Official Draft Public Notice Version **November 20, 2020**
The findings, determinations, and assertions contained in this document are not final and subject to change following the public comment period.

FACT SHEET AND STATEMENT OF BASIS
ASHLEY VALLEY OPERATING, LLC
RENEWAL PERMIT: DISCHARGE
UPDES PERMIT NUMBER: UT0000035
MINOR INDUSTRIAL

FACILITY CONTACTS

Person Name:	Lanham Frazier
Position:	Operations Manager, Ashley Valley Operating Company, LLC
Phone Number:	(281) 455-0552
Person Name:	James Roush
Position:	Plant Operator, Ashley Valley Operating Company, LLC
Phone Number:	(435) -279-7144
Facility Name:	Ashley Valley Operating (AVO)
Mailing and Facility Address:	55 Waugh Drive, Suite 550 Houston, TX 77007
Actual Address:	South 5500 East Jensen, UT 84035

DESCRIPTION OF FACILITY

Ashley Valley Operating, LLC is the current permit holder of Ashley Valley Operating, LLC (AVO), thus the Ashley Valley Unit North Production Facility located in Uintah County near Jensen, Utah. AVO became the permit holder effective December 1, 2014. Historically, water produced in association with oil production in the area flowed through three facilities which were permitted to discharge water. Two of the facilities, CIMA (UT0021768) and "USA Pan American Facility" (UT0000124) have since been terminated as result of facility closure. The Ashley Valley Unit North Production Facility (UT0000035) continues to discharge water produced in association with oil production in the area. The Ashley Valley Unit North Production Facility has a Standard Industrial Classification (SIC) Code 1311 for crude petroleum and natural gas extraction. Under normal operations the facility continuously discharges effluent, which consists of groundwater produced concurrently with oil production from Ashley Valley oil field. The produced water is separated from the oil by both mechanical and gravity means in treatment vessels along with three retention ponds in series. The final effluent discharges from a culvert leaving the third retention pond, and flows through an unnamed ditch approximately 1/4 of a mile to a private retention pond before continuing down an unnamed ditch approximately another ½ mile where it flows through a diversion structure, mixes with canal water, and flows into the Union Irrigation Canal. The canal has diverter to control whether water flows into Ashley Creek or provides for local irrigation. During irrigation season most, if not all, of the water is diverted into the Union Irrigation Canal. During the non-irrigation season most is diverted to Ashley Creek.

SUMMARY OF CHANGES FROM PREVIOUS PERMIT

AVO has improved their treatment process – most notably adding an additional aeration tank. AVO has also installed an agitator in pond 2 to improve aeration, upgraded piping between retention ponds and

Outfall 001 to improve functionality, modified a gunbarrel, and installed an oil and water separator used to measure oil production. Lastly, AVO has added levy height to detention ponds to increase capacity.

AVO discharges into the Colorado River Basin, thus must comply with the Colorado River System Water Quality Standards for Salinity. Under this program AVO is allowed 1 ton/day salt loading, or 366 tons/year. In the past the Division of Water Quality (DWQ) has granted a waiver from this standard, but based on recent review, waiver has been denied for this permit cycle. See COLORADO RIVER BASIN SALINITY CONTROL PROGRAM OFFSET section in this document for agreement details.

DISCHARGE

DESCRIPTION OF DISCHARGE

AVO has been reporting self-monitoring results on Discharge Monitoring Reports on a monthly basis. There have been numerous violations during the last permit cycle.

Outfall	Description of Discharge Point
001	Located at latitude N 40.366969° and longitude -109.414831°. The discharge is through a 30-inch diameter gravity flow pipe leading from the third retention pond to an unnamed ditch.

RECEIVING WATERS AND STREAM CLASSIFICATION

The final discharge from AVO flows into an unnamed ditch, which flows into Ashley Creek, thence to the Green River. The designated beneficial uses of Ashley Creek and tributaries, from confluence with Green River to Steinaker diversion are 2B, 3B, and 4 according to *Utah Administrative Code (UAC) R317-2-13*:

Class 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.

Class 3B -- Protected for warm water species of game fish and other warm water aquatic life, including the necessary aquatic organisms in their food chain.

