



## Sunnyside Cogeneration Associates

P.O. Box 10, East Carbon, Utah 84520 • (435) 888-4476 • Fax (435) 888-2538

January 6, 2010

**RECEIVED**

**JAN 11 2010**

**DIVISION OF  
WATER QUALITY**

Keith Eagan  
Division of Water Quality  
288 North 1460 West  
Salt Lake City, Utah 84116

RE: Sunnyside Cogeneration Associates  
Semi-Annual Monitoring Reports  
Ground Water Permit No. UGW070002

Dear Mr. Eagan:

Please find attached the sampling report for the July, August, September, October, November and December semi-annual monitoring period. The monitoring of Ground Water discharge Permit sampling locations was performed on December 14, 2009, in accordance with the Ground Water Quality Sampling Plan for Ground Water Discharge Permit Number UGW070002.

All monitoring locations were well within the required permit limits during the December sampling event.

If you have any questions regarding the sampling activities or this report, please contact Rusty Netz or myself at (435) 888-4476.

Thank You,

Richard Carter  
Agent for  
Sunnyside Cogeneration Associates



DWQ-2010-001105

Keith Eagan  
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Enclosures:

<u>Table 1:</u>	Ground Water Analysis for the 2 <sup>nd</sup> half of 2009
<u>Table 2:</u>	MW-7 Analysis-2 <sup>nd</sup> half of 2009
<u>Attachment A:</u>	Analytical Reports

Cc: Steve Gross  
William Rossiter  
Maggie Estrada  
Paul Shepard  
Rusty Netz  
Plant File

# TABLE 1

## Sunnyside Cogeneration Associates Facility

Groundwater Permit # UGW070002 Compliance Sampling  
2nd Half  
Sampling Date: December 14, 2009

Sample Location	Field Parameters				Metals (mg/l)							
	Temp. (C)	pH (S.U.)	SC (umhoes)	Arsenic	Barium	Cadmium	Copper	Lead	Selenium	Silver	Zinc	
Permit Background Values	N.A.	N.A.	N.A.	0.0038	0.5787	0.0031	0.012	0.007	0.0083	0.008	0.0824	
Permit Protection Levels	N.A.	N.A.	N.A.	0.0125	0.50	0.0039	0.325	0.0088	0.0125	0.025	0.125	
Whitmore Springs	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	
Freshwater Reservoir	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	
Coal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	
Ash Disposal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	
Well MW-1	14	7.17	2710	ND	0.013	ND	ND	ND	0.0046	ND	ND	
Well MW-2	12.8	7.21	2030	ND	0.016	ND	ND	ND	0.0127	ND	ND	
Well MW-3	12.7	7.22	1702	ND	0.03	ND	ND	ND	0.0114	ND	ND	
Well MW-4	15.5	7.05	2270	ND	0.058	ND	0.006	0.0042	ND	ND	ND	

Sample Locations	Inorganics			Cations (mg/l)				Anions (mg/l)			Alkalinity	
	TDS (mg/l)	pH (S.U.)	Hardness CaCO3	Calcium	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonate HCO3		Carbonate CO3
Permit Background Values	1877	8.35	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Permit Protection Levels	3018	8.5-8.5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Whitmore Springs	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Freshwater Reservoir	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Coal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Ash Disposal Runoff Basin	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW	NW
Well MW-1	2120	7.3	982	123	318	4.1	159	120	1040	650	ND	477
Well MW-2	1490	7.4	744	105	227	4.8	117	42	645	678	ND	519
Well MW-3	1180	7.6	652	93.1	180	5.3	102	38	437	688	ND	512
Well MW-4	1680	7.2	774	122	287	6.6	114	87	780	578	ND	422

A "<" sign indicates the value reported was the practical quantification limit for this sample using the method described. Concentrations of analyte, if present, below this limit were not quantifiable. These results should be considered non-detect.

