTHER SYMPTOMS AFFECTED:

REVIEW OF AVAILABLE DATA DOES NOT IDENTIFY ANY CONDITIONS WORSENER BY
EXPOSURE TO THIS PRODUCT.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

HAZARDOUS DECOMPOSITION PRODUCTS:

NONE KNOWN.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. SWEEP UP AND REMOVE. AVOID CREATING OR INHALING
DUST.

WASTE DISPOSAL METHOD:

IF NOT CONTAMINATED, REUSE PRODUCT.

GET APPROVAL FROM LANDFILL OPERATOR AND TRANSPORT TO SANITARY LANDFILL.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

NOT NORMALLY NECESSARY.

TOXIC DUST/MIST RESPIRATOR.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

NORMAL WORK GLOVES.

EYE PROTECTION:

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING SALT-CEMENT-GRADE, BULK

516.003150

CAUTION!

MAY CAUSE IRRITATION TO THE EYES, SKIN OR RESPIRATORY SYSTEM.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE IN DRY LOCATION TO PROTECT PRODUCT QUALITY. REQUIRES COVERED STORAGE

AVOID CREATING OR INHALING DUST.

CONTAINER DISPOSITION:

CONTAINER SHOULD BE TRANSPORTED WITH ALL CLOSURES IN PLACE AND RETURNED FOR REUSE.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

NOT RESTRICTED

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
N/AC. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTSD. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)
CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA NE EEC YES ACOIN YES NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

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HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY

Energy Minerals and Natural Resources Department

Oil Conservation Division

2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

RECEIVED

NOV 26 2001

Environmental Bureau
Oil Conservation Division

Submit Original
Plus 1 Cc
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator Baker Atlas |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site Hobbs Facility |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter unknown |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 88231g. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 1718 S. Dal Paso Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are from Baker Atlas Hobbs facility. This waste is generated by the washing of oilfield equipment and tools. I have included a certificate of waste status and chain of custody. Sundance would like approval to accept this material into our Parabo Facility.

Estimated Volume 500 bbls. cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 11-5-01
Waste Management Facility Authorized Agent

TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO: 505-394-2511

| | | |
|---------------------------------|---------------------------------------|-----------------------|
| (This space for State Use) | | |
| APPROVED BY: <u>[Signature]</u> | TITLE: <u>Environmental Engr.</u> | DATE: <u>11-15-01</u> |
| APPROVED BY: <u>[Signature]</u> | TITLE: <u>Environmental Geologist</u> | DATE: <u>11-26-01</u> |

CERTIFICATE OF WASTE STATUS

NON-EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: Baker Atlas Hobbs NM

SOURCE: Wash rock sump Holding tank

DISPOSAL LOCATION: SUNDANCE SERVICES INC.

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for Baker Atlas
concur with the status of the waste from the subject site.

Name Jerry L. Antero

Title/Agency Engineer In Charge

Address 1718 S Del Paso
Hobbs NM 88240

Signature Jerry Antero

Date 10-29-2001



ARDINAL LABORATORIES, INC.

2111 Beechwood, Atlanta, TX 79803 101 East Marland, Hobbs, NM 88240
(816) 673-7091 Fax (816) 673-7020 (505) 383-2326 Fax (505) 383-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 1 of 1

| | | | | | | | | | |
|---|-------------|-------------------------------|----------------|----------------|----------------|------------------|----------------|----------------|----------------|
| Company Name: BAKER ATLAS | | PO #: | | | | | | | |
| Project Manager: JOHN AMP | | Company: | | | | | | | |
| Address: 1718 S. DAL PASO | | Address: | | | | | | | |
| City: HOBBS State: NM Zip: 88240 | | City: | | | | | | | |
| Phone #: 393-4181 | | Address: P.O. Box 1858 | | | | | | | |
| Fax #: | | City: | | | | | | | |
| Project #: | | State: | | | | | | | |
| Project Name: SUMP | | Zip: | | | | | | | |
| Project Location: DAL PASO AREA | | Phone #: | | | | | | | |
| FOR LAB USE ONLY | | Fax #: | | | | | | | |
| LAB ID. | Sample I.D. | MATRIX | | | | PRES. | | SAMPLING | |
| | | (G)RAB OR (C)OMP. | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER |
| H4749-1 Sump | | (G)RAB OR (C)OMP. | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER | (G)ROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)ROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | (G)RAB OR (C)OMP. | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER | (G)GROUNDWATER |
| | | DATE | | TIME | | ANALYSIS REQUEST | | | |
| | | 2/2/96 | | | | TCLP Complex | | | |

Notes and Comments: (To be filled in by the customer or the laboratory. Do not write on this page.)

Received By: **ALDO SANCHEZ** Date: **2/2/96**

Delivered By: **(Circle One)** **Customer - UPS - Bus - Other:**

Checked By: **(Initials)**

Remarks:

† Cardinal cannot accept verbal changes. Please fax written changes to 816.673.7828.



ARDINAL LABORATORIES

PHONE (515) 673-7001 • 3111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 383-2323 • 101 E. MARLAND • HOBBS, NM 88240

**ANALYTICAL RESULTS FOR
BAKER ATLAS
ATTN: JERRY ANTE
1718 S. DAL PASO
HOBBS, NM 88240
FAX TO:**

Receiving Date: 03/28/00
Reporting Date: 03/31/00
Project Owner: NOT GIVEN
Project Name: SUMP
Project Location: DAL PASO YARD
Lab Number: H4748-1
Sample ID: SUMP

Analysis Date: 03/30/00
Sampling Date: 03/28/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: AH/GP
Analyzed By: BC

| TCLP SEMIVOLATILES (ppm) | EPA LIMIT | Sample Result H4748-1 | Method Blank | QC | % Recov. | True Value QC |
|--------------------------|-----------|-----------------------|--------------|-------|----------|---------------|
| Pyridine | 5.00 | <0.020 | <0.008 | 0.004 | 8 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.020 | <0.008 | 0.037 | 74 | 0.050 |
| o-Cresol | 200 | <0.020 | <0.008 | 0.023 | 46 | 0.050 |
| m, p-Cresol | 200 | 0.024 | <0.008 | 0.021 | 42 | 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.008 | 0.038 | 72 | 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.008 | 0.040 | 80 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.008 | 0.048 | 88 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.008 | 0.048 | 88 | 0.050 |
| 2,4,6-Trichlorophenol | 400 | <0.020 | <0.008 | 0.049 | 88 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.008 | 0.050 | 100 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.008 | 0.058 | 118 | 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.008 | 0.052 | 104 | 0.050 |

% RECOVERY

| | |
|----------------------|-----|
| Fluorophenol | 37 |
| Phenol-d5 | 34 |
| Nitrobenzene-d5 | 81 |
| 2-Fluorobiphenyl | 85 |
| 2,4,6-Tribromophenol | 88 |
| Terphenyl-d14 | 111 |

METHODS: EPA SW 846-8270, 1311, 3510

Burgess J. Cooke
Burgess J. Cooke / Ph. D.

3/31/00
Date

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ANALYTICAL RESULTS FOR

BAKER ATLAS

ATTN: JERRY ANTE

1718 S. DAL PASO

HOBBBS, NM 88240

FAX TO:

Receiving Date: 03/28/00

Reporting Date: 04/07/00

Project Number: NOT GIVEN

Project Name: SUMP

Project Location: DAL PASO YARD

Sampling Date: 03/28/00

Sample Type: SLUDGE

Sample Condition: COOL & INTACT

Sample Received By: AH/MP

Analyzed By: AH

TCLP METALS

| LAB NO. | SAMPLE ID | As ppm | Ag ppm | Ba ppm | Cd ppm | Cr ppm | Pb ppm | Hg ppm | Se ppm |
|------------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ANALYSIS DATE: | | 04/07/00 | 04/08/00 | 04/08/00 | 04/08/00 | 04/08/00 | 04/08/00 | 03/30/00 | 04/07/00 |
| EPA LIMITS: | | 5 | 5 | 100 | 1 | 5 | 5 | 0.2 | 1 |
| H4748-1 | SUMP | <1 | <1 | <5 | <0.1 | <1 | <1 | <0.02 | <0.1 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Quality Control | | 0.181 | 1.018 | 23.53 | 0.971 | 4.822 | 6.002 | 0.0053 | 0.057 |
| True Value QC | | 0.200 | 1.000 | 25.00 | 1.000 | 5.000 | 6.000 | 0.0080 | 0.050 |
| % Recovery | | 91 | 102 | 98 | 97 | 98 | 100 | 62 | 114 |
| Relative Standard Deviation | | 3.3 | 1.4 | 2.3 | 0.2 | 4.4 | 10.8 | 9.0 | 4.0 |
| METHODS: EPA 1311, 800/4-81/ | | 208.2 | 272.1 | 208.1 | 213.1 | 218.1 | 239.1 | 245.1 | 270.2 |

Amy Hill
Chemist

4/7/00
Date

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PHONE (505) 303-2320 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR

BAKER ATLAS

ATTN: JERRY ANTE

1718 S. DAL PASO

HOBBS, NM 88240

FAX TO:

Receiving Date: 03/29/00

Reporting Date: 04/08/00

Project Owner: NOT GIVEN

Project Name: SUMP

Project Location: DAL PASO YARD

Sampling Date: 03/29/00

Sample Type: SLUDGE

Sample Condition: COOL & INTACT

Sample Received By: AH/GP

Analyzed By: AH/BC

| LAB NUMBER | SAMPLE ID | REACTIVITY | | CORROSIVITY | IGNITABILITY |
|-----------------------------|-----------|------------------|------------------|-------------|--------------|
| | | Sulfide (ppm) | Cyanide (ppm) | (pH) | (°F) |
| ANALYSIS DATE: | | 04/04/00 | 04/04/00 | 04/07/00 | 04/07/00 |
| H4740-1 | SUMP | Not reactive | Not reactive | 7.43 | >140 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| Quality Control | | NR | NR | 6.98 | NR |
| True Value QC | | NR | NR | 7.00 | NR |
| % Recovery | | NR | NR | 98.7 | NR |
| Relative Percent Difference | | NR | NR | 0 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1010, 1311, 40 CFR 261

Burgess J. Carter
Chemist

4/8/00
Date

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PHONE (806) 363-2329 • 101 E. MARLAND • HOBBBS, NM 88240

ANALYTICAL RESULTS FOR BAKER ATLAS

ATTN: JERRY ANTE
1718 S. DAL PASO
HOBBBS, NM 88240
FAX TO:

Receiving Date: 03/29/00
Reporting Date: 03/31/00
Project Owner: NOT GIVEN
Project Name: BUMP
Project Location: DAL PASO YARD
Lab Number: H4749-1
Sample ID: BUMP

Analysis Date: 03/30/00
Sampling Date: 03/29/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: AH/GP
Analyzed By: BC

| TCLP VOLATILES (ppm) | EPA LIMIT | Sample Result H4749-1 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|-----------|--------------------------|-----------------|-------|---------|------------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.083 | 83 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.083 | 83 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.087 | 87 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.089 | 88 | 0.100 |
| Benzene | 0.5 | <0.005 | <0.005 | 0.101 | 101 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.101 | 101 | 0.100 |
| Trichloroethylene | 0.5 | 0.015 | <0.005 | 0.103 | 103 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.103 | 103 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.100 | 100 | 0.100 |
| 1,4-Dichlorobenzene | 7.5 | <0.005 | <0.005 | 0.100 | 100 | 0.100 |

% RECOVERY

| | |
|----------------------|-----|
| Dibromofluoromethane | 88 |
| Toluene-d8 | 100 |
| Bromofluorobenzene | 82 |

METHODS: EPA SW 846-8260, 1311

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

3/31/00
Date

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District IV - (505) 827-7131

Energy Minerals and Natural Resources Department

Oil Conservation Division

2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Originate

Submit
Plus
to app
Distric

RECEIVED

OCT 23 2001

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|---------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site HOBBS FACI |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter CHAPARRAL |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318, State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 5801 Lovinton HWY Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following waste is generated by the washing of tools and oil equipment. This analytical is from Halliburtons Hobbs facility. Sundance would like approval to accpet this waste into our Parabo facility.

Estimated Volume 300 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____

SIGNATURE: *Donna L. Roach* TITLE: OFFICE MGR DATE: 10-1-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511
SSIDONNA@AOL.COM

(This space for State Use)

APPROVED BY: *Mark C. ...* TITLE: Environmental Eng DATE: 10-15-01

APPROVED BY: *Mark J. ...* TITLE: Environmental Geologist DATE: 10-23-01

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION

COMPANY/GENERATOR: Halliburton

ADDRESS: 5801 Lovington Hwy

GENERATING SITE: Hobbs Yard

COUNTY Lea STATE NM

TYPE OF WASTE: Wash Rack Grit

ESTIMATED VOLUME: 300,000 lbs.

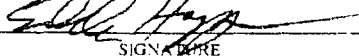
GENERATING PROCESS: Wash Rack Sumps

REMARKS: _____

NMOCD FACILITY: Sundance

TRUCKING FACILITY: Chaparral

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 261.3.

AGENT: 
SIGNATURE

NAME: Eddie Hopper
PRINTED

ADDRESS: 5801 Lovington Hwy Hobbs, NM 88240

DATE: 10/1/01



ARDINAL LABORATORIES

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PHONE (805) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
6801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| 12- TCLR VOLATILES (ppm) | EPA LIMIT | Sample Result H5422-1 | Method Blank | QC | %Recov. | True Value QC |
|--------------------------|--------------|--------------------------|-----------------|-------|---------|------------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.083 | 83 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| Benzene | 0.5 | <0.005 | <0.005 | 0.088 | 88 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.092 | 92 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.091 | 91 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.099 | 99 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.084 | 94 | 0.100 |
| 1,4-Dichlorobenzene | 7.6 | <0.005 | <0.005 | 0.104 | 104 | 0.100 |

% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 95 |
| Toluene-d8 | 91 |
| Bromofluorobenzene | 98 |

METHODS: EPA SW 846-8260, 1311

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

12/14/00
Date

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ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Analysis Date: 12/16/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

12-20-2000 02:33pm LAB NUMBER SAMPLE ID

TPH
(mg/Kg)

| | | |
|-----------------------------|----------------|-------|
| H5422-1 | WASHBAY SLUDGE | 77300 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Quality Control | | 228 |
| True Value QC | | 240 |
| % Recovery | | 95.0 |
| Relative Percent Difference | | 4.0 |

METHOD: EPA 600/4-79-020 418.1

Burgess J. Coche
Chemist

Date

12/18/00

H5422T.XLS

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ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| TCLP SEMIVOLATILES (ppm) | EPA LIMIT | Sample Result H5422-1 | Method Blank | QC | % Recov. | True Value QC |
|--------------------------|--------------|--------------------------|-----------------|-------|----------|------------------|
| Pyridine | 5.00 | <0.020 | <0.005 | 0.011 | 22 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.020 | <0.005 | 0.024 | 48 | 0.050 |
| o-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| m, p-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.005 | 0.021 | 42 | 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.005 | 0.034 | 68 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.005 | 0.026 | 52 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.005 | 0.040 | 80 | 0.050 |
| 2,4,6-Trichlorophenol | 400 | <0.020 | <0.005 | 0.048 | 92 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.005 | 0.046 | 92 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.005 | 0.045 | 90 | 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.005 | 0.047 | 94 | 0.050 |

% RECOVERY

| | |
|----------------------|-----|
| Fluorophenol | 56 |
| Phenol-d5 | 40 |
| Nitrobenzene-d5 | 104 |
| 2-Fluorobiphenyl | 68 |
| 2,4,6-Tribromophenol | 89 |
| Terphenyl-d14 | 81 |

METHODS: EPA SW 846-8270, 1311, 3510

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

12/14/00
Date

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HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/BC

REACTIVITY

12-10-00 LAB NUMBER SAMPLE ID

Sulfide
(ppm)

Cyanide
(ppm)

CORROSIVITY
(pH)

IGNITABILITY
(°F)

| | | | | |
|-----------------------------|--------------|--------------|----------|--------------|
| ANALYSIS DATE: | 12/14/00 | 12/14/00 | 12/16/00 | 12/16/00 |
| H5422-1 WASHBAY | Not reactive | Not reactive | 7.65 | Nonflammable |
| SLUDGE | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 7.03 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 100 | NR |
| Relative Percent Difference | NR | NR | 0.1 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1030 (proposed), 1311, 40 CFR 261

Chemist

Date

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811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-1
Originated 8/1

Submit Orig
Plus 1 C
to approp
District Of

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|---|--|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator Electric Submersible PUMP |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site Hobbs Yard |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter unknown |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 88231 | 8. State NEW MEXICO |
| 7. Location of Material (Street Address or ULSTR) 8426 N. Dal Paso Hobbs, NM 88241 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are from Electric Submersible Pump's Hobbs facility. This waste is generated by the washing off of oil field rental tools. All equipment is washed into the sump and pumped to a waste water tank outside the building in a bermed area. I have attached a certificate of waste and chain of custody. Sundance would like approval to accept this material into our Parabo facility.

Estimated Volume 240 bbls. cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 9-26-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: [Signature] TITLE: Environmental Engineer DATE: 9-26-01
APPROVED BY: [Signature] TITLE: Bureau Chief DATE: 10/2/01

10/2/01
E-mailed

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: ESP 8426 N DAL PASO HOBBS NM 88240
SOURCE: OILFIELD RINSATE
DISPOSAL LOCATION: SUNDANCE SERVICES, PARABO FACILITY,
P.O. BOX 1737 EUNICE NM 88231

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for ESP
concur with the status of the waste from the subject site.

Name Rodrigo Barrota
Title/Agency ESP
Address 8426 N DAL PASO
HOBBS NM 88240
Signature Rodrigo Barrota
Date 9-25-00



ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Merland, Hobbs, NM 88240
(915) 573-7001 Fax (915) 573-7020 (505) 383-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page ____ of ____

| | | | | | | | | | | | | | | | | | | | |
|---|-------------|------------------------------------|--|-------------------------------------|----------|--|--|----------------|--|--|--|--|--|--|--|--|--|--|--|
| Company Name: <u>Wood Group ESP</u> | | P.O. #: <u>9909</u> | | | | | | | | | | | | | | | | | |
| Project Manager: <u>Kodjo Bunka</u> | | Company: | | | | | | | | | | | | | | | | | |
| Address: <u>8426 N. 2nd St. Paso</u> | | Addr: | | | | | | | | | | | | | | | | | |
| City: <u>Ho. 665</u> | | State: <u>NM</u> Zip: <u>88240</u> | | | | | | | | | | | | | | | | | |
| Phone #: <u>(505) 392-7999</u> Fax #: <u>(505) 392-8190</u> | | Address: | | | | | | | | | | | | | | | | | |
| Project #: | | City: | | | | | | | | | | | | | | | | | |
| Project Name: | | State: | | | | | | | | | | | | | | | | | |
| Project Location: | | Zip: | | | | | | | | | | | | | | | | | |
| Sample Name: | | Phone #: | | | | | | | | | | | | | | | | | |
| Room (Lab Use Only): | | Fax #: | | | | | | | | | | | | | | | | | |
| Lab I.D. | Sample I.D. | MATRIX | | PRESERV | SAMPLING | ANALYSIS REQUEST | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | |
| H6881 Text Water | | (G)RAB OR (C)OMP. | | <input checked="" type="checkbox"/> | DATE | TIME | | | | | | | | | | | | | |
| | | CONTAINERS | | | | | | | | | | | | | | | | | |
| | | GROUNDWATER | | | | | | | | | | | | | | | | | |
| | | WASTEWATER | | | | | | | | | | | | | | | | | |
| | | SOIL | | | | | | | | | | | | | | | | | |
| | | CRUDE OIL | | | | | | | | | | | | | | | | | |
| | | SLUDGE | | | | | | | | | | | | | | | | | |
| | | OTHER: | | | | | | | | | | | | | | | | | |
| | | ACID/BASE: | | | | | | | | | | | | | | | | | |
| | | ICE / COOL | | | | | | | | | | | | | | | | | |
| OTHER: | | | | | | | | | | | | | | | | | | | |
| Time: | | Received By: (Lab Staff) | | Phone Result: | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | Add'l Phone #: | | | | | | | | | | | |
| Date: | | Received By: | | Fax Result: | | <input type="checkbox"/> Yes <input type="checkbox"/> No | | Add'l Fax #: | | | | | | | | | | | |
| Sample Requisitioned: | | Sample Condition: | | Checked By: | | | | | | | | | | | | | | | |
| Collected By: | | Sample Condition: | | Checked By: | | | | | | | | | | | | | | | |
| Delivered By: (Circle One) | | Sample Condition: | | Checked By: | | | | | | | | | | | | | | | |
| Sampler - UPB - Bus - Other: | | Sample Condition: | | Checked By: | | | | | | | | | | | | | | | |

* Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.



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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
WOOD GROUP ESP
ATTN: RODRIGO BURROLA
8428 N. DAL PASO
HOBBS, NM 88240
FAX TO: (505) 392-8180

Receiving Date: 09/04/01
Reporting Date: 09/05/01
Project Number: NOT GIVEN
Project Name: NOT GIVEN
Project Location: NOT GIVEN
Lab Number: H6128-1
Sample ID: TEST WATER

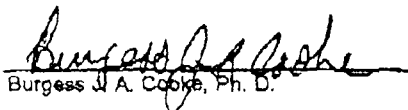
Analysis Date: 09/04/01
Sampling Date: 09/04/01
Sample Type: WASTEWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| TCLP VOLATILES (ppm) | EPA LIMIT | Sample Result H6128-1 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|--------------|--------------------------|-----------------|-------|---------|------------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.106 | 106 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.092 | 92 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.115 | 115 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.091 | 91 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.088 | 88 | 0.100 |
| Benzene | 0.5 | 0.011 | <0.005 | 0.096 | 96 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.090 | 90 | 0.100 |
| Trichloroethylene | 0.6 | 0.104 | <0.005 | 0.098 | 98 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.084 | 84 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.098 | 96 | 0.100 |
| 1,4-Dichlorobenzene | 7.5 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |

% RECOVERY

| | |
|----------------------|-----|
| Dibromofluoromethane | 103 |
| Toluene-d8 | 111 |
| Bromofluorobenzene | 108 |

METHODS: EPA SW 846-8260, 1311


Burgess J. A. Cooke, Ph. D.

9/5/01
Date

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ANALYTICAL RESULTS FOR
WOOD GROUP ESP
ATTN: RODRIGO BURROLA
8426 N. DAL PASO
HOBBS, NM 88240
FAX TO: (505) 392-8190

Receiving Date: 09/04/01
Reporting Date: 09/11/01
Project Number: NOT GIVEN
Project Name: NOT GIVEN
Project Location: NOT GIVEN
Lab Number: H6128-1
Sample ID: TEST WATER

Extraction Date: 09/04/01
Analysis Date: 09/10/01
Sampling Date: 09/04/01
Sample Type: WASTEWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| TCLP SEMIVOLATILES (ppm) | EPA LIMIT | Sample Result H6128-1 | Method Blank | QC | % Recov. | True Value QC |
|--------------------------|--------------|--------------------------|-----------------|-------|----------|------------------|
| Pyridine | 5.00 | <0.020 | <0.005 | 0.006 | 12 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.020 | <0.005 | 0.028 | 56 | 0.050 |
| o-Cresol | 200 | <0.020 | <0.005 | 0.036 | 72 | 0.050 |
| m, p-Cresol | 200 | <0.020 | <0.005 | 0.036 | 72 | 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.005 | 0.024 | 48 | 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.005 | 0.044 | 88 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.005 | 0.029 | 58 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.005 | 0.043 | 86 | 0.050 |
| 2,4,5-Trichlorophenol | 400 | <0.020 | <0.005 | 0.042 | 84 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.005 | 0.046 | 92 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.005 | 0.047 | 94 | 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.005 | 0.051 | 102 | 0.050 |

% RECOVERY

| | |
|----------------------|----|
| Fluorophenol | 38 |
| Phenol-d5 | 24 |
| Nitrobenzene-d5 | 75 |
| 2-Fluorobiphenyl | 59 |
| 2,4,6-Tribromophenol | 39 |
| Terphenyl-d14 | 75 |

METHODS: EPA SW 846-8270, 1311, 3510

Burgess J.A. Cooke/Ph. D.

Date 9/14/01

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ANALYTICAL RESULTS FOR
WOOD GROUP ESP
ATTN: RODRIGO BURROLA
8428 N. DAL PASO
HOBBS, NM 88240
FAX TO: (505) 392-8190

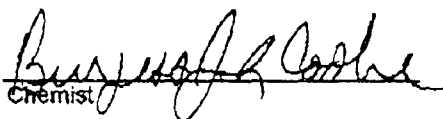
Receiving Date: 09/04/01
Reporting Date: 09/07/01
Project Number: NOT GIVEN
Project Name: NOT GIVEN
Project Location: NOT GIVEN

Sampling Date: 09/04/01
Sample Type: WASTEWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/BC

LAB NUMBER SAMPLE ID REACTIVITY
Sulfide Cyanide CORROSIVITY IGNITABILITY
(ppm) (ppm) (pH) (°F)

| | | | | |
|-----------------------------|--------------|--------------|----------|----------|
| ANALYSIS DATE: | 09/05/01 | 09/05/01 | 09/05/01 | 09/06/01 |
| H8128-1 | Not reactive | Not reactive | 7.17 | >140 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 6.94 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 99.1 | NR |
| Relative Percent Difference | NR | NR | 0.7 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1010, 1311, 40 CFR 261


Chemist

9/7/01
Date

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ANALYTICAL RESULTS FOR
WOOD GROUP ESP
ATTN: RODRIGO BURROLA
8426 N. DAL PASO
HOBBS, NM 88240
FAX TO: (505) 392-8190

Receiving Date: 09/04/01
Reporting Date: 09/07/01
Project Number: NOT GIVEN
Project Name: NOT GIVEN
Project Location: NOT GIVEN

Sampling Date: 09/04/01
Sample Type: WASTEWATER
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH

TCLP METALS

| LAB NO. | SAMPLE ID | As ppm | Ag ppm | Ba ppm | Cd ppm | Cr ppm | Pb ppm | Hg ppm | Se ppm |
|-----------------------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ANALYSIS DATE: | | 09/06/01 | 09/07/01 | 09/07/01 | 09/07/01 | 09/07/01 | 09/07/01 | 09/07/01 | 09/06/01 |
| EPA LIMITS | | 5 | 5 | 100 | 1 | 5 | 5 | 0.2 | 1 |
| H6128-1 | TEST WATER | <1 | <1 | <5 | <0.1 | <1 | <1 | <0.02 | <0.1 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Quality Control | | 0.048 | 4.530 | 21.90 | 0.994 | 4.878 | 5.062 | 0.0107 | 0.199 |
| True Value QC | | 0.050 | 5.000 | 25.00 | 1.000 | 5.000 | 5.000 | 0.0100 | 0.200 |
| % Recovery | | 96.0 | 90.6 | 87.6 | 99.4 | 97.6 | 101 | 107 | 99.5 |
| Relative Standard Deviation | | 2.2 | 0.2 | 1.4 | 0.7 | 0.9 | 1.4 | 6.5 | 2.2 |
| METHODS: EPA 1311, 600/4-79 | | 206.2 | 272.1 | 208.1 | 213.1 | 218.1 | 239.1 | 245.1 | 270.2 |

Amy Hill
Chemist

9-7-01
Date

H6128M.XLS

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Hobbs, NM 88241-1980
District II - (505) 748-1283
BHS, First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form 4
Original

Submit
Ph.
to ap
Dist

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|---|--------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site HOBBS FACI |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter UNKNOWN |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 5801 LOVINGTON hyHOBBS, N.M. 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The attached MSDS is for sand mixed at Halliburton's Hobbs facility. This material becomes a waste when there is material left over from sand frac jobs. Sundance would like approval to accept this material into our Parabo Disposal Facility.

