Official Draft Public Notice Version **December 26, 2018**
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FACT SHEET AND STATEMENT OF BASIS
SUNYSIDE COGENERATION ASSOCIATES
RENEWAL PERMIT: DISCHARGE
UPDES PERMIT NUMBER: UT0024759
MINOR INDUSTRIAL

FACILITY CONTACTS

Person Name:	Rusty Netz
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Facility Name:	Sunnyside Cogeneration Associates
Location	One Power Plant Road Sunnyside, UT 84539

DESCRIPTION OF FACILITY

Sunnyside Cogeneration Associates (SCA) is a steam electric power generating facility, with approximately 51 net MW in generating capacity. SCA has a Standard Industrial Classification (SIC) code 4911, for electric power generation. The facility is located just south of State Highway 123 near the town of Sunnyside in Carbon County, Utah. SCA burns waste coal from coal refuse piles and utilizes nearby water supply sources for cooling water.

Cooling water is primarily obtained from ground water, but could also be obtained from Grassy Trail Creek if it flowed consistently. Water is pumped and stored in two large reservoirs near the plant; one 20 million gallons in size and the other 40 million gallons in size. Cooling water from the reservoirs is treated with acid for pH control before use in the cooling system. The cooling water is recycled a number of times, which requires the addition of a phosphate based anti-scaling chemical, an oxygen scavenger, acid for pH control, and sodium hypochlorite (at 5mg/L) to prevent biological growth.

Cooling tower blow down is continually recirculated to a water clarifier for solids removal. These solids are pumped at a rate of 30 gpm to the water thickener. From the water thickener the solids are pumped to the ash silo and used for ash conditioning. All of the ash, such as the fly ash and bottom ash are transported to the ash silo. Material is trucked from the ash silo to the ash landfill site.

Boiler blow down water is discharged at a rate of 30 gpm into a holding tank and eventually loaded into a water truck and used for dust suppression on the ash landfill sites. SCA is considered as a zero discharge facility because there are no direct discharges of cooling tower or boiler blow down water to any sedimentation ponds.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

SCA's site operating conditions have not changed since the permit renewal.

DISCHARGE

DESCRIPTION OF DISCHARGE

SCA has a total of eleven discharge points in its present permit. In its permit application SCA asked that an additional discharge point called 018 be added to the permit. Outfall 018 is associated with SCA's #2 Ash Landfill. Discharges coming from the #2 Ash Landfill will report to the SCA #2 Sedimentation Pond and any discharges from the SCA #2 Sedimentation pond will end up in the pond associated with Outfall 018. There was one discharge over the last permit cycle due to a storm greater than a 100 year storm event. There have only been four discharges from this facility in the last 20 years.

Outfall	Description of Discharge Point
002	Water Supply Pipeline, Latitude 39° 35' 50", Longitude 110° 22' 42". Water from the deep water well is conveyed via the water supply pipeline discharged into Grassy Trail Creek.
003	Water Supply Pipeline, Latitude 39° 32' 58", Longitude 110° 23' 32". Outfall for pipe line just before entrance to clean water pond. Outfall is to Grassy Trail Creek.
007	Rail Cut Pond, Latitude 39° 32' 52", Longitude 110° 23' 48". Surface runoff discharged from sedimentation pond to Icelander Creek.
008	Old Coarse Refuse Pond, Latitude 39° 32' 20", Longitude 110° 23' 03". Surface runoff discharged from sedimentation pond to Iceland Creek.
009	Pasture Pond, Latitude 39° 32" 36", Longitude 110° 23' 29". Surface runoff discharged from sedimentation pond to Icelander Creek.
012	Coarse Refuse Toe Pond, Latitude 39° 32' 28", Longitude 110° 23' 58". Surface runoff discharged from sedimentation pond to Icelander Creek.
013	Facility sedimentation Pond, Latitude 39° 32' 46", Longitude 110° 23' 49". Sedimentation pond to contain runoff from the Cogeneration facility. Discharge to Icelander Creek.
014	Coal Pile Sedimentation Pond, Latitude 39° 32' 45", Longitude 110° 23' 36". Sedimentation Pond to contain runoff from the coal pile. Discharge to Icelander Creek.

016	Borrow Area Pond, Latitude 39° 32' 25", Longitude 110° 23' 45". Sedimentation pond containing runoff from soil borrow area. Discharge to Icelander Creek.
017	The #1 Ash Landfill Sedimentation Pond, Latitude 39° 32' 50" N, Longitude 110° 23' 45" W. Sedimentation pond to contain runoff from the Phase II landfill area. Discharge is to Icelander Creek.
018	The #2 Ash Landfill Sedimentation Pond, Latitude 39°32' 18.3" N, Longitude 110°23'10" W. Sedimentation pond to contain runoff from the #2 Ash Landfill. Discharge is to Icelander Creek.

RECEIVING WATERS AND STREAM CLASSIFICATION

Grassy Trail Creek and Icelander Creek are classified as 2B, 3C and 4 according to *Utah Administrative Code (UAC) R317-2-13*.

2B - Protected for infrequent primary contact recreation. Also protected for secondary contact recreation where there is a low likelihood of ingestion of water or a low degree of bodily contact with the water. Examples include, but are not limited to, wading, hunting, and fishing.

3C - Protected for non-game fish and other aquatic life, including the necessary aquatic organisms in their food chain.

4 - Protected for agricultural uses including irrigation of crops and stock watering.

BASIS FOR EFFLUENT LIMITATIONS

In accordance with regulations promulgated in *40 Code of Federal Regulations (CFR) Part 122.44* and in *UAC R317-8-4.2*, effluent limitations are derived from technology-based effluent limitations guidelines, Utah Secondary Treatment Standards (*UAC R317-1-3.2*) or Utah Water Quality Standards (*UAC R317-2*). In most cases where multiple limits have been developed, those that are more stringent apply. In cases where no limits have been developed, Best Professional Judgment (BPJ) may be used where applicable.

Based on *UAC R317-1-3.2*, Utah Secondary Treatment Standards, pH shall be limited to a minimum of 6.5 standard units and a maximum of 9.0 standard units at all discharge points and total suspended solids (TSS) shall be limited to 25 mg/L as a thirty-day average and to 35 mg/L as a seven-day average at all discharge points.

Based on Best Professional Judgment (BPJ) and limits and monitoring from the previous permit an oil and grease limitation of 10 mg/L will be included in the permit for outfalls 002, 003, 007, 008, 009, 012, and 016.

Dissolved oxygen (DO) shall meet a concentration of 5.0 mg/L as a thirty-day minimum average for all discharges. This is based on the waste load analysis (WLA).

Based on *40 CFR 434, Subpart D (Alkaline Mine Drainage)*, TSS shall have a daily maximum of 70 mg/L at discharge points 007, 008, 009, 012 and 016. The limitation on total iron (T-Fe) in the previous permit was 1.0 mg/L. Based on water quality standards and BPJ, this limitation will be retained in the renewal permit at Outfalls 002, 003, 007, 008, 009, 012 and 016. Also based on BPJ, oil and grease shall be limited visually at Outfalls 007, 008, 009 and 016. If an oil sheen or grease sheen is observed, then a sample must be taken and the concentration of oil and grease shall not exceed 10 mg/L.

Based on *40 CFR 434, Subpart D.*, special provisions are applicable to the coal mining discharge points (Outfalls 007, 008, 009, 012 and 016). Any discharge or increase in the volume of a discharge caused by precipitation within any 24-hour period less than or equal to the 10-year 24-hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitation instead of the otherwise applicable limitations for TSS:

Parameter	Effluent Limitations
Settleable Solids	0.5 ml/L

Any discharge or increase in the volume of a discharge caused by precipitation within any 24 hour period greater than the 10 year 24 hour precipitation event (or snowmelt of equivalent volume) may comply with the following limitations instead of the otherwise applicable limitations:

Parameter	Effluent Limitations
pH	6.5 to 9.0 S.U.

The operator shall have the burden of proof that the discharge or increase in discharge was caused by the applicable precipitation event.

Based on *40 CFR 423.15 (New Source Performance Standards for Steam Electric Power Generating Point Source Category)* there shall be no discharge of polychlorinated biphenyl compounds (PCBs) such as those commonly used in transformer fluid at any of the discharge points directly associated with the steam electric power generation facility (Outfalls 013, 014, 017, and 018), or from any other areas associated with SCA.

For discharge points 013, 014, 017 and 018 the following additional limitations (along with those indicated above as applicable to all discharge points) may also apply:

Based on *40 CFR 423.15(j)(2),* neither free available chlorine nor total residual chlorine may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Director that the units in a particular location cannot operate at or below this level of chlorination. Outfalls 013 and 014 are from storm water run-off sedimentation ponds, which do not have a source of chlorine and have never discharged to date. Since no chlorine is directly discharged to any of the outfall locations, the only possibility of discharging trace amounts of chlorine is from the ash landfills (Outfalls 017and 018). Cooling tower blow down is first mixed with a water clarifier, for solids removal, and the water is reused in the cooling tower. The solids are transported to the ash landfills. It is highly unlikely that any chlorine will leach from the ash landfill during a runoff event, fill the sedimentation pond and be discharged via Outfalls 017 or 018. Therefore based upon BPJ, the chlorine limitations in *40 CFR 423.15*

have not been included for Outfalls 013, 014, 017 or 018.

At Outfalls 017 and 018, based upon *40 CFR 423.15(j)(1)*, there shall be no detectable amounts of the 126 priority pollutants in the effluent. Also, based on *40 CFR 423.15(j)(3)*, instead of monitoring for these pollutants directly, SCA may use engineering calculations which demonstrate that the regulated pollutants are not detectable in the final discharge by the analytical methods in *40 CFR 136*.

Based on *40 CFR 423.15(j) (1)* total chromium and total zinc effluent limits need to be included in the permit at Outfalls 017 and 018 because the discharge from these ponds is runoff from the ash landfills, which are recipients of clarified cooling tower blow down water (latent with solids). Since the State has no water quality standard for total chromium and the previous permit had an effluent limit of 0.03 mg/L which is more stringent than the categorical limit contained in *40 CFR 423.15(j)(1*), the effluent limit from the previous permit will be retained in this permit. Therefore, total chromium will be limited to 0.03 mg/L. The State does have a zinc water quality standard, which is lower than the limit contained in *40 CFR 423.1(j)(1),* but higher than the limit contained in the previous permit. Therefore the effluent limit contained in the previous permit will be continued in this permit. Therefore, the limit in this renewal permit for total zinc will be 0.3 mg/L for Outfalls 017 and 018.

Based on *40 CFR 423.15,* discharge points 013, 014, 017, and 018 shall be limited to an oil and grease concentration of 15.0 mg/L as an average of daily values for 30 consecutive days. The maximum value for any one day shall not exceed 20 mg/L.

TSS shall be limited to a daily maximum of 100 mg/L at outfalls 013, 017 and 018 based on *40 CFR 423.15(c).* TSS shall be limited to a daily maximum of 50 mg/L at outfall 014 based on *40 CFR 423.15(k)*. Based on *40 CFR 423.15(l),* any untreated overflow from facilities designed, constructed, and operated to treat the coal pile runoff which results from a 10 Year, 24 hour rainfall event shall not be subject to the limitations in *40 CFR 423.15(k).*

Carried over from the previous permit and based on BPJ, a special provision in this renewal permit is applicable to all the discharge points associated with the steam electric power generating facility (outfalls 013, 014, 017 and 018). Any untreated overflow from facilities designed, constructed, and operated to treat the runoff which results from a 10-year 24-hour runoff event may comply with the following limitation instead of the otherwise applicable limitations:

Parameter	Effluent limitation
pH	6.5 to 9.0 S.U.

Total dissolved solids (TDS) mass loading is limited according to policies established by the Colorado River Basin Salinity Control Forum (CRBSCF), as authorized in *UAC R317-2-4.* Based on the CRBSCF policies, the TDS shall be limited to one-ton per day as a sum of all discharge points. SCA should be able to continue meeting the TDS mass loading limitation.

The TDS effluent limit of 1650 mg/L is the same as in the previous permit and will be retained in this renewal permit.

Based on information submitted by Rusty Netz, Environmental Engineer with SCA the sum of the potential flow from all the discharge points is 1.76 million gallons per day (MGD) and the largest possible flow from any one outfall is 0.45 MGD (Outfall 016). The wasteload allocation indicated a

design flow of 1.76 MGD and this will be included in the permit as a 30 day average flow.

Reasonable Potential Analysis

Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. RP for this permit renewal was not conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance) because the facility rarely discharges there is inadequate data for use in a RP. SCA "has limited to no industrial contributions" to their waste stream. Therefore it was determined that a full RP was not required, and that no metals monitoring is being added to the permit.

Effluent Characteristics	Effluent Limitations				Monitoring Requirements	
	30 Day Average	7 Day Average	Daily Minimum	Daily Maximum	Sample Frequency	Sample Type
Flow, [1]MGD						
Outfall 002	*b	[2]NA	NA	Report	Monthly	Measured
Outfall 003	*b 0.12	NA	NA	Report	Monthly	Measured
Outfall 007	0.13	NA	NA	Report	Monthly	Measured
Outfall 008	0.14	NA	NA	Report	Monthly	Measured
Outfall 009	0.29	NA	NA	Report	Monthly	Measured
Outfall 012	0.21	NA	NA	Report	Monthly	Measured
Outfall 013	0.09	NA	NA	Report	Monthly	Measured
Outfall 014	0.45	NA	NA	Report	Monthly	Measured
Outfall 016	0.15	NA	NA	Report	Monthly	Measured
Outfall 017	0.17	NA	NA	Report	Monthly	Measured
Outfall 018		NA	NA	Report	Monthly	Measured
Oil & Grease, mg/L *a						
Outfall 002	NA	NA	NA	10	Monthly	Grab
Outfall 003	NA	NA	NA	10	Monthly	Grab
Outfall 007	NA	NA	NA	10	Monthly	Visual/Grab
Outfall 008	NA	NA	NA	10	Monthly	Visual/Grab
Outfall 009	NA	NA	NA	10	Monthly	Visual/Grab
Outfall 012	NA	NA	NA	10	Monthly	Visual/Grab
Outfall 013	15	NA	NA	20	Monthly	Grab
Outfall 014	15	NA	NA	20	Monthly	Grab
Outfall 016	NA	NA	NA	10	Monthly	Visual/Grab
Outfall 017	15	NA	NA	20	Monthly	Grab
Outfall 018	15	NA	NA	20	Monthly	Grab
TSS, mg/L	25	35	NA	70	Monthly	Grab
Outfall 002	25	35	NA	NA	Monthly	Grab
Outfall 003	25	35	NA	NA	Monthly	Grab
Outfall 013	25	35	NA	100	Monthly	Grab
Outfall 014 *c	25	35	NA	50	Monthly	Grab
Outfall 017	25	35	NA	100	Monthly	Grab
Outfall 018	25	35	NA	100	Monthly	Grab
TDS, mg/L *d	NA	NA	NA	1650	Monthly	Grab
pH, standard units	NA	NA	6.5	9.0	Monthly	Grab
DO, mg/L	NA	NA	5.0	NA	Monthly	Grab
Total Iron, mg/L						
Outfall 002	NA	NA	NA	1.00	Monthly	Grab

Outfall 003	NA	NA	NA	1.00	Monthly	Grab
Outfall 007	NA	NA	NA	1.00	Monthly	Grab
Outfall 008	NA	NA	NA	1.00	Monthly	Grab
Outfall 009	NA	NA	NA	1.00	Monthly	Grab
Outfall 012	NA	NA	NA	1.00	Monthly	Grab
Outfall 016	NA	NA	NA	1.00	Monthly	Grab
Total Chromium, mg/L						
Outfall 017	0.03	NA	NA	0.03	Monthly	Grab
Outfall 018	0.03	NA	NA	0.03	Monthly	Grab
Total Zinc, mg/L						
Outfall 017	0.3	NA	NA	0.3	Monthly	Grab
Outfall 018	0.3	NA	NA	0.3	Monthly	Grab
Sanitary Waste *e	NA	NA	NA	None	Monthly	Visual

[1] *MGD: million gallons per day* [2] *NA: not applicable*

*a With the exception of Outfalls 002, 003, 013, 014, 017, and 018 monitoring for Oil & Grease shall be a visual test performed at least once per month. If any oil and/or grease sheens are observed visually, then a sample of the effluent shall be taken immediately and that sample shall not exceed 10 mg/L. In addition to the monthly sampling requirement for Oil & Grease at Outfalls 002, 003, 013, 014, 017 and 018, a sample for Oil & Grease shall also be immediately taken whenever sheen is observed on the effluent or there is another reason to believe oil and grease is present.

*b The only discharge from outfalls 002 and 003 would be for essential maintenance from the deep water wells.

*c Any untreated overflow from facilities designed, constructed, and operated to treat the coal pile runoff which results from a 10-year 24-hour precipitation event shall not be subject to a daily maximum of 50 mg/L.

*d In addition to the concentration limitation, the total amount of total dissolved solids shall not exceed a maximum of 1 ton (2000 lbs) per day as a sum of all outfalls.

*e There shall be no sanitary waste in the discharge.

SELF-MONITORING AND REPORTING REQUIREMENTS

The self-monitoring requirements have not been changed from the previous permit. The permit will require reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report (DMR) forms due 28 days after the end of the monitoring period. Effective January 1, 2017, monitoring results must be submitted using NetDMR unless the permittee has successfully petitioned for an exception. Lab sheets for metals must be attached to the DMRs.

BIOSOLIDS

The State of Utah has adopted the 40 CFR 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. However, this facility does not receive, generate, treat or dispose of biosolids. Therefore 40 CFR 503 does not apply.

STORM WATER

STORMWATER REQUIREMENTS

The storm water requirements are based on the UPDES Multi-Sector General Permit (MSGP) for Storm Water Discharges for Industrial Activity, General Permit No. UTR000000. All sections of the MSGP that pertain to discharges from the SCA facility have been included and sections which are redundant or do not pertain have been deleted. The permit requires the preparation and implementation of a Storm Water Pollution Prevention Plan (SWPPP) for all areas within the confines of the facility. The SCA facility has developed a SWPPP and was concluded to be sufficient for the facility during inspection.

PRETREATMENT REQUIREMENTS

Any process wastewater that the facility may discharge to the sanitary sewer, either as direct discharge or as a hauled waste, is subject to federal, state and local pretreatment regulations. Pursuant to Section 307 of the Clean Water Act, the permittee shall comply with all applicable Federal General Pretreatment Regulations promulgated, found in 40 CFR section 403, the State Pretreatment Requirements found in UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the waste.

In addition, in accordance with 40 CFR 403.12(p)(1), the permittee must notify the POTW, the EPA Regional Waste Management Director, and the State hazardous waste authorities, in writing, if they discharge any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under 40 CFR 261. This notification must include the name of the hazardous waste, the EPA hazardous waste number, and the type of discharge (continuous or batch).

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the State of Utah Permitting and Enforcement Guidance Document for Whole Effluent Toxicity Control (biomonitoring). Authority to require effluent biomonitoring is provided in Permit Conditions, UAC R317-8-4.2, Permit Provisions, UAC R317-8-5.3 and Water Quality Standards, UAC R317-2-5 and R317 -2-7.2.

The Permit and Enforcement Guidance Document for Whole Effluent Toxicity DWQ, February 2018, states that Whole Effluent Toxicity testing is required in UPDES permit where there is reasonable potential to discharge toxics. SCA is categorized as a minor industrial facility. There is no discharge of process water as it is all recirculated. All discharges are from stormwater activities. For these reasons and based upon BPJ, a reasonable potential for toxicity does not exist and therefore, biomonitoring is not included as part of the effluent monitoring program. However, the permit will contain a WET reopener provision.

PERMIT DURATION

It is recommended that this permit be effective for a duration of five (5) years.

Drafted by
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PUBLIC NOTICE

Began: Month Day, 2018
Ended: Month Day, 2018

Comments will be received at: 195 North 1950 West
PO Box 144870
Salt Lake City, UT 84114-4870

The Public Noticed of the draft permit was published in The Sun Advocate and on the Division of Water Quality web site.

During the public comment period provided under R317-8-6.5, any interested person may submit written comments on the draft permit and may request a public hearing, if no hearing has already been scheduled. A request for a public hearing shall be in writing and shall state the nature of the issues proposed to be raised in the hearing. All comments will be considered in making the final decision and shall be answered as provided in R317-8-6.12

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