

**Statement of Basis
Concrete Batch Plant General Permit**

**Permit to Construct No. P-2009.0004
Project ID 62381**

**Sunroc Corporation
Caldwell, Idaho**

Facility ID 027-00094

Final

**April 7, 2020
Chris Duerschner
Permit Writer**

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The purpose of this Statement of Basis is to satisfy the requirements of IDAPA 58.01.01. et seq, Rules for the Control of Air Pollution in Idaho, for issuing air permits.

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ACRONYMS, UNITS, AND CHEMICAL NOMENCLATURE

acfm	actual cubic feet per minute
ASTM	American Society for Testing and Materials
BACT	Best Available Control Technology
BMP	best management practices
Btu	British thermal units
CBP	concrete batch plant
cfm	cubic feet per minute
CFR	Code of Federal Regulations
CO	carbon monoxide
DEQ	Department of Environmental Quality
HAP	hazardous air pollutants
IDAPA	a numbering designation for all administrative rules in Idaho promulgated in accordance with the Idaho Administrative Procedures Act
lb/hr	pounds per hour
MACT	Maximum Achievable Control Technology
MMBtu	million British thermal units
NAAQS	National Ambient Air Quality Standard
NESHAP	National Emission Standards for Hazardous Air Pollutants
NO _x	nitrogen oxides
NSPS	New Source Performance Standards
PM	particulate matter
PM _{2.5}	particulate matter with an aerodynamic diameter less than or equal to a nominal 2.5 micrometers
PM ₁₀	particulate matter with an aerodynamic diameter less than or equal to a nominal 10 micrometers
PSD	Prevention of Significant Deterioration
PTC	permit to construct
PTE	potential to emit
<i>Rules</i>	<i>Rules for the Control of Air Pollution in Idaho</i>
SM	synthetic minor
SM80	synthetic minor facility with emissions greater than or equal to 80% of a major source threshold
SO ₂	sulfur dioxide
T/yr	tons per consecutive 12 calendar month period
TAP	toxic air pollutants
VOC	volatile organic compounds

FACILITY INFORMATION

Description

Sunroc Corporation has proposed the addition of a 9.9 MMBtu/hr boiler at the Maddens Concrete Batch Plant. This facility contains both a central mix and a stationary truck mix concrete batch plant. The central mix plant consists of a four compartment aggregate storage bin, three compartment cement storage bin, 12 cubic yard weigh batcher, and 12 cubic yard tilt mixer. The facility combines aggregate, sand, and cement and then transfers the mixture, along with water, into a central drum mixer for stationary mixing of the concrete.

The truck mix plant consists of a three-stage aggregate storage bin, cement storage silo, an eight cubic yard weight hopper, and a portable chain conveyor. The facility combines aggregate, sand, and cement and then transfers the mixture into a central drum mixer, along with water, for stationary mixing of the concrete.

No IC engines powering electrical generators are included in this facility.

Permitting History

The following information was derived from a review of the permit files available to DEQ. Permit status is noted as active and in effect (A) or superseded (S).

January 30, 2017	P-2009.0004, Facility name change, Permit status (A, but will become S upon issuance of this permit)
June 29, 2009	P-2009.0004, Reissuance to correct typographical errors, Permit status (S)
April 27, 2009	P-2009.0004, Install a new portable CBP, one additional cement storage silo, and a new portable cement chain conveyor, Permit status (S)
November 4, 2005	P-050031, Construction of a concrete batch plant, Permit status (S)

Application Scope

This PTC is for a minor modification at an existing minor facility.

Application Chronology

February 10, 2020	DEQ received an application and an application and processing fee.
February 11 – February 26, 2020	DEQ provided an opportunity to request a public comment period on the application and proposed permitting action.
February 20, 2020	DEQ determined that the application was complete.
February 24, 2020	DEQ made available the draft permit and statement of basis for peer and regional review.
March 2, 2020	DEQ made available the draft permit and statement of basis for applicant review.
April 7, 2020	DEQ issued the final permit and statement of basis.