Note: This is an ongoing waste stream.

RECEIVED

AUG 16 2001

Environmental Bureau
Oil Conservation Division

Estimated Volume 200 yds cy Known Volume (to be entered by the operator at the end of the haul)

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 7-27-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)
APPROVED BY: [Signature] TITLE: Bureau Chief DATE: 8/20/01
APPROVED BY: _____ TITLE: _____ DATE: _____

4

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION

COMPANY/GENERATOR: HES

ADDRESS: 5801 Lovington Hwy Hobbs, NM

GENERATING SITE: HES

COUNTY Lca STATE NM

TYPE OF WASTE: Senter-Bauxite 12/40 Resin Coated Sand

ESTIMATED VOLUME: 4,000 lbs.

GENERATING PROCESS: Unused on job

REMARKS: _____

NMOCD FACILITY: Sundance

TRUCKING FACILITY: Hes

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous of listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: 

SIGNATURE

NAME: Eddie Hopper

PRINTED

ADDRESS: 5801 Lovington Hwy., Hobbs, NM 88240

DATE: 5/24/01



MATERIAL SAFETY DATA SHEET

SAND - BROWN

Revision Date: 06/06/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: SAND - BROWN
Synonyms: None
Chemical Family: Not determined
Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Crystalline silica, quartz 14808-60-7 | 60 - 100% | 0.05 mg/m3 | 0.1 mg/M3 |

3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye irritation. Potential carcinogen. May cause delayed injury to lungs.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Get immediate medical attention.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|---|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Lower (oz./ft3): | Not applicable |
| Flammability Limits in Air - Upper (%): | Not Determined |
| Flammability Limits in Air - Upper (oz./ft3): | Not applicable |

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Not applicable.

Special Protective Equipment for Fire-Fighters

Not Determined

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Not Determined

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions

Avoid creating or inhaling dust.

Storage Information

Store in a cool, dry location.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in a well ventilated area. Localized ventilation should be used to control dust levels.

Respiratory Protection

In high concentrations, supplied air respirator or a self-contained breathing apparatus. Dust/mist respirator.

Hand Protection

Cloth gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Wear safety glasses or goggles to protect against exposure.

Other Precautions

Not Determined

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|----------------|
| Physical State: | Solid |
| Color: | Brown |
| Odor: | Odorless |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 2.65 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | 94 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Not Determined |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | Not Determined |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)

Hydrofluoric acid.

Hazardous Decomposition Products

None known.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION**Principle Route of Exposure**

Eye contact. Inhalation. Skin contact.

Inhalation

May cause silicosis, which reduces lung function. The lung damage can lead to heart problems.

Skin Contact

None known.

Eye Contact

Dust may cause irritation and inflammation.

Ingestion

None known

Aggravated Medical Conditions

Respiratory

Chronic Effects/Carcinogenicity

Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica.

Other Information

None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity

Not determined

Genotoxicity: Not determined

Reproductive/Developmental

Toxicity:

Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)

Not determined

Persistence/Degradability

Not determined

Bio-accumulation

Not Determined

Ecotoxicological Information

Acute Fish Toxicity:

Not determined

Acute Crustaceans Toxicity:

Not determined

Acute Algae Toxicity:

Not determined

Chemical Fate Information

Not determined

Other Information

Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method

Bury in a licensed landfill according to federal, state, and local regulations. If not contaminated, reuse product.

Contaminated Packaging

Empty container completely. Transport with all closures in place. Return for reuse or disposal in a sanitary landfill according to national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

Chronic Health Hazard

EPA SARA (313) Chemicals

This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations

Canadian DSL Inventory

All components listed on inventory.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS
Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

END OF MSDS



MATERIAL SAFETY DATA SHEET

SAND - WHITE

Revision Date: 06/06/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: SAND - WHITE
Synonyms: None
Chemical Family: Not determined
Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Crystalline silica, quartz 14808-60-7 | 60 - 100% | 0.05 mg/m3 | 0.1 mg/M3 |

3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye irritation. Potential carcinogen. May cause delayed injury to lungs.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Get immediate medical attention.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|---|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Upper (%): | Not Determined |

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Not applicable.

Special Protective Equipment for Fire-Fighters

Not Determined

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Not Determined

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions

Avoid creating or inhaling dust.

Storage Information

Store in a cool, dry location.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in a well ventilated area. Localized ventilation should be used to control dust levels.

Respiratory Protection

In high concentrations, supplied air respirator or a self-contained breathing apparatus. Dust/mist respirator.

Hand Protection

Cloth gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Wear safety glasses or goggles to protect against exposure.

Other Precautions

Not Determined

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|----------------|
| Physical State: | Solid |
| Color: | White |
| Odor: | Odorless |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 2.65 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | 100 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | 0 |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Not Determined |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | 65 |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid

None known.

Incompatibility (Materials to Avoid)
Hydrofluoric acid.

Hazardous Decomposition Products
None known.

Additional Guidelines
Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure
Eye contact. Inhalation. Skin contact.

Inhalation
May cause silicosis, which reduces lung function. The lung damage can lead to heart problems.

Skin Contact
None known.

Eye Contact
Dust may cause irritation and inflammation.

Ingestion
None known

Aggravated Medical Conditions
Respiratory

Chronic Effects/Carcinogenicity
Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica.

Other Information
None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity
Not determined

Genotoxicity: Not determined

Reproductive/Developmental Toxicity: Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)

Not determined

Persistence/Degradability

Not applicable

Bio-accumulation

Not Determined

Ecotoxicological Information

| | |
|-----------------------------|----------------|
| Acute Fish Toxicity: | Not determined |
| Acute Crustaceans Toxicity: | Not determined |
| Acute Algae Toxicity: | Not determined |

Chemical Fate Information

Not determined

Other Information

Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method

Bury in a licensed landfill according to federal, state, and local regulations. If not contaminated, reuse product.

Contaminated Packaging

Empty container completely. Transport with all closures in place. Return for reuse or dispose in a sanitary landfill according to national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

Chronic Health Hazard

EPA SARA (313) Chemicals

This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations

Canadian DSL Inventory

All components listed on inventory.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS
Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

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*****END OF MSDS*****



MATERIAL SAFETY DATA SHEET

INTERPROP I PROPPANT

Revision Date: 03/21/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: INTERPROP I PROPPANT
Synonyms: None
Chemical Family: Not determined
Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|---------------------------------------|-------------------------------|----------------------|---------------------|
| Sintered bauxite 1318-16-7 | 60 - 100% | Not applicable | Not applicable |
| Proprietary Component | 60 - 100% | Not applicable | 15 mg/M3 |
| Aluminum oxide 1344-28-1 | 10 - 30% | 10 mg/m3 | 15 mg/M3 |
| Iron oxide 1309-37-1 | 1 - 5% | 5 mg/m3 | 10 mg/M3 |
| Silica, amorphous fused 60676-86-0 | 1 - 5% | 0.1 mg/m3 | 5 mg/M3 |
| Titanium dioxide 13463-67-7 | 1 - 5% | 10 mg/m3 | 15 mg/M3 |

3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye and respiratory irritation. Potential carcinogen. May cause delayed injury to lungs.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Get immediate medical attention.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|--|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Lower (oz./ft ³): | Not applicable |
| Flammability Limits in Air - Upper (%): | Not Determined |
| Flammability Limits in Air - Upper (oz./ft ³): | Not applicable |

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Not applicable.

Special Protective Equipment for Fire-Fighters

Not Determined

NFPA Ratings:

Not Determined

HMIS Ratings:

Not Determined

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption
Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions
Not Determined

Storage Information
Store in a cool, dry location.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls
Use in a well ventilated area. Localized ventilation should be used to control dust levels.

Respiratory Protection
Dust/mist respirator.

Hand Protection
Cloth gloves.

Skin Protection
Normal work coveralls.

Eye Protection
Dust proof goggles.

Other Precautions
Not Determined

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|----------------|
| Physical State: | Solid |
| Color: | Dark brown |
| Odor: | Odorless |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 3.17 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft³): | 114 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Not Determined |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistokes): | Not Determined |

Partition Coefficient/n-Octanol/Water:
Molecular Weight (g/mole):

Not Determined
228.1

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid
None anticipated

Incompatibility (Materials to Avoid)
None known.

Hazardous Decomposition Products
None known.

Additional Guidelines
Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure
Eye contact. Inhalation. Skin contact.

Inhalation
May cause respiratory irritation. May cause silicosis, which reduces lung function. The lung damage can lead to heart problems.

Skin Contact
None known.

Eye Contact
Dust may cause irritation and inflammation.

Ingestion
Not determined

Aggravated Medical Conditions
Respiratory

Chronic Effects/Carcinogenicity
Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica.

Other Information
None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity
Not determined

Genotoxicity: Not determined

Reproductive/Developmental Toxicity: Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)
Not determined

Persistence/Degradability
Not applicable

Bio-accumulation
Not Determined

Ecotoxicological Information
Acute Fish Toxicity: Not determined
Acute Crustaceans Toxicity: Not determined
Acute Algae Toxicity: Not determined

Chemical Fate Information
Not determined

Other Information
Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method
Bury in a licensed landfill according to federal, state, and local regulations. If not contaminated, reuse product.

Contaminated Packaging
Empty container completely. Transport with all closures in place. Return for reuse or dispose in a sanitary landfill according to national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

EPA SARA (313) Chemicals

This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372:

Aluminum Oxide//1344-28-1

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

All components listed do not apply to the California Proposition 65 Regulation.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations**Canadian DSL Inventory**

All components listed on inventory.

WHMIS Hazard Class

D2B Toxic Materials

16. OTHER INFORMATION**The following sections have been revised since the last issue of this MSDS**

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

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END OF MSDS



MATERIAL SAFETY DATA SHEET

SUPER LC PROPPANT

Revision Date: 06/06/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: SUPER LC PROPPANT
Synonyms: None
Chemical Family: Not determined
Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Phenol / formaldehyde resin 9003-35-4 | 1 - 5% | Not applicable | Not applicable |

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Crystalline silica, quartz 14808-60-7 | 60 - 100% | 0.05 mg/m3 | 0.1 mg/M3 |

3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye and respiratory irritation. Potential carcinogen. May cause delayed injury to lungs. May cause allergic skin and respiratory reaction.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

Flash Point/Range (F): Not Determined

Flash Point/Range (C): Not Determined

Flash Point Method: Not Determined

Autoignition Temperature (F): Not Determined

Autoignition Temperature (C): Not Determined

Flammability Limits in Air - Lower (%): Not Determined

Flammability Limits in Air - Upper (%): Not Determined

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Decomposition in fire may produce toxic gases.

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Not Determined

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust.

Storage Information

Store in a cool, dry location.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in a well ventilated area. Localized ventilation should be used to control dust levels.

Respiratory Protection

Dust/mist respirator.

Hand Protection

Impervious rubber gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Wear safety glasses or goggles to protect against exposure.

Other Precautions

Not Determined

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|----------------------|
| Physical State: | Solid |
| Color: | Light to dark yellow |
| Odor: | Saddle soap |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 2.61 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | 99.8 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Not Determined |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | Not Determined |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid
None anticipated

Incompatibility (Materials to Avoid)
Hydrofluoric acid.

Hazardous Decomposition Products
Carbon monoxide. Ammonia. Formaldehyde.

Additional Guidelines
Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure
Eye contact. Inhalation. Skin contact.

Inhalation
May cause allergic respiratory reaction. Coughing, chest pains, and breathing difficulty may occur. May cause silicosis, which reduces lung function. The lung damage can lead to heart problems.

Skin Contact
None known. This product contains ingredients which may produce an allergic skin reaction. It should be treated as a skin sensitizer.

Eye Contact
Dust may cause irritation and inflammation.

Ingestion
None known

Aggravated Medical Conditions
Skin disorders. Eye ailments.

Chronic Effects/Carcinogenicity
Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica. Formaldehyde, a suspected carcinogen, is released when heated.

Other Information
None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity

Not determined

Genotoxicity: Not determined

Reproductive/Developmental

Toxicity: Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)

Not determined

Persistence/Degradability

Not determined

Bio-accumulation

Not Determined

Ecotoxicological Information

Acute Fish Toxicity: Not determined

Acute Crustaceans Toxicity: Not determined

Acute Algae Toxicity: Not determined

Chemical Fate Information

Not determined

Other Information

Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method

Bury in a licensed landfill according to federal, state, and local regulations. If not contaminated, reuse product.

Contaminated Packaging

Empty container completely. Transport with all closures in place. Return for reuse or dispose in a sanitary landfill according to national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

Chronic Health Hazard

EPA SARA (313) Chemicals

This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations

Canadian DSL Inventory

All components listed on inventory.

WHMIS Hazard Class

D2A Very Toxic Materials

| |
|------------------------------|
| 16. OTHER INFORMATION |
|------------------------------|

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

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END OF MSDS



MATERIAL SAFETY DATA SHEET

ACFRAC PRB PROPPANT

Revision Date: 06/06/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: ACFRAC PRB PROPPANT
Synonyms: None
Chemical Family: Not determined
Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Crystalline silica, quartz 14808-60-7 | 60 - 100% | 0.05 mg/m3 | 0.1 mg/M3 |
| Phenol / formaldehyde resin 9003-35-4 | 1 - 5% | Not applicable | Not applicable |

3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye, skin and respiratory irritation. Potential carcinogen. May cause delayed injury to lungs. May cause allergic skin and respiratory reaction.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes

difficult.

Skin

Wash with soap and water.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Do not induce vomiting. Slowly dilute with 1-2 glasses of water or milk and seek medical attention. Never give anything by mouth to an unconscious person.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|---|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Upper (%): | Not Determined |

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Decomposition in fire may produce toxic gases.

Special Protective Equipment for Fire-Fighters

Full protective clothing and approved self-contained breathing apparatus required for fire fighting personnel.

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMS Ratings:

Not Determined

6. ACCIDENTAL RELEASE MEASURES

Personal Precautionary Measures

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions

Avoid contact with eyes, skin, or clothing. Avoid creating or inhaling dust.

Storage Information

Store in a cool, dry location.

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in a well ventilated area. Localized ventilation should be used to control dust levels.

Respiratory Protection

HEPA Respirator. Dust/mist respirator.

Hand Protection

Impervious rubber gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Dust proof goggles.

Other Precautions

Not Determined

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|----------------|
| Physical State: | Solid |
| Color: | Brown-black |
| Odor: | Odorless |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 2.53 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | 99.8 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Not Determined |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistrokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | Not Determined |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid

None anticipated

Incompatibility (Materials to Avoid)

Hydrofluoric acid.

Hazardous Decomposition Products

Carbon dioxide. Silicon dioxide. Aldehydes.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure

Eye contact. Inhalation. Skin contact.

Inhalation

May cause allergic respiratory reaction. May cause silicosis, which reduces lung function. The lung damage can lead to heart problems.

Skin Contact

This product contains ingredients which may produce an allergic skin reaction. It should be treated as a skin sensitizer. May cause skin irritation.

Eye Contact

May cause eye irritation.

Ingestion

Not determined

Aggravated Medical Conditions

Respiratory

Chronic Effects/Carcinogenicity

Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica.

Other Information

None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity

Not determined

Genotoxicity: Not determined

Reproductive/Developmental Toxicity: Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)

Not determined

Persistence/Degradability

Not applicable

Bio-accumulation

Not Determined

Ecotoxicological Information

Acute Fish Toxicity: Not determined

Acute Crustaceans Toxicity: Not determined

Acute Algae Toxicity: Not determined

Chemical Fate Information

Not determined

Other Information

Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method

Bury in a licensed landfill according to federal, state, and local regulations. If not contaminated, reuse product.

Contaminated Packaging

Not determined

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

Chronic Health Hazard

EPA SARA (313) Chemicals

This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations

Canadian DSL Inventory

All components listed on inventory.

WHMIS Hazard Class

D2A Very Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

*****END OF MSDS*****



MATERIAL SAFETY DATA SHEET

CARBO-LITE PROPPANT

Revision Date: 04/06/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: CARBO-LITE PROPPANT
Synonyms: None
Chemical Family: Not determined
Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|---|-------------------------------|----------------------|---------------------|
| Contains no hazardous substances Mixture | 60 - 100% | Not applicable | Not applicable |

3. HAZARDS IDENTIFICATION

Hazard Overview
May cause eye irritation.

4. FIRST AID MEASURES

Inhalation
If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Get immediate medical attention.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|---|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Upper (%): | Not Determined |

Fire Extinguishing Media

Water fog, carbon dioxide, foam, dry chemical.

Special Exposure Hazards

Not applicable.

Special Protective Equipment for Fire-Fighters

Not Determined

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Not Determined

6. ACCIDENTAL RELEASE MEASURES**Personal Precautionary Measures**

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE**Handling Precautions**

Avoid creating or inhaling dust.

Storage Information

Store in a cool, dry location. Product has a shelf life of 36 months

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in a well ventilated area.

Respiratory Protection

Not normally needed. But if significant exposures are possible then the following respirator is recommended. Dust/mist respirator.

Hand Protection

Cloth gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Dust proof goggles.

Other Precautions

Not Determined

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|-----------------|
| Physical State: | Solid |
| Color: | Yellow to brown |
| Odor: | Phenolic |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 2.60 to 3.70 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | 95 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Insoluble Sinks |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | Not Determined |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid

None anticipated

Incompatibility (Materials to Avoid)

Contact with oxidizing agents.

Hazardous Decomposition Products

Ammonia. Formaldehyde. Carbon monoxide. Carbon dioxide.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION**Principle Route of Exposure**

Eye contact. Inhalation. Skin contact.

Inhalation

Not determined

Skin Contact

None known.

Eye Contact

Dust may cause irritation and inflammation.

Ingestion

None known

Aggravated Medical Conditions

None known.

Chronic Effects/Carcinogenicity

Effects of prolonged or repeated exposure are not well established.

Other Information

None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity

Not determined

Genotoxicity: Not determined

Reproductive/Developmental

Toxicity: Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)

Not determined

Persistence/Degradability

Not applicable

Bio-accumulation

Not Determined

Ecotoxicological Information

Acute Fish Toxicity:

Not determined

Acute Crustaceans Toxicity:

Not determined

Acute Algae Toxicity:

Not determined

Chemical Fate Information

Not determined

Other Information

Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method

Bury in a licensed landfill according to federal, state, and local regulations. If not contaminated, reuse product.

Contaminated Packaging

Product may be stored in reusable containers. Do NOT contaminate. Transport with all closures in place.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

EPA SARA (313) Chemicals

This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations

Canadian DSL Inventory

Product contains one or more components not listed on inventory.

WHMIS Hazard Class

D2A Very Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

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END OF MSDS



MATERIAL SAFETY DATA SHEET

ECONOPROP PROPPANT

Revision Date: 04/06/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: ECONOPROP PROPPANT
Synonyms: None
Chemical Family: Not determined
Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Proprietary Component | 60 - 100% | Not applicable | 15 mg/M3 |
| Crystalline silica, cristobalite 14464-46-1 | 10 - 30% | 0.05 mg/m3 | 0.1 mg/M3 |

3. HAZARDS IDENTIFICATION

Hazard Overview

Potential carcinogen. May cause delayed injury to lungs. May cause allergic respiratory reaction.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Get immediate medical attention.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|---|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Upper (%): | Not Determined |

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Not applicable.

Special Protective Equipment for Fire-Fighters

Not Determined

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Not Determined

6. ACCIDENTAL RELEASE MEASURES**Personal Precautionary Measures**

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE**Handling Precautions**

Avoid creating or inhaling dust.

Storage Information

Store in a cool, dry location. Product has a shelf life of 60 months

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in a well ventilated area.

Respiratory Protection

Dust/mist respirator.

Hand Protection

Cloth gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Dust proof goggles. Do NOT wear contact lenses.

Other Precautions

Eyewash fountains and safety showers must be easily accessible.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|---|---------------------|
| Physical State: | Solid |
| Color: | Cream to light gray |
| Odor: | Odorless |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 2.69 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | 96 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Insoluble Sinks |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | Not Determined |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid

None anticipated

Incompatibility (Materials to Avoid)

Chlorine trifluoride.

Hazardous Decomposition Products

None known.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION**Principle Route of Exposure**

Eye contact. Inhalation. Skin contact.

Inhalation

Not determined

Skin Contact

None known.

Eye Contact

Dust may cause irritation and inflammation.

Ingestion

None known

Aggravated Medical Conditions

None known.

Chronic Effects/Carcinogenicity

Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica.

Other Information

None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity

Not determined

Genotoxicity: Not determined

Reproductive/Developmental

Toxicity:

Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)

Not determined

Persistence/Degradability

Not applicable

Bio-accumulation

Not Determined

Ecotoxicological Information

Acute Fish Toxicity:

Not determined

Acute Crustaceans Toxicity:

Not determined

Acute Algae Toxicity:

Not determined

Chemical Fate Information

Not determined

Other Information

Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method

Bury in a licensed landfill according to federal, state, and local regulations. If not contaminated, reuse product.

Contaminated Packaging

Empty container completely. Transport with all closures in place. Return for reuse or disposal in a sanitary landfill according to national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

Chronic Health Hazard

EPA SARA (313) Chemicals

This product does not contain a toxic chemical for routine annual "Toxic Chemical Release Reporting" under Section 313 (40 CFR 372).

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations

Canadian DSL Inventory

All components listed on inventory.

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS
Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

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END OF MSDS



MATERIAL SAFETY DATA SHEET

SBU CERAMAX-E

Revision Date: 06/28/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: SBU CERAMAX-E
Synonyms: None
Chemical Family: Mineral
Application: Proppant

Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Crystalline silica, quartz 14808-60-7 | 10 - 30% | 0.05 mg/m3 | 0.1 mg/M3 |

3. HAZARDS IDENTIFICATION

Hazard Overview

May cause eye irritation. May cause delayed injury to lungs. Potential carcinogen.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Under normal conditions, first aid procedures are not required.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|---|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Upper (%): | Not Determined |

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Not applicable.

Special Protective Equipment for Fire-Fighters

Not applicable.

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Flammability 0, Reactivity 0, Health 1

6. ACCIDENTAL RELEASE MEASURES**Personal Precautionary Measures**

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE**Handling Precautions**

Avoid creating or inhaling dust.

Storage Information

Store in a cool, dry location. Product has a shelf life of 60 months

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls

Use in a well ventilated area.

Respiratory Protection

Dust/mist respirator.

Hand Protection

Normal work gloves.

Skin Protection

Normal work coveralls.

Eye Protection

Wear safety glasses or goggles to protect against exposure.

Other Precautions

None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|----------------|
| Physical State: | Solid |
| Color: | Gray |
| Odor: | Odorless |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 2.55 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | Not Determined |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Not Determined |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistrokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | Not Determined |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid

None anticipated

Incompatibility (Materials to Avoid)

Hydrofluoric acid.

Hazardous Decomposition Products

None known.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION**Principle Route of Exposure**

Eye or skin contact, inhalation.

Inhalation

May cause silicosis, which reduces lung function. The lung damage can lead to heart problems.

Skin Contact

None known.

Eye Contact

May cause mechanical irritation to eye.

Ingestion

None known

Aggravated Medical Conditions

Lung disorders.

Chronic Effects/Carcinogenicity

Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica.

Other Information

None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity

Not determined

Genotoxicity: Not determined

Reproductive/Developmental

Toxicity:

Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)

Not determined

Persistence/Degradability

Not applicable

Bio-accumulation

Not Determined

Ecotoxicological Information

Acute Fish Toxicity:

Not determined

Acute Crustaceans Toxicity:

Not determined

Acute Algae Toxicity:

Not determined

Chemical Fate Information

Not determined

Other Information

Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method

Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated Packaging

Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

Chronic Health Hazard

EPA SARA (313) Chemicals

This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372:

Aluminum Oxide//1344-28-1

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

NJ Right-to-Know Law

One or more components listed.

PA Right-to-Know Law

One or more components listed.

Canadian Regulations

Canadian DSL Inventory
All components listed on inventory.

WHMIS Hazard Class
D2A Very Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

This information is furnished without warranty, expressed or implied, as to accuracy or completeness. The information is obtained from various sources including the manufacturer and other third party sources. The information may not be valid under all conditions nor if this material is used in combination with other materials or in any process. Final determination of suitability of any material is the sole responsibility of the user.

*****END OF MSDS*****



MATERIAL SAFETY DATA SHEET

SINTER BALL PROPPANT

Revision Date: 06/28/2000

1. CHEMICAL PRODUCT AND COMPANY IDENTIFICATION

Product Trade Name: SINTER BALL PROPPANT
Synonyms: None
Chemical Family: Mineral
Application: Proppant

Manufacturer/Supplier
Halliburton Energy Services
P.O. Box 1431
Duncan, Oklahoma 73536-0431

Emergency Telephone: (800) 666-9260 or (713) 676-3000

Prepared By
Product Stewardship
Telephone: 1-580-251-4335

2. COMPOSITION/INFORMATION ON INGREDIENTS

| <u>Substance</u> | <u>Weight Percent (%)</u> | <u>ACGIH TLV-TWA</u> | <u>OSHA PEL-TWA</u> |
|--|-------------------------------|----------------------|---------------------|
| Aluminum oxide 1344-28-1 | 60 - 100% | 10 mg/m3 | 15 mg/M3 |
| Proprietary Component | 1 - 5% | Not applicable | 15 mg/M3 |
| Crystalline silica, cristobalite 14464-46-1 | < 1% | 0.05 mg/m3 | 0.1 mg/M3 |

3. HAZARDS IDENTIFICATION

Hazard Overview
May cause eye irritation. May cause delayed injury to lungs. Potential carcinogen.