- NW= No water present
- NA= Non-Applicable
- BA= Bi-Annually
- NS= No Sample Taken
- ND= Non Detect

# TABLE 2

## Sunnyside Cogeneration Associates Facility

Groundwater Permit # UGW070002 Compliance Sampling  
MW-7

Second half of 2009  
Sampling Date: December 14, 2009

Sample Location	Field Parameters				Metals(mg/l)						
	Temp. (C)	pH (S.U.)	SC (units)	Arsenic	Barium	Cadmium	Copper	Lead	Selenium	Silver	Zinc
Permit Background Values	N.A.	N.A.	N.A.	0.05	0.18	0.003	0.018	0.01	0.0167	0.0011	0.037
Permit Protection Levels	N.A.	N.A.	N.A.	0.05	1.00	0.0025	0.05	0.0175	0.025	0.05	2.5
MW-7	13.2	7.38	6080	0.0055	0.018	ND	0.008	0.0052	0.0128	ND	0.03

Sample Locations	Inorganics			Cations(mg/l)				Anions(mg/l)				
	TDS (mg/l)	pH (S.U.)	Calcium	Hardness CaCO3	Sodium	Potassium	Magnesium	Chloride	Sulfate	Bicarbonates HCO3	Carbonate CO3	Alkalinity
Permit Background Values	4283.8	7.978	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Permit Protection Levels	5383	6.5-8.5	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
MW-7	4810	7.8	82.7	414	1270	5.7	82.5	340	2070	977	ND	718

A \* sign indicates the value reported was the practical quantitation limit for this sample using the method described. Concentrations of analyte, if present, below this limit were not quantifiable. These results should be considered non-detect.  
 NW= No water present  
 NA= Non-Applicable  
 BA=BI-Annually  
 ND=NoN-Detect

# Attachment A



# Chemtech-Ford Laboratories

## Certificate of Analysis

Lab Sample No.: 0909111-02

**Name:** Sunnyside Cogeneration

**Sample Date:** 12/14/2009 11:00 AM

**Sample Site:** MW-1

**Receipt Date:** 12/15/2009 12:00 PM

**System No.:**

**Sampler:** Client

**Sample Type:** Wastewater

**Project:**

Parameter	Sample Result	Minimum Reporting Limit	Units	Analysis Date/Time	Analyst Initials	Analytical Method	Flag
<b>Calculations</b>							
Hardness, Total as CaCO <sub>3</sub>	962	1	mg/L	12/22/2009 12:00	MJB	SM 2340B	
<b>Inorganic</b>							
Alkalinity - Bicarbonate	650	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Carbonate	ND	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - CO <sub>2</sub>	477	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Hydroxide	ND	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Chloride	120	10	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
pH	7.3	0.1	pH Units	12/15/2009 17:00	JSH	SM 4500H-B	SPH
Sulfate	1040	10	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
Total Dissolved Solids (TDS)	2120	10	mg/L	12/16/2009 14:51	JSH	SM2540C	
<b>Metals</b>							
Arsenic, Total	ND	0.0025	mg/L	12/23/2009 20:10	MJB	EPA 200.8	
Barium, Total	0.013	0.005	mg/L	12/21/2009 18:23	MJB	EPA 200.7	
Calcium, Total	123	0.2	mg/L	12/21/2009 18:23	MJB	EPA 200.7	
Cadmium, Total	ND	0.0025	mg/L	12/23/2009 20:10	MJB	EPA 200.8	
Copper, Total	ND	0.005	mg/L	12/21/2009 18:23	MJB	EPA 200.7	
Lead, Total	ND	0.0025	mg/L	12/23/2009 20:10	MJB	EPA 200.8	
Magnesium, Total	159	0.2	mg/L	12/21/2009 18:23	MJB	EPA 200.7	
Potassium, Total	4.1	0.2	mg/L	12/21/2009 18:23	MJB	EPA 200.7	
Selenium, Total	0.0045	0.0025	mg/L	12/23/2009 20:10	MJB	EPA 200.8	
Silver, Total	ND	0.002	mg/L	12/23/2009 20:10	MJB	EPA 200.8	
Sodium, Total	316	0.5	mg/L	12/21/2009 18:23	MJB	EPA 200.7	
Zinc, Total	ND	0.01	mg/L	12/21/2009 18:23	MJB	EPA 200.7	