TECHNICAL ANALYSIS

Emissions Units and Control Equipment

Table 1 EMISSIONS UNIT AND CONTROL EQUIPMENT INFORMATION

Source ID No.	Sources	Control Equipment	Emission Point ID No.
Central mix concrete batch plant with a 12 cubic yard Erie tilt mixer and a four compartment aggregate storage bin	Manufacturer: Erie Strayer Co. Model: N/A Max. Production Rate: 260 cy/hr Max. Daily Production: 6,240 cy/day Max. Annual Production: 2,277,600 cy/yr	<u>Central mix dust collector</u> Manufacturer: C&W Model: BP-790 Filtration area: 785 ft ² Blower: 5,000 ACFM Cleaning Mechanism: Pulse jet PM ₁₀ control efficiency: 99.90%	CDCBH Exit height: 23.0 ft Exit diameter: 1.0 ft Exit flow rate: 5,000 acfm Exit velocity: 106.1 ft/s Exit temperature: 68.0 °F
Three compartment (North, Mid, and South) cement storage bin	Three cement storage silos	<u>Three identical silo dust collectors</u> Manufacturer ^(a) : C&W Model: LPR-6-S Filtration area: 267 ft ² Blower: 1,760 ACFM Cleaning Mechanism: Pulse jet PM ₁₀ control efficiency: 99.99%	NSILOBH MSILOBH SSILOBH Exit height: 84 ft Exit diameter: 0.39 ft Exit flow rate: 1,760 acfm Exit velocity: 2.8 ft/s Exit temperature: 68.0 °F
Central mix 12 cubic yard cement weigh batcher	Manufacturer: Erie Strayer Co. Model: N/A Capacity: 12 cy	<u>Weigh batcher dust collector</u> Manufacturer: C&W Model: CP-35 Filtration area: 36 ft ² Blower: 140 ACFM Cleaning Mechanism: Pulse jet PM ₁₀ control efficiency: 99.99%	WHBH Exit height: 40.5 ft Exit diameter: 0.42 ft Exit flow rate: 140 acfm Exit velocity: 16.8 ft/s Exit temperature: 68.0 °F
Truck mix concrete batch plant with an 8 cubic yard weigh hopper and a three-stage aggregate storage bin	Manufacturer: Vince Hagan Co. Model: 8300-65A Max. Production Rate: 70 cy/hr Max. Daily Production: 1,680 cy/day Max. Annual Production: 613,200 cy/yr	<u>Truck mix dust collector</u> Manufacturer: Vince Hagan Model: VHW-160 Blower: 480 ACFM Cleaning Mechanism: Electric vibrator PM ₁₀ control efficiency: 99.8%	TMSILOBH Exit height: 25 ft Exit diameter: 2 ft Exit flow rate: 480 acfm Exit velocity: 2.5 ft/s Exit temperature: 68.0 °F
Portable chain conveyor	Make: RBT Model: 3600	<u>Portable chain conveyor dust collector</u> Manufacturer: Donaldson Model: UMA-100 Filtration area: 100 ft ² Cleaning Mechanism: Shaker PM ₁₀ control efficiency: 99.4%	CCONV Exit height: 9 ft Exit diameter: 0.75 ft Exit flow rate: 600 acfm Exit velocity: 22.6 ft/s Exit temperature: 68.0 °F
Cement storage silo	Capacity: 2,500 tons	<u>Railroad siding silo dust collector</u> Manufacturer ^(a) : C & W Model: CP-305 Filtration area: 356 ft ² Cleaning Mechanism: Pulse jet PM ₁₀ control efficiency: 99.99%	N/A
Boiler	Manufacturer: Kemco Model: Thermefficient-100 Manufacture Date: 2005 Serial No.: 25873 Heat input rating: 9.9 MMBtu/hr Fuel Type: Natural Gas	None	Exit height: 50 ft. Exit diameter: 2.0 ft. Exit flow rate: 1800 acfm Exit temperature: 60 °F Orientation: vertical

a) Both the storage silo baghouse and supplement storage silo fly ash baghouse are considered process equipment and therefore there is no associated control efficiency. Controlled PM₁₀ emission factors were used when determining PTE and for modeling purposes.

Emissions Inventories

Potential to Emit

IDAPA 58.01.01 defines Potential to Emit as the maximum capacity of a facility or stationary source to emit an air pollutant under its physical and operational design. Any physical or operational limitation on the capacity of the facility or source to emit an air pollutant, including air pollution control equipment and restrictions on hours of operation or on the type or amount of material combusted, stored or processed, shall be treated as part of its design if the limitation or the effect it would have on emissions is state or federally enforceable. Secondary emissions do not count in determining the potential to emit of a facility or stationary source.

Pre-Project Potential to Emit

Pre-project Potential to Emit is used to establish the change in emissions at a facility as a result of this project.

The following table presents the pre-project potential to emit for all criteria pollutants from all emissions units at the facility as reported previously in the SOB accompanying P-2009.0004, issued April 27, 2009.

Table 2 PRE-PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)
Central Mix Plant	2.94	0.344	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck Mix Plant	1.40	0.093	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Pre-Project Totals	4.34	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00

a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.

b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Post Project Potential to Emit

Post project Potential to Emit is used to establish the change in emissions at a facility and to determine the facility's classification as a result of this project. Post project Potential to Emit includes all permit limits resulting from this project.