4. FIRST AID MEASURES

Inhalation

If inhaled, remove from area to fresh air. Get medical attention if respiratory irritation develops or if breathing becomes difficult.

Skin

Wash with soap and water. Get medical attention if irritation persists.

Eyes

In case of contact, immediately flush eyes with plenty of water for at least 15 minutes and get medical attention if irritation persists.

Ingestion

Under normal conditions, first aid procedures are not required.

Notes to Physician

Not Applicable

5. FIRE FIGHTING MEASURES

| | |
|---|----------------|
| Flash Point/Range (F): | Not Determined |
| Flash Point/Range (C): | Not Determined |
| Flash Point Method: | Not Determined |
| Autoignition Temperature (F): | Not Determined |
| Autoignition Temperature (C): | Not Determined |
| Flammability Limits in Air - Lower (%): | Not Determined |
| Flammability Limits in Air - Upper (%): | Not Determined |

Fire Extinguishing Media

All standard firefighting media.

Special Exposure Hazards

Not applicable.

Special Protective Equipment for Fire-Fighters

Not applicable.

NFPA Ratings:

Health 1, Flammability 0, Reactivity 0

HMIS Ratings:

Flammability 0, Reactivity 0, Health 1

6. ACCIDENTAL RELEASE MEASURES**Personal Precautionary Measures**

Use appropriate protective equipment. Avoid creating and breathing dust.

Environmental Precautionary Measures

None known.

Procedure for Cleaning/Absorption

Scoop up and remove.

7. HANDLING AND STORAGE

Handling Precautions
Avoid creating or inhaling dust.

Storage Information
Store in a cool, dry location. Product has a shelf life of 60 months

8. EXPOSURE CONTROLS/PERSONAL PROTECTION

Engineering Controls
Use in a well ventilated area.

Respiratory Protection
Dust/mist respirator.

Hand Protection
Normal work gloves.

Skin Protection
Normal work coveralls.

Eye Protection
Wear safety glasses or goggles to protect against exposure.

Other Precautions
None known.

9. PHYSICAL AND CHEMICAL PROPERTIES

| | |
|--|----------------|
| Physical State: | Solid |
| Color: | Dark green |
| Odor: | Odorless |
| pH: | Not Determined |
| Specific Gravity @ 20 C (Water=1): | 3.62 |
| Density @ 20 C (lbs./gallon): | Not Determined |
| Bulk Density @ 20 C (lbs/ft3): | 124 |
| Boiling Point/Range (F): | Not Determined |
| Boiling Point/Range (C): | Not Determined |
| Freezing Point/Range (F): | Not Determined |
| Freezing Point/Range (C): | Not Determined |
| Vapor Pressure @ 20 C (mmHg): | Not Determined |
| Vapor Density (Air=1): | Not Determined |
| Percent Volatiles: | Not Determined |
| Evaporation Rate (Butyl Acetate=1): | Not Determined |
| Solubility in Water (g/100ml): | Insoluble |
| Solubility in Solvents (g/100ml): | Not Determined |
| Solubility in Sea Water (g/100ml): | Not Determined |
| VOCs (lbs./gallon): | Not Determined |
| Viscosity, Dynamic @ 20 C (centipoise): | Not Determined |
| Viscosity, Kinematic @ 20 C (centistrokes): | Not Determined |
| Partition Coefficient/n-Octanol/Water: | Not Determined |
| Molecular Weight (g/mole): | Not Determined |

10. STABILITY AND REACTIVITY

Stability Data: Stable

Hazardous Polymerization: Will Not Occur

Conditions to Avoid

None anticipated

Incompatibility (Materials to Avoid)

Hydrofluoric acid.

Hazardous Decomposition Products

None known.

Additional Guidelines

Not Applicable

11. TOXICOLOGICAL INFORMATION

Principle Route of Exposure

Eye or skin contact, inhalation.

Inhalation

May cause silicosis, which reduces lung function. The lung damage can lead to heart problems.

Skin Contact

None known.

Eye Contact

May cause mechanical irritation to eye.

Ingestion

None known

Aggravated Medical Conditions

Lung disorders.

Chronic Effects/Carcinogenicity

Contains crystalline silica which may cause a delayed, progressive lung disease (silicosis). The IARC and NTP have determined there is sufficient evidence in humans of the carcinogenicity of crystalline silica.

Other Information

None known.

Toxicity Tests

Oral Toxicity: Not determined.

Dermal Toxicity: Not determined

Inhalation Toxicity: Not determined

Primary Irritation Effect: Not determined

Carcinogenicity

Not determined

Genotoxicity: Not determined

**Reproductive/Developmental
Toxicity:** Not determined

12. ECOLOGICAL INFORMATION

Mobility (Water/Soil/Air)
Not determined

Persistence/Degradability
Not applicable

Bio-accumulation
Not Determined

Ecotoxicological Information

| | |
|-----------------------------|----------------|
| Acute Fish Toxicity: | Not determined |
| Acute Crustaceans Toxicity: | Not determined |
| Acute Algae Toxicity: | Not determined |

Chemical Fate Information
Not determined

Other Information
Not applicable

13. DISPOSAL CONSIDERATIONS

Disposal Method
Bury in a licensed landfill according to federal, state, and local regulations.

Contaminated Packaging
Follow all applicable national or local regulations.

14. TRANSPORT INFORMATION

Land Transportation

DOT

Not restricted

Canadian TDG

Not restricted

ADR

Not restricted

Air Transportation

ICAO/IATA

Not restricted

Sea Transportation

IMDG

Not restricted

Other Shipping Information

Labels: None

15. REGULATORY INFORMATION

US Regulations

US TSCA Inventory

All components listed on inventory.

EPA SARA Title III Extremely Hazardous Substances

Not applicable

EPA SARA (311,312) Hazard Class

Acute Health Hazard

Chronic Health Hazard

EPA SARA (313) Chemicals

This product contains toxic chemical(s) listed below which is(are) subject to the reporting requirements of Section 313 of Title III of SARA and 40 CFR Part 372:

Aluminum Oxide//1344-28-1

EPA CERCLA/Superfund Reportable Spill Quantity For This Product

Not applicable.

EPA RCRA Hazardous Waste Classification

If product becomes a waste, it does NOT meet the criteria of a hazardous waste as defined by the US EPA.

California Proposition 65

The California Proposition 65 regulations apply to this product.

MA Right-to-Know Law

One or more components listed.

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One or more components listed.

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All components listed on inventory.

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D2A Very Toxic Materials

16. OTHER INFORMATION

The following sections have been revised since the last issue of this MSDS

Not applicable

Additional Information

For additional information on the use of this product, contact your local Halliburton representative.

For questions about the Material Safety Data Sheet for this or other Halliburton products, contact Product Stewardship at 1-580-251-4335.

Disclaimer Statement

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END OF MSDS

Hobbs, NM 88241-1980
District II - (505) 748-1283
511 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-13
Originated 8/87

RECEIVED

Submit Origin
Plus 1 Co
to appropriate
District Office

JUN 29 2001

Environmental Bureau
Oil Conservation Division

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|---|--|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator Exxon/Nobile |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site J.L. Greenwood #12 |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter unknown |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) | Sec 9 T22S R37E |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following MSDS is for gel water mixed on location for a frac job that was not performed. This material is needed to be hauled off location for disposal. I have included a certifixate of status. Sundance would like approval to accept this material into our Parabo disposal facility

Note: a verbal approval would be appreciated.

Estimated Volume ~~1500 bbls~~ cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 5-23-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____
APPROVED BY: Monty J. Kelly TITLE: Environmental Geologist DATE: 7-2-01

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: J.L. Greenwood #12
SOURCE: unused gel water
DISPOSAL LOCATION: SUNDANCE SERVICES INC.

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for Exxon/Mobile
concur with the status of the waste from the subject site.

Name - Timothy R. Reep
Title/Agency Operations Compliance Tech.
Address P.O. Box 1760
Denver City, Texas 79323
Signature Timothy R. Reep
Date 5-23-01

LGC-IV W/ DIESEL - BULK

PAGE 1

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536DATE: 05-21-01
REVISED DATE 04-07-99EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359
EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359

* * * * * SECTION I - PRODUCT DESCRIPTION * * * * *

CHEMICAL CODE: LGC-IV W/ DIESEL - BULK PART NUMBER: 516004830
PKG QTY: CARGO TANK APPLICATION: CONCENTRATE
SERVICE USED: FRACTURING

* * * * * SECTION II - COMPONENT INFORMATION * * * * *

| COMPONENT+ + + + + | PERCENT | TLV | PEL |
|---------------------|---------|----------|----------|
| DIESEL | 31-60 % | NOT EST | NOT EST |
| GUAR GUM DERIVATIVE | 31-60 % | 10 MG/M3 | 15 MG/M3 |

* * * * * SECTION III - PHYSICAL DATA * * * * *

| PROPERTY | MEASUREMENT |
|---|-----------------------|
| APPEARANCE | YELLOWISH LIQUID, GEL |
| ODOR | DIESEL |
| SPECIFIC GRAVITY (H2O=1) | 1.035 |
| BULK DENSITY | 8.62 LB/GAL |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | NIL |
| BIODEGRADABILITY | SLOWLY |
| PERCENT VOLATILES | 100 |
| EVAPORATION RATE(BUTYL ACETATE=1) | <1 |
| VAPOR DENSITY | 5-6 |
| VAPOR PRESSURE (MMHG) | N/D |
| BOILING POINT(760 MMHG) | 300 F / 148 C |
| POUR POINT | N/D |
| FREEZE POINT | N/D |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

* * * * * SECTION IV - FIRE AND EXPLOSION DATA * * * * *

NFPA(704) RATING:

| | | | |
|------------------------------------|----------------|--------------|-----------------|
| HEALTH 2 | FLAMMABILITY 2 | REACTIVITY 1 | SPECIAL NONE |
| FLASH POINT | 150 F / | 65 C | FLASH MTHD PMCC |
| AUTOIGNITION TEMPERATURE | ND F / | ND C | |
| FLAMMABLE LIMITS (OZ. PER CU. FT.) | LOWER N/D | UPPER N/D | |

EXTINGUISHING MEDIA:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:

USE WATER SPRAY TO COOL FIRE-EXPOSED SURFACES.

FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING

APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

MAY BE IGNITED BY HEAT, SPARKS, OR FLAMES. FIGHT FIRE FROM A SAFE DISTANCE AND FROM A PROTECTED LOCATION. HEAT MAY BUILD PRESSURE AND RUPTURE CLOSED CONTAINERS, SPREADING THE FIRE AND INCREASING THE RISK OF BURNS AND

PN: 516004830

PAGE 2

INJURIES.

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON MONOXIDE AND NITROGEN OXIDES.

* * * * * SECTION V - HEALTH HAZARD DATA * * * * *

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: NOT DETERMINED

PRODUCT TLV: NOT ESTABLISHED

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

MAY CAUSE EYE IRRITATION.

SKIN:

FREQUENT OR PROLONGED CONTACT WILL DRY AND DEFAT THE SKIN, POSSIBLY LEADING TO IRRITATION AND DERMATITIS. REPEATED CONTACT MAY SENSITIZE THE SKIN.

INHALATION:

HIGH CONCENTRATIONS MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. THIS MAY BE EVIDENCED BY GIDDINESS, HEADACHES, DIZZINESS, NAUSEA, VOMITING OR POSSIBLY UNCONSCIOUSNESS.

VAPORS, MIST OR SPRAY MAY CAUSE IRRITATION.

INGESTION:

IRRITATION OF THE MOUTH AND THROAT, ABDOMINAL PAIN, NAUSEA AND VOMITING, DIARRHEA, AND COLLAPSE MAY RESULT FROM INGESTION.

ASPIRATION INTO LUNGS BY INGESTION OR VOMITING, MAY CAUSE CHEMICAL PNEUMONITIS RESULTING IN EDEMA AND HEMORRAGE AND MAY BE FATAL. SYMPTOMS INCLUDE INCREASED RESPIRATORY RATE AND BLUISH DISCOLORATION OF SKIN. COUGHING AND GAGGING ARE OFTEN NOTED AT THE TIME OF ASPIRATION.

CHRONIC EFFECTS:

PROLONGED OR REPEATED APPLICATION OF A SIMILAR PRODUCT TO THE SKIN OF LAB LABORATORY MICE WITHOUT WASHING BETWEEN APPLICATIONS RESULTED IN INCREASED INCIDENCE OF SKIN TUMORS. IT IS SUSPECTED THAT TUMORS MAY BE DUE IN PART TO SEVERELY IRRITATED CONDITIONS FROM CONTINUOUS CONTACT WITH THE PRODUCT.

OTHER SYMPTOMS AFFECTED:

BECAUSE OF ITS IRRITATING PROPERTIES, THIS MATERIAL MAY AGGRAVATE AN EXISTING DERMATITIS.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER. IF IRRITATION DEVELOPS, SEEK MEDICAL ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK PROMPT MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! ASPIRATION INTO LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO LUNGS.

* * * * * SECTION VI - REACTIVITY DATA * * * * *

PN: 516004830

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STABILITY: STABLE

CONDITIONS TO AVOID:

HEAT, SPARKS AND OPEN FLAME.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

NITROGEN OXIDES, CARBON DIOXIDE AND/OR CARBON MONOXIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

* * * * * SECTION VII - SPILL OR LEAK PROCEDURES * * * * *

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. ISOLATE SPILL AREA AND STOP LEAK WHERE SAFE. REMOVE IGNITION SOURCES. CONTAIN AND ABSORB SPILL WITH SAND OR OTHER INERT MATERIAL. SCOOP OR SWEEP UP USING NON-SPARKING TOOLS. IN ENCLOSED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS.

WASTE DISPOSAL METHOD:

GET APPROVAL FROM HAZARDOUS WASTE DISPOSAL SITE AUTHORIZED UNDER EPA-RCRA SUBTITLE C OR STATE EQUIVALENT. SHIP TO SITE.

* * * * * SECTION VIII - SPECIAL PROTECTION INFORMATION * * * * *

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

ORGANIC VAPOR CARTRIDGE RESPIRATOR WITH A DUST-MIST FILTER.

IN OXYGEN DEFICIENT AREAS OR CONFINED SPACES, POSITIVE PRESSURE SUPPLIED-AIR RESPIRATOR WITH 5-MINUTE AUXILIARY BOTTLE, OR PRESSURE-DEMAND OR POSITIVE PRESSURE SELF-CONTAINED BREATHING APPARATUS.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION SHOULD BE USED IN AREAS WITHOUT GOOD CROSS VENTILATION.

LOCAL EXHAUST VENTILATION MUST BE DESIGNED FOR COMBUSTIBLE ATMOSPHERES (NEC CLASS II EQUIPMENT).

PROTECTIVE GLOVES:

IMPERVIOUS RUBBER GLOVES.

EYE PROTECTION:

WEAR GOGGLES AND/OR FACE SHIELD. PROVIDE EYEWASH AND QUICK DRENCH SYSTEM.

OTHER PROTECTIVE EQUIPMENT:

RUBBER APRON TO PREVENT DIRECT SKIN CONTACT.

* * * * * SECTION IX - SPECIAL PRECAUTIONS * * * * *

PRECAUTIONARY LABELING LGC-IV W/ DIESEL - BULK

516.004830

WARNING!

MAY CAUSE HEADACHE, DIZZINESS AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS.
MAY CAUSE IRRITATION TO THE EYES, SKIN OR RESPIRATORY SYSTEM.

COMBUSTIBLE!

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE AWAY FROM OXIDIZERS.

KEEP FROM HEAT, SPARKS, AND OPEN FLAME.

KEEP CONTAINER CLOSED WHEN NOT IN USE.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

AVOID BREATHING VAPORS.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE. RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING LANDFILL OPERATOR'S AUTHORIZATION.

* * * * * SECTION X - TRANSPORTATION INFORMATION * * * * *

PN: 516004830

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DOT SHIPPING DESCRIPTION:

DIESEL FUEL SOLUTION - COMBUSTIBLE LIQUID - NA1993 - III

* * * * * SECTION XI - ENVIRONMENTAL EVALUATION * * * * *

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: Y PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y

CHRONIC (DELAYED): Y MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)
CHEMICAL CONTAINS NO TOXIC INGREDIENTS

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES
TSCA YES CEPA NE EEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES MEET THE CRITERIA OF A HAZARDOUS WASTE AS DEFINED BY US EPA BECAUSE OF:

IGNITABILITY

* * * * *

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS

SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536DATE: 05-18-01
REVISED DATE 04-07-99EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359
EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359

* * * * * SECTION I - PRODUCT DESCRIPTION * * * * *

CHEMICAL CODE: CLAYFIX-II MATERIAL - POLY HAL-TANK PART NUMBER: 516004720
PKG QTY: BULK APPLICATION: TEMPORARY CLAY STABILIZER
SERVICE USED: FRACTURING & SAND CONTR.

* * * * * SECTION II - COMPONENT INFORMATION * * * * *

| COMPONENT | PERCENT | TLV | PEL |
|-------------------------------|---------|---------|---------|
| ALKYLATED QUATERNARY CHLORIDE | 31-60 % | NOT EST | NOT EST |

* * * * * SECTION III - PHYSICAL DATA * * * * *

| PROPERTY | MEASUREMENT |
|---|---------------------------|
| APPEARANCE | CLEAR, LIGHT AMBER LIQUID |
| ODOR | SLIGHT AMINE |
| SPECIFIC GRAVITY (H2O=1) | 1.020 |
| BULK DENSITY | 8.50 LB/GAL |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | SOLUBLE |
| BIODEGRADABILITY | SLOWLY |
| PERCENT VOLATILES | 45-50 |
| EVAPORATION RATE (BUTYL ACETATE=1) | N/D |
| VAPOR DENSITY | < 1 |
| VAPOR PRESSURE (MMHG) | 25.00 |
| BOILING POINT (760 MMHG) | /216 F / 102 C |
| POUR POINT | N/D |
| FREEZE POINT | N/D |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

* * * * * SECTION IV - FIRE AND EXPLOSION DATA * * * * *

NFPA (704) RATING:

| | | | |
|--------------------------------|----------------|--------------|--------------|
| HEALTH 3 | FLAMMABILITY 1 | REACTIVITY 1 | SPECIAL NONE |
| FLASH POINT | NONE | | |
| AUTOIGNITION TEMPERATURE | ND F / | ND C | |
| FLAMMABLE LIMITS (% BY VOLUME) | LOWER N/D | UPPER | N/D |

EXTINGUISHING MEDIA:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:

USE WATER SPRAY TO COOL FIRE-EXPOSED SURFACES.

FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING
APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

UNUSUAL FIRE AND EXPLOSION HAZARDS:

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON MONOXIDE AND NITROGEN OXIDES.

HEAT OF A FIRE MAY PRODUCE HYDROCHLORIC ACID.

PN: 516004720

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* * * * * SECTION V - HEALTH HAZARD DATA * * * * *

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE NOT REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: ECOTOXICITY:

MYSIDOPSIS BAHIA: 96-HOUR 10.5 PPM

TOX ORAL-RAT MALE LD50: 220 MG/KG

TOX ORAL-RAT FEMALE LD50: 145 MG/KG

PRODUCT TLV: NOT ESTABLISHED

----- EFFECTS OF EXPOSURE -----
ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

CONCENTRATED SOLUTIONS MAY CAUSE SEVERE BURNS.

SKIN:

CONTACT MAY CAUSE SKIN IRRITATION.

INHALATION:

MAY BE IRRITATING.

INGESTION:

MAY BE FATAL IF SWALLOWED.

CHRONIC EFFECTS:

NO SPECIFIC INFORMATION IS AVAILABLE ON THE CHRONIC EFFECTS OF EXPOSURE.

OTHER SYMPTOMS AFFECTED:

BECAUSE OF ITS IRRITATING PROPERTIES, THIS MATERIAL MAY AGGRAVATE AN
EXISTING DERMATITIS. BREATHING OF VAPOR AND/OR MISTS MAY AGGRAVATE ASTHMA
AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.

----- EMERGENCY AND FIRST AID PROCEDURES -----
EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. IF
IRRITATION PERSISTS, SEEK PROMPT MEDICAL ATTENTION.

SKIN:

PROMPTLY WASH SKIN WITH SOAP AND WATER. IF IRRITATION DEVELOPS, SEEK MEDICAL
ATTENTION.

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION,
PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN.
SEEK PROMPT MEDICAL ATTENTION.

INGESTION:

GIVE UP TO TWO (2) QUARTS OF WATER AND INDUCE VOMITING. DO NOT GIVE ANYTHING
BY MOUTH IF PERSON IS DROWSY, UNCONSCIOUS. OR HAS NO GAG REFLEX. SEEK
PROMPT MEDICAL ATTENTION OR CALL THE POISON CONTROL CENTER (800) 441-0040.

* * * * * SECTION VI - REACTIVITY DATA * * * * *

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

NITROGEN OXIDES, CARBON DIOXIDE AND/OR CARBON MONOXIDE.

HYDROGEN CHLORIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

PN: 516004720

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* * * * * SECTION VII - SPILL OR LEAK PROCEDURES * * * * *

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. ISOLATE SPILL AND STOP LEAK WHERE SAFE. CONTAIN AND ABSORB SPILL WITH AN INERT MATERIAL. SCOOP UP AND REMOVE.

WASTE DISPOSAL METHOD:

PRODUCT SHOULD BE DISPOSED OF IN ACCORDANCE TO FEDERAL, STATE, AND LOCAL GOVERNMENT REGULATIONS.

* * * * * SECTION VIII - SPECIAL PROTECTION INFORMATION * * * * *

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

ORGANIC VAPOR/ACID GAS CARTRIDGE RESPIRATOR WITH A FULL FACEPIECE AND A DUST-MIST FILTER.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

BUTYL GLOVES.

EYE PROTECTION:

GOGGLES AND/OR FACE SHIELD.

THE AVAILABILITY OF AN EYE WASH FOUNTAIN AND SAFETY SHOWER IS RECOMMENDED.

OTHER PROTECTIVE EQUIPMENT:

RUBBER APRON TO PREVENT DIRECT SKIN CONTACT.

* * * * * SECTION IX - SPECIAL PRECAUTIONS * * * * *

PRECAUTIONARY LABELING CLAYFIX-II MATERIAL - POLY HAL-TANK

516.004720

CAUTION!

MAY CAUSE IRRITATION TO THE EYES, SKIN OR RESPIRATORY SYSTEM.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

OTHER HANDLING AND STORAGE CONDITIONS:

STORE AWAY FROM OXIDIZERS.

STORE IN A COOL WELL VENTILATED LOCATION.

KEEP CONTAINER CLOSED WHEN NOT IN USE.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

AVOID BREATHING VAPORS.

CONTAINER DISPOSITION:

IF CONTAINER RETAINS PRODUCT RESIDUES, LABEL PRECAUTIONS MUST BE OBSERVED.

STORE CONTAINER WITH CLOSURES IN PLACE. OFFER EMPTY CONTAINER TO RECONDI-

TIONOR OR RECYCLER FOR RECONDITIONING OR DISPOSAL. ENSURE RECONDITIONER

OR RECYCLER IS AWARE OF THE PROPERTIES OF THE CONTENTS.

SPECIAL PRECAUTIONS:

KEEP AWAY FROM FOOD.

PRODUCT HAS A SHELF LIFE OF 24 MONTHS.

***** SECTION X - TRANSPORTATION INFORMATION *****

DOT SHIPPING DESCRIPTION:

TOXIC LIQUID, ORGANIC, N.O.S. - 6.1 - UN2810 - III
(CONTAINS TETRAMETHYLAMMONIUM CHLORIDE)

***** SECTION XI - ENVIRONMENTAL EVALUATION *****

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y
CHRONIC (DELAYED): Y MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

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D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES
TSCA YES CEPA YES EEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

★ IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 05-18-01
REVISED DATE 04-07-99

EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359
EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359

***** SECTION I - PRODUCT DESCRIPTION *****

CHEMICAL CODE: LOSURF-300 NONIONIC SURFACTANT - HAL-TANK PART NUMBER: 516001790
PKG QTY: 330 GALLON TANK APPLICATION: NONEMULSIFIER
SERVICE USED: STIMULATION

***** SECTION II - COMPONENT INFORMATION *****

| COMPONENT+ + + + + + + + + | PERCENT | TLV | PEL |
|----------------------------|---------|---------|---------|
| ISOPROPANOL | 31-60 % | 400 PPM | 400 PPM |
| AROMATIC SOLVENT | 11-30 % | 100 PPM | 100 PPM |
| PROPYLENE OXIDE | TRACE % | 20 PPM | 20 PPM |
| NAPHTHALENE | 1-10 % | 10 PPM | 10 PPM |

***** SECTION III - PHYSICAL DATA *****

| PROPERTY | MEASUREMENT |
|---|----------------|
| APPEARANCE | AMBER LIQUID |
| ODOR | SOLVENT |
| SPECIFIC GRAVITY (H2O=1) | .910 |
| BULK DENSITY | 7.59 LB/GAL |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | DISPERSES |
| BIODEGRADABILITY | N/D |
| PERCENT VOLATILES | 46-50 |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/D |
| VAPOR DENSITY | N/D |
| VAPOR PRESSURE (MMHG) | 33.00 |
| BOILING POINT(760 MMHG) | N/D |
| POUR POINT | N/D |
| FREEZE POINT | N/D |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | NOT EVALUATED |

***** SECTION IV - FIRE AND EXPLOSION DATA *****

NFPA(704) RATING:

| | | | |
|--------------------------------|----------------|--------------|----------------------|
| HEALTH 1 | FLAMMABILITY 4 | REACTIVITY 0 | SPECIAL NONE |
| FLASH POINT | | 63 F / | 17 C FLASH MTHD PMCC |
| AUTOIGNITION TEMPERATURE | | ND F / | ND C |
| FLAMMABLE LIMITS (% BY VOLUME) | LOWER | N/D | UPPER N/D |

EXTINGUISHING MEDIA:

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.
SPECIAL FIRE FIGHTING PROCEDURES:

USE WATER SPRAY TO COOL FIRE-EXPOSED SURFACES.
FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING
APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.
UNUSUAL FIRE AND EXPLOSION HAZARDS:
MAY BE IGNITED BY HEAT, SPARKS, OR FLAMES. FIGHT FIRE FROM A SAFE DISTANCE

PN: 516001790

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AND FROM A PROTECTED LOCATION. HEAT MAY BUILD PRESSURE AND RUPTURE CLOSED
CONTAINERS, SPREADING THE FIRE AND INCREASING THE RISK OF BURNS AND
INJURIES.
INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE CARBON DIOXIDE, CARBON
MONOXIDE AND NITROGEN OXIDES.