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

BASIS FOR EFFLUENT LIMITATIONS

Limitations pH are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. Oil and grease are based on best professional judgment (BPJ). The rest of the parameters have been determined by the Wasteload Analysis, which is attached. It has been determined that this discharge will not cause a violation of water quality standards. An Antidegradation Level II review is not required since the Level I review shows that water quality impacts are minimal. The permittee is expected to be able to comply with these limitations.

Total dissolved solids (TDS) limitations are based upon Utah Water Quality Standards for concentration values and the Colorado River Basin Salinity Control Forum (CRBSCF) for mass loading values when applicable as authorized in *UAC R317-2-4*. Regarding TDS loading, the CRBSCF Policy entitled "NPDES Permit Program Policy for Implementation of Colorado River Salinity Standards" (Policy), with

the most current version dated October 2017, requires the TDS loading limitation of one-ton per day (or 366 tons per year) as a sum from all discharge points, unless the average concentration of TDS is 500 mg/L or less. If the concentration of TDS at any Outfall is less than or equal to 500 mg/L as a thirty day average, then no loading limit applies for that Outfall. The one-ton per day (or 366 tons per year) loading limit applies only to those Outfalls exceeding 500 mg/L as a thirty day average. Outfalls exceeding 500 mg/L as a thirty day average, collectively, need to meet the one-ton per day (or 366 tons per year) limit. If one-ton per day (or 366 tons per year) TDS cannot be achieved, then the permittee will be required to remove salinity/TDS in excess of one-ton per day (or 366 tons per year) by developing a treatment process, participating in a salinity off-set program, or developing some type of mechanism to remove the salinity/TDS unless a demonstration is made by the permittee resulting an exemption to these requirements. AVO has recently submitted information requesting an exemption, but the DWQ has denied the full exemption for this permit cycle -- therefore, participation in a salinity-offset program or other applicable mechanism is required.

COLORADO RIVER BASIN SALINITY CONTROL PROGRAM OFFSET

According to the *Colorado River Basin Salinity Control Program: Utah, Monitoring and Evaluation Report, FY2019* the cumulative cost of offsetting 1 ton of salt in the Uinta Basin is $155. As of August 2020 AVO has hired an independent consulting firm to examine water chemistry and use at the Ashley Valley Oil Fields. DWQ has agreed to provide an **85% reduction, averaged over a period of roughly three years**, while AVO examines and starts to implement solutions. This payment will become due on January 31, covering the previous calendar year (January through December), with the expectation of the first payment which will cover permit issuance through December 2021 (due January 31, 2022). There will also be a 10% fee added to offset cost to cover the Utah Department of Agriculture and Food administrative fee, as they solicit and implement offset projects. As part of this offset agreement, AVO must submit data gathered and request for future offset agreement by January 1, 2023. Any violation of this agreement will revoke it, and the offset will return to current rate as determined by the *Colorado River Basin Salinity Control Program*.

Date	Action	Cost Reduction Applied
January 31, 2022	Salinity Offset Payment Due (Permit issue through December 31, 2021)	95%
January 1, 2023	AVO submits data gathered and submits request for future offset agreement	NA
January 31, 2023	Salinity Offset Payment Due (January 1, 2022 through December 31, 2022)	85%
January 1, 2024	Agreement Expires (Cost/ ton becomes current rate or new cost determined by new agreement)	NA
January 31, 2024	Salinity Offset Payment Due (January 1, 2023 through December 31, 2023)	75%

UNDISSOCIATED H2S COMPLIANCE SCHEDULE

The DWQ has determined that AVO's current discharge is in violation of the narrative water quality standards due to excessive growth of sulphide-loving bacteria in the receiving water. As a result, the

aquatic water quality standard for undissociated hydrogen sulfide of 0.002 mg/L will be applied to the discharge as an end-of-pipe limit. AVO has hired Linkan Engineering to address continued H2S limit exceedance issues. Linkan Engineering proposed a plan to achieve compliance that consists of two phases, with hope that issues will be addressed with actions taken in Phase I. If issues are addressed by Phase I, Phase II will not be needed. First table below outlines Compliance Schedule milestones. Note higher initial interim limit is to allow for additional testing. Any violation of milestones will revoke the Compliance Schedule and the final permit limit of 0.002 mg/L will immediately become active.

