0045

Canyon Fuel Company, LLC.
Sufco Mine
A Subsidiary of Arch Western Bituminous Group, LLC.

Ken May, General Manager
397 South 800 West
Salina, UT 84654
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Incoming
C/041/0002

RECEIVED
MAY 2 2 2006
DIV. OF OIL, GAS & MINING

May 18, 2006

Coal Regulatory Program
Attn.: Pam Grubaugh-Littig
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
Box 145801
Salt Lake City, Utah 84114-5801

RE: Pines Tract Temporary 2006 Stock Watering Plan.

Dear Ms. Grubaugh-Littig:

Several subsidence cracks have formed in the East Fork Box Canyon area. Two spring discharge areas have been affected at this time: the North Water spring and Joes Mill Pond spring. These spring areas are located on Manti-LaSal National Forest lands in the SE1/4 of Section 11 and the NE1/4 of Section 14, T12S R5E, SLM. Therefore, Canyon Fuel Company, LLC Sufco Mine will provide water to the water troughs at the North Water spring and place a new temporary water troughs in the general area of Joes Mill Pond for the 2006 stock water season. In the interest of time, water will initially be provided to the North Water springs trough by trucking water to the troughs. While trucking water, Sufco will move the solar panels and piston pump currently in the spring area to a location adjacent to the main stem of the East Fork of Box Canyon Creek. Water to the troughs will then be supplied by the pump located adjacent to the creek. Overflow from the troughs can be directed to the North Water spring area at the bottom of the canyon.

The measured discharge volumes from the North Water spring ranged from 2.61 to 12.00 gpm and 0 to 3 gpm at the Joes Mill Pond spring area. Historic flow data available for these two areas are located on the attached Pines Tract Spring Data sheets. Based on this data, Sufco has determined the water trucking/pumping needs will require an average of 12,000 gallons per day up to a maximum of 21,600 gallons per day of replacement water for stock watering in these two spring areas. This will require an average of 4 loads of water per day up to a maximum of 7 loads per day with a 3,000 gallon 10-wheeler water truck.

Sufco will haul water from the North Fork of Quitchupah Creek where Sufco has been voluntarily hauling stock water during the past few years for the 20 days that the cows are in this area. Sufco proposes to locate water troughs at the locations shown on the attached map as discussed with Russ Jensen of the Emery Cattleman Association. Access to the sites will be on Forest Roads 007, 028, 058 and 044. Additional access will be on unimproved non-service four wheel tracks that branch off Forest Road 028 and lead to the solar power pump and cattle water tanks location at the North Water spring. These tracks will not be improved during the stock watering process.

If you have any questions regarding the information contained in or attached to this letter, please give Mike Davis a call at (435) 286-4421.

Sincerely,
CANYON FUEL COMPANY, LLC
SUFCO Mine

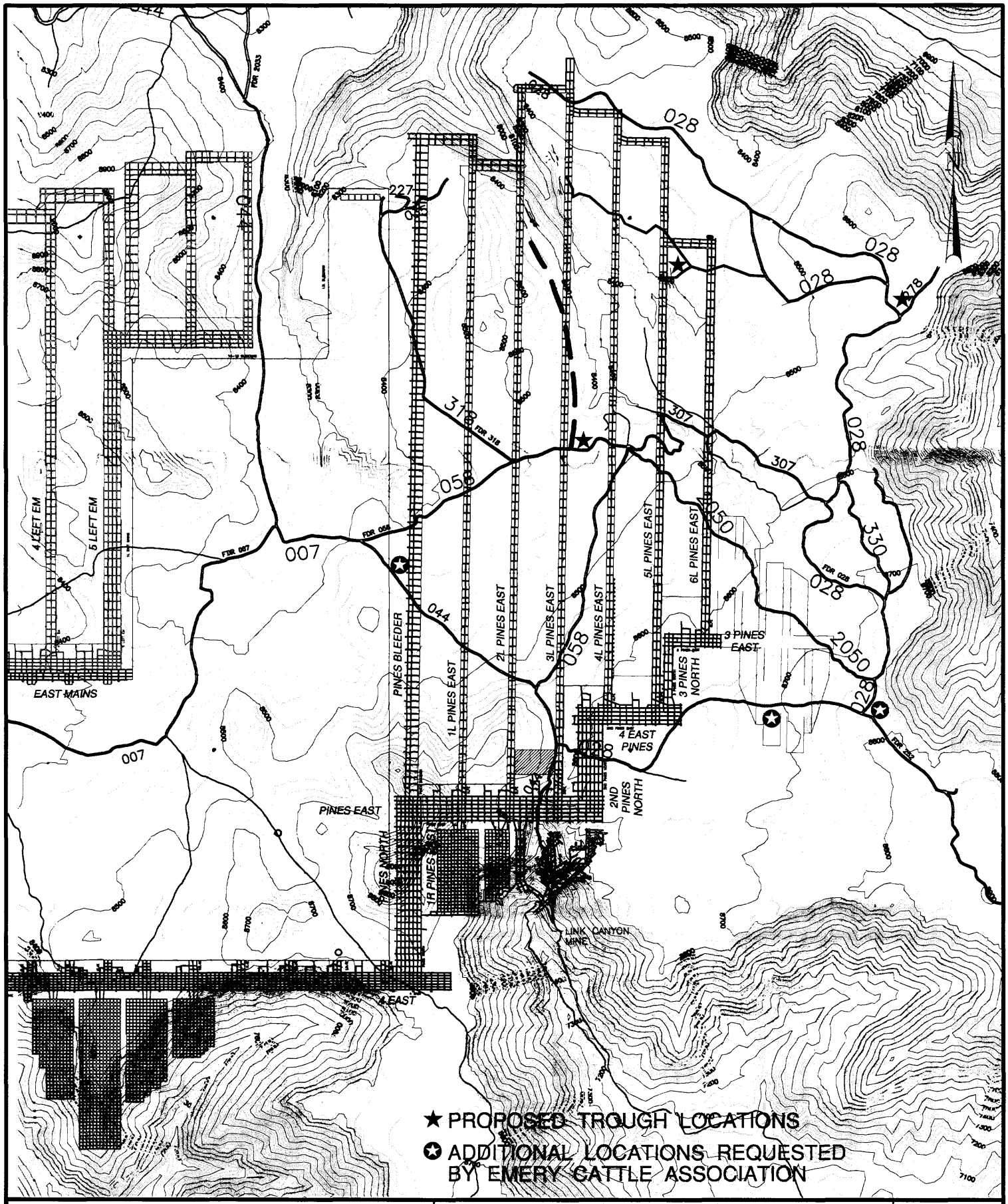
for Ken May

Kenneth E. May
Mine Manager

Encl.

cc: DOGM Price Office
DOGM Correspondence File

Sufpub/govt2006/dogm-coor/Cattle Stock Water Cover Letter.doc



Canyon Fuel Company, LLC SUFCO Mine 397 South 800 West - Salina, UT 84654 (435) 286-4480 Phone (435) 286-4499 Fax	**East Fork Box Canyon** **Location of Water Troughs**		SHEET NO. **Figure 1**
	SCALE: 1" = 3000'	DATE: May 2006	DRAWN BY:K.B.B.
	ENGINEER: M.L.D.	CHECKED BY: M.L.D.	
	FILE NAME: H:\SURVEYIN\SURFACE\BOXCANYN...Cracks2006.dwg		

PINES TRACT SPRING DATA

A. North Water Spring/Sufco Pines 105
Located in Section 11,T21S,R5E,SLBM

Water Right Owner:
No Water Right listed for this spring with the Utah Division of Water Rights.

Water Right amount or Beneficial use:
No Water Right - Beneficial use has been for stock watering of cows starting June 16 for 20 days. Solar pump pumps water to water troughs located above the spring area. This cattle alotment is rotated every other year with another alotment by the Forest Service(2006, 2008, etc).

