

**FACT SHEET AND STATEMENT OF BASIS  
CASPER'S ICE CREAM, INC.  
RENEWAL PERMIT: DISCHARGE, & REUSE  
UPDES PERMIT NUMBER: UT0025526  
MINOR INDUSTRIAL**

**FACILITY CONTACTS**

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**Facility Name:** Casper's Ice Cream, Inc.  
**Mailing and Facility Address:** 11805 North 200 East  
Richmond, Utah 84333  
**Telephone:** 435.258.2477

**DESCRIPTION OF FACILITY**

Casper's Ice Cream, Inc. (Casper's) is an ice cream manufacturing company that produces novelty products such as ice cream sandwiches as well as hard ice cream. It is located about 1.5 miles north of Richmond Utah at 11805 North 200 East in Richmond, Utah at latitude 41°58.81' and longitude 111°49.89'. Casper's Standard Industrial Classification (SIC) code is 2024, with a North American Industry Classification System (NAICS) Code of 311520 for Ice Cream and Frozen Dessert Manufacturing.

Casper's has two pipes that leave the facility; one contains non-contact cooling water and the other contains process water. Approximately 8,000 gallons of process water is generated per day at the facility. The process water is currently being treated through several grease traps, septic tanks and to an aerated containment pond. Process water will be blended with irrigation and non-contact cooling water then land applied on cropland located east and west of the facility.

Casper's generates up to approximately 75,000 gallons of non-contact cooling water effluent per day. The non-contact cooling water is collected and discharged through Outfall 001 to a pond located between Casper's property, and a farm to the West. The pond discharges to the Cub River. During the months when the irrigation is needed for the fields, the non-contact cooling water will be added to the process water to be used for make-up water for the irrigation system. This will bring about long periods of no discharge for the non-contact cooling water.

In 2005 Casper's constructed two wastewater storage lagoons to contain 100% of its process water and a portion of the plant non-contact cooling water which eliminated the process water discharge to the Cub River. The process wastewater goes through grease interceptors to help settle out the solids prior to being pumped to the lagoons. The lagoons are located east of the processing building. Aerators are installed to help prevent odors and solids settle to the bottom of the lagoons prior to being applied to the farmland. During the winter months, December through February, the process water is stored in two lagoons located near the irrigation fields with an approximate capacity of 1.5 million gallons each. During the summer months, the stored process water is used to irrigate approximately 12 acres of alfalfa located on land the

east of the process building/west of the storage lagoons and 90 acres located on the east side of the processing building. The 90 acres is irrigated with a pivot system; 17 of the 90 acres are owned by Casper's the other 73 acres is owned by a family named Christensen. Additional land application sites are being added to Casper's disposal sites. The first location is 28 acres and is north of the facility; it will begin to be used for land application by Spring 2021. The second location is 86 acres west of the facility. This location currently splits the non-contact cooling water pond, it projected to be purchased and used by 2022.

During the winter months, excess non-contact cooling water is discharged to the Cub River.

Casper's is on the fourth UPDES permit renewal cycle. The initial permit in 2005 the facility did not have their disposal system finalized for the process wash down water which also connected with the cooling water system. Therefore, chemical oxygen demand (COD) and biological oxygen demand (BOD) were included in the permit. Prior to the 2010 permit issuance, Casper's separated the process wash down and non-cooling water system and installed a land application system. As a result of the changes, COD and BOD monitoring were removed from the permit and monitoring frequency for pH and total suspended solids were adjusted.

#### **SUMMARY OF CHANGES FROM PREVIOUS PERMIT**

Casper's has not made any improvements at the facility.

The addition of annual metal monitoring has been added for Outfall 001 to collect data for reasonable potential analysis. The daily minimum dissolved oxygen (DO) has been changed to 5.5 mg/L based on the wasteload analysis.

Outfall 001R has been added to the permit as a description and approval to use the process wastewater for irrigation on the 12, 90, 28 and 86 acre parcels surrounding the Casper facility as Type II Reuse for land application. There will not be limits on the land application but monitoring requirements.

**DISCHARGE**

**DESCRIPTION OF DISCHARGE**

Casper's has two outfalls for discharging. Outfall 001 to discharge non-contact cooling water to the Cub River and Outfall 001R to recycle the process wastewater on a total of 102 to 216 acres.