# Chemtech-Ford Laboratories

## Certificate of Analysis

Lab Sample No.: 0909111-04

**Name:** Sunnyside Cogeneration  
**Sample Site:** MW-2  
**System No.:**  
**Sample Type:** Wastewater

**Sample Date:** 12/14/2009 11:45 AM  
**Receipt Date:** 12/15/2009 12:00 PM  
**Sampler:** Client  
**Project:**

Parameter	Sample Result	Minimum Reporting Limit	Units	Analysis Date/Time	Analyst Initials	Analytical Method	Flag
<b>Calculations</b>							
Hardness, Total as CaCO <sub>3</sub>	744	1	mg/L	12/22/2009 12:00	MJB	SM 2340B	
<b>Inorganics</b>							
Alkalinity - Bicarbonate	678	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Carbonate	ND	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - CO <sub>2</sub>	519	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Hydroxide	ND	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Chloride	42	1	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
pH	7.4	0.1	pH Units	12/15/2009 17:00	JSH	SM 4500H-B	SPH
Sulfate	645	5	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
Total Dissolved Solids (TDS)	1490	10	mg/L	12/16/2009 14:55	JSH	SM2540C	
<b>Metals</b>							
Arsenic, Total	ND	0.0025	mg/L	12/23/2009 20:17	MJB	EPA 200.8	
Barium, Total	0.016	0.005	mg/L	12/21/2009 18:31	MJB	EPA 200.7	
Calcium, Total	105	0.2	mg/L	12/21/2009 18:31	MJB	EPA 200.7	
Cadmium, Total	ND	0.0025	mg/L	12/23/2009 20:17	MJB	EPA 200.8	
Copper, Total	ND	0.005	mg/L	12/21/2009 18:31	MJB	EPA 200.7	
Lead, Total	ND	0.0025	mg/L	12/23/2009 20:17	MJB	EPA 200.8	
Magnesium, Total	117	0.2	mg/L	12/21/2009 18:31	MJB	EPA 200.7	
Potassium, Total	4.8	0.2	mg/L	12/21/2009 18:31	MJB	EPA 200.7	
Selenium, Total	0.0127	0.0025	mg/L	12/23/2009 20:17	MJB	EPA 200.8	
Silver, Total	ND	0.002	mg/L	12/23/2009 20:17	MJB	EPA 200.8	
Sodium, Total	227	0.5	mg/L	12/21/2009 18:31	MJB	EPA 200.7	
Zinc, Total	ND	0.01	mg/L	12/21/2009 18:31	MJB	EPA 200.7	



# Chemtech-Ford Laboratories

## Certificate of Analysis

Lab Sample No.: 0909111-05

**Name:** Sunnyside Cogeneration  
**Sample Site:** MW-3  
**System No.:**  
**Sample Type:** Wastewater

**Sample Date:** 12/14/2009 12:10 PM  
**Receipt Date:** 12/15/2009 12:00 PM  
**Sampler:** Client  
**Project:**

Parameter	Sample Result	Minimum Reporting Limit	Units	Analysis Date/Time	Analyst Initials	Analytical Method	Flag
<b>Calculations</b>							
Hardness, Total as CaCO <sub>3</sub>	652	1	mg/L	12/22/2009 12:00	MJB	SM 2340B	
<b>Inorganic</b>							
Alkalinity - Bicarbonate	688	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Carbonate	ND	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - CO <sub>2</sub>	512	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Hydroxide	ND	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Chloride	36	1	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
pH	7.6	0.1	pH Units	12/15/2009 17:00	JSH	SM 4500H-B	SPH
Sulfate	437	5	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
Total Dissolved Solids (TDS)	1180	10	mg/L	12/16/2009 14:57	JSH	SM2540C	
<b>Metals</b>							
Arsenic, Total	ND	0.0025	mg/L	12/23/2009 20:20	MJB	EPA 200.8	
Barium, Total	0.030	0.005	mg/L	12/21/2009 18:35	MJB	EPA 200.7	
Calcium, Total	93.1	0.2	mg/L	12/21/2009 18:35	MJB	EPA 200.7	
Cadmium, Total	ND	0.0025	mg/L	12/23/2009 20:20	MJB	EPA 200.8	
Copper, Total	ND	0.005	mg/L	12/21/2009 18:35	MJB	EPA 200.7	
Lead, Total	ND	0.0025	mg/L	12/23/2009 20:20	MJB	EPA 200.8	
Magnesium, Total	102	0.2	mg/L	12/21/2009 18:35	MJB	EPA 200.7	
Potassium, Total	5.3	0.2	mg/L	12/21/2009 18:35	MJB	EPA 200.7	
Selenium, Total	0.0114	0.0025	mg/L	12/23/2009 20:20	MJB	EPA 200.8	
Silver, Total	ND	0.002	mg/L	12/23/2009 20:20	MJB	EPA 200.8	
Sodium, Total	180	0.5	mg/L	12/21/2009 18:35	MJB	EPA 200.7	
Zinc, Total	ND	0.01	mg/L	12/21/2009 18:35	MJB	EPA 200.7	

**Abbreviations**

ND = Not detected at the corresponding Minimum Reporting Limit.  
 1 mg/L = one milligram per liter or 1 mg/Kg = one milligram per kilogram = 1 part per million.  
 1 ug/L = one microgram per liter or 1 ug/Kg = one microgram per kilogram = 1 part per billion.  
 1 ng/L = one nanogram per liter or 1 ng/Kg = one nanogram per kilogram = 1 part per trillion.

**Flag Descriptions**

SPH = Sample submitted past method specified holding time.





# Chemtech-Ford Laboratories

## Certificate of Analysis

Lab Sample No.: 0909111-03

**Name:** Sunnyside Cogeneration  
**Sample Site:** MW-4  
**System No.:**  
**Sample Type:** Wastewater

**Sample Date:** 12/14/2009 11:30 AM  
**Receipt Date:** 12/15/2009 12:00 PM  
**Sampler:** Client  
**Project:**

Parameter	Sample Result	Minimum Reporting Limit	Units	Analysis Date/Time	Analyst Initials	Analytical Method	Flag
<b>Calculations</b>							
Hardness, Total as CaCO <sub>3</sub>	774	1	mg/L	12/22/2009 12:00	MJB	SM 2340B	
<b>Inorganic</b>							
Alkalinity - Bicarbonate	578	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Carbonate	ND	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - CO <sub>2</sub>	422	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Hydroxide	ND	2.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Chloride	87	1	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
pH	7.2	0.1	pH Units	12/15/2009 17:00	JSH	SM 4500H-B	SPH
Sulfate	780	10	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
Total Dissolved Solids (TDS)	1680	10	mg/L	12/16/2009 14:53	JSH	SM2540C	
<b>Metals</b>							
Arsenic, Total	ND	0.0025	mg/L	12/23/2009 20:14	MJB	EPA 200.8	
Barium, Total	0.056	0.005	mg/L	12/21/2009 18:27	MJB	EPA 200.7	
Calcium, Total	122	0.2	mg/L	12/21/2009 18:27	MJB	EPA 200.7	
Cadmium, Total	ND	0.0025	mg/L	12/23/2009 20:14	MJB	EPA 200.8	
Copper, Total	0.006	0.005	mg/L	12/21/2009 18:27	MJB	EPA 200.7	
Lead, Total	0.0042	0.0025	mg/L	12/23/2009 20:14	MJB	EPA 200.8	
Magnesium, Total	114	0.2	mg/L	12/21/2009 18:27	MJB	EPA 200.7	
Potassium, Total	6.6	0.2	mg/L	12/21/2009 18:27	MJB	EPA 200.7	
Selenium, Total	ND	0.0025	mg/L	12/23/2009 20:14	MJB	EPA 200.8	
Silver, Total	ND	0.002	mg/L	12/23/2009 20:14	MJB	EPA 200.8	
Sodium, Total	267	0.5	mg/L	12/21/2009 18:27	MJB	EPA 200.7	
Zinc, Total	0.01	0.01	mg/L	12/21/2009 18:27	MJB	EPA 200.7	