* * * * * SECTION V - HEALTH HAZARD DATA * * * * *

CALIFORNIA PROPOSITION 65:
PRODUCT OR PRODUCT COMPONENTS ARE REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:
PRODUCT OR COMPONENTS ARE NOT LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : "NTP, IARC, OSHA, OR, ACIGH".

PRODUCT TOXICITY DATA: AQU TLM96: 3.3-10 PPM(BROWN SHRIMP)

PRODUCT TLV: NOT ESTABLISHED

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

MAY CAUSE EYE IRRITATION.

SKIN:

FREQUENT OR PROLONGED CONTACT WILL DRY AND DEFAT THE SKIN, POSSIBLY LEADING
TO IRRITATION AND DERMATITIS. REPEATED CONTACT MAY SENSITIZE THE SKIN.

INHALATION:

HIGH CONCENTRATIONS MAY CAUSE CENTRAL NERVOUS SYSTEM DEPRESSION. THIS MAY
BE EVIDENCED BY GIDDINESS, HEADACHES, DIZZINESS, NAUSEA, VOMITING OR
POSSIBLY UNCONSCIOUSNESS.

VAPORS, MIST OR SPRAY MAY CAUSE IRRITATION.

INGESTION:

ASPIRATION INTO LUNGS BY INGESTION OR VOMITING, MAY CAUSE CHEMICAL
PNEUMONITIS RESULTING IN EDEMA AND HEMORRAGE AND MAY BE FATAL. SYMPTOMS
INCLUDE INCREASED RESPIRATORY RATE AND BLUISH DISCOLORATION OF SKIN.
COUGHING AND GAGGING ARE OFTEN NOTED AT THE TIME OF ASPIRATION.

CHRONIC EFFECTS:

CHRONIC OVEREXPOSURE MAY CAUSE LIVER AND KIDNEY DISORDERS.

OTHER SYMPTOMS AFFECTED:

BECAUSE OF ITS IRRITATING PROPERTIES, THIS MATERIAL MAY AGGRAVATE AN
EXISTING DERMATITIS. BREATHING OF VAPOR AND/OR MISTS MAY AGGRAVATE ASTHMA
AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK
PROMPT MEDICAL ATTENTION.

SKIN:

IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE
REMOVING CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION. WASH
CLOTHING BEFORE REUSE.

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK PROMPT MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! ASPIRATION INTO LUNGS DUE TO VOMITING CAN CAUSE CHEMICAL PNEUMONITIS WHICH CAN BE FATAL. IF VOMITING OCCURS SPONTANEOUSLY, KEEP HEAD BELOW HIPS TO PREVENT ASPIRATION OF LIQUID INTO LUNGS.

***** SECTION VI - REACTIVITY DATA *****

STABILITY: STABLE

PN: 516001790

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CONDITIONS TO AVOID:

HEAT, SPARKS AND OPEN FLAME.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

CARBON MONOXIDE AND/OR CARBON DIOXIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

***** SECTION VII - SPILL OR LEAK PROCEDURES *****

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

USE PROTECTIVE EQUIPMENT. ISOLATE SPILL AREA AND STOP LEAK WHERE SAFE. REMOVE IGNITION SOURCES. CONTAIN AND ABSORB SPILL WITH SAND OR OTHER INERT MATERIAL. SCOOP OR SWEEP UP USING NON-SPARKING TOOLS. IN ENCLOSED AREAS, WEAR SELF-CONTAINED BREATHING APPARATUS.

WASTE DISPOSAL METHOD:

GET APPROVAL FROM HAZARDOUS WASTE DISPOSAL SITE AUTHORIZED UNDER EPA-RCRA SUBTITLE C OR STATE EQUIVALENT. SHIP TO SITE.

***** SECTION VIII - SPECIAL PROTECTION INFORMATION *****

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

ORGANIC VAPOR CARTRIDGE RESPIRATOR WITH A FULL FACEPIECE.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION. LOCAL EXHAUST VENTILATION SHOULD BE USED IN AREAS WITHOUT GOOD CROSS VENTILATION.

LOCAL EXHAUST VENTILATION MUST BE DESIGNED FOR EXPLOSIVE ATMOSPHERES (NEC CLASS I EQUIPMENT).

PROTECTIVE GLOVES:

IMPERVIOUS RUBBER GLOVES.

EYE PROTECTION:

GOGGLES AND/OR FACE SHIELD.

OTHER PROTECTIVE EQUIPMENT:

RUBBER APRON TO PREVENT DIRECT SKIN CONTACT.

***** SECTION IX - SPECIAL PRECAUTIONS *****

PRECAUTIONARY LABELING LOSURF-300 NONIONIC SURFACTANT - HAL-TANK516.001790

WARNING!

MAY CAUSE HEADACHE, DIZZINESS AND OTHER CENTRAL NERVOUS SYSTEM EFFECTS.

MAY CAUSE EYE IRRITATION.

MAY CAUSE DEFATTING OF SKIN WHICH MAY LEAD TO IRRITATION OR DERMATITIS.

FLAMMABLE!

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.
OTHER HANDLING AND STORAGE CONDITIONS:

STORE AWAY FROM OXIDIZERS.
KEEP FROM HEAT, SPARKS, AND OPEN FLAME.
KEEP CONTAINER CLOSED WHEN NOT IN USE.
AVOID CONTACT WITH SKIN, EYES AND CLOTHING.
AVOID BREATHING VAPORS.

CONTAINER DISPOSITION:

EMPTY CONTAINER COMPLETELY. TRANSPORT CONTAINER WITH ALL CLOSURES IN PLACE. RETURN FOR REUSE OR DISPOSE IN A SANITARY LANDFILL BY FIRST OBTAINING LANDFILL OPERATOR'S AUTHORIZATION.

* * * * * SECTION X - TRANSPORTATION INFORMATION * * * * *

DOT SHIPPING DESCRIPTION:

FLAMMABLE LIQUID, N.O.S. - 3 - UN1993 - II
(CONTAINS ISOPROPANOL)

PN: 516001790

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* * * * * SECTION XI - ENVIRONMENTAL EVALUATION * * * * *

EPA SUPERFUND (SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: Y PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y
CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)
N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

| COMPONENT NAME | CAS-REG-NO | PCT |
|-----------------|------------|---------|
| ISOPROPANOL | 67-63-0 | 31-60 % |
| PROPYLENE OXIDE | 75-56-9 | TRACE % |
| NAPHTHALENE | 91-20-3 | 1-10 % |

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES

TSCA YES CEPA YES EEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

★ IF PRODUCT BECOMES A WASTE, IT DOES MEET THE CRITERIA OF A HAZARDOUS WASTE AS DEFINED BY US EPA BECAUSE OF:

IGNITABILITY

* * * * *

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR

CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.

BE-5 MICROBIOCIDES

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MATERIAL SAFETY DATA SHEET
HALLIBURTON ENERGY SERVICES
DUNCAN, OKLAHOMA 73536

DATE: 05-18-01
REVISED DATE 04-07-99

EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359
EMERGENCY TELEPHONE: 800/666-9260 OR 580/251-3359

* * * * * SECTION I - PRODUCT DESCRIPTION * * * * *

CHEMICAL CODE: BE-5 MICROBIOCIDES PART NUMBER: 516004930
PKG QTY: 36 LB BOX APPLICATION: MICROBIOCIDES
SERVICE USED: FRACTURING

* * * * * SECTION II - COMPONENT INFORMATION * * * * *

| COMPONENT+ + + + + + + + + + | PERCENT | TLV | PEL |
|---|---------|-----------|---------------|
| 5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE | 1-10 % | 0.1 MG/M3 | NOT EST |
| 2-METHYL-4-ISOTHIAZOLIN-3-ONE | 1-10 % | NOT EST | NOT EST |
| MAGNESIUM CHLORIDE | 1-10 % | NOT EST | NOT EST |
| DIATOMACEOUS EARTH | 31-60 % | 10 MG/M3 | (TTWA 6 MG/M3 |
| SILICA, CRYSTALLINE--QUARTZ | 1-10 % | 0.1 MG/M3 | 0.1 MG/M3 |
| * * * * * SECTION III - PHYSICAL DATA * * * * * | | | |

| PROPERTY | MEASUREMENT |
|---|-----------------------------|
| APPEARANCE | LIGHT GREEN TO YELLOW SOLID |
| ODOR | MILD |
| SPECIFIC GRAVITY (H2O=1) | .720 |
| BULK DENSITY | 5.59 LB/CU.FT. |
| PH | NOT DETERMINED |
| SOLUBILITY IN WATER AT 20 DEG C. GMS/100ML H2O | DISPERSES |
| BIODEGRADABILITY | N/D |
| PERCENT VOLATILES | N/A |
| EVAPORATION RATE(BUTYL ACETATE=1) | N/A |
| VAPOR DENSITY | >1 |
| VAPOR PRESSURE (MMHG) | N/D |
| BOILING POINT(760 MMHG) | N/A |
| FOUR POINT | N/A |
| FREEZE POINT | N/A |
| SOLUBILITY IN SEAWATER | NOT EVALUATED |
| PARTITION COEF (OCTANOL IN WATER) | N/D |

* * * * * SECTION IV - FIRE AND EXPLOSION DATA * * * * *

NFPA (704) RATING:

| | | | | |
|------------------------------------|----------------|--------------|---------|------|
| HEALTH 3 | FLAMMABILITY 1 | REACTIVITY 0 | SPECIAL | NONE |
| FLASH POINT | | NONE | | |
| AUTOIGNITION TEMPERATURE | | ND F / | ND | C |
| FLAMMABLE LIMITS (OZ. PER CU. FT.) | LOWER | N/A | UPPER | N/A |

+++++
EXTINGUISHING MEDIA:

9-110-31-5

USE WATER SPRAY, FOAM, DRY CHEMICAL, OR CARBON DIOXIDE.

SPECIAL FIRE FIGHTING PROCEDURES:

USE WATER SPRAY TO COOL FIRE-EXPOSED SURFACES.

FULL PROTECTIVE CLOTHING AND NIOSH/MSHA APPROVED SELF-CONTAINED BREATHING APPARATUS REQUIRED FOR FIRE FIGHTING PERSONNEL.

PN: 516004930

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UNUSUAL FIRE AND EXPLOSION HAZARDS:

INCOMPLETE THERMAL DECOMPOSITION MAY PRODUCE TOXIC GASES.

***** SECTION V - HEALTH HAZARD DATA *****

CALIFORNIA PROPOSITION 65:

PRODUCT OR PRODUCT COMPONENTS ARE REGULATED UNDER CALIF. PROPOSITION 65.

CARCINOGENIC DETERMINATION:

PRODUCT OR COMPONENTS ARE LISTED AS A POTENTIAL CARCINOGEN
ACCORDING TO : NTP, AND IARC

PRODUCT TOXICITY DATA: NOT DETERMINED

PRODUCT TLV: NOT ESTABLISHED

----- EFFECTS OF EXPOSURE -----

ROUTES OF EXPOSURE:

EYE OR SKIN CONTACT, INHALATION.

EYE:

CONTACT WILL PRODUCE SEVERE IRRITATION OR BURNS AND, IF NOT IMMEDIATELY REMOVED, MAY LEAD TO PERMANENT EYE DAMAGE.

SKIN:

CONTACT CAUSES SEVERE IRRITATION OR BURNS WITH POSSIBLE IN-DEPTH INJURY.

INHALATION:

MISTS, AEROSOLS OR VERY HIGH VAPOR CONCENTRATIONS WILL PRODUCE INTENSE EYE NOSE AND RESPIRATORY IRRITATION AND MAY RESULT IN LUNG DAMAGE. PROLONGED EXPOSURE MAY RESULT IN CHEMICAL PNEUMONITIS AND, IN EXTREME CASES, PULMONARY EDEMA (FILLING OF THE LUNGS WITH FLUIDS).

INGESTION:

CAUSES SEVERE IRRITATION OR BURNS TO THE MOUTH AND GASTROINTESTINAL TRACT. IN EXTREME CASES MAY CAUSE KIDNEY AND LIVER DAMAGE.

CHRONIC EFFECTS:

NO SPECIFIC INFORMATION IS AVAILABLE ON THE CHRONIC EFFECTS OF EXPOSURE.

OTHER SYMPTOMS AFFECTED:

BECAUSE OF ITS IRRITATING PROPERTIES, THIS MATERIAL MAY AGGRAVATE AN EXISTING DERMATITIS. BREATHING OF VAPOR AND/OR MISTS MAY AGGRAVATE ASTHMA AND INFLAMMATORY OR FIBROTIC PULMONARY DISEASE.

----- EMERGENCY AND FIRST AID PROCEDURES -----

EYE:

IMMEDIATELY FLUSH EYES WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES. SEEK PROMPT MEDICAL ATTENTION.

SKIN:

IMMEDIATELY FLUSH SKIN WITH PLENTY OF WATER FOR AT LEAST 15 MINUTES WHILE REMOVING CONTAMINATED CLOTHING AND SHOES. SEEK MEDICAL ATTENTION. WASH CLOTHING BEFORE REUSE.

INHALATION:

REMOVE TO FRESH AIR. IF NOT BREATHING, GIVE ARTIFICIAL RESPIRATION, PREFERABLY MOUTH-TO-MOUTH. IF BREATHING IS DIFFICULT, GIVE OXYGEN. SEEK PROMPT MEDICAL ATTENTION.

INGESTION:

DO NOT INDUCE VOMITING! GIVE UP TO TWO (2) QUARTS OF WATER TO DILUTE.

NEVER GIVE ANYTHING BY MOUTH TO AN UNCONSCIOUS PERSON. SEEK MEDICAL ATTENTION.

* * * * * SECTION VI - REACTIVITY DATA * * * * *

STABILITY: STABLE

CONDITIONS TO AVOID:

NOT APPLICABLE.

INCOMPATIBILITY (MATERIALS TO AVOID):

STRONG OXIDIZERS.

HAZARDOUS DECOMPOSITION PRODUCTS:

PN: 516004930

PAGE 3

OXIDES OF SULFUR AND NITROGEN AND HYDROGEN CHLORIDE.

HAZARD POLYMERIZATION: WON'T OCCUR

CONDITIONS TO AVOID:

NOT APPLICABLE.

* * * * * SECTION VII - SPILL OR LEAK PROCEDURES * * * * *

STEPS TO BE TAKEN IF MATERIAL IS RELEASED OR SPILLED:

DIKE AND ABSORB SPILL USING HYPOCHLORITE SOLUTION* IN AN INERT MATERIAL AND TRANSFER TO A SUITABLE CONTAINER. *FORMULATION: 8 LBS. CALCIUM HYPOCHLORITE 5 LBS. SODIUM HYDROXIDE AND 77 LBS. WATER. SODIUM HYDROXIDE MUST BE ADDED TO MAINTAIN ALKALINITY AND PREVENT THE EVOLUTION OF CHLORINE GAS.

WASTE DISPOSAL METHOD:

GET APPROVAL FROM HAZARDOUS WASTE DISPOSAL SITE AUTHORIZED UNDER EPA-RCRA SUBTITLE C OR STATE EQUIVALENT. SHIP TO SITE.

* * * * * SECTION VIII - SPECIAL PROTECTION INFORMATION * * * * *

RESPIRATORY PROTECTION (USE NIOSH/MSHA APPROVED EQUIPMENT):

ORGANIC VAPOR CHEMICAL CARTRIDGE RESPIRATOR WITH A DUST-MIST FILTER.

VENTILATION:

USE ONLY WITH ADEQUATE VENTILATION.

PROTECTIVE GLOVES:

IMPERVIOUS RUBBER GLOVES.

EYE PROTECTION:

WEAR GOGGLES AND/OR FACE SHIELD. PROVIDE EYEWASH AND QUICK DRENCH SYSTEM.

OTHER PROTECTIVE EQUIPMENT:

RUBBER APRON TO PREVENT DIRECT SKIN CONTACT.

* * * * * SECTION IX - SPECIAL PRECAUTIONS * * * * *

PRECAUTIONARY LABELING BE-5 MICROBIOCIDES

516.004930

DANGER!

MAY CAUSE SEVERE EYE AND SKIN BURNS.

FOR PRECAUTIONARY STATEMENTS, REFER TO SECTIONS IV-VIII.

LABEL IN ACCORDANCE WITH FEDERAL INSECTICIDE, FUNGICIDE, AND RODENTICIDE ACT REQUIREMENTS.

EPA REGISTRATION NUMBER: 10707-44-40153

EPA EST. NUMBER: 10707-TX-008

OTHER HANDLING AND STORAGE CONDITIONS:

STORE AWAY FROM OXIDIZERS.

STORE IN A COOL WELL VENTILATED LOCATION.

KEEP CONTAINER CLOSED WHEN NOT IN USE.

AVOID CONTACT WITH SKIN, EYES AND CLOTHING.

AVOID BREATHING VAPORS.

CONTAINER DISPOSITION:

TRIPLE RINSE, REUSING RINSATE AS PRODUCT. OFFER CONTAINER FOR RECYCLING OR RECONDITIONING, OR PUNCTURE AND DISPOSE OF IN A SANITARY LANDFILL.

* * * * * SECTION X - TRANSPORTATION INFORMATION * * * * *

DOT SHIPPING DESCRIPTION:

CORROSIVE SOLID, TOXIC, N.O.S. - 8 - UN2923 - II
(5-CHLORO-2-METHYL-4-ISOTHIAZOLIN-3-ONE)

* * * * * SECTION XI - ENVIRONMENTAL EVALUATION * * * * *

EPA SUPERFUND(SARA) TITLE III - HAZARD CLASSIFICATION & ASSOCIATED INFORMATION

FIRE: N PRESSURE: N REACTIVE: N ACUTE (IMMEDIATE): Y
CHRONIC (DELAYED): N MIXTURE OR PURE MATERIAL: MIX

B. EPA - CERCLA/SUPERFUND, 40 CFR 302 (REPORTABLE SPILL QUANTITY)

PN: 516004930

PAGE 4

N/A

C. EPA - SARA TITLE III, CFR 355 (EXTREMELY HAZARDOUS SUBSTANCES)
PRODUCT CONTAINS NO EXTREMELY HAZARDOUS COMPONENTS

D. EPA - SARA TITLE III, 40 CFR 372 (LIST OF TOXIC CHEMICALS)

E. COMPONENTS LISTED ON FOLLOWING CHEMICAL INVENTORIES
TSCA YES CEPA YES BEC N/D ACOIN N/D NPR NE DRSM NE

H. EPA - RCRA (HAZARDOUS WASTE), 40 CFR 261

IF PRODUCT BECOMES A WASTE, IT DOES NOT MEET THE CRITERIA OF A
HAZARDOUS WASTE

THE INFORMATION WHICH IS CONTAINED IN THIS DOCUMENT IS BASED UPON AVAILABLE DATA AND BELIEVED TO BE CORRECT. HOWEVER, AS SUCH AS IT HAS BEEN OBTAINED FROM VARIOUS SOURCES, INCLUDING THE MANUFACTURER AND INDEPENDENT LABORATORIES, IT IS GIVEN WITHOUT WARRANTY OR REPRESENTATION THAT IT IS COMPLETE, ACCURATE AND CAN BE RELIED UPON. HALLIBURTON HAS NOT ATTEMPTED TO CONCEAL IN ANY WAY THE DELETERIOUS ASPECTS OF THE PRODUCT LISTED HEREIN, BUT MAKES NO WARRANTY AS TO SUCH. FURTHER, AS HALLIBURTON CANNOT ANTICIPATE NOR CONTROL THE MANY SITUATIONS IN WHICH THE LISTED PRODUCT OR THIS INFORMATION MAY BE USED BY OUR CUSTOMER, THERE IS NO GUARANTEE THAT THE HEALTH AND SAFETY PRECAUTIONS SUGGESTED WILL BE PROPER UNDER ALL CONDITIONS. IT IS THE SOLE RESPONSIBILITY OF EACH USER OF THE LISTED PRODUCT TO DETERMINE AND COMPLY WITH THE REQUIREMENTS OF ALL APPLICABLE LAWS AND REGULATIONS REGARDING ITS USE OR DISPOSAL. THIS INFORMATION IS GIVEN SOLELY FOR THE PURPOSES OF HEALTH AND SAFETY TO PERSONS AND PROPERTY. ANY OTHER USE OF THIS INFORMATION IS EXPRESSLY PROHIBITED. HEALTH, SAFETY AND ENVIRONMENT DEPARTMENT, HALLIBURTON ENERGY SERVICES.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
 EXXON MOBIL
 ATTN: T. REEP & L. SHELTON
 HCR BOX 236
 SEMINOLE, TX 79360
 FAX TO: (806) 592-2812

Receiving Date: 06/04/01
 Reporting Date: 06/05/01
 Project Number: NOT GIVEN
 Project Name: NOT GIVEN
 Project Location: J.L. GREENWOOD #12

Analysis Date: 06/05/01
 Sampling Date: 06/04/01
 Sample Type: LIQUID
 Sample Condition: INTACT
 Sample Received By: HM
 Analyzed By: BC

| LAB NUMBER | SAMPLE ID | IGNITABILITY (°F) |
|-----------------------------|--------------------|----------------------|
| H5901-1 | J.L. GREENWOOD #12 | >140 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Quality Control | | NR |
| True Value QC | | NR |
| % Accuracy | | NR |
| Relative Percent Difference | | NR |

METHOD: SW 846-1010

August P. Caste
 Chemist

6/5/01
 Date

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Hobbs, NM 88241-1980
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811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

NEW MEXICO
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-13
Originated 8/87

Submit Origin
Plus 1 Co
to appropriate
District Office


REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site HOBBS FACILITY |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter CHAPARRAL |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 5801 Lovinton Hwy Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

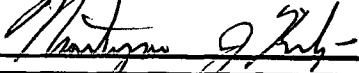
The following waste is generated by the washing of tools and oil equipment. This analytical is from Halliburtons Hobbs facility. Sundance would like approval to accept this waste into our Parabo facility.

Estimated Volume 300 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE:  TITLE: OFFICE MGR DATE: 4-6-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____

APPROVED BY:  TITLE: Environmental Ecologist DATE: 4-10-01

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION

COMPANY/GENERATOR: Halliburton

ADDRESS: 5801 Lovington Hwy

GENERATING SITE: Hobbs Yard

COUNTY Lea STATE NM

TYPE OF WASTE: Wash Rack Grit

ESTIMATED VOLUME: 300,000 lbs.

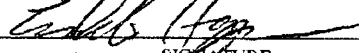
GENERATING PROCESS: Wash Rack Sumps

REMARKS: _____

NMOCD FACILITY: Sundance

TRUCKING FACILITY: Chaparral

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous of listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613.

AGENT: 
SIGNATURE

NAME: Eddie Hopper
PRINTED

ADDRESS: 5801 Lovington Hwy Hobbs, NM 88240

DATE: 3/20/01

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

CARDINAL LABORATORIES, INC.

**21111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476**

Page of

[illegible]

† Cardinal cannot accept verbal changes. Please fax written changes to 605-393-2476.



CARDINAL LABORATORIES

PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| TCLP VOLATILES (ppm) | EPA LIMIT | Sample Result H5422-1 | Method Blank | QC | %Recov. | True Value |
|----------------------|-----------|-----------------------|--------------|-------|---------|------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.083 | 83 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| Benzene | 0.5 | <0.005 | <0.005 | 0.088 | 88 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.092 | 92 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.091 | 91 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.099 | 99 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.094 | 94 | 0.100 |
| 1,4-Dichlorobenzene | 7.6 | <0.005 | <0.005 | 0.104 | 104 | 0.100 |

% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 95 |
| Toluene-d8 | 91 |
| Bromofluorobenzene | 98 |

METHODS: EPA SW 846-8260, 1311

Project Location: L. B. Smith
Sample Location: Washbay Sump
Lab Number: H5422-1

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

12/14/00
Date

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**ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:**

**Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD**

**Analysis Date: 12/16/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC**

12-20-2000 02:33 LAB NUMBER SAMPLE ID

5053927062
TPH
(mg/Kg)

T-057 P.011/013 F-830

| | | |
|------------------------------------|-----------------------|--------------|
| H5422-1 | WASHBAY SLUDGE | 77300 |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| | | |
| Quality Control | | 228 |
| True Value QC | | 240 |
| % Recovery | | 95.0 |
| Relative Percent Difference | | 4.0 |

METHOD: EPA 600/4-79-020 418.1Receiving Date: 12/12/00
Reporting Date: 12/18/00

Project Number: NOT GIVEN

Project Name: WASHBAY SUMP

Project Location: HOBBS YARD

Analysis Date: 12/16/00
Sampling Date: 12/12/00

Sample Type: SLUDGE

Sample Condition: COOL & INTACT

Sample Received By: BC

Analyzed By: BC

Chemist

Date

H5422T.XLS

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ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

12-20-2000 02:33pm TCEP SEMIVOLATILES (ppm) EPA Sample Result Method True Value
LIMITS H5422-1 Blank QC % Recov. T-QC

| | | | | | | |
|--------------------------|-------|--------|--------|-------|----|-------|
| Pyridine | 5.00 | <0.020 | <0.005 | 0.011 | 22 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.020 | <0.005 | 0.024 | 48 | 0.050 |
| o-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| m, p-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.005 | 0.021 | 42 | 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.005 | 0.034 | 68 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.005 | 0.026 | 52 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.005 | 0.040 | 80 | 0.050 |
| 2,4,5-Trichlorophenol | 400 | <0.020 | <0.005 | 0.046 | 92 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.005 | 0.046 | 92 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.005 | 0.045 | 90 | 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.005 | 0.047 | 94 | 0.050 |

% RECOVERY

| | |
|----------------------|-----|
| Fluorophenol | 56 |
| Phenol-d5 | 40 |
| Nitrobenzene-d5 | 104 |
| 2-Fluorobiphenyl | 68 |
| 2,4,6-Tribromophenol | 89 |
| Terphenyl-d14 | 81 |

METHODS: EPA SW 846-8270, 1311, 3510

Burgess, J. A. Cooke, Ph. D.