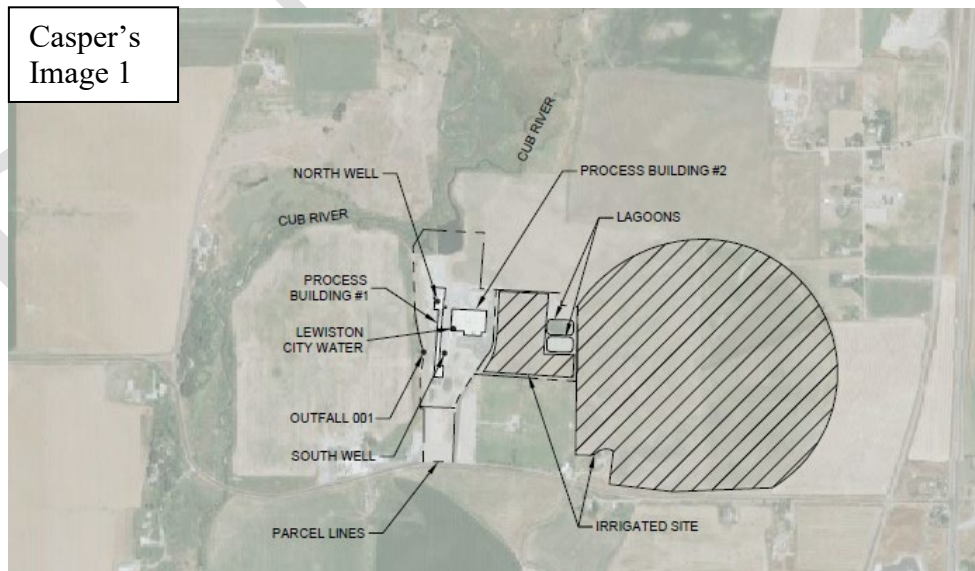
<b>Outfall</b>	<b>Description of Discharge Point</b>
001	Located at latitude 41°56' 59" North and longitude 111°49'55' West. The discharge is piped to an unnamed pond which connects to the Cub River. <i>Outfall location Image 1</i>
001R	Located at latitude 41°56' 53" North and longitude 111°49'37" West. This Outfall is for Recycled Process Water from the storage lagoons for land application.

During the winter months, December through February, the process water is stored in two lagoons located near the irrigation fields with an approximate capacity of 1.5 million gallons each.

During the summer months, the stored process water is used to irrigate approximately 12 acres of alfalfa located on land the east of the process building/west of the storage lagoons and 90 acres, pivot system, located on the east side of the processing building.

Additional land application sites are being added to Casper's disposal sites. The first location is 28 acres and is north of the facility; it will begin to be used for land application by Spring 2021. The second location is 86 acres west of the facility. This location currently splits the non-contact cooling water pond, it projected to be purchased and used by 2022.

*Outfall location Image 2*





### RECEIVING WATERS AND STREAM CLASSIFICATION

The receiving water for Outfall 001 is the Cub River.

Per UAC R317-2-13.3(a), the designated beneficial uses for the Cub River and Cub River and tributaries, from confluence with Bear River to state line is 2B, 3B and 4.

- |          |  |
|----------|--|
| 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 on total suspended solids (TSS) and pH are based on current Utah Secondary Treatment Standards, UAC R317-1-3.2. The oil and grease is based on best professional judgment (BPJ). Temperature and total phosphorus are based on the Wasteload Analysis (WLA) and in consulting with the Watershed Coordinator for Class 3B waters. Class 3B is for warm water aquatic life, therefore temperature will remain as 84° C as required in the previous permit. Casper's does not discharge sanitary waste; therefore E.coli will not be required to be monitored. Chlorine is not used in Outfall 001 therefore total residual chlorine will not have a limit.

Attached is a WLA for this discharge into the unnamed pond. 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.

**Parameters of Concern**

The potential parameters of concern identified for the discharge/receiving water were temperature and total phosphorus as determined in consultation with the UPDES Permit Writer.