The following table presents the post project Potential to Emit for criteria pollutants from all emissions units at the facility as determined by DEQ staff using the DEQ Concrete Batch Plant EI spreadsheet. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 3 POST PROJECT POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)	lb/hr ^(a)	T/yr ^(b)
Central Mix Plant	2.94	0.344	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Truck Mix Plant	1.40	0.093	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Boiler	0.074	0.323	5.82E-03	2.55E-02	0.971	4.251	0.815	3.571	0.053	0.234
Post-Project Totals	4.41	0.76	0.01	0.03	0.97	4.25	0.82	3.57	0.05	0.23

a) Controlled average emission rate in pounds per hour is a daily average, based on the proposed daily operating schedule and daily limits.

b) Controlled average emission rate in tons per year is an annual average, based on the proposed annual operating schedule and annual limits.

Change in Potential to Emit

The change in facility-wide potential to emit is used to determine if a public comment period may be required and to determine the processing fee per IDAPA 58.01.01.225. The following table presents the facility-wide change in the potential to emit for criteria pollutants.

Table 4 CHANGES IN POTENTIAL TO EMIT FOR REGULATED AIR POLLUTANTS

Source	PM ₁₀ /PM _{2.5}		SO ₂		NO _x		CO		VOC	
	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr	lb/hr	T/yr
Pre-Project Potential to Emit	4.34	0.44	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Post Project Potential to Emit	4.41	0.76	5.82E-03	2.55E-02	0.97	4.25	0.82	3.57	0.05	0.23
Changes in Potential to Emit	0.07	0.32	0.01	0.03	0.97	4.25	0.82	3.57	0.05	0.23

Post Project HAP Emissions

The following table presents the post project potential to emit for HAP pollutants from all emissions units at the facility as determined by DEQ staff using the concrete batch plant general permit spreadsheet. See Appendix A for a detailed presentation of the calculations of these emissions for each emissions unit.

Table 5 HAZARDOUS AIR POLLUTANTS EMISSIONS POTENTIAL TO EMIT SUMMARY

IDAPA Listing	Hazardous Air Pollutants	PTE (T/yr)
585	Acrolein	0.00E+00
	Chromium metal (II and III)	2.69E-04
	Cobalt metal dust, and fume	3.57E-06
	Ethyl benzene	0.00E+00
	Hexane	7.65E-02
	Manganese as Mn (fume)	5.07E-03
	Mercury (alkyl compounds as Hg)	1.11E-05
	Methyl chloroform	0.00E+00
	Naphthalene	5.92E-06
	Phosphorous	1.94E-03
	Propionaldehyde	0.00E+00
	Quinone	0.00E+00
	Selenium	7.24E-06
586	Toluene	1.45E-04
	Xylene	0.00E+00
	Acetaldehyde	0.00E+00
	Arsenic	7.31E-04
	Benzene	2.04E-05
	Benzo(a)pyrene	1.16E-08
	Beryllium and compounds	5.45E-06
	1,3-Butadiene	0.00E+00
	Cadmium and compounds	7.75E-05
	Chromium (VI)	2.41E-04
Not listed	Formaldehyde	7.28E-04
	3-Methylcholanthrene	1.75E-08
	Nickel	4.44E-04
	Acenaphthene	1.75E-08
	Acenaphthylene	1.75E-08
	Anthracene	2.33E-08
	Benzo(b)fluoranthene	1.75E-08
	Benzo(k)fluoranthene	1.75E-08
Benzo(e)pyrene	0.00E+00	
Benzo(g,h,l)perylene	1.16E-08	
Chrysene	1.75E-08	
Dibenzo(a,h)anthracene	1.16E-08	
Total		0.0862

The estimated PTE for all federally listed HAPs combined is below 25 T/yr and no PTE for a federally listed HAP exceeds 10 T/yr. Therefore, this facility is not a Major Source for HAPs.

Ambient Air Quality Impact Analyses

No modelling analysis is required for this permitting action because the proposed boiler is permit exempt under IDAPA 58.01.01.222.02.c.

REGULATORY ANALYSIS

Attainment Designation (40 CFR 81.313)

The facility is located in Canyon County, which is designated as attainment or unclassifiable for PM_{2.5}, PM₁₀, SO₂, NO₂, CO, and Ozone. Refer to 40 CFR 81.313 for additional information.