Date	Milestone
Permit Issue Date	H2S interim limit of 1.500 mg/L in effect
April 1, 2021	H2S interim limit of 1.000 mg/L in effect
August 1, 2021	Phase I design package submitted to DWQ for review
August 1, 2022	Phase I updates installed
September 1, 2022	If needed, AVO submits request for Phase II updates *
November 1, 2022	H2S final limit of 0.002 mg/L in effect

Date	H2S Parameter Limit, mg/L
Permit Issue	1.500
April 1, 2021	1.000
November 1, 2022	0.002

*If approved, Compliance Schedule will be modified.

Reasonable Potential Analysis

Since January 1, 2016, the DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. RP for this permit renewal was conducted following DWQ's September 10, 2015 Reasonable Potential Analysis Guidance (RP Guidance). There are four outcomes defined in the RP Guidance: Outcome A, B, C, or D. These Outcomes provide a frame work for what routine monitoring or effluent limitations are required. There was no metal data reported during the last permit cycle, so RP was not performed on metals.

The permit limitations are:

Parameter	Effluent Limitations *a				
	Maximum Monthly Avg	Maximum Weekly Avg	Yearly Average	Daily Minimum	Daily Maximum
Total Flow, MGD	1.5	--	--	--	--
BOD_5, mg/L	30	45	--	--	--
TSS, mg/L	25	35	--	--	--
WET, Chronic Biomonitoring	--	--	--	--	IC_{25} > 16.7% effluent
Oil & Grease, mg/L	--	--	--	--	10.0
pH, Standard Units	--	--	--	6.5	9
Undissociated H2S, mg/L *e, *f	--	--	--	--	1.500/1.000/0.002
TDS, mg/L	--	--	--	--	1200

TDS *d	1 ton/day	--	366 tons/year	--	--

SELF-MONITORING AND REPORTING REQUIREMENTS

The following self-monitoring requirements are different than the previous permit. TDS in tons/day will now need to be calculated. 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 biomonitoring must be attached to the biomonitoring DMR. Lab sheets for metals and toxic organics must be attached to the DMRs.

Self-Monitoring and Reporting Requirements *a			
Parameter	Frequency	Sample Type	Units
Total Flow *b	Continuous	Recorder	MGD
BOD_5	Monthly	Grab	mg/L
TSS	Monthly	Grab	mg/L
pH	Monthly	Grab	SU
WET – Biomonitoring *c	Semi- annually	Grab	Pass/Fail
Oil & Grease	Monthly	Grab	mg/L
TDS, mg/L	Monthly	Grab	mg/L
TDS *d	Monthly	Grab	tons/day
Undissociated H2S, mg/L *e, *f	Monthly	Grab	mg/L

*a See Definitions, *Part VI*, for definition of terms.

*b Flow measurements of influent/effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.

*c One semi-annual sample is to be collected during irrigation season (April – October) and one to be collected during the non-irrigation season (November – March). Tests will be conducted using both Ceriodaphnia dubia and Pimephales promelas (fathead minnow) species.

*d No tons per day loading limit will be applied if the concentration of TDS in the discharge is equal to or less than 500 mg/L as a thirty-day average. However, if the thirty-day average TDS concentration exceeds 500 mg/L, then the permittee cannot discharge more than one-ton per day or 366 tons per year as a sum from all discharge points exceeding 500 mg/L as a thirty-day average. If the permittee cannot achieve one-ton per day or 366 tons per year as a sum from all applicable Outfalls, the permittee will be required to account for the excess salinity/TDS tonnage by developing a treatment process, participating in a salinity offset program, or other type of mechanism to remove or offset the excess salinity/TDS. See COLORADO RIVER BASIN SALINITY CONTROL PROGRAM OFFSET section in this document for agreement details.

*e Method for H2S calculation can be found in the most recent edition of *Standard Methods for the Examination of Water and Wastewater*. In the event any value associated with this parameter is non-detect, 0.5 of the detection limit will be used to calculate the reported value.

*f The effective date for the final undissociated H2S limit of 0.002 mg/L is November 1, 2022. At time of permit issue interim limit will be 1.500 mg/L and the interim limit of 1.000 mg/L will take effect April 1, 2021.