**Total Maximum Daily Load (TMDL)**

The Cub River from the confluence with the Bear River to the Utah-Idaho State Line (UT16010202-010-00) is listed as impaired (Class 4A, Impaired: TMDL approved) on the 2016 303(d) list for phosphorus and sedimentation.

A TMDL was completed for the Middle Bear River on February 23, 2010 (UDWQ 2010). The TMDL identified an instream concentration goal of 0.05 mg/l total phosphorus in the Cub River.

**Reasonable Potential Analysis**

Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. To complete a RP analysis, more than 10 data points per parameter are needed. Casper's was not required to sample for metal parameters in their previous permit, therefore, analysis data is not available to perform a RP analysis. For this permit cycle, Casper's will be required to permit, at a minimum, annual metal sampling. If additional sampling is performed, it shall be reported to DWQ. Less than 10 data points may affect the RP outcomes which may require additional monitoring in the future.

<b>Table 1</b>				
<b>Parameter</b>	<b>Outfall 001</b>			
	<b>Effluent Limitations <sup>a</sup></b>			
	<b>Maximum Monthly Avg</b>	<b>Maximum Weekly Avg</b>	<b>Daily Minimum</b>	<b>Daily Maximum</b>
<b>Flow, MGD</b>	--	--	--	0.08
<b>TSS, mg/L</b>	25	35	--	--
<b>pH, Standard Units</b>	--	--	6.5	9
<b>DO, mg/L</b>	--	--	5.5	--
<b>Oil &amp; Grease, mg/L</b>	--	--	--	10.0
<b>Total Phosphorus, mg/L</b>				0.05
<b>Temperature, °C</b>				84

**SELF-MONITORING AND REPORTING REQUIREMENTS**

The permit will require reports to be submitted monthly and annually, as applicable, on Discharge Monitoring Report (DMR) in NetDMR unless the permittee has successfully petitioned for an exception. Lab sheets for metals must be attached to the DMRs.

<b>Table 2</b>			
<b>Outfall 001</b>			
<b>Self-Monitoring and Reporting Requirements <sup>a</sup></b>			
<b>Parameter</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
<b>Total Flow <sup>b, c, d</sup></b>	Continuous	Recorder	MGD
<b>TSS</b>	Monthly	Grab	mg/L
<b>pH</b>	Monthly	Grab	SU
<b>DO</b>	Monthly	Grab	mg/L
<b>Oil &amp; Grease <sup>e, f</sup></b>	Monthly	Grab	mg/L
<b>Total Phosphorus</b>	Monthly	Grab	mg/L
<b>Temperature</b>	Monthly	Grab	Celsius
<b>Metals <sup>g, h, i</sup></b>	Annual	Grab/Comp	mg/L

The following is a summary of the Recycled Process Water self-monitoring and reporting requirements.

<b>Table 3</b>			
<b>Outfall 001 R</b>			
<b>Recycled Process Water</b>			
<b>Self-Monitoring and Reporting Requirements <sup>a, j, k, l</sup></b>			
<b>Parameter</b>	<b>Frequency</b>	<b>Sample Type</b>	<b>Units</b>
<b>Total Flow <sup>c, m</sup></b>	Continuous/Seasonally	Recorder	MGD
<b>BOD</b>	Monthly/Seasonally	Grab	mg/L
<b>TSS</b>	Monthly/Seasonally	Grab	mg/L
<b>pH</b>	Monthly/Seasonally	Grab	SU
<b>Total Phosphorus</b>	Monthly/Seasonally	Grab	mg/L
<b>Nitrate</b>	Monthly/Seasonally	Grab	mg/L
<b>Nitrite</b>	Monthly/Seasonally	Grab	mg/L
<b>Total Nitrogen</b>	Monthly/Seasonally	Grab	mg/L

<b>Table 4</b>	
<b>Land Application per Crop Type <sup>m</sup></b>	
Crop Type	List of crops grown on each site
Crop Harvest (tons/yr)	As measured based on harvest records
Land Application Area (acres)	Land treated process water effluent was applied based on application area
Number of Days per Season	Estimated (About 180 days/growing season)