# Chemtech-Ford Laboratories

## Certificate of Analysis

Lab Sample No.: 0909111-01

**Name:** Sunnyside Cogeneration  
**Sample Site:** MW-7  
**System No.:**  
**Sample Type:** Wastewater

**Sample Date:** 12/14/2009 10:30 AM  
**Receipt Date:** 12/15/2009 12:00 PM  
**Sampler:** Client  
**Project:**

Parameter	Sample Result	Minimum Reporting Limit	Units	Analysis Date/Time	Analyst Initials	Analytical Method	Flag
<b>Calculations</b>							
Hardness, Total as CaCO3	414	1	mg/L	12/22/2009 12:00	MJB	SM 2340B	
<b>Inorganic</b>							
Alkalinity - Bicarbonate	977	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Carbonate	ND	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - CO2	718	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Alkalinity - Hydroxide	ND	1.0	mg/L	12/16/2009 11:00	TSM	SM 2320B	
Chloride	340	10	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
pH	7.8	0.1	pH Units	12/15/2009 17:00	JSH	SM 4500H-B	SPH
Sulfate	2070	20	mg/L	12/15/2009 15:00	TSM	EPA 300.0	
Total Dissolved Solids (TDS)	4610	10	mg/L	12/16/2009 14:49	JSH	SM2540C	
<b>Metals</b>							
Arsenic, Total	0.0055	0.0025	mg/L	12/24/2009 14:03	MJB	EPA 200.8	
Barium, Total	0.018	0.005	mg/L	12/21/2009 18:09	MJB	EPA 200.7	
Calcium, Total	62.7	0.2	mg/L	12/21/2009 18:09	MJB	EPA 200.7	
Cadmium, Total	ND	0.0025	mg/L	12/23/2009 20:07	MJB	EPA 200.8	
Copper, Total	0.008	0.005	mg/L	12/21/2009 18:09	MJB	EPA 200.7	
Lead, Total	0.0052	0.0025	mg/L	12/23/2009 20:07	MJB	EPA 200.8	
Magnesium, Total	62.5	0.2	mg/L	12/21/2009 18:09	MJB	EPA 200.7	
Potassium, Total	5.7	0.2	mg/L	12/21/2009 18:09	MJB	EPA 200.7	
Selenium, Total	0.0128	0.0025	mg/L	12/23/2009 20:07	MJB	EPA 200.8	
Silver, Total	ND	0.002	mg/L	12/23/2009 20:07	MJB	EPA 200.8	
Sodium, Total	1270	0.5	mg/L	12/21/2009 18:09	MJB	EPA 200.7	
Zinc, Total	0.03	0.01	mg/L	12/21/2009 18:09	MJB	EPA 200.7	

# CHEMTECH - FORD, INC.

COMPANY: SCA  
 ADDRESS: 123 456 789  
 CITY/STATE/ZIP: ABC DEF GHI  
 PHONE #: 123 456 789  
 COMPANY CONTACT: 123 456 789  
 PROJECT: 123 456 789

ANALYSIS REQUEST  
 BILLING NAME:  
 BILLING ADDRESS:  
 P.O. #:  
 TURNAROUND REQUIRED\*  
 \*expedited turnaround, subject to additional charge

Mark 'X' for copy to DEQ Div of Drinking Water

9111

Lab ID#	SAMPLE IDENTIFICATION/LOCATION	SAMPLE DATE	SAMPLE TIME	MATRIX					ANALYTES REQUESTED	
				Number of Containers	Water: Drink (circle) Ground (circle)	Sol / Solid (circle)	Sudge: Solid, Liquid (circle)	Solvent		Other (specify)
01	MW-1	12/10/09	1100	3	Water: Drink (circle) Ground (circle)	Sol / Solid (circle)	Sudge: Solid, Liquid (circle)	Solvent	Other (specify)	SEE LIS
02	MW-1		1130							
03	MW-4		1145							
04	MW-2		1210							
05	MW-3									
6										
7										
8										
9										
10										

Special Instructions:

Relinquished by: (signature) [Signature] Date/Time: 12/10/09 1300

Relinquished by: (signature) [Signature] Date/Time: 12/10/09 1300

Relinquished by: (signature) [Signature] Date/Time: 12/10/09 1300

Received by: (signature) [Signature]

Received by: (signature) [Signature]

Received by: (signature) [Signature]

CHEMTECH-FORD, INC. 6100 South Strader (380 West) Murray, UT 84107 Phone 801-262-7289 Fax 801-262-7378  
 NET 30 DAYS: 1.8% PER MONTH INTEREST CHARGE (18% A.P.R.). CUSTOMER AGREES TO PAY COLLECTION COSTS AND ATTORNEY'S FEES.

WHITE: ORIGINAL YELLOW: CUSTOMER PINK: FILE