Facility Classification

The AIRS/AFS facility classification codes are as follows:

For HAPs (Hazardous Air Pollutants) Only:

- A = Use when any one HAP has permitted emissions > 10 T/yr or if the aggregate of all HAPS (Total HAPs) has permitted emissions > 25 T/yr.
- SM80 = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits > 8 T/yr of a single HAP or ≥ 20 T/yr of Total HAPs.
- SM = Use if a synthetic minor (uncontrolled HAPs emissions are > 10 T/yr or if the aggregate of all uncontrolled HAPs (Total HAPs) emissions are > 25 T/yr and permitted emissions fall below applicable major source thresholds) and the permit sets limits < 8 T/yr of a single HAP and/or < 20 T/yr of Total HAPs.
- B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 10 and 25 T/yr HAP major source thresholds.
- UNK = Class is unknown.

For All Other Pollutants:

- A = Use when permitted emissions of a pollutant are > 100 T/yr.
- SM80 = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are ≥ 80 T/yr.
- SM = Use if a synthetic minor for the applicable pollutant (uncontrolled emissions are > 100 T/yr and permitted emissions fall below 100 T/yr) and permitted emissions of the pollutant are < 80 T/yr.
- B = Use when the potential to emit (i.e. uncontrolled emissions and permitted emissions) are below the 100 T/yr major source threshold.
- UNK = Class is unknown.

Table 6 REGULATED AIR POLLUTANT FACILITY CLASSIFICATION

Pollutant	Uncontrolled PTE (T/yr)	Permitted PTE (T/yr)	Major Source Thresholds (T/yr)	AIRS/AFS Classification
PM ₁₀	6.41	0.76	100	B
PM _{2.5}	6.41	0.45	100	B
SO ₂	0.03	0.03	100	B
NO _x	4.25	4.25	100	B
CO	3.57	3.57	100	B
VOC	0.234	0.23	100	B
HAP (single)	0.077	0.077	10	B
Total HAPs	0.086	0.086	25	B

Permit to Construct (IDAPA 58.01.01.201)

IDAPA 58.01.01.201..... Permit to Construct Required

The permittee has requested that a PTC be issued to the facility for the proposed new emissions source. Therefore, a permit to construct is required to be issued in accordance with IDAPA 58.01.01.220. This permitting action was processed in accordance with the procedures of IDAPA 58.01.01.200-228.

Tier II Operating Permit (IDAPA 58.01.01.401)

IDAPA 58.01.01.401..... Tier II Operating Permit

The application was submitted for a permit to construct (refer to the Permit to Construct section), and an optional Tier II operating permit has not been requested. Therefore, the procedures of IDAPA 58.01.01.400–410 were not applicable to this permitting action.

Visible Emissions (IDAPA 58.01.01.625)

IDAPA 58.01.01.624..... Visible Emissions

The sources of PM₁₀ emissions at this facility are subject to the State of Idaho visible emissions standard of 20% opacity.

Fugitive Emissions (IDAPA 58.01.01.650)

IDAPA 58.01.01.650..... Rules for the Control of Fugitive Emissions

The sources of fugitive emissions at this facility are subject to the State of Idaho fugitive emissions standards.

Rules for Control of Odors (IDAPA 58.01.01.775)

IDAPA 58.01.01.750..... Rules for Control of Odors

Section 776.01 states that no person shall allow, suffer, cause, or permit the emission of odorous gases, liquids, or solids into the atmosphere in such quantities as to cause air pollution.

Title V Classification (IDAPA 58.01.01.300, 40 CFR Part 70)

IDAPA 58.01.01.301..... Requirement to Obtain Tier I Operating Permit

Post project facility-wide emissions from this facility do not have a potential to emit greater than 100 tons per year for all criteria pollutants or 10 tons per year for any one HAP or 25 tons per year for all HAP combined as demonstrated previously in the Emissions Inventories Section of this analysis. Therefore, the facility is not a Tier I source in accordance with IDAPA 58.01.01.006 and the requirements of IDAPA 58.01.01.301 do not apply.

PSD Classification (40 CFR 52.21)

40 CFR 52.21..... Prevention of Significant Deterioration of Air Quality

The facility is not a major stationary source as defined in 40 CFR 52.21(b)(1), nor is it undergoing any physical change at a stationary source not otherwise qualifying under paragraph 40 CFR 52.21(b)(1) as a major stationary source, that would constitute a major stationary source by itself as defined in 40 CFR 52. Therefore in accordance with 40 CFR 52.21(a)(2), PSD requirements are not applicable to this permitting action. The facility is/is not a designated facility as defined in 40 CFR 52.21(b)(1)(i)(a), and does not have facility-wide emissions of any criteria pollutant that exceed 250 T/yr.