Date	H2S Parameter Limit, mg/L
Permit Issue	1.500
April 1, 2021	1.000
November 1, 2022	0.002

BIOSOLIDS

The State of Utah has adopted the 40 CFR 503 federal regulations for the disposal of sewage sludge (biosolids) by reference. However, since this facility is a lagoon, there is not any regular sludge production. Therefore 40 CFR 503 does not apply at this time. In the future, if the sludge needs to be removed from the lagoons and is disposed in some way, the DWQ must be contacted prior to the removal of the sludge to ensure that all applicable state and federal regulations are met.

STORM WATER

STORMWATER REQUIREMENTS

Storm water requirements are not included in this permit. Instead, separate storm water permits may be required based on the types of activities occurring on site.

Permit coverage under the Construction General Storm Water Permit (CGP) is required for any construction at the facility which will disturb an acre or more, or is part of a common plan of development or sale that is an acre or greater. A Notice of Intent (NOI) is required to obtain a construction storm water permit prior to the period of construction.

As described in UAC R317-8-3.9(2)(a)3, an industrial storm water permit is only required if the facility has had a storm water discharge that results in the discharge of a reportable quantity or has contributed to a water quality standard violation.

Information on storm water permit requirements can be found at http://stormwater.utah.gov

PRETREATMENT REQUIREMENTS

There will be no discharge of any process water or by-product to the sanitary sewer. Any wastewater conveyed to a public sanitary sewer is subject to federal, state and local pretreatment regulations. Pursuant to section 307 of the Clean Water Act, AVO shall comply with all applicable federal pretreatment regulations promulgated in 40 CFR Section 403, the State pretreatment requirements found in UAC R317-8-8 and any specific local regulations developed by the wastewater treatment plant. Notification must be provided to the DWQ's Pretreatment Coordinator 14 days prior to discharge to a POTW which does not have an approved pretreatment program.

BIOMONITORING REQUIREMENTS

A nationwide effort to control toxic discharges where effluent toxicity is an existing or potential concern is regulated in accordance with the Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity (WET) Control (biomonitoring), dated February 2018. 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.

Acute WET testing was completed at this facility from 2004 to 2009. During that time period there were no acute toxicity failures. As a result it was eliminated from the permit during the last two permit cycles. Based on this information there appears to be no reasonable potential for acute toxicity. During this last permit cycle, testing for chronic toxicity was required, and shall continue to be required for the next permit cycle.

The renewal permit will contain a toxicity limitation re-opener provision that allows for modification of the permit at any time in the future should testing indicate the presence of toxicity in the discharge.

PERMIT DURATION

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

Drafted by
Danielle Lenz, Discharge
Jennifer Robinson, Pretreatment
Lonnie Shull, Biomonitoring
Lisa Stevens, Storm Water
Danielle Lenz, Reasonable Potential Analysis
Nick von Stackelberg, Wasteload Analysis
Utah Division of Water Quality, (801) 536-4300

PUBLIC NOTICE

Began: Month Day, Year
Ended: Month Day, Year

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

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.

ADDENDUM TO FSSOB

During finalization of the Permit certain dates, spelling edits and minor language corrections were completed. Due to the nature of these changes they were not considered Major and the permit is not required to be re Public Noticed.

Responsiveness Summary

(Explain any comments received and response sent. Actual letters can be referenced, but not required to be included).

DWQ-2020-013717

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ATTACHMENT 1

Effluent Monitoring Data

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Effluent Monitoring Data.