Date

12/14/00

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PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/BC

REACTIVITY

12-20-2000 LAB NUMBER SAMPLE ID HOBBS

Sulfide
(ppm)Cyanide
(ppm)CORROSIVITY
(pH)IGNITABILITY
(°F)

| ANALYSIS DATE: | 12/14/00 | 12/14/00 | 12/16/00 | 12/18/00 |
|-----------------------------|--------------|--------------|----------|--------------|
| H5422-1 WASHBAY | Not reactive | Not reactive | 7.65 | Nonflammable |
| SLUDGE | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 7.03 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 100 | NR |
| Relative Percent Difference | NR | NR | 0.1 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1030 (proposed), 1311, 40 CFR 261

Chemist

Date

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ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/16/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH/GP

TCLP METALS

LAB NO. SAMPLE ID As Ag Ba Cd Cr Pb T-Hg Se
ppm ppm ppm ppm ppm ppm ppm ppm

| ANALYSIS DATE: | 12/13/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/15/00 | 12/14/00 |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| EPA LIMITS: | 5 | 5 | 100 | 1 | 5 | 5 | 0.2 | 1 |
| H5422-1 WASHBAY SLUDGE | <1 | <1 | <5 | <0.1 | <1 | <1 | <0.02 | <0.1 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Quality Control | 0.193 | 4.719 | 44.56 | 1.047 | 5.009 | 0.00945 | 5.076 | 0.053 |
| True Value QC | 0.200 | 5.000 | 50.00 | 1.000 | 5.000 | 0.01000 | 5.000 | 0.050 |
| % Recovery | 96.5 | 94.4 | 89.1 | 105 | 100 | 94.5 | 102 | 106 |
| Relative Standard Deviation | 2.0 | 0.5 | 3.7 | 0.3 | 2.9 | 6.8 | 0.4 | 2.0 |

METHODS: EPA 1311, 600/4-91/01 206.2 272.1 208.1 213.1 218.1 239.1 245.1 270.2

LAB NO.

Chemist

Date

H5422M.XLS

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QUANTITY
TYPED
RECEIVED
DATE

WEB RELEASE: HALLIBURTON ENERGY SERVICES

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Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

NEW MEXICO
Energy Minerals and Natural Resources Department
RECEIVED Oil Conservation Division
JUN 29 2001
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131
Environmental Bureau
Oil Conservation Division

Form C-13
Originated 8/8/

Submit Origin
Plus 1 Co
to appropriate
District Office

JUN 18 2001

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|--|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> <i>6-14-01</i> Verbal Approval Received: Yes <input checked="" type="checkbox"/> <i>mjk</i> No <input type="checkbox"/> | 4. Generator <i>Weatherford</i> |
| 2. Management Facility Destination <i>SUNDANCE SERVICES INC.</i> | 5. Originating Site <i>1802 W. MARLAND HOBBS, NM 88240</i> |
| 3. Address of Facility Operator <i>P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO</i> | 6. Transporter <i>CANON CORP.</i> |
| 7. Location of Material (Street Address or ULSTR) <i>1802 W. MARLAND Hobbs, NM 88240</i> | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

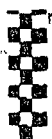
BRIEF DESCRIPTION OF MATERIAL:

Sump waste (30yds)

Estimated Volume *30yds.* cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: *Donna Roach* TITLE: *OFFICE MGR* DATE: *6-13-01*
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: *DONNA L. ROACH* TELEPHONE NO. *505-394-2511*

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____
APPROVED BY: *Monty J. Kelly* TITLE: *Environmental Geologist* DATE: *7-2-01*



Trace Analysis, Inc.

6701 Aberdeen Ave., Suite 9

Lubbock, TX 79424-1515

(806) 794-1296

Report Date: June 8, 2001 Order Number: A01060401
A99 Weatherford Exit AssessmentPage Number: 1 of 1
1805 W Marland Hobbs, NM

Summary Report

Robbie Walker
BNC-Midland
P.O. Box 1271
Midland, Tx. 79707

Report Date: June 8, 2001

Order ID Number: A01060401

Project Number: A99
Project Name: Weatherford Exit Assessment
Project Location: 1805 W Marland Hobbs, NM

| Sample | Description | Matrix | Date Taken | Time Taken | Date Received |
|--------|-------------|--------|------------|------------|---------------|
| 172351 | SCI | Soil | 5/30/01 | 15:00 | 6/2/01 |

This report consists of a total of 1 page(s) and is intended only as a summary of results for the sample(s) listed above.

| Sample - Field Code | BTEX | | | | | TPH DRD | TPH CRO |
|---------------------|--------------------|--------------------|-------------------------|-------------------------|-----------------------|----------------|----------------|
| | Benzene (mg/Kg) | Toluene (mg/Kg) | Ethylbenzene (mg/Kg) | M,P,O-Xylene (mg/Kg) | Total BTEX (mg/Kg) | DRO (mg/Kg) | GRO (mg/Kg) |
| 172351 - SCI | <0.025 | <0.025 | <0.025 | <0.025 | <0.025 | 5400 | 3.2 |

Sample: 172351 - SCI

| Param | Flag | Result | Units |
|--------------------------------------|------|---------------|-------|
| Corrosivity | | | |
| Corrosivity (EPA limit = >5.5 mm/yr) | | Non-corrosive | mm/yr |
| pH (EPA limit = <2 >12.8) | | 7.4 | S.U. |
| Ignitability | | non-ignitable | |
| Reactivity | | | |
| Reactivity | | Non-reactive | |
| Hydrogen Sulfide (EPA limit = 500) | | <10 | mg/Kg |
| Hydrogen Cyanide (EPA limit = 250) | | <2.5 | mg/Kg |
| TCLP Mercury (EPA limit = 0.20) | | <0.010 | mg/L |
| TCLP Metals | | | |
| TCLP Arsenic (EPA limit = 5.0) | | <1.0 | mg/L |
| TCLP Barium (EPA limit = 100.0) | | <1.0 | mg/L |
| TCLP Cadmium (EPA limit = 1.0) | | <.50 | mg/L |
| TCLP Chromium (EPA limit = 5.0) | | <.10 | mg/L |
| TCLP Lead (EPA limit = 5.0) | | <.50 | mg/L |
| TCLP Selenium (EPA limit = 1.0) | | <1.0 | mg/L |
| TCLP Silver (EPA limit = 5.0) | | <.10 | mg/L |

CERTIFICATE OF WASTE STATUS

NON-EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: 1802 West Marland, Hobbs N.M.
SOURCE: Wash Basin, used for cleaning down hole oil field pumps
DISPOSAL LOCATION: SUNDANCE SERVICES INC.

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for Weatherford
concur with the status of the waste from the subject site.

Name Robbie O. Walker
Title/Agency BNC Environmental Serv.
Address 4400 N Big Springs Ste A-7
Midland, TX 79705
Signature Robbie Walker
Date 6/1/01

P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

NEW MEXICO
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

FORM C-15
Originated 8/8/

Submit Origin
Plus 1 Co.
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator PRO WELL TESTING |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site hobbs facility |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter unknown |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 2815 Lovington Hwy, Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are from Pro Well Testing's Hobbs facility. This waste is generated by the washing of well testing and wireline tools. I have attached a certificate of waste and chain of custody. Sundance would like to request approval to accept this waste into our Parabo disposal facility.

Estimated Volume 300 bbls. _____ cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 4-6-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____
APPROVED BY: Monty J. Kelly TITLE: Environmental Geologist DATE: 4-10-01

CERTIFICATE OF WASTE STATUS

NON-EXEMPT WASTE MATERIAL

ORIGINATING LOCATION: 2815 Lovington Hwy, Hobbs, NM 88240

SOURCE: wash bay sump and holding tank

DISPOSAL LOCATION: SUNDANCE SERVICES INC.

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for Prowell Testing and Wireline Service
concur with the status of the waste from the subject site.

Name Merv Buckner

Title/Agency manager

Address 2815 Lovington Hwy, Hobbs, NM 88240

Signature

Merv Buckner

Date

4-2-01



ARDINAL LABORATORIES, INC.

2111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Company Name: Redwell Testing & Consulting P.O. #: 102 BILTO ANALYSIS REQUEST

Project Manager: NEED Buckner Company:

Address: 2815 Livingston Hwy City: Attn:

City: HOVOS State: NM Zip: 88240 Address:

Phone #: Fax #: City:

Project #: Project Owner: State: Zip:

Project Name: Summ Analysis Phone #:

Project Location: HOVOS Fax #:

Sampler Name:

FOR LAB USE ONLY

Lab I.D. 115333-1 Sample I.D. Summ

(G)RAB OR (C)OMP. # CONTAINERS

MATRIX GROUNDWATER WASTEWATER SOIL CRUDE OIL SLUDGE OTHER:

PRESERV ACID/BASE: ICE / COOL OTHER: DATE 11/13/00 TIME 11:13 AM

REMARKS: NOTE: Sample is 70% water 30% liquid

Relinquished By: NEED Buckner Received By: Summ

Date: 11/13/00 Time: 11:13pm

Delivered By: (Circle One) UPS - Bus - Other:

Sample Condition Cool ☒ Intact ☒ Yes ☐ No ☐

CHECKED BY: (Initials) Summ

† Cardinal cannot accept verbal changes. Please fax written changes to 505-393-2476.



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
PRO-WELL TESTING & WIRELINE SERVICES
ATTN: MERV BUCKNER
2815 LOVINGTON HWY
HOBBS, NM 88240

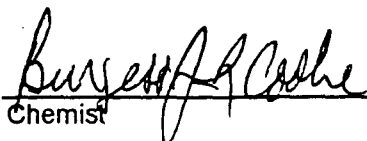
FAX TO:

Sampling Date: 11/13/00
Sample Type: SLUDGE
(70% SOLID, 30% LIQUID)
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH/BC

Receiving Date: 11/13/00
Reporting Date: 11/16/00
Project Number: NOT GIVEN
Project Name: SUMP ANALYSIS
Project Location: HOBBS, NM

| LAB NUMBER SAMPLE ID | REACTIVITY | | | |
|-----------------------------|------------------|------------------|---------------------|----------------------|
| | Sulfide (ppm) | Cyanide (ppm) | CORROSIVITY (pH) | IGNITABILITY (°F) |
| ANALYSIS DATE: | 11/15/00 | 11/15/00 | 11/14/00 | 11/14/00 |
| H5333-1 SUMP | Not reactive | Not reactive | 7.08 | >140 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 7.04 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 101 | NR |
| Relative Percent Difference | NR | NR | 0 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1010, 1311, 40 CFR 261


Chemist

11/16/00
Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
PRO-WELL TESTING & WIRELINE SERVICES
ATTN: MERV BUCKNER
2815 LOVINGTON HWY
HOBBS, NM 88240
FAX TO:

Receiving Date: 11/13/00
Reporting Date: 11/16/00
Project Number: NOT GIVEN
Project Name: SUMP ANALYSIS
Project Location: HOBBS, NM
Sample ID: SUMP
Lab Number: H5333-1

Analysis Date: 11/15/00
Sampling Date: 11/13/00
Sample Type: SLUDGE
(70% SOLID, 30% LIQUID)
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC

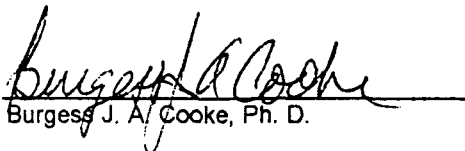
| TCLP VOLATILES (ppm) | EPA LIMIT | Sample Result H5333-1 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|--------------|--------------------------|-----------------|-------|---------|------------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.083 | 83 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| Benzene | 0.5 | 0.503 | <0.005 | 0.088 | 88 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.092 | 92 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.091 | 91 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.099 | 99 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.094 | 94 | 0.100 |
| 1,4-Dichlorobenzene | 7.5 | <0.005 | <0.005 | 0.104 | 104 | 0.100 |

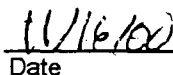
% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 98 |
| Toluene-d8 | 88 |
| Bromofluorobenzene | 87 |

METHODS: EPA SW 846-8260, 1311

NOTE: Analysis performed on a 70:30 mixture of leachate & liquid.


Burgess J. A. Cooke, Ph. D.


Date



PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
PRO-WELL TESTING & WIRELINE SERVICES
ATTN: MERV BUCKNER
2815 LOVINGTON HWY
HOBBS, NM 88240
FAX TO:

Receiving Date: 11/13/00
Reporting Date: 11/16/00
Project Number: NOT GIVEN
Project Name: SUMP ANALYSIS
Project Location: HOBBS, NM
Sample ID: SUMP
Lab Number: H5333-1

Analysis Date: 11/14/00
Sampling Date: 11/13/00
Sample Type: SLUDGE
(70% SOLID, 30% LIQUID)
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: BC


| TCLP SEMIVOLATILES (ppm) | EPA LIMIT | Sample Result H5333-1 | Method Blank | QC | % Recov. | True Value QC |
|--------------------------|--------------|--------------------------|-----------------|-------|----------|------------------|
| Pyridine | 5.00 | <0.050 | <0.005 | 0.008 | 16 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.050 | <0.005 | 0.032 | 64 | 0.050 |
| o-Cresol | 200 | <0.050 | <0.005 | 0.028 | 56 | 0.050 |
| m, p-Cresol | 200 | 0.174 | <0.005 | 0.026 | 52 | 0.050 |
| Hexachloroethane | 3.00 | <0.050 | <0.005 | 0.019 | 38 | 0.050 |
| Nitrobenzene | 2.00 | <0.050 | <0.005 | 0.040 | 80 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.050 | <0.005 | 0.027 | 54 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.050 | <0.005 | 0.041 | 82 | 0.050 |
| 2,4,5-Trichlorophenol | 400 | <0.050 | <0.005 | 0.041 | 82 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.050 | <0.005 | 0.045 | 90 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.050 | <0.005 | 0.040 | 80 | 0.050 |
| Pentachlorophenol | 100 | <0.050 | <0.005 | 0.043 | 86 | 0.050 |

% RECOVERY

| | |
|----------------------|----|
| Fluorophenol | 38 |
| Phenol-d5 | 32 |
| Nitrobenzene-d5 | 83 |
| 2-Fluorobiphenyl | 82 |
| 2,4,6-Tribromophenol | 53 |
| Terphenyl-d14 | 94 |

METHODS: EPA SW-846 8270, 1311, 3510

NOTE: Analysis performed on a 70:30 mixture of leachate & liquid.


Burgess J. A. Cooke, Ph. D.

11/16/00
Date



PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
PRO-WELL TESTING & WIRELINE SERVICES
ATTN: MERV BUCKNER
2815 LOVINGTON HWY
HOBBS, NM 88240
FAX TO:

Receiving Date: 11/13/00
Reporting Date: 11/17/00
Project Number: NOT GIVEN
Project Name: SUMP ANALYSIS
Project Location: HOBBS, NM

Sampling Date: 11/13/00
Sample Type: SLUDGE
(70% SOLID, 30% LIQUID)
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH

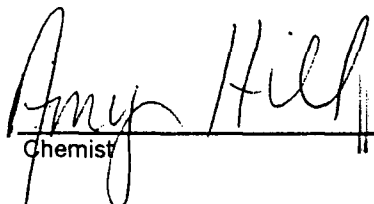
TCLP METALS

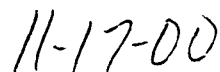
| LAB NO. | SAMPLE ID | As ppm | Ag ppm | Ba ppm | Cd ppm | Cr ppm | Pb ppm | Hg ppm | Se ppm |
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|

| | | | | | | | | |
|-----------------------------|----------|----------|----------|----------|----------|----------|----------|----------|
| ANALYSIS DATE: | 11/16/00 | 11/14/00 | 11/14/00 | 11/14/00 | 11/14/00 | 11/14/00 | 11/16/00 | 11/15/00 |
| EPA LIMITS: | 5 | 5 | 100 | 1 | 5 | 5 | 0.2 | 1 |
| H5333-1 SUMP | <1 | <1 | <5 | <0.1 | <1 | <1 | <0.02 | <0.1 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Quality Control | 0.195 | 4.773 | 23.10 | 1.034 | 5.206 | 0.935 | 0.0098 | 0.214 |
| True Value QC | 0.200 | 5.000 | 25.00 | 1.000 | 5.000 | 1.000 | 0.0100 | 0.200 |
| % Recovery | 97.5 | 95.5 | 92.4 | 103 | 104 | 93.5 | 98.0 | 107 |
| Relative Standard Deviation | 2.3 | 0.4 | 7.5 | 0.3 | 3.1 | 5.2 | 2.2 | 2.2 |

| | | | | | | | | |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|
| METHODS: EPA 1311, 600/4-79- | 206.2 | 272.1 | 208.1 | 213.1 | 218.1 | 239.1 | 245.1 | 270.2 |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|

NOTE: Analyses performed on 70:30 mixtures of leachate & liquid.


Chemist


Date

H5333M.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

Hobbs, NM 88241-1980
District II (505) 748-1283
811 S. First
Artesia, NM 88210
District III (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Originated 8/

Submit Orig
Plus 1 C
to approp
District Of

01 FEB 16 PM 2:12

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|----------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator Permian Mack |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site Hobbs Facili |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter Maclaskey |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 2121 W West County Road Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. | |
| All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are from Permian Mack's Hobbs facility. This waste was generated by the washing of trucks and shop tools into the grit trap. I have included a certificate of waste status and chain of custody. Sundance would like approval to accept this material into our Parabo facility.

Estimated Volume 200 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 2-7-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____

APPROVED BY: Monty J. Kelly TITLE: Environmental Geologist DATE: 2-17-01

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL**ORIGINATING LOCATION:** 2121 West Gounty Road Hobbs, NM**SOURCE:** wash bay grit trap**DISPOSAL LOCATION:** SUNDANCE SERVICES INC.

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1985 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for Permian Mack Sales
concur with the status of the waste from the subject site.

Name GARY SCHRIE**Title/Agency** SERVICE MANAGER**Address** P.O. Box 1678
Hobbs, NM 88240**Signature** **Date** 2-7-2001



PHONE (915) 873-7001 • 2111 BEECHWOOD • ARLINE, TX 79803

PHONE (906) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
PERMIAN MACK SALES OF NM, INC.

ATTN: RANDY

P.O. BOX 1878

HOBBS, NM 88240

FAX TO:

Receiving Date: 09/07/00

Reporting Date: 09/14/00

Project Owner: NOT GIVEN

Project Name: NOT GIVEN

Project Location: NOT GIVEN

Sampling Date: 09/07/00

Sample Type: SLUDGE

Sample Condition: COOL & INTACT

Sample Received By: GP

Analyzed By: SCIAH

REACTIVITY

LAB NUMBER SAMPLE ID

Sulfide

Cyanide

CORROSIVITY

IGNITABILITY

09/14/2000 08:37

ENCLOSURE

(ppm)

(ppm)

(pH)

(°F)

| ANALYSIS DATE: | 9/12/00 | 9/12/00 | 9/13/00 | 9/13/00 |
|-----------------------------|--------------|--------------|---------|---------|
| H5180-1 GRIT TRAP | Not reactive | Not reactive | 6.60 | >140 |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 8.99 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 99.9 | NR |
| Relative Percent Difference | NR | NR | 0 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1010, 1311, 40 CFR 261

Chemist

Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims for damages or negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated theories or otherwise.

TOTAL P.06



PHONE (815) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 383-2328 • 101 E MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
PERMIAN MACK SALES OF NM, INC.

ATTN: RANDY

P.O. BOX 1878

HOBBS, NM 88240

FAX TO:

Receiving Date: 09/07/00
 Reporting Date: 09/14/00
 Project Owner: NOT GIVEN
 Project Name: NOT GIVEN
 Project Location: NOT GIVEN

Sampling Date: 09/07/00
 Sample Type: SLUDGE
 Sample Condition: COOL & INTACT
 Sample Received By: GP
 Analyzed By: AH

TCLP METALS

| LAB NO. | SAMPLE ID | As | Ba | Cd | Cr | Pb | Hg | Se |
|------------------------------|-----------|----------|----------|----------|----------|----------|----------|----------|
| | | ppm | ppm | ppm | ppm | ppm | ppm | ppm |
| ANALYSIS DATE: | | 09/11/00 | 09/11/00 | 09/11/00 | 09/11/00 | 09/11/00 | 09/13/00 | 09/11/00 |
| EPA LIMITS: | | 5 | 5 | 100 | 1 | 5 | 0.2 | 1 |
| H5160-1 | GRIT TRAP | <1 | <1 | <5 | <0.1 | <2 | <0.02 | <0.1 |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| | | | | | | | | |
| Quality Control | | 0.066 | 4.882 | 24.63 | 0.949 | 5.273 | 5.182 | 0.0105 |
| True Value QC | | 0.050 | 5.000 | 25.00 | 1.000 | 5.000 | 5.000 | 0.0100 |
| % Recovery | | 110 | 97.0 | 98.1 | 94.9 | 105 | 104 | 105 |
| Relative Standard Deviation | | 2.3 | 0.5 | 1.3 | 0.4 | 2.4 | 0.1 | 5.4 |
| METHODS: EPA 1311, 600/4-91A | | 208.2 | 272.1 | 208.1 | 213.1 | 218.1 | 239.1 | 245.1 |
| | | | | | | | | 270.2 |

Amy Hill
 Chemist

9-14-00
 Date

H5160.XLS

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for analyses. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.



PHONE (815) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (806) 393-2326 • 101 E. MARLAND • HOBBBS, NM 88240

ANALYTICAL RESULTS FOR
 PERMIAN MACK SALES OF NM, INC.
 ATTN: RANDY
 P.O. BOX 1678
 HOBBBS, NM 88240
 FAX TO:

Receiving Date: 09/07/00
 Reporting Date: 09/11/00
 Project Owner: NOT GIVEN
 Project Name: NOT GIVEN
 Project Location: NOT GIVEN
 Lab Number: H5160-1
 Sample ID: GRIT TRAP

Analysis Date: 09/08/00
 Sampling Date: 09/07/00
 Sample Type: SLUDGE
 Sample Condition: COOL & INTACT
 Sample Received By: GR
 Analyzed By: BC

| TCLP VOLATILES (ppm): | EPA LIMIT | Sample Result | Method | QC | %Recov. | True Value |
|-----------------------|-----------|---------------|--------|-------|---------|------------|
| | | H5160-1 | Blank | | | QC |
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.102 | 102 | 0.100 |
| Methyl Ethyl Ketone | 200 | 0.113 | <0.050 | 0.109 | 109 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.104 | 104 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.114 | 114 | 0.100 |
| Benzene | 0.6 | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.105 | 105 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.109 | 109 | 0.100 |
| Tetrachloroethylene | 0.7 | 0.011 | <0.005 | 0.106 | 106 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.106 | 106 | 0.100 |
| 1,4-Dichlorobenzene | 7.5 | <0.005 | <0.005 | 0.111 | 111 | 0.100 |

% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 95 |
| Toluene-d8 | 96 |
| Bromofluorobenzene | 98 |

METHODS: EPA SW 846-8260, 1311

Burgess J.A. Cooke
 Burgess J.A. Cooke, Ph. D.

9/11/00
 Date

PLEASE NOTE: Liability and Damages. Cardinal's liability and client's exclusive remedy for any claim arising, whether based in contract or tort, shall be limited to the amount paid by client for services. All claims, including those for negligence and any other cause whatsoever shall be deemed waived unless made in writing and received by Cardinal within thirty (30) days after completion of the applicable service. In no event shall Cardinal be liable for incidental or consequential damages, including, without limitation, business interruptions, loss of use, or loss of profits incurred by client, its subsidiaries, affiliates or successors arising out of or related to the performance of services hereunder by Cardinal, regardless of whether such claim is based upon any of the above-stated reasons or otherwise.

NEW MEXICO
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Form C-13
Originated 8/8/

Submit Origin
Plus 1 Co
to appropriate
District Office

OIL CONSERVATION DIV.
01 FEB 16 PM 2:12

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|---|----------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input checked="" type="checkbox"/> 2701 No <input type="checkbox"/> | 5. Originating Site LEVELLAND TX |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter CHAPARRAL SERVICE |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) HWY 114 LEVELLAND TX | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following analytical results are from Halliburtons Levelland facility.
This waste is generated by the washing of oilfield tools. I have included
a certificate of waste status and chain of custody. Sundance would like
approval to accept this material into our Parabo facility.