NSPS Applicability (40 CFR 60)

The facility is not subject to any NSPS requirements 40 CFR Part 60.

NESHAP Applicability (40 CFR 61)

The facility is not subject to any NESHAP requirements in 40 CFR 61.

MACT Applicability (40 CFR 63)

Because the facility includes a boiler, it may be subject to 40 CFR 63, Subpart JJJJJ – National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers Area Sources. However, because the boiler is fired exclusively by natural gas it is exempted from this subpart as provided by §63.11195(e).

Permit Conditions Review

This section describes the permit conditions for this initial permit or only those permit conditions that have been added, revised, modified or deleted as a result of this permitting action.

Facility-Wide Conditions

Permit Condition 2.1 establishes that the permittee shall take all reasonable precautions to prevent fugitive particulate matter (PM) from becoming airborne and provides examples of the controls in accordance with IDAPA 58.01.01.650-651.

Permit Condition 2.2 establishes that the concrete batch plant shall employ efficient fugitive dust controls and provides examples of the controls in accordance with IDAPA 58.01.01.808.01 and 808.02.

Permit Condition 2.3 establishes that there are to be no emissions of odorous gases, liquids, or solids from the permit equipment into the atmosphere in such quantities that cause air pollution.

Permit Condition 2.4 establishes that the permittee shall monitor fugitive dust emissions on a daily basis to demonstrate compliance with the facility-wide permit requirements.

Permit Condition 2.5 establishes that the permittee monitor and record odor complaints to demonstrate compliance with the facility-wide permit requirements.

Permit Condition 2.6 establishes that the permittee shall maintain records as required by the Recordkeeping General Provision.

Boiler

Permit Condition 5.1 provides a description of the boiler to be installed at the facility.

Permit Condition 5.2 provides a description of the boiler control device.

Permit Condition 5.3 establishes fuel restrictions for the proposed boiler.

Permit Condition 5.4 establishes the maximum allowable annual operating hours for the boiler, as proposed by the applicant.

Permit Condition 5.5 establishes monitoring and recordkeeping requirements to demonstrate compliance with the boiler operating requirements.

PUBLIC REVIEW

Public Comment Opportunity

An opportunity for public comment period on the application was provided in accordance with IDAPA 58.01.01.209.01.c or IDAPA 58.01.01.404.01.c. During this time, there were no comments on the application and there was not a request for a public comment period on DEQ's proposed action. Refer to the chronology for public comment opportunity dates.

APPENDIX A – EMISSIONS INVENTORIES

Final Concrete Batch Plant Emissions Inventory

Listed Below are the emissions estimates for the units selected.

Company:	Sunroc Corporation
Facility ID:	027-00094
Permit No.:	P-2009.0004 Project 62381
Source Type:	Portable/Staionary Concrete Batch Plant
Manufacturer/Model:	Vince Hagan/8300-65A

Production

Maximum Hourly Production Rate:	260	cy/hr
Proposed Daily Production Rate:	6240	cy/day
Proposed Maximum Annual Production Rate:	2277600	cy/year

		Tons/year								
Emissions Units		PM _{2.5}	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead	THAPs	CO ₂ e
CBP Type:	Central Mix	0.099	0.344	NA	NA	NA	NA	2.47E-05		N/A
Water Heater #1:	9.9 MMBtu/hr Natural Gas Heater	0.323	0.323	2.55E-02	4.251	3.571	0.234	2.13E-05		1523
Water Heater #2:	No water heater	0.000	0.000	0.00E+00	0.000	0.000	0.000	0.00E+00		0
Small Diesel Engine(s) *:	No Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA		0
Large Diesel Engine *:	No Large Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA		0
Annual Totals (T/yr)		0.42	0.667	2.55E-02	4.25	3.57	0.23	4.59E-05	9.36E-02	1523

		Pounds/hour							
		PM _{2.5}	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead	THAPs
CBP Type:	Central Mix	1.281	2.37	NA	NA	NA	NA	1.12E-05	
Water Heater #1:	9.9 MMBtu/hr Natural Gas Heater	0.074	0.074	5.82E-03	0.971	0.815	0.053	4.85E-06	
Water Heater #2:	No water heater	0.000	0.000	0.00E+00	0.000	0.000	0.000	0.00E+00	
Small Diesel Engine(s) *:	No Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA	
Large Diesel Engine*:	No Large Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA	
Daily Totals (lb/hr)		1.35	2.44	5.82E-03	0.97	0.82	0.05	1.61E-05	2.23E-02

