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Mojave Solar LLC

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Submitted Electronically

Subject: **09-AFC-5C**
Condition Number: **BIO 19**
Description: **Evaporation Pond Plan Monthly Report for March 2024**
Submittal Number: **BIO19-131-00**

April 16, 2024

Ashley Gutierrez, CPM
California Energy Commission
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Ms. Gutierrez,

Pursuant to Condition of Certification BIO-19, please find enclosed the Monthly Evaporation Pond Monitoring Report, for the of month March 2024.

The raw digital data (MS Excel) is attached with the email.

Sincerely,

Mahnaz Ghamati

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Attachments: Evaporation Pond Plan Monthly Report for March 2024, Raw digital data (MS Excel).

Monthly Evaporation Pond Monitoring Report

For March 2024

Mojave Solar Project

09-AFC-5C

ASI Operations
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April 2024

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1 Introduction

The MSP facility has four evaporation ponds, two in Alpha (denoted as A-E and A-W for their respective east or west positions within the Alpha portion of the plant) and two in Beta (B-E and B-W) (Figure 1). The California Energy Commission (CEC), in Condition of Certification BIO-19, requires that prior to the operation of the evaporation ponds a final Evaporation Pond Monitoring and Adaptive Management Plan (Evaporation Pond Plan) be approved.

BIO-19 requires monthly reporting for the first year if a technology other than netting is used. Reporting may be reduced to monthly or quarterly thereafter if no bird or wildlife deaths are reported during the first year. After the first year, monthly monitoring will continue pending approval of the Evaporation Pond Plan with on-going communication between MSP and the CPM. This report provides a summary of avian and non-avian monitoring at MSP's evaporation ponds and the Harper Lake Area of Critical Environmental Concern (ACEC). Final BIO19 Evaporation Pond Plan, BIO19-00-08 Evaporation Pond Monitoring and Adaptive Management Plan, Rev. 6. (Mojave Solar Project 09-AFC-5C) submittal approved on March 8, 2017.

2 Methods

2.1 Deterrent Deployment

The BIO-19 Evaporation Pond Monitoring and Adaptive Management Plan defines netting as the "final deterrent" and states that deterrents or netting will be used at the ponds. As such, the Eagle Eyes and BirdGard deterrents were removed from the ponds as each pond was netted.

1) Visual deterrents, Eagle Eyes were removed from each pond as netting commenced.

2) Audio deterrent, BirdGard was removed from each pond as netting commenced.

The specifications for the deterrent technologies are provided below:

- **Visual Deterrents (Eagle Eyes):** The Eagle Eye unit uses a reflective pyramid that rotates to reflect sunlight, creating a menacing pattern with the moving beams of light. The ever-changing light spectrum reflected by the Eagle Eye disorients birds in flight by significantly limiting their vision, causing them to deviate in flight and go elsewhere. The systems are either wind-powered or use a 12-volt electric battery to rotate the reflective pyramid. The battery may be charged by a small photovoltaic cell. It can be used to deter resident birds. Eight Eagle Eyes (4 red

wind driven and 4 silver electrically driven) are installed around each pond perimeter (Figure 2) for total of 32 units installed at the four ponds.

- **BirdGard:** This device uses digital recordings of species-specific distress and alarm calls, along with the sounds of a bird's natural predators are broadcast through high fidelity weather-resistant speakers to convince birds they are under attack and drive them away.

Photo 1: Eagle Eye deterrent

Photo 2: BirdGard deterrent

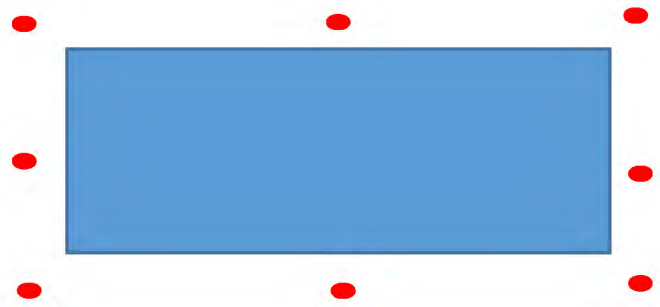


Figure 1. Layout of Eagle Eyes around each of the four ponds for a total of 32 Eagle Eyes.

BirdGard was implemented July 27, 2016, and the use of the propane cannons was discontinued. Due to the fatalities of a Mallard Duck in the Beta East evaporation pond on August 2nd and a California Gull in the Beta East evaporation pond on August 16th, adaptive management was triggered pursuant to BIO-19, for the 3rd quarter of 2016. On August 23rd, 2016, MSP requested CPM approval to modify the existing technology by changing the chip card that manages the sounds to avoid that the birds get comfortable or familiar with the kind of sounds emitted by the device (BIO19-22-00).

In an email received September 16, 2016, the CPM did not approve this proposal. MSP then, as per CPM recommendations, requested for approval on September 27th, to redeploy the cannons in addition to changing the chip card and keeping the Eagle Eyes, periodically rotating implementation of these technologies. MSP also proposed installing a water cannon system with high flow in all the ponds to hinder the birds from finding a proper spot in the ponds for perching or staying on the water. After observing the effects of the current evaporators in use at the Alpha ponds, this seems to be a working system for bird deterrents. On October 7th, 2016, CEC requested information by email on the water cannons; how many cannons per pond, how would they be triggered to go off, and which particular type of cannon would be installed. On October 11th, 2016, MSP sent an email response to CEC stating there would be 2 to 6 cannons deployed per pond, depending on final model and layout. They would go off automatically and would most likely be the Landshark model or a product similar to this.

A meeting was held on December 14, 2016, between MSP and CEC to discuss the proposed Adaptive Management. Topics discussed were the operation schedule of the water cannons, time of year cannons are to be used, would cannons affect existing

evaporators, water flow rates, power source, how many cannons per pond, how they would be turned on, and brand or model type. An email was sent by MSP on December 21st, 2016, answering all the questions the CEC had from the meeting. Final approval from the CEC received on February 27, 2017. As per the email received, "Staff approves the proposed adaptive management measure submitted on September 27, 2016. Please do not implement the final deterrents until the final Evaporation Pond Monitoring and Management Plan (BIO-19) is approved." and later confirmation from the CEC CPM, the expected date of implementation for the new deterrent is May 31, 2017. MSP asked for an extension on the implementation of the water cannon on 5/21/2017. Extension was granted until June 30th, 2017, on May 22, 2017. Due to the presence of nesting birds at the pond, MSP asked for and was granted another extension until August 31 to install the water cannons. The MSP DB determined that the risk to these nesting birds was too great to allow construction activities at the ponds until the chicks had fledged.

Placement of rental water cannons took place on Tuesday, August 2nd in Alpha West Pond and the units were tested for two weeks to assess coverage, efficiency, and numerous mechanical/technical parameters. Full deployment of the water cannons at all the ponds and thus daily Point Counts at the ponds and ACEC began on 10/10/2017. MSP suspended the use of the Water Cannons as per CEC communication dated November 3rd ("Staff directs Abengoa Mojave Solar to suspend use of the Landshark water cannons until further notice. Staff is reviewing the mortality reports to determine if the water cannons should continue to be used".

In an email dated 1/29/2018, the CEC staff directed the DB to halt the remaining deterrents "Just wanted to update you that a formal response to the Notification of Adaptive Management will be coming shortly. As stated previously, the final adaptive management trigger occurred on October 16 and 17, 2017 with the deaths of two western grebes at the Beta West evaporation pond. During our site visit on 1/24 we can discuss if halting use of the remaining deterrents is appropriate".

In an email received on February 5, 2018, the CEC staff stated: "BIO-19: I coordinated with USFWS regarding the BIO-19 question from the site visit regarding halting use of deterrents. The agencies recommend that MSP maintain and repair deterrents until we can make a determination about the netting. In general, deterrents may have some benefits to naive individuals (i.e., young or migrating individuals), so there may still be some benefit to the deterrence. If there are particular repairs or maintenance that is costly or requires significant resources, we can discuss whether they make sense."

In an email dated January 24, 2020, the CEC staff stated "Staff has discussed this with the USFWS, and they are in agreement that the ponds should be netted. MSP is advised that to remain in compliance with BIO-19 the project owner shall begin installation of netting at the evaporation ponds, per the requirements of BIO-19." "In addition, avian monitoring may be reduced to monthly, per the approved BIO-19 Plan, until the ponds are netted." The Mojave Solar Project (08-AFC-3C) Compliance Advice Letter For BIO-19, dated January 23, 2018, specifies that MSP has 60 days from notification to begin installation of netting. Accordingly, MSP planned to commence installation of netting at the ponds within the permitted period and avian monitoring will be reduced to monthly beginning February 2020.

Due to the COVID 19 pandemic, the CEC granted postponing the installation of the pond netting until the further notice. On May 21, 2021, because of the lifting of the "stay at home" order for San Bernardino County, CEC notified MSP of its intent to request that MSP initiate installation of the pond netting. CEC also requested additional information on the scope of work, design specifications, schedule, and status of nesting birds which MSP provided via email on May 26, 2021. Installation of netting on the Beta West Pond began in early September 2021 and was completed at the end of October 2021. Installation of netting at the remaining ponds was delayed due to issues with the netting contractor. Installation of netting on the Beta East Pond began in October and was completed in December 2023. Installation began on the Alpha ponds in December 2023 and is anticipated to be completed by mid-April 2024.

2.2 Monitoring

The Designated Biologist (DB) is responsible for ensuring that the CPM-approved avian monitors (avian monitors) are trained and qualified to implement the Evaporation Pond Plan requirements. Currently, all monitoring is performed by the DB.

2.2.1 Transect Survey Protocol

To improve the value of data collected, monitors started using a transect approach to survey avian activity, as directed by CPM starting November 1, 2016. Monitors slowly walk and/or drive the perimeter of each evaporation pond (approximately 30 minutes around each set of evaporation ponds) and record bird observations for individuals within the pond area as defined in the latest draft of the Evaporation Pond and Adaptive Management Plan. A slow pace will not significantly deter birds, because any present individuals are presumed tolerant of general site activity. Birds observed from the transect lines but occurring outside of the defined area of the evaporation ponds, will

not be recorded. Hard copy or electronic datasheets will be used to record observations at the evaporation ponds and ACEC (Appendix B).

During surveys, the avian monitor recorded the following information on observed species on a hard copy datasheet:

- Station identification number
- Date
- Survey start/stop time
- Observer
- Monitoring Purpose (daily or bi-weekly)
- Wildlife exclusion/deterrent technologies operation status (if applicable)
- Weather (including precipitation, temperature, wind, and percent cloud cover)
- Species (under rare conditions, e.g., low-light or backlighting or if bird is in a difficult to distinguish plumage phase or molting, the bird was identified to functional group)
- Functional group classification based on De Graaf et al. 1985
- Number of individuals
- Behavior (flythrough, flyover, foraging, nesting, perched, standing/walking, swimming/wading/diving, vocalization)
  - Nests are only documented in the surveys if they are "at the evaporation ponds" as defined by CPM emails dated February 19 and 25, 2015.
  - If the bird(s) were observed on a nest, the location was recorded using a global positioning system (GPS) unit.
  - If the bird(s) were found perching or nesting, detail was recorded pertaining to the type of perch (fence, trough, pond feature (measuring stick, outlet pipes), deterrent, machinery, other permanent feature, other temporary feature, transmission/power line, or vegetation.
- Location of observation
  - Distance and direction of the observation from the station
  - Pond (A-E, A-W, B-E, B-W) or ACEC
- Fatalities, injuries, or physical infirmities (e.g., birth defects or reduced growth)
- Special-status species (state or federally protected, excluding those species only protected under the Migratory Bird Treaty Act)

During this monitoring period, observed behaviors are defined to standardize interpretation:

- Flythrough is considered flying low through vicinity and interacting with site and or ponds.
- Flyover is considered passing overhead at distance and not interacting with site or ponds.
- Nesting activity is defined as active nest building, nest occupation, or dependent chicks. Nest inactivity is when the adults and fledglings are no longer dependent on the nest location.
- Perched is defined as above ground level.
- Standing/walking is defined as on ground level.
- Vocalizations where number of individuals cannot be confirmed are recorded as one individual.

The Avian Transect Data Sheet used during this reporting period is provided as Appendix A.

Transect surveys were scheduled at times of high bird activity. Morning surveys began no later than one hour after sunrise and evening surveys ended within one hour of sunset. The order in which transects were surveyed was systematically rotated by surveying them in a different sequence or direction so transects were surveyed during different times throughout the morning or afternoon/evening survey period.

2.2.2 Incidental Daily Observations

During biological monitoring duties, the DB intermittently visited the evaporation ponds. During these visits, the DB made incidental observations of avian and non-avian wildlife. These observations were recorded in field notebooks. The DB then reports them to the agencies and project owner as necessary.

2.2.3 Other Monitoring

During transect surveys and incidental observations, biological staff monitored for the following BIO-19 adaptive management triggers: 1) dead birds at the evaporation ponds, 2) special-status animals at the evaporation ponds, and 3) noise levels attributable to the deterrent technology exceeding 60 dB at the Harper Lake ACEC wetlands. The DB reports observations to the project owner who determines whether adaptive management under BIO-19 was triggered, and then reports it to the agencies as necessary.

If adaptive management is triggered, MSP has 10 days to notify the CPM of the incident and propose an adaptive management action to be implemented. Based on the approved Evaporation Pond Plan, MSP has 60 business days after CPM approval to acquire the proposed deterrent(s) and implement the adaptive management action.

2.2.4 Monitoring If Netted

The BIO-19 Plan (Rev. 6, Sec. 3.2.4) states "If the ponds are netted, the DB or the CPM-approved avian biologist or monitor will monitor the ponds at least monthly to ensure that the netting is in place and functioning properly, and properly and record any avian/wildlife mortalities per section 3.2.4. They will also monitor the ponds after storm events when winds exceed 25 mph to ensure that the nets are in place and functioning properly."

MSP submitted Revision 8 of the plan on October 19 and CEC approved the revision on October 27, 2021. This revision included the following language for monitoring netted ponds: "In addition to monthly monitoring of the pond netting and avian mortalities, the DB or CPM-approved avian biologist will survey the ponds for birds that may have become trapped inside the netting and or stranded/injured on top of the netting during routine compliance visits and MSP personnel will similarly survey the netting during weekly evaporation pond inspections. Initially the ponds will be surveyed weekly at a minimum. If strandings/fatalities are found not to be an issue, this schedule may be reduced with approval of CEC."

3 Reporting Requirements

3.1 Monthly Reports

On November 12, 2014, the CEC instructed MSP to begin deploying deterrents. The CEC provided verbal and written direction to the Designated Biologists in November and December 2014 requesting a monthly monitoring report. This monthly report is in response to those requests and is consistent with the requirements of BIO-19, which require a monthly report for the first year of deterrent operation when a technology other than netting is used.

On June 26, 2015, MSP submitted a revised Evaporation Pond Plan (Revision 4.3) to the CPM for review and approval. Section 5, of that plan establishes the following reporting requirements, which are essentially the same as the Rev. 6 of the approved BIO-19, Evaporation Pond and Adaptive Management Plan:

If non-net technology is used, monthly monitoring reports will be prepared by the DB and/or CPM-approved avian biologist and submitted to the CEC for review. Reports will include a summary of monitoring activities, a description of avian and wildlife activity at the evaporation ponds, and any fatalities found in or around the evaporation ponds, and any adaptive management responses implemented or changes to deterrent deployment. In addition, reports will include all the raw data collected, including photocopies of data sheets completed during monitoring. Reports will also include a cumulative list of birds observed organized by bird family and include a notation identifying the season in which the bird was observed and whether the bird was observed at the ACEC or an evaporation pond (including pond identification). Water quality test results will be reported per the requirements of the DMP.

If netting is not used, monthly reports will be provided during the first year of operation of the ponds. Provisions are included in BIO-19 to reduce reporting to quarterly if no bird or wildlife deaths are reported during the first year. Consistent with this allowance, reports will be provided quarterly following any year where no bird or wildlife deaths are reported.

If netting is used, reports will be provided quarterly.

This report follows those reporting requirements.

On October 21st, 2016, CEC approved decreasing avian point counts from weekdays to weekly (once a week) and allowing fatality monitoring by Operations staff on other days (see below Section 3.2.3) according to Rev. 6 of the approved BIO-19, Evaporation Pond and Adaptive Management Plan:

3.2 Avian Monitoring Reduction

During the implementation of a new wildlife deterrent/exclusion technology, CPM-approved biologist or the biological monitors will monitor the evaporation ponds and Harper Lake ACEC wetlands once a week using transect surveys, or other protocol approved by the CPM. When weekday monitoring is required, weekend and holiday monitoring will be conducted by site staff (includes non-biologists) for fatalities only. If a carcass is discovered at a time when an approved biologist or monitor is not on-site, the site staff will document the carcass, which includes photographing the carcass, and recording the standard information on the data sheets. If the carcass is on land, it will be covered with a cone or bucket and secured to ensure the carcass remains until an approved biologist or monitor is back on site and can properly identify and document it. If in the water, the staff person will record on a map where the carcass is located,

take photos, and record other information on the standard data sheet, and notify the biological staff or ECM the same day of the finding. The next time the avian biologist is on-site, they will attempt to locate the carcass, identify it, and safely retrieve the carcass.

Once it is established that the new deterrent/exclusion technology does not disturb birds using the marsh, monitoring at the ACEC will be reduced to monthly.

Depending on the results of the daily monitoring at the ponds of new deterrents/ technologies, BIO-19 allows monitoring efforts to be decreased to weekly, bi-weekly or monthly. As discussed in Section 2.1 above, MSP reduced the monitoring frequency to monthly beginning February 2020.

The DB on site trained operations staff on how to conduct the fatality monitoring and paperwork required if a carcass was found. As applicable, operations staff texts or emails results to the DB with results of the day's monitoring.

3.3 Water Quality

Beginning April 2020, MSP discontinued water sample collection as requested, due to the netting installation. The CEC granted this request on March 12, 2020. In an email dated August 9, 2021, CEC directed MSP to resume "water quality monitoring per the approved BIO-19 Plan until netting installation is complete at each pond." Monthly water quality sampling resumed in September 2021. The current results are attached in Appendix D.

Ninyo & Moore is under contract to conduct water quality testing in accordance with the Detection Monitoring Program and Ground Water Monitoring Plan (Ninyo & Moore 2016). Therefore, the water quality data for this period is being reported by Ninyo & Moore under separate cover.

4 Monitoring Results

4.1 Evaporators

On June 27th, 2016, three evaporators were deployed into the Alpha West evaporation pond. A small control house was installed on the shore of the southwest corner of the pond, inside of the pond perimeter fence. The evaporator units were initially situated on the far west side of the Alpha West Pond, about 15 meters from the west shoreline.

On June 29, 2016, the evaporators were tested by the supplier and by MSP staff. On June 30th, MSP began operating the evaporators. Since initiating the evaporators, MSP has reconfigured the three evaporators multiple times, in attempts to reduce overspray from escaping the pond liner and optimize evaporation. The relative positions of the evaporators changed in April with the removal of one evaporator from Alpha-West evaporation pond and its placement, along with a new evaporator, into Alpha-East evaporation pond.

On June 5th, 2017, four new evaporators began operating on Beta West and Beta East ponds (two on each pond). The operational parameters used for the evaporators on Alpha ponds were incorporated for the operation of the evaporators on Beta ponds.

The evaporator control house has a weather gauge that reads three factors: temperature, wind, and humidity. The evaporators shut down if any of the three factors exceed specific levels that lower evaporation efficiency. The evaporators were removed from the Beta West Pond in September 2021 as netting installation commenced. The evaporators and associated control houses were removed from Beta East in October 2023 and from the Alpha ponds in November 2023 as netting of the ponds commenced.

MSP communicated with CEC regarding the use of SMI Super Polecat Evaporators to replace the existing evaporators when the ponds are netted. CEC approved their use in a letter dated 3/17/23. MSP deployed one Polecat evaporator at the Alpha East Pond in early August 2023 to test its effectiveness. The evaporator is contained inside a chain link cage covered with the same 1" mesh netting used to cover the beta pond. Due to the pond water conditions, the evaporator could only be operated for approximately one week before needing maintenance. As a result, MSP deployed an additional evaporator at the alpha east pond so that one was operational while the other was down for maintenance. MSP staff and the DB monitored the evaporators to ensure that birds did not become trapped in the netted enclosures. Birds avoided the evaporators while they were operating. After testing the Polecat evaporators, MSP determined that they were not suitable for use due the high level of maintenance necessary to keep them operational. The Polecat evaporators were removed from the Alpha ponds in November 2023.

Subsequently, MSP communicated with CEC regarding the use of PittBoss Sprayer-less Evaporators to replace the existing evaporators when the ponds are netted. In a letter dated December 22, 2023, CEC approved the use of the PittBoss evaporators. In February 2024, MSC installed four PittBoss evaporators in the alpha east pond (see photos).

Photos 3&4: Location and close-up of PittBoss Sprayer-less Evaporators installed in the Alpha East Pond.

The CEC instructed MSP to monitor the effects that the evaporators have on birds. To date, birds have not been observed interacting with them.

4.2 Deterrent Deployment

CPM Dale Rundquist sent an email on May 13th, 2016, approving MSP's BIO-19 Adaptive Management request to install BirdGard at the evaporation ponds. MSP installed BirdGard on July 27th, within 60-days after CPM approval (May 13th). The propane cannon deterrents were replaced by the installation of BirdGard.

The BirdGard and Eagle Eyes were removed from the ponds to accommodate the installation of the netting at each pond.

4.3 Transect Surveys

During the reporting period, all transect surveys were conducted by the DB. On each transect, the DB recorded all bird observations, whether visual or auditory. Scans of the transect logs and the raw digital data from the transect surveys are included in Appendix B.

As Beta ponds have been netted, transect surveys were only conducted at the Alpha ponds.

No new species were observed at the evaporation ponds or the ACEC. Total number species observed since point counts began in August of 2014 remains at 205. Out of the cumulative 205 species, seven were observed this period during transect surveys and incidental observations (Appendix C). Water birds were the most common functional group observed.

Bird activity at the ponds was minimal during the month. During March, four species were observed at the ponds and three species at the ACEC. Only one species was observed at the ponds during transect surveys (Appendix C).

No avian fatalities were detected during formal transect/point counts or incidentally at the ponds during the reporting period.

The DB surveyed the ponds for nesting birds at least once a week beginning in February to ensure that netting installation does not impact nesting birds. Very few birds were observed using the ponds during the month of March and no sign of nesting was observed.

No new species were observed at the ponds during the current reporting period. Overall bird numbers and diversity was minimal throughout the month as only a few individuals were observed at the alpha ponds likely due to activity associated with netting installation.

4.4 Pond Netting

Netting over Beta West Pond was completed in October 2021. The netting contractor was onsite in August 2022 to repair holes in the netting and modify the existing design to minimize damage to the netting at wear points where the netting contacts the support posts and hardware. Per communications with CEC during August, MSP will monitor the design changes for 2-3 months to ensure effectiveness before beginning installation of netting on the Beta East Pond. No issues have been observed with the netting since repairs and modifications were completed.

Installation of netting on the remaining ponds was scheduled to begin in early January 2023. In February MSP became aware that the netting contractor was lacking critical California documentation to be able to work at the site and suspended the project until the contractor provides the necessary documents. MSP informed CEC, USFWS, and the DB about the unexpected obstacles with the netting project on February 10th and requested an extension to complete the netting after the bird breeding season. MSP has since contracted with a new netting contractor.

Installation of netting on the Beta East Pond began in October 2023 and was completed in late December. The netting contractor began installation of the posts around the Alpha ponds in November in order to remain on schedule while awaiting delivery of the netting. Installation on the Alpha West Pond was completed at the end of March. Installation on the Alpha East resumed upon completion of the alpha west pond and is expected to be completed by the end April 2024.

The DB and/or MSP personnel conducted weekly inspections of the netting at each of the ponds for holes or tears and for fatalities or strandings associated with the netted pond. No live stranded birds or fatalities associated with the netting were observed during the reporting period.

4.5 Lake Tank Water Storage

In June 2023 and January 2024, CEC issued two separate authorizations to MSP for the installation and use of 10 Lake Tank water storage tanks. Two tanks have been installed in Alpha power block area and two in the Beta power block area. Two additional tanks are currently being installed in Alpha east, east of the evaporation ponds and one in Alpha west. The tanks are netted to comply with BIO-19 and are being monitored by the DB to ensure that wildlife do not become entangled in the netting or trapped in the tanks. To date there have been no issues and wildlife have not been observed interacting with the tanks.

4.6 Water Quality

Ninyo & Moore will provide (under separate cover) the results of routine water quality testing conducted in accordance with the Detection Monitoring Program and Ground Water Monitoring Plan.

5 Conclusion and Recommendation

At the end of February, monitoring had occurred for 882 days.

6 References

California Energy Commission (CEC). 2010. Abengoa Mojave Solar Project Commission Decision CEC-800-2010-008-CMF. September 2010.

Mojave Solar Project (MSP). 2016. BIO-19, Evaporation Pond Monitoring and Adaptive Management Plan (revision 6). March 2017.

MSP and Ironwood Consulting. 2015. Monthly Evaporation Pond Monitoring Report for November 2015 through November 2016.

MSP. 2017-2023. Monthly Evaporation Pond Monitoring Report for December 2016, through December 2023.

Ninyo & Moore. 2017. Revised Detection Monitoring Program, California Energy Commission, Mojave Solar Project, San Bernardino County, California.

Appendix A

Avian Point Count Data Sheets

BIO-19 Monitoring Data Sheet – Mojave Solar Project. Appendix B.

Transect ID: _____ Date (mo/day/yr): ____/____/____ Start Time _____:_____ End Time _____:_____ Observer Initials: _____
Monitoring Interval: Daily Weekly Biweekly Monthly (circle one)
Deterrents in Use: _____Deterrents Operating to Manufacturer Specifications? Y N

Evaporators in use: Y N Avian Activity on/near Evaporators or Mist? Y N If Yes, explain in detail:

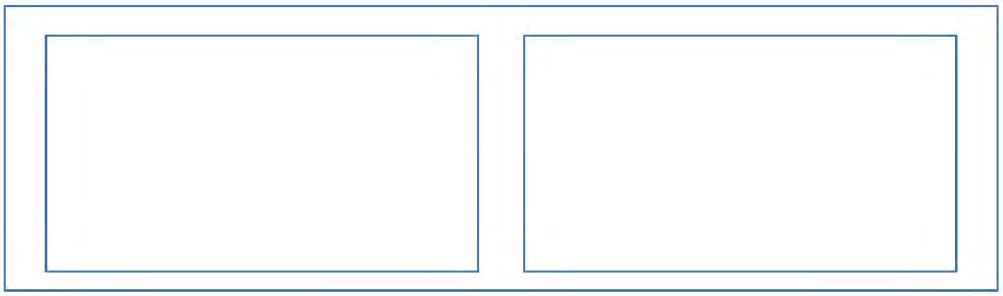
_____

Weather Conditions: Temp: (F) _____ % Cloud Cover: 0-25 25-50 50-75 75-100
Precipitation: None Light Heavy Wind Speed (MPH): 0 1-5 6-10 11-20 20+ Wind Direction: _____

Evaporation Pond Pair

Illustrate evaporator locations, bird detection locations, and flight direction.

North



Westernmost Pond South Easternmost Pond

Special-status Species Observed? Y N Species, Location, Disposition: _____

Any Birds NOT Identified to Species? Y N If yes, explain: _____

Other: Injury Infirmity Mortality _____
Taken to Rehabilitation Center or Veterinarian? Y N Provide details_____
Non-Avian Wildlife Observations (tracks, scat, burrows etc.): _____

REVISED 3/02/2017

BIO-19 Monitoring Data Sheet – Mojave Solar Project. Appendix B.

Pond ID: ________ Date (mo/day/yr): ____/____/____ **A.M. or P.M.** Observer Initials: _________

Transect ID	Species Code	Functional Group Code	# Individuals	Observed Behavior(s)									Distance from Obs	Direction of Flight	Location	
				Flythrough	Flyover	Foraging	Nesting	Perched	Standing/Walking	Swimming/ Wading/Diving	Vocalization	Other (see below)			Perch Structure (See Below)	Location (See Below)

Acronyms and Definitions: Pond ID Alpha, Beta or ACEC. Alpha eastern-most pond (A-E), Alpha westernmost pond (A-W), Beta easternmost pond (B-E), Beta westernmost pond (B-W), Harper Lake ACEC (ACEC). Species Code: four letter American Ornithological Union (AOU) 4 or 6 alpha code. Functional Group Code: Includes Food Type, Feeding substrate, and Technique see Functional Group Classification Procedures adapted from De Graaf et al 1985; Observed Behaviors: Flythrough = flying low through vicinity and interacting with site. Flyover = passing overhead at distance and not interacting with site. Perched is defined as above ground level. Standing/walking is defined as on ground level. Perch Structures include: fence, trough, pond feature (staff gauge, outlet pipes), deterrent, machinery, other permanent feature, other temporary feature, transmission/power line, or vegetation. Location: At the pond = within or perched on the evaporation pond perimeter fence or flying low enough to be behaviorally interacting with the ponds (e.g., such that birds may be in contact with the process water in a pond, or invertebrates that may live in or just above the water). Distance and Direction: Distance and direction of the observation from transect;: example; LOSH 120m NNE

REVISED 3/02//2017

BIO-19 – Avian Point Count Data Sheet – Mojave Solar Project

Station ID: _____Date (mo/day/yr): ___/___/___ Start Time _____:_____ End Time _____:_____

Observer Initials: _____ Monitoring Purpose: Daily Deterrent Bi-Weekly

Are deterrents operating to manufacturer specifications?

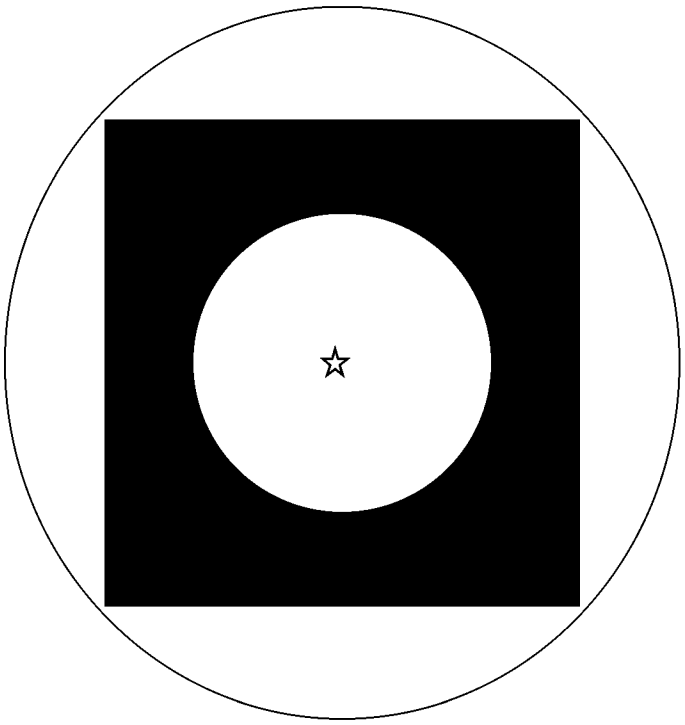
West Pond: Cannons Y N Scare Eyes Y N

East Pond: Cannons Y N Scare Eyes Y N

Weather Conditions: Temp: (F) _____ % Cloud Cover: 0-25 25-50 50-75 75-100

Wind Speed: (MPH) 0 1-5 6-10 11-20 20+ Wind Direction: ____Precip: None Light Heavy

North



South

Appendix B

Point Count Datasheets and Raw Digital Data

(MS Excel provided within the submittal)

Appendix C

MSP Cumulative Avian Species List for March 2024

(Includes Incidental Sightings)

Species	Location
American Coot – *Fulica americana*	ACEC
Lesser Scaup – *Aythya affinis*	Ponds
Black-necked Stilt – *Himantopus mexicanus*	Ponds
Killdeer – *Charadrius vociferus*	Ponds
Least Sandpiper – *Calidris minutilla*	Ponds
Bell's Sparrow – *Artemisiospiza belli*	ACEC
Horned Lark – *Eremophila alpestris*	ACEC

Appendix D

Water Quality Testing Results

Enthalpy Analytical
931 West Barkley Ave
Orange, CA 92868
(714) 771-6900

enthalpy.com

Lab Job Number:	502065
Report Level:	II
Report Date:	02/26/2024

Analytical Report *prepared for:*

Mahnaz Ghamati
Mojave Solar LLC
42134 Harper Lake Road
Hinkley, CA 92347

Project: POND_SAMPLING - Mojave Solar, 408-466-6715

Authorized for release by:

Diane Galvan, Project Manager
714-771-9928
diane.galvan@enthalpy.com

This data package has been reviewed for technical correctness and completeness. Release of this data has been authorized by the Laboratory Manager or the Manager's designee, as verified by the above signature which applies to this PDF file as well as any associated electronic data deliverable files. The results contained in this report meet all requirements of NELAP and pertain only to those samples which were submitted for analysis. This report may be reproduced only in its entirety.

CA ELAP# 1338, NELAP# 4038, SCAQMD LAP# 18LA0518, LACSD ID# 10105

ENTHALPY ANALYTICAL

Sample Summary

Mahnaz Ghamati
Mojave Solar LLC
42134 Harper Lake Road
Hinkley, CA 92347

Lab Job #:	502065
Project No:	POND_SAMPLING
Location:	Mojave Solar, 408-466-6715
Date Received:	02/10/24

Sample ID	Lab ID	Collected	Matrix
ALPHA WEST POND	502065-001	02/09/24 11:45	Water
ALPHA EAST POND	502065-002	02/09/24 11:35	Water

ENTHALPY ANALYTICAL

Case Narrative

Mojave Solar LLC 42134 Harper Lake Road Hinkley, CA 92347 Mahnaz Ghamati	Lab Job Number: 502065 Project No: POND_SAMPLING Location: Mojave Solar, 408-466-6715 Date Received: 02/10/24

This data package contains sample and QC results for two water samples, requested for the above referenced project on 02/10/24. The samples were received cold and intact.

Metals (EPA 6020 and EPA 7470A):

- Low recoveries were observed for mercury in the MS/MSD for batch 332766 affecting 502065-001 and 502065-002; the parent sample was not a project sample, the LCS was within limits, and the associated RPD was within limits.
- No other analytical problems were encountered.

Ion Chromatography (EPA 300.0):

- Low recoveries were observed for fluoride and nitrogen, nitrite in the MS/MSD of 502065-001 affecting 502065-001 and 502065-002; the LCS was within limits, and the associated RPDs were within limits.
- Responses exceeding the instrument's linear range were observed for chloride and sulfate in the MS/MSD for batch 332742 and the MS/MSD of 502065-001 affecting MS QC1127364, MSD QC1127365, MS QC1127380, and MSD QC1127381; affected data was qualified with "E".
- No other analytical problems were encountered.

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Chain of Custody Record

Lab No: 502065

Page: 1 of 1

Turn Around Time (rush by advanced notice only)

Standard:	X	5 Day:		3 Day:	
2 Day:		1 Day:		Custom TAT:	

Enthalpy Analytical - Orange

931 W. Barkley Avenue, Orange, CA 92868

Phone 714-771-6900

Matrix: A = Air S = Soil/Solid
W = Water DW = Drinking Wate SD = Sediment
PP = Pure Product SEA = Sea Water
SW = Swab T = Tissue WP = Wipe O = Other

Preservatives:
1 = $Na_2S_2O_3$ 2 = HCl 3 = HNO_3
4 = H_2SO_4 5 = NaOH 6 = Other

Sample Receipt Temp: (lab use only)

CUSTOMER INFORMATION		PROJECT INFORMATION	
Company:	Mojave Solar	Name:	Mojave Solar
Report To:	Mahnaz Ghamati	Number:	408-466-6715
Email:	mahnaz.ghamati@atlantica.com	P.O. #:	4500937731
Address:	42134 Harper lake Rd	Address:	
	Hinkley, CA		
Phone:	760-308-0418	Global ID:	
Fax:		Sampled By:	Ali Assadi

	Sample ID	Sampling Date	Sampling Time	Matrix	Container No. / Size	Pres.	SM4500-NH3-G	SM4500 P-B5-E	SM2320B	SM2540C-TDS	EPA6020	EPA 300	EPA 200.7 B, Ca, Fe	EPA 7470A, Mercury			Test Instructions / Comments
1	Alpha West Pond	02/09/24	11:45	W	4	3,4	X	X	X	X	X	X	X	X			pH: 8.55 T°C: 9.2 EC: 316.5
2	Alpha East Pond	02/09/24	11:35	W	4	3,4	X	X	X	X	X	X	X	X			pH: 8.55 T°C: 11.6 EC: 131.4
4																	
5																	
6																	
7																	
8																	
9																	
10																	

	Signature	Print Name	Company / Title	Date / Time
[1] Relinquished By:		Ali Assadi	Mojave Solar/NT Shop	2,9,24 / 14:50
[1] Received By:		Katherine Noh	EA	2/10/24 0956
[2] Relinquished By:				
[2] Received By:				
[3] Relinquished By:				
[3] Received By:				

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SAMPLE ACCEPTANCE CHECKLIST

Section 1

Client: Mojave Solar — Project: Mojave Solar - Pads

Date Received: 2/10/24 — Sampler's Name Present: ☑ Yes ☐ No

Section 2

Sample(s) received in a cooler? ☑ Yes, How many? 1 ☐ No (skip section 2) — Sample Temp (°C) (No Cooler): _____

Sample Temp (°C), One from each cooler: #1: 3.8 #2: _____ #3: _____ #4: _____

(Acceptance range is < 6°C but not frozen (for Microbiology samples, acceptance range is < 10°C but not frozen). It is acceptable for samples collected the same day as sample receipt to have a higher temperature as long as there is evidence that cooling has begun.)

Shipping Information: _____

Section 3

Was the cooler packed with: ☑ Ice ☐ Ice Packs ☐ Bubble Wrap ☐ Styrofoam ☐ Paper ☐ None ☐ Other _____

Cooler Temp (°C): #1: 3.6 #2: _____ #3: _____ #4: _____

Section 4	YES	NO	N/A
Was a COC received?	✓		
Are sample IDs present?	✓		
Are sampling dates & times present?	✓		
Is a relinquished signature present?	✓		
Are the tests required clearly indicated on the COC?	✓		
Are custody seals present?		✓	
If custody seals are present, were they intact?			✓
Are all samples sealed in plastic bags? (Recommended for Microbiology samples)			✓
Did all samples arrive intact? If no, indicate in Section 4 below.	✓		
Did all bottle labels agree with COC? (ID, dates and times)	✓		
Were the samples collected in the correct containers for the required tests?	✓		
Are the containers labeled with the correct preservatives?	✓		
Is there headspace in the VOA vials greater than 5-6 mm in diameter?			✓
Was a sufficient amount of sample submitted for the requested tests?	✓		

Section 5 Explanations/Comments

Section 6

For discrepancies, how was the Project Manager notified? ☐ Verbal PM Initials: _____ Date/Time _____

☐ Email (email sent to/on): _____ / _____

Project Manager's response:

Completed By: _____ Date: 2/10/24

View/Print Label

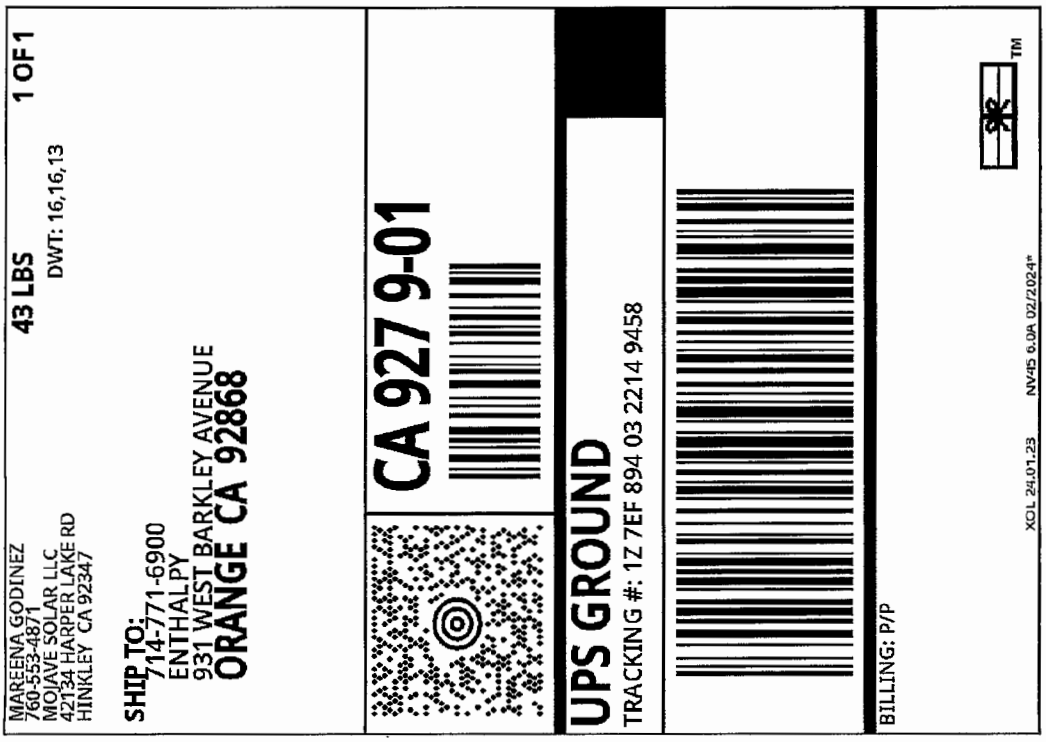
1. **Ensure there are no other shipping or tracking labels attached to your package.** Select the Print button on the print dialogue box that appears. Note: If your browser does not support this function, select Print from the File menu to print the label.

2. **Fold the printed label at the solid line below.** Place the label in a UPS Shipping Pouch. If you do not have a pouch, affix the folded label using clear plastic shipping tape over the entire label.

3. **GETTING YOUR SHIPMENT TO UPS**
   Customers with a scheduled Pickup
   - Your driver will pickup your shipment(s) as usual.

   Customers without a scheduled Pickup
   - Take your package to any location of The UPS Store®, UPS Access Point(TM) location, UPS Drop Box, UPS Customer Center, Staples® or Authorized Shipping Outlet near you. To find the location nearest you, please visit the 'Locations' Quick link at ups.com.
   - Schedule a Pickup on ups.com to have a UPS driver pickup all of your packages.

FOLD HERE



956
3.8/3.6

ENTHALPY ANALYTICAL

Analysis Results for 502065

Mahnaz Ghamati
Mojave Solar LLC
42134 Harper Lake Road
Hinkley, CA 92347

Lab Job #: 502065
Project No: POND_SAMPLING
Location: Mojave Solar, 408-466-6715
Date Received: 02/10/24

Sample ID: ALPHA WEST POND **Lab ID: 502065-001** **Collected: 02/09/24 11:45**
Matrix: Water

502065-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 200.7									
Prep Method: EPA 3015A									
Boron	**100**		mg/L	2.0	40	332858	02/12/24	02/15/24	JCP
Calcium	**770**		mg/L	4.0	40	332858	02/12/24	02/15/24	JCP
Iron	ND		mg/L	0.020	1	332858	02/12/24	02/13/24	JCP
Method: EPA 300.0									
Prep Method: METHOD									
Fluoride	ND		mg/L	20	100	332742	02/10/24 12:10	02/10/24 13:11	JAA
Chloride	**43,000**		mg/L	1,000	1000	332742	02/10/24 12:10	02/10/24 14:12	JAA
Nitrogen, Nitrite	ND		mg/L	10	100	332742	02/10/24 12:10	02/10/24 13:11	JAA
Bromide	**100**		mg/L	30	100	332742	02/10/24 12:10	02/10/24 13:11	JAA
Nitrogen, Nitrate	ND		mg/L	10	100	332742	02/10/24 12:10	02/10/24 13:11	JAA
Sulfate	**23,000**		mg/L	1,000	1000	332742	02/10/24 12:10	02/10/24 14:12	JAA
Method: EPA 6020									
Prep Method: EPA 3015A									
Antimony	ND		ug/L	100	50	332832	02/12/24	02/12/24	DXC
Arsenic	ND		ug/L	100	50	332832	02/12/24	02/12/24	DXC
Barium	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Beryllium	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Cadmium	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Chromium	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Cobalt	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Copper	ND		ug/L	150	50	332832	02/12/24	02/12/24	DXC
Lead	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Molybdenum	**1,100**		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Nickel	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Selenium	ND		ug/L	100	50	332832	02/12/24	02/12/24	DXC
Silver	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Thallium	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Vanadium	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Zinc	ND		ug/L	500	50	332832	02/12/24	02/12/24	DXC
Method: EPA 7470A									
Prep Method: METHOD									
Mercury	ND		ug/L	0.40	1	332766	02/12/24	02/12/24	KAM
Method: SM 4500-NH3-G									
Ammonia-N	ND		mg/L	0.10	1	333823	02/23/24	02/23/24	JTS
Method: SM 4500-P-B5-E									
Phosphorus	**1.6**		mg/L	0.080	4	333474	02/20/24	02/22/24	JAK
Method: SM2320B									
Prep Method: METHOD									
Bicarbonate	**610**		mg/L	24	10	332974	02/13/24	02/13/24	WWC
Carbonate	ND		mg/L	12	10	332974	02/13/24	02/13/24	WWC

Results for any subcontracted analyses are not included in this section.

Analysis Results for 502065

502065-001 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Hydroxide	ND		mg/L	7.0	10	332974	02/13/24	02/13/24	WWC
Alkalinity, Total as CaCO3	**500**		mg/L	20	10	332974	02/13/24	02/13/24	WWC
Method: SM2540C Prep Method: METHOD									
Total Dissolved Solids	**110,000**		mg/L	100	10	332906	02/13/24	02/14/24	WWC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 502065

Sample ID: ALPHA EAST POND	Lab ID: 502065-002	Collected: 02/09/24 11:35
	Matrix: Water	

502065-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist
Method: EPA 200.7 Prep Method: EPA 3015A									
Boron	**130**		mg/L	2.0	40	332858	02/12/24	02/15/24	JCP
Calcium	**840**		mg/L	4.0	40	332858	02/12/24	02/15/24	JCP
Iron	ND		mg/L	0.020	1	332858	02/12/24	02/13/24	JCP
Method: EPA 300.0 Prep Method: METHOD									
Fluoride	ND		mg/L	20	100	332742	02/10/24 12:10	02/10/24 14:33	JAA
Chloride	**56,000**		mg/L	1,000	1000	332742	02/10/24 12:10	02/10/24 14:53	JAA
Nitrogen, Nitrite	ND		mg/L	10	100	332742	02/10/24 12:10	02/10/24 14:33	JAA
Bromide	**130**		mg/L	30	100	332742	02/10/24 12:10	02/10/24 14:33	JAA
Nitrogen, Nitrate	ND		mg/L	10	100	332742	02/10/24 12:10	02/10/24 14:33	JAA
Sulfate	**16,000**		mg/L	1,000	1000	332742	02/10/24 12:10	02/10/24 14:53	JAA
Method: EPA 6020 Prep Method: EPA 3015A									
Antimony	ND		ug/L	100	50	332832	02/12/24	02/12/24	DXC
Arsenic	ND		ug/L	100	50	332832	02/12/24	02/12/24	DXC
Barium	**260**		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Beryllium	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Cadmium	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Chromium	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Cobalt	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Copper	ND		ug/L	150	50	332832	02/12/24	02/12/24	DXC
Lead	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Molybdenum	**1,400**		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Nickel	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Selenium	ND		ug/L	100	50	332832	02/12/24	02/12/24	DXC
Silver	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Thallium	ND		ug/L	50	50	332832	02/12/24	02/12/24	DXC
Vanadium	ND		ug/L	250	50	332832	02/12/24	02/12/24	DXC
Zinc	ND		ug/L	500	50	332832	02/12/24	02/12/24	DXC
Method: EPA 7470A Prep Method: METHOD									
Mercury	ND		ug/L	0.40	1	332766	02/12/24	02/12/24	KAM
Method: SM 4500-NH3-G									
Ammonia-N	ND		mg/L	0.10	1	333823	02/23/24	02/23/24	JTS
Method: SM 4500-P-B5-E									
Phosphorus	**2.5**		mg/L	0.080	4	333474	02/20/24	02/22/24	JAK
Method: SM2320B Prep Method: METHOD									
Bicarbonate	ND		mg/L	24	10	332974	02/13/24	02/13/24	WWC
Carbonate	**280**		mg/L	12	10	332974	02/13/24	02/13/24	WWC
Hydroxide	**40**		mg/L	7.0	10	332974	02/13/24	02/13/24	WWC
Alkalinity, Total as CaCO3	**590**		mg/L	20	10	332974	02/13/24	02/13/24	WWC
Method: SM2540C Prep Method: METHOD									
Total Dissolved Solids	**120,000**		mg/L	100	10	332906	02/13/24	02/14/24	WWC

Results for any subcontracted analyses are not included in this section.

ENTHALPY ANALYTICAL

Analysis Results for 502065

502065-002 Analyte	Result	Qual	Units	RL	DF	Batch	Prepared	Analyzed	Chemist

ND Not Detected

Results for any subcontracted analyses are not included in this section.

Batch QC

Type: Blank	**Lab ID:** QC1127698	**Batch:** 332858
Matrix: Water	**Method:** EPA 200.7	**Prep Method:** EPA 3015A

QC1127698 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Boron	ND		mg/L	0.050	02/12/24	02/13/24
Calcium	ND		mg/L	0.10	02/12/24	02/13/24
Iron	ND		mg/L	0.020	02/12/24	02/13/24

Type: Lab Control Sample	**Lab ID:** QC1127699	**Batch:** 332858
Matrix: Water	**Method:** EPA 200.7	**Prep Method:** EPA 3015A

QC1127699 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Boron	0.3678	0.4000	mg/L	92%		85-115
Calcium	20.44	20.40	mg/L	100%		85-115
Iron	0.3941	0.4000	mg/L	99%		85-115

Type: Matrix Spike	**Lab ID:** QC1127700	**Batch:** 332858
Matrix (Source ID): Water (502063-043)	**Method:** EPA 200.7	**Prep Method:** EPA 3015A

QC1127700 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Boron	0.3645	0.008554	0.4000	mg/L	89%		75-125	1
Calcium	75.85	57.04	20.40	mg/L	92%		75-125	1
Iron	0.3861	ND	0.4000	mg/L	97%		75-125	1

Type: Matrix Spike Duplicate	**Lab ID:** QC1127701	**Batch:** 332858
Matrix (Source ID): Water (502063-043)	**Method:** EPA 200.7	**Prep Method:** EPA 3015A

QC1127701 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Boron	0.3760	0.008554	0.4000	mg/L	92%		75-125	3	20	1
Calcium	75.28	57.04	20.40	mg/L	89%		75-125	1	20	1
Iron	0.3832	ND	0.4000	mg/L	96%		75-125	1	20	1

Type: Matrix Spike	**Lab ID:** QC1127702	**Batch:** 332858
Matrix (Source ID): Water (502063-052)	**Method:** EPA 200.7	**Prep Method:** EPA 3015A

QC1127702 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Boron	0.4814	0.1040	0.4000	mg/L	94%		75-125	1
Calcium	83.97	64.91	20.40	mg/L	93%		75-125	1
Iron	0.3951	ND	0.4000	mg/L	99%		75-125	1

Batch QC

Type:	Matrix Spike Duplicate	Lab ID:	QC1127703	Batch:	332858
Matrix (Source ID):	Water (502063-052)	Method:	EPA 200.7	Prep Method:	EPA 3015A

QC1127703 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Boron	0.5089	0.1040	0.4000	mg/L	101%		75-125	6	20	1
Calcium	87.78	64.91	20.40	mg/L	112%		75-125	4	20	1
Iron	0.3935	ND	0.4000	mg/L	98%		75-125	0	20	1

Type:	Blank	Lab ID:	QC1127362	Batch:	332742
Matrix:	Water	Method:	EPA 300.0	Prep Method:	METHOD

QC1127362 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Fluoride	ND		mg/L	0.20	02/10/24 12:10	02/10/24 12:30
Chloride	ND		mg/L	1.0	02/10/24 12:10	02/10/24 12:30
Nitrogen, Nitrite	ND		mg/L	0.10	02/10/24 12:10	02/10/24 12:30
Bromide	ND		mg/L	0.30	02/10/24 12:10	02/10/24 12:30
Nitrogen, Nitrate	ND		mg/L	0.10	02/10/24 12:10	02/10/24 12:30
Sulfate	ND		mg/L	1.0	02/10/24 12:10	02/10/24 12:30

Type:	Lab Control Sample	Lab ID:	QC1127363	Batch:	332742
Matrix:	Water	Method:	EPA 300.0	Prep Method:	METHOD

QC1127363 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Fluoride	9.225	10.00	mg/L	92%		90-110
Chloride	45.65	50.00	mg/L	91%		90-110
Nitrogen, Nitrite	4.275	4.567	mg/L	94%		90-110
Bromide	14.19	15.00	mg/L	95%		90-110
Nitrogen, Nitrate	4.261	4.518	mg/L	94%		90-110
Sulfate	23.73	25.00	mg/L	95%		90-110

Type:	Matrix Spike	Lab ID:	QC1127364	Batch:	332742
Matrix (Source ID):	Water (502065-001)	Method:	EPA 300.0	Prep Method:	METHOD

QC1127364 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Fluoride	20.68	4.595	20.00	mg/L	80%		80-120	100
Chloride	38,870	43100	100.0	mg/L	-4223%	E,NM	80-120	100
Nitrogen, Nitrite	6.653	ND	9.134	mg/L	73%	*	80-120	100
Bromide	108.0	100.4	15.00	mg/L	50%	NM	80-120	100
Nitrogen, Nitrate	9.227	ND	9.036	mg/L	102%		80-120	100
Sulfate	22,940	22840	50.00	mg/L	206%	E,NM	80-120	100

Batch QC

Type:	Matrix Spike Duplicate	Lab ID:	QC1127365	Batch:	332742
Matrix (Source ID):	Water (502065-001)	Method:	EPA 300.0	Prep Method:	METHOD

QC1127365 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Fluoride	20.41	4.595	20.00	mg/L	79%	*	80-120	1	20	100
Chloride	38,790	43100	100.0	mg/L	-4306%	E,NM	80-120		20	100
Nitrogen, Nitrite	6.684	ND	9.134	mg/L	73%	*	80-120	0	20	100
Bromide	108.4	100.4	15.00	mg/L	53%	NM	80-120	0	20	100
Nitrogen, Nitrate	8.647	ND	9.036	mg/L	96%		80-120	6	20	100
Sulfate	22,900	22840	50.00	mg/L	125%	E,NM	80-120		20	100

Type:	Matrix Spike	Lab ID:	QC1127380	Batch:	332742
Matrix (Source ID):	Water (502063-057)	Method:	EPA 300.0	Prep Method:	METHOD

QC1127380 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Fluoride	20.17	0.2345	20.00	mg/L	100%		80-120	1
Chloride	113.1	12.14	100.0	mg/L	101%		80-120	1
Nitrogen, Nitrite	9.060	ND	9.134	mg/L	99%		80-120	1
Bromide	14.91	0.07935	15.00	mg/L	99%		80-120	1
Nitrogen, Nitrate	11.14	2.246	9.036	mg/L	98%		80-120	1
Sulfate	106.8	60.28	50.00	mg/L	93%	E	80-120	1

Type:	Matrix Spike Duplicate	Lab ID:	QC1127381	Batch:	332742
Matrix (Source ID):	Water (502063-057)	Method:	EPA 300.0	Prep Method:	METHOD

QC1127381 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Fluoride	20.48	0.2345	20.00	mg/L	101%		80-120	2	20	1
Chloride	114.6	12.14	100.0	mg/L	102%		80-120	1	20	1
Nitrogen, Nitrite	9.201	ND	9.134	mg/L	101%		80-120	2	20	1
Bromide	15.12	0.07935	15.00	mg/L	100%		80-120	1	20	1
Nitrogen, Nitrate	11.26	2.246	9.036	mg/L	100%		80-120	1	20	1
Sulfate	107.5	60.28	50.00	mg/L	94%	E	80-120		20	1

ENTHALPY ANALYTICAL

Batch QC

Type: Blank	**Lab ID:** QC1127643	**Batch:** 332832	
Matrix: Water	**Method:** EPA 6020	**Prep Method:** EPA 3015A	

QC1127643 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Antimony	ND		ug/L	2.0	02/12/24	02/12/24
Arsenic	ND		ug/L	2.0	02/12/24	02/12/24
Barium	ND		ug/L	5.0	02/12/24	02/12/24
Beryllium	ND		ug/L	1.0	02/12/24	02/12/24
Cadmium	ND		ug/L	1.0	02/12/24	02/12/24
Chromium	ND		ug/L	5.0	02/12/24	02/12/24
Cobalt	ND		ug/L	1.0	02/12/24	02/12/24
Copper	ND		ug/L	3.0	02/12/24	02/12/24
Lead	ND		ug/L	5.0	02/12/24	02/12/24
Molybdenum	ND		ug/L	5.0	02/12/24	02/12/24
Nickel	ND		ug/L	5.0	02/12/24	02/12/24
Selenium	ND		ug/L	2.0	02/12/24	02/12/24
Silver	ND		ug/L	5.0	02/12/24	02/12/24
Thallium	ND		ug/L	1.0	02/12/24	02/12/24
Vanadium	ND		ug/L	5.0	02/12/24	02/12/24
Zinc	ND		ug/L	10	02/12/24	02/12/24

Type: Lab Control Sample	**Lab ID:** QC1127644	**Batch:** 332832	
Matrix: Water	**Method:** EPA 6020	**Prep Method:** EPA 3015A	

QC1127644 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Antimony	103.2	100.0	ug/L	103%		80-120
Arsenic	98.63	100.0	ug/L	99%		80-120
Barium	98.85	100.0	ug/L	99%		80-120
Beryllium	97.69	100.0	ug/L	98%		80-120
Cadmium	101.6	100.0	ug/L	102%		80-120
Chromium	98.40	100.0	ug/L	98%		80-120
Cobalt	103.8	100.0	ug/L	104%		80-120
Copper	98.33	100.0	ug/L	98%		80-120
Lead	99.37	100.0	ug/L	99%		80-120
Molybdenum	95.52	100.0	ug/L	96%		80-120
Nickel	102.0	100.0	ug/L	102%		80-120
Selenium	99.26	100.0	ug/L	99%		80-120
Silver	48.94	50.00	ug/L	98%		80-120
Thallium	98.58	100.0	ug/L	99%		80-120
Vanadium	99.15	100.0	ug/L	99%		80-120
Zinc	100.9	100.0	ug/L	101%		80-120

Batch QC

Type:	Matrix Spike	Lab ID:	QC1127645	Batch:	332832
Matrix (Source ID):	Drinking Water (502031-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1127645 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Antimony	100.6	ND	100.0	ug/L	101%		75-125	1
Arsenic	99.14	ND	100.0	ug/L	99%		75-125	1
Barium	108.6	12.11	100.0	ug/L	96%		75-125	1
Beryllium	97.77	ND	100.0	ug/L	98%		75-125	1
Cadmium	99.21	0.4328	100.0	ug/L	99%		75-125	1
Chromium	99.18	0.6489	100.0	ug/L	99%		75-125	1
Cobalt	104.4	0.4397	100.0	ug/L	104%		75-125	1
Copper	1,435	1366	100.0	ug/L	69%	NM	75-125	10
Lead	172.3	75.08	100.0	ug/L	97%		75-125	1
Molybdenum	94.68	0.2338	100.0	ug/L	94%		75-125	1
Nickel	106.0	3.190	100.0	ug/L	103%		75-125	1
Selenium	96.62	ND	100.0	ug/L	97%		75-125	1
Silver	47.18	0.02466	50.00	ug/L	94%		75-125	1
Thallium	98.14	ND	100.0	ug/L	98%		75-125	1
Vanadium	100.2	1.968	100.0	ug/L	99%		75-125	1
Zinc	3,811	3737	100.0	ug/L	74%	NM	75-125	10

Type:	Matrix Spike Duplicate	Lab ID:	QC1127646	Batch:	332832
Matrix (Source ID):	Drinking Water (502031-001)	Method:	EPA 6020	Prep Method:	EPA 3015A

QC1127646 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Antimony	98.09	ND	100.0	ug/L	98%		75-125	3	20	1
Arsenic	99.56	ND	100.0	ug/L	99%		75-125	0	20	1
Barium	106.4	12.11	100.0	ug/L	94%		75-125	2	28	1
Beryllium	97.36	ND	100.0	ug/L	97%		75-125	0	23	1
Cadmium	96.81	0.4328	100.0	ug/L	96%		75-125	2	21	1
Chromium	98.44	0.6489	100.0	ug/L	98%		75-125	1	30	1
Cobalt	104.3	0.4397	100.0	ug/L	104%		75-125	0	25	1
Copper	1,449	1366	100.0	ug/L	83%	NM	75-125	1	29	10
Lead	171.0	75.08	100.0	ug/L	96%		75-125	1	20	1
Molybdenum	96.00	0.2338	100.0	ug/L	96%		75-125	1	20	1
Nickel	105.3	3.190	100.0	ug/L	102%		75-125	1	30	1
Selenium	98.32	ND	100.0	ug/L	98%		75-125	2	28	1
Silver	46.52	0.02466	50.00	ug/L	93%		75-125	1	29	1
Thallium	97.15	ND	100.0	ug/L	97%		75-125	1	20	1
Vanadium	99.75	1.968	100.0	ug/L	99%		75-125	0	31	1
Zinc	3,805	3737	100.0	ug/L	68%	NM	75-125	0	27	10

Type:	Blank	Lab ID:	QC1127442	Batch:	332766
Matrix:	Water	Method:	EPA 7470A	Prep Method:	METHOD

QC1127442 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Mercury	ND		ug/L	0.40	02/12/24	02/12/24

Batch QC

Type: Lab Control Sample | **Lab ID:** QC1127443 | **Batch:** 332766
Matrix: Water | **Method:** EPA 7470A | **Prep Method:** METHOD

QC1127443 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Mercury	4.791	5.000	ug/L	96%		80-120

Type: Matrix Spike | **Lab ID:** QC1127444 | **Batch:** 332766
Matrix (Source ID): Water (502027-004) | **Method:** EPA 7470A | **Prep Method:** METHOD

QC1127444 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Mercury	2.556	ND	5.000	ug/L	51%	*	75-125	1

Type: Matrix Spike Duplicate | **Lab ID:** QC1127445 | **Batch:** 332766
Matrix (Source ID): Water (502027-004) | **Method:** EPA 7470A | **Prep Method:** METHOD

QC1127445 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Mercury	2.454	ND	5.000	ug/L	49%	*	75-125	4	20	1

Type: Lab Control Sample | **Lab ID:** QC1131174 | **Batch:** 333823
Matrix: Water | **Method:** SM 4500-NH3-G

QC1131174 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Ammonia-N	2.266	2.500	mg/L	91%		80-120

Type: Blank | **Lab ID:** QC1131175 | **Batch:** 333823
Matrix: Water | **Method:** SM 4500-NH3-G

QC1131175 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Ammonia-N	ND		mg/L	0.10	02/23/24	02/23/24

Type: Matrix Spike | **Lab ID:** QC1131187 | **Batch:** 333823
Matrix (Source ID): Water (502383-001) | **Method:** SM 4500-NH3-G

QC1131187 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Ammonia-N	4.675	ND	5.000	mg/L	93%		80-120	2

Type: Matrix Spike Duplicate | **Lab ID:** QC1131188 | **Batch:** 333823
Matrix (Source ID): Water (502383-001) | **Method:** SM 4500-NH3-G

QC1131188 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Ammonia-N	5.087	ND	5.000	mg/L	102%		80-120	8	20	2

Batch QC

Type: Blank **Lab ID: QC1129672** **Batch: 333474**
Matrix: Water **Method: SM 4500-P-B5-E**

QC1129672 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Phosphorus	ND		mg/L	0.020	02/20/24	02/22/24

Type: Lab Control Sample **Lab ID: QC1129673** **Batch: 333474**
Matrix: Water **Method: SM 4500-P-B5-E**

QC1129673 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Phosphorus	0.4210	0.4000	mg/L	105%		80-120

Type: Matrix Spike **Lab ID: QC1129674** **Batch: 333474**
Matrix (Source ID): Water (502021-003) **Method: SM 4500-P-B5-E**

QC1129674 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	DF
Phosphorus	0.4500	ND	0.4000	mg/L	108%		75-125	1

Type: Matrix Spike Duplicate **Lab ID: QC1129675** **Batch: 333474**
Matrix (Source ID): Water (502021-003) **Method: SM 4500-P-B5-E**

QC1129675 Analyte	Result	Source Sample Result	Spiked	Units	Recovery	Qual	Limits	RPD	RPD Lim	DF
Phosphorus	0.3920	ND	0.4000	mg/L	94%		75-125	14	20	1

Type: Blank **Lab ID: QC1128007** **Batch: 332974**
Matrix: Drinking Water **Method: SM2320B** **Prep Method: METHOD**

QC1128007 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Bicarbonate	ND		mg/L	2.0	02/13/24	02/13/24
Carbonate	ND		mg/L	1.2	02/13/24	02/13/24
Hydroxide	ND		mg/L	0.70	02/13/24	02/13/24
Alkalinity, Total as CaCO3	ND		mg/L	2.0	02/13/24	02/13/24

Type: Lab Control Sample **Lab ID: QC1128008** **Batch: 332974**
Matrix: Drinking Water **Method: SM2320B** **Prep Method: METHOD**

QC1128008 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Alkalinity, Total as CaCO3	1,040	1000	mg/L	104%		90-110

Batch QC

Type:	Sample Duplicate	Lab ID:	QC1128009	Batch:	332974
Matrix (Source ID):	Water (501838-004)	Method:	SM2320B	Prep Method:	METHOD

QC1128009 Analyte	Result	Source Sample Result	Units	Qual	RPD	RPD Lim	DF
Bicarbonate	397.9	390.6	mg/L		2	20	5
Carbonate	ND	ND	mg/L			20	5
Hydroxide	ND	ND	mg/L			20	5
Alkalinity, Total as CaCO3	326.2	320.2	mg/L		2	20	5

Type:	Blank	Lab ID:	QC1127847	Batch:	332906
Matrix:	Water	Method:	SM2540C	Prep Method:	METHOD

QC1127847 Analyte	Result	Qual	Units	RL	Prepared	Analyzed
Total Dissolved Solids	ND		mg/L	10	02/13/24	02/14/24

Type:	Lab Control Sample	Lab ID:	QC1127848	Batch:	332906
Matrix:	Water	Method:	SM2540C	Prep Method:	METHOD

QC1127848 Analyte	Result	Spiked	Units	Recovery	Qual	Limits
Total Dissolved Solids	968.0	1000	mg/L	97%		90-110

Type:	Sample Duplicate	Lab ID:	QC1127849	Batch:	332906
Matrix (Source ID):	Water (502153-002)	Method:	SM2540C	Prep Method:	METHOD

QC1127849 Analyte	Result	Source Sample Result	Units	Qual	RPD	RPD Lim	DF
Total Dissolved Solids	135.0	136.5	mg/L		1	5	0.5

* Value is outside QC limits

E Response exceeds instrument's linear range

ND Not Detected

NM Not Meaningful