Note: A verbal approval would be appreciated. This location is extremely
full and in danger of overflow.
Estimated Volume 125 bbls. cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 2-7-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: _____ TITLE: _____ DATE: _____
APPROVED BY: William J. K... TITLE: Environmental Geologist DATE: 2-17-01

394-2590

**CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY New Mexico CONSERVATION DIVISION**

COMPANY/GENERATOR: Halliburton Energy Serv.ADDRESS: Hwy 114, Levelland TXGENERATING SITE: Same

COUNTY _____ STATE _____

TYPE OF WASTE: Waste WaterESTIMATED VOLUME: 125 bblsGENERATING PROCESS: Water from the Washing
of ToolsREMARKS: Test Results on FileNMOCDF FACILITY: SundanceTRUCKING FACILITY: Chapparell Services

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, subparts C and D, has not been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Sections 2613:

AGENT: Eddie HopperNAME: Eddie HopperADDRESS: 5801 Lovington HwyDATE: 1-7-01

Environmental Lab of Texas, Inc. 12609 West 1-20 East Odessa, Texas 79763

(915) 563-1808 FAX (915) 563-1713

CHAIN-OF-CUSTODY RECORD AND ANALYSIS REQUEST

Project Manager:

Scott Nelson

Phone #:

FAX #:

ANALYSIS REQUEST

Company Name & Address:

Halliburton

Project Name:

Levelland, TX

Project Location:

Hwy 114

Sample Signature:

Robert F. Smith

LAB #
(LAB USE ONLY)

FIELD CODE

CONTAINERS

Volume/Amount

WATER

SOIL

AIR

SLUDGE

OTHER

HCL

HNO3

FOR

NONE

OTHER

DATE

TIME

BTX 2020/5030

TPH 418.3

TCLP Metals Ag As Ba Cd Cr Pb Hg Se

Total Metals Ag As Ba Cd Cr Pb Hg Se

TCLP Volatiles

TCLP Semi Volatiles

TDS

RCI

25990 Outsite Tent.

1

3

✓

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Repackaged by:

Date:

Time:

Repackaged by:

REMARKS

Repackaged by:

Date:

Time:

Repackaged by:

Repackaged by:

Date:

Time:

Repackaged by:

Repackaged by: LeClair, Fred

Date: 2-25-00

Time: 17:00

Repackaged by: LeClair, Fred

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALLIBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX: 505-392-7062

Sample Type: Water
Sample Condition: Intact/loose/HCl
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving Date: 02/25/00
Analysis Date: 02/28/00

MAIL- 00-00 02-25 FROM: CUST. SVC. CTR. MIDLAND

TPH 10-8156864591

ELT# FIELD CODE

mg/L

23790 Outside Tank

7

QUALITY CONTROL
TRUE VALUE
% PRECISION
BLANK

367

360

102

<1

Methods: EPA 418.1

Roland K. Tuttle
Roland K. Tuttle

3-14-00
Date

QUALITY CONTROL
TRUE VALUE
% PRECISION
BLANK

367

360

102

<1

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALLIBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX: 505-392-7062

Sample Type: Water
Sample Condition: Intact/Iced
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving Date: 02/25/00
Analysis Date: 3/03 & 3/08/00

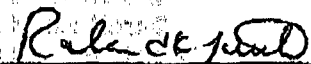
TCLP METALS (mg/L)

| ELT# | Field Code | Ag | As | Ba | Cd | Cr | Hg | Pb | Se |
|-------|--------------|------|--------|-------|-------|-------|-------|-------|--------|
| | EPA LIMIT | 5.00 | 5.00 | 100.0 | 1.00 | 5.00 | 0.20 | 5.00 | 1.00 |
| 23790 | Outside Tank | 0.02 | <0.002 | 0.20 | 0.009 | <0.03 | 0.003 | <0.10 | <0.002 |

REPORTING LIMIT 0.01 0.002 0.10 0.005 0.03 0.002 0.10 0.002

% INSTRUMENT ACCURACY 99 95 104 100 102 98 98 102
% EXTRACTION ACCURACY 104 94 106 92 97 85 94 95

METHODS: EPA SW 846-1311, 7760, 7062, 7080, 7130, 7190, 7470, 7420, 7742


Raland K. Tuttle

3-14-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALLIBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX: 505-392-7082

Sample Type: Water
Sample Condition: Intact/Iced/HCl
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving Date: 02/25/00
Analysis Date: 03/09/00
Field Code: Outside Tank

| TCLP VOLATILES (mg/l) | SAMPLE 23790 | PQL | BLANK | %EA | %DEV |
|--------------------------|-----------------|-------|-------|-----|------|
| 1,1-Dichloroethene | ND | 0.001 | ND | 118 | -3.1 |
| 2-Butanone | ND | 0.010 | ND | | 2.3 |
| Chloroform | ND | 0.001 | ND | | -2.0 |
| Benzene | ND | 0.001 | ND | 118 | 4.9 |
| 1,2-Dichloroethane | ND | 0.001 | ND | | 3.1 |
| Vinyl Chloride | ND | 0.001 | ND | | 3.0 |
| Carbon Tetrachloride | ND | 0.001 | ND | | -5.6 |
| Trichloroethene | ND | 0.001 | ND | 118 | -9.3 |
| Tetrachloroethene | ND | 0.001 | ND | | -6.2 |
| Chlorobenzene | ND | 0.001 | ND | 95 | -15 |
| 1,4-Dichlorobenzene | ND | 0.001 | ND | | -5.5 |

SYSTEM MONITORING COMPOUNDS

% RECOVERY

dibromofluoromethane

105

toluene-d8

111


4-bromofluorobenzene

116

ND = < PQL

PQL = PRACTICAL QUANTITATION LIMIT

Methods: EPA SW 846-8240, 1311


Ralston K. Tuttle

3-14-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALLIBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY.
HOBBBS, NM 88240
FAX: 505-382-7062

Sample Type: Water
Sample Condition: Intact/Load
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving Date: 02/25/00
Analysis Date: 03/05/00
Field Code: Outside Tank

| TCLP SEMIVOLATILE ORGANICS (mg/L) | REPORTING LIMIT | ELT# 23790 |
|--------------------------------------|--------------------|---------------|
| Cresol | <0.040 | ND |
| 1,4-Dichlorobenzene | <0.040 | ND |
| 2,4-Dinitrotoluene | <0.040 | ND |
| Hexachlorobenzene | <0.040 | ND |
| Hexachlor-1,3-butadiene | <0.040 | ND |
| Hexachloroethane | <0.040 | ND |
| Nitrobenzene | <0.040 | ND |
| Pentachlorophenol | <0.040 | ND |
| Pyridine | <0.040 | ND |
| 2,4,5-Trichlorophenol | <0.040 | ND |
| 2,4,6-Trichlorophenol | <0.040 | ND |

ND= NOT DETECTED, < REPORTING LIMIT

Method: SW 846-8270,1311


Roland K. Tuttle

3-14-00
Date

12600 West L20 East of Odessa, Texas 79766 (817) 500-1555

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALLIBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY.
HOBBES, NM 88240
FAX: 505-382-7062

Sample Type: Water
Sample Condition: Intact/Iced
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving date: 02/25/00
Analysis Date: See Below

| ELT# | Field Code | REACTIVITY | | CORROSIVITY | IGNITABILITY |
|-------|--------------|------------------|---------------|--------------------|--------------|
| | | H ₂ S | CN- | (s.u.) | |
| | | NON-REACTIVE | NON-CORROSIVE | | |
| | | (ppm) | (ppm) | | |
| 23790 | Outside Tank | <20.0 | <2.0 | Non Corrosive 8.00 | >200 deg. F |

ANALYSIS DATE

3/1/00 3/1/00 2/29/00 3/1/00

METHODS: EPA SW-846-9045, 1010M


Roland K. Tuttle

3-14-00
Date

SUNDANCE SERVICES INC.

P.O. BOX 1737

EUNICE, NM 88231

505-394-2511

505-394-2590 FAX

FACSIMILE TRANSMITTAL SHEET

TO:

Martyn Kule

FROM:

Donna Road

COMPANY:

OCD

DATE:

2-7-01

FAX NUMBER:

476-3462

TOTAL NO. OF PAGES INCLUDING COVER:

9

PHONE NUMBER:

SENDER'S REFERENCE NUMBER:

RE:

YOUR REFERENCE NUMBER:

☐ URGENT

☒

FOR REVIEW

☐ PLEASE COMMENT

☐ PLEASE REPLY

☐ PLEASE RECYCLE

NOTES/COMMENTS:

Sorry to fax this to you. Halliburton
is in the process of changing environmental
men and let this one get to full.
Please review for a verbal.

Thanks

Donna

Hobbs, NM 88241-1980
 District II - (505) 748-1283

Energy Minerals and Natural Resources Department
Oil Conservation Division
 2040 South Pacheco Street
 Santa Fe, New Mexico 87505
 (505) 827-7131

Form C-13
 Originated 8/87

Albuquerque, NM 88210
 District III - (505) 334-6178
 1000 Rio Brazos Road
 Albuquerque, NM 87110
 District IV - (505) 827-7131

Submit Origin
 Plus 1 Co
 to appropriate
 District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | | |
|--|--|----------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | | 5. Originating Co. LEVELLAND CO |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | | 6. Transporter CHAPARRAL SERVICE |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318, State NEW MEXICO | | |
| 7. Location of Material (Street Address or ULSTR) HWY 114 LEVELLAND TX | | |
| 9. Circle One: | | |
| A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. | | |
| All transporters must certify the wastes delivered are only those consigned for transport. | | |

BRIEF DESCRIPTION OF MATERIAL:

THE FOLLOWING ANALYTICAL RESULTS ARE FROM HALLIBURTON LEVELLAND FACILITY

This waste is generated by the washing of oilfield tools. I have included a certificate of waste status and chain of custody. Sundance would like approval to accept this material into our Parabo facility.

Note: A verbal approval would be appreciated. This location is extremely full and in danger of overflow.

Estimated Volume 125 bbls. cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: [Signature]
 Waste Management Facility Authorized Agent

DATE: 02/07/01

TIME: 7:00

TELEPHONE NO. 505-394-1011

TELEPHONE NO. 505-394-1011

(This space for Solid U.S.)

APPROVED BY: _____ TITLE: _____ DATE: _____
 APPROVED BY: [Signature] TITLE: Environmental Geologist DATE: 02/07/01

354-2570

CERTIFICATE OF WASTE STATUS
NON-EXEMPT WASTE MATERIAL
AS REQUIRED BY NEW MEXICO CONSERVATION DIVISION

COMPANY/GENERATOR: Halliburton Energy Serv.ADDRESS: Highway 114, Loveland TXGENERATING SITE: Superior

COUNTY _____ STATE _____

TYPE OF WASTE: Waste WaterESTIMATED VOLUME: 125 bblsGENERATING PROCESS: Water from the Washingof ToolsREMARKS: Test Results on FileNMCD FACILITY: SundanceTRUCKING FACILITY: Chapparral Services

As a condition of acceptance for disposal, I hereby certify that this waste is a non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the waste is not hazardous. I further certify that to my knowledge "hazardous or listed waste" pursuant to the provisions of 40 CFR Part 261, subparts C and D, has not been added or mixed with the waste in or on to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR Sections 261.

AGENT: Eddie HopperNAME: Eddie HopperADDRESS: 5801 Lovington HwyDATE: 1-2-01

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY
HOBBBS, NM 88240
FAX: 505-362-7062

Sample Type: Water
Sample Condition: Intact/leak/HOI
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving Date: 02/25/00
Analysis Date: 02/28/00

| CLT# | FIELD CODE | TPH mg/L |
|-------|--------------|-------------|
| 00700 | Outside Tank | 7 |

| | |
|-----------------|-----|
| QUALITY CONTROL | 367 |
| TRUE VALUE | 360 |
| % PRECISION | 102 |
| BLANK | <1 |

Methods: EPA 418.1

Roland K. Tuttle
Roland K. Tuttle

3-14-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX: 505-392-7082

Sample Type: Water
Sample Condition: Intact/iced
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving Date: 02/25/00
Analysis Date: 3/03 & 3/08/00

TCLP METALS (mg/L)

| ELT# | Field Code | Ag | As | Ba | Cd | Cr | Hg | Pb | Se |
|-------|--------------|------|--------|-------|-------|-------|-------|-------|--------|
| | EPA LIMIT | 5.00 | 5.00 | 100.0 | 1.00 | 5.00 | 0.20 | 5.00 | 1.00 |
| 23790 | Outside Tank | 0.02 | <0.002 | 0.20 | 0.008 | <0.03 | 0.003 | <0.10 | <0.002 |

REPORTING LIMIT 0.01 0.002 0.10 0.005 0.03 0.002 0.10 0.002

% INSTRUMENT ACCURACY 99 95 104 100 102 98 98 102
% EXTRACTION ACCURACY 104 94 108 92 97 83 94 95

METHODS: EPA SW 846-1311, 7760, 7062, 7080, 7180, 7190, 7470, 7420, 7742


Roland K. Tuttle

3-14-00
Date

ENVIRONMENTAL LAB OF , INC.

"Don't Treat Your Soil Like Dirt!"

HALLIBURTON ENERGY SERVICES
ATTN: MR. SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX: 505-392-7062

Sample Type: Water
Sample Condition: Intact/leak
Project #: None Given
Project Name: None Given
Project Location: Hwy. 114

Sampling Date: 02/25/00
Receiving date: 02/28/00
Analysis Date: See Below

| ELT# | Field Code | REACTIVITY | | CORROSIVITY | IGNITABILITY |
|-------|--------------|--------------|------|--------------------|--------------|
| | | H2S | CN | (s.v.) | |
| | | NON-REACTIVE | | NON-CORROSIVE | |
| | | ppm | ppm | | |
| 23790 | Outside Tank | <20.0 | <2.0 | Non Corrosive 8.00 | >200 deg. F |

ANALYSIS DATE

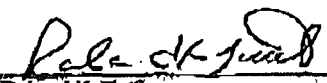
3/1/00

3/1/00

2/29/00

3/1/00

METHODS: EPA SW-846-9045.1010M


Roland K. Tuttle

3-14-00
Date

SUNDANCE SERVICES INC.

P.O. BOX 1737

BUNNIF. NM 88711

505 394 2511

505-394-2590 FAX

FACSIMILE TRANSMITTAL SHEET

| | |
|-----------------------------|--|
| TO: <u>Martyn Kieley</u> | FROM: <u>Donna Road</u> |
| COMPANY: <u>OCD</u> | DATE: <u>2-7-01</u> |
| FAX NUMBER: <u>476-3462</u> | TOTAL NO. OF PAGES INCLUDING COVER: <u>9</u> |
| PHONE NUMBER: | SENDER'S REFERENCE NUMBER: |
| RE: | YOUR REFERENCE NUMBER: |

☐ URGENT ☒ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS:

Sorry to fax this to you. Halliburton
is in the process of changing environmental
men and let this one get to full.
Please review for a verbal.

Thanks

Donna

P. O. Box 1980
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

NEW MEXICO
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

FORM C-13
Originated 8/8

Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|------------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator HALLIBURTON |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site HOBBS FACILITY |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter CHAPARRAL |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO | |
| 7. Location of Material (Street Address or ULSTR) 5801 Lovinton HWY Hobbs, NM 88240 | |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following waste is generated by the washing of tools and oil equipment. This analytical is from Halliburtons Hobbs facility. Sundance would like approval to accept this waste into our Parabo facility.

Estimated Volume 300 bbls cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE: *Donna L. Roach* TITLE: OFFICE MGR DATE: 1-8-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: *Donna Williams* TITLE: Environmental Engineer Specialist DATE: 01-17-01
APPROVED BY: *Monty J. Kelly* TITLE: Environmental Geologist DATE: 01-29-01

CHAIN-OF-CUSTODY AND ANALYSIS REQUEST

Page 41

CARDINAL LABORATORIES, INC.

22111 Beechwood, Abilene, TX 79603 101 East Marland, Hobbs, NM 88240
(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

(915) 673-7001 Fax (915) 673-7020 (505) 393-2326 Fax (505) 393-2476

| ANALYSIS REQUEST | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--|---------------------|------------------|------------|--|--|----------------|--|--------------|--|------------------|------------|----------------|--|----------------|------|------------------|---------------------|-------------|------------|------|-----------|---------------|--|------------------|--------|----------------|------------|---------------|--|----------------|--|--------------|--|---------------|--|------------------|--|---------------|--|----------------|--|--------------|--|------------------|--|-------------------|--|------------------|--|---------------|--|----------------|--|--------------|--|------------------|--|
| Company Name: HALLIBURTON ENERGY SERVICES | | P.O. #: | | <div style="text-align: center; font-size: 2em; font-weight: bold;"> <div>TCO</div> <div>1917 ADL</div> </div> | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Manager: SCOTT NELSON | | Company: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Address: 5801 LOVINGTON HWY | | City: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| City: HOBBS | | State: NM | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Zip: 88240 | | Phone #: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Phone #: | | Fax #: | | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">PRESERV</th> <th colspan="2">SAMPLING</th> </tr> <tr> <td>DATE</td> <td>TIME</td> <td>DATE</td> <td>TIME</td> </tr> <tr> <td>12/12</td> <td>1:15</td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | PRESERV | | SAMPLING | | DATE | TIME | DATE | TIME | 12/12 | 1:15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| PRESERV | | SAMPLING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| DATE | TIME | DATE | TIME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| 12/12 | 1:15 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Name: WASHBAY SUMP | | Project Owner: | | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <th colspan="2">MATRIX</th> <th colspan="2">PRESERV</th> <th colspan="2">SAMPLING</th> </tr> <tr> <td>(#) CONTAINERS</td> <td>(#) LAB OR (C) OMP.</td> <td>GROUNDWATER</td> <td>WASTEWATER</td> <td>SOIL</td> <td>CRUDE OIL</td> </tr> <tr> <td></td> <td></td> <td>GLUE</td> <td>OTHER:</td> <td>AD/BASE:</td> <td>ICE / COOL</td> </tr> <tr> <td></td> <td></td> <td>OTHER:</td> <td></td> <td></td> <td></td> </tr> <tr> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> </tr> </table> | | | | | | MATRIX | | PRESERV | | SAMPLING | | (#) CONTAINERS | (#) LAB OR (C) OMP. | GROUNDWATER | WASTEWATER | SOIL | CRUDE OIL | | | GLUE | OTHER: | AD/BASE: | ICE / COOL | | | OTHER: | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| MATRIX | | PRESERV | | | | | | | | SAMPLING | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| (#) CONTAINERS | (#) LAB OR (C) OMP. | GROUNDWATER | WASTEWATER | | | | | | | SOIL | CRUDE OIL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | GLUE | OTHER: | | | | | | | AD/BASE: | ICE / COOL | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | OTHER: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Location: HOBBS YARD | | Project Address: | | <table border="1" style="width:100%; border-collapse: collapse;"> <tr> <td colspan="2" rowspan="2">Lab I.D.</td> <td colspan="2" rowspan="2">Sample I.D.</td> <td colspan="2" rowspan="2">H5422-1</td> <td colspan="2" rowspan="2">washbay Sudge</td> <td colspan="2" rowspan="2">DATE</td> <td colspan="2" rowspan="2">TIME</td> </tr> <tr> </tr> <tr> <td colspan="2">Sampler Name:</td> <td colspan="2">Project Phone #:</td> <td colspan="2">Project Fax #:</td> <td colspan="2">Project City:</td> <td colspan="2">Project State:</td> <td colspan="2">Project Zip:</td> </tr> <tr> <td colspan="2">Project Name:</td> <td colspan="2">Project Address:</td> <td colspan="2">Project City:</td> <td colspan="2">Project State:</td> <td colspan="2">Project Zip:</td> <td colspan="2">Project Phone #:</td> </tr> <tr> <td colspan="2">Project Location:</td> <td colspan="2">Project Address:</td> <td colspan="2">Project City:</td> <td colspan="2">Project State:</td> <td colspan="2">Project Zip:</td> <td colspan="2">Project Phone #:</td> </tr> </table> | | | | | | Lab I.D. | | Sample I.D. | | H5422-1 | | washbay Sudge | | DATE | | TIME | | Sampler Name: | | Project Phone #: | | Project Fax #: | | Project City: | | Project State: | | Project Zip: | | Project Name: | | Project Address: | | Project City: | | Project State: | | Project Zip: | | Project Phone #: | | Project Location: | | Project Address: | | Project City: | | Project State: | | Project Zip: | | Project Phone #: | |
| Lab I.D. | | Sample I.D. | | | | | | | | | | | | | | | | | | | | H5422-1 | | washbay Sudge | | DATE | | TIME | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Sampler Name: | | Project Phone #: | | | | | | | | Project Fax #: | | Project City: | | Project State: | | Project Zip: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Name: | | Project Address: | | | | | | | | Project City: | | Project State: | | Project Zip: | | Project Phone #: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Project Location: | | Project Address: | | Project City: | | Project State: | | Project Zip: | | Project Phone #: | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |



CARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (805) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
6801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| TCLP VOLATILES (ppm) | EPA LIMIT | Sample Result H5422-1 | Method Blank | QC | %Recov. | True Value QC |
|----------------------|--------------|--------------------------|-----------------|-------|---------|------------------|
| Vinyl Chloride | 0.20 | <0.005 | <0.005 | 0.108 | 108 | 0.100 |
| 1,1-Dichloroethylene | 0.7 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| Methyl Ethyl Ketone | 200 | <0.050 | <0.050 | 0.083 | 83 | 0.100 |
| Chloroform | 6.0 | <0.005 | <0.005 | 0.089 | 89 | 0.100 |
| 1,2-Dichloroethane | 0.5 | <0.005 | <0.005 | 0.087 | 87 | 0.100 |
| Benzene | 0.5 | <0.005 | <0.005 | 0.088 | 88 | 0.100 |
| Carbon Tetrachloride | 0.5 | <0.005 | <0.005 | 0.092 | 92 | 0.100 |
| Trichloroethylene | 0.5 | <0.005 | <0.005 | 0.091 | 91 | 0.100 |
| Tetrachloroethylene | 0.7 | <0.005 | <0.005 | 0.099 | 99 | 0.100 |
| Chlorobenzene | 100 | <0.005 | <0.005 | 0.094 | 94 | 0.100 |
| 1,4-Dichlorobenzene | 7.6 | <0.005 | <0.005 | 0.104 | 104 | 0.100 |

% RECOVERY

| | |
|----------------------|----|
| Dibromofluoromethane | 95 |
| Toluene-d8 | 91 |
| Bromofluorobenzene | 98 |

METHODS: EPA SW 846-8260, 1311

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

12/14/00
Date

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ARDINAL LABORATORIES

PHONE (915) 673-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Analysis Date: 12/16/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

12-20-2000 02:33pm LAB NUMBER SAMPLE ID

TPH
(mg/Kg)

| | | |
|-----------------------------|----------------|-------|
| H5422-1 | WASHBAY SLUDGE | 77300 |
| | | |
| | | |
| | | |
| | | |
| | | |
| Quality Control | | 228 |
| True Value QC | | 240 |
| % Recovery | | 95.0 |
| Relative Percent Difference | | 4.0 |

METHOD: EPA 600/4-79-020 418.1

Buyers J. Coche
Chemist

Date

12/18/00

H5422T.XLS

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CARDINAL LABORATORIES

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PHONE (505) 393-2328 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/14/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD
Sample ID: WASHBAY SLUDGE
Lab Number: H5422-1

Analysis Date: 12/13/00
Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: BC

| TCLP SEMIVOLATILES (ppm) | EPA LIMIT | Sample Result H5422-1 | Method Blank | QC | % Recov. | True Value QC |
|--------------------------|--------------|--------------------------|-----------------|-------|----------|------------------|
| Pyridine | 5.00 | <0.020 | <0.005 | 0.011 | 22 | 0.050 |
| 1,4-Dichlorobenzene | 7.50 | <0.020 | <0.005 | 0.024 | 48 | 0.050 |
| o-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| m, p-Cresol | 200 | <0.020 | <0.005 | 0.033 | 66 | 0.050 |
| Hexachloroethane | 3.00 | <0.020 | <0.005 | 0.021 | 42 | 0.050 |
| Nitrobenzene | 2.00 | <0.020 | <0.005 | 0.034 | 68 | 0.050 |
| Hexachloro-1,3-butadiene | 0.500 | <0.020 | <0.005 | 0.026 | 52 | 0.050 |
| 2,4,6-Trichlorophenol | 2.00 | <0.020 | <0.005 | 0.040 | 80 | 0.050 |
| 2,4,5-Trichlorophenol | 400 | <0.020 | <0.005 | 0.048 | 92 | 0.050 |
| 2,4-Dinitrotoluene | 0.130 | <0.020 | <0.005 | 0.048 | 92 | 0.050 |
| Hexachlorobenzene | 0.130 | <0.020 | <0.005 | 0.045 | 90 | 0.050 |
| Pentachlorophenol | 100 | <0.020 | <0.005 | 0.047 | 94 | 0.050 |

% RECOVERY

| | |
|----------------------|-----|
| Fluorophenol | 56 |
| Phenol-d5 | 40 |
| Nitrobenzene-d5 | 104 |
| 2-Fluorobiphenyl | 68 |
| 2,4,6-Tribromophenol | 89 |
| Terphenyl-d14 | 81 |

METHODS: EPA SW 846-8270, 1311, 3510

Burgess J. A. Cooke
Burgess J. A. Cooke, Ph. D.

12/14/00
Date

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ARDINAL LABORATORIES

PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (805) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY.
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/18/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: BC
Analyzed By: AH/BC

REACTIVITY

12-20-2000 LAB NUMBER SAMPLE ID

Sulfide
(ppm)Cyanide
(ppm)CORROSIVITY
(pH)IGNITABILITY
(°F)

| ANALYSIS DATE: | 12/14/00 | 12/14/00 | 12/16/00 | 12/16/00 |
|-----------------------------|--------------|--------------|----------|--------------|
| H5422-1 WASHBAY | Not reactive | Not reactive | 7.65 | Nonflammable |
| SLUDGE | | | | |
| | | | | |
| | | | | |
| | | | | |
| Quality Control | NR | NR | 7.03 | NR |
| True Value QC | NR | NR | 7.00 | NR |
| % Recovery | NR | NR | 100 | NR |
| Relative Percent Difference | NR | NR | 0.1 | NR |

METHOD: EPA SW 846-7.3, 7.2, 1030 (proposed), 1311, 40 CFR 261


Chemist

 12/18/00
Date

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CARDINAL LABORATORIES

PHONE (915) 873-7001 • 2111 BEECHWOOD • ABILENE, TX 79603

PHONE (505) 393-2326 • 101 E. MARLAND • HOBBS, NM 88240

ANALYTICAL RESULTS FOR
HALLIBURTON ENERGY SERVICES
ATTN: SCOTT NELSON
5801 LOVINGTON HWY
HOBBS, NM 88240
FAX TO:

Receiving Date: 12/12/00
Reporting Date: 12/16/00
Project Number: NOT GIVEN
Project Name: WASHBAY SUMP
Project Location: HOBBS YARD

Sampling Date: 12/12/00
Sample Type: SLUDGE
Sample Condition: COOL & INTACT
Sample Received By: AH
Analyzed By: AH/GP

TCLP METALS

| LAB NO. | SAMPLE ID | As ppm | Ag ppm | Ba ppm | Cd ppm | Cr ppm | Pb ppm | Hg ppm | Se ppm |
|--------------------------------|----------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ANALYSIS DATE: | | 12/13/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/14/00 | 12/15/00 | 12/14/00 |
| EPA LIMITS: | | 5 | 5 | 100 | 1 | 5 | 5 | 0.2 | 1 |
| H6422-1 | WASHBAY SLUDGE | <1 | <1 | <5 | <0.1 | <1 | <1 | <0.02 | <0.1 |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| | | | | | | | | | |
| Quality Control | | 0.193 | 4.719 | 44.56 | 1.047 | 5.009 | 0.00945 | 5.076 | 0.053 |
| True Value QC | | 0.200 | 5.000 | 50.00 | 1.000 | 5.000 | 0.01000 | 5.000 | 0.050 |
| % Recovery | | 96.5 | 94.4 | 89.1 | 105 | 100 | 94.5 | 102 | 106 |
| Relative Standard Deviation | | 2.0 | 0.5 | 3.7 | 0.3 | 2.9 | 5.8 | 0.4 | 2.0 |
| METHODS: EPA 1311, 600/4-91/01 | | 206.2 | 272.1 | 208.1 | 213.1 | 218.1 | 239.1 | 245.1 | 270.2 |

Amy Hill
Chemist

12-16-00
Date

H5422M.XLS

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CO
TIN
FID

Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Aztec, NM 87410
District IV - (505) 827-7131

Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131

Originated 8/8

Submit Origin
Plus 1 Co
to appropri:
District Off

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|--|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 4. Generator KOCH ASPHALT PLAN 5. Originating Site ARTESIA NM 6. Transporter UNKNOWN |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 882318. State NEW MEXICO |
| 7. Location of Material (Street Address or ULSTR) | 2411 North Freeman |
| 9. Circle One: A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. <input checked="" type="radio"/> B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following MSDS is for Sylvablend D40T. This waste is used as an emulsion preparation at this plant. No other chemicals have been added to this material. It has been left in a tank there on location. Sundance would like approval to accept this material into our Sunandace Facility.

Estimated Volume 100 bbls. cy Known Volume (to be entered by the operator at the end of the haul) _____ cy

SIGNATURE: Donna L. Roach TITLE: OFFICE MGR DATE: 1-3-01
Waste Management Facility Authorized Agent
TYPE OR PRINT NAME: DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY: DENIED TITLE: Not oil field DATE: _____
APPROVED BY: _____ TITLE: _____ DATE: _____

CERTIFICATE OF WASTE STATUS

Non-Exempt Waste Material

ORIGINATION LOCATION: Koch Asphalt Plant, Artesia , New Mexico

SOURCE: Emulsion preparation Waste Sylvablend® D40T (Tall Oil)

DISPOSAL LOCATION: Parabo, Eunice Facility

As a condition of acceptance for disposal, I hereby certify that this waste is non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for Koch Pavement Solutions concur with the status of the waste from subject site.

Name: Bob Allen

Title/Agency: Safety & Environmental Solutions, Inc.

Address: 703 E. Clinton, Hobbs, New Mexico

Signature: Bob Allen

Date: January 3, 2001

Notes to Physician Provide general supportive measures and treat symptomatically. In case of ingestion, the decision of whether or not to induce vomiting should be made by the attending physician. If burn is present, treat as any thermal burn.

If victims of chemical over-exposure are taken for medical attention, give a copy of the label or MSDS to the physician/health professional.

Section 5. Fire and Explosion Data

Flammability of the Product Nonflammable.

Auto-Ignition Temperature Not available.

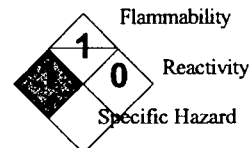
Flash Point >260°C (500°F).

Flammable Limits Not available.

NFPA 704

0=Minimal; 1=Slight;
2=Moderate; 3=Serious;
4=Severe

Health



This information is for people trained in the National Fire Protection Association's (NFPA 704) Identification of the Fire Hazards of Materials.

General Fire Hazards Product is not considered combustible. If heated above its flash point in the presence of air, product can support combustion. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. If mist is generated, minimum flash point may be reduced.

Hazardous Decomposition Products Smoke, carbon monoxide, carbon dioxide, water, trace quantities of sulfur oxides, and other normal products of combustion.

Extinguishing Media Carbon dioxide, dry chemical or water. Avoid using a direct stream of water.

Fire Fighting Equipment and Instructions Wear full protective clothing, including self-contained positive pressure/pressure demand breathing apparatus, helmet, and protective clothing. Use water spray to cool fire-exposed containers and to protect personnel.

Section 6. Accidental Release Measures

Containment Contain the discharged material. Do not allow product to enter sewer or waterways. Check with local and state environmental agencies for guidance.

Clean-up Procedures Spills may present a slipping (physical) hazard. Wear appropriate protective equipment and clothing during clean-up. Avoid skin and eye contact. Absorb spill with inert material. Shovel material into appropriate container for disposal. Thoroughly wash spill area with water after clean-up. **WATER SPILL:** product is regulated as an oil under the Clean Water Act. Follow all applicable regulations. Follow all Local, State, Federal and Provincial regulations for disposal.

Evacuation Procedures Isolate area. Keep unnecessary personnel away. In case of large spills, follow all facility emergency response procedures.

Special Instructions Remove soiled clothing and laundry before reuse (see Section 7 - Storage). Avoid excessive skin contact with spilled material. Wear appropriate personal protective equipment.

Section 7. Handling and Storage

Handling Avoid prolonged or repeated skin contact with this material. Wash thoroughly after handling. Avoid inhalation of mists/vapors/fumes. Keep this product from heat, sparks, or open flame. Do not use air pressure or apply heat with open flame to remove contents of drum. After emptied, drum may retain solid, liquid and/or vapor residues. Continue to observe all precautions on label as if drum were full. Do not cut, puncture, torch or weld on or near the emptied drum. Do not use for other purposes. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

Storage Store at ambient temperature and atmospheric pressure. Porous material such as clothing, rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.

Section 8. Exposure Controls/Personal Protection

| | |
|-----------------------------|---|
| Engineering Controls | Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product. |
| Personal Protection | |
| Eye/Face: | Wear chemical goggles and face shield if splashing is possible. Ensure compliance with OSHA's personal protective equipment (PPE) standard for eye and face protection, 29 CFR 1910.133. |
| Skin: | Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. For heated/molten product, use any type thermal insulating gloves and other clothing as necessary to protect from thermal burns. Ensure compliance with OSHA's personal protective equipment (PPE) standard, 29 CFR 1910.132 (general) and 138 (hand protection). |
| Respiratory: | GAS/VAPOR: Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit-testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage, must be implemented. For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in Publication No. 87-116 or ANSI Z88.2-1992. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. |
| General: | Eye wash fountains and emergency showers are recommended. Launder contaminated clothing before reuse. Use good industrial hygiene practices in handling this material. Observe exposure limits for Oil Mist (NOC): ACGIH TWA: 5 mg/m ³ Respirable; STEL 10 mg/m ³ Respirable; OSHA TWA: 5 mg/m ³ Respirable. |

| Chemical Name or Product Name | CAS # | OSHA PEL | ACGIH TLV |
|-------------------------------|-------------|-----------------|-----------------|
| 1) Tall Oil Fractions | Proprietary | Not established | Not established |

NOTE: The 1989 OSHA PELs were vacated in 1993 and are not currently enforceable by Federal OSHA. However, some state OSHA programs may still enforce the 1989 limits.

Section 9. Physical and Chemical Properties

| | | | |
|--------------------------------------|------------------|---|-----------------|
| Physical state and appearance | Liquid. | Vapor Density | Not available. |
| Odor | Fatty. | Percent Volatile (EPA Method 24) | Not available. |
| Color | Dark. | Solubility (water) | Negligible |
| Molecular Weight | Not applicable. | Density (vs. water) | Not available. |
| Specific Gravity | 0.98 (Water = 1) | Flash Point | >260°C (500°F). |
| Boiling Point | >260°C (500°F) | R/B Softening Point | Not applicable. |
| Acid No. | Not applicable | Acid No. (per ASTM D 460) | 167-170 |

Section 10. Stability and Reactivity Data

| | |
|---|---|
| Chemical Stability | The product is stable. |
| Conditions to avoid | Avoid strong oxidizing agents. Avoid prolonged contact with porous materials. |
| Incompatibility | This product may react with strong oxidizing agents. |
| Hazardous Decomposition Products | None, except extreme high temperatures may lead to decomposition, releasing fumes containing carbon monoxide, carbon dioxide, water, trace sulfur oxides, and/or hydrocarbons of varying molecular weights. |

Continued on Next Page

Page Number: 3

Hazardous Polymerization

Hazardous polymerization will not occur.

Section 11. Toxicological Information**Toxicity to Animals**

No toxicological information is available for this product. However, tall oil fractions may contain some or all of the following:

Tall Oil Rosin:

ORAL, rat, LD50 = 7600 mg/kg;

ORAL, mouse, LD50 = 4600 mg/kg;

ORAL, guinea pig, LD50 = 4600 mg/kg;

DERMAL, rabbit: LD50 = > 2500 mg/kg.

Tall Oil Fatty Acids:

ORAL, rat, LD50 = > 10,000 mg/kg.

DERMAL, rabbit, LD50 = > 2000 mg/kg.

Tall oil fatty acids were not found to be an eye or skin irritant in rabbits. No alteration of reproductive physiology was found in rats at feeding levels of 5% and 10% of their diet. Tall oil fatty acids were non-mutagenic in the Ames Salmonella Assay. Some tall oil fatty acids were found to cause skin sensitization in 50% of exposed guinea pigs.

Tall Oil Heads:

ORAL, rat, LD50 = > 9000 mg/kg.

Tall Oil Pitch:

A mixture of tall oil pitch and tall oil heads was found to cause skin sensitization in 16% of exposed guinea pigs. Tall oil pitch alone may not cause skin sensitization.

Dimer Fatty Acids:

ORAL, rat, LD50 = > 5000 mg/kg.

In laboratory tests, guinea pigs exposed to dimer fatty acids did not exhibit a skin sensitization response. This product was not found to be a skin irritant in rabbits.

Toxicity to Humans

Contact may cause skin or eye irritation. Exposure to oil mists/fumes/vapors may cause respiratory tract irritation with throat discomfort, coughing, and difficulty breathing.

A similar product was not found to be a skin sensitizer in adult males following prolonged or repeated skin contact.

CARCINOGENIC EFFECTS: None of this product's components are listed as carcinogens by ACGIH, IARC, NIOSH, NTP or OSHA. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. No information available on the toxicity of this product to the reproductive system.

Section 12. Ecological Information**Ecotoxicity**

When spilled, this product may act as an oil, causing a film, sheen, emulsion, or sludge at or beneath the surface of a body of water. Oils of any kind can cause: (a) drowning of waterfowl due to lack of buoyancy, loss of insulating capacity of feathers, starvation and vulnerability to predators due to lack of mobility; (b) lethal effects on fish by coating gill surfaces, preventing respiration; (c) potential fish kills resulting from alteration in biochemical oxygen demand; (d) asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom; and (e) adverse aesthetic effects of fouled shoreline and beaches.

No toxicological information is available for this product. However, tall oil fractions may contain some or all of the following:

Tall Oil Fatty Acids:

Acute fish toxicity (zebra):

LC50 (24h) = 50-100 mg/l;

LC50 (96h) = 10-20 mg/l, (NOEC = 10 mg/l).

Immobilization studies (Daphnia magna):

EC50 (48 hr) = 55.7 mg/l.

Respiratory inhibition studies using activated sludge showed 50% inhibition for tall oil fatty acids was not reached after 30 minutes at the highest concentration tested (1000 mg/l).

Tall Oil Pitch:

Acute fish toxicity (Zebra):
LC50 (96h) = > 400 mg/l.

Growth inhibition studies (Fresh water algae):
EC50 (72 hr) = > 1000 mg/l, (NOEC = 5000 mg/l).

Immobilization studies (Daphnia magna):
EC50 (48 hr) = > 2000 mg/l.

Environmental Fate Biodegradability studies showed tall oil fatty acids to be readily biodegradable, and degraded 50% within seven days.

Section 13. Disposal Considerations

Waste Disposal Wastes must be tested using methods described in 40 CFR 261 to determine if it meets applicable definitions of hazardous waste. No EPA Waste Numbers are applicable for this product's components. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Write to the address listed in Section 1 for information on heavy metals analysis and other disposal information.

Section 14. Transport Information

DOT Classification Not a DOT controlled material (United States).

Proper Shipping Name None.

DOT Identification Number None.

Packing Group None.

Hazardous Substances Reportable Quantity Not available.

Special Provisions for Transport IF SHIPPED OVER 100°C (but less than product flash point): DOT Shipping Name: Elevated temperature liquid, n.o.s.; Hazard Class: 9; UN/NA Number: UN3257; Packing group III (bulk shipping requires "HOT" placard).

Additional Shipping Information Not Determined

International Transportation Regulations Not Determined

Section 15. Regulatory Information

Federal and State Regulations OSHA: Not hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

SARA TITLE III:

SARA Section 302 (40 CFR 355 Appendix A): **None of this product's components are listed;**

SARA Section 311/312 (40 CFR 370.2): **None;**

SARA Section 313 (40 CFR 372.65): **None of this product's components are listed;**

CERCLA (40 CFR 302.4): **None of this product's components are listed.**

EPA, Clean Water Act: Regulated as a non-petroleum based oil. Spills of this material to navigable waters in quantities sufficient to produce "sheen" are reportable.

TSCA Inventory: All of this product's components are listed.

State Lists: This product can contain a component on the State of Minnesota Hazardous Substance List:
Rosin

This product does not contain any chemicals currently on the California List of Known Carcinogens and Reproductive Toxins.

Section 16. Other Information

Key/Legend ACGIH = American Conference of Governmental Industrial Hygienists. ANSI = American National Standards Institute. ASTM = American Society for Testing and Materials. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. DOT = Department of Transportation. EPA = Environmental Protection Agency. IARC = International Agency for Research on Cancer. LD = Lethal Dose. NIOSH = National Institute of Occupational Health and Safety. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limit. SARA = Superfund Amendments and Reauthorization Act. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act.

Validated by Richard Moye on 05/22/2000.

Verified by Regulatory Affairs Dept..

Printed 11/27/2000.

Supersedes Date 05/01/98 **Reason for Revision** Update Section 1

Notice to Reader

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.



Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

Product/Trade Name SYLVABLEND® D40T
(formerly ACINTOL® D40T & SYLVATAL® D40T)

Supplier / Manufacturer Arizona Chemical
P.O. Box 550850
Jacksonville, FL 32255-0850 USA
(800) 526-5294 / (904) 928-8700

Code D40T
MSDS# 6220
Validation Date 05/22/2000
Print Date 11/27/2000

Chemical Name Tall Oil

EMERGENCY PHONE
CHEMTREC: 1-800-424-9300
(transportation and medical)

Section 2. Composition and Information on Ingredients

| Name | CAS # | % by Weight |
|-----------------------|-------------|-------------|
| 1) Tall Oil Fractions | Proprietary | 100 |

See Section 8 for Exposure Controls/ Exposure Limits/ Personal Protection information.

Section 3. Hazards Identification

EMERGENCY OVERVIEW

Product is a dark liquid with a fatty odor. Product is not considered to be combustible. However, after prolonged contact with highly porous materials, this product may spontaneously combust. May cause eye and skin irritation. If heated product contacts the eye and/or skin, thermal burns may result. Inhalation of mists/vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing. Aspiration into lungs may cause chemical pneumonitis and pulmonary edema.

HMIS

HEALTH: ☐ 1

FIRE: ☐ 1

REACTIVITY: ☐ 0

PPE: see Section 8 of this MSDS.

0=Minimal; 1=Slight; 2=Moderate;
3=Serious; 4=Severe;
(*)=Chronic health hazard.

Potential Health Effects

| | |
|---------------------|--|
| Eye Contact | Product may cause eye irritation. If heated product contacts the eye, thermal burns may result. |
| Skin Contact | Product may cause skin irritation. When it is heated, this product may cause thermal burns. |
| Inhalation | Exposure to oil mists/vapors/fumes may cause respiratory tract irritation. Heating this product may release harmful vapors. Inhalation of mists/vapors/fumes generated by heating this product may cause respiratory tract irritation with throat discomfort, coughing and difficulty breathing. |
| Ingestion | Ingestion of large quantities may result in gastrointestinal disturbances including irritation, nausea, and diarrhea. Aspiration into lungs may cause severe damage, including chemical pneumonitis and pulmonary edema. |

Section 4. First Aid Measures

| | |
|---------------------|--|
| Eye Contact | Immediately flush eyes with flooding amounts of cool, low pressure water for at least 15 minutes. If irritation persists, get medical attention. If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately. |
| Skin Contact | In case of skin contact, wash immediately with soap and water. If irritation develops or persists, get medical attention. If hot product contacts skin, cool under running water and get medical attention. Launder contaminated clothing before reuse. |
| Inhalation | Move person to non-contaminated air. If affected person is not breathing, apply artificial respiration. Seek medical attention. |
| Ingestion | If swallowed, contact a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by medical personnel. |

Continued on Next Page

Page Number: 1

Section 16. Other Information

Key/Legend ACGIH = American Conference of Governmental Industrial Hygienists. ANSI = American National Standards Institute. ASTM = American Society for Testing and Materials. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. DOT = Department of Transportation. EPA = Environmental Protection Agency. IARC = International Agency for Research on Cancer. LD = Lethal Dose. NIOSH = National Institute of Occupational Health and Safety. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limit. SARA = Superfund Amendments and Reauthorization Act. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act.

Validated by Richard Moye on 05/22/2000.

Verified by Regulatory Affairs Dept..

Printed 11/27/2000.

Supersedes Date 05/01/98 **Reason for Revision** Update Section 1

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Last Page of MSDS

Page Number: 6

JAN 16-01 TUE 16:36

SUNDANCE SERVICES INC

FAX NO. 5053942590

P.01

SUNDANCE SERVICES INC.

P. O. BOX 1737

EUNICE, NM 88231

505-394-2511

505-394-2590 FAX

FACSIMILE TRANSMITTAL SHEET

TO

Martyne Kielling

FROM

Donna Roach

COMPANY:

NMOCD

DATE:

1-16-00

FAX NUMBER:

505-476-3462

TOTAL NO. OF PAGES (INCLUDING COVER)

18

PHONE NUMBER

SENDER'S REFERENCE NUMBER

RE

YOUR REFERENCE NUMBER

☐ URGENT ☐ FOR REVIEW ☐ PLEASE COMMENT ☐ PLEASE REPLY ☐ PLEASE RECYCLE

NOTES/COMMENTS

Martyne,

Please review these approvals. This first analytical results are from Equilon Jal tank farm. They are emptying monitor wells around the tank farm, that have diesel in them(justa skim).m They would they would like to haul ASAP. The Asphalt plant would like to haul by friday. Please give me a call as soon as you can.

Thank you,

Donna Roach

JAN 16-01 TUE 16:36
Jan 16 01 09:32a

SUNDANCE SERVICES INC
THERESA NIX

FAX NO. 5053942590
3617770971

P. 02
p. 1



ASSESSMENT • REMEDIATION • RISK ASSESSMENT • COMPLIANCE • LITIGATION / ENFORCEMENT SUPPORT

FAX TRANSMITTAL

TO: Donna
Sundance Services

FAX: 505-394-2590

FROM: Theresa Nix

PHONE: 361-777-0630

DATE: 01/16/01

RE: Water disposal

H₂A Job No. 106.001

Total No. of Pages (including cover sheet): 8

Donna,

The analytical data for the material to be hauled is attached. Please call me after you look over this so we can schedule the trucks. We would like to begin hauling this today. We have approximately 450 - 500 bbls.

Thanks!

C:\P\eraz\H2A\Job - 106\011\Sundance Fax 01-16-01.doc



Certificate of Analysis Summary 200378

KEY Consultants, Ltd., Carrollton, TX

Project Name: Jal Station

Project ID: 910103

Project Manager: Steve Freundt

Project Location: Jal, New Mexico

Date Received in Lab: Thu Jan-20-00 10:30 AM

Date Report Faxed: Fri Jan-28-00

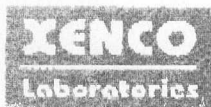
XENCO Contact: Debbie Simmons

| Analysis Requested | Lab ID: | 400378-001 | | | |
|------------------------------|-----------|---------------|--|--|--|
| | Field ID: | Effluent Frac | | | |
| | Depth: | | | | |
| | Matrix: | Water | | | |
| | Sampled: | Jan-19-2000 | | | |
| | Analyzed: | Jan-24-2000 | | | |
| | Unit: | mg/L | | | |
| | | R L | | | |
| SVOAs by EPA 8270C | | | | | |
| Acenaphthene | | BRL 0.002 | | | |
| Acenaphthylene | | BRL 0.002 | | | |
| Anthracene | | BRL 0.002 | | | |
| Benzo(a)anthracene | | BRL 0.002 | | | |
| Benzo(a)pyrene | | BRL 0.002 | | | |
| Benzo(b)fluoranthene | | BRL 0.002 | | | |
| Benzo(g,h,i)perylene | | BRL 0.002 | | | |
| Benzo(k)fluoranthene | | BRL 0.002 | | | |
| Benzyl Alcohol | | BRL 0.020 | | | |
| Benzyl Butyl Phthalate | | BRL 0.010 | | | |
| Bis(2-chloroethoxy) methane | | BRL 0.010 | | | |
| Bis(2-chloroethyl) ether | | BRL 0.010 | | | |
| Bis(2-chloroisopropyl) ether | | BRL 0.010 | | | |
| Bis(2-ethylhexyl) phthalate | | BRL 0.010 | | | |
| 4-Bromophenyl-phenyl ether | | BRL 0.010 | | | |
| Di-n-Butyl Phthalate | | BRL 0.010 | | | |
| 4-chloro-3-methylphenol | | BRL 0.010 | | | |
| 4-Chloroaniline | | BRL 0.020 | | | |
| 2-Chloronaphthalene | | BRL 0.010 | | | |
| 2-Chlorophenol | | BRL 0.010 | | | |
| 4-Chlorophenyl Phenyl Ether | | BRL 0.010 | | | |
| Chrysene | | BRL 0.002 | | | |
| Dibenz(a,h)Anthracene | | BRL 0.002 | | | |
| Dibenzofuran | | 0.031 0.010 | | | |
| 1,2-Dichlorobenzene | | BRL 0.010 | | | |
| 1,3-Dichlorobenzene | | BRL 0.010 | | | |
| 1,4-Dichlorobenzene | | BRL 0.010 | | | |
| 2,4-Dichlorophenol | | BRL 0.010 | | | |

This analytical report, and the entire data package it represents, has been made for your exclusive and confidential use. The interpretations and results expressed throughout this analytical report represent the best judgment of XENCO Laboratories. XENCO Laboratories, however, assumes no responsibility and makes no warranty to the end use of the data hereby presented.

BRL Below Reporting Limit.

Eddie L. Clemons, II
QA/QC Director



Certificate of Analysis Summary 200378

KEI Consultants, Ltd., Carrollton, TX

Project Name: Jal Station

Project ID: 910103

Project Manager: Steve Freundt

Project Location: Jal, New Mexico

Date Received in Lab: Thu Jan-20-00 10:30 AM

Date Report Faxed: Fri Jan-28-00

XENCO Contact: Debbie Simmons

| Analysis Requested | Lab ID: | 200378-001 | | | |
|-----------------------------|-----------|--------------|-------|--|--|
| | Field ID: | Effluent Fmg | | | |
| | Depth: | | | | |
| | Matrix: | Water | | | |
| | Sampled: | Jan-19-2000 | | | |
| | Analyzed: | Jan-24-2000 | | | |
| | Units: | mg/L | | | |
| SVOAs by EPA 8270C | | | R.L. | | |
| Diethyl Phthalate | | BRL | 0.010 | | |
| Dimethyl Phthalate | | BRL | 0.010 | | |
| 2,4-Dimethylphenol | | 0.039 | 0.010 | | |
| 4,6-dinitro-2-methyl phenol | | BRL | 0.010 | | |
| 2,4-Dichlorophenol | | BRL | 0.020 | | |
| 2,6-Dinitrotoluene | | BRL | 0.010 | | |
| 1,2-Diphenylhydrazine | | BRL | 0.020 | | |
| Fluorethene | | BRL | 0.002 | | |
| Fluorene | | BRL | 0.002 | | |
| Hexachlorobenzene | | BRL | 0.010 | | |
| Hexachlorobutadiene | | BRL | 0.010 | | |
| Hexachlorocyclopentadiene | | BRL | 0.010 | | |
| Hexachloroethane | | BRL | 0.010 | | |
| Indeno(1,2,3-c,d)Pyrene | | BRL | 0.002 | | |
| Isophorone | | BRL | 0.010 | | |
| 2-Methylnaphthalene | | 0.109 | 0.002 | | |
| 2-methylphenol | | BRL | 0.010 | | |
| 3,5,4-Methylphenol | | BRL | 0.010 | | |
| Naphthalene | | 0.061 | 0.002 | | |
| 4-Nitroaniline | | BRL | 0.020 | | |
| 3-Nitroaniline | | BRL | 0.020 | | |
| 2-Nitroaniline | | BRL | 0.020 | | |
| Nitrobenzene | | BRL | 0.020 | | |
| 2-Nitrophenol | | BRL | 0.010 | | |
| 4-Nitrophenol | | BRL | 0.010 | | |
| n-Nitrosodl-n-Propylaniline | | BRL | 0.010 | | |
| n-Nitrosodiphenylamine | | BRL | 0.010 | | |
| Di-n-Octyl Phthalate | | BRL | 0.010 | | |

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Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limit



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XENCO Contact: Debbie Simmons

| Analysis Requested | Lab ID: | 200378-001 | | | |
|------------------------|-----------|---------------|--|--|--|
| | Field ID: | Effluent Frac | | | |
| | Depth: | | | | |
| | Matrix: | Water | | | |
| | Sampled: | Jan-19-2000 | | | |
| | Analyzed: | Jan-24-2000 | | | |
| SVOAs by EPA 8270C | Units: | mg/L | | | |
| | | | | | |
| Perchlorophenol | | BRL 0.010 | | | |
| Perfluorobenzene | | 0.020 0.002 | | | |
| Phenol | | BRL 0.010 | | | |
| Pyrene | | 0.003 0.002 | | | |
| 1,2,4-Trichlorobenzene | | BRL 0.010 | | | |
| 2,4,6-Trichlorophenol | | BRL 0.010 | | | |
| 2,4,5-Trichlorophenol | | BRL 0.010 | | | |

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BRL Below Reporting Limit

Eddie L. Clemons, II
QA/QC Director



Certificate of Analysis Summary 200378

KEI Consultants, Ltd., Carrollton, TX

Project Name: Jal Station

Project ID: 910103

Date Received in Lab: Thu Jan-20-00 10:30 AM

Project Manager: Steve Freundt

Date Report Faxed: Fri Jan-28-00

Project Location: Jal, New Mexico

XENCO Contact: Debbie Simmons

| Analysis Requested | Lab ID : | 200378-001 | | |
|-------------------------------|------------|---------------|--|--|
| | Field ID : | Effluent Pipe | | |
| | Depth : | | | |
| | Matrix : | Water | | |
| | Sampled : | Jan-19-2000 | | |
| | Analyzed : | Jan-24-2000 | | |
| VOAs by SW-846 8260 | Units : | mg/L | | |
| | | R.L. | | |
| Benzene | | 0.021 0.005 | | |
| Bromobenzene | | BRL 0.005 | | |
| Bromochloromethane | | BRL 0.005 | | |
| Bromodichloromethane | | BRL 0.005 | | |
| Bromoform | | BRL 0.005 | | |
| Bromomethane | | BRL 0.005 | | |
| MTBE | | 0.020 0.005 | | |
| tert-Butylbenzene | | BRL 0.005 | | |
| Sec-Butylbenzene | | 0.026 0.005 | | |
| n-Butylbenzene | | BRL 0.005 | | |
| Carbon Tetrachloride | | BRL 0.005 | | |
| Chlorobenzene | | BRL 0.005 | | |
| Chloroethane | | BRL 0.010 | | |
| Chloroform | | BRL 0.005 | | |
| Chloromethane | | BRL 0.010 | | |
| 2-Chlorotoluene | | BRL 0.005 | | |
| 4-Chlorotoluene | | BRL 0.005 | | |
| p-Cymene (p-Isopropyltoluene) | | 0.010 0.005 | | |
| 1,2-Dibromo-3-Chloropropane | | BRL 0.005 | | |
| Dibromochloromethane | | BRL 0.005 | | |
| Dibromomethane | | BRL 0.005 | | |
| 1,2-Dichlorobenzene | | BRL 0.005 | | |
| 1,3-Dichlorobenzene | | BRL 0.005 | | |
| 1,4-Dichlorobenzene | | BRL 0.005 | | |
| Dichlorodifluoromethane | | BRL 0.005 | | |
| 1,2-Dichloroethane | | BRL 0.005 | | |
| 1,1-Dichloroethane | | BRL 0.005 | | |
| trans-1,2-Dichloroethane | | BRL 0.005 | | |

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Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limit



Certificate of Analysis Summary 200378

KEI Consultants, Ltd., Carrollton, TX

Project Name: Jal Station

Project ID: 910103

Project Manager: Steve Freundt

Project Location: Jal, New Mexico

Date Received in Lab: Thu Jan-20-00 10:30 AM

Date Report Faxed: Fri Jan-28-00

XENCO Contact: Debbie Simmons

| Analysis Requested | Lab ID : | 200378-001 | | |
|---------------------------|------------|-------------|-------|--|
| | Field ID : | SW-846 | | |
| VOAs by SW-846 8260 | Depth : | Water | | |
| | State : | Jan-19-2000 | | |
| | Sampled : | Jan-24-2000 | | |
| | Analyzed : | mg/L | | |
| | | | R L | |
| cis-1,2-Dichloroethene | | BRL | 0.005 | |
| 1,1-Dichloroethene | | BRL | 0.005 | |
| 2,2-Dichloropropane | | BRL | 0.005 | |
| 1,3-Dichloropropane | | BRL | 0.005 | |
| 1,2-Dichloropropane | | BRL | 0.005 | |
| trans-1,3-dichloropropane | | BRL | 0.005 | |
| 1,1-Dichloropropane | | BRL | 0.005 | |
| cis-1,3-Dichloropropane | | BRL | 0.005 | |
| Ethylbenzene | | 0.050 | 0.005 | |
| Hexachlorobutadiene | | BRL | 0.005 | |
| Isopropylbenzene | | 0.024 | 0.005 | |
| Naphthalene | | 0.098 | 0.010 | |
| n-Propylbenzene | | 0.027 | 0.005 | |
| Styrene | | BRL | 0.005 | |
| 1,1,1,2-Tetrachloroethane | | BRL | 0.005 | |
| 1,1,2,2-Tetrachloroethane | | BRL | 0.005 | |
| Toluene | | 0.114 | 0.005 | |
| 1,2,4-Trichlorobenzene | | BRL | 0.005 | |
| 1,2,3-Trichlorobenzene | | BRL | 0.005 | |
| 1,1,2-Trichloroethane | | BRL | 0.005 | |
| 1,1,1-Trichloroethane | | BRL | 0.005 | |
| Trichloroethene | | BRL | 0.005 | |
| Trichlorofluoroethane | | BRL | 0.005 | |
| 1,2,3-Trichloropropane | | BRL | 0.005 | |
| 1,2,4-Trimethylbenzene | | 0.078 | 0.005 | |
| 1,3,5-Trimethylbenzene | | 0.017 | 0.005 | |
| Vinyl Chloride | | BRL | 0.005 | |
| o-Xylene | | 0.060 | 0.005 | |

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Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limit



Certificate of Analysis Summary 200378

KEI Consultants, Ltd., Carrollton, TX

Project Name: Jal Station

Project ID: 910103

Project Manager: Steve Freundt

Project Location: Jal, New Mexico

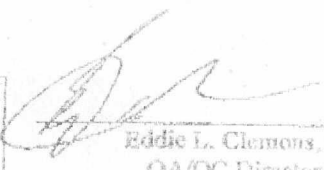
Date Received in Lab: Thu Jan-20-00 10:30 AM

Date Report Faxed: Fri Jan-22-00

XENCO Contact: Debbie Simmons

| Analysis Requested | Lab ID: Field ID: Depth: Matrix: Sampled: | 200378-001 Effluent Pipe | | | |
|---------------------|---|-----------------------------|---------------------|--|--|
| | | Water Jan-19-2000 | | | |
| VOAs by SW-346 8260 | Analyzed: Units: | Jan-24-2000 mg/L | | | |
| m,p-Xylenes | | | R.L. 0.058 0.005 | | |
| Methylene Chloride | | | BRL 0.020 | | |
| Tetrachloroethylene | | | BRL 0.005 | | |

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Eddie L. Clemons, II
QA/QC Director

BRL Below Reporting Limit

JAN 16 01 10E 16:42
Hobbs, NM 88241-1980
District II - (505) 748-1283
811 S. First
Artesia, NM 88210
District III - (505) 334-6178
1000 Rio Brazos Road
Artesia, NM 87410
District IV - (505) 827-7131

SUNDANCE SERVICES INC. FAX NO. 5053942590
Energy Minerals and Natural Resources Department
Oil Conservation Division
2040 South Pacheco Street
Santa Fe, New Mexico 87505
(505) 827-7131


P. 10
Form C-13
Originated 8/8/80
Submit Original
Plus 1 Copy
to appropriate
District Office

REQUEST FOR APPROVAL TO ACCEPT SOLID WASTE

| | |
|--|---------------------------------|
| 1. RCRA Exempt: <input type="checkbox"/> Non-Exempt: <input checked="" type="checkbox"/> | 4. Generator KOCH ASPHALT PLANT |
| Verbal Approval Received: Yes <input type="checkbox"/> No <input type="checkbox"/> | 5. Originating Site ARTESIA NM |
| 2. Management Facility Destination SUNDANCE SERVICES INC. | 6. Transporter UNKNOWN |
| 3. Address of Facility Operator P.O. BOX 1737 Eunice NM 88231 | 8. State NEW MEXICO |
| 7. Location of Material (Street Address or ULSTR) | 2411 North Freeman |
| 9. Circle One A. All requests for approval to accept oilfield exempt wastes will be accompanied by a certification of waste from the Generator; one certificate per job. B. All requests for approval to accept non-exempt wastes must be accompanied by necessary chemical analysis to PROVE the material is not-hazardous and the Generator's certification of origin. No waste classified hazardous by listing or testing will be approved. All transporters must certify the wastes delivered are only those consigned for transport. | |

BRIEF DESCRIPTION OF MATERIAL:

The following MSDS is for Sylvablend D40T. This waste is used as an emulsion preparation at this plant. No other chemicals have been added to this material. It has been left in a tank there on location. Sundance would like approval to accept this material into our Sundance Facility.

Estimated Volume 100 bbls. cy Known Volume (to be entered by the operator at the end of the haul) _____ cy
SIGNATURE  TITLE OFFICE MGR DATE 1-3-01
NAME DONNA L. ROACH TELEPHONE NO. 505-394-2511

(This space for State Use)

APPROVED BY _____ TITLE _____ DATE _____
APPROVED BY _____ TITLE _____ DATE _____

CERTIFICATE OF WASTE STATUS**Non-Exempt Waste Material**

ORIGINATION LOCATION: Koch Asphalt Plant, Artesia, New Mexico

SOURCE: Emulsion preparation Waste Sylvalend® D40T (Tall Oil)

DISPOSAL LOCATION: Parabo, Eunice Facility

As a condition of acceptance for disposal, I hereby certify that this waste is non-exempt waste as defined by the Environmental Protection Agency's (EPA) July 1988 Regulatory Determination. To my knowledge, this waste will be analyzed pursuant to the provisions of 40 CFR Part 261 to verify the nature as non-hazardous. I further certify that to my knowledge no "hazardous or listed waste" pursuant to the provisions of 40 CFR, Part 261, Subparts C and D, has been added or mixed with the waste so as to make the resultant mixture a "hazardous waste" pursuant to the provisions of 40 CFR, Section 261.3.

I, the undersigned as the agent for Koch Pavement Solutions concur with the status of the waste from subject site.

Name: Bob Allen

Title/Agency: Safety & Environmental Solutions, Inc

Address: 703 E. Clinton, Hobbs, New Mexico

Signature: Bob Allen

Date: January 3, 2001

SYLVABLEND® D40T

MSDS# 6220

Notes to Physician

Provide general supportive measures and treat symptomatically. In case of ingestion, the decision of whether or not to induce vomiting should be made by the attending physician. If burn is present, treat as any thermal burn.

If victims of chemical over-exposure are taken for medical attention, give a copy of the label or MSDS to the physician/health professional.

Section 5. Fire and Explosion Data

Flammability of the Product Nonflammable.

Auto-Ignition Temperature Not available.

Flash Point >260°C (500°F)

Flammable Limits Not available.

General Fire Hazards Product is not considered combustible. If heated above its flash point in the presence of air, product can support combustion. Porous material such as rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material. If mist is generated, minimum flash point may be reduced.

Hazardous Decomposition Products Smoke, carbon monoxide, carbon dioxide, water, trace quantities of sulfur oxides, and other normal products of combustion.

Extinguishing Media Carbon dioxide, dry chemical or water. Avoid using a direct stream of water.

Fire Fighting Equipment and Instructions Wear full protective clothing, including self-contained positive pressure/pressure demand breathing apparatus, helmet, and protective clothing. Use water spray to cool fire-exposed containers and to protect personnel.

NFPA 704

Health

Flammability

Reactivity

0=Minimal, 1=Slight,
2=Moderate, 3=Severe;
4=Severe



This information is for people trained in the National Fire Protection Association's (NFPA 704) Identification of the Fire Hazards of Materials.

Section 6. Accidental Release Measures

Containment Contain the discharged material. Do not allow product to enter sewer or waterways. Check with local and state environmental agencies for guidance.

Clean-up Procedures Spills may present a slipping (physical) hazard. Wear appropriate protective equipment and clothing during clean-up. Avoid skin and eye contact. Absorb spill with inert material. Shovel material into appropriate container for disposal. Thoroughly wash spill area with water after clean-up. WATER SPILL: product is regulated as an oil under the Clean Water Act. Follow all applicable regulations. Follow all Local, State, Federal and Provincial regulations for disposal.

Evacuation Procedures Isolate area. Keep unnecessary personnel away. In case of large spills, follow all facility emergency response procedures.

Special Instructions Remove soiled clothing and launder before reuse (see Section 7 - Storage). Avoid excessive skin contact with spilled material. Wear appropriate personal protective equipment.

Section 7. Handling and Storage

Handling Avoid prolonged or repeated skin contact with this material. Wash thoroughly after handling. Avoid inhalation of mists/vapors/fumes. Keep this product from heat, sparks, or open flame. Do not use air pressure or apply heat with open flame to remove contents of drum. After emptied, drum may retain solid, liquid and/or vapor residues. Continue to observe all precautions on label as if drum were full. Do not cut, puncture, torch or weld on or near the emptied drum. Do not use for other purposes. Never eat, drink, or smoke in work areas. Practice good personal hygiene after using this material, especially before eating, drinking, smoking, using the toilet or applying cosmetics.

Storage Store at ambient temperature and atmospheric pressure. Porous material such as clothing, rags, paper, insulation, or organic clay may spontaneously combust when wetted with this material.

SYLVA BLEND® D40T

MSDS# 6220

Section 8. Exposure Controls/Personal Protection

| | |
|-----------------------------|---|
| Engineering Controls | Provide local exhaust and general ventilation systems to maintain airborne concentrations below OSHA, ACGIH, and manufacturer recommended exposure limits. Local exhaust ventilation is preferred because it prevents contaminant dispersion into work areas by controlling it at its source. Local exhaust ventilation is recommended when generating excessive levels of vapors from handling or thermal processing. Use local and general exhaust ventilation to effectively remove and prevent buildup of mists/vapors/fumes generated from the handling of this product. |
| Personal Protection | |
| Eye/Face: | Wear chemical goggles and face shield if splashing is possible. Ensure compliance with OSHA's personal protective equipment (PPE) standard for eye and face protection, 29 CFR 1910.133. |
| Skin: | Use impervious gloves. Work clothing sufficient to prevent all skin contact should be worn, such as coveralls and long sleeves. For heated/molten product, use any type thermal insulating gloves and other clothing as necessary to protect from thermal burns. Ensure compliance with OSHA's personal protective equipment (PPE) standard, 29 CFR 1910.132 (general) and 138 (hand protection). |
| Respiratory: | GAS/VAPOR: Respirators should be selected by and used under the direction of a trained health and safety professional following requirements found in OSHA's respirator standard (29 CFR 1910.134) and ANSI's standard for respiratory protection (Z88.2-1992). A written respiratory protection program, including provisions for medical certification, training, fit-testing, exposure assessments, maintenance, inspection, cleaning, and convenient, sanitary storage, must be implemented. For concentrations above the TLV and/or PEL but less than 10 times these limits, a NIOSH approved half-facepiece respirator equipped with appropriate chemical cartridges may be used. For concentrations greater than 10 times the TLV and/or PEL, consult the NIOSH respirator decision logic found in Publication No. 87-116 or ANSI Z88.2-1992. Warning! Air-purifying respirators do not protect workers in oxygen-deficient atmospheres. |
| General: | Eye wash fountains and emergency showers are recommended. Launder contaminated clothing before reuse. Use good industrial hygiene practices in handling this material. Observe exposure limits for Oil Mist (NOC): ACGIH TWA: 5 mg/m ³ Respirable; STEL 10 mg/m ³ Respirable; OSHA TWA: 5 mg/m ³ Respirable. |

| Chemical Name or Product Name | CAS # | OSHA PEL | ACGIH TLV |
|-------------------------------|-------------|-----------------|-----------------|
| 1) Tall Oil Fractions | Proprietary | Not established | Not established |

NOTE: The 1989 OSHA PELs were located in 1993 and are not currently enforceable by Federal OSHA. However, some state OSHA programs may still enforce the 1989 limits.

Section 9. Physical and Chemical Properties

| | | | |
|--------------------------------------|------------------|---|----------------|
| Physical state and appearance | Liquid. | Vapor Density | Not available |
| Odor | Fatty | Percent Volatile (EPA Method 24) | Not available |
| Color | Dark | Solubility (water) | Negligible |
| Molecular Weight | Not applicable | Density (vs. water) | Not available |
| Specific Gravity | 0.98 (Water = 1) | Flash Point | >260°C (500°F) |
| Boiling Point | >260°C (500°F) | R/B Softening Point | Not applicable |
| ST | Not applicable | Auto Ign. Temp. ASTM D3602 | 167-170 |

Section 10. Stability and Reactivity Data

| | |
|---|---|
| Chemical Stability | The product is stable. |
| Conditions to avoid | Avoid strong oxidizing agents. Avoid prolonged contact with porous materials. |
| Incompatibility | This product may react with strong oxidizing agents. |
| Hazardous Decomposition Products | None, except extreme high temperatures may lead to decomposition, releasing fumes containing carbon monoxide, carbon dioxide, water, trace sulfur oxides, and/or hydrocarbons of varying molecular weights. |

Continued on Next Page

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Hazardous Polymerization

Hazardous polymerization will not occur.

Section 11. Toxicological Information

Toxicity to Animals

No toxicological information is available for this product. However, tall oil fractions may contain some or all of the following:

Tall Oil Rosin:

ORAL, rat, LD50 = 7600 mg/kg.

ORAL, mouse, LD50 = 4600 mg/kg.

ORAL, guinea pig, LD50 = 4600 mg/kg.

DERMAL, rabbit, LD50 = > 2500 mg/kg.

Tall Oil Fatty Acids:

ORAL, rat, LD50 = > 10,000 mg/kg.

DERMAL, rabbit, LD50 = > 2000 mg/kg.

Tall oil fatty acids were not found to be an eye or skin irritant in rabbits. No alteration of reproductive physiology was found in rats at feeding levels of 5% and 10% of their diet. Tall oil fatty acids were non-mutagenic in the Ames Salmonella Assay. Some tall oil fatty acids were found to cause skin sensitization in 50% of exposed guinea pigs.

Tall Oil Heads:

ORAL, rat, LD50 = > 5000 mg/kg.

Tall Oil Pitch:

A mixture of tall oil pitch and tall oil heads was found to cause skin sensitization in 16% of exposed guinea pigs. Tall oil pitch alone may not cause skin sensitization.

Dimer Fatty Acids:

ORAL, rat, LD50 = > 5000 mg/kg.

In laboratory tests, guinea pigs exposed to dimer fatty acids did not exhibit a skin sensitization response. This product was not found to be a skin irritant in rabbits.

Toxicity to Humans

Contact may cause skin or eye irritation. Exposure to oil mists/fumes/vapors may cause respiratory tract irritation with throat discomfort, coughing, and difficulty breathing.

A similar product was not found to be a skin sensitizer in adult males following prolonged or repeated skin contact.

CARCINOGENIC EFFECTS: None of this product's components are listed as carcinogens by ACGIH, IARC, NIOSH, NTP or OSHA. **MUTAGENIC EFFECTS:** Not available. **TERATOGENIC EFFECTS:** Not available. No information available on the toxicity of this product to the reproductive system.

Section 12. Ecological Information

Ecotoxicity

When spilled, this product may act as an oil, causing a film, sheen, emulsion, or sludge at or beneath the surface of a body of water. Oils of any kind can cause: (a) drowning of waterfowl due to lack of buoyancy; loss of insulating capacity of feathers; starvation and vulnerability to predators due to lack of mobility; (b) lethal effects on fish by coating gill surfaces, preventing respiration; (c) potential fish kills resulting from alteration in biochemical oxygen demand; (d) asphyxiation of benthic life forms when floating masses become engaged with surface debris and settle on the bottom; and (e) adverse aesthetic effects of fouled shoreline and beaches.

No toxicological information is available for this product. However, tall oil fractions may contain some or all of the following:

Tall Oil Fatty Acids:

Acute fish toxicity (zebra):

LC50 (24h) = 50-100 mg/l.

LC50 (96h) = 10-20 mg/l, (NOEC = 10 mg/l)

Immobilization studies (Daphnia magna):

ED50 (48 hr) = 35.7 mg/l.

Respiratory inhibition studies using activated sludge showed 50% inhibition for tall oil fatty acids was not reached after 30 minutes at the highest concentration tested (1000 mg/l).

Continued on Next Page

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Tail Oil Pitch:

Acute fish toxicity (Zebra):
LC50 (96h) = > 400 mg/L.

Growth inhibition studies (Fresh water algae):
EC50 (72 hr) = > 1000 mg/L, (NOEC = 5000 mg/L).

Immobilization studies (Daphnia magna):
EC50 (48 hr) = > 2000 mg/L.

Environmental Fate

Biodegradability studies showed tail oil fatty acids to be readily biodegradable, and degraded 50% within seven days.

Section 13. Disposal Considerations

Waste Disposal

Wastes must be tested using methods described in 40 CFR 261 to determine if it meets applicable definitions of hazardous waste. No EPA Waste Numbers are applicable for this product's components. Dispose of waste material according to Local, State, Federal, and Provincial Environmental Regulations. Write to the address listed in Section 1 for information on heavy metals analysis and other disposal information.

Section 14. Transport Information

DOT Classification

Not a DOT controlled material (United States).

Proper Shipping Name

None.

DOT Identification Number

None.

Packing Group

None.

Hazardous Substances

Not available.

Reportable Quantity

Special Provisions for Transport

IF SHIPPED OVER 100°C (but less than product flash point): DOT Shipping Name: Elevated temperature liquid, n.o.s.; Hazard Class: 9; UN/NA Number: UN3257; Packing group III. (bulk shipping requires "HOT" placard).

Additional Shipping Information

Not Determined.

International Transportation Regulations

Not Determined.

Section 15. Regulatory Information

Federal and State Regulations

OSHA: Not hazardous by definition of Hazard Communication Standard (29 CFR 1910.1200).

SARA TITLE III

SARA Section 302 (40 CFR 355 Appendix A): None of this product's components are listed.

SARA Section 311/312 (40 CFR 370.2): None.

SARA Section 313 (40 CFR 372.65): None of this product's components are listed.

CERCLA (40 CFR 302.4): None of this product's components are listed.

EPA, Clean Water Act: Regulated as a non-petroleum based oil. Spills of this material to navigable waters in quantities sufficient to produce "sheen" are reportable.

TSCA Inventory: All of this product's components are listed.

State Lists: This product can contain a component on the State of Minnesota Hazardous Substance List: **Rozin**.

This product does not contain any chemicals currently on the California List of Known Carcinogens and Reproductive Toxins.

SYLVABLEND® D40T

MSDS# 6220

Section 16. Other Information**Key/Legend**

ACGIH = American Conference of Governmental Industrial Hygienists. ANSI = American National Standards Institute. ASTM = American Society for Testing and Materials. CERCLA = Comprehensive Environmental Response, Compensation and Liability Act. DOT = Department of Transportation. EPA = Environmental Protection Agency. IARC = International Agency for Research on Cancer. LD = Lethal Dose. NIOSH = National Institute of Occupational Health and Safety. NTP = National Toxicology Program. OSHA = Occupational Safety and Health Administration. PEL = Permissible Exposure Limit. SARA = Superfund Amendments and Reauthorization Act. TLV = Threshold Limit Value. TSCA = Toxic Substance Control Act.

Validated by Richard Moye on 05/22/2000.

Verified by Regulatory Affairs Dept.

Printed 11/27/2000.

Supersedes Date 05/01/98

Reason for Revision

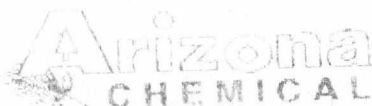
Update Section 1

Notice to Reader

Reasonable care has been taken in the preparation of this information, but the manufacturer makes no warranty of merchantability or any other warranty, expressed or implied, with respect to this information. The manufacturer makes no representations and assumes no liability for any direct, incidental or consequential damages resulting from its use.

Last Page of MSDS

Page Number: 6



Material Safety Data Sheet

Section 1. Chemical Product and Company Identification

| | | | |
|-------------------------|--|--|------------|
| Product/Trade Name | SYLVABLEND® D40T (formerly ACINTOL® D40T & SYLVATAL® D40T) | Code | D40T |
| Supplier / Manufacturer | Arizona Chemical P.O. Box 550850 Jacksonville FL 32255-0850 USA (800) 526-5294 / (904) 928-8700 | MSDS# | 6220 |
| Chemical Name | Tail Oil | Validation Date | 05/22/2000 |
| | | Print Date | 11/27/2000 |
| | | EMERGENCY PHONE CHEMTREC: 1-800-424-9300 (transportation and medical) | |

Section 2. Composition and Information on Ingredients

| Name | CAS # | % by Weight |
|-----------------------|-------------|-------------|
| 1) Tail Oil Fractions | Proprietary | 100 |

See Section 8 for Exposure Controls/ Exposure Limits/ Personal Protection information.

Section 3. Hazards Identification

EMERGENCY OVERVIEW

Product is a dark liquid with a fatty odor. Product is not considered to be combustible. However, after prolonged contact with highly porous materials, this product may spontaneously combust. May cause eye and skin irritation. If heated product contacts the eye and/or skin, thermal burns may result. Inhalation of mists/vapors/fumes generated by heating this product may cause respiratory irritation with throat discomfort, coughing or difficulty breathing. Aspiration into lungs may cause chemical pneumonitis and pulmonary edema.

HMIS

HEALTH: ☐ 1
 FIRE: ☐ 1
 REACTIVITY: ☐ 0
 PPE: see Section 8 of this MSDS.

0=Minimal 1=Slight 2=Moderate
 3=Serious 4=Severe
 (*)=Chemical health hazard

Potential Health Effects

| | |
|--------------|---|
| Eye Contact | Product may cause eye irritation. If heated product contacts the eye, thermal burns may result. |
| Skin Contact | Product may cause skin irritation. When it is heated, this product may cause thermal burns. |
| Inhalation | Exposure to oil mists/vapors/fumes may cause respiratory tract irritation. Heating the product may release harmful vapors. Inhalation of mists/vapors/fumes generated by heating this product may cause respiratory tract irritation with throat discomfort, coughing and difficulty breathing. |
| Ingestion | Ingestion of large quantities may result in gastrointestinal disturbances including irritation, nausea, and diarrhea. Aspiration into lungs may cause severe damage, including chemical pneumonitis and pulmonary edema. |

Section 4. First Aid Measures

| | |
|--------------|--|
| Eye Contact | Immediately flush eyes with flooding amounts of cool, low pressure water for at least 15 minutes. If irritation persists, get medical attention. If hot product contacts eye, flush with water for at least 15 minutes and seek medical attention immediately. |
| Skin Contact | In case of skin contact, wash immediately with soap and water. If irritation develops or persists, get medical attention. If hot product contacts skin, cool under running water and get medical attention. Launder contaminated clothing before reuse. |
| Inhalation | Move person to non-contaminated air. If affected person is not breathing, apply artificial respiration. Seek medical attention. |
| Ingestion | If swallowed, contact a physician or poison control center immediately. DO NOT induce vomiting unless directed to do so by medical personnel. |