* The Large engine may run : **There is no large engine.** hr/yr

* The Small engine(s) may run : **There is no small engine.** hr/yr

HAPS & TAPS Emissions Inventory

Metals	HAP	TAP	lb/hr	T/yr	Averaging Period	EL lb/hr	Exceeded?
Arsenic	X	X	1.35E-04	5.83E-04	Annual	1.50E-06	Yes
Barium		X	4.27E-05	1.87E-04	24-hour	3.30E-02	No
Beryllium	X	X	1.01E-06	4.01E-06	Annual	2.80E-05	No
Cadmium	X	X	2.58E-05	7.69E-05	Annual	3.70E-06	Yes
Cobalt	X	X	8.15E-07	3.57E-06	24-hour	3.30E-03	No
Copper		X	8.25E-06	3.61E-05	24-hour	1.30E-02	No
Chromium	X	X	1.14E-04	2.10E-04	24-hour	3.30E-02	No
Manganese	X	X	9.25E-04	3.99E-03	24-hour	3.33E-01	No
Mercury	X	X	2.52E-06	1.11E-05	24-hour	N/A	No
Molybdenum (soluble)		X	1.07E-05	4.68E-05	24-hour	3.33E-01	No
Nickel	X	X	9.28E-05	3.38E-04	Annual	2.70E-05	Yes
Phosphorus	X	X	5.22E-04	1.44E-03	24-hour	7.00E-03	No
Selenium	X	X	9.20E-07	4.03E-06	24-hour	1.30E-02	No
Vanadium		X	2.23E-05	9.78E-05	24-hour	3.00E-03	No
Zinc		X	2.81E-04	1.23E-03	24-hour	6.67E-01	No
Chromium VI	X	X	8.28E-06	3.63E-05	Annual	5.60E-07	Yes
Non PAH Organic Compounds							
Pentane		X	1.55E-02	6.80E-02	24-hour	118	No
Methyl Ethyl Ketone	X	X	0.00E+00	0.00E+00	24-hour	39.3	No
Non-PAH HAPs							
Acetaldehyde	X	X	0.00E+00	0.00E+00	Annual	3.00E-03	No
Acrolein	X	X	0.00E+00	0.00E+00	24-hour	1.70E-02	No
Benzene	X	X	2.04E-05	2.04E-05	Annual	8.00E-04	No
1,3 - Butadiene	X	X	0.00E+00	0.00E+00	Annual	2.40E-05	No
Ethyl Benzene	X	X	0.00E+00	0.00E+00	24-hour	29	No
Formaldehyde	X	X	7.28E-04	7.28E-04	Annual	5.10E-04	Yes
Hexane	X	X	1.75E-02	7.65E-02	24-hour	12	No
Isooctane			0.00E+00	0.00E+00	N/A	N/A	N/A
Methyl Chloroform	X	X	0.00E+00	0.00E+00	24-hour	127	No
Propionaldehyde	X	X	0.00E+00	0.00E+00	24-hour	2.87E-02	No
Quinone	X	X	0.00E+00	0.00E+00	24-hour	2.70E-02	No
Toluene	X	X	3.30E-05	1.45E-04	24-hour	25	No
o-Xylene	X	X	0.00E+00	0.00E+00	24-hour	29	No
PAH HAPs							
2-Methylnaphthalene	X	X	2.33E-07	2.33E-07	Annual	9.10E-05	No
3-Methylcholanthrene	X	X	1.75E-08	1.75E-08	Annual	2.50E-06	No
7,12-Dimethylbenz(a)anthracene	X		1.55E-07	6.80E-07	N/A	N/A	N/A

Acenaphthene	X	X	1.75E-08	1.75E-08	Annual	9.10E-05	No
Acenaphthylene	X	X	1.75E-08	1.75E-08	Annual	9.10E-05	No
Anthracene	X	X	2.33E-08	2.33E-08	Annual	9.10E-05	No
Benzo(a)anthracene	X	X	1.75E-08	1.75E-08	Annual	9.10E-05	No
Benzo(a)pyrene	X	X	1.16E-08	1.16E-08	Annual	2.00E-06	No
Benzo(b)fluoranthene	X	X	1.75E-08	1.75E-08	Annual	2.00E-06	No
Benzo(e)pyrene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Benzo(g,h,i)perylene	X	X	1.16E-08	1.16E-08	Annual	9.10E-05	No
Benzo(k)fluoranthene	X	X	1.75E-08	1.75E-08	Annual	2.00E-06	No
Chrysene	X	X	1.75E-08	1.75E-08	Annual	2.00E-06	No
Dibenzo(a,h)anthracene	X	X	1.16E-08	1.16E-08	Annual	2.00E-06	No
Dichlorobenzene	X	X	1.16E-05	1.16E-05	Annual	9.10E-05	No
Fluoranthene	X	X	2.91E-08	2.91E-08	Annual	9.10E-05	No
Fluorene	X	X	2.72E-08	2.72E-08	Annual	9.10E-05	No
Indeno(1,2,3-cd)pyrene	X	X	1.75E-08	1.75E-08	Annual	2.00E-06	No
Naphthalene (24-hour)	X	X	2.16E-03	9.47E-03	24-hour	3.33	No
Naphthalene (Annual)	X	X	5.92E-06	5.92E-06	Annual	9.10E-05	No
Perylene	X		0.00E+00	0.00E+00	N/A	N/A	N/A
Phenanthrene	X	X	1.65E-07	1.65E-07	Annual	9.10E-05	No
Pyrene	X	X	4.85E-08	4.85E-08	Annual	9.10E-05	No
PAH HAPs Total	X	X	1.11E-07		Annual	2.00E-06	No
Polycyclic Organic Matter (POM)	X	X	1.11E-07	1.11E-07	Annual	2.00E-06	No