	Flow	TDS	H2S	pH		O & G	BOD5		TSS	
Month	Ave	Ave	Ave	Min	Max	Max	30Ave	7Ave	30Ave	7Ave
Apr-17	0.95	1220	0.033	8	8	8.29	22.9	22.9	3	3
May-17	0.97	1240	0.0005	8.15	8.15	9.15	21.3	21.3	3	3
Jun-17	0.97	1120	0.0004	8.24	8.24	8.08	22.5	22.5	3	3
Jul-17	0.88	1250	0.0059	8.3	8.3	10.2	34.7	34.7	3	3
Aug-17	0.98	1260	0.0005	8.19	8.19	10.4	31.4	31.4	3	3
Sep-17	0.93	1280	0.1845	8.34	8.49	13.8	30.5	30.5	2	2
Oct-17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Nov-17	ND	ND	ND	ND	ND	ND	ND	ND	ND	ND
Dec-17	0.99	1430	0.3832	8.41	8.41	5	40.3	42.5	3	3
Jan-18	0.99	1310	0.11	8.06	8.06	5	33.9	33.9	3	3
Feb-18	0.99	1320	0.16	8.15	8.15	5	38	38	3	3
Mar-18	0.98	1250	0.077	7.97	8.04	5	31	32.6	3	3
Apr-18	0.96	1300	0.002	7.9	7.9	5	39.6	39.6	3	3
May-18	0.99	1310	0.977	8	8	5	36	36	3	3
Jun-18	0.9	1620	0.52	8.14	8.14	5	31.9	31.9	3	3
Jul-18	0.96	1020	0.091	8.22	8.22	5	37.6	47.5	3	3
Aug-18	0.96	1240	0.24	8.03	8.03	5	29.6	29.6	3	3
Sep-18	0.95	1210	0.714	8.17	8.17	5	18.8	18.8	3	3
Oct-18	0.93	1220	0.018	8.17	8.17	5	29.3	29.3	3	3
Nov-18	0.91	1270	0.357	8.65	8.65	5	40.4	40.4	3.6	3.6
Dec-18	0.91	1290	0.093	7.97	7.97	6	30.1	30.1	4.8	4.8
Jan-19	0.94	1330	0.8412	8.16	8.16	5	30	30	3	3
Feb-19	0.88	1220	0.1551	7.73	7.73	7	34.2	34.2	3	3
Mar-19	0.98	1230	0.315	7.75	7.75	6	30.8	30.8	3	3
Apr-19	0.86	1190	0.0258	7.84	7.84	6	26.4	26.4	3	3
May-19	0.91	2090	0.2512	7.7	7.7	7	33.3	33.3	3	3
Jun-19	0.89	1220	0.0296	7.79	7.79	6	30.8	30.8	3	3
Jul-19	0.9	1200	0.615	7.81	7.81	6	31.5	31.5	3	3
Aug-19	1.09	1240	0.1394	7.88	7.88	11	29.5	29.5	3	3
Sep-19	0.91	1210	0.0207	7.97	7.97	6	24.7	24.7	3	3
Oct-19	0.9	1140	0.0076	8.25	8.25	5	29.1	29.1	3	3
Nov-19	0.86	1230	0.2925	7.95	7.95	8	28.5	28.5	3	3
Dec-19	0.88	1120	1.3758	8.09	8.09	6	31.9	31.9	4.4	4.4
Jan-20	0.79	1150	1.0374	8	8	5	23.5	23.5	3	3
Feb-20	0.88	1240	1.33	7.93	7.93	5	22.1	22.1	3	3
Mar-20	0.88	940	0.0237	8	8	5	22.7	22.7	3	3
Apr-20	0.71	NR	NR	NR	NR	NR	NR	NR	NR	NR

WET Results

Month	WET Test	Pass / Fail
9/30/2017	Chronic	Pass
3/31/2018	Chronic	Pass
9/30/2018	Chronic	Pass
3/31/2019	Chronic	Fail
9/30/2019	Chronic	Fail
3/31/2020	Chronic	ND
9/30/2017	Chronic	ND
3/31/2018	Chronic	ND
9/30/2018	Chronic	ND
3/31/2019	Chronic	Pass
9/30/2019	Chronic	Pass

ND = Non-detect

NR= Not reported

ATTACHMENT 2

Wasteload Analysis

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ATTACHMENT 3

Reasonable Potential Analysis

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REASONABLE POTENTIAL ANALYSIS

Water Quality has worked to improve our reasonable potential analysis (RP) for the inclusion of limits for parameters in the permit by using an EPA provided model. As a result of the model, more parameters may be included in the renewal permit. A Copy of the Reasonable Potential Analysis Guidance (RP Guide) is available at water Quality. There are four outcomes for the RP Analysis[1]. They are;

Outcome A: A new effluent limitation will be placed in the permit.
Outcome B: No new effluent limitation. Routine monitoring requirements will be placed or increased from what they are in the permit,
Outcome C: No new effluent limitation. Routine monitoring requirements maintained as they are in the permit,
Outcome D: No limitation or routine monitoring requirements are in the permit.

Initial screening for metals values that were submitted through the discharge monitoring reports showed that a closer look at some of the metals is not needed.

[1] See Reasonable Potential Analysis Guidance for definitions of terms