Flow Rate:

1. Baseline & Sufco Pines 105 Spring Flow Data for 06/17/97 to 12/21/05.

	Flow (gpm)	Gallons/day
Average	6.63	9,547
Maximum	12.00	17,280
Minimum	2.61	3,758

2. Emery Water Conservancy District Website Flow Data 2005.

	Flow (gpm)	Gallons/day
Average	4.74	6,826
Maximum	11.87	17,093
Minimum	0.00	0

3. Emery Water Conservancy District Website Flow Data for 06/07/05 to 07/15/05.

	Flow (gpm)	Gallons/day
Average	1.52	2,189
Maximum	7.29	10,498
Minimum	0.00	0

4. North Water Spring Solar Pump Curve Data.
   Pump rated at 5.1 gpm at 60 feet of vertical lift in this location.
   1. Estimate 4,590 gallons of water pumped per day.
      (Sun light estimated at 15 hours of operation per day (6 am to 9pm))
   2. Maximum Pump capacity of 7,344 gallons of water for 24 hour period.

Mining Activity:
This spring was undermined during the week of December 19, 2005.
An inspection of the area was made on April 27, 2006.
The Division and Forest Service were notified and a combined Division, BLM, Forest Service, Cattleman and Sufco inspection of the area was conducted on 5/11/2006.

B. Joes Mill Pond Spring

Located in Section 14,T21S,R5E,SLBM

Water Right Owner:

No Water Right listed for this spring or Joes Mill pond with the Utah Division of Water Rights.

Water Right amount or Beneficial use:

No Water Right - Beneficial use has been for stock watering of cows starting June 16 for 20 days. This cattle alotment is rotated every other year with another alotment by the Forest Service (2006, 2008, etc).

Flow Rate:

Joes Mill Pond Spring

Flows ranged from no discharge to minor seepage to an est. 2-3 gpm in 2005 from Baseline data and Erik Petersen notes & observations from 06/17/97 to 10/27/05. Maximum flow of 4320 gallons per day at 3 gpm.

Mining Activity:

This spring was undermined during the week of January 30, 2006.
An inspection of the area was made on April 27, 2006.
The Division and Forest Service were notified and a combined Division, BLM, Forest Service, Cattleman and Sufco inspection of the area was conducted on 5/11/2006.

SUFPUB:\WATERMON.DAT\WATRQUAL\NorthWaterSpring Flow Data.xls

UTAH COAL MINING WATER QUALITY DATABASE

DISCLAIMER: The Utah Division of Oil, Gas and Mining provides this data access page free of charge. Data cannot always be validated. DOGM assumes no responsibility for the accuracy or use of the data.

To upload EDI files, you must use Internet Explorer version 4.XX or Netscape version 4.XX or later. Database file format and structure information can be found at:http://ogm.utah.gov/coal/edi/default.htm

Flow														
MINE	SITE TYPE	FROM	THRU	SAMPLES										
				#	MEASURABLE				STANDARD DEVIATION					
					#	MINIMUM	AVERAGE	MAXIMUM	STD	-2 STD	-1 STD	+1 STD	+2 STD
SUFCO	PINES 105 Spring	06/01/2000	12/21/2005	18	18	2.940000	5.748076	10.000000	2.14	1.47	3.61	7.89	10.03

Flow BY DATE	
SAMPLE DATE	SUFCO PINES 105 Spring
06/01/2000 17 40	10.000000
08/23/2000 11 10	5.880000
11/16/2000 14 30	7.300000
06/13/2001 14 30	7.890000
08/22/2001 12 45	5.475360
10/01/2001 11 30	3.660000
05/09/2002 14 50	5.520000
09/21/2002 15 00	3.560000
10/09/2002 15 30	5.060000
06/06/2003 15 10	4.890000
08/05/2003 12 45	2.940000
10/17/2003 14 30	4.340000

06/25/2004 17 50	4.560000
08/12/2004 15 20	3.920000
11/02/2004 14 30	3.650000
06/27/2005 16 30	5.880000
09/29/2005 14 30	9.620000
12/21/2005 15 45	9.320000

NOTE: FOR PASS/FAIL PARAMETERS (P/F), 0=PASS AND 1=FAIL
FOR YES/NO PARAMETERS (Y/N), 0=NO AND 1=YES

For help, contact Dana Dean (801)538-5320 (danadean@utah.gov)

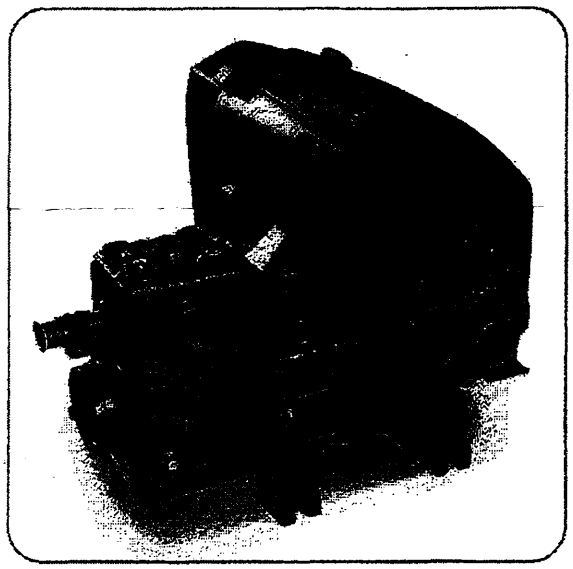
Site	Date	Flow gpm
Pines 105	17-Jun-97	12
Pines 105	28-Jun-97	10
Pines 105	28-Aug-97	2.61
Pines 105	03-Nov-97	10
Pines 105	29-Jun-98	3
Pines 105	16-Sep-98	11.1
Pines 105	04-Nov-98	8.33
Pines 105	22-Jun-99	9.7
Pines 105	25-Aug-99	7.8
Pines 105	27-Oct-99	7.7
Pines 105	23-Aug-00	5.88
Pines 105	13-Jun-01	7.89
Pines 105	22-Aug-01	5.45
Pines 105	01-Oct-01	3.66
PONDS		
Joes Mill Pond	17-Jun-97	
Joes Mill Pond	29-Oct-97	No discharge from seeps noted, 0.5 feet deep x15x20 foot diameter
Joes Mill Pond	23-Aug-00	pond is ~20% full
Joes Mill Pond Seep	10-Oct-03	Minor seepage, not enough to measure
Joes Mill Pond Seep	09-Jun-04	diffuse seepage
Joes Mill Pond Seep	08-Jul-04	diffuse seepage
Joes Mill Pond Seep	02-Nov-04	Minor seepage, not enough to measure
Joes Mill Pond Seep	16-May-05	2-3 gpm est.
Joes Mill Pond Seep	01-Jun-05	2-3 gpm est.
Joes Mill Pond Seep	15-Jun-05	2-3 gpm est.
Joes Mill Pond Seep	01-Jul-05	1 gpm est.
Joes Mill Pond Seep	15-Jul-05	no flow at surface, damp ground
Joes Mill Pond Seep	30-Aug-05	no flow at surface, saturated soil only
Joes Mill Pond Seep	27-Oct-05	no flow at surface, saturated soil only

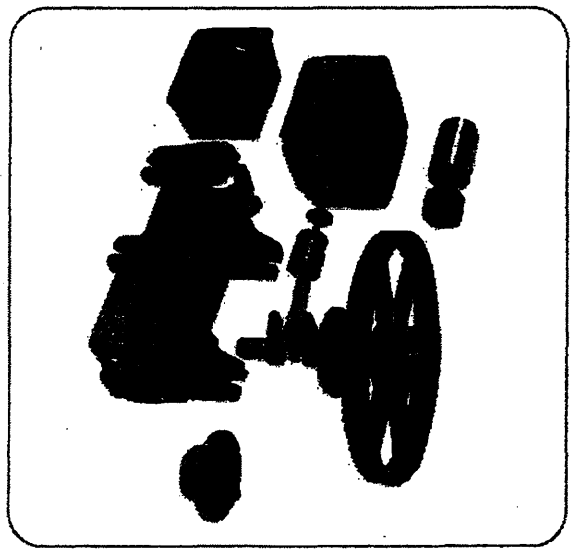
Conergy Solar Force Piston Pump

CONERGY

Conergy Solar Force Piston Pump draws water from a shallow well, spring, pond, river or tank. It can push water uphill and over long distances for home, village, irrigation or livestock uses. It can use power directly from a photovoltaic array or from storage batteries to fill a storage tank or to pressurize water.