Total HAPs Emissions (lb/hr) and (T/yr): 2.23E-02 9.36E-02

7.65E-02 Maximum Annual TAP (T/yr)

Truck Mix Plant

Listed Below are the emissions estimates for the units selected.

Company:	Sunroc Corporation
Facility ID:	027-00094
Permit No.:	P-2009.0004 Project 62381
Source Type:	Portable/Staionary Concrete Batch Plant
Manufacturer/Model:	Vince Hagan/8300-65A

Production

Maximum Hourly Production Rate:	70	cy/hr
Proposed Daily Production Rate:	1680	cy/day
Proposed Maximum Annual Production Rate:	613200	cy/year

		Tons/year								
Emissions Units		PM _{2.5}	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead	THAPs	CO ₂ e
CBP Type:	Truck Mix	0.027	0.093	NA	NA	NA	NA	6.64E-06		N/A
Water Heater #1:	No water heater	0.000	0.000	0.00E+00	0.000	0.000	0.000	0.00E+00		0
Water Heater #2:	No water heater	0.000	0.000	0.00E+00	0.000	0.000	0.000	0.00E+00		0
Small Diesel Engine(s) *:	No Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA		0
Large Diesel Engine *:	No Large Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA		0
Annual Totals (T/yr)		0.03	0.093	0.00E+00	0.00	0.00	0.00	6.64E-06	2.56E-03	0

		Pounds/hour							
		PM _{2.5}	PM ₁₀	SO ₂	NO _x	CO	VOC	Lead	THAPs
CBP Type:	Truck Mix	0.668	1.12	NA	NA	NA	NA	1.58E-05	
Water Heater #1:	No water heater	0.000	0.000	0.00E+00	0.000	0.000	0.000	0.00E+00	
Water Heater #2:	No water heater	0.000	0.000	0.00E+00	0.000	0.000	0.000	0.00E+00	
Small Diesel Engine(s) *:	No Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA	
Large Diesel Engine*:	No Large Engine	0.00	0.00	0.00E+00	0.00	0.00	0.00	NA	
Daily Totals (lb/hr)		0.67	1.12	0.00E+00	0.00	0.00	0.00	1.58E-05	6.58E-04

* The Large engine may run : **There is no large engine.** hr/yr

* The Small engine(s) may run : **There is no small engine.** hr/yr

HAPS & TAPS Emissions Inventory

Metals	HAP	TAP	lb/hr	T/yr	Averaging Period	EL lb/hr	Exceeded?
Arsenic	X	X	5.08E-05	2.22E-04	Annual	1.50E-06	Yes