**Table References**

- a. See Definitions, *Part VIII*, for definition of terms.
- b. All parameters in this table will be reported on the monthly Discharge Monitoring Report.
- c. Flow measurements of effluent volume shall be made in such a manner that the permittee can affirmatively demonstrate that representative values are being obtained.
- d. If the rate of discharge is controlled, the rate and duration of discharge shall be reported.
- e. There shall be no visible sheen or floating solids or visible foam in other than trace amounts.
- f. Oil & Grease sampled when sheen is present or visible. If no sheen is present or visible, report 9 under "NODI" in NetDMR.
- g. Metals samples should be analyzed using a method that meets MDL requirements. If a test method is not available the permittee must submit documentation to the Director regarding the method that will be used. The sample type (composite or grab) should be performed according to the methods requirements.
- h. Metals are being sampled in support of the work being done for the Reasonable Potential Analysis. The Metal parameters will be monitored and reported on an annual basis by the facility on Discharge Monitoring Report, but will not have a limit associated with them, if Casper's decides to sample more frequently for these parameters, the additional data is required to be reported.
- i. Metals


Arsenic	Copper	Nickel
Cadmium	Cyanide	Selenium
Total	Lead	Silver
Chromium	Mercury	Zinc
- j. Recycled Process Water monitoring results obtained during the previous month for recycled water discharges shall be summarized for each month and reported annually, no later than January 28th day of the month following the completed reporting period.
- k. Recycled Process Water monitoring shall be conducted during the seasonal usage. Months the recycled process water is not used, "No Discharge" shall be reports in NetDMR.
- l. E.coli shall not be present in the discharge.
- m. Land Application Reports shall be summarized per crop type and submitted annually, no later than the January 28th day of the month following the completed reporting period.

**End Table References**

Management Practices for Land Application:

- (1) The application of treated effluent to frozen, ice-covered, or snow covered land is prohibited.
- (2) No person shall apply treated effluent where the slope of the site exceeds 6 percent.
- (3) The use should not result in a surface water runoff.
- (4) The use must not result in the creation of an unhealthy or nuisance condition, as determined by the local health department.
- (5) Any irrigation with treated effluent must be at least 300 feet from a potable well.
- (6) Impoundments of treated effluent, if not sealed, must be at least 500 feet from any potable well.
- (7) Public access to effluent storage and irrigation or disposal sites shall be restricted by a stock-tight fence or other comparable means which shall be posted and controlled to exclude the public.



### **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 does not receive, generate, treat or dispose biosolids. Therefore 40 CFR 503 does not apply at this time.

### **STORM WATER**

Separate storm water permits may be required based on the types of activities occurring on site.

Permit coverage under the Multi Sector General Permit (MSGP) for Storm Water Discharges from Industrial Activities is required based on the Standard Industrial Classification (SIC) code for the facility and the types of industrial activities occurring. If the facility is not already covered, it has 30 days from when this permit is issued to submit the appropriate Notice of Intent (NOI) for the MSGP or exclusion documentation. Previously storm water discharge requirements and coverage were combined in this individual permit. These have been separated to provide consistency among permittees, electronic reporting for storm water discharge monitoring reports, and increase flexibility to changing site conditions.

Permit coverage under the Construction General Storm Water Permit (CGP) is required for any construction at the facility which 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.

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

### **PRETREATMENT REQUIREMENTS**

Any wastewater discharged to the sanitary sewer, either as a direct discharge or as a hauled waste, is subject to Federal, State and local pretreatment regulations. Pursuant to Section 307 of the CWA, the permittee shall comply with all applicable Federal Pretreatment Regulations promulgated at 40 CFR Part 403, the State Pretreatment Requirements at UAC R317-8-8, and any specific local discharge limitations developed by the Publicly Owned Treatment Works (POTW) accepting the wastewaters.

In addition, in accordance with 40 CFR Part 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 the permittee discharges any substance into a POTW which if otherwise disposed of would be considered a hazardous waste under 40 CFR Part 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 Utah Pollutant Discharge Elimination System Permit and Enforcement Guidance Document for Whole Effluent Toxicity 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.



The permittee is a minor industrial facility that will be discharging an infrequent amount of effluent, in which toxicity is neither an existing concern, nor likely to be present. Based on these considerations and the absence of receiving stream water quality monitoring data, there is no reasonable potential for toxicity in the permittee's discharge (per State of Utah Permitting and Enforcement Guidance Document for WET Control). As such, there will be no numerical WET limitations or WET monitoring requirements in this permit. However, the permit will contain a toxicity limitation re-opener provision that allows for modification of the permit should additional information indicate the presence of toxicity in the discharge.

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**PERMIT DURATION**

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

Drafted by  
Sarah Ward, Discharge & Reuse  
Daniel Griffin, Biosolids  
Jennifer Robinson, Pretreatment  
Lonnie Shull, Biomonitoring  
Lisa Stevens, Storm Water  
Suzan Tahir, 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

The Public Noticed of the draft permit will be published on the Department of Environmental Quality Division of Water Quality website.

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).

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**ATTACHMENT 1**

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**ATTACHMENT 2**

*Effluent Monitoring Data*

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Casper's Ice Cream Inc.  
Effluent Monitoring Data  
<https://echo.epa.gov/effluent-charts#UT0025526>

Month/Year	Temperature		Dissolved Oxygen		pH			TSS			Oil & Grease		Total Phosphorus		Flow	
	Daily Max	Units	Daily Min	Unit	Daily Min	Daily Max	Unit	Max Mon Ave	Max Wk Ave	Unit	Daily Max	Units	Daily Max	Units	Max Mon Ave	Units
11/17/2017	No Discharge	Celsius degrees	No Discharge	mg/L	No Discharge	No Discharge	SU	No Discharge	No Discharge	mg/L	No Discharge	mg/L	No Discharge	mg/L	No Discharge	MGD
2/7/2018	13.89	Celsius degrees	6.7	mg/L	7.8	7	SU	-	-	mg/L	Conditional Monitoring - Not Required	mg/L	0.11	mg/L	0.013	MGD
4/30/2018	11.6	Celsius degrees	6.8	mg/L	7	7	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.03	mg/L	0.02	MGD
7/31/2018	24	Celsius degrees	6.8	mg/L	7	7	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.03	mg/L	0.04	MGD
11/15/2018	No Discharge	Celsius degrees	No Discharge	mg/L	No Discharge	No Discharge	SU	No Discharge	No Discharge	mg/L	No Discharge	mg/L	No Discharge	mg/L	No Discharge	MGD
2/5/2019	15.6	Celsius degrees	7.2	mg/L	7.7	7	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.02	mg/L	0.035	MGD
5/8/2019	15.6	Celsius degrees	7.7	mg/L	7	7.5	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.01	mg/L	0.048	MGD
8/16/2019	16	Celsius degrees	7.3	mg/L	7.5	7.5	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.02	mg/L	0.039	MGD
11/30/2019	11.7	Celsius degrees	8.3	mg/L	7.5	7.5	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.01	mg/L	0.027	MGD
2/12/2020	13.9	Celsius degrees	8.5	mg/L	7.5	7.5	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.06	mg/L	0.027	MGD
5/8/2020	11.1	Celsius degrees	8.7	mg/L	7.5	7.5	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.03	mg/L	0.028	MGD
8/11/2020	21.7	Celsius degrees	8.5	mg/L	7.5	7.5	SU	4	4	mg/L	Conditional Monitoring - Not Required	mg/L	0.02	mg/L	0.03	MGD
10/19/2020	No Discharge	Celsius degrees	No Discharge	mg/L	No Discharge	No Discharge	SU	No Discharge	No Discharge	mg/L	No Discharge	mg/L	No Discharge	mg/L	No Discharge	MGD

**ATTACHMENT 3**

*Wasteload Analysis*

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**ATTACHMENT 4**

*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<sup>1</sup>. 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.

Since January 1, 2016, DWQ has conducted reasonable potential analysis (RP) on all new and renewal applications received after that date. To complete a RP analysis, more than 10 data points per parameter are needed. Casper's was not required to sample for metal parameters in their previous permit, therefore, analysis data is not available to perform a RP analysis. For this permit cycle, Casper's will be required to permit, at a minimum, annual metal sampling. If additional sampling is performed, it shall be reported to DWQ. Less than 10 data points may affect the RP outcomes which may require additional monitoring in the future.

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<sup>1</sup> See Reasonable Potential Analysis Guidance for definitions of terms