- **Ultra-Efficient**
  - Uses less power than any other pump in its range
- **Economical**
  - Reduces power system cost by 25-75 % compared to centrifugal or AC pumps
- **Solar-Direct Application**
  - Starts pumping in low light conditions
- **Pressurizing Application**
  - DC version is most efficient. AC version uses a low-surge permanent magnet motor that greatly reduces starting surge, inverter size, and wire size requirements (when compared to conventional AC pumps).
- **Rugged and Reliable**
  - Proven design with a 20-year life expectancy, simple to maintain with common tools (5-10 yr. maintenance interval)
- **Good Tolerance for Dirt and Dry Run**
- **Mechanical Drive**
  - Allows engine or hand-lever backup
- **Illustrated Instruction Manual**
  - Makes it easy for anyone to install and service, with no previous experience
- **Construction**
  - Cast iron body
  - Brass cylinder and valve seats
  - Leather cup piston seals
  - Neoprene valve seals
  - Oil-bath crankcase
  - Gear (timing) belt drive on PV models
  - Standard V-belt on B models
  - Pressure relief valve
  - Permanent Magnet DC Motor
  - Surge tank included (not in photo)





- **Voltages Available**
  - 12, 24, 48 V DC
    Note: PV-Direct full working voltage is typically 20 % higher than nominal (example: 29 V for a 24 V system)
  - 115 V or 230 V AC, 50-60 Hz

SOLAR PUMPS

Solar pumps surface | Technical data

Conergy Solar Force Piston Pump

CONERGY

SOLAR PUMPS

Suction Capacity

- 25 vertical feet (7.6 m) at sea level. Subtract 1 foot for every 1000 ft. elevation (1 m for every 1,000 m). Suction capacity may be further limited by intake pipe friction. Intake piping should be minimum 1" (3010, 3020 models) or minimum 1 ¼" (3040). For best reliability, place the pump as close to the water source as possible.

System Requirements

- Solar-Direct Systems: Chart indicates power (w) required at the pump. The rated power of the PV array must exceed this number by 20 % or more. A pump controller (linear current booster) is required for the pump to start and run in varying light conditions. A solar tracker may be used to increase daily yield (40-55 % in summer).
- Pressurizing Systems: battery power system, pressure switch, and pressure tank of minimum 60 gallon (230 l) size (captive-air tank, available locally)

Fittings

- Intake: 1 ¼" female pipe thread
- Outlet: 1" female pipe thread

Dimensions

- 22 x 13 x 16" high (56 x 33 x 41 cm)
- With Surge Tank (not shown in photo), total height 26" (60 cm)
- Weight, max. 80 lbs (36 kg)
  Shipped in 2 or 3 boxes

Warranty

- 2 years against defects in materials and workmanship

Reading the Chart

- Total Lift = vertical Distance from surface of the water source to the pipe outlet or top of storage tank
  Model Designation:
  V=voltage, B=battery model, PV=PV array-direct model

Technical data Conergy Solar Force Piston Pump:

V = Voltage • Specify 12, 24, 48, 115, 230 AC

Total Lift				Model # 3010 V- B			Model # 3020 - V- B or PV			Model # 3040 - V- B or PV		
Feet	Meters	PSI	Kg/cm²	GPM	Lpm	Watts	GPM	Lpm	Watts	GPM	Lpm	Watts
20	6.1	8.7	0.61	5.8	22.0	87	5.2	19.7	110	9.3	35.2	165
30	9.2	17.4	1.22	5.6	21.3	104	5.2	19.7	132	9.3	35.2	207
40	12.3	26	1.83	5.6	20.2	123	5.1	19.3	154	9.2	34.8	252
50	15.4	35	2.44	5.0	19.7	152	5.1	19.3	182	9.2	34.8	286
100	30.5	43	3.05	5.1	19.2	171	5.0	18.9	202	9.1	34.5	322
125	38.1	52	3.66	4.9	19.2	200	5.0	18.9	224	9.1	34.5	364
150	45.7	60	4.24	4.9	18.7	226	5.0	18.9	252	9.1	34.5	403
175	53.3	69	4.88				4.9	18.6	269			
180	54.9	78	5.49				4.9	18.6	280			
200	61.0	87	6.10				4.8	18.2	308			
230	67.1	96	6.71				4.7	17.8	314			

- Specifications vary ±10 %
- PV Models are pre-wired for 12, 24, or 36 V (array-direct)

Available from:

SolarForce-TD-USA-0511

For further information: www.conergy.us
Subject to technical changes
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