Barium		X	0.00E+00	0.00E+00	24-hour	3.30E-02	No
Beryllium	X	X	1.20E-06	5.27E-06	Annual	2.80E-05	No
Cadmium	X	X	4.16E-06	1.82E-05	Annual	3.70E-06	Yes
Cobalt	X	X	0.00E+00	0.00E+00	24-hour	3.30E-03	No
Copper		X	0.00E+00	0.00E+00	24-hour	1.30E-02	No
Chromium	X	X	6.65E-05	2.13E-04	24-hour	3.30E-02	No
Manganese	X	X	2.48E-04	1.07E-03	24-hour	3.33E-01	No
Mercury	X	X	0.00E+00	0.00E+00	24-hour	N/A	No
Molybdenum (soluble)		X	0.00E+00	0.00E+00	24-hour	3.33E-01	No
Nickel	X	X	5.35E-05	2.34E-04	Annual	2.70E-05	Yes
Phosphorus	X	X	2.12E-04	7.04E-04	24-hour	7.00E-03	No
Selenium	X	X	1.05E-05	4.61E-05	24-hour	1.30E-02	No
Vanadium		X	0.00E+00	0.00E+00	24-hour	3.00E-03	No
Zinc		X	0.00E+00	0.00E+00	24-hour	6.67E-01	No
Chromium VI	X	X	1.06E-05	4.65E-05	Annual	5.60E-07	Yes
Non PAH Organic Compounds							
Pentane		X	0.00E+00	0.00E+00	24-hour	118	No
Methyl Ethyl Ketone	X	X	0.00E+00	0.00E+00	24-hour	39.3	No
Non-PAH HAPs							
Acetaldehyde	X	X	0.00E+00	0.00E+00	Annual	3.00E-03	No
Acrolein	X	X	0.00E+00	0.00E+00	24-hour	1.70E-02	No
Benzene	X	X	0.00E+00	0.00E+00	Annual	8.00E-04	No
1,3 - Butadiene	X	X	0.00E+00	0.00E+00	Annual	2.40E-05	No
Ethyl Benzene	X	X	0.00E+00	0.00E+00	24-hour	29	No
Formaldehyde	X	X	0.00E+00	0.00E+00	Annual	5.10E-04	No
Hexane	X	X	0.00E+00	0.00E+00	24-hour	12	No
Isooctane			0.00E+00	0.00E+00	N/A	N/A	N/A
Methyl Chloroform	X	X	0.00E+00	0.00E+00	24-hour	127	No
Propionaldehyde	X	X	0.00E+00	0.00E+00	24-hour	2.87E-02	No
Quinone	X	X	0.00E+00	0.00E+00	24-hour	2.70E-02	No
Toluene	X	X	0.00E+00	0.00E+00	24-hour	25	No
o-Xylene	X	X	0.00E+00	0.00E+00	24-hour	29	No
PAH HAPs							
2-Methylnaphthalene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
3-Methylcholanthrene	X	X	0.00E+00	0.00E+00	Annual	2.50E-06	No
7,12-Dimethylbenz(a)anthracene	X		0.00E+00	0.00E+00	N/A	N/A	N/A
Acenaphthene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Acenaphthylene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Anthracene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Benzo(a)anthracene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No

Benzo(a)pyrene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Benzo(b)fluoranthene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Benzo(e)pyrene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Benzo(g,h,i)perylene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Benzo(k)fluoranthene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Chrysene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Dibenzo(a,h)anthracene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Dichlorobenzene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Fluoranthene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Fluorene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Indeno(1,2,3-cd)pyrene	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No
Naphthalene (24-hour)	X	X	0.00E+00	0.00E+00	24-hour	3.33	No
Naphthalene (Annual)	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Perylene	X		0.00E+00	0.00E+00	N/A	N/A	N/A
Phenanathrene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
Pyrene	X	X	0.00E+00	0.00E+00	Annual	9.10E-05	No
PAH HAPs Total	X	X	0.00E+00		Annual	2.00E-06	No
Polycyclic Organic Matter (POM)	X	X	0.00E+00	0.00E+00	Annual	2.00E-06	No

Total HAPs Emissions (lb/hr) and (T/yr): 6.58E-04 2.56E-03

1.07E-03 Maximum Annual TAP (T/yr)

APPENDIX B – FACILITY DRAFT COMMENTS

Sunroc Corporation was allowed input on a draft permit and statement of basis. This input was submitted to DEQ on March 12, 2020, and did not recommend any revisions to the draft documents.

APPENDIX C – PROCESSING FEE

PTC Processing Fee Calculation Worksheet

Instructions:

Fill in the following information and answer the following questions with a Y or N. Enter the emissions increases and decreases for each pollutant in the table.

Company: Sunroc Corporation
Address: 10340 Hwy 20
City: Caldwell
State: Idaho
Zip Code: 83605
Facility Contact: Kamren Garfield
Title: Environmental Specialist
AIRS No.: 327320

Y Does this facility qualify for a general permit (i.e. concrete batch plant, hot-mix asphalt plant)? Y/N

Y Did this permit require engineering analysis? Y/N

N Is this a PSD permit Y/N (IDAPA 58.01.01.205.04)

Emissions Inventory			
Pollutant	Annual Emissions Increase (T/yr)	Annual Emissions Reduction (T/yr)	Annual Emissions Change (T/yr)
NO _x	4.3	0	4.3
SO ₂	0.0	0	0.0
CO	3.6	0	3.6
PM10	0.3	0	0.3
VOC	0.2	0	0.2
Total:		0	8.4
Fee Due	\$ 500.00		

Comments: