STATE OF COLORADO



COLORADO DEPARTMENT OF PUBLIC HEALTH AND ENVIRONMENT WATER QUALITY CONTROL DIVISION

TELEPHONE: (303) 692-3500

CERTIFICATION TO DISCHARGE UNDER CDPS GENERAL PERMIT COG840000 DISCHARGES ASSOCIATED WITH PRODUCED WATER TREATMENT FACILITIES

Certification Number: COG840002

This Certification to Discharge specifically authorizes:

GreenBack Produced Water Recovery, LLC to discharge from the facility identified as

GreenBack Schaeffer Ranch Latitude 39 27"59.11 Longitude 107 42" 52.84" to:

Unnamed tribuatry of West Mamm Creek

Facility Located at:

5.5 Miles southeast of Rifle, Garfield County, Colorado

| Outfall 001A Location | Latitude 39 27' 59.11", Longitude 107 42" 52.84". After completion of all |
|-----------------------|--|
| | treatment and prior to being released to the tributary to West Mann Creek. |

Permit Limitations and Monitoring Requirements apply consistent with General Permit Part I.B and Part I.C

| Parameter | ICIS Code | Discharge Limitations Maximum Concentrations | | | | Monitoring | _ |
|---|-----------------|--|------------------|---------------------|-------------------|------------|-------------|
| | | 30-Day Average | 7-Day Average | Daily Max. | 2-Year Average | Frequency | Sample Type |
| | | A | plicable to al | l Discharges | | | |
| GENERAL PARAMETERS OF CONCER | N | | | | | | |
| Flow, MGD | 50050 | 0.3 | NA | Report | NA | Continuous | Recorder |
| Temperature, °C | 00010 | NA | Report (MWAT) | Report (2hr Max) | NA | Continuous | Recorder |
| Total Suspended Solids, mg/l | 00530 | 30 | 45 | NA | NA | Monthly | Grab |
| Total Dissolved Solids, mg/l | 70295 | Report | NA | Report | NA | Monthly | Grab |
| pH, s.u. (Minimum-Maximum) | 00400 | NA | NA | 6.5-9.0 | NA | Monthly | Garb |
| Chlorides, mg/l | 00940 | 250 | NA | Report | 38 | Monthly | Grab |
| ORGANIC PARAMETERS OF CONCER | N | | | | | | |
| Oil and Grease, mg/l | 03582 | NA | NA | 10 | NA | Monthly | Grab |
| Benzene, ug/l | 34030 | NA | NA | 5,300 | 795 | Monthly | Grab |
| Toluene, ug/l | 34010 | NA | NA | 17,500 | 2625 | Monthly | Grab |
| Ethylbenzene, ug/l | 37371 | NA | NA | 32,000 | 4800 | Monthly | Grab |
| Xylenes (Total), ug/l | 81551 | NA | NA | Report | NA | Monthly | Grab |
| Volatile and Semi-Volatile Organic Compounds, ug/l | 51577 | Report | NA | Report | NA | Quarterly | Grab |
| METAL PARAMETERS OF CONCERN | Potentially Dis | solved (PD) u | nless noted o | therwise) | | | |
| Aluminum, Total Recoverable, ug/l | 01104 | 1438 | NA | 10071 | 216 | Monthly | Grab |
| Antimony, Dissolved, ug/l | 01095 | Report | NA | Report | NA | Monthly | Grab |
| Arsenic, Total Recoverable, ug/l | 00978 | 100 | NA | NA | 15 | Monthly | Grab |
| Arsenic, PD, ug/l | 01309 | NA | NA | 340 | 51 | Monthly | Grab |
| Barium, PD, ug/l | 01311 | Report | NA | Report | | Monthly | Grab |
| Beryllium, Total Recoverable, ug/l | 00998 | 100 | NA | Report | 15 | Monthly | Grab |
| Cadmium, potentially dissolved, ug/l | 01313 | 0.97 | NA | 9.1 | 0.15 | Monthly | Grab |
| Trivalent Chromium, Total Recoverable, ug/l | 04262 | NA | NA | 50 | 7.5 | Monthly | Grab |
| Hexavalent Chromium, dissolved, ug/l | 01220 | 11 | NA | 16 | 1.7 | Monthly | Grab |
| Copper, PD, ug/l | 01306 | 23 | NA NA | 38 | 3.5 | Monthly | Grab |

| Parameter | | | Discha | rge Limitation | | | |
|-------------------------------|---------|------------------------|------------------|----------------|-------------------|------------|---------------|
| | ICIS | Maximum Concentrations | | | | Monitoring | Sample Type |
| | Code | 30-Day Average | 7-Day Average | Daily Max. | 2-Year Average | Frequency | Janipie i ype |
| Iron, Total Recoverable, ug/l | 00980 | 1000 | NA | NA | 150 | Monthly | Grab |
| Lead, PD, ug/l | 01049 | 8.1 | NA | 209 | 1.2 | Monthly | Grab |
| Manganese, PD, ug/i | 01319 | 2379 | NA | 4305 | 357 | Monthly | Grab |
| Mercury, Total, ug/l | 71900 | 0.01 | NA | NA | 0.0015 | Monthly | Grab |
| Nickel, PD, ug/l | 01322 | 132 | NA | 1186 | 20 | Monthly | Grab |
| Selenium, PD, ug/l | 01323 | 4.6 | NA | 18.4 | 0.69 | Monthly | Grab |
| Silver, PD, ug/l | 01304 | 2.1 | NA | 13 | 0.32 | Monthly | Grab |
| Thallium, PD, ug/l | 01324 | 15 | NA NA | NA | 2.3 | Monthly | Grab |
| Uranium, PD, ug/l | 01326 | 5036 | NA | 8062 | 755 | Monthly | Grab |
| Zinc, PD, ug/l | 01303 | 317 | NA | 366 | 48 | Monthly | Grab |
| Calcium (mg/l) | 00918 | Report | NA | NA | NA | Monthly | Grab |
| Magnesium (mg/l) | 00921 | Report | NA | NA | NA | Monthly | Grab |
| Sodium (mg/l) | 00923 | Report | NA | NA | NA | Monthly | Grab |
| Bicarbonate as HCO3 (mg/l) | 00440 | Report | NA | NA | NA | Monthly | Grab |
| SAR calculated limit* | 00931 | Report | NA | NA | NA | Monthly | Grab |
| Adjusted SAR effluent** | 00931 | Report | NA | NA | NA | Monthly | Grab |
| SAR pass/fail *** | 51613 | Pass/Fail | NA | NA | NA | Monthly | Grab |
| EC (dS/m) | 00094 | 1.5 | NA | NA | NA | Monthly | Grab |
| RADIONUCLIDE PARAMETERS OF | CONCERN | | | | | -, | |
| Radium 226+228, Total pCi/l | 11503 | Report | NA | 5 | 0.75 | Quarterly | Grab |
| WET, chronic | | | | | | | |
| Static Renewal 7 Day Chronic | | | | NOEC or | | | |
| Pimephales promelas | ТКР6С | NA | NA | IC25 ≥ IWC | NA | Quarterly | Grab |
| Static Renewal 7 Day Chronic | | | | NOEC or | | | |
| Ceriodaphnia dubia | ТКРЗВ | NA | NA | IC25 ≥ IWC | NA | Quarterly | Grab |

^{*} This SAR limit is to be calculated using the actual measured EC value (30-day average) of the effluent and substituting this value in to the following equation to solve for SAR. The equation for determining the SAR limit is: SAR = (7.1 * EC) - 2.48. This limitation is capped at 8.17.

See the permit for definitions and more information regarding the terms and conditions associated with the above limitations.

Certification is issued and effective: February 6, 2012 Certification Expires: August 31, 2014

This certification under the permit requires that specific actions be performed at designated times. The certification holder is legally obligated to comply with all terms and conditions of the permit.

Signed,

Andrew Neuhart

Assessment Based Permits Unit Manager

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Water Quality Control Division

^{**} The SAR value of the effluent is to be reported as the adjusted SAR. See the definitions section in Part I.C.17 for information on calculating the adjusted SAR value.

^{***} The permittee shall compare the SAR value of the effluent (adjusted SAR) to this calculated SAR limitation and report as Pass/Fail whether the effluent SAR meets this value. If the SAR effluent value (adjusted SAR) is less than or equal to the calculated limit, then the permittee will report "Pass" and if it is greater than the calculated limit the permittee will